

Exploring Interagency Patient Safety Policies and Strategies in the World Health Organisation Eastern Mediterranean Region (WHO-EMR): A Qualitative Study of Libya

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Dedication

I dedicate this work to:

My parents (Salem and Bornia), who have instilled in me valuable principles and strengths that guide my life, may Allah bless them and grant them a spot in the hereafter as well as paradise.

My cherished family members, including brothers, grandmother, uncles, and aunts, for their unwavering love, continual moral support, and sincere prayers throughout my academic journey at Cardiff University, even during times of my physical and virtual absence.

In addition, I would like to dedicate my work to health policymakers and healthcare staff who prioritise patient safety and integrate it into their daily practices.

DECLARATION OF ORIGINALITY

I affirm that the thesis is exclusively authored by Aseel Dardur and has not been previously presented for any academic degree/qualification elsewhere. The content within this thesis is entirely my own as the primary researcher, unless explicitly credited otherwise via means of acknowledgments or references.

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ABSTRACT

Background

Ensuring patient safety is acknowledged as imperative globally. The increasing magnitude of medical harm has led many countries worldwide to develop new legislation, structures, and policies to respond effectively to unsafe care concerns. While improving patient safety holds a prominent position in the healthcare policy priorities of WHO-EMR governments, including Libya, the progress achieved thus far has fallen short of optimal outcomes. The complexity of improving patient safety is underscored by a limited understanding of the safety aspect of healthcare, an underdeveloped research landscape in this domain, and inadequate infrastructure to address patient safety challenges proactively. Compounding these challenges is the absence of holistic, systematic approaches to managing and improving patient safety, further contributing to the suboptimal patient safety practices in the WHO EMR.

Aim: To improve understanding of patient safety organisation, management, and concerns in Libya, in conjunction with exploring the effects of interagency working between LMoH, healthcare organisations, and WHO on the organisation and delivery of quality care therein. This understanding, coupled with the global agenda of patient safety espoused by WHO for LMICs countries, was used to generate a context-lens framework for improving patient safety through interagency working in Libya.

Research Questions: The study aims to address the following questions: -

1. How is patient safety and managed within the Libyan health system?
2. What patient safety concerns have been perceived by Libyan health policymakers and healthcare managers?
3. How does the interplay and interface between WHO and the Libyan health system's patient safety strategy affect the organisation and delivery of safe care in Libya?
4. What strategies can be effectively employed to address challenges to patient safety in Libya?

Methods

This research was conducted employing a qualitative strategy of inquiry, specifically utilising the Exploratory-Descriptive Qualitative (EDQ) research approach. The data collection involved 30 interviews and policy document review in Libya. An inductive analysis approach, incorporating content and thematic analysis strategies, was applied to examine and interpret the data.

Findings

Patient safety organisation, management, and concerns in Libya: Patient safety across the Libyan health system is highly fragmented and loosely regulated, mostly as a result of extreme adversity. An explicit lack of legislation and regulations for patient safety as well as a lack of national quality improvement and patient safety initiatives constituted political and health system factors contributing to patient safety challenges in Libya. Moreover, an absence of policies and strategies for patient safety in Libya

was also noted, reflecting poor political awareness of the importance of patient safety. Consequently, some healthcare organisations tended to formulate minimum guidelines for patient safety management in practice, although these primarily focus on quality, rather than patient safety directly. The results also indicated that there is no legislative or regulatory mandate for Libyan healthcare organisations to develop or implement proper patient safety systems or strategies, with accountability and mechanisms for developing and implementing patient safety initiatives not clearly defined nor introduced. This resulted in underdeveloped systems and processes to organise and manage patient safety, suggesting an absence of proactive approaches to reducing patient harm.

Interagency working in patient safety in Libya: This study pointed to broad challenges to interagency working in patient safety in Libya, including poor understanding of and factors influencing interagency working, such as a lack of a shared vision, no clarity over defined roles and responsibilities, inter-level policy and procedural differences, a lack of commitment, and the implications of political turmoil. Communication in interagency working was poor, contributing to suboptimal interfacing within the context of enhancing the Libyan health system patient safety strategy. In addition, there was a deficiency in interagency coordination in managing health system resources in Libya to maximise effects on patient safety. This compromised the attainment of effective organisation and delivery of quality healthcare in Libya. Moreover, poor management of interagency patient safety-related work emerged as a concern, including a lack of engagement in planning and decision-making, challenges associated with implementation, and inadequate oversight.

Improving patient safety through enhanced interagency working in Libya: To redress patient safety challenges identified in Libya, the study offered a Libyan context-lens framework for improving patient safety in Libya through enhanced interagency working. This focuses on establishing robust mechanisms for developing interagency working in patient safety, an action plan for patient safety management during emergencies, particularly focusing on implementing the WHO patient safety-related frameworks, promoting political accountability for patient safety, leadership, and clinical governance, and research, education, and training in patient safety.

Conclusion

Patient safety in Libya has received relatively minimal attention, yet the challenges identified therein align with those experienced by many developing and middle-income countries, particularly those facing extreme adversity. These profound challenges have resulted in poor patient safety regulation in Libya and a lack of effective measures to minimise patient harm in healthcare settings. A holistic approach is therefore necessary to address these challenges through enhanced interagency working, taking into account the complex political, organisational, socio-technical, and cultural factors influencing the health system as a whole. To this end, the proposed Libyan context-lens framework aims to inform and guide policymakers, WHO, healthcare managers, as well as researchers in their efforts towards improving patient safety in Libya.

LIST OF ABBREVIATIONS

ACSQHC	Australian Commission on Safety and Quality in Health Care
ADs	Adverse Events
AHRQ	Agency for Healthcare Research & Quality
CG	Clinical Governance
CQC	Care Quality Commission
CRM	Clinical Risk Management
DoH	UK Department of Health
EMR	Eastern Mediterranean Region
GDP	Gross Domestic Product
GMC	UK General Medical Council
GNH	Gross National Happiness
HAI	Healthcare Associated Infection
HMIS	Health Management Information System
IHI	Institute for Healthcare Improvement
IOM	US Institute of Medicine
IT	Information Technology
JCAHO	Joint Commission on Accreditation of Healthcare Organisations
LMIC	Low- and Middle-income Country
LMoH	Libyan Ministry of Health
ME	Medication Error
NHS	National Health Services (UK)
NPSA	National Patient Safety Agency
NRLS	National Reporting and Learning System
OECD	Organisation for Economic Cooperation and Development
PHC	Primary Healthcare
PSI	Patient Safety Indicator
PSI	Patient Safety Incident
PST	Patient Safety Team
QA	Quality Assurance
QIPsIs	Quality Improvement and Patient Safety Initiatives
UK	United Kingdom
UN	United Nations
USA	United States of America
WHO	World Health Organization
WHO EMRO	WHO Regional Office for the Eastern Mediterranean
WHO-WAPS	World Alliance for Patient Safety

GLOSSARY

Table (A) displays the definitions of crucial terms that this study utilises. These definitions are derived from salient concepts outlined in the International Classification for Patient Safety proposed by the WHO World Alliance for Patient Safety (Sherman et al. 2009; WHO 2009b) and other pertinent literature sources as referenced.

Table (A): The Definition of Key Terms Involved in the Study

Term	Definition
Healthcare	Services are delivered to people/communities with the aim of promoting, preserving, monitoring, or restoring health, encompassing self-care and extending beyond medical care (WHO 2009).
Patient Safety	It is both as an objective (a state free from unnecessary harm) and a practice involving processes and structures designed to enhance healthcare safety.
Adverse Event	An injury stemming from medical interventions, as opposed to complications associated with the disease, leading to extended hospital stays or disability upon discharge from medical care, or both. Adverse events can be either avoidable or unavoidable. (WHO 2009)
Error	<i>“A failure to carry out a planned action as intended or application of an incorrect plan”</i> . (WHO 2009, p. 22). Errors can occur either by performing the incorrect action (commission) or by neglecting to execute the correct action (omission), whether it be in the planning or implementation phase.
Healthcare-associated Harm	<i>“Harm arising from or associated with plans or actions taken during the provision of healthcare, rather than an underlying disease or injury”</i> (WHO 2009, p. 22)
Incident	<i>“An event or circumstance which could have resulted, or did result, in unintended or unnecessary harm to a person and/or patient”</i> (Sherman et al. 2009; WHO 2009b).
Injury	<i>“Damage caused to person or patient tissues or body by an agent or event”</i> (WHO 2009, p. 23)
Near Miss	An incident that is yet to affect the patient (SHEIKHTAHERI 2014).
Safety culture	It represents the amalgamation of individual and collective values, skills, attitudes, and behavioural patterns within employees at all organisational levels, such as those in healthcare organisations. These factors dictate the allegiance to the organisation's health and safety initiatives (Hodgen et al. 2017).
Interagency working	This occurs when at least two agencies interface and interplay with each other in a planned, systematic, and formal manner, as opposed to mere informal networking. This is geared towards shared goals and objectives and can manifest at micro, meso, or macro levels (strategic or operational levels) (Duggan et al. 2009).
Low-income Country	A nation whose per capita income is lower than £806.64 per person per year (World Bank 2017).
Middle-income Country	A nation whose per capita income is £807.43-£3143.94 for each individual annually, whereas the per capita income of an upper middle-income country is £3144.72-£9738.73 per individual each year (World Bank 2017).
High-income Country	A state with per capita income of £9739.51 or more per person/year (World Bank 2017) .
Developed Country	Denotes a sovereign state whose economy has significantly progressed, boasting advanced technological infrastructure in comparison to other nations (Surbhi 2019).
Developing Country	This is a state undergoing a gradual process of industrialisation, navigating the initial stages of industrial development, and characterised by a low per capita income (Surbhi 2019).

List of Academic Contributions

- Cardiff School of Healthcare Sciences Postgraduate Research Symposium 2022 “Interagency Working in Patient Safety at different Levels”
- The International Society for Quality in Health Care 38th International Conference, Brisbane, Australia, October 2022 “The Organisation and Delivery of Quality and Safe Care through Effective Interagency Working.
- A scoping review is to be submitted for review and publication in the International Journal for Quality in Health Care (IJQHC).

Chapter One: Introduction

1.1. Introduction

The chapter initiates explorations of the study context, spanning nine sections, setting the stage for this thesis and establishing the researcher's position within the study's framework. It commences with **Section 1.1** for introduction. **Section 1.2**, offering an insight into the research and underscoring the significance of context. **Section 1.3** delves into international interagency working and collaborative mechanisms in the context of patient safety in Libya. **Section 1.4** articulates the rationale justifying the imperative need for the current research study. Subsequently, **Section 1.5** outlines the study's aims, research questions, and objectives. Moving forward, **Section 1.6** provides a synopsis of the research method, while **Section 1.7** offers an overview of the thesis structure. Additionally, **Section 1.8** shed the light on understanding the context – moving from general to specific through the following chapter. **Section 1.8** summarises the chapter.

1.2. Importance of context

This section elucidates the significance of patient safety before providing a general overview of interrelated and interlinked organisational management factors and arrangements contributing to establishing safe systems of care.

1.2.1. Why patient safety?

Healthcare organisations treat patients in an environment of complex interactions, consisting of several interconnected factors. These factors encompass the disease process, technology, clinicians, resources, procedures, and policies. When these intricate elements interact, unforeseen and harmful outcomes can arise, leading to patient harm (Pype et al. 2018). Essentially, healthcare has evolved into a more complex system, making it susceptible to situations that may cause avoidable harm, thereby compromising patient safety (Flott et al. 2019).

The overarching emphasis of patient safety, as defined in Table A above, lies in establishing healthcare delivery systems that prevent critical errors, learns from mistakes and errors in the healthcare workplace, and is rooted in a safety culture involving healthcare organisations, professionals, and patients (Melnyk et al. 2018). Literature indicates a significant disparity in the risks associated with air travel and healthcare. The likelihood of death while traveling by airplane is approximately 1 in 3 million, while the chance of a patient experiencing harm in healthcare is 1 in 300 (David

et al. 2013; WHO 2019a). However, comparing healthcare to High-Reliability Organisations (HROs) may not always be accurate due to the intricate nature of healthcare (Jones 2020).

The gravity of unsafe care garnered public attention with the landmark of the influential "To Err Is Human" report by the USA Institute of Medicine (IOM) in 1999, estimating 44,000 to 98,000 annual hospital deaths due to medical errors (IOM 1999a). This was further underscored by the UK Department of Health's 2000 report *An Organisation with a Memory*, estimating 400 deaths or serious injuries annually in the UK due to medical errors (DoH 2000). These reports delineated the landscape of safety issues, spotlighted severe failures, and marked the inception of patient safety as a healthcare priority, urging organisations to cultivate a safety culture and improve care processes (IOM 1999a; DoH 2000).

Despite global efforts to enhance patient safety, millions still suffer harm from unsafe medical practices yearly (Slawomirski et al. 2017a; WHO 2021a). Medical harm ranks among the top 10 causes of death globally, with up to 83% deemed avoidable (National Academies of Sciences 2018; Lachman et al. 2020a). In the USA alone, an estimated 200,000 preventable medical deaths occur annually (Mohney 2016), and diagnostic errors are expected to affect every adult at least once in their lifetime (Flott et al. 2019).

In the United Kingdom (UK), 3.6% of deaths in medical practices result from preventable healthcare issues (Yu, Flott, et al. 2016a). Extrapolating this proportion to other OECD nations suggests 175,000 avoidable deaths, with 70,000 potentially preventable (Yu, Flott, et al. 2016a). Moreover, the UK exceeds the United Nations' Sustainable Development Goal for maternal deaths, with 9 in 100,000 deaths in pregnancy-related cases (Yu, Flott, et al. 2016a). A study spanning 1990 to 2013 in the UK revealed that due to adverse effects from medical treatment (Lunevicius and Haagsma 2018), incidence rates of 173-176 cases and mortality rates of 0.92-1.33 deaths per 100,000 individuals.

Other examples of medical harm have been well documented in other regions. Examining the broader landscape of healthcare quality and safety in Low- and Middle-income Countries LMICs such as Libya, the burden of unsafe care is notably higher in comparison to nations that form of Organisation for Economic Cooperation and

Development (OECD). Poor-quality care is estimated to contribute to 10-15% of total deaths in LMICs, resulting in around 2.6 million annual deaths due to unsafe care (National Academies of Sciences 2018; Ghebreyesus 2021). This, in turn, signifies that approximately 75% of all global Disability-Adjusted Life Years (DALYs) lost due to unsafe care occur within Low- and Middle-income Countries (LMICs) such as Libya (Slawomirski et al. 2017a; WHO 2021a). Such levels of unsafe care pose significant challenges to LMICs health systems, including Libya (referred to as a WHO-EMRO country), which often lack the necessary resources for substantial improvements.

Delving into regional specifics, South Asia and Western Sub-Saharan Africa report the highest mortality rates due to unsafe care, estimated at 1.9 million and 1.2 million deaths, respectively (Kruk et al. 2018; Kang et al. 2021a). Central Europe and Latin America, on the other hand, exhibit the most deaths attributable to poor-quality and unsafe care, with 78% and 69% of deaths associated with healthcare, respectively (Flott et al. 2019). This flags patient safety as a pressing concern, prompting increased investments in measuring and improving patient safety.

Focusing on the WHO Eastern Mediterranean Region (WHO-EMR), a recent regional study reveals that up to one in four patients experiences harm in healthcare organisations across the EMR, resulting in approximately 4.4 million adverse events occurring annually due to suboptimal care practices (Letaief 2017a). It is noteworthy that this constitutes up to 18% of hospital admissions associated with at least one adverse event, with 3% being severe enough to cause death or permanent disability (Letaief 2017a). These alarming statistics suggest that unsafe care significantly undermines the foundations of health systems in the WHO EMR, thus preventing them from harnessing their full potential in the capacity of healthcare institutions. Across nations facing extreme adversity, such as Libya, characterised by conflict and chronic political instability, these challenges tend to get exacerbated (Neilson et al. 2021a; WHO 2021a; O'Brien et al. 2022). This has elevated the importance of quality and safe healthcare in extreme adversity settings to the forefront of international discourse, led and supported by WHO (Jaff et al. 2019; Leatherman et al. 2020; Letaief et al. 2021).

In light of what has been alluded to above, the gravity of patient safety impediments in this context is recognised as a high priority globally by WHO, highlighted by the passage of resolution WHA55.18 by the World Health Assembly (WHA) in May 2002. This resolution urged WHO and its member states to address the issue of unsafe care

and establish evidence-based systems critical for improving patient safety (WHO 2002). It marked the first global acknowledgment of patient safety as a priority and a worldwide endeavour. This commitment has been further reinforced by the Global Patient Safety Action Plan 2021–2030 (WHO 2021b), outlining four proposed areas for global action to enhance patient safety.

- Establishing global standards and policy frameworks for patient safety, involving defining, measuring, and reporting as well as learning from medical errors. Additionally, support is provided to develop reporting systems, undertake preventive actions, and implement measures to mitigate risks.
- Implementing evidence-based interventions, such as new regulations, for improving patient care and safety. Special attention is given to medical product safety, the safe use of medical devices, and adherence to appropriate standards for safe clinical practices.
- Fostering a safety culture within healthcare organisations is a priority, incorporating mechanisms such as accreditation to identify healthcare staff characteristics that set a standard benchmarking for international clinical excellence and patient safety.
- Promoting research on the quality and safety of healthcare is actively encouraged, particularly with a focus on LMICs including Libya.

Such evidence from WHO indicates an explicit rationale for undertaking this study in Libya. Before moving forward to explain the aim and rationale of this research study, the following section explains factors influencing patient safety improvement that, according to the existing literature, are lacking in LMICs such as Libya, thus contributing to unsafe care challenges therein.

1.2.2. Factors influencing patient safety

This section provides a general overview of factors contributing to establishing safe systems of care, based on well-acknowledged interrelated and interlinked organisational management theories and arrangements leading to patient safety improvements.

1.2.2.1. Leadership

Health system leadership is embodied at three structural levels: from the overarching macro level (health system and political) to the meso level (healthcare organisation

management), through to the micro context of healthcare teams (Figuerola et al. 2019). Effective health system leadership revolves around the capability to offer strategic guidance to various stakeholders within the health system. It involves ensuring the presence of strategic policy frameworks that are coupled with robust regulations, oversight, and accountability for actions. Additionally, health system leadership entails identifying priorities and fostering commitment across the system to address those priorities, ultimately aiming for enhanced services and outcomes (OECD, 2020a). Given that health systems operate through different levels, such as the Libyan health system, within which there are ranging networks and levels of responsibilities, they require systematic coordination and organisation through effective cross-cutting leadership to ensure that care services at the point of delivery are effective, efficient, accessible, equitable, patient-centred, and safe (Curry et al. 2020).

Scholarly literature has exemplified the fact that leadership at the macro level of health systems significantly impacts the healthcare organisations' cultures (Sfantou et al. 2017; De Brún et al. 2019; Figuerola et al. 2019; Lyons et al. 2021; Restivo et al. 2022). This involves health system regulators demonstrating effective leadership through the development of integrated approaches that are characterised by a consistency of explicit vision, policy frameworks, regulations, strategies, resources, attention to system design and change, and accountability for ensuring patient safety within the health system (WHO, 2016c).

Political (Parliament and government) leadership proves most efficacious when it adopts a supportive and sustained approach, guiding initiatives that extend organisational and professional boundaries via the system. This is essential for the purpose of addressing intricate and pervasive challenges associated with safety. It was also noted by Bolden et al. (2019) that when healthcare organisations are supported by top-level leadership and are seen as partners in developing the system and services, they are enabled to deliver ever-improving high-quality and safe patient care.

Healthcare professionals, that encompass nurses, benefit from supportive leadership that enables them to implement their acquired skills and competencies in a safe manner (Lee et al., 2023a). As emphasised by Van Marum et al. (2022), effective leadership support not only enhances safety culture, teamwork, and communication among healthcare staff but also fosters a culture of trust and openness. Titi et al.

(2021) also found that a positive patient safety culture is contingent on strong healthcare organisation leadership and management commitment to encouraging and fostering safety practices in their healthcare setting.

In addition, Wong et al. (2013) studied the relationship between nursing leadership practices and patient safety outcomes, and positive correlations were identified. The performance of nursing leaders was linked to improved safety practices and outcomes, including reductions in patient mortality rates, along with the occurrence of medical errors. This highlights the crucial role of healthcare organisations' leadership in fostering a just and open culture, free from fear of blame and punishment. Such an environment encourages healthcare staff to speak up, raise concerns, and express opinions openly, facilitating learning from safety failures for continuous improvement. This, in turn, can contribute significantly to reinforcing patient safety improvements, as argued by Braithwaite et al. (2017), particularly in countries such as Libya.

1.2.2.2. Clinical governance for improving patient safety

Clinical Governance (CG) is recognised for enhancing the performance of healthcare organisations and promoting safer and more effective healthcare. Originally introduced in the UK during the 1990s as part of NHS reforms (Secretary of State for Health, 1997), CG serves as a mechanism whereby healthcare providers take responsibility for improving the quality of their care services on a continuous basis, as well as upholding high standards of care. This involves establishing an environment conducive to clinical excellence (Sally and Donaldson, 1998). McSherry (2004) argued that many patient safety incidents stem from flawed healthcare systems and processes. It was emphasised that healthcare entities should adopt CG approaches to ensure effective clinical outcomes for patients. The focus is on establishing reliable processes to ensure well-designed and effective care systems capable of delivering and accounting for patient care's safety and quality.

Besides the UK, CG has been implemented and advocated in other countries, such as Canada, Australia, Ireland, Italy, the Netherlands, and Iran, as an integrated approach to sustaining the provision of better care and driving an effective change in clinical practices (ACSQHC, 2017; Amelia et al., 2015a; Azami-Aghdash et al., 2015a; Botje et al., 2014; Brault et al., 2015; Flynn et al., 2015; Halton et al., 2017; Meads et al., 2017). The existing literature has shown that CG consists of multiple interlinked core elements, including clinical effectiveness and evidence-based care; quality

improvement systems; management of staff and processes; risk management; clinical audit; training and education; patient empowerment and engagement; and information technology (Ghavamabad et al., 2021; GMC | UK, 2018; Price et al., 2020; Travaglia et al., 2011a).

Using such pillars can help guide healthcare organisations to continuously improve their clinical practices and performance so that clinical excellence could be achieved (Mcsherry 2004). Furthermore, the adoption of GC practices can create and improve an accountability system within medical practice (Haxby et al. 2011). GC allows accountability arrangements to be in place throughout the healthcare organisation, contributing to making everyone accountable for the delivery of high-quality care and continuous quality improvement (Macfarlane, 2019a). Price et al. (2020) also believe that CG provides an opportunity for developing the fundamental components required for a just culture (solid culture of safety)—a solid culture of safety. This involves creating a non-blame environment, facilitating reporting and learning, and contributing to an ethos where staff are valued and supported as they interact with patients (GMC | UK 2018).

1.2.2.3. Risk management

In Healthcare organisations face myriad risks, including but not limited to clinical, financial, environmental, political, and economic perils (McGowan et al. 2023). Undoubtedly, these can result in adverse consequences for medical practices thereby breaching patient care and safety. Herein, risk management refers to the implementation of both clinical as well as administrative initiatives implemented for the identification, evaluation, analysis, monitoring, and integrated management of current and potential risks relating to patient care and safety (McGowan et al. 2023). In other words, it is described as a programme of interlinked activities and arrangements implemented in a proactive manner to pinpoint, lower, and tackle injury-related perils for patients during the provision of care. Cagliano et al. (2011) emphasise that clinical risk management processes should systematically encompass the identification and management of risks pertaining to patients. This involves the reporting, evaluation, and tracking of adverse events, including near misses. Furthermore, it entails the capability to follow up on these events and derive lessons from them, aiming to prevent their recurrence.

The intricate nature of healthcare systems gives rise to risks if not well controlled (Braithwaite et al., 2018). Inherent in the practices and processes of care is the unavoidable risk that patients may experience undesired consequences of treatments (Cutter and Jordan, 2013). Consequently, the complete elimination of medical errors is challenging in the complexity of healthcare, particularly in situations with intricate decision-making processes. However, effective management can be achieved through the implementation of risk management, which involves a recursive process of continuous improvement, drawing inspiration from the Plan, Do, Check, Act (PDCA) paradigm (Reed and Card, 2016). By embracing risk management processes, the likelihood of positive events can be increased, and the probabilities and impacts associated with adverse events can be decreased. This, in turn, enhances organisational resilience and flexibility to confront uncertainties and adverse outcomes, ultimately improving patient safety.

Fenn and Egan (2012) contend that incorporating risk management strategies in healthcare facilitates the development of protocols to establish responsive systems. This includes the implementation of quality and patient safety indicators, along with action plans for quality assurance and continuous improvement, which optimise patient safety practices. Additionally, Ferdosi et al. (2020) emphasise that the practices and processes of risk management enable healthcare organisations to mitigate adverse consequences resulting from potential system defects by identifying errors, addressing root causes, and strategically planning and monitoring. Clinical incident reporting, which involves the identification and documentation of errors for subsequent learning, is a pivotal aspect of a formal risk management system (Carfield and Franklin, 2019).

Moreover, in healthcare, the adoption of risk management models is geared towards performance enhancement, whilst considering the medical practices' distinctive characteristics compared to other work environments (Prokešová, 2020). The WHO International Classification for Patient Safety elucidates crucial concepts pertaining to risk management in healthcare (Etges et al., 2018). This entails proposing a hierarchical categorisation of various types of risks in healthcare, along with activities and processes aimed at minimising patient harm through the identification, analysis, evaluation, monitoring, and following up—essentially, implementation of approaches related to risk management. Global regulatory bodies for healthcare providers, such

as those in the UK, Health care Insurance Reciprocal of Canada, and the American Society of Health care Risk Managers, have increasingly introduced guidelines that emphasise the importance of incorporating risk management practices into the routine management and operations of healthcare organisations (Etges et al., 2018). This illuminates the regulatory imperative for healthcare organisations to safeguard patients from risks associated with medical practices.

1.2.2.4. Safety culture

Every organisation has a culture, comprising a set of shared attitudes, assumptions, and actions that underlie how tasks are carried out (Sandars and Cook, 2009). Shared values and beliefs within a healthcare system interact with its structures and mechanisms, giving rise to behavioural norms (Stock et al., 2010). Patient safety culture, implies shared attitudes and behavioural patterns among healthcare providers, is recognised as a crucial element in preventive strategies for ensuring patient safety (AHRQ, 2016; Agbar et al., 2023). These attitudes and patterns significantly influence the efficiency of processes and their interaction with organisational structures, ultimately shaping behavioural standards that may enhance patient safety within the organisation (Alquwez et al., 2018a).

The terms 'safety culture' and 'safety climate' are often used interchangeably, with climate representing the observable and measurable aspect of culture. Safety attitudes, a subset of safety climate, are the components individuals can experience and engage with, making them easily and voluntarily measurable. Increased awareness of patient safety outcomes has heightened concerns about organisational cultures, as a higher positive safety culture can be associated with improved patient care outcomes (Theodosios, 2012). A positive culture guides healthcare staff's discretionary behaviours, encouraging them to prioritize patient safety (Fujita et al., 2013). Higher safety standards correlate with fewer errors, prompt error reporting, and enhanced open learning (Martinez et al., 2016).

Learning on a continuous basis is fundamental to patient safety culture, thus stressing the importance of reporting and learning from errors, accidents (and near misses), as well as adverse incidents to prevent their recurrence. In the face of increasing healthcare system complexity, the conventional approach to safety management, centered on mortality committees and accident scrutiny, is deemed inefficient (Pype et al., 2018). Recognised bodies such as WHO, NPSF, JCI, and IHI advocate for

cultivating a robust patient safety culture for enhancing patient safety (Hodgen et al., 2017).

A positive safety culture encompasses key features, including acknowledgment of a high-risk environment, a blame-free and non-punitive reporting system, an open learning workplace, and the commitment of healthcare providers to understanding and addressing unsafe situations. This involves identifying and evaluating threats and safety concerns, establishing a non-punitive environment for reporting and analysing errors, and promoting a culture of learning (Lawati et al., 2018a). Therefore, assessing the safety culture in healthcare is essential, emerging as the bedrock upon which patient care/safety can be improved by dedicating attention and commitment to safety issues, reducing negative outcomes, and fostering a culture of reporting and learning from errors (Martinez et al., 2016).

However, achieving a positive culture poses challenges due to variations in attitudes toward safe practices, the nature as well as prevalence of unsafe situations, and related issues across different healthcare settings (Seung et al., 2017). Rather than blaming individuals, healthcare organisations should focus on designing systems that create safe conditions and high standards of safety (Aveling et al. 2016). Buja et al. (2018) argued that successful healthcare systems allow a safe, non-punitive environment and are simple, timely, and inexpensive.

It is crucial to note that any organisation with a robust culture of safety is characterised by active communication, shared perceptions of safety and safe practices, as well as the effectiveness of safety measures, and speaking up, reporting, and learning (Reis et al., 2018). Additionally, Vaismoradi et al. (2020), highlighted leadership, teamwork, evidence-based practices for patient-centeredness as the principles that constituting a positive safety culture in healthcare. Similarly, a systematic review by Churruca et al. (2021) identified key dimensions that can be assessed to gain insights into safety culture, a perspective supported by other scholars (Lawati et al., 2018a; Pereira Santos et al., 2017; Reis et al., 2018; Verbakel et al., 2014), including, but not limited to:

1. Management and institutional commitment to safety and support of safe practice.
2. Systems, procedures, and processes normalising and enshrining patient safety (e.g., handoffs and transitions).

3. Resources, including staffing and equipment.
4. Interpersonal relationships, including teamwork, communication, collaboration, openness, coordination, and interactions within and across units.
5. Organisational learning, reporting and speaking up about errors, and continuous improvement.
6. Organisational factors and individual staff characteristics affecting safety include job satisfaction, stress, workload, and work pressure.
7. Staff training, education, continuous development, and overall patient safety awareness.

Assessing these dimensions is fundamental for developing a solid safety ideology and mindset in medical practice (Martinez et al., 2016). This can offer a comprehensive understanding of safety aspects that necessitate immediate attention, foster awareness of patient safety among health staff, analyse trends in safety culture on a continuous basis, as well as evaluate the ramifications of pertinent interventions for improvement.

1.2.2.5. Human factors contributing to patient safety

Human factors, also known as ergonomics, constitute a scientific discipline focused on understanding the interaction and interplay between human and system elements within healthcare. It involves applying a set of theoretical principles, data, procedures, and approaches to design, with the goal of optimising both human practices as well as overall performance of the system as a whole, as set out by the International Ergonomics Association (2021). These factors encompass organisational, individual, environmental, and job-related characteristics that influence behaviour and can influence safety (Boysen 2013). They cover human-equipment (e.g., system and equipment design) as well as human-human interactions (e.g., communications, coordination, teamworking, and organisational culture).

The knowledge of human factors is essential for comprehending the impact of various factors, including fatigue, stress, communication breakdowns, disruptions, and inadequate knowledge and skills, on healthcare professionals (R. J. Mitchell et al., 2016). Such understanding directly influences healthcare processes and service delivery. Principles and practices related to human factors focus on optimising human performance by gaining a better understanding of individuals' behaviour within healthcare workplaces, their interactions, and their environment, including equipment

and procedures (Dul et al. 2012). This suggests that understanding human factors can offer a systematic approach to minimising human frailties, ultimately reducing unsafe and adverse consequences.

Human factors play a critical role in contributing to unsafe practices in healthcare, with potential serious and fatal consequences as a result of the influence of environmental circumstances on behaviours and performance in practice (Chaneliere et al. 2018). Human performance in healthcare settings is highly dependent on the existence of appropriate equipment, tools, processes, combined with effective leadership commitment and support. Consequently, healthcare organisations must consider human factors and behaviours when developing systems and policies. While human fallibility cannot be eliminated, moderating it is crucial for limiting risks. Carayon et al. (2014) and Braithwaite et al. (2021) argue that applying engineering principles and human factors analysis to healthcare system design enhances safety and reliability. Managing human factors helps understand characteristics and circumstances associated with adverse events.

Human factors principles, as outlined by the UK National Quality Board (2013), contribute to identifying, assessing, and managing risks that might breach patient safety. Additionally, these principles contribute to the analysis of incidents for learning purposes and identifying corrective actions. Aceves-González et al. (2021) highlight the significance of healthcare professionals, leaders, and organisations comprehending human factors as a scientific discipline. They emphasise its potential to generate knowledge for redesigning healthcare systems and processes, particularly in LMICs.

On the broader scale, understanding human factors and associated approaches can serve a leading role in improving patient safety, bringing about change in care systems and emphasising the importance of redesigning and strengthening processes, procedures, and equipment for better outcomes (The Health Foundation 2020). Moreover, human factors approaches can be considered foundational to current improvement sciences in relation to quality and patient safety, providing a well evidenced-based and integrated paradigm to such a critical aspect of healthcare, as asserted by Hignett et al. (2015a). The widespread adoption of these concepts presents a unique opportunity to foster cultural change, empowering healthcare organisations to prioritise patient safety and clinical excellence. This, in turn,

encourages the open reporting of adverse and unsafe events associated with healthcare, contributing to ongoing improvement efforts in the healthcare system.

1.2.2.6. Education and training

The correlation between education and training and patient safety has been evident in the existing literature for many years (Agbar et al., 2023; Buljac-Samardzic et al., 2020; M. J. Mansour et al., 2018; D. Deering et al. 2011; Tregunno et al., 2014). Health workforces are an essential component of safer healthcare. Educating and training health workforces about safety skills and behaviours can potentially enhance patient outcomes, ensuring safe, high-quality care. This permeates ‘Do No Harm’ as a principle of medical practices and the first priority for all medical practitioners.

Educational and training interventions in patient safety have garnered increasing interest in recent years and have been recognised as a critical contributor to improving patient safety in developed countries for many years—i.e., education and training programmes have been used as a method to enable knowledge and skill acquisition and behavioural and organisational change in relation to quality improvement and patient safety (Kirkman et al. 2015). The recognition of the significance of patient safety interventions has led to the integration of dedicated patient safety curricula and frameworks in medical and nursing education worldwide, especially in developed countries (Kirkman et al. 2015; Lee et al. 2022). This systematic approach to education and training focuses on enhancing safety culture in healthcare organisations, particularly in LMICs. WHO has played a key role by introducing the Patient Safety Curriculum Guide for Medical Schools and a Multi-professional Edition, designed for global implementation across medical and healthcare establishments (WHO, 2016e). These guides have been widely integrated into the teaching and training materials of medical establishments internationally (Eltony et al., 2017; Lee et al., 2022; WHO, 2019a).

Industrialised nations such as the UK, US, Canada, and Australia have incorporated patient safety concepts into medical curricula and professional development programmes to enhance the competencies and skills of healthcare workforces (Kirkman et al. 2015; Yu et al. 2016c; Agbar et al. 2023). For instance, the NHS in the UK has shaped education and training within quality improvement and patient safety improvement frameworks, supported by organisations like the General Medical Council and Health Education England (GMC | UK 2020). In Australia, initiatives such

as the Patient Safety Competency Framework for Nursing Students have been introduced to enhance safety-related knowledge and competencies (Levett-Jones et al. 2017; De Rezende et al. 2022).

The USA has witnessed similar trends, with bodies such as the Accreditation Council for Graduate Medical Education (ACGME) and the Association of American Medical Colleges (AAMC) endorsing formal patient safety education from medical school through postgraduate and professional training (Kirkman et al. 2015; Passiment et al. 2020). Additionally, the Canadian Medical Education Directives for Specialists (CanMEDS) competency framework has incorporated essential patient safety competencies globally within medical and nursing curricula (Frank and Danoff 2009). These initiatives collectively highlight the global efforts to utilise education and training strategies to optimise safe practices in healthcare settings.

1.3. Interagency working in patient safety

Interagency working among various government departments, state agencies, or non-governmental organisations across diverse boundaries is increasingly recognised as a benchmark for effectively developing and implementing policies and services to a superior standard (Warmington et al. 2004; Duggan et al. 2009). This systemic pattern of working has been politicised in many sectors, within which it has received much attention and been the focus of political agendas (Atkinson 2007). For example, child welfare and family support, education, public service delivery, and youth justice in the UK and Ireland (Balloch and Taylor, 2001). This has been supported by multiple policy documents, which have stressed the importance of interagency working as the ‘engine for change.’

A specific example is that interagency working has been central to Welsh government policy in relation to delivering effective public services (Welsh Commission on Public Service Governance and Delivery 2014). This has been stated in multiple reports, reinforcing the importance of pursuing interagency initiatives for approaching joint collaboration, cooperation, and communication more effectively and consistently. As such, interagency working has witnessed an increasing movement within many sectors, demonstrating organisations and individuals’ interest in operating across boundaries, increasingly contributing to establishing effective arrangements in response to the enormous challenges encountered (Warmington et al. 2004b; Connolly et al. 2020).

The current body of literature has predominantly addressed interagency working in various sectors, with limited or negligible emphasis on its significance and potential advantages in enhancing health system performance and outcomes, specifically concerning the safety aspect of healthcare (Barnes et al., 2018). There is a necessity to delve into and comprehend potential influences of interagency working on the organisation and provision of high-quality healthcare. This encompasses the interrelation and interaction primarily among entities that exert influence over the entire health system, including regulators of the health system (LMoH and aligned national bodies, e.g., patient safety monitoring and accreditation institutions), healthcare organisations, and WHO—i.e., do and/or how they work together in an interagency context for achieving successful outcomes in patient safety. This commitment could therefore be the guiding trajectory for addressing patient safety challenges and improving the organisation and delivery of quality care in LMICs such as Libya.

To elaborate on this within the framework of the study being reported, it is crucial to examine and understand the impact and sway of the WHO in bolstering health systems across WHO-EMR countries, with a specific focus on patient safety under the umbrella of quality, particularly in settings facing severe challenges such as Libya (Letaief et al., 2021a). The WHO's approaches and programmes aimed at enhancing the quality of care in diverse WHO-EMR countries have garnered increasing attention (Al-Mandhari et al., 2018). This is evident in the literature, showing a clear contribution from WHO towards improving health system outcomes in WHO-EMR countries, including patient safety, through support and capacity building facilitated by WHO country offices (WHO 2015b; WHO 2015a; Fadlallah et al. 2019a; Ravaghi et al. 2022).

In parallel, such efforts have been translated into action for strengthening national health systems' capacities to facilitate and interpret patient safety policies and programmes in different WHO-EMR countries at various levels—from institutional to national (Letaief 2017). However, progress to date has been suboptimal in most WHO-EMR countries, including Libya, demonstrating a lack of commitment at the political and national levels to improving patient safety (El-Jardali & Fadlallah 2017).

Moreover, the Global Patient Safety Action Plan 2021–2030 is rooted in the authority granted by the World Health Assembly resolution WHA72.6, tasking the Director-General of WHO with devising a comprehensive global patient safety action plan in

collaboration with countries worldwide to effectively tackle challenges associated with patient safety worldwide, especially in low- and middle-income countries (WHO 2021). This strategic initiative, exemplified by the Global Patient Safety Action Plan 2021–2030, extends its concern to patient safety in conflict-affected and vulnerable (FCV) settings, a context relevant to Libya, as emphasised in recent WHO reports, technical support packages, and intervention guidance for enhancing quality of care in FCV settings (Leatherman et al., 2020; Letaief et al., 2021; O'Brien et al., 2022). Notably, challenges persist in formulating a comprehensive response to unsafe acute challenges in extremely adverse settings, evident in countries such as Libya, Yemen, Afghanistan, and Syria.

Taking Libya as a specific case, collaborative efforts between the Libyan Ministry of Health (LMoH) and WHO over the past decade aimed to establish a modern, efficient health system in the country (UNSMIL 2017; UNMAS | WHO 2020a). These endeavors sought to assess the health system's current status, identify issues, and develop strategies for its enhancement, focusing on redesigning and reforming policies, regulations, and decision-making processes. The goal was to optimise system methodologies for delivering quality healthcare services that align with public and patient expectations. Despite these joint initiatives, progress has fallen short, leading to persistent system failures and resulting in suboptimal healthcare outcomes across the country (Allen et al., 2022).

As a result, achieving improvements desired is still proving difficult (WHO 2021c). A key factor for this could be linked to the complex nature of patient safety challenges in the Libyan context, which require a jointly coordinated response by those influencing the health system as a whole and hence patient safety in Libya, including LMoH, healthcare organisations and managers, and also WHO through interagency working. Put differently, patient safety challenges in Libya might not be easily addressed without a holistic approach that is based on effective interagency working that ensures an effective coordinated response to such challenges. This requires an effective coordination role for LMoH and healthcare organisations, with support and capacity building from WHO, to be effectively addressed—i.e., achieving an 'robust synergy' towards patient safety improvement. As has become increasingly recognised in the sectors highlighted at the beginning of this section, effective interagency working can

also be the norm that is rooted in the everyday practice of those influencing patient safety to enhance patient safety outcomes in Libya.

Before achieving that goal, it is crucial to thoroughly comprehend the interaction and collaboration among the Libyan Ministry of Health (LMoH), healthcare organisations, and the World Health Organisation (WHO) concerning patient safety in Libya. This thesis attempts to fill the gap by improving understanding of how patient safety in Libya is approached and managed as an interagency effort among different agencies, including LMoH, healthcare organisations, and WHO. This involves a shared commitment to producing a holistic approach through interagency working, centred on communication, engagement, and coordination for joint actions, to understanding patient safety challenges so that a coordinated response to addressing these challenges can be ensured. That serves as catalysing for making sense of the role and contribution of those influencing patient safety in Libya towards getting it right for patient safety.

1.4. Rationale of the study

While patient safety has been well documented in many developed nations, relatively less emphasis has been placed on developing countries' (especially Libya) patient safety paradigm (Johnston et al. 2019; Panagioti et al. 2019; WHO 2021a). Putting succinctly, a significant portion of patient safety data and research has come from the developed world, leaving limited research findings available from developing countries and LMICs such as Libya. There has recently been a massive shift in the patient safety paradigm worldwide over the past two decades in developed countries, with an increasing focus being placed on research for improving care quality (Jha et al. 2010; WHO 2012; WHO 2018b; Wise 2018).

Information on medical harm in advanced health systems has been available since the early 1980s. Instances include studies on medical accidents in the UK (Vincent 1989), the Harvard Medical Practice Study estimating rates of preventable patient harm in the USA (Brennan et al. 1991), patient harm in Canada (Baker et al. 2004), as well as medical errors in Australia (Wilson McL. et al. 1995). Subsequent studies on medical harm aimed at reducing preventable patient harm and enhancing healthcare quality for patients have swiftly followed in these contexts (De Vries et al. 2008; Harrison et al. 2015).

That is, inquiries, recommendations, interventions, and practice-based initiatives have been introduced accordingly. In fact, such a well-established evidence base has helped in understanding complexities in healthcare systems, the prevalence of medical harm, as well as factors leading to unsafe care in the developed world. This has, moreover, led health authorities and policymakers therein to introduce patient safety organisations and structures, combined with new policies, regulations, regulatory agencies, standards, and interventions to improve patient safety (Elmontsri et al. 2018c). Thus, evidence-based patient safety improvement initiatives have existed for longer in such contexts.

Concerns about patient harm in LMICs such as Libya have risen due to a lack of knowledge, reliable data, and attention from health organisations and researchers (Elmontsri et al., 2018a). Limited research in countries like Libya indicates significant concerns about healthcare quality and safety, yet contributing factors and consequences are not extensively studied (Aveling et al., 2015; Saleh et al., 2015b; Lawati et al., 2018a; Yang, 2018a). Developing countries face higher rates of medical harm (e.g., HAIs) with inadequate resources and outdated systems and infrastructure exacerbating the problem (WHO, 2011; WHO, 2014; Farokhzadian et al., 2018). Despite the serious situation, reliable data on patient safety in Libya is limited (Johnston et al., 2019).

Political instability in Libya since 2011 has strained the healthcare system, leading to facility closures and contributing to unsafe care (SARA | WHO, 2017; UNSMIL, 2017; UNMAS | WHO, 2020a; SAIM, 2016). WHO has highlighted failures in the Libyan health system, emphasising the need for improvements in patient safety and healthcare quality (SARA | WHO, 2017; UNSMIL, 2017; UNMAS | WHO, 2020a). Despite limited studies on medical harm and patient safety in Libya, existing research indicates suboptimal patient safety levels (Rages, 2014; Eltarhuni et al., 2020). However, comprehensive understanding and knowledge about patient safety in Libya remain limited. Recognising the potential for improvement, this thesis aims at providing an insightful portrait of patient safety organisation, management, and concerns in Libya, incorporating perspectives from national health system policymakers, healthcare managers, and WHO. The goal is to develop a holistic, context-lens approach for understanding, managing, and improving patient safety in Libya through enhanced interagency working (Elmontsri, 2018, 2019).

The researcher's interest and background have significantly influenced the study being reported. With an MSc in Safety and Health Management, focusing on risk management, and a Libyan origin, the researcher has a personal connection to the healthcare complexities in Libya. Having graduated in 2016, the researcher's experiences, including volunteering in healthcare settings, sparked a keen interest in patient safety. The aim is to contribute to improving human lives through empirical research, recognising the direct benefits to patients, healthcare organisations, as well as policymakers. The researcher believes that understanding patient safety within the Libyan health system as a whole is crucial and aims to contribute to improvement efforts.

1.5. Aim, objectives, and research questions

Libya is striving to fulfil WHO's three overarching goals for overall health system performance: delivering high-quality healthcare, being responsive to population expectations, and ensuring fairness in financial contributions (WHO, 2000). In line with these objectives, this study attempts to improve understanding in two key areas:

1. Patient safety organisation, management, and concerns in Libya, explored through the perspectives and experiences of national health policymakers and managers; and
2. Interagency working in patient safety throughout different levels of the Libyan health system, encompassing WHO's contributions to improving patient safety in Libya and effects on the organisation and delivery of safe care in Libya.

This understanding remains crucial, considering the significant potential for improving patient safety in Libya. The study aims to address the following questions:

1. How is patient safety operationalised, organised, and managed within the Libyan health system?
2. What patient safety challenges and concerns have been perceived by Libyan health decision-makers, policymakers, and healthcare managers?
3. How does the interplay and interface between WHO and the Libyan health system's patient safety strategy affect the organisation and delivery of safe care in Libya?
4. What strategies can be effectively employed to address challenges to patient

5. safety in Libya?

The study's specific objectives were formulated to achieve the overall study's aims and desired outcomes: -

1. To investigate and elucidate patient safety regulation across the Libyan health system, examining the development and implementation of policies, strategies, and mechanisms for patient safety, and gaining insights from healthcare managers' experiences with these measures.
2. To map and assess the role and impact of the WHO in advancing patient safety in Libya. Additionally, evaluate the involvement of Libyan health system policymakers in shaping WHO regional patient safety policies and strategies.
3. To examine the level of political commitment of the Libyan health system regulators to the development and implementation of patient safety policies and strategies in Libya.
4. To probe the views and experience of healthcare managers in Libya regarding patient safety mechanisms. Identify factors that either facilitate or hinder implementing patient safety practices, as perceived by these managers.
5. To explore what improvement initiatives for patient safety have been developed and implemented in Libya as well as identify associated facilitators and/or barriers.
6. To suggest a holistic model for devising effective strategies for patient safety improvement in Libya (at policy and practice levels).

1.6. Overview of research method

The study employed an Exploratory-Descriptive Qualitative (EDQ) research approach (Patton 2002), utilising interviews and policy documents review and analysis. The data were analysed inductively using content and thematic analysis strategies, interpreted from the lens of the systems approach (MacQueen and Milstein 1999; Braun and Clarke 2006; McGill et al. 2020).

1.7. Structure of the thesis

This thesis is organised and presented in nine chapters as displayed in Table 1.1.

Table 1.1: Structure and Organisation of the Thesis

Chapter	Description
1. Introduction	This provides an overview positioning the study and the rationale behind carrying out this research, followed by a statement of the study's aims and research questions, objectives, and methods.
2. Background: Libya	This chapter provides a general background on Libya, including geography, history, socio-economic development and reforms, the political system, and the health system, along with associated challenges.
3. Scoping Review	This chapter synthesises evidence relating to patient safety in the WHO EMR.
4. Methodology	This chapter provides an overview of the philosophical underpinnings of the research study, the methodological approach, data collection and analysis methods, and the rationale for these. It then moves on to describe research rigour and quality criteria, piloting, and study ethical considerations
5. Findings (1)	This chapter presents findings regarding how patient safety is operationalised, organised, and managed within the Libyan health system, along with associated challenges and contributing factors.
6. Findings (2)	This chapter focuses on interagency working in patient safety and how the interplay and interface between WHO and the Libyan health system's patient safety strategy affects the organisation and delivery of safe care in Libya.
7. Findings (3)	This chapter presents strategies perceived by participants as needed to respond to complex patient safety challenges in Libya, particularly through enhanced interagency working.
8. Discussion	In this chapter, the study's findings are discussed and interpreted in line of existing literature. It also introduces a holistic, context-lens framework for patient safety improvement in Libya, taking into account the complex organisational, political, socio-technical, and cultural aspects and factors that influence the Libyan health system as a whole and henceforth patient safety.
9. Conclusions and Recommendations	This chapter presents the contribution of the study knowledge and literature, the conclusions of the study along with recommendations, areas and directions for further research, and study limitations

1.8. Understanding the context: moving from general to specific

After establishing a broad understanding of patient safety at the global level, including LMICs, the following chapter narrows the focus to Libya—a country with a unique

blend of challenges and opportunities that influence the Libyan health system and the quality of healthcare services. This not only contextualises the study within a specific geographical and cultural setting but also sets the stage for addressing a global concern within the specific context of Libya. The rich history, socio-economic developments, political transitions, and characteristics of the health system in Libya could offer a vivid backdrop against which the complexities of patient safety challenges can be explored and addressed. The narrative journey from the broader challenges faced globally in patient safety, as elaborated in this chapter, to the specific intricacies of Libya and its health system in the following chapter emphasises the importance of understanding national and local contexts in addressing global health system challenges, including patient safety. Thus, the following chapter will lay the groundwork for a focused inquiry into challenges to the Libyan health system and suboptimal patient safety outcomes. This transition not only enriches the thesis with a deep understanding of the specific setting but also highlights the importance of tailoring improvement strategies to the nuanced needs of different contexts. Moving forward, the insights from Libya's background become a lens through which the study's objectives and research questions can be examined with greater specificity and relevance.

1.9. Chapter summary

The present chapter offers a comprehensive overview of the thesis. It began by emphasising the importance of context and highlighting the researcher's interest in the issue being explored. The conceptual justification for conducting the study in Libya, where research on patient safety is limited, was provided. The chapter outlined the purpose of the study, the research questions, and the study objectives. Additionally, the research method—a qualitative strategy involving in-depth, semi-structured interviews and policy document reviews—is overviewed. The structure of the thesis, as well as the link between Chapters 1 and 2, were also outlined to address the aforementioned aspects.

Chapter Two: Background of Libya

2.1. Introduction

This chapter offers a comprehensive overview of the study's setting, Libya. It encompasses key aspects such as geography and climate, demographics core cultural values, historical background, socio-economic development and reforms, the political system, and the health system profile. Additionally, associated factors within each aspect that influence the health system and patient safety outcomes in Libya are discussed in the chapter.

2.2. Geography and climate

Libya, designated and referred to herein as a WHO-EMRO country, is located in North Africa and ranks as the 15th largest globally and the third largest on the African continent. Positioned at a geographically strategic juncture connecting Europe to Africa, Libya boasts unique values and a distinctive heritage, featuring strengths like a dynamic workforce, abundant natural resources, and robust economic and capital reserves (Multilateral Investment Guarantee Agency, 2021). Encompassing an expansive area of 1,759,540 square kilometres and situated between 26 latitudes north and 17 longitudes east, Libya shares borders with seven countries. The Mediterranean Sea lies throughout Libya's northern border, with Sudan to the southeast, Egypt to the east, Algeria and Tunisia to the west, and Niger and Chad to the south (Australian Department of Foreign Affairs and Trade, 2018).

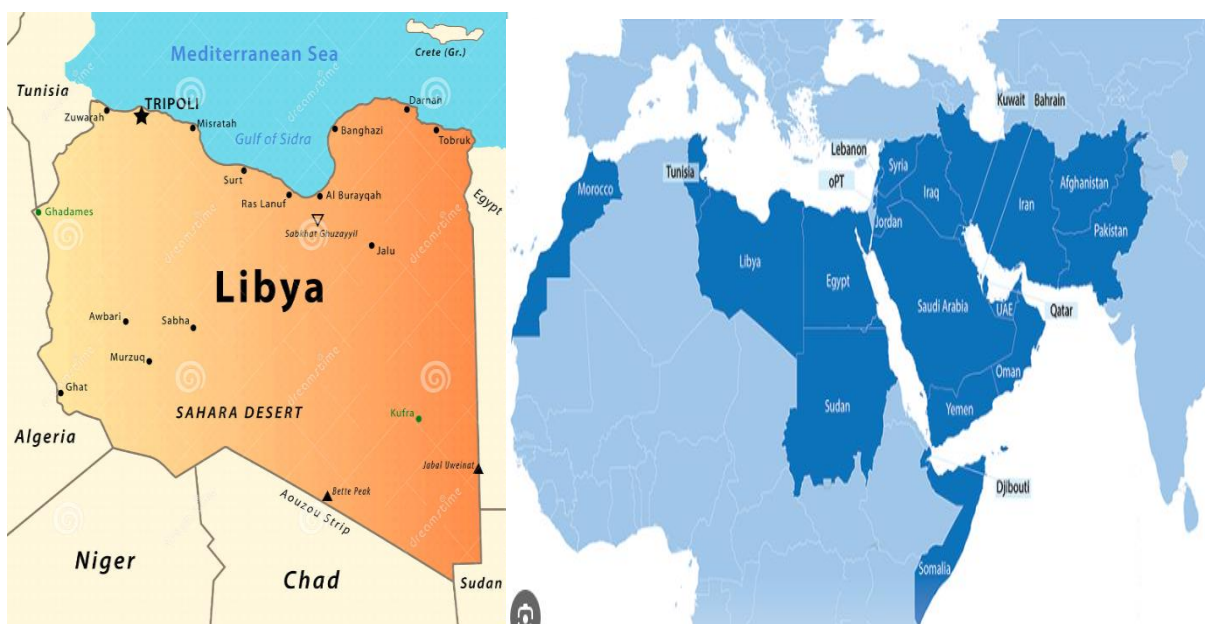


Figure: 2.1: Map of Libya (EIA 2015)

Libya is globally ranked as the fifteenth largest country and the third largest in Africa. The estimated population in 2019 was 6.537 million, with 80.7% residing in urban areas (WorldMeters 2019). The capital, Tripoli, situated in the north-western region, has a population of 1.2 million (Australian Department of Foreign Affairs and Trade 2018). Covering an area of approximately 1,665,000 square kilometres, Libya boasts a Mediterranean coastline spanning about 1900km (SARA | WHO 2017). Recognised as a critical gateway to European countries, Libya holds strategic importance for Africa. While a large proportion of the population occupies most coastal areas, several towns are scattered across the mainly desert south. Tripoli, the capital city, is 1000 kilometres west of Benghazi, which is the second largest after Tripoli, located in the eastern region.

Approximately 90% of Libya comprises desert or semi-desert, with limited natural freshwater resources (Ekhtor-Mobayode et al. 2023). The absence of permanent rivers is compensated by intermittent riverbeds flooding during rain but remain dry most of the time. The country's Mediterranean climate features four seasons characterised by a warm winter and a dry summer (The World Bank 2022). The climate varies from temperate in the northern coastal regions with winter rainfalls to semi-arid and arid in inland and desert areas, respectively. Aridity, mostly due to the Saharan plateau, has been a notable constraint on economic activities, with hot, dry winds occasionally raising temperatures in the north during spring and autumn.

2.3. Demographics and core cultural values

This section focuses on people, culture, and history in Libya.

2.3.1. People

Notably, the national census determines the population statistics and characteristics in Libya (Amhem 2022). Libya has been conducting six consecutive official censuses since the country's liberation, conducted once in a decade. A new federal population census was carried out at the end of 2006. Other sources, including the Population Reference Bureau and the World Population Predictions estimated the Libyan population in mid-2010 at approximately 6.04 million people, with a growth rate of 0.8% (PRB, 2012). The World Bank figures also align with the Libyan census, showing that about 6,871 million people were living in the country by 2020. The non-nationals were close to 12% of this population while only about 4. According to U.N. projections, the Libyan population in 2040 is expected to reach nearly 8 million people (United Nations

2022: Population Estimation). Its Mediterranean coastline measures over 1900km, which is relatively huge compared to its population.

The national census shows a 50.73% male and 49.27% female population with a sex ratio of 102.9 (WHO, 2020). Just over a third of Libyans are below 15 years old (31.06 percent), as opposed to 39.1 percent in another census undertaken in 1995. Tripoli and Benghazi, the two major cities of Libya, accommodate over half of its population (Aboubaker 2023). It shows an uneven population distribution, of which 86% live in towns and occupy only 10% of the country's territory, concentrated in narrow coastal strips of the North Mediterranean (Al-Fawwaz, 2020). In most cases, the ethnic groups of Libya consist of mixed Arabians and Berberes, making up almost 96.5% of the inhabitants, except small Tebu and Tuariq nomads or semi-nomads located in the south part of Libya. Foreigners include Arabs, Africans, a few Europeans, and Asians.

Before 1954, Libya's population was increasing at a slow rate. The high casualties in Libyan territory during the post-Italian colonisation, owing to the devastation caused by WWII, could explain this observation better. Nevertheless, statistics show that the population in Libya grew at a very high speed from 1980 up to 2020, amounting to six percent per year (Al-Fawwaz, 2020). This may be due to changes in living and working patterns, more excellent education and increasing employment opportunities afforded to women, delays in women's marriages – implying that their husbands may marry later on, and a lesser need or desire among families to grow.

Since the 1980s, Libya has experienced a significant increase in its population, growing at an accelerated pace of 6% per year (United Nations 2022: Population Estimation). This rapid growth, coupled with a high concentration of the population in urban areas, has put a strain on the existing health system and healthcare infrastructure across the country. With 86% of the population living in urban areas such as Tripoli and Benghazi that occupy only 10% of the country's territory, the demand for healthcare services in these regions has surged, outpacing the health system's capabilities and capacities to expand and adapt to ensure a quality level of health services for all citizens (UNMAS | WHO 2020).

The urban concentration has potentially contributed to overcrowded healthcare facilities, limited access to care in rural areas, and a stretched thin healthcare workforce in Libya, potentially resulting in a failure to provide quality health services.

Therefore, a new health system strategy may need to be nationally developed based on the population growth and the accompanied growing health needs in the country (Elmasuri 2016; Eddib and Eddib 2023), taking account of the current situation generally. This can potentially help redesign and strengthen the health system to ensure quality patient-centred quality care services that satisfactorily meet the population needs in Libya.

2.3.2. Culture

The Libyan culture has undergone rapid changes and transformations in the past few years, resulting in new values, behaviours, lifestyles, and also health issues (Al-Areibi, 2019). Islam forms the core religion in Libya. The majority of the people in Libya are Muslims, with more than 96% practicing Sunnism. Arabic is a state language in Libya, while English is ubiquitous because many non-Arab immigrants work in different spheres and fields throughout Libya (Al-Fawwaz, 2020). Put differently, many university schools utilise English as one of their most commonly spoken languages (for example, linguistics and medical dental). Additionally, Italian and French, which are also spoken, can be heard in several large cities of Libya.

Jeannotte, (2017) argued that culture comprises shared meaning, understanding, beliefs, and sense-making. It would be best to consider culture alive, something people produce by creating and re-creating their worlds (Al-Areibi, 2019). Muslims apply an Islamic approach to running their lives by living according to the Sharia Law, which becomes the leading factor determining behaviour, views, social norms and values, public law, and economic policies in every Muslim country. The unique customs and cultures of one's country distinguish it from others (Aboubaker 2023). That religion is entrenched within most facets of Libyan life is evident in how Libyans practice their beliefs day to day. Libya predominantly adheres to Arabic beliefs, sharing cultural norms and customs with other MENA (Middle East and North Africa) countries, such as Algeria, Egypt, and Tunisia. Socially, Libya presents itself as a cohesive entity.

Self-centred style of management culture: The majority has considered this culture to be a group of corrupt individuals dismissing to share the values and aspirations of others in the workplace and also community at large (Gentili 2017; Liu et al. 2022). In a typical developing, upper middle-income country such as Libya, organisations are usually run by unskilled or weak individuals who concentrate on retaining positions, often undercutting the public interest and interests of those who lead them and

providing support or protection upon request (Al-Areibi, 2019). Moreover, Eddib & Eddib (2023), who also argued that many unqualified individuals have been placed in leadership and management positions in Libyan healthcare organisations, contributing to the inefficiently running and poorly organised healthcare systems. This self-centred style of management culture is broadly characterised by its attitude that "the society is for us" (Lakhdar 2016), and it is not only relevant to healthcare organisations in Libya, but has also penetrated into other sectors, such as Libyan education institutions (Mohammed et al. 2020).

The Libyan culture in healthcare organisations has mostly tended to prioritise individual achievements and personal success, influencing management styles to increasingly lean towards self-centred approaches to healthcare management, resulting in suboptimal governance and organisation outcomes (Çelik and Taguri 2021; Abdalla and Abdalrahman 2023). The healthcare management and leadership culture has showed traits of being self-centred, which could be influenced by a combination of cultural factors emphasising authoritative individualism in decision making rather than adapting a collective approach to decision making that is more inclusive and considerate of different perspectives at all levels of the healthcare organisation. This might have contributed to the low level of service quality and weak performance of healthcare systems in Libya. Transforming and improving healthcare organisational culture in Libya can therefore be a facilitator and key change agent towards improving the overall health system's efficiency, performance, and outcomes, especially at the point of care delivery.

More specifically, the current Libyan healthcare organisation's top management and leadership style of 'Director-General' has been underscored as a governance and leadership determinant influencing both organisational performance as well as the health system as a whole in Libya (Mohammed et al. 2020). This could potentially correlate with the observed shortcomings in service quality and the prevalence of healthcare challenges in Libya. Notably, evidence related to the Libyan health system rebuilding efforts has therefore emphasised the necessity of transforming the current health governance and leadership model into a board of directors, akin to that adopted in health systems in most developed countries (Rages 2014; Çelik and Taguri 2021; Eddib and Eddib 2023). Such a transformation could hold promise in better aligning

healthcare organisation needs and priorities, thus positively influencing organisational culture and fostering a commitment to achieving quality outcomes.

2.3.3. History

Before gaining independence, Libya experienced limited organisational activities. Throughout its history, the country was subject to various foreign dominations, including the Phoenicians, Carthaginians, Greeks, and Romans (Adams et al., 2019). Traces of Greek and Roman culture can still be observed in archaeological sites such as Leptis Magna, Cyrene, Sabratha, and Apollonia. In the 7th century A.D., the Arabs conquered Libya (Al-Fawwaz, 2020), and in the mid-16th century, the Ottomans took control, maintaining influence until the Italian invasion in 1911 (Bugaghis 2011). The Italian occupation led to over two decades of resistance by the Libyan people. Historically, Libya comprised three regions: Tripolitania forms a large part of the west, Cyrenaica in the east, and Fezzan throughout the centre and the far south. The Allies regained control of Cyrenaica in 1922, administering Tripolitania by 1943 (Alkhamis et al., 2021).

On March 1, 1949, Idris As-Senussi declared Cyrenaica independent, leading to a U.N. resolution that freed Libya by January 1, 1952 (Alkhamis et al., 2021). On December 24, 1951, Libya gained independence as the United Kingdom of Libya, with Idris al-Senussi becoming the emir of Cyrenaica. The nation adopted a federal structure, with self-rule for the regions of Cyrenaica, Tripolitania, as well as Fezzan, each having its own government. Tripoli and Benghazi served as the dual capitals. Muammar al-Gaddafi seized leadership on September 1, 1969, overthrowing King Idris al-Senussi in a peaceful coup (Adams et al., 2019). Al-Gaddafi disbanded the monarchy, announced the Republic of Libya, and, in 1977, introduced the Jamahiriya, a system of socialist authoritarianism. Under Jamahiriya, all national productive units and the entire country came under the direct control of popular congresses, reflecting the principles of the government (Almaktar et al., 2021).

Country-wide political violence followed in February 2011, with fight escalations taking place between the national military and opposition forces (newly formed at that time) protesting to overthrow the al-Gaddafi regime. Then, the opposition forces took over Benghazi city together almost throughout Eastern Libya, western cities, and the formation of the National Transitional Council (NTC) (Dehnavieh et al., 2019). In March 2011, Resolution 1973 was adopted under the "No-fly Zone" over Libya, authorising

some foreign troops' intervention, aimed at the protection of civilians, after several atrocities committed by the fighting forces. However, after the liberation of Tripoli (the capital city) on August 20, the al-Gaddafi regime was almost exiled from power (Chemlali 2023).

The death of al-Gaddafi in Sirte on October 20, 2011, ended his rule in Libya, whereby no other city was left standing. The NTC announced the liberation of Libya on October 23 and appointed a transitional government to govern the country. The Supreme Election Commission conducted an election on July 7, 2012, for the very first time after the downfall of the Al-Gaddafi regime and chose 200 representatives for the General National Conference (GNC) (the parliament) (Chemlali 2023). Following, the GNC formed a national interim government to prepare for elections for a new statutory assembly to produce a national constitution to be introduced for a national referendum. To date, Libya has experienced various transitional periods; however, the complexity of the problems and the volatility of the political situation persist. As a result, the lack of political stability, combined with subsequent volatile socioeconomic conditions, has severely undermined leadership and planning processes in the health sector in Libya, leading to poor health system outcomes, compromising patient safety (Saieh 2021).

2.4. Libya's socio-economic development and reforms

In recent years, Libya has purposefully returned to prosperity through integration with international systems, preserving its peculiarities and heritage. However, this decision should be made after serious consideration, reflection, and national priority assessment for the prosperous and successful distribution of fortune to people in Libya (Almaktar et al., 2021). But Libya has confronted diverse political, economic, social, cultural, and political issues since the early 2000s, particularly after 2011. As such, it is necessary to comprehend how these difficulties have impacted the people, the nation, and the Libyan health system (Bozakouk et al., 2022). Policymaking, decision-making, and organisational health management should come over the present situation to allow them to be much more productive in creating an appropriate setting for a change.

2.4.1. Education

Education was almost not prioritised during the occupation periods that Libya witnessed (Barbour et al. 2022). Libya was one of the most impoverished countries globally at the time of its independence in 1951. It had a low number of citizens who

were literate, poor, and unhealthy (Bozakouk et al., 2022). Since the 1960s, Libya has depended on oil revenue and promoted quick education growth. Hence, education is viewed as a means of securing employment and development (Dehnavieh et al., 2019). The Libyan government has made education mandatory and free for children whose age is between 6 and 18. During the 1970's and 1990's, education was rapidly growing in the country (Bozakouk et al., 2022). During this period, there was a 2-fold increase in the school population; female enrolment went up by over 130 percent while males were 80%. However, as far as primary/middle schools (6th grade) are concerned, education was made mandatory only in 1975 and since then has been extended up to secondary education for about 18 to 19 (Batista et al., 2021). The entire burden on the government concerning the curriculum, teachers' provisioning, and training were fully covered and supported.

The Libyan administration motivates exceptional performers among its citizens to study further in foreign countries, such as the U.K, USA, and Canada, which are more advanced, to increase their scope of learning and development (Batista et al., 2021). For instance, the researcher obtained a full scholarship for the postgraduate study being reported. At about 4% of gross domestic product (GDB), Libya's expenditure on education is close to the MENA average (Dehnavieh et al., 2019). Adult literacy is reported at 88.5%, one of the highest in the region, with males having a better position at 93.7% compared to 83.1% for females (Dehnavieh et al., 2019; Barbour et al. 2022). In comparison, youth literacy is one hundred percent (100%) better than the neighbouring countries. However, the education status among males and females in the MENA regions is different because females of the student population usually have more education compared to males (Almaktar et al., 2021). In addition, the female literacy rate in Libya is more advanced than in most countries within the MENA areas (Dehnavieh et al., 2019; Barbour et al. 2022).

Libya is currently considered an economy in the middle stage of development and is classified among high-income countries (World Bank 2019). In this case, there would be typical attitudes to education and ones caused by secondary schooling that do not resemble those usually found in most of the developed world. However, education is still at a low-quality level to date (Batista et al., 2021). Although significant successes in the last forty years have achieved good primary results, the system still fails to meet

its objectives, such as providing the necessary training and skills for economic growth (European Institute of the Mediterranean 2022).

Numerous significant issues, such as low-quality inputs including curriculum, teaching, infrastructure and facilities, and assessment methods, and disparities in funding resource allocation, have impacted the Libyan education system's overall quality and its global competitiveness rating (Elkhouly et al. 2021). For instance, there is a lack of national and/or international standards in Libya against which educational system could be benchmarked to improve outputs and outcomes (Almaktar et al., 2021). Additionally, there is no single coordinating agency existing to provide nationwide planning, monitoring, and tracking procedures for the education sector in Libya (Batista et al., 2021; Elkhouly et al. 2021). At present, connection, coordination, and engagement between higher education institutions and healthcare organisations, commonly seen in industrialised countries, are almost absent in Libya, compounding the prevailing challenges (Elkhouly et al. 2021). These gaps collectively contribute to the debilitation of healthcare systems in Libya, impeding the cultivation of a skilled and adequately trained healthcare workforce, and constraining the development and implementation of innovative and evidence-based practices in medical care to improve outcomes (Çelik and Taguri 2021; Elkhouly et al. 2021).

4.4.2. Economy

Libya's principal resource is crude oil and gas. Before the oil discovery in Libya, Libya's economy was weak; the country has been transformed to be among its best comparative neighbours in physical and human infrastructure development (Estrada et al., 2020). Over the last four decades, Libya's economy has been dependent principally on revenues derived from oil and other petroleum by-products like natural gas, which are the backbone of the economy. By 2010, it was generating nearly 66 percent of the GDP, close to all exportation of goods, and more than 75 percent of the government's income (Estrada et al., 2020). Nevertheless, despite its low density of population and oil revenues, Libya's per capita gross domestic products is one of the highest (approximability £7498.85). However, a negligible portion of that translates into societal benefits (Osborne et al., 2022). In formality, Libya contributes 60% of its GDP, with a small percentage of formal human resources. Libya has a national contribution of 20 points on public services such as education, health, and social care

(MISIRL and Orhan, 2022). However, this contributes only nine percent of the country's GDP while forming 56% of its formal human resources.

Moreover, about 27% of Libyan females are engaged in national economic activities, and over the past decade, the unemployment rate has been at 20.7% (21.6% male, 18.7% female). Climatic conditions are poor; hence, Libyan soils cannot provide sufficient crops (Osborne et al., 2022). Therefore, most food supplies in Libya are imported (about 75%). The rise of oil prices in the last few decades has resulted in higher export earnings, contributing to better macroeconomic balances but with little effect on large-scale economic expansion (European Institute of the Mediterranean 2022). Steps towards restoring some parts of the economy, such as the retail industry, based on partnership and joint ownership have also been undertaken in the past few years (MISIRL and Orhan, 2022). Economic reforms in Libya could be faster, considering the country needs modernised economic infrastructures. Libya's experience over the last four decades shows magnitudes of investments in several sectors. These have led to a satisfactory level of infrastructure necessary for an economy (Osborne et al., 2022). Nevertheless, over the past twenty years, several issues regarding areas, including unemployment, health care, housing, and education connected with the government management of the economy, have emerged (European Commission 2022).

Libya has often been considered a distributive state, where its institutions are not gathering wealth through taxes and similar means; however, they seem to be spending it. Indeed, the main work of the Libyan administration is making budget allocations (Renzaho, 2020). Such policies often result in market distortions and inefficiencies because they concentrate efforts on distribution instead of wealth creation. Libya's state-owned enterprises (SOEs) must be more secure, unsound, and unjust towards the companies awarded contracts. Government salaries are small and independent of efficiency in SOE managers and are not recommended for maximum output work (Renzaho, 2020). The Libyan private sector, including private healthcare services, suffers enormous bureaucracies, leading to policy uncertainty; expensive capital and basic banking facilities are inaccessible (Global Health Cluster 2020). As a result, numerous authentic enterprises need more money, thus stifling innovation (Osborne et al., 2022). These are some of the poor productivity hindrances, such as small businesses needing to have the benefits of scale or efficiencies, evading exaggerated

taxation, and having relatively low-quality standards. Such issues have contributed to influencing the Libyan health system and overall outcomes, hence the suboptimal quality of health services (Çelik and Taguri 2021).

However, the state has represented a significant constraint on the Libyan economy with bureaucracy, wasteful subsidies, and ownership of critical assets. This has led to antisocial and economic transformation, where many of the constraints result from inadequate economic governance by incompetent leaders (Sharafeddin and Arocho, 2022). Occasionally, legislation changes suddenly and does not appear convincing, even to prospective local investors. The major limitation is overdependence on oil – it constitutes more than two-thirds of government earnings and over nine-tenths of earnings through foreign exchange. About two-thirds (60%) of government finances are used to pay not-so-useful but relatively low civil servants in a country endowed with significant oil and gas resources (European Commission 2022). As elaborated in Section 2.3.2, another shortfall includes weak managerial efficiencies in certain companies and the absence of well-trained Human Resources (HR) specialists (Mohammed et al. 2020; Renzaho, 2020). In the case of Libya, though the country can be endowed with a rich resource base, top managers do not possess the necessary competence and experience to deal with these resource bureaus (Lakhdar 2016; Gentili 2017). According to the European Institute of the Mediterranean (2022), it has been imperative and urgent to support economic reforms in the public sector in Libya including healthcare to improve overall outcomes such as quality and safety.

Sanctions imposed on Libya by the U.S. during 1984-1999 affected the exploration and production of oil and gas from that time up to the beginning of the third millennium. They decreased the crude oil output in subsequent years (Sharafeddin and Arocho 2022). Access to the oil and gas fields and services was greatly hampered as a result of the sanctions, especially evident in the absence of the U.S presence in the Libyan upstream market. Then, the U.N. issued sanctions [1992-1999] when some assets were temporarily blocked outside the territory (Renzaho, 2020). The overall life of Libyans was affected by these sanctions, as well as their social, educational, and financial developments. Besides, the country remained unplugged from new knowledge and technological discoveries, which in turn contributed to the underdeveloped health system therein (Estrada et al., 2020). However, the sanction resumed in 1999, with the U.N. lifting its embargo in 2003 and the U.S. lifting theirs in

2004. The World Bank estimates about 18 billion dollars' worth of oil output loss, mainly due to underinvestment, with Libya claiming they denied their economy 33 billion dollars' worth (World Bank 2020).

To date, Libya's economy remains fragile and anchored to oil production (Devi 2022). It, predominantly reliant on oil and gas revenues, has seen significant fluctuations that directly influence the provision of public services, notably healthcare (SARA | WHO 2017). Despite having one of the highest in per capita incomes within the MENA region, the allocation and distribution of financial resources towards health system development and improvement has remained deficient in Libya (Çelik and Taguri 2021). Similarly, the nation's heavy dependence on oil and gas renders it susceptible to the global market volatilities, thus compromising the government's capacity to adequately fund public services, including healthcare (European Institute of the Mediterranean 2022). This has contributed to the perception of suboptimal outcomes within the health system in Libya.

The amalgamation of various factors delineated above, combined with the state's role in the economy that is characterised by bureaucracy, have led to inefficiencies in public sectors that extend to healthcare (Devi 2022). The lack of effective socio-economic development and reforms in Libya have profoundly impacted its health system, fostering a multifaceted environment wherein the system is struggling to cater to meet the needs of population and ensure quality outcomes (Çelik and Taguri 2021). The economic challenges compounded by a lack of investing in healthcare infrastructure and services have led to underdeveloped healthcare systems, shortages in medical supplies, outdated facilities, and inadequate service delivery. Addressing such challenges therefore necessitates introducing comprehensive, system-wide reforms to augment socio-economic status in Libya, thus fostering prosperity and enhancing public sectors, including a healthcare system capable of meeting population needs and ensuring quality healthcare provision (Elmagbri et al. 2022).

[2.4. The political system in Libya](#)

While every nation has its own tolerance threshold for corruption, the degree of such abuse differs worldwide. The highly corrupt countries, in general, are less developed than the least developed countries (Spyromitros and Panagiotidis 2022). This is true regarding Eastern Europe, Africa, and South America's experience of developing countries (Sharafeddin & Arocho, 2022). To establish the nation's autonomy on the

one hand and to make it more proactive in driving development and improvement agendas for public and private sectors, there is a need for a sense of vision backed by political will, which is highly needed to reinforce the development and improvement of the Libyan health system to ensure high quality health services (Elmonsri et al. 2018).

However, the political environment and changes in Libya since 1970s presented many challenges to the development of the public and private sectors in Libya, including healthcare (Belhaj et al. 2023). The economic reforms over the past 40 years have severely hindered effective management, governance, and stewardship practices and mechanisms in Libya (Sharafeddin and Arocho, 2022), which has negatively contributed to creating a fragmented health sector in the country. Often, inadequate political management, governance, and stewardship arise when key political actors in Libya lose the capacity or lack the willingness to enhance and apply their influence to push towards development and improvement (Rages 2014). Rather than addressing their mounting difficulties and issues, they (political actors) often tend to refuge them up, a condition that leads to several issues:

- It is, however, very improbable that there may be an elaborate plan and enough allocations to actualise this vision budget from the government (Telci, 2020). It is unlikely to have committed political or managerial support for good practices that depend primarily on individual initiatives.
- It lacks the necessary measures to ensure quality public service provision, including the healthcare sector, is only provided by qualified individuals (as discussed in Section 2.3.3).
- However, public institutions, including health organisations, are incompetent and rarely provide the services they were formed to perform. The government is seen as paying for nothing since its organisations, such as healthcare and education, do not seem to offer those commodities (Telci, 2020), resulting in suboptimal outcomes (e.g., poor quality health services). With time, they tend to perceive themselves as the rulers and controllers and not the providers, whose work is to serve population and, therefore, should be accountable to them (Mohammed et al. 2020).

- New environmental conditions, such as advanced technology and evolving societal expectations, are reshaping society. As a result, governmental institutions, including healthcare organisations, are inefficient and powerless in handling such unprecedented challenges or keeping pace with emerging global trends (Saieh 2021).
- Sometimes, it proves impossible to determine who has made what decision in many cases (Elmagbri et al. 2022; Irhiam et al. 2023). Whose fault, is it? The spreading of responsibilities makes it difficult to ascertain who is reasonably accountable or responsible for what.
- Performance management, monitoring, and oversight are lacking (Abdalla & Abdalrahman 2023). National institutions are not well managed, suffering from inadequate oversight and poor management, compounded by a lack of national performance indicators for continuous improvement, including in healthcare.

Entering 2020, Libya was a wholly divided country whose competing military and political factions operated parallel and frequently conflicting government systems (Saieh 2021). The Government of National Accord (GNA) came in to have authority over the Western side, including Tripoli (the capital city). On the other hand, another National Interim Government, supported by a military group under the name of the Libyan National Army, was on the east, centre, and south (Telci, 2020). However, these control bodies had different control mechanisms and budgets. The entire Libyan central bank (CBL) was split into two parallel sides. The CBL in Libya supplied Libya's money supply and foreign reserves while mimicking the CBL's currency printing function on the eastern side. The only oil export is carried out by a corporation located in Tripoli, the National Oil Corporation (WHO, 2020). It should be noted that the guard of petroleum facilities, which ensures the security of all oil fields in Libya, is split into mutually conflicting troops, consisting of East and West.

The political transition has undermined the political stature that subsequently impacted all state sectors, including healthcare, hence the relevance of this current research study. In the opinion of Oun et al. (2017), the situation in Libya is very complicated because there are two-armed power groups with opposing views. The country operates with a total territorial setback, which hinders its growth and advancement in all spheres (WHO, 2020). The government has experienced a frozen political impasse

that led to a rise in crime, such as kidnapping, kidnappings, human trafficking, and illegal mass migration from Africa via Libya into Europe (Zurqani et al., 2019). Ekhatior-Mobayode et al. (2023) also observed post-revolution expansion, acknowledging an unsusceptible political situation with no damage or possible injury status. Accordingly, it is recognised that the current crisis to date in Libya is viewed as a political rather than a military solution.

In conclusion, the post-2011 period, characterised by political division and conflict, has witnessed Libya splitting into rival factions with two competing governments: the GNA controlling the west, based in Tripoli, and the army-supported government in the east of the country (United Nations 2023). This division further extended to the Central Bank of Libya and other key institutions, resulting in duplicated functions, fragmented authority, and competing political frameworks. The severe fragmentation has severely undermined strategic planning, regulation, policy making, supervision, and stewardship of the health system in Libya, eroding the health system's capacity to function effectively thus failing to ensure an acceptable level of quality health services (WHO 2022). It is worth noting that addressing these challenges will require a comprehensive approach that encompasses political stabilisation, institutional reforms, and the re-establishment of effective governance mechanisms to ensure accountability and efficiency across the Libyan health system for quality outcomes.

2.5. Libyan health system profile and associated factors influencing quality and safety

The Libyan primary healthcare service provider is its government, and these services are provided free of charge at the delivery point to all citizens. In addition, some essential medicines are also prescribed without cost (WHO 2015a). Following the independence of Libya in 1951, the present-day health system in the country operated with minimal resources and funds. Socioeconomic development planning in Libya began in 1963 (Telci, 2020). The right to free, quality health was enshrined in the Health Law No. 106 of 1973 (MoH 2018). To start with, the health system concentrated on individual patient healthcare before 1969; in the 1970s, it focused on community health facilities; and since 1980 it has been in the Health for All programme.

2.5.1. Health system organisation

As for its health system, Libya has one of the region's best health infrastructures, having made significant progress towards attaining the Millennium Development Goals (MDGs) and UHC (SARA | WHO 2017). The healthcare system in Libya is

similar to that in other countries, but it still combines public and private services (WHO, 2020). LMoH is the health system regulator in Libya that finances, allocates resources, plans, regulates, evaluates, and monitors research institutions, general hospitals, District Health Authorities (DHAs) and primary care settings.

DHAs encompass all these healthcare facilities, such as health promotion, disease prevention, treatment, and rehabilitation, through PHC units and rural hospitals (Telci, 2020). Furthermore, the military as well as companies owned by the national oil corporation in Libya extend complimentary health services to their employees, offered at healthcare facilities that are dedicated, with a small financial contribution from the employees. Moreover, social security (welfare) provides health care and a range of rehabilitation services for those with special needs, including people with disabilities (Saleh et al. 2014). However, there is also a growing LPHS, albeit with limited roles.

The decentralisation of DHAs began with the 2000 breakdown of the central body of LMoH (LMoH 2018). The Inspector General of Health (previously IGH) was established in 2003 for the purpose of monitoring DHAs, albeit without direct executive authority. Libya's administrative system has shifted towards centralisation and synchronisation downstream in March 2006, since which LMoH has been recognised and alienated into twenty-three health districts, with health functional authority in every district. Accordingly, the main responsibilities of LMoH include the following:

1. Formulating national health plans, strategies, and policies.
2. Overseeing and inspecting DHAs.
3. Establishing guidelines and regulations for healthcare providers, encompassing private as well as public sectors.
4. Monitoring national healthcare entities, including not only general but also as specialised hospitals.
5. Collaborating with different national sectors and segments, with the aim of health system development and improvement.

Nonetheless, this should entail upgrading the LMoH capacities to practice health system governance functions at the national level. Furthermore, developing DHAs capabilities is essential (Telci, 2020). The health system lacks quality in terms of strategy and planning, dimensions of institutions, and human resources towards developing and implementing health programmes, system governance and

management, guidance, and leadership development, which require further research for improvement. Moreover, health laws, legislation, and regulatory frameworks are in place but almost outdated (Elmasuri 2016).

On the other hand, the Libyan healthcare system is fully financed by via the country's budget allocation. The Ministry of Finance determines budgets for LMoH on a yearly basis (Habib et al., 2021). However, Libya lacks explicit rules and/or processes for what and how financial allocations are distributed and used effectively for the health system development (Çelik and Taguri 2021). Figure (2) illustrates how the Libyan health system is financed, and the role of LMoH/other ministries in Libya (Çelik and Taguri 2021).

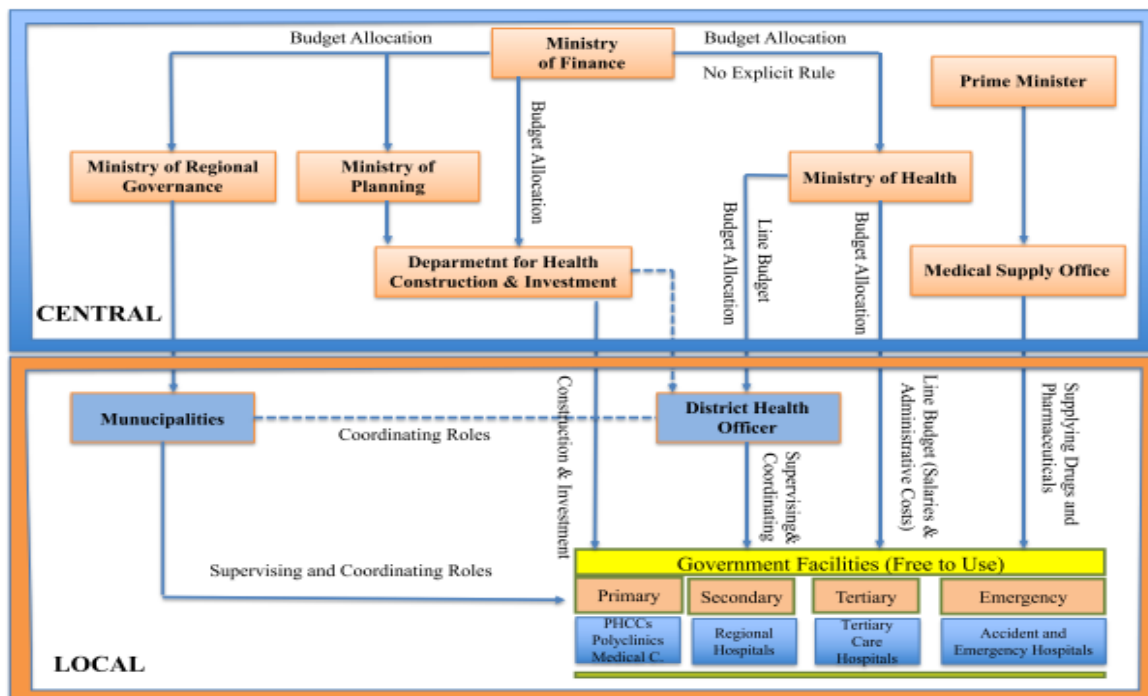


Figure 2.2: The Financing Process of the Libyan Health System

In comparison to other nations, Libya allocates a higher percentage of resources (69%) to public health, surpassing other MENA regions, countries with higher incomes, as well as the global average (50.1%, 54.3%, and 62.8%, respectively) (WHO 2019b). This significant allocation holds potential for supporting the development and enhancement of the health system.

Moreover, Libya's health expenditure slightly exceeds the aforementioned regions, excluding oil-rich states like Saudi Arabia (WHO 2019b). The allocation of budgets for health facilities across various districts in Libya is managed by the LMoH, which also

centrally disburses salaries for healthcare workers. In this financing framework, the Ministry of Planning collaborates with LMoH to address the plans for healthcare facility needs and infrastructure development, with direct coordination from LMoH. The government, through its Ministry of Health, approves and allocates the budget with the involvement of the Ministry of Planning (Çelik and Taguri 2021). Notably, Libyan healthcare centres do not receive direct budgets and financial support for pharmaceutical, infrastructure, or logistical operations. The Department of Drugs and Pharmaceuticals, under LMoH, handles the distribution of pharmaceuticals, medicines, and essential supplies to public health facility pharmacies. The LMoH's Pharmaceuticals and Supplies department oversees the selection, decision-making, and supplies medical supplies to myriad entities (Saieh 2021).

2.5.2. National health system policy and strategy

In addition to its role in coordinating, supervising, and evaluating national health programmes and healthcare services at the central level, LMoH also shapes the overall direction of health policies and strategies by joining hands with national bodies engaged in health (MISIRL and Orhan, 2022). LMoH guides the development and implementation of health programmes by declaring national health policies (WHO, 2020). These policies serve as a roadmap to achieve UHC for all citizens, as mandated by Health Law No. 106 of 1973 (Çelik and Taguri 2021). This legal framework outlines the responsibilities of LMoH and encompasses directives related to the supervision of health services at all levels.

The health policy emphasises ensuring uniform and adequate healthcare services for society. By leveraging the legal provisions established in health laws, particularly the law above of 1973, the government underscores its commitment to making healthcare accessible as a fundamental right for every citizen (Çelik and Taguri 2021). This commitment is integral to the broader economic and social development plans outlined over the last two decades. In this way, the national health policy aligns with overarching development goals, reflecting a concerted effort to integrate health into the broader fabric of societal advancement (Lakhdar 2016).

For instance, the national health strategy in Libya (LMoH 2018), developed for a medium-term plan by 2030 within the remit of the SDG-3, aimed at ensuring delivery of health care to all, improving service, and integrating all health care services (WHO 2022b). This corresponds to the health system policy, which articulates 'health for all

and by all as well as health in all policies approach in public policymaking' (LMoH 2018). This intends to render equal-quality Medicare to the nation's populace. In this respect, LMoH highlights that strengthening the health system in Libya is essential for realising overall health targets to provide the population with good health status and help them achieve a healthy lifestyle (LMoH 2018). This also pledges that healthcare development will correspond with general socioeconomic development and that healthcare access would be simplified through family practice (Zurqani et al., 2019).

Making the way forward towards that stature, however, requires comprehensive reforms to be introduced to rebuild the health system in Libya so that it is responsive to ensuring access by all to the needed health services. Libya, therefore, seeks to lay the strong groundwork for good health to erect economic and social progress (SARA | WHO 2017). In this essence, Libya's move to embrace quality healthcare underscores its readiness to enhance health and life in the country. Ultimately, the following are the basis of the current health policy in Libya are epitomised in the following (LMoH 2018):

- The citizens of Libya are assured of comprehensive healthcare.
- Equal distribution and utilisation of health resources.
- Health development is a component or an aspect of the total socioeconomic development of health human resources and capital.
- LMoH to work with the relevant bodies to create awareness of 'health in all policies approach in public policymaking'.
- The use of proper technology.
- Involving communities in developing and improving health services.
- Integrating family registry with the referral system in health care delivery for public awareness to enable access to all types of services.

Furthermore, the following are the Libyan health strategy objectives (LMoH 2018):

- Enhancing the health information and documentation system and providing training for healthcare staff to fortify health system governance and management.
- Enriching the national health workforce through continuous education and training initiatives, aiming to nationalise personnel in the health industry.

- Bolstering the existing health facilities and elevating service quality by enhancing their diagnostic and therapeutic capabilities. It is essential to ensure ongoing assessment and evaluation of these services.
- Reinforcing the procurement methods for medical supplies, updating regulations and guidelines, advocating for the rational use of medicine, and promoting management practices of pharmaceuticals in Libya.
- Committing to increased collaboration and partnership with global, regional, and national organisations to optimally utilise their capacities in implementing and evaluating national health strategies and programmes.
- Establishing new funding channels, augmenting resources through quality control manuals for health activities, and implementing audit and evaluation measures for the coherent utilisation of available resources.

2.5.3. Service delivery

Libya employs a mixed healthcare system comprising both public and private sectors rather than relying solely on a state-run model (SARA | WHO 2017). Healthcare services are administered through PHC centres, polyclinics, rehabilitation centres, general hospitals (in both urban and rural areas), and tertiary care specialised hospitals. As such, healthcare services are delivered through three levels (Figure 2.3):

1. **Primary Level:** It includes **728** PHC units providing services for 5,000 to 10,000 citizens, **571** PHC centres serving **10,000** to **26,000** citizens, and **85** polyclinics offering comprehensive healthcare services to about 50,000 to 60,000 citizens.
2. **Second Level:** Comprising general hospitals, both rural and urban (totalling **75**), providing care services to those referred from PHC.
3. **Third Level:** Involves tertiary care-specialised hospitals and medical centres (totalling **22**) delivering highly specialised care and treatments.

While the majority of health services in Libya are streamlined via various PHC units, facilities, polyclinics, rehabilitation units, and public health facilities (hospitals), with a limited number of specialised tertiary hospitals, the country's referral system requires development and improvement, since PHC facilities have mostly operated on an open-access framework (Çelik and Taguri 2021).

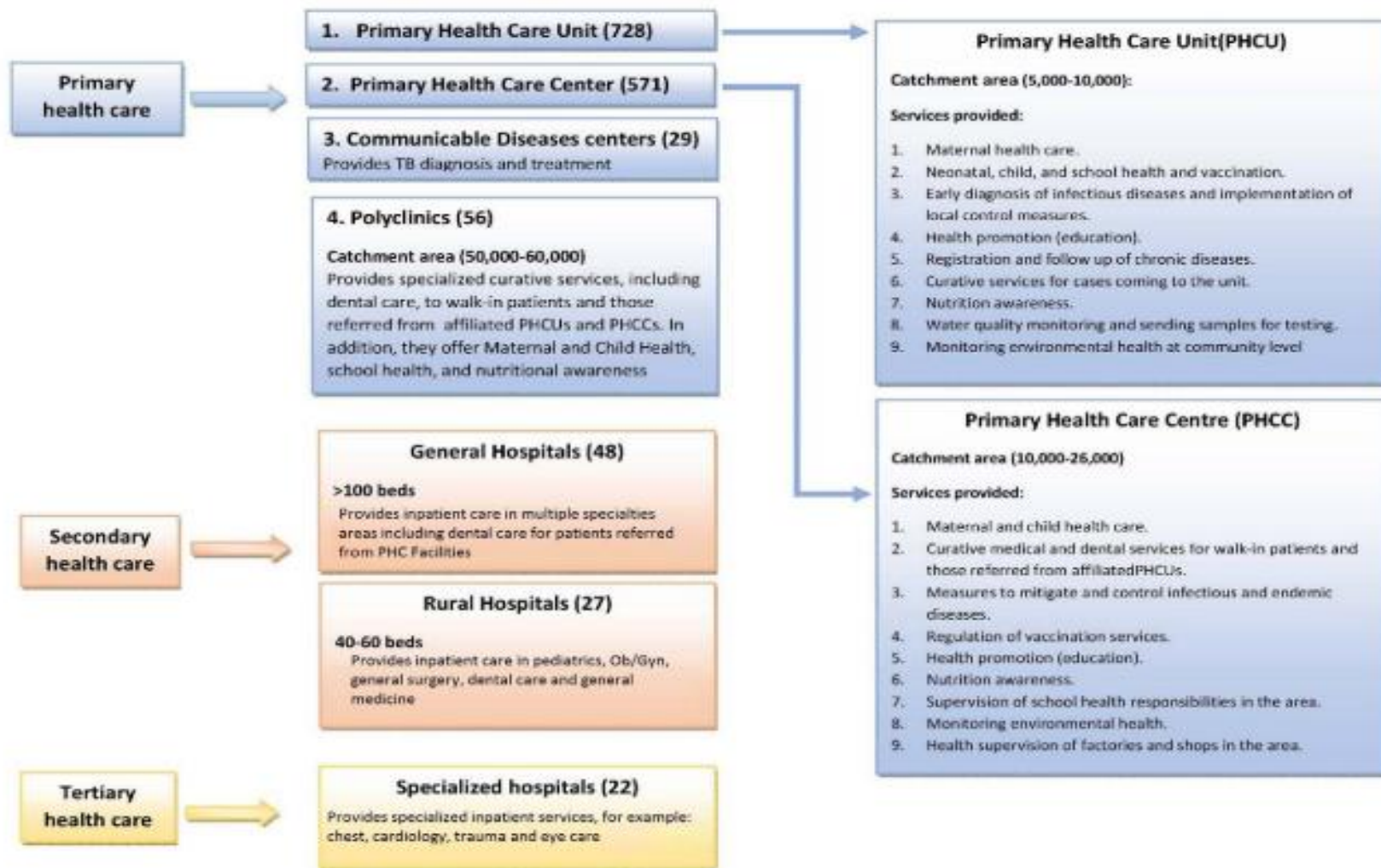


Figure 2.3: Health care Delivery System in Libya (Source: SARA | WHO 2017)

Also, PHC facilities span all districts; DHAs operationalises most PHC facilities, while not many of them operate in polyclinics. In certain areas, PHC functionality's quality is circumspect. There have been some questionable issues in relation to management practices, staffing, hygiene practices, skills mix and competencies, behaviours of PHC staff, and culture, medical waste management (Katoue et al., 2022). A survey by LMoH and WHO showed that one-third of these health facilities are functional, another one-third can hardly be considered available, and about 23% of which are either not operational or being repaired (SARA | WHO 2017).

Libya tops the MENA region regarding hospital bed rates compared to other countries, with 37 hospitals per 10,000 people (Kabakian-Khasholian et al., 2020). This figure is more than any other country in MENA, such as Egypt, with only seventeen hospital beds, or even Tunisia, which is considered high by international standards (UNMAS | WHO 2020a). The two major cities of Tripoli and Benghazi have the most prominent hospitals. In addition, most public hospitals in Libya, especially major settings, are considered independent, exercising authority to have their own budget, set out policies for staff recruitment, and outsource some housekeeping, maintenance, medical, and laboratory services selected through tender processes (Çelik and Taguri 2021a).

Reports indicate operational deficiencies in public hospitals, affecting service quality due to factors like poor organisation, lack of senior staff with effective leadership, substandard working conditions, inadequately structured referral systems, and deficiencies in management, disposal practices, waste management, monitoring, accreditation, and quality improvement (Ibrahim et al., 2020; UNSMIL 2017). It should also be noted that, overwhelmingly, most public hospitals are relatively small for their populations (WHO 2019b). Such strains impede these health institutions' effective operations and adversely affect the hospitals' quality standards. Moreover, there is a growing number of patients, while the available resources need to be improved, the staff is overstretched, and the situation is such that the best possible patient care becomes ever more challenging (Hosien et al., 2022).

Furthermore, the private healthcare services was banned throughout the 1980s but has recently been re-established more; the government has intended to foster and expand private healthcare sector growth (Hosien et al., 2022). Libya boasts approximately 157 private hospitals and polyclinics with an additional

2088 beds, along with 302 dental clinics, 415 outpatient clinics, 426 laboratories, and 2,254 pharmacies (SARA | WHO 2017). Private healthcare facilities are packed but lacking in stipulated laws and regulations, with healthcare quality therein not being fully quantified or assessed for evaluation and continuous improvement (Habib et al., 2021). However, several patients have insurance coverage through their employers, while others pay out of pocket due to poor service delivery in public health facilities (SARA | WHO 2017). Health facility budgets in various health districts in Libya are determined by the LMoH, and salaries for health workers are centrally paid by the LMoH. In this financing process, the Ministry of Planning collaborates with the LMoH to address plans for healthcare facility needs and infrastructure development. The budget is prepared and approved by the Libyan government through its MoH, and funds are then allocated by the Libyan Ministry of Planning.

2.5.4. Human resources

The growth of medical institutions in Libya has been significant since the 1980s, leading to the establishment of 18 medical schools, 15 dental schools, and 9 nursing schools across the country (Goos and Kaya, 2020). This includes public health schools, health sciences schools, pharmacy schools, and schools of medical technicians, with two additional universities related to medical and paramedical education (SARA | WHO 2017). These institutions serve as the primary source of the health workforce in Libya, producing an average of twenty physicians, six dentists, six chemists, and seventy-one nurses and midwives per up to 10,000 people in recent years.

The Libyan Ministry of Education is primarily responsible for generating healthcare workforces, with the Ministry of Health (LMoH) playing a crucial role in producing specialised health professionals. However, proper planning to right-size the health workforce in accordance and line with health needs or international standards such as those set by WHO/SDG is often lacking in Libya (Goos and Kaya, 2020). The health workforce in Libya faces issues of mal distribution, both geographically and across different levels of healthcare, with a preference for urban locations and hospital practices. The decentralised authority given to healthcare organisations for hiring has led to over-employment without clear guidelines on recruitment, which mostly contributes to the suboptimal health workforce existing in Libya (Çelik and Taguri 2021).

Furthermore, national health human resource development plans and strategies in Libya are weak, making it economically impractical for health authorities to fund the education and training of healthcare professionals overseas. This has resulted in a deficit of healthcare professionals, as many have moved abroad for better pay, creating a dependence on expatriate nurses, especially in specialised areas like anaesthetics, cardiology, family medicine, and primary care (Estrada et al., 2020; WHO | LMoH 2017). The existing medical and nursing education and training in Libya face challenges due to inadequate standards for licensing, accreditation, and certification (Elmontsri 2019; Fallah et al., 2023). Issues include a lack of qualified teaching staff, outdated curriculums, weak management, and a lack of attraction to the profession (Msalam 2018; Fallah et al., 2023). Continuous professional development, ongoing knowledge and skills improvement, regular performance monitoring, and evaluation linked to career advancement are also lacking, along with periodic re-certifying examinations (Msalam 2018; Fallah et al., 2023).

2.5.5. Health Information System (HIS)

Establishing a Health Information Centre (HIC) of LMoH as a coordinating body for collecting and reporting on national health and health system information has been a good stride towards generating high-quality data for decision-making in Libya (Msalam 2018). However, owing to a dearth of SOPs concerning management of data, institutionalised assessments of data quality, or a functional HIS system based on the internet, the crucial HIS functions in Libya are almost absent and need to be strengthened (WHO 2017b). Data and information management across the Libyan health system, especially at the point of service delivery, is still inadequate, requiring modernisation to maximise effect (Fallah et al., 2023). This could have been one of the reasons contributing to the unavailability of data for the last 10 years in Libya (Çelik and Taguri 2021).

A report recently produced collectively by LMoH and WHO underscores deficiencies in Libya's HIS (WHO | LMoH 2017). The HIS is fraught with the absence of a robust policy and institutional framework and the lack of cost-effective monitoring and evaluation mechanisms for systematically collecting and processing health system and healthcare data. The institutional capacities for the collection, analysis, management, and dissemination of data and information throughout the Libyan health system are notably weak (Msalam 2018). In Libya, healthcare organisations

predominantly rely on manual, handwritten reporting, which compromise information management, leading to limited data accuracy and inadequate management of paper patient files and information. While some data and information are to some extent managed properly at the national decision-making level, the quality of the overall process remains rudimentary (WHO 2017b). Additionally, the maintenance and care of health records in healthcare facilities lack effective management practices, and analytical skills are not ensured or consistently maintained at expert levels (Estrada et al., 2020).

Effective evaluation and enhancement of healthcare systems and processes necessitate the establishment of robust HIS involving the implementation of rigorous evidence-based approaches to collecting and managing data and information (Gebremedhin et al., 2021). Enhancing the quality of data and information flow, spanning from healthcare facilities to policymaking and decision-making level, offers opportunities to continuously strengthen the health system functionality and the delivery and quality of health services (Bagherian and Sattari 2022). This entails the meticulous recording and documentation of both qualitative and quantitative data, including metrics related to mortality and morbidity rates, which furnish vital evidence to guide and inform the development and improvement of healthcare systems, resource allocation, and service planning and provision. Furthermore, a robust HIS can foster interdisciplinary and cross-sectoral collaboration aimed at devising innovative initiatives aimed for health system improvement (Fallah et al., 2023), thereby contributing to improved overall quality and safety outcomes.

2.6. Chapter summary

This chapter offered an overview of Libya's geography and climate, demographics core cultural values, historical background, and socio-economic factors—educational, economic, political, and cultural—characterising Libyan society, the locus of this study. This comprehensive examination aims to determine the influence of these factors on reforming the health system as well as any efforts aimed at improving patient safety in Libya. For instance, the self-centred style of management culture and socio-economic development in Libya are pivotal determinants for improving the health system outcomes as well as health services quality.

On the other hand, the health system of the resource-intensive state of Libya possesses two notable strengths: substantial government funding and widespread

health infrastructure that surpasses the standards of many countries in the MENA region. However, the system has still been affected by other factors, such as weak governance and leadership, poor planning, decision-making, and policymaking, damaged infrastructure due to ensuing political instability, inadequate human resources, and a lack of relevant information and data. These factors have collectively contributed to the poor functioning system and hence the observed suboptimal quality of health services.

This research study therefore aims to address the existing gap by examining and improving understanding of patient safety organisation, management, and concerns in Libya, along with exploring interagency working in patient safety as well as its influence on the organisation and delivery of quality care therein. The goal is to develop a comprehensive framework, contextualised to Libya, to improve patient safety in Libya through effective interagency working. The following chapter will provide a scoping review to critically map and synthesise the existing evidence about patient safety in the WHO EMR, thereby positioning and rationalising the study being reported.

Chapter Three: Scoping Review to Map and Synthesise Evidence Related to Patient Safety in the WHO EMR

3.1. Introduction

This chapter elucidates a scoping review of existing evidence concerning patient safety in the EMR. A requirement was identified for a robust synthesis of evidence for characterising the evidence base linked to the WHO EMR's patient safety practices. The WHO EMR is defined by the WHO classification, covering twenty-three countries across the Middle East and North Africa (WHO 2020). Given the variability in circumstances among countries therein, this review specifically focuses on Arabic-speaking nations (Figure 3.4), where cultural and health system contexts exhibit broad similarities (Sharara et al. 2018a). Consequently, the evidence generated has the potential to be widely applicable and representative, providing a wealth of valuable information and data to guide the study at hand.

3.2. The WHO EMR context

In the context of health systems across the EMR, the understanding of patient safety remains limited, despite well-documented instances in developed nations (Tingle 2017a). WHO EMR health systems face significant threats and challenges amidst constrained resources and inadequate infrastructure, exhibiting a concerning trend where up to around 25 percent patients in hospitals experience adverse events, often preventable, with 3 percent resulting in death or permanent disability (Yang 2018b; Letaief 2017b). Due to the potential for substantial improvement, it is imperative to comprehend the causes of patient harm in the WHO EMR to inform health policy and implement effective corrective measures. This review addresses this gap by identifying and synthesising existing evidence on patient safety in the WHO EMR, highlighting the focus of current literature and pinpointing knowledge gaps (Figure 3.4). The geographical scope specifically centres on Arabic-speaking countries within the WHO EMR, characterised by shared health system/ cultural backdrops (Sharara et al. 2018b).



Figure 3.1: Geographical Area of Focus in the Scoping Review

Health systems in several nations, especially those that are confronted with severe adversity, including Libya, are going through transitions. For this reason, a vivid explication of contextualised pieces of evidence can help impart the desired knowledge to health policymakers that, in turn, prioritises future investigation areas and underscores interventions (evidence-based) aimed at shaping improving patient safety within the WHO EMR.

3.3. Method

This scoping review adhered to the recommended Joanna Briggs Institute (JBI) guidelines (JBI 2015) and was conducted using the five-stage approach proposed by Arksey and O'Malley (Arksey and O'Malley 2005), comprising of 1) Identifying the review question, 2) Identifying relevant studies, 3) study selection, 4) charting the data, and 5) collating, summarising, and reporting results.

3.3.1. Identifying the review question

The scoping review question is: What evidence is there for patient safety and healthcare providers' awareness of patient safety in Arabic speaking countries within the WHO EMR?

3.3.2. Identifying relevant studies

A comprehensive electronic inquiry was systematically performed across various databases, including Medline, PubMed, Embase, ASSIA, ProQuest, and ProQuest Dissertations and Theses. Additionally, manual exploration of reference lists from previously identified studies was undertaken. The search spanned from January 2009

to June 2020, executed between June 2019 and March 2020, with subsequent updates carried out up to December 2023, leading to the discovery of additional studies.

The review search period was meticulously set from 2009 to 2023 to align with the seminal publication of the WHO's report of “*Global Priorities for Research in Patient Safety*” in 2008 (WHO, 2008; Bates et al., 2009). This pivotal report has undeniably shaped the trajectory of patient safety research, particularly emphasising the urgent need for targeted investigations in developing and transitional countries such as Libya. The review period therefore began immediately after WHO's report to capture the evolution and impact of research influenced by global priorities for patient safety referenced by WHO. This review was grounded in a post-report context, allowing the assessment of the extent to which the WHO's recommendations have been implemented and to identify progress and gaps in patient safety research during a period marked by heightened awareness and commitment to addressing patient safety challenges .

Keywords used for the search strategy were derived from a diverse set of terms relevant to patient safety, incorporating those identified through preliminary searches and present in titles and abstracts of key papers (Table 3.1). A combination of the keywords and Medical Subject Headings (MeSH) was utilised, employing Boolean operators (AND / OR) to enhance precision and eliminate plagiarism concerns.

Table 3.1: Search Keywords used to Search Databases

Concept 1 Key Terms	Concept 2 Geographical Area Terms
Patient safety* System* Healthcare* Cultur* Safety Concern* Safety Climate* Polic* Strategy* Hospital Safety* Unsafe care* Regulation* Medical error* Near miss* Incident* Harm* Injur* Risk* Reporting* Recording*	Developing country* Low income* Middle income country* Transitional country* North Africa* Eastern Mediterranean Region* EMR* Middle East* Arabic country* Libya* Egypt* Qatar* Tunisia* Bahrain* Sudan* Iraq* Yemen* Palestine* Lebanon* Saudi Arabia* Djibouti* Oman* Morocco* Algeria* Jordan* UAE* Somalia* Kuwait* Syria* Mauritania*

The keywords presented in Table 3.1 were used to construct the search strategies as outlined in Table 3.2.

Table 3.2: The Scoping Review Search String

1. 'Patient safety'
2. cultur*
3. polic*
4. strateg*
5. system*
6. regulat*
7. #1 AND #2 OR #3 OR #4 OR #5 OR #6
8. Unsafe care* OR Safety concern* OR Safety Climate* OR Medical error* OR Near miss* OR Incident* OR Harm* OR Injur* OR Risk* OR Reporting* OR Recording*
9. Developing country* OR low income country* OR middle income country* OR transitional country* OR North Africa* OR Eastern Mediterranean Region* EMR* OR Middle East* OR Arabic country*
10. #7 AND #9
11. #8 AND #9
12. Libya
13. #12 AND #7 OR #8
14. Egypt* Qatar* Tunisia* Bahrain* Sudan* Iraq* Yemen* Palestine* Lebanon* Saudi Arabia*
15. #14 AND #7 OR #8
16. Djibouti* Oman* Morocco* Algeria* Jordan* UAE* Somalia* Kuwait* Syria* Mauritania*
17. #16 AND #7 OR #8

All electronic records were downloaded from the searched databases into Excel sheets and subsequently exported and managed through the reference manager Mendeley.

3.3.3. Study selection

Table 3.2 shows the pre-determined criteria developed to identify and select appropriate studies (Table 3.3).

Table 3.3: Inclusion and Exclusion Criteria of the Review

Inclusion Criteria	Exclusion Criteria
<p>Studies focused on one or more of the following: -</p> <ul style="list-style-type: none"> ▪ Patient safety / Safety culture ▪ Medical error / harm ▪ Adverse events ▪ HAIs ▪ Mortality ▪ Reporting and learning 	<p>Studies that focused primarily on, without mentioning patient safety, one or more of the following: -</p> <ul style="list-style-type: none"> ▪ Safety of healthcare staff ▪ Medication safety or Pharmacovigilance ▪ Hygiene and surveillance ▪ Study protocols / conference abstracts
Studies included if they presented data on at least one Arabic-speaking country situated within the WHO EMR	Systematic reviews / scoping reviews
Studies published in English	Studies were based on a non- WHO EMR Arabic-speaking country
	Studies were conducted in a non-healthcare setting (e.g., medical schools)

The retrieved titles and abstracts were scanned for potential relevance by marking them as either 'Yes', 'No', or 'Maybe' (AJ, DR, AD). The full-text articles of potentially relevant abstracts were then retrieved. DR and AD independently screened the retrieved articles and marked each by either 'Yes', 'No', or 'Maybe' for potential inclusion, while AJ scanned the articles marked with 'Maybe' and decided on 'Yes' or 'No' for final inclusion. Content retrieved from grey literature sources was scanned by AD using the pre-specified criteria with the other reviewers' arbitration (AJ, DR) where needed. Any discrepancies or disagreements were resolved by discussion between the three reviewers (AJ, DR, AD).

3.3.4. Charting the data

AD designed a tailored Microsoft Excel data charting form adhering to the guidelines outlined in the JBI manual for evidence synthesis (JBI 2020). This form facilitated the extraction of essential information, including paper title, author(s), journal, origin, year, design, methods, and findings. The extraction process involved independent efforts by AD, with subsequent review and consensus reached by AJ and DR for accuracy and agreement.

3.3.5. Collating, summarising, and reporting the results

Attributes of the reviewed literature were systematically compiled and succinctly outlined across various pivotal descriptors, including origin, aim, methods, population, setting, and key findings and outcomes. A comprehensive examination of data was conducted holistically, encompassing both published and unpublished literature, employing a narrative synthesis methodology structured in a two-stage process. This process involved an initial coding phase followed by a subsequent categorisation cycle, leading to the identification of broader themes pertinent to the overarching review question and aim.

Consequently, a comprehensive summary is sought, elucidating a narrative depiction and analysis of the findings meticulously mapped and assessed within the contextual framework of the broader literature. This synthesis is organised under three primary categories: the nature of medical harm in the WHO EMR, prioritising patient safety within the region, and safety culture.

The outcomes of the review search strategy are delineated in the PRISMA flowchart. Subsequently, the review findings are presented narratively, aligning with the principal characteristics of the scrutinised studies. This presentation is complemented by a

critical appraisal of the reviewed literature, utilising tables and charts judiciously where deemed appropriate. The synthesis of data was independently conducted by AD, continually refined, and subjected to consensus validation by AJ and DR, ensuring a unified perspective on the final thematic constructs.

3.4. Results

Following screening, a total of 498 studies were reduced to 221 included studies (Figure 3.5) and are presented in Table 3.4.

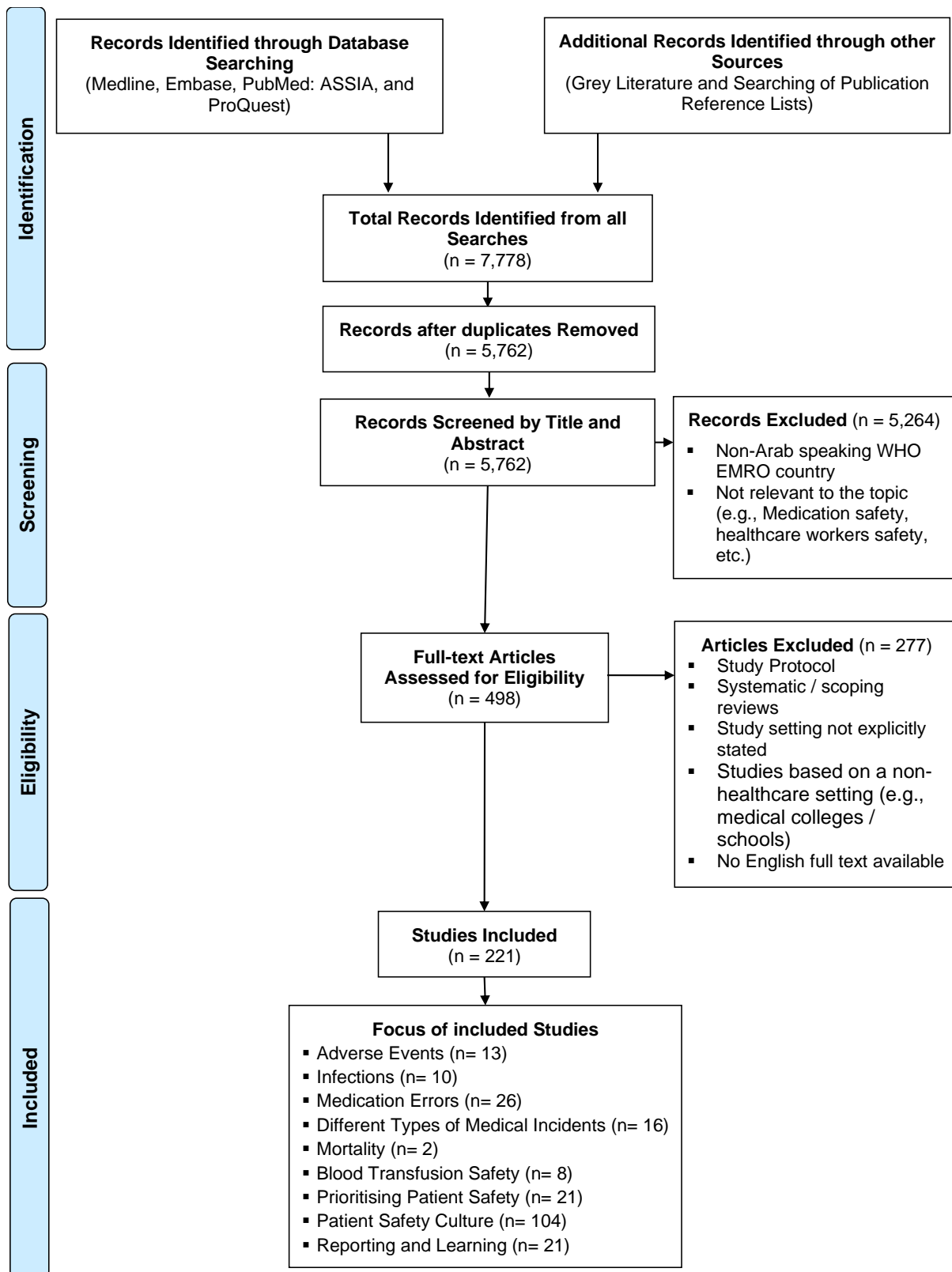


Figure 3.2: PRISMA Flow Chart of the Scoping Review

Table 3.4: The Included Studies in the Scoping Review

Authors / Year	Title of Paper	Country
Al-Surimi et al., (2022)	Impact of Patient Safety Culture on Job Satisfaction and Intention to Leave Among Healthcare Workers: Evidence from Middle East Context	Multi-country
Beuret et al. (2013)	Feasibility and relevance of an operating room safety checklist for developing countries: Study in a French hospital in Djibouti	Djibouti
Khamaiseh et al. (2020)	Patient safety culture in Jordanian primary health-care centres as perceived by nurses: a cross-sectional study	Jordan
Mwachofi et al.(2011)	Factors affecting nurses' perceptions of patient safety	Saudi Arabia
Madarati et al. (2018)	Dental-Dam for Infection Control and Patient Safety during Clinical Endodontic Treatment: Preferences of Dental Patients	Saudi Arabia
Atallah and Abdulrahim (2020)	Effect of an educational programme on the attitudes towards patient safety of operation room nurses.	Tnisia
Abbas et al. 2021	Sleep Quality Among Healthcare Workers During the COVID-19 Pandemic and Its Impact on Medical Errors: Kuwait Experience	Kuwait
Abdalla et al. (2014)	ASSESSMENT OF NURSES' PERFORMANCE RELATED TO CONTROL OF SOME PARASITES ACQUIRED FROM FRESH VEGETABLES AS A PATIENT SAFETY MEASURE IN A MILITARY HOSPITAL. 44(3)	Egypt
Abdallah et al. (2019)	Organizational learning and patient safety: hospital pharmacy settings	Kuwait
Abdallah et al. (2020)	Arabic version of pharmacy survey on patient safety culture: Hospital pharmacy settings	Kuwait
Abdelhai et al. (2012)	Assessing patient safety culture and factors affecting it among health care providers at Cairo University Hospitals	Egypt
Abdelrazik and Ahmed (2016)	Priority needs and wisdom strategy for blood transfusion safety in developing low-resource countries	Multi-country
Isse, (2018)	Identifying Patient Safety and The Healthcare Environment in Puntland, Somalia	Somalia
Abkar et al. (2013)	Unsafe injection practices in Hodeidah governorate, Yemen	Yemen
Aboshaiqah, (2010)	Patients Safety Culture: A Baseline Assessment Of Nurses' Perceptions In A Saudi Arabia Hospital	Saudi Arabia
Aboshaiqah and Bake (2013)	Assessment of Nurses' Perceptions of Patient Safety Culture in a Saudi Arabia Hospital	Saudi Arabia
Aboul-Fotouh et al. (2012)	Assessment of patient safety culture among healthcare providers at a teaching hospital in Cairo, Egypt	Egypt
Abu-El-Noor et al. (2017)	Safety Culture in Neonatal Intensive Care Units in the Gaza Strip, Palestine: A Need for Policy Change	Palestine
Abu-El-Noor et al. (2019)	Patient safety culture among nurses working in Palestinian governmental hospital: A pathway to a new policy.	Palestine
Abualrub et al. (2015)	Perceptions of reporting practices and barriers to reporting incidents among registered nurses and physicians in accredited and nonaccredited Jordanian hospitals.	Jordan
AbuAIRub and Abu Alhijaa (2014)	The Impact of Educational Interventions on Enhancing Perceptions of Patient Safety Culture Among Jordanian Senior Nurses	Jordan
Almutairi et al. (2013)	Perceptions of clinical safety climate of the multicultural nursing workforce in Saudi Arabia: a cross-sectional survey.	Saudi Arabia
Albarrak et al. (2020)	Assessment of patient safety challenges and electronic occurrence variance reporting (e-OVR) barriers facing physicians and nurses in the emergency department: a cross sectional study	Saudi Arabia
Al-Abbadi et al. (2019)	Patients' Perspectives of Surgical Safety Before and After Their Elective Surgeries at King Abdulaziz University Hospital, Jeddah, Saudi Arabia.	Saudi Arabia
Al-Awa et al. (2012)	Benchmarking the post-accreditation patient safety culture at King Abdulaziz University Hospital	Saudi Arabia
Al-Harkan et al. (2020)	Investigation of Medication Errors in a Tertiary Care Hospitals in the Qassim Region, Saudi Arabia	Saudi Arabia
Al-Khalidi et al. (2013)	Attitude of primary care physicians toward patient safety in Aseer region, Saudi Arabia	Saudi Arabia
Al-Mandhari et al. (2014)	Patient Safety Culture Assessment in Oman	Oman
Al-Mandhari et al. (2015)	Medical Errors: Why Now and What's Next?	Oman
Al-Mandhari et al. (2016)	Awareness and implementation of nine World Health Organization's patient safety solutions among three groups of healthcare workers in Oman	Oman
Al-Mandhari et al. (2018)	Developing patient safety system using WHO tool in hospitals in Oman	Oman
Al-Shaya et al. (2021)	The COVID-19 outbreak in Saudi Arabia and the impact on patient safety incident reports: An empirical study among the medical facilities of Qassim health cluster	Saudi Arabia

Al-Surimi et al. (2021)	Road towards promoting patient safety practices among hospital pharmacists: Hospital-based baseline patient safety culture assessment cross-sectional survey	Saudi Arabia
Al-zain and Althumairi (2021)	Awareness, Attitudes, Practices, and Perceived Barriers to Medical Error Incident Reporting Among Faculty and Health Care Practitioners (HCPs) in a Dental Clinic	Saudi Arabia
Alahmadi, (2010)	Assessment of patient safety culture in Saudi Arabian hospitals	Saudi Arabia
Alakahli et al. (2014)	Evaluation of medication error in intensive care unit in Yemeni hospital.	Yemen
Alameddine et al. (2015)	Assessing health-care providers' readiness for reporting quality and patient safety indicators at primary health-care centres in Lebanon: A national cross-sectional survey	Lebanon
Aldaqa and Al-amoodi (2014)	To Report or not: The Dilemma of Reporting Medical Errors among Physicians	Saudi Arabia
Aldawood et al. (2020)	Enhancing teamwork communication and patient safety responsiveness in a paediatric intensive care unit using the daily safety huddle tool	Saudi Arabia
Alenezi et al. (2019)	Clinical practitioners' perception of the dimensions of patient safety culture in a government hospital: A one-sample correlational survey	Saudi Arabia
Alfaqawi et al. (2020)	Treating patients in a safe environment: a cross-sectional study of patient safety attitudes among doctors in the Gaza Strip, Palestine	Palestine
Alharaibi et al. (2021)	Prescribing errors among adult patients in a large tertiary care system in Saudi Arabia	Saudi Arabia
Alharbi et al. (2018)	Assessment of Patient Safety Culture in an Adult Oncology Department in Saudi Arabia	Saudi Arabia
Alharbi et al. (2019)	Exploring healthcare professionals' perceptions of medication errors in an adult oncology department in Saudi Arabia: A qualitative study	Saudi Arabia
Alhatmi, (2011)	Safety as a hospital organizational priority: a case study	Saudi Arabia
Alhawassi et al. (2018)	Advancing pharmaceuticals and patient safety in Saudi Arabia: A 2030 vision initiative	Saudi Arabia
Ali et al. (2018)	Baseline assessment of patient safety culture in public hospitals in Kuwait	Kuwait
Aljabri et al. (2012)	Assessment of Patient Safety Culture in Saudi Hospitals: A Baseline Study in the Eastern Region	Saudi Arabia
Aljadhey et al. (2016)	Culture of Safety among Nurses in a Tertiary Teaching Hospital in Saudi Arabia	Saudi Arabia
AlJarallah and AlRowaiss (2013)	The pattern of medical errors and litigation against doctors in Saudi Arabia	Saudi Arabia
Abdulla et al (2023)	An Evaluation of Healthcare Safety Culture Among Healthcare Professionals in Secondary and Tertiary Public Hospitals in the Middle East Region	Multi-country
Aljuaid et al. (2021)	Medication Error During the Day and Night Shift on Weekdays and Weekends: A Single Teaching Hospital Experience in Riyadh, Saudi Arabia	Saudi Arabia
Alkatheeri et al. (2020)	Impact of drug information services on patient safety at east jeddah hospital in Saudi Arabia; a retrospective study	Saudi Arabia
Alkhenizan and Shafiq (2018)	The process of litigation for medical errors in Saudi Arabia and the United Kingdom	Saudi Arabia
Almalki et al. (2020)	Exploring patient-safety culture in the community pharmacy setting: a national cross-sectional study	Saudi Arabia
Rawas and Abou Hashish (2023)	Predictors and outcomes of patient safety culture at King Abdulaziz Medical City, Jeddah, Saudi Arabia. A nursing perspective	Saudi Arabia
Alnasser et al. (2020)	Patients' knowledge, awareness, and attitude regarding patient safety at a teaching hospital, Riyadh, Saudi Arabia	Saudi Arabia
Alonazi et al (2011)	An evaluation of a patient safety culture tool in Saudi Arabia	Saudi Arabia
Alqattan et al. (2018)	An evaluation of patient safety culture in a secondary care setting in Kuwait.	Kuwait
Alquwez et al. (2018)	Nurses' Perceptions of Patient Safety Culture in Three Hospitals in Saudi Arabia	Saudi Arabia

Alquwez et al. (2020)	Examining the Influence of Workplace Incivility on Nurses' Patient Safety Competence	Saudi Arabia
Alrabae et al. (2021)	The association between self-reported workload and perceptions of patient safety culture: A study of intensive care unit nurses	Saudi Arabia
Alrowely and Baker (2019)	<p>Assessing Building Blocks for Patient Safety Culture—a Quantitative Assessment of Saudi Arabia	Saudi Arabia
Alrumi et al. (2019)	Infection control measures in neonatal units: implementation of change in the Gaza-Strip	Palestine
Alsafi et al. (2011)	Physicians' attitudes toward reporting medical errors-An observational study at a general hospital in Saudi Arabia	Saudi Arabia
Alsaleh et al. (2018)	Assessment of patient safety culture: a nationwide survey of community pharmacists in Kuwait	Kuwait
Alshaikh et al. (2013)	Medication error reporting in a university teaching hospital in saudi arabia	Saudi Arabia
Alshammari et al. (2019)	A survey of hospital healthcare professionals' perceptions toward patient safety culture in Saudi Arabia	Saudi Arabia
Alshammari et al. (2021)	<p>Medication Error Concept and Reporting Practices in Saudi Arabia: A Multiregional Study Among Healthcare Professionals	Saudi Arabia
Alshammari and Mital (2016)	Medical errors in Saudi Arabia: Understanding the pattern and associated financial cost.	Saudi Arabia
Alsharari et al. (2021)	Impact of night shift rotations on nursing performance and patient safety: A cross-sectional study	Saudi Arabia
Alslubi and El-Dahiyat (2019)	Patient safety practices among community pharmacists in Abu Dhabi, United Arab Emirates	UAE
Alswat et al. (2017)	Improving patient safety culture in Saudi Arabia (2012-2015): Trending, improvement and benchmarking	Saudi Arabia
Alzahrani et al. (2018)	Attitudes of doctors and nurses toward patient safety within emergency departments of two Saudi Arabian hospitals	Saudi Arabia
Ammouri et al. (2015)	Patient safety culture among nurses	Oman
Anwar, (2017)	Assessment of Patient Safety Culture among Health Care Workers in Beni-Suef University Hospital, Egypt	Egypt
Aouicha et al. (2021)	Exploring patient safety culture in emergency departments: a Tunisian perspective	Tunisia
Arabi et al. (2012)	Incident reporting at a tertiary care hospital in Saudi Arabia	Saudi Arabia
Arabi et al. (2016a)	Information technology to improve patient safety: A round table discussion from the 5th International Patient Safety Forum, Riyadh, Saudi Arabia	Saudi Arabia
Arabi et al.(2016b)	Learning from defects using a comprehensive management system for incident reports in critical care	Saudi Arabia
Awa et al. (2011)	Comparison of Patient Safety and Quality of Care Indicators Between Pre and Post Accreditation Periods in King Abdulaziz University Hospital	Saudi Arabia
AY et al. (2019)	Factors that facilitate reporting of adverse drug reactions by pharmacists in Saudi Arabia	Saudi Arabia
Banakhar et al. (2018)	Barriers of Reporting Errors among Nurses in a Tertiary Hospital	Saudi Arabia
Bottcher et al. (2019)	Attitudes of doctors and nurses to patient safety and errors in medical practice in the Gaza-Strip: a cross-sectional study.	Palestine
Böttcher et al. (2018)	Maternal mortality in the Gaza strip: a look at causes and solutions	Palestine
Chang et al. (2015)	Evaluation of an intervention program to prevent hospital-acquired catheter-associated urinary tract infections in an ICU in a rural Egypt hospital	Egypt
Cheikh et al. (2016)	Patient's safety culture among Tunisian healthcare workers: results of a cross sectional study in university hospital.	Tunisia
Cheraghali, (2011)	Blood safety concerns in the Eastern Mediterranean region	Multi-country
Darbandi et al. (2017)	Status of blood transfusion in World Health Organization-Eastern Mediterranean Region (WHO-EMR): Successes and challenges.	Multi-country
Al Dhabbari (2018)	Nurses' perceptions of patient safety culture in Oman	Oman
Alsafi et al. (2015)	Physicians' knowledge and practice towards medical error reporting: a cross-sectional hospital-based study in Saudi Arabia	Multi-country
Gaid et al. (2018)	Device-associated nosocomial infection in general hospitals, Kingdom of Saudi Arabia, 2013-2016	Saudi Arabia
El-Asady et al. (2018)	Adverse events in a Tunisian hospital: results of a retrospective cohort study	Tunisia

El-jardali, (2012)	Integrating quality and patient safety concepts in medical curricula Baseline Assessment in Lebanon	Lebanon
El-Jardali, et al. (2011)	Predictors and outcomes of patient safety culture in hospitals	Lebanon
El-Jardali, et al. (2014)	Patient safety culture in a large teaching hospital in Riyadh: baseline assessment, comparative analysis and opportunities for improvement	Saudi Arabia
El-Jardali and Fadlallah (2017)	A review of national policies and strategies to improve quality of health care and patient safety: a case study from Lebanon and Jordan	Jordan
El-Sherbiny et al. (2020)	Assessment of patient safety culture among paramedical personnel at general and district hospitals, Fayoum Governorate	Egypt
Elasrag and Abu-Snieneh (2020)	Nurses' perception of factors contributing to medication administration errors	Saudi Arabia
ELMeneza and AbuShady (2020)	Anonymous reporting of medical errors from The Egyptian Neonatal Safety Training Network	Egypt
Elmontsri et al. (2017a)	Key priority areas for patient safety improvement strategy in Libya: a protocol for a modified Delphi study	Libya
AL-Dossary, (2022)	The effects of nursing work environment on patient safety in Saudi Arabian hospitals	Saudi Arabia
Elmontsri et al. (2018a)	Improving patient safety in developing countries – moving towards an integrated approach	Multi-country
Elmontsri et al. (2018b)	Improving patient safety in Libya: insights from a British health system perspective.	Libya
Elmorsy, (2019)	Awareness and attitude about patient safety among health professionals in Arar, Saudi Arabia.	Saudi Arabia
Elnour et al. (2009)	Awareness and Reporting of Adverse Drug Reactions Among Health Care Professionals in Sudan	Sudan
Elsou et al. (2017)	Psychometric Properties of an Arabic Safety Attitude Questionnaire (Short Form 2006)	Palestine
Elsous et al. (2016)	A cross-sectional study to assess the patient safety culture in the Palestinian hospitals: a baseline assessment for quality improvement.	Palestine
Elsous et al. (2017)	Nursing perceptions of patient safety climate in the Gaza Strip, Palestine.	Palestine
Eltarhuni et al. (2020)	Assessment of patient safety culture in benghazi children's hospital from the viewpoint of nursing staff.	Libya
Basuni and Bayoumi (2015)	Improvement critical care patient safety: using nursing staff development strategies, at Saudi Arabia.	Saudi Arabia.
Alkorashy, (2013)	Factors shaping patient safety management in the middle east hospitals from nursing perspective: A focus group study.	Multi-country
El-Jardali et al. (2010)	The current state of patient safety culture in lebanese hospitals: A study at baseline.	Lebanon
El-Jardali et al. (2012)	Integrating patient safety standards into the accreditation program: a qualitative study to assess the readiness of Lebanese hospitals to implement into routine practice	Lebanon
Alsweed et al. 2014(2014)	Impact of computerised provider order entry system on nursing workflow, patient safety, and medication errors: perspectives from the front line	Saudi Arabia
Alsohime et al. (2019)	Reporting adverse events related to medical devices: A single center experience from a tertiary academic hospital.	Saudi Arabia
Mazhar et al. (2018)	Prevention of medication errors at hospital admission: a single-centre experience in elderly admitted to internal medicine	Saudi Arabia
Faqeeh et al. (2019)	Integrating Safety Attitudes and Safety Stressors into Safety Climate and Safety Behavior Relations: The Case of Healthcare Professionals in Abu Dhabi.	UAE
Foda et al. (2020)	Assessment of patient safety culture perception among healthcare workers in intensive care units of Alexandria Main University Hospital, Egypt	Egypt
Gadallah et al. (2014)	Patient safety attitude among health care providers in family health care centers in Cairo governorate	Egypt
Ghobashi et al. (2014)	Assessment of patient safety culture in primary health care settings in Kuwait	Kuwait
Grira et al. (2015)	The incidence of serious adverse events in a tunisian hospital: a retrospective medical record review study	Tunisa
Alqattan et al. (2021)	Exploring Patient Safety Culture in a Kuwaiti Secondary Care Setting: A qualitative study	Kuwait

Sayed et al. (2013)	Patient safety in the operating room at a governmental hospital	Tunisia
Haddad et al. (2018)	How Can Eastern/Southern Mediterranean Countries Resolve Quality and Safety Issues in Transfusion Medicine?	Multi-country
Haddad et al. (2020a)	How to manage transfusion systems in developing countries: The Experience of Eastern and Southern Mediterranean countries	Multi-country
Haddad et al. (2020b)	Quality and safety measures in transfusion practice: The experience of eight southern/eastern Mediterranean countries.	Multi-country
Hajj et al. (2018))	Medication safety knowledge, attitudes and practices among community pharmacists in Lebanon	Lebanon
Hala and Saber (2011)	A Baseline Assessment of Patient Safety Culture among Nurses at Student University Hospital	Egypt
Hamaideh, (2017)	Mental health nurses' perceptions of patient safety culture in psychiatric settings	Jordan
Hamdan, (2013)	Measuring safety culture in Palestinian neonatal intensive care units using the Safety Attitudes Questionnaire	Palestine
Hamdan and Saleem (2018)	Changes in Patient Safety Culture in Palestinian Public Hospitals.	Palestine
Hamid et al. (2020)	An exploration of patient safety culture in Kuwait hospitals: a qualitative study of healthcare professionals' perspectives	Kuwait
Hassan and Mansour (2018)	Assessment of Nurses' Perception Concerning Patients Safety in Intensive Care units in Baghdad Hospitals	Iraq
Hayajneh et al. (2010)	Adverse events in Jordanian hospitals: Types and causes	Jordan
Hazazi and Qattan. (2020)	Exploring Strength Areas of Patient Safety Culture Improvement in KAMC, Makkah, Saudi Arabia	Saudi Arabia
Salami et al (2019)	Medication Administration Errors: Perceptions of Jordanian Nurses	Jordan
brahim et al. (2019)	Assessment of patient safety measures in governmental hospitals in Al-Baha, Saudi Arabia	Saudi Arabia
Ismail et al. (2017)	Study of Patient Safety Regarding Blood Transfusion in four Hospitals in Khartoum State	Sudan
Al-Tawfiq et al. (2013)	Reduction and surveillance of device-associated infections in adult intensive care units at a Saudi Arabian hospital, 2004-2011	Saudi Arabia
Halabi et al. (2021)	Professional Competence Among Registered Nurses Working in Hospitals in Saudi Arabia and Their Experiences of Quality of Nursing Care and Patient Safety	Saudi Arabia
John et al. (2019)	Incident Reporting System in Pediatric Intensive Care Units of Cairo Tertiary Hospital: An Intervention Study	Egypt
Kenawy and Kett (2019)	The impact of electronic prescription on reducing medication errors in an Egyptian outpatient clinic	Egypt
Khatatbeh et al. (2021)	Burnout and patient safety: A discriminant analysis of paediatric nurses by low to high managerial support	Jordan
Khater et al. (2015)	Nurses' perceptions of patient safety culture in Jordanian hospitals.	Jordan
Almotairy (2020)	The Impact of Safety Culture on Nurse and Patient Outcomes in Middle East Acute Care Hospitals	Multi-country
AL Lawati et al. (2019)	Assessment of patient safety culture in primary health care in Muscat, Oman: a questionnaire -based survey	Oman
Abu Esba et al. (2021)	Adverse Drug Reactions Spontaneously Reported at a Tertiary Care Hospital and Preventable Measures Implemented	Saudi Arabia
Lemay et al. (2018)	Reporting of Adverse Drug Reactions in Primary Care Settings in Kuwait: A Comparative Study of Physicians and Pharmacists	Kuwait
Letaief et al. (2017)	A Prospective Assessment of Adverse Events in 3 Digestive Surgery Departments From Central Tunisia.	Tunisia
Letaief et al. (2021)	Quality of health care and patient safety in extreme adversity settings in the eastern mediterranean region: A qualitative multicountry assessment	Multi-country
Hamdan and Saleem (2013)	Assessment of patient safety culture in Palestinian public hospitals.	Palestine
Qoronbleh, (2021)	Patient Safety Culture amongst Nurses in Qatar	Qatar
El Sayed et al. (2019)	Interfacility patient transfers in Lebanon-A culture-changing initiative to improve patient safety and outcomes	Lebanon
Suliman et al. (2017)	Exploring Safety Culture in Jordanian Hospitals: A Baseline Study	Jordan
Tobaiqy and Stewart (2013)	Exploring health professionals' experiences of medication errors in Saudi Arabia	Saudi Arabia
AL MA'MARI et al. (2019)	Predictors of perceptions of patient safety culture and frequency of event reporting by critical care nurses in Oman: a model-building approach	Oman

Lili et al. (2020)	Assessment of nurses' patient safety culture in 30 primary health-care centres in Tunisia.	Tunisia
AL Ma'mari et al. (2020)	Fatigue, burnout, work environment, workload and perceived patient safety culture among critical care nurses	Saudi Arabia
Madani Al et al. (2020)	<p>Policies vs Practice of Medical Error Disclosure at a Teaching Hospital in Saudi Arabia	Saudi Arabia
Mahjoub et al. (2015)	Healthcare-associated infections in a Tunisian university hospital: From analysis to action	Tunisia
Mahjoub et al. (2018)	Promoting safety culture through health-care professional-patient relationship's improvement	Tunisia
Al Mahmoud et al. (2020)	Exploring the perceptions of the patient safety culture	Saudi Arabia
Al Malki et al. (2018)	Health professional perspectives of patient safety issues in intensive care units in Saudi Arabia	Saudi Arabia
Mansour et al. (2020)	Disclosure of medical errors: physicians' knowledge, attitudes and practices (KAP) in an oncology center	Jordan
Al-Ahmadi (2009)	Measuring Patient Safety Culture in Riyadh's Hospitals: A Comparison between Public and Private Hospitals	Saudi Arabia
Temsah et al. (2021)	Adverse events experienced with intrahospital transfer of critically ill patients: A national survey	Saudi Arabia
Mihdawi et al. (2020)	The Influence of Nursing Work Environment on Patient Safety	Jordan
Miligy, (2015)	Laboratory errors and patient safety	Egypt
Al-Tehewy et al. (2020)	Association of patient safety indicator 03 and clinical outcome in a surgery hospital	Egypt
Mohamed et al. (2015)	Assessment of Patient Safety Culture in Primary Healthcare Services in Alexandria, Egypt	Egypt
MOHAMMED et al. (2014)	Medication errors at the outpatient pharmacy in a hospital in Aseer region, Kingdom of Saudi Arabia	Saudi Arabia
Mosallam and Ibrahim (2015)	Critical Value Reporting at Egyptian Laboratories	Egypt
Al Nadabi et al. (2020a)	Patient safety culture in Oman: A national study	Oman
Najjar et al. (2013a)	The Arabic version of the hospital survey on patient safety culture: a psychometric evaluation in a Palestinian sample	Palestine
Najjar et al. (2013b)	The global trigger tool shows that one out of seven patients suffers harm in Palestinian hospitals: Challenges for launching a strategic safety plan	Palestine
Najjar et al. (2018a)	Improving patient safety in Palestinian hospitals: a cross-sectional and retrospective chart review study	Palestine
Najjar et al. (2018b)	Similarities and differences in the associations between patient safety culture dimensions and self-reported outcomes in two different cultural settings: A national cross-sectional study in Palestinian and Belgian hospitals	Palestine
Naveed et al. (2019)	Improved efficiency and patient safety through bespoke electronic thalassaemia care module	UAE
Ibrahim et al. (2017)	Cross-infection and infection control in dentistry: Knowledge, attitude and practice of patients attended dental clinics in King Abdulaziz University Hospital, Jeddah, Saudi Arabia.	Sudai Arabia
Ibrahim et al. (2020)	Dispensing errors in community pharmacies in the United Arab Emirates: investigating incidence, types, severity, and causes	UAE
Omar Al et al. (2019)	Workplace bullying and its impact on the quality of healthcare and patient safety	Saudi Arabia
Qarni et al. (2021)	<p>Quality Improvement and Patient Safety Education in Internal Medicine Residency Training Program: An Exploratory Qualitative Study</p>.	Saudi Arabia
Qassim et al. (2014)	Reporting Adverse Drug Reactions: Evaluations of Knowledge, Attitude and Practice among Community Pharmacists in UAE.	UAE
Rages (2014)	Perceptions of Patient Safety Culture amongst Health Care Workers in the Hospitals of Northeast Libya.	Libya
Rasslan et al. (2012)	Device-associated infection rates in adult and pediatric intensive care units of hospitals in Egypt. International Nosocomial Infection Control Consortium (INICC) findings	Egypt
Rejeb et al. (2016)	Mortality among patients with nosocomial infections in tertiary intensive care units of Sahloul Hospital, Sousse, Tunisia	Tunisia
Siddiqi et al. (2012)	Patient safety friendly hospital initiative: From evidence to action in seven developing country hospitals	Multi-country
Alkhani et al. (2014)	Factors contributing to the identification and prevention of incorrect drug prescribing errors in outpatient setting	Saudi Arabia

Deering et al. (2011)	On the front lines of patient safety: implementation and evaluation of team training in Iraq	Iraq
ELMeneza et al.(2020)	Egyptian Neonatal Safety Training Network: a dream to improve patient safety culture in Egyptian neonatal intensive care units	Egypt
Azer and Baharoon (2016)	Medical error reporting: is it about physicians' knowledge and their practice, or patient safety culture in the workplace?	Saudi Arabia
Sahmoud et al. (2021)	Knowledge Improvement of Blood Transfusion Safety Among Pediatricians: Post Educational Intervention	Egypt
Salama, et al. (2013)	The effect of hand hygiene compliance on hospital-acquired infections in an ICU setting in a Kuwaiti teaching hospital	Kuwait
Saleh et al. (2015a)	The perception of hospital safety culture and selected outcomes among nurses: An exploratory study	Saudi Arabia
Atwa et al. (2023)	Healthcare practitioners' attitudes toward patient safety in hospital settings in Jeddah, Kingdom of Saudi Arabia	Saudi Arabia
Al Salem et al. (2019)	Hospital Survey on Patient Safety Culture: Psychometric evaluation in Kuwaiti public healthcare settings	Kuwaiti
Salem et al. (2019)	Nurses' Perceptions of Patient Safety Culture in Intensive Care Units: A Cross-Sectional Study	Egypt
Salih et al. (2021)	Patient safety attitude and associated factors among nurses at Mansoura University Hospital: A cross sectional study	Egypt
El Shafei and Zayed (2019)	Patient safety attitude in primary health care settings in Giza, Egypt: Cross-sectional study	Egypt
Soliman et al. (2020)	Intervention Study to Upgrade Patient Safety Practices in Pediatric Intensive Care Units of Cairo University Children Hospital	Egypt
Stewart et al. (2018)	Perspectives of healthcare professionals in Qatar on causes of medication errors: A mixed methods study of safety culture	Qatar
Suliman, (2015)	NURSES' PERCEPTIONS OF PATIENT SAFETY CULTURE IN PUBLIC HOSPITALS IN JORDAN.	Jordan
Ta'an et al. (2021)	Prevalence of medical errors and barriers to report among nurses and nursing students in Jordan: A cross-sectional study.	Jordan
Al Tehewy et al. (2016)	Medication Administration Errors in a University Hospital	Egypt
Tehewy et al. (2015)	A study of rate and predictors of fall among elderly patients in a university hospital	Egypt
Titi et al. (2021)	Staying ahead of the curve: Navigating changes and maintaining gains in patient safety culture - a mixed-methods study	Saudi Arabia
Tlili et al. (2020)	Assessing patient safety culture in 18 Tunisian adult intensive care units and determination of its associated factors: A multi-center study	Tunisia
Tubaishat, A. (2017)	The effect of electronic health records on patient safety: A qualitative exploratory study	Jordan.
Al Nadabi et al. (2020b)	Association between the nationality of nurses and safety culture in maternity units of Oman	Oman
Walston et al. (2010)	Factors affecting the climate of hospital patient safety: A study of hospitals in Saudi Arabia	Saudi Arabia
Webair et al. (2015)	Assessment of patient safety culture in primary care setting, Al-Mukala, Yemen	Yemen
Wilson et al. (2012)	Patient safety in developing countries: Retrospective estimation of scale and nature of harm to patients in hospital	Multi-country
Yousef et al. (2021)	Medication administration errors: Causes and reporting behaviours from nurses perspectives	Jordan
Yousef and Yousef (2017)	Using total quality management approach to improve patient safety by preventing medication error incidences	Syria
Ahmed et al. 2019	Medical errors: Healthcare professionals' perspective at a tertiary hospital in Kuwait	Kuwait
Zaghloul et al. (2016)	Obligation towards medical errors disclosure at a tertiary care hospital in Dubai, UAE	UAE
Alrasheadi et al., (2022)	Nurses' Perception of Safety Culture in Medical–Surgical Units in Hospitals in Saudi Arabia	Saudi Arabia
Qoronfleh et al., (2023)	A Perspective on Patient Safety Culture among Nurses in Qatar	Qatar
Vaz et al., (2023)	Unbundling the complexity of performance management of healthcare providers in the Middle East	Multi-country
Alaska & Alkutbe, (2023)	What Do We Know About Patient Safety Culture in Saudi Arabia? A Descriptive Study	Saudi Arabia

3.4.1. Characteristics of included studies

The main characteristics of the included studies were examined in terms of aim, origin, design, method, setting, and sample details.

3.4.1.1. Aim

The focal point of 48% of the scrutinised studies centered around Patient Safety Culture (PSC). Some studies had a more general aim focussing on institutionalising and improving patient safety (9.5%; n = 21), or incident reporting and learning (9.5%; n = 21). The remaining studies investigated different types of medical harm (34%; n = 75).

3.4.1.2. Origin

Geographically, the 221 studies provided data for only 17 of the 21 Arab countries of the EMR, with most originating in Saudi Arabia (37%; n = 81), Egypt (13%; n = 29), multiple-country studies (8%; n = 16), or other countries as described in Figure 3.3.

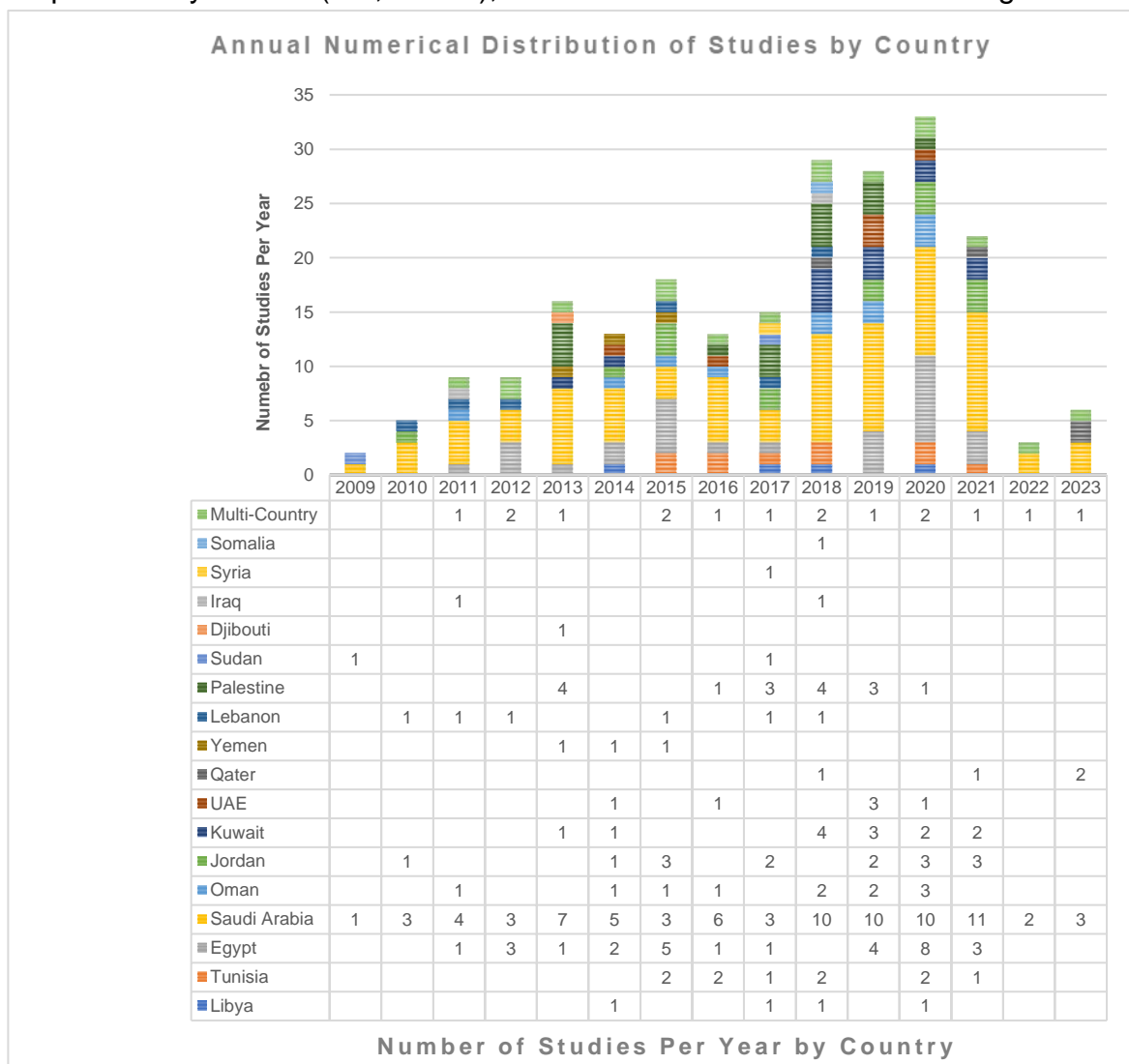


Figure 3.3: Clustered Bar Chart of Year and Geographical Distribution of the Studies

Countries such as Sudan, Libya, Djibouti, Syria, Iraq, Qatar, and Somalia contributed relatively few studies (n = 1 – 4). While reasons behind the absence of patient safety research from countries such as Morocco, Algeria, Bahrain, and Mauritania are presently unknown. Arguably, a pattern here perhaps between those countries that have published and the level of wealth and adversity—those countries with lower numbers or no patient safety publications are perhaps lower income and have witnessed significant uprisings over the review reporting period since 2009 onwards.

3.4.1.3. Design

Quantitative methodological approaches, predominantly employing cross-sectional designs, held a dominant position in patient safety research. (57.65%; n=128). In comparison, qualitative and mixed-methods approaches have been underutilised within patient safety research within the WHO EMR (9%). Types of study design are shown in Figure 3.4.

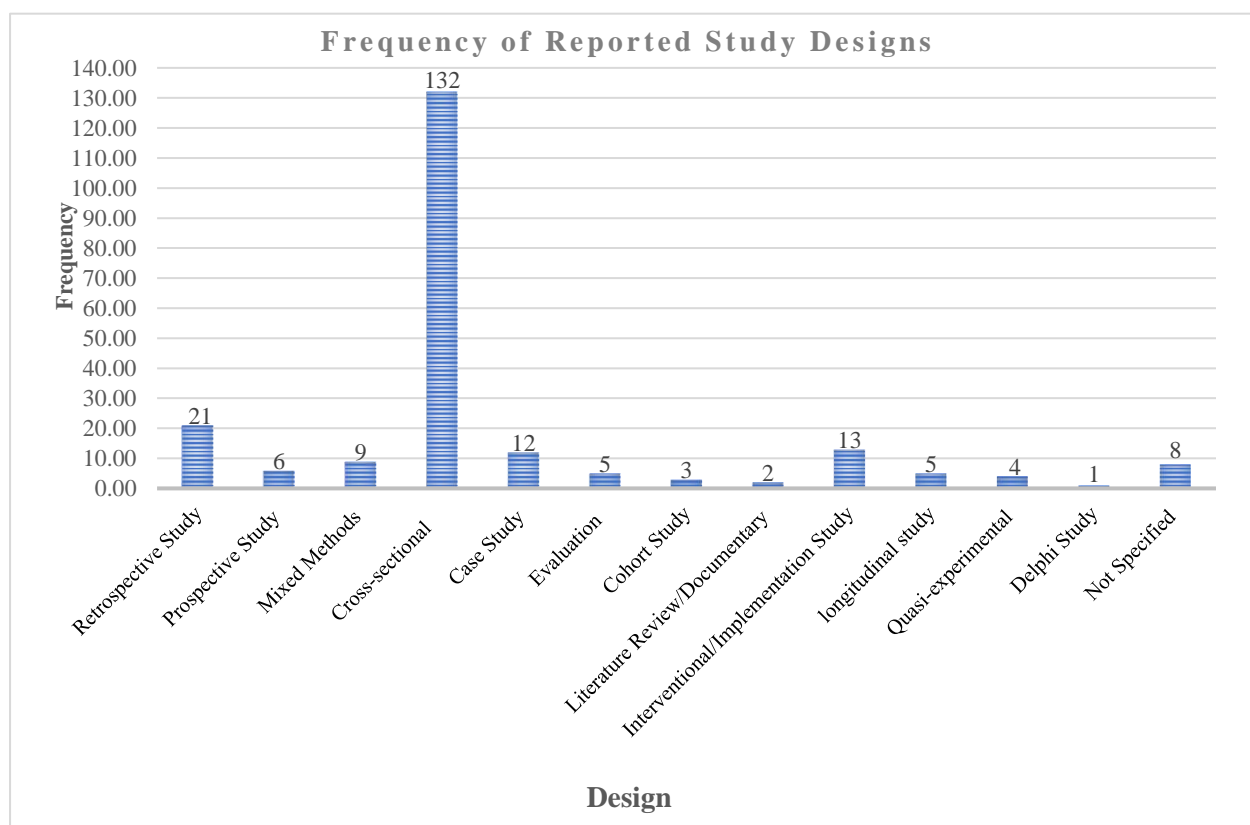


Figure 3.4: Frequency of Reported Study Designs

3.4.1.4. Data collection approaches

Quantitative surveys were utilised in the majority of the studies (65% / 221), with the rest using other data collection methods as shown in Figure 3.5.

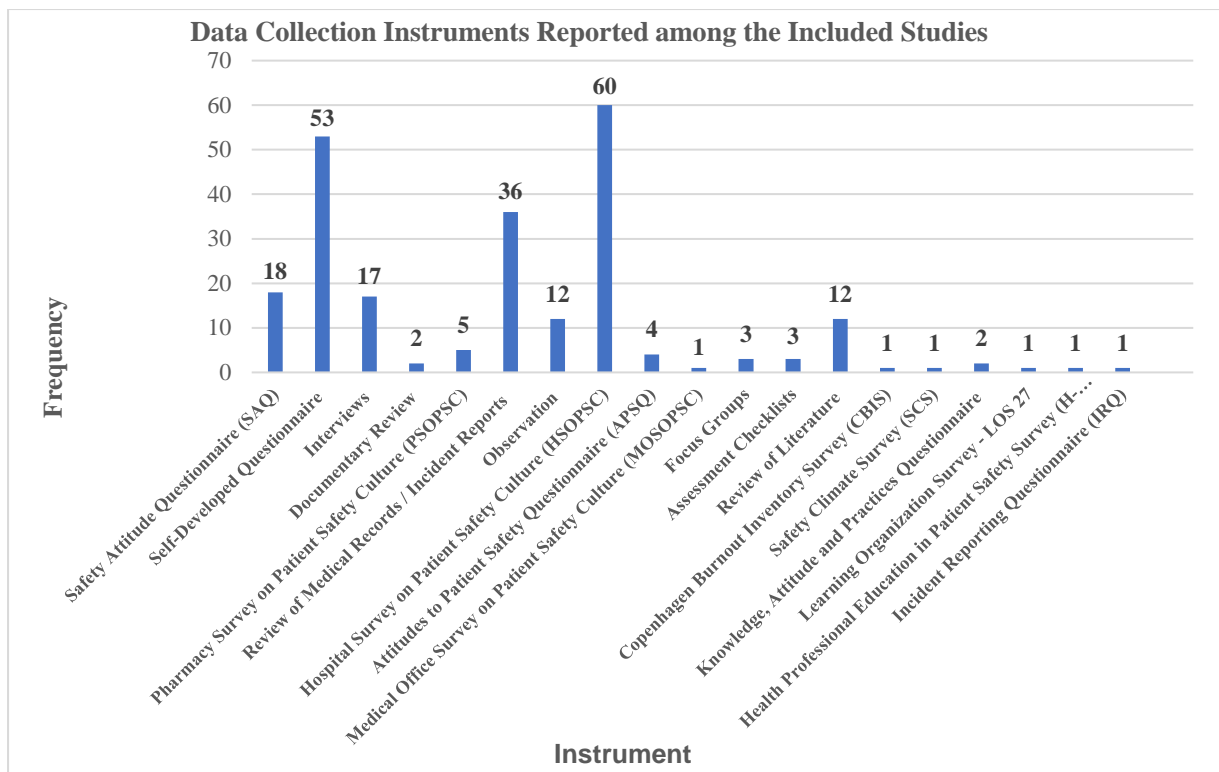


Figure 3.5: Data Collection Methods and Frequencies among the Included Studies

Within this category, the Hospital Survey on Patient Safety Culture (HSOPSC) (AHRQ 2004) was employed in 27% of cases ($n = 60$), followed by self-developed questionnaires at 24% ($n = 53$), and the Safety Attitudes Questionnaire (SAQ) (Sexton et al. 2006) at 8% ($n = 18$) each. Additionally, alternative methods included medical records review (16%; $n = 36$), interviews (8%; $n = 17$), literature review (6%; $n = 12$), and other methodologies, as illustrated in Figure 3.5.

3.4.1.5. Types of participants studied

Fifty-four studies used a sample composed entirely of nurses (25%), frontline clinical staff only (19%; $n = 42$), clinical and non-clinical staff in the same study (23%; $n = 51$), or other groups as described in Figure 3.6.

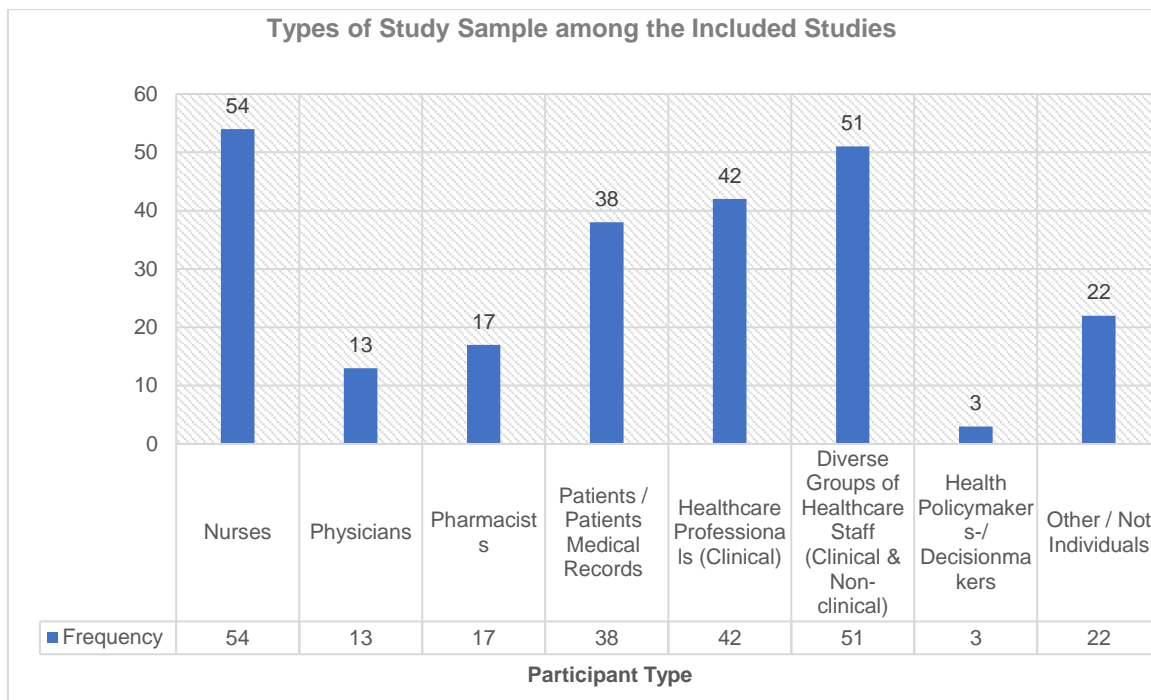


Figure 3.6: Types of Participants among the Studies

3.4.1.6. Setting

There was a variety of setting types involved across the included studies as shown in Figure 3.7.

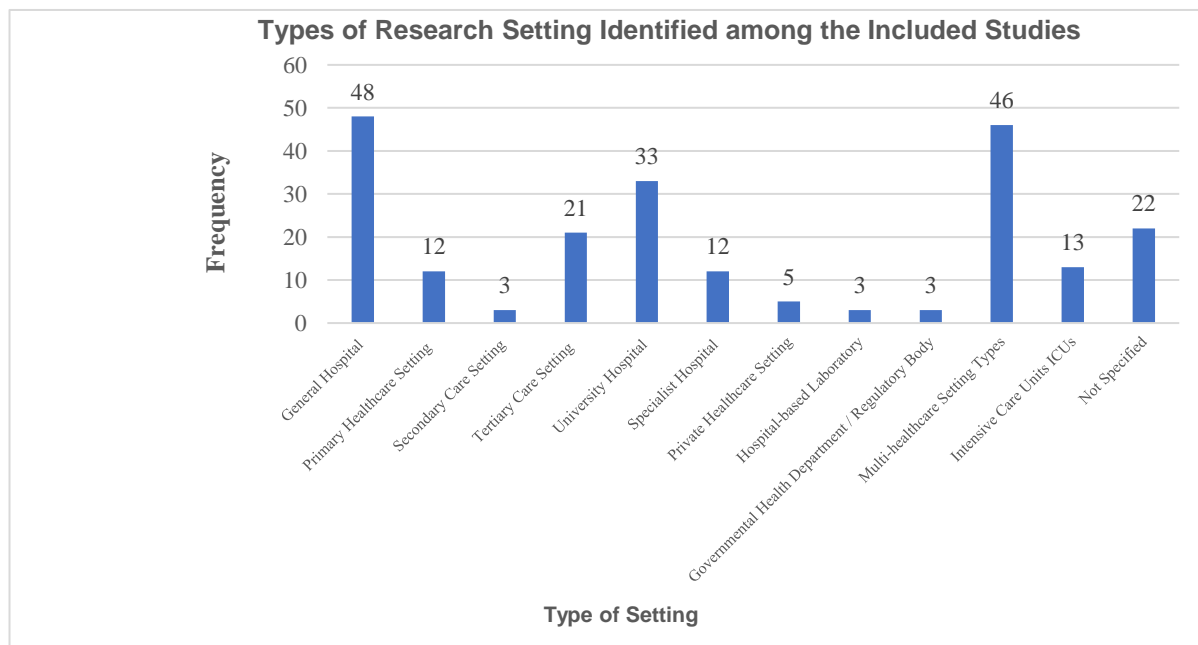


Figure 3.7: Settings of the included studies

The terms used to describe the type of setting were given by the author(s) across the included studies thus some terms may overlap in reality. Most studies were conducted in single hospitals or local groups of general care units. The most type of settings

described was general hospitals (22%; n = 48), followed by multi-healthcare settings (21%; n = 46), university hospitals (15%; n = 33), tertiary care (10%; n = 21), primary care (6%; n = 12), or other as described in Figure 3.7.

3.5.2. Findings of the included studies

This section will provide a thematic narrative analysis and presentation of the included studies' findings.

3.5.2.1. Nature of medical harm

Seventy-five studies were categorised under this theme and were organised into six domains as appropriate.

3.5.2.1.1. Adverse events (AEs)

AEs incidence rate was reported in some WHO EMR countries as follows: Tunisia; (5.2%) (Gira et al. 2015), (18.1%) (Letaief et al. 2017), and (10%) (El-Asady et al. 2018a); Jordan (16.6%) (Hayajneh et al. 2010), Palestine; (14.2%) (Najjar et al. 2013b; Najjar et al. 2018b); and Egypt, Jordan, Morocco, Sudan, Tunisia, and Yemen; (8.2% [2.5% to 18.4% per country]) (Wilson et al. 2012). A Yemeni study reported an incidence rate of 48.95% in a total of 1600 injections observed (Abkar et al. 2013). Two studies investigated AEs in Saudi Arabia: one reported that hemodynamic and respiratory status deterioration and missing clinical information represented significant AEs among patients transferred to/from ICUs (Halabi et al. 2021), while a further found that 66.66% of nurses reported experiencing an AE relating to equipment failure (Alsohime et al. 2019).

Another Egyptian study focused on surgical incidents and found that 80% of surgeries lacked organised discussion among surgical team members for anticipated critical events (Sayed et al. 2013). The preventability rate of AEs identified among studies ranged from 50% - 83%. The consequences of suffering an AE included a prolonged hospital stay (range: 27% - 90%), temporary harm (range: 10% - 70.4%), permanent disability (range: 6% - 14%), and death (range: 4% - 31%) across most studies. In addition, a study of WHO surgical safety checklist effects in a Djiboutian hospital' operating rooms demonstrated its capability to effectively decrease AEs (Becret et al. 2013). Another study of nurse managers support effects on AEs in Jordanian hospitals showed that nurse managers support was a significant factor in decreasing AEs (Khatatbeh et al. 2021). Factors and type of errors associated with AEs as identified among the studies are described in Figure 3.8.

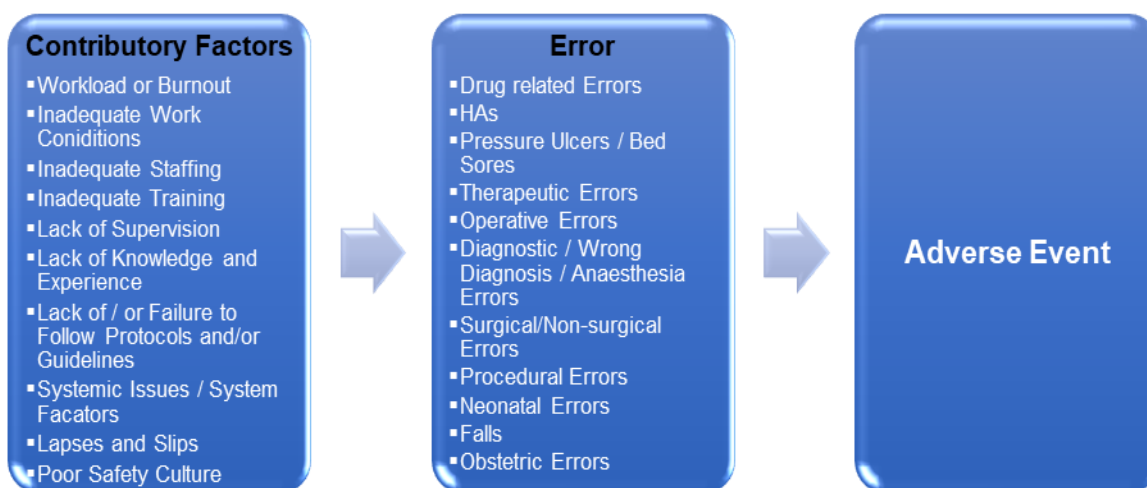


Figure 3.8: Contributing Factors and Types of Error associated with AEs

3.5.2.1.2. Healthcare-associated infections (HAIs)

Four studies conducted in Saudi Arabia, Tunisia, Egypt, and Kuwait, estimating the prevalence of Healthcare-Associated Infections (HAIs), collectively revealed a prevalence rate of 41.9%, ranging from 7.8% to 50% (Rasslan et al., 2012; Al-Tawfiq et al., 2013; Mahjoub et al., 2015; Gaid et al., 2018). Notably, one of these studies reported a mortality rate associated with HAIs at 21.3% (Gaid et al., 2018). A detailed overview of the types of HAIs and their respective prevalence rates across these studies is presented in Table 3.5.

Table 3.5: Common Types of Infection as Identified among the studies

Type of Infection	Range of Prevalence Rate
Ventilator-Associated Pneumonia (VAP)	19.3% - 73.4%
Catheter-Associated Urinary Tract Infections (CAUTI)	9.6% - 65.6%
Central Line-Associated Blood Stream Infection (CLABSI)	22.5% - 38.5%
Peripheral Venous Catheter (PVC)	<42.2%
Bloodstream Infections	<22.5 %

Two studies of patients' perspectives towards IPC in Saudi Arabian dentistry showed that most patients had positive attitudes towards dentistry infections and IPC measures (Ibrahim et al. 2017; Madarati et al. 2018). Similarly, an Egyptian study of nurses' knowledge regarding IPC measures revealed that >50% of nurses had a positive attitude towards relevant the IPC measures (Abdalla et al. 2014). An intervention study to improve adherence to IPC measures and staff education programmes in two Palestinian hospitals' neonatal ICUs achieved an improvement of

16.71% (Alrumi et al. 2019). Another intervention study of hand hygiene compliance effects on HAIs in a Kuwaiti hospital reported an improved HH compliance rate by 18.5% and a decrease in HAIs rate by 22% post-intervention (Salama et al. 2013). A further intervention of CAUTI prevention in Egyptian hospital' ICUs reduced CAUTI by 29.43% post-intervention (Chang et al. 2015).

3.5.2.1.3. Medication errors (MEs)

Twenty-two studies reported on MEs in Saudi Arabia, Egypt, Jordan, the UAE, and Yemen. Table 3.6 summarises the types of MEs and their prevalence rate as identified among these studies.

Table 3.6: Types and Prevalence rate of MEs Identified among the Studies

Type	Specific Type	Prevalence Rate
General Medication Errors (Alshaikh et al. 2013; Alakahli et al. 2014; MOHAMMED et al. 2014; Thomas et al. 2017; Thomas et al. 2019; Al-Harkan et al. 2020; Aljuaid et al. 2021)	Prescribing Error	14.8% - 55%
	Administration Error	0.6% - 34.5%
	Dispensing Error	<28.2%
	Incomplete Order	2% - 61.7%
	Wrong Drug Selection	25.7 % - 50.5%
	Drug Monitoring	0% - 50%
	Wrong/Over-Dose	25% - 44.3%
	Drug Omission	37%
Administration Errors (al Tehewy et al. 2016; Salami et al. 2019)	Wrong Documentation	90%
	Wrong Technique/Wrong Time	32.6% - 78.90%
	Wrong Route	14.8% - 39.58%
	Wrong Medication	<5%
	Wrong Patient	0.05% - 30.5%
Medication Prescribing Errors (Al-Khani et al. 2014; Alharaibi et al. 2021)	Improper Dose	<30.7%
	Wrong Dose	<53%
	Wrong Frequency	9% - 20%
	Wrong Drug	10% - 32.1%
	Two Conflicting Doses Duplication	<6.27%
	Incomplete Order	<3.52%
	Wrong Duration	<3.13%
	Wrong Quantity	<30%
Medication Dispensing Errors (Ibrahim et al. 2020)	Prescription-Related Error	<2.6%
	Pharmacist Counselling Error	<4.1%
Adverse Drug Reactions (Abu Esba et al. 2021)	Immune System Disorders	<87.8%

Some studies investigated contributory factors to MEs and reasons behind the underreporting of MEs in the aforementioned countries (M and D 2013; Mazhar et al. 2018; Hajj et al. 2018; Alharbi et al. 2019; Elasrag and Abu-Snieneh 2020; Yousef et al. 2021), which are shown in Figure 3.9.

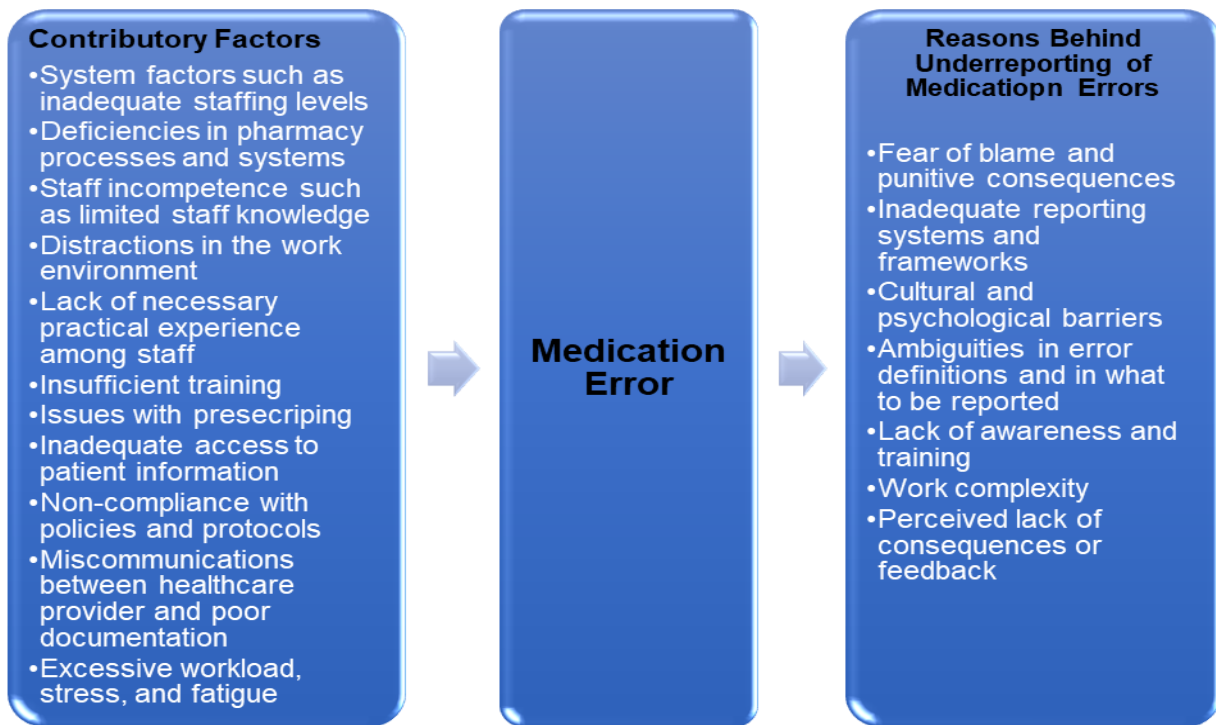


Figure 3.9: Contributory Factors to MEs and the Underreporting of MEs among Studies

In addition, a few studies suggested strategies to reduce MEs. For example, the total quality management approach as an effective low-cost strategy to control MEs in a Syrian hospital (Yousef and Yousef 2017); the Pharmaceuticals and Therapeutics Library in a Saudi Arabian hospital (Alkatheeri et al. 2020); the electronic prescription which reduced MEs and increased the error free prescriptions by 18.2% in Egypt (Kenawy and Kett 2019a); educational programmes to healthcare staff and patients and regulations to reduce MEs in Saudi Arabia (Alhawassi et al. 2018); and the Computerised Provider Order Entry System which helped manage nurses' workflow and reduce MEs (Alsweed et al. 2014).

3.5.2.1.4. Mortality

Two studies investigated patient safety related mortality over one year. The first reported 18 maternal mortalities in a Palestinian hospital, with sepsis, postpartum haemorrhage, and pulmonary embolism as the leading causes of death (Böttcher et

al. 2018), and a further showed a mortality rate of 35.8% (24/67) associated with nosocomial infections in Tunisian ICUs, with Bacteraemia and trauma identified as contributory factors (Rejeb et al. 2016).

3.5.2.1.5. Studies reporting different types of medical incidents

Fifteen This sub-theme comprised fifteen studies, with four conducted in Egypt. Among these, one study, conducted by Tehewy et al. in 2015, observed a falls incidence rate of 16.9% within a sample of 411 elderly patients. Another study, by ELMeneza (2020) and AbuShady (2020), examined 2724 incidents and found that 59.5% of them involved errors. Notably, death was reported at 4.528%, serious patient harm at 2.9%, and minor harm at 25.2%; one found that 14 tests of the 1,600 laboratory testing procedures reviewed encountered errors (0.87%) (Miligy 2015); and the final one reported a pressure ulcer (PU) incidence rate of 67.7%/1,000 discharges, with a death ratio of 8.8 (Al-Tehewy et al. 2020).

Seven studies originated in Saudi Arabia. One found that 20.4% of 642 incident records reviewed were associated with an error, with most deaths occurring in surgery and obstetrics (25% for each) or other medical specialties (17%) (AlJarallah and AlRowaiss 2013), and a further reported an incidence rate of 5.8% among 3041 incident reports reviewed (Arabi et al., 2012). A study of patients' perspectives regarding their safety showed that >50% of 410 patients had no knowledge about the side effects of their drugs, 20.7% experienced an error, and 47% misunderstood any infections prevention means (Alnasser et al., 2020).

Another study of surgeon-patient interaction showed that most patients reported that interaction reduced pre-surgery anxiety and improved the patient's understanding of the surgical procedure pre-/post-surgery (Al-Abadi et al., 2019). Two studies reported that in 2012, 45.78% of deaths and 53.65% of disability cases resulting from healthcare in Saudi Arabia were compensated an amount of £21248.13 – £106240.65 and £786.97 – £10624.07, respectively (Alshammari and Mital 2016), which is higher compared to the UK as the other study found (Alkhenizan and Shafiq 2018). A study of policies and practices of medical errors disclosure revealed a low awareness of relevant policies and programmes among participants (Madani et al., 2020).

In Kuwait, two studies delved into the realm of medical errors. One study, conducted by Ahmed et al. (2019), reported a notable incidence rate of 60.3%, with life-threatening complications accounting for 32.3% and fatalities at 20.9%. Another study,

led by Abbas et al. in 2021, explored poor sleep quality among healthcare staff and teams during COVID-19, revealing that 77.42% of them attributed medical errors to this condition. In Jordan, a separate study identified that predominant medical errors were associated with changing positions for bedridden patients, medication errors, falls, and iatrogenic infections (Ta'an et al. 2021). Moreover, a team training intervention implemented in Iraq helped decrease medical errors in hospitals studied (Deering et al. 2011).

3.5.2.1.6. Patient safety in blood transfusion

This sub-theme encompassed eight studies, with five regional investigations indicating the persistent presence of transfusion-transmitted infections (TTIs) such as Hepatitis and HIV through blood transfusion (Cheraghali 2011; Darbandi et al. 2017; Haddad et al. 2020c; Haddad et al. 2020a). Two specific studies conducted in Egypt shed light on blood safety measures, revealing that human factors contribute significantly to blood transfusion errors (Sahmoud et al. 2021). Additionally, these studies proposed a pivotal commitment to the recruitment and retention of voluntary, non-remunerated repeat donors, especially for low-resource countries (Abdelrazik and Ahmed 2016). Another study, focusing on Sudan, found that despite the absence of written guidelines, 75% of healthcare providers in four Sudani hospitals demonstrated good knowledge and attitudes regarding blood safety (Ismail et al., 2017).

3.5.2.1.7. Summary of key findings

Evidence reveals a widespread occurrence of medical harm in the WHO EMR, including AEs, HAIs, MEs, mortality as a consequence of medical practices, and unsafe blood transfusion. AEs were a prominent focus, with reported incidence rates varying widely by country and/or specific settings. AEs rates ranged from 5.2% to 48.95% in some WHO EMR countries, highlighting significant concerns and challenges to patient care and safety. Surgical incidents and their preventability were also notable, with some studies suggesting that up to 83% of AEs could be prevented. The consequences of AEs included extended hospitalisation, temporary or permanent disability, or even death, with figures ranging up to 31%.

The analysis of HAIs revealed a general prevalence of 41.9% across studies from Saudi Arabia, Tunisia, Egypt, and Kuwait. Specific infections such as VAP, CAUTI, CLABSI, PVC, and bloodstream infections were detailed, flagging their substantial burden on healthcare systems. Evidence from Saudi Arabia and Egypt demonstrates

a generally positive attitude towards IPC measures among patients and nurses, indicating a receptive environment for IPC protocols in healthcare settings. Interventions targeting infections in Palestine and Kuwait successfully also enhanced adherence to IPC measures and hand hygiene compliance, showing the effectiveness of specific IPC strategies in patient care and safety outcomes .

MEs were investigated across 22 studies, revealing prescribing, administration, and dispensing errors as a significant patient safety concern. Contributory factors to MEs include systemic issues such as inadequate staffing and deficiencies in pharmaceutical processes, staff incompetence and lack of knowledge, excessive workload, stress and fatigue, inadequate access to patient information, non-compliance with relevant protocols, and poor communication. Furthermore, underreporting of MEs is exacerbated by fears of blame, ineffective reporting systems, and cultural and psychological barriers. Innovative strategies, such as electronic prescription systems and educational programmes, were introduced in some countries, including Saudi Arabia and Egypt, proving effective measures to reduce MEs.

Mortality associated with medical practices was also explored in depth, with evidence from some countries, such as Tunisia, notably reporting a mortality rate of 35.8% in ICUs, pointing to different types of infections as a critical patient safety concern. Patient safety in specific aspects of healthcare, such as blood transfusions, was also addressed, revealing a consistent presence of transfusion-transmitted infections and highlighting the need for strengthened safety measures and guidelines. Evidence highlights the significant and varied nature of medical harm across WHO EMR countries, showcasing both the challenges as well as the need for effective strategies for addressing such challenges. Consequently, comprehensive research was emphasised in several studies to guide and inform targeted interventions that address unsafe care challenges within the WHO EMR countries, especially in those lacking evidence and experiencing adversity, such as Libya and Iraq.

3.5.2.2. Prioritising patient safety in the WHO EMR

Within this theme, twenty articles were identified, each addressing factors influencing patient safety. Specific studies delved into the intricacies of patient safety in various regions, such as Saudi Arabia (Aljuaid et al. 2016; Ibrahim et al., 2019; Halabi et al., 2021), Somalia (Abdi Yusuf Isse 2018), Oman (Alhatmi 2011), and the broader

Electronic Medical Record (EMR) landscape (Ezzat Alkorashy 2013; Saleh et al., 2015c; Letaief et al. 2021b). A discernible pattern across these studies reveals that patient safety in these contexts is influenced by environmental factors, issues within organisational systems, and cultural aspects within healthcare workplaces. The challenges posed by these factors make it difficult to uphold patient safety as a strategic organisational priority. Noteworthy examples of these challenges include the absence of comprehensive policies and strategies for patient safety, limited resources, poor leadership and commitment to patient safety (at political, national, and service delivery levels) and support to ensuring patient safety, extreme adversity, and other related issues, as shown in Figure 3.10.

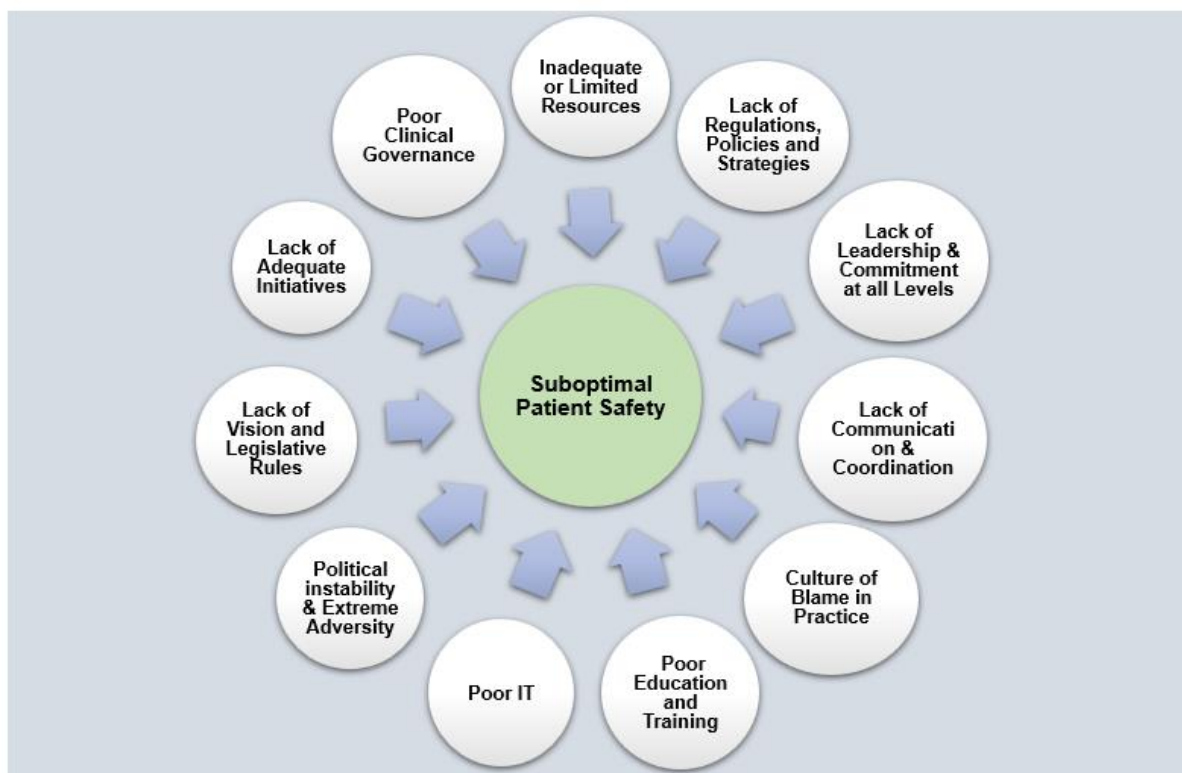


Figure 3.10: Factors Contributing to the Lack of Prioritisation of Patient Safety in the WHO EMR

For example, a study of national policies and strategies related to patient safety in Lebanon and Jordan revealed that both countries lack relevant policies and strategies (El-Jardali and Fadlallah 2017b). Political instability and conflict resulting in extreme economic and social adversity in some WHO EMR countries such as Libya, Yemen, and Syria, is also a significant threat to prioritising patient safety (Letaief et al. 2021). Two studies focused on enhancing patient safety in Libya recommended the imperative for the country to consult internationally endorsed patient safety guidelines,

policies, and draw insights from the experiences of the UK and other global experts in the realm of patient safety. (Elmonsri et al. 2017b; Elmonsri et al. 2018a). Two further studies of improving patient safety in the WHO EMR generally suggested different integrated approaches, such as systems approach, introducing “just culture” approaches, and lessons from developed countries to guide the development of a nation-wide strategy to enhance patient safety across the WHO EMR nations (WHO 2015b; Elmonsri et al. 2018d).

Several studies have scrutinised initiatives related to patient safety in the WHO EMR. Notably, in Lebanon, efforts have been directed towards the implementation of patient safety indicators (Alameddine et al. 2015) and integrating patient safety standards into accreditation programmes (El-Jardali et al. 2012). Lebanese primary healthcare centres demonstrated a readiness to adopt patient safety indicators, and healthcare organisations such as hospitals in the country have prioritised patient safety by integrating patient safety standards into accreditation programmes, albeit with identified gaps in implementation. In Saudi Arabia, initiatives include incorporating patient safety indicators into accreditation processes (Awa et al. 2011), leveraging information technology to enhance patient safety (Arabi et al. 2016b), and addressing educational aspects of patient safety (Qarni et al. 2021). Although progress has been made, the evidence to date is limited, making it challenging to ascertain the extent of meaningful changes in patient safety outcomes.

In Oman, the implementation of the WHO Nine Life-saving Patient Safety Solutions tool facilitated the redesign of care processes and heightened safety awareness among healthcare staff, aiming to ensure safe care provision (Al-Mandhari et al. 2016a). The WHO Patient Safety Friendly Hospital Initiative (PSFHI), introduced in 2007 in the WHO EMR, was subsequently extended to Egypt, Jordan, Sudan, Tunisia, Yemen, Morocco, and Oman (Siddiqi et al. 2012). However, the evaluation scores for hospitals engagement in the PSFHI varied significantly, ranging from 14% to 41% across these countries, reflecting a suboptimal level of readiness for achieving optimal patient safety. Still, none of the participating hospitals achieved a baseline score of 50% across all main domains of the PSFHI. Oman stands out as the only country to have achieved successful outcomes in implementing the PSFHI in response to patient safety challenge in the country (Al-Mandhari et al. 2018b).

3.5.2.2.1. Summary of key findings

The review identified 20 studies addressing the complexities of patient safety across several countries in the WHO EMR, indicating significant challenges in prioritising patient safety across the WHO EMR. Evidence illuminates the multifaceted nature of patient safety, affected by environmental factors, systemic and organisational issues, and cultural aspects within healthcare settings. Environmental and contextual factors, particularly political instability and socio-economic adversities in countries such as Libya, Yemen, and Syria, were identified as significant impediments to prioritising and improving patient safety in such contexts. The evident lack of comprehensive national policies and strategies for patient safety was a common emerging theme across WHO EMR countries, complicating efforts to standardise and enforce patient safety improvement initiatives.

Systemic issues, including poor leadership, inadequate resources, and a lack of political commitment, were cited as key barriers to prioritising and improving patient safety across most WHO EMR countries. In addition, the PSFHI, introduced in 2007 across several WHO EMR countries, showed varied outcomes. Evidence shows that none of the participating hospitals in those countries achieved a baseline score of 50% across all domains of the PSFHI, reflecting a suboptimal level of readiness for achieving optimal patient safety, apart from Oman, which was noted for its successful application of the PSFHI to strengthen patient safety improvement efforts therein.

In relation to improvement initiatives, countries such as Lebanon and Saudi Arabia have made some efforts and progress towards integrating patient safety standards into healthcare accreditation programmes and leveraging technology to improve patient safety outcomes. However, evidence on the effectiveness of such initiatives remains limited, indicating a research gap that needs to be addressed to better assess and understand their effects on patient safety. Evidence from other countries suggests the adoption and endorsement of internationally recognised safety guidance standards and best-practice patient safety improvement strategies as models for WHO EMR countries to follow—to bolster efforts towards improving patient safety in the WHO EMR context.

However, there is still a discernible gap in the development and implementation of patient safety improvement strategies across the countries of the WHO EMR, as evidenced by the challenges to patient safety identified by the current scoping review.

The consequences of suboptimal healthcare in most WHO EMR countries are therefore profound, breaching patient care and safety; hence, such challenges must be addressed through an evidence-based, coordinated, holistic approach targeting all levels of health systems. Evidence clearly demonstrates a critical need for a sustained commitment (at national and local levels) across all countries to improving patient safety through comprehensive policy reforms, regulations, leadership, resource allocation, patient safety education, and training to support a cultural transformation towards safer medical practices.

3.5.2.3. Safety culture and organisational learning

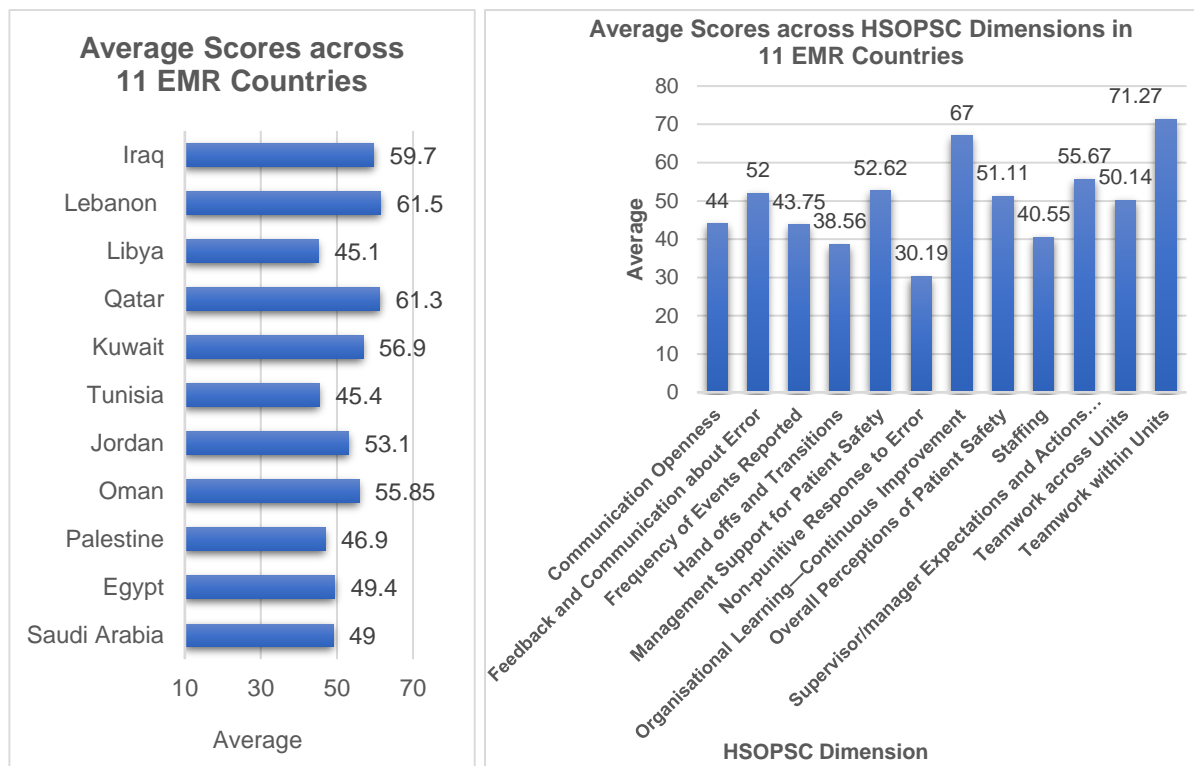
A total of 104 studies were categorised under this theme and were organised under sub-themes as appropriate.

3.5.2.3.1. Patient safety culture (PSC)

Most studies highlighted that healthcare providers across the WHO EMR have become more aware of PSC and the importance of transforming organisational culture. Five studies conducted an examination of the psychometric properties of the HSOPSC and SAQ, reporting their appropriateness in measuring PSC in the WHO-EMR context (Alonazi 2011; Najjar et al. 2013a; Elsou et al. 2017; Al Salem et al. 2019).

PSC assessment using the HSOPSC: Fifty-three studies assessed PSC using the HSOPSC in 11 WHO EMR countries (full details are available in Appendix 1). Figure 3.11 shows the average performance of 11 WHO EMR countries on the dimensions of the HSOPSC using the data extracted from 53 studies across the 11 countries. (Aboshaiqah 2010; Alahmadi 2010a; F. et al. 2010; Abdelhai et al. 2012; Aboul-Fotouh et al. 2012; Al-Awa et al. 2012; Aljabri 2012; Aboshaiqah and Baker 2013a; M. and A.A. 2013; Al-Mandhari et al. 2014; El-Jardali et al. 2014; Ghobashi et al. 2014; Rages 2014a; AbuAIRub et al. 2014; AM et al. 2015; Ammouri et al. 2015a; Khater et al. 2015; Mohamed et al. 2015; Suliman 2015; Cheikh et al. 2016; Alswat et al. 2017a; Anwar 2017; Hamaideh 2017a; M et al. 2017; Alharbi et al. 2018; Ali et al. 2018; Alqattan et al. 2018; Alquwez et al. 2018a; Al Dhabbari 2018; Hamdan and Saleem 2018a; Hassan and Mansour 2018; Najjar et al. 2018a; Stewart et al. 2018; Alenezi et al. 2019; Alrowely and Baker 2019; Alshammari et al. 2019; Elmorsy 2019; AL Lawati et al. 2019; AL MA'MARI et al. 2019; Salem et al. 2019; El-Sherbiny et al. 2020; Eltarhuni et al. 2020a; Foda et al. 2020; MA et al. 2020; Al Mahmoud et al. 2020; Tlili

et al. 2020; Alrabae et al. 2021; Aouicha et al. 2021a; M. Walid 2021; Titi et al. 2021; Alrasheadi et al. 2022a; Abdulla et al. 2023; Alaska and Alkutbe 2023; Qoronfleh et al. 2023; Rawas and Abou Hashish 2023).



Country	Saudi Arabia	Egypt	Palestine	Jordan	Oman	Tunisia	Kuwait	Qatar	Libya	Lebanon	Iraq
No. Studies	19	7	3	6	5	4	3	4	2	1	1

Figure 3.11: The Average Performance of 11 WHO EMR Countries on the Dimensions of the HSOPSC

Most of the HSOPSC assessments have been conducted in Saudi Arabia, with sixteen studies being run from 2010 to 2023, yielding a positive average rate of 49%. Qatar, Lebanon, and Iraq have reported a positive average rate of >60 (moderately high), but more studies are needed considering only a single survey was conducted in these countries. Oman, Kuwait, and Jordan follow this performance with an average of 53% – 57%, which is also moderately positive. On the other hand, Palestine, Tunisia, Libya, and Egypt have had a deficient safety culture, with all of them reporting an average rate of <49% on all dimensions of HSOPSC. Regionally, Saudi Arabia might have the most accurate measurements considering the higher number of studies conducted— 16 surveys were done from 2010 to 2023, although this country reporting a low average rate of <50% in all studies. Concisely, this could reflect the level of overall safety culture in healthcare in the whole region.

Precisely, the average performance of 11 WHO EMR countries on the dimensions of the HSOPSC ranged from 45.1 (the lowest) to 61.5 (the highest), which means an overall low performance across all countries, demonstrating the need for comprehensive improvements, particularly for those countries reporting an average of <50%. The average positive rate on Teamwork within units was 71.27% across all countries which is crucial for the smooth working of organisations, while being better than Teamwork across Hospital Units (50.14%).

Conversely, Non-punitive Response to Error was flagged as a concern in all countries (30%) which shows that all countries have a very punitive response to errors, deteriorating over the year since 2010. Handoffs and Transitions which means Important patient care information is transferred across hospital units and during shift changes, was also extremely low (38.56%) in all countries, showing that this aspect is declining and should be assessed and targeted for urgent improvement. Average rates on communication Openness, and Frequency of Events Reported, and Staffing were low in all countries (<44), Indicating that such factors have affected patient safety in the EMR. Additionally, Management Support for Patient Safety, and Organisational Learning—Continuous Improvement were ranged from 52% - 67% across all countries which is a modest performance improvement, but more needs to be done to achieve upper high levels of PSC.

PSC assessment using a modified version of HSOPSC: some studies made some modifications to the original version of HSOPSC to fit their aim that was then mapped onto the HSOPSC domains. Two Saudi Arabian studies found non-punitive response to errors, communication openness, and frequency of events reported as areas requiring improvements (Al-Ahmadi T 2009; Hazazi and Qattan 2020), and showed that errors were reported more frequently in private hospitals than in public hospitals (Al-Ahmadi T 2009). A Lebanese study of the association between PSC predictors and outcomes revealed significant correlations across the different dimensions. Notably, event reporting, communication, patient safety leadership and management, staffing, and accreditation were identified as positive PSC predictors (El-Jardali et al. 2011). Another piece of work evaluated the healthcare professional-patient relationship in a Tunisian hospital, highlighting the relationship as poorly developed among healthcare professionals (Mahjoub et al. 2018).

PSC assessment using SAQ: Eighteen studies assessed safety culture using the SAQ (Sexton et al. 2006) in Jordan, Saudi Arabia, Egypt, Oman, and Palestine (Hala A. Abdou and Kamilia M. Saber 2011; Hamdan 2013; Gadallah et al. 2014; EM and MM 2015; Aljadhey et al. 2016; Elsous et al. 2016; Abu-El-Noor et al. 2017; Elsous et al. 2017; Al Malki et al. 2018; El Shafei and Zayed 2019; Khamaiseh et al. 2020; Habahbeh and Alkhalaileh 2020; Al Nadabi et al. 2020; Soliman et al. 2020; Al Nadabi et al. 2020; Salih et al. 2021; Atwa et al. 2023). Working condition presented the biggest weakness in most studies (<45%), whereas job satisfaction and teamwork climate were positively rated among most studies (>55%) (Hamdan 2013; EM and MM 2015; Aljadhey et al. 2016; Abu-El-Noor et al. 2017; Elsous et al. 2017; Al Malki et al. 2018; Khamaiseh et al. 2020; Habahbeh and Alkhalaileh 2020; Al Nadabi et al. 2020; Soliman et al. 2020; Al Nadabi et al. 2020).

However, safety climate, perception of management, and stress recognition scored <50% among most studies (Hala A. Abdou and Kamilia M. Saber 2011; Gadallah et al. 2014; Aljadhey et al. 2016; Elsous et al. 2016; Elsous et al. 2017; El Shafei and Zayed 2019; Habahbeh and Alkhalaileh 2020; Al Nadabi et al. 2020; Salih et al. 2021). This indicates relatively negative safety attitudes among WHO EMR countries. In addition, a comparison study of safety attitudes between doctors and nurses in a Saudi Arabian hospital found similar positive safety attitudes among both professional groups (Alzahrani et al. 2018). An intervention study of enhancing safety attitudes in an Egyptian hospital showed statistically significant differences between participants who received training in patient safety and others who did not in terms of skills and knowledge, which significantly increased post-intervention (Soliman et al. 2020).

PSC assessment using Attitudes to Patient Safety Questionnaire III: Four studies used APSQ (Carruthers et al. 2009) in Saudi Arabia and Palestine (Al-Khaldi 2013; Abu-El-Noor et al. 2019; Bottcher et al. 2019; Alfaqawi et al. 2020). The domains of working hours as a cause of errors and team functioning had the highest positive score across the four studies (>70%). Whereas, negative attitudes were found in the domains of patient safety training received, professional incompetence as a cause of error, and the importance of patient safety in the curriculum (<50%) in all but one study, in which they all received a score of >60% (Abu-El-Noor et al. 2019). The domains of error inevitability, disclosure responsibility, patient involvement in reducing error, and error reporting confidence received a score of 52.6% - 77.8% across all studies.

PSC assessment using Pharmacy Survey on Patient Safety Culture (PSOPSC):

Four studies explored safety culture within a specific area of healthcare practice in Saudi Arabia, UAE, and Kuwait (Alsaleh et al. 2018; Alslubi and El-Dahiyat 2019; Almalki et al. 2020; Al-Surimi et al. 2021) using PSOPSC (Guide 2014), which was previously validated in Kuwait (Abdallah et al. 2020). Collectively, communication about mistakes, communication about prescriptions across shifts, communication openness, organisational learning continuous improvement, overall perceptions of patient safety, patient counselling, physical space and environment, response to mistakes, staff training and skills, and teamwork were positively rated across the five studies (>75), except one study in which they were all rated in range of 54% - 74% (Al-Surimi et al. 2021).

However, staffing, work pressure, and space obtained the lowest score in the five studies (24% - 40%) indicating that these are issues impacting patient safety within pharmacies in different WHO EMR countries. A study of PSC in Yemen (Webair et al. 2015) using the Medical Office Survey on Patient Safety Culture (MOSPSC) (AHRQ 2021) showed average positive responses of 67% for all dimensions. A study of safety climate in Saudi Arabian hospitals (Almutairi et al. 2013) using the Safety Climate Survey (SCS) (Kho et al. 2005) demonstrated that only 54% of the respondents viewed the safety climate as positive and indicated that the national diversity in a multicultural nursing workforce impacts patient safety.

3.5.2.3.2. Factors influencing PSC

Nine studies explored factors contributing to PSC in Saudi Arabia, Kuwait, Oman, Jordan, Lebanon, and Egypt (Walston et al. 2010; Mwachofi et al. 2011; El Sayed et al. 2019; Almotairy 2020; Hamid et al. 2020; AL Ma'mari et al. 2020; Mihdawi et al. 2020; Halabi et al. 2021; AL-Dossary 2022; Al-Surimi et al. 2022). Factors Identified among studies as contributing to PSC are shown in Figure 3.12.

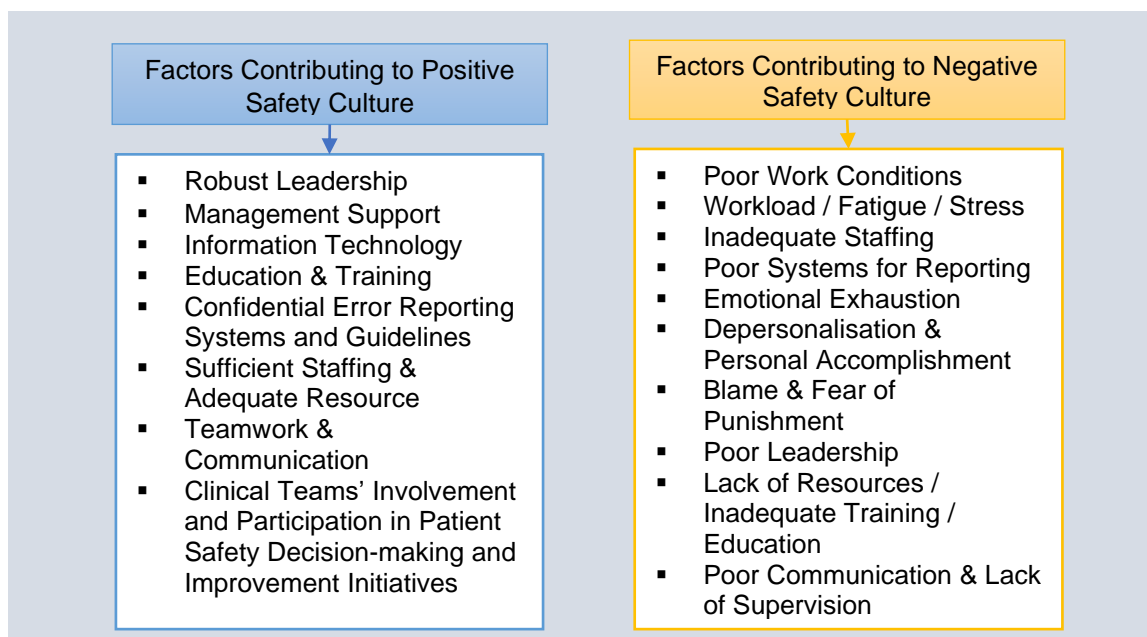


Figure 3.12: Factors Influencing PSC among studies

Three additional studies identified specific workplace factors that have adversely impacted patient safety in Saudi Arabia. These include night shift work rotations effects on nurses' physiological status and patient safety (Alsharari et al. 2021), workplace incivility impact on nurses' patient safety competence (Alquwez 2020), and workplace bullying impacts on nurses' patient safety attitudes (Omar et al. 2019). Moreover, three studies looked at strategies to promote PSC: the development of the Egyptian Neonatal Safety Training Network to promote safety in neonatal care (ELMeneza et al 2020); integrating safety attitudes and safety stressors into safety climate and safety behaviour relations in UAE (Faqeeh et al. 2019); and using daily safety huddle tool (AHRQ 2017) to enhance teamwork communication and safety responsiveness in Saudi Arabia (Aldawood et al. 2020), which helped create an equitable environment where staff can speak freely about safety issues.

3.5.2.3.3. Incident reporting and organisational learning

Seventeen studies explored incident reporting and barriers to reporting in Saudi Arabia, Egypt, Jordan, UAE, Kuwait, and Sudan (Abualrub et al., 2015; Albarrak et al. 2020; Aldaqal & Al-amoodi, 2014; Alsafi et al., 2011; F. M. Alshammari et al., 2021; Al-Shaya et al., 2021; Al-zain & Althumairi, 2021; Aldryhim et al. 2019; Banakhar et al., 2018; Alsafi et al. 2015; Elnour et al., 2009; John et al., 2019; Lemay et al., 2018; Mansour et al., 2020; Qassim et al., 2014; Azer and Baharoon 2016; Zaghloul et al.,

2016). A common theme across these studies was a lack of knowledge and poor practice among healthcare staff in relation to incident reporting. Furthermore, most studies showed that healthcare staff tend not to report incidents when no harm or severe harm has occurred to patients, and particularly when such reporting might expose them to punitive actions—fear of punitive consequences if they report errors. Additional factors contributing to the underreporting of medical errors are illustrated in Figure 3.16 (Abualrub et al., 2015; Al et al., 2020; Aldaqal & Al-amoodi, 2014; Alsafi et al., 2011; F. M. Alshammari et al., 2021; Al-Shaya et al., 2021; Al-zain & Althumairi, 2021; Aldryhim et al. 2019; Banakhar et al., 2018; Alsafi et al. 2015; Elnour et al., 2009; John et al., 2019; Lemay et al., 2018; Mansour et al., 2020; Qassim et al., 2014; Azer and Baharoon 2016; Zaghloul et al., 2016).



Figure 3.13: Barriers Contributing to the Underreporting of Incidents among Studies

Two further studies assessed the relationship between reporting and organisational learning and PSC in Egypt (Mosallam and Ibrahim 2015) and Kuwait (Abdallah et al. 2019), supporting a cultural shift from individual blaming to raised awareness, trust, sharing, and learning. Two studies reported on implementing comprehensive management system for incident reporting in Saudi Arabian ICUs (Arabi et al. 2016) and electronic medical record in a UAE medical centre (Naveed et al. 2019), which were noted to significantly improve incident reporting and overall safety practices.

3.5.2.3.4. Summary of key findings

Evidence related to PSC across the WHO EMR reveals a complex picture, with a general recognition of the importance of PSC yet varying levels of establishment and effectiveness. While some countries such as Saudi Arabia and Egypt reported moderately PSC assessments, others such as Palestine, Tunisia, Libya, and Lebanon showed significant deficiencies. The vast majority of the PSC studies employed the HSOPSC, with a focus on areas such as teamwork within units, non-punitive response to errors, handoffs and transitions, and overall perceptions of patient safety among healthcare staff. Evidence from 53 studies across 11 WHO EMR countries revealed that Saudi Arabia conducted the most PSC assessments but showed a moderately low PSC with an average score below 50%. In contrast, countries such as Qatar, Lebanon, and Iraq reported more positive rates, albeit based on fewer studies, suggesting a potentially higher but underexplored PSC—evidence is still limited from these contexts.

Despite some positive indicators in areas such as teamwork within units in relation to patient safety WHO EMR countries exhibited low performance in the non-punitive response to errors, frequency of events reported, and feedback and communication about errors within healthcare environments. This demonstrates a prevailing culture of blame and punishment, hindering open reporting and learning from errors in healthcare settings. The dimensions of handoffs and transitions, teamwork across units, and communication openness were notably poor across all countries, also indicating poor communication, which could affect patient care and safety. Moreover, studies using other safety culture assessment tools, such as SAQ and APSQ III, consistently flagged significant gaps in areas such as management support, working conditions, staffing, and communication openness.

Incident reporting and organisational learning were specifically explored through 17 studies, revealing significant barriers to reporting and learning such as lack of knowledge, poor reporting practices, and fear of punitive repercussions among healthcare staff. These are compounded by factors such as excess workload, inadequate staffing, and poor leadership, undermining the establishment of an open reporting and learning culture. Evidence from several studies delineates factors influencing PSC. Positive contributors included effective leadership, management support, advanced information technology, education and training, adequate staffing,

teamwork, and the involvement of healthcare managers in safety decision making. However, these elements were noted to be mostly lacking in nearly all WHO EMR countries. The variations in safety culture outcomes as well as the factors influencing safety culture across different WHO EMR countries point to significant gaps in the effectiveness of patient safety strategies.

Evidence therefore indicates a critical need for a safety culture transformation, particularly through continuous education and training, supportive management and leadership, and robust reporting systems, thereby fostering an environment that prioritises learning and safety over blame. This is vital for promoting safety culture that is sustainable, resilient, and adaptable to the changing dynamics of healthcare environments across the WHO EMR countries. Evidence from some studies suggest a dire need to foster a 'just culture' that supports safe practices, involving a shift from a blame, punitive-focused approach to one that encourages open reporting, learning from errors, and continuous improvement.

3.6. Discussion

The review encompassed 221 studies that spanned a diverse array of topics investigating patient safety since the release of *To Error is Human* as well as *An Organisation with a Memory* reports, which served as a catalyst for the global patient safety movement. This was further emphasised by the WHO 2008 report of "*Global Priorities for Research in Patient Safety*" across developing nations (WHO 2008a). Patient safety research in the WHO EMR has been dominated by quantitative studies using cross-sectional designs and surveys, with most studies conducted on a relatively small scale in single hospitals or care units. The large number of studies, the differences in focus, and the lack of uniformity of methodologies among these studies have made the synthesis of evidence complex.

The 221 studies provided data for 17 of the 21 Arab countries that make up the EMR, with most studies originating in Saudi Arabia (n = 79). Some countries (e.g., Sudan, Libya, Djibouti, Qatar, Somalia, Morocco, Algeria, Bahrain, and Mauritania) contributed very few or no studies. Explanations for the paucity or absence of research in these countries have not been explored but may be linked to economic and adversity factors further discuss below. An interesting pattern can be drawn in this context perhaps between those countries that have published and the level of wealth and adversity—countries with lower numbers or no publications are lower income and have

experienced significant upheavals over the reporting period of the review. In addition, countries across the WHO EMR were shown to be at different stages of patient safety development and practice; some such as Saudi Arabia and Oman were much more developed than others such as Libya and Yemen. Therefore, it was difficult to establish a clear certainty or clarity about patient safety across the region or in any individual country specifically.

The review revealed a high proportion of preventable harm and preventable mortality among patients across the EMR. For example, the rate of AEs in some WHO-EMR countries spanned between 2.5% - 18.4%, with a preventability rate ranging from 50% to 83%, indicating an urgent need for research output and interventions. In comparison, reported AE rates in countries including New Zealand, the UK, the Netherlands, Canada, Brazil, Spain, Sweden, Ireland and Iran, varied within the range of 5.7% to 12.9% (184). Healthcare-associated infections are an established cause of patient harm worldwide (Haque et al. 2018) but are much higher in the EMR. For example, HAIs rate in Saudi Arabia, Tunisia, Egypt, and Kuwait varied between 7.8% and 50%, being much higher than previously reported in low- and middle-income countries (5.7% and 19.1%), developed countries (3.5% and 12%), or European countries (7.1%) (Haque et al. 2018; WHO 2018a).

The review findings indicated the existence of a punitive and blame-focused work environments in healthcare settings across WHO-EMR countries, in which a culture of blame overshadows workplaces. This needs urgent attention, a transformation to “just culture” is ultimately needed in all WHO EMR countries, but it is likely to be a complex endeavour. Nevertheless, for the purpose of instigating a culture change and enhancing safety awareness, the importance of patient safety education and training programs, in conjunction with regulatory measures, has been underscored as essential to accomplish this objective (WHO 2009a). Medical errors in countries go underreported for reasons including fear of negative consequences, lack of time or knowledge on what should be reported, inadequate incident reporting processes, or crisis such as the recent COVID-19 outbreak which has impacted incident reporting in Saudi Arabia (Al-Shaya et al. 2021).

It can be contended that this might be attributed to the absence of necessary policies and regulations for effectively managing and fostering patient safety by instituting nationwide mandatory reporting systems. Therefore, lessons from failures and errors

are not learned, whereas the opposite is mostly the case in most developed countries (Stavropoulou et al. 2015; Brunsveld-Reinders et al. 2016a). Nevertheless, reporting systems may not be efficient in the WHO EMR context due to the punitive culture overshadowing workplaces. Therefore, interventions—programmes and regulatory frameworks are needed to help establish a non-blame culture of reporting and encourage honest disclosure of information and speaking up among healthcare staff in the WHO EMR (Kuosmanen et al. 2019).

Evidence shows that some WHO EMR countries such as Saudi Arabia, Oman, Egypt, and Jordan are further on patient safety journey and have implemented standards and systems around patient safety practice and education. Although these initiatives have been implemented it is still difficult to establish whether they have resulted in meaningful change in patient safety outcomes as evidence of progress is limited. It was evident that patient safety has not been prioritised in most WHO EMR countries, particularly in limited-resources or fragile and conflict-affected countries.

The review showed that patient safety in resource-limited and fragile WHO EMR countries is hindered by insufficient policies, weak clinical governance, inadequate leadership support, political instability, extreme adversity, and a lack of clear vision and strategic direction. These reflect the findings of a broader literature flagging reasons behind suboptimal patient safety in developing countries (WHO 2015b; WHO 2018b; Yang 2018b; Kang et al. 2021b). In nations like Libya, Yemen, Iraq, and Syria, severe adversity poses a considerable threat as far as patient safety is concerned, with the collapse of health systems in these environments being the primary challenge (Letaief et al. 2021b). A study of patient safety policies and strategies in Lebanon and Jordan revealed that both countries lack explicit policies and strategies for patient safety (El-Jardali and Fadlallah 2017b).

Such as a significant gap in national understanding, knowledge, and policy across most WHO EMR countries although some countries, for example, Saudi Arabia, Oman, and Egypt have better understanding and knowledge and therefore better national policies might have been in place. Nevertheless, the lack of targeted efforts to address this knowledge gap comprehensively across all WHO EMR nations may explain the absence of effective enactment and manifestation of patient safety. This is evident in the limited availability of necessary policies and reforms that target all levels of the health system, filtering down to the service delivery level in most WHO EMR countries.

Patient safety policies and their implementation in the WHO EMR elicit less priority compared to developed countries (Slawomirski et al. 2017b). In contrast, the UK's NHS places a strong emphasis on patient safety, with effective governance through policies and oversight by various regulatory bodies ensuring adherence to safety protocols in organisational operations (DoH | UK 2013). Another example is the USA's set of "*National Patient Safety Goals*" that requires organisations to set robust policies to ensure patient safety (Aust 2013). The adversity, fragility, and limited-resources issues come into play in this context, for example, in limited-resources or conflict affected countries where countries have limited or no national governmental structures it is unsurprising that ministries of health have difficulty functioning to raise awareness and facilitate patient safety at regional and local levels. Where governmental structures have been consistently functioning and resourced (e.g., UK, US, Australia) to reinforce patient safety improvement across the system as whole.

3.7. Implications and application

Addressing patient safety challenges in the WHO EMR goes beyond merely increasing staffing and equipment. Even if such an immediate improvement were feasible, it may not present a viable solution, especially in more vulnerable countries. The imperative for WHO-EMR nations is not just to take appropriate actions but to also demonstrate these actions visibly, showcasing a commitment to enhancing patient safety. A comprehensive approach to nationwide interventions in the WHO EMR should encompass various levels of the hierarchy, ranging from policy making and development, regulatory frameworks, risk assessment and management, as well as cultural transformation. This necessitates political and leadership commitment to assume ownership and ensure implementation. Table 3.7 outlines tailored actions suited to the specific context of each country to improve patient safety across the WHO-EMR.

Table 3.7: Interventions and Actions Required for Patient Safety Improvement in the WHO EMR according to Country Context

Status	Country	Action
High Stability/No Adversity	Saudi Arabia Bahrain Oman Jordan UAE Kuwait Qatar	<ul style="list-style-type: none"> ▪ Setting out explicit policies, standards, guidelines, and protocols on patient safety and enforcing them through effective regulations, legislation, and resources. ▪ Emphasising oversight and inspection of healthcare providers by regulatory and monitoring organisations to ensure effective organisation and delivery of safe care. ▪ Introducing training and education programmes in patient safety for healthcare staff to promote safety culture and improve safety awareness. ▪ Developing a safety framework for the involvement of healthcare staff and patients (including their families) in decision making related patient safety improvement. ▪ Instituting comprehensive patient safety reporting systems, fostering a non-blame culture, and encouraging learning from errors through the provision of patient safety education and training programmes . ▪ Encouraging more research to strengthen knowledge and evidence base about patient safety.
Moderate Stability / Limited Resources	Egypt Tunisia Djibouti Morocco Mauritania Algeria Sudan	<ul style="list-style-type: none"> ▪ Developing explicit regulatory frameworks for patient safety to reinforce safe medical practices and set clear expectations for outcomes. ▪ Formulating and implementing a comprehensive national patient safety strategy with a clearly defined purpose. ▪ Implementing training and educational interventions in patient safety for healthcare staff to cultivate a safety culture and enhance accountability in medical practices. ▪ Promoting the involvement of healthcare staff in decision-making processes related to patient safety, including the development of policies and guidelines. ▪ Encouraging extensive research to expand the national knowledge base on patient safety and inform comprehensive interventions. ▪ Establishing independent national monitoring institutions to oversee healthcare organisations and services and advocate for patient safety improvements.
Low Stability & Extreme Adversity	Lebanon Libya Palestine Yemen Somalia Syria Iraq	<p>With support and capacity building from WHO: -</p> <ul style="list-style-type: none"> ▪ Raising patient safety to the political and top health system level. ▪ Developing a framework for patient safety management during emergencies to ensure effective implementation of minimum standards of patient safety. ▪ Conducting baseline assessments of patient safety practices to provide a better longitudinal understanding of patient safety concerns and opportunities for improvement. ▪ Establishing minimum standard patient safety guidance frameworks for ensuring safe medical practices. ▪ Implementing some basic interventions to improve patient safety in priority areas, including clinical protocols, licensing, accreditation, and certification of healthcare staff. ▪ Encouraging system-wide research to understand and effectively address patient safety challenges.

These strategies can serve as a foundation for designing and implementing improvement interventions in the WHO EMR, with the current imperative being policy-level action. The next crucial step involves sharing lessons learned to deepen the understanding and address unsafe care within WHO EMR countries. Despite the growing interest in patient safety in the WHO EMR, numerous potential patient safety issues remain unexplored. Recognising patients' experiences and involving them is now acknowledged as crucial for comprehending and enhancing the safety of care globally (Doyle et al. 2013). However, relevant studies addressing this aspect are lacking in the region.

Comprehensive, system-wide studies are urgently needed to comprehend patient safety from the perspective of the entire health system. This approach will generate a more comprehensive understanding of the challenges, considering the unique cultural, healthcare delivery, and political contexts in each country. Internationally, such studies have laid the groundwork for enhancing patient safety (Malaskovitz and Hodge 2008; Clay-Williams et al. 2014). Thus, the region's patient safety challenges should be scrutinised using a systems approach (Dekker and Leveson 2015). Understanding patient safety through the health system's design and from the viewpoint of individuals navigating the system is essential. This approach will enable us to capture a complete spectrum of patient safety issues, establish an evidence base for developing appropriate solutions, and guide comprehensive interventions for improvement.

Despite growing interest in patient safety in the EMR, many potential patient safety problems are yet to be fully explored. Patients' experience and involvement is increasingly recognised as critical to understanding and improving safety of care internationally (Doyle et al. 2013), but relevant studies are absent in the region. System-wide studies to understand patient safety from the perspective of the whole health system are missing and are urgently needed to generate a fuller picture of the challenges, taking into account the cultural, healthcare delivery and political contexts in each country. Such studies internationally have been the foundation for improving patient safety (Malaskovitz and Hodge 2008; Clay-Williams et al. 2014). Patient safety challenges in the region need to be investigated through the lens of systems approach (Dekker and Leveson 2015)—we need to understand patient safety through the design of the health system and the perspective of those moving through and navigating the system. This will allow us to obtain a full scope of patient safety issues and establish

evidence base to develop appropriate solutions and guide comprehensive interventions.

3.8. Limitations

While the review stands as the inaugural attempt to synthesise evidence on patient safety in the WHO EMR, its interpretation should be mindful of certain limitations. Despite efforts to enhance comprehensiveness, it cannot be guaranteed that the review has captured all relevant studies. Second, the diverse aims, designs, and settings of the numerous studies have complicated comparisons. Third, adhering to the scoping review methodology, the included studies' risk of bias was not systematically assessed, as would be necessary in systematic reviews (Tricco et al. 2018). Consequently, caution is recommended when drawing conclusions based on the combined data from these studies.

3.9. Conclusions

The review indicates that unsafe healthcare is a significant problem in the EMR; in particular, the review has identified a high proportion of preventable harm and mortality, the punitive and blame-focused work environments, and a lack of in-depth research output, and inadequate resources. The review identified an interesting pattern between those countries that have published and the level of wealth and adversity. Countries with lower publication numbers or no publications typically fall into the lower-income category and have undergone significant upheavals over the past decades. WHO EMR countries are at varying stages of patient safety improvement, demonstrating diverse progress. The variability in patient safety progress across the WHO EMR can potentially be attributed to adverse conditions within specific countries, making it challenging to perceive the WHO EMR as a cohesive or unified group. Patient safety is not consistent or homogenous across the WHO EMR due to inherent differences within the region.

In essence, the current findings underscore the significance of aligning policies, organisations, regulatory frameworks, capacities, resources, and cultural transformation to institutionalise patient safety uniformly across all WHO EMR countries. The review posits that enhancing patient safety in the WHO EMR necessitates comprehensive systemic changes, addressing challenges at all health system levels and involving individuals navigating the entire system. To establish an evidence base guiding interventions and informing patient safety improvement efforts,

in-depth system-wide research is essential. Such research, utilising a systems approach, would offer a better understanding of patient safety across all health system levels and contribute to guiding future patient safety research in the region.

3.10. Gap in literature

A high proportion of the existing literature in WHO EMR has focused on perceptions of healthcare staff towards safety culture, leaving a gap in knowledge relating to how patient safety is or can be organised and operationalised from the perspective of different levels of the health system (e.g., macro, meso, and micro). There is an explicit lack of studies focusing on the different aspects of the health system to explore dynamic interrelationships and interfacing between the different parts and functions that make up the system as a whole in relation to patient safety.

Notably, none of the studies conducted in different WHO EMR countries have introduced or adopted a holistic approach to understanding, managing, and improving patient safety across the health system as whole, especially in those countries experiencing extreme adversity such as Lebanon, Libya, Palestine, Yemen, Somalia, Syria, and Iraq (Table 3.7). The scoping review suggests that in understanding and improving patient safety, a focus needs to be placed on the wider systemic factors influencing health systems across WHO EMR, hence patient safety therein (e.g., complex political, organisational, socio-technical, and cultural factors influencing the health system as a whole). This a key gap in the literature that has limited the ability of policymakers, healthcare managers, as well as researchers for achieving high-quality improvement outcomes.

To this end, this qualitative exploratory study is carried out to close a key gap existing in the literature into this area, with a specific focus on Libya. The current study therefore attempts to improve understanding of patient safety organisation, management, and concerns in Libya, in conjunction with exploring interagency working in patient safety across different levels of the Libyan health system, including WHO's contribution to improving patient safety therein and its influence upon on the organisation and delivery of quality care. This understanding, in line with the global agenda of patient safety espoused by WHO for LMICs such as Libya, is very crucial for obtaining a greater insight into holistic approaches for the enhancement, promotion, and integration of improvement strategies. As such, this study will offer a comprehensive, context-lens

framework for improving patient safety in Libya through enhanced interagency working. The next chapter will present the research methodology adopted to carry out this study.

Chapter Four: Methodology

4.1. Introduction

This chapter provides details of methodological approaches and techniques applied to undertake the study. **Section 4.1** is an introduction. **Section 4.2** describes an explicit and comprehensive reporting guidance checklist for this qualitative study. **Section 4.3** elucidates the philosophical underpinnings and research paradigm adopted for this study. **Section 4.4** describes different methodological research approaches and presents the approach selected for the study. **Section 4.5** describes the study's settings and population in addition to the numerous methods and strategies used to collect and analyse data, including the development process of the study's patient safety improvement framework. Considerations are given in **Sections 4.6** and **4.7** to research rigour and quality criteria and piloting and practicing methods, respectively. Finally, study ethical considerations are addressed in **Section 4.8**, followed by a chapter summary presented in **Section 4.9**.

4.2. Consolidated Criteria for Reporting Qualitative Research (COREQ)

To enhance the rigor and transparency in reporting this qualitative inquiry, the study being reported adhered to the (COREQ), employing a detailed 32-item checklist specifically designed for qualitative research (Tong et al. 2007). The COREQ framework informed the design, implementation, and reporting processes of this study, providing a structured and systematic approach to conducting the current qualitative inquiry of patient safety in Libya. This approach consequently ensured that the study was reported with sufficient detail to enable readers to evaluate the validity and reliability of the research methodology as well as findings. A completed COREQ checklist, which encapsulates critical elements including the research team and reflexivity, design and methods, and analysis, findings, and interpretations, is provided in Appendix (2).

4.3. Philosophical underpinnings of research and paradigms

All research approaches encompass a conceptual foundation or philosophical standpoint concerning the nature and acquisition of knowledge, influencing the entire research process. The researcher's philosophical worldview shapes and influences the development of the research question(s), the selection of methods for collecting and analysing the data, and the investigation of these questions (Given, 2012). This approach ensures that researchers anchor their work in methodological literature comprehensible to readers (Pombo et al., 2020). While philosophical ideas may seem

somewhat concealed, they exert a significant influence on research and, therefore, warrant identification. Creswell (2003) emphasised the importance of researchers being conscious of the assumptions they make about acquiring knowledge and explicitly stating them.

Numerous philosophical perspectives in research have been delineated, yet a consensus on classification and consistent terminology remains elusive. In navigating these variations, the researcher opted to align with the widely recognised works of Guba and Lincoln (1994), Patton (2002), Creswell (2003), and Green and Thorogood (2018), who outlined four primary research paradigms. These include positivism, post-positivism, constructivism, and pragmatism. A research paradigm is characterised as a fundamental set of beliefs guiding actions in research, defining one's perception of the world, one's position within it, and one's relationship to its components. The foundational beliefs that delineate paradigms centre on three interconnected questions, as elucidated by Guba and Lincoln (1994), Creswell (2003), and Green and Thorogood (2018):

1. **Ontological Question:** This pertains to the essence of reality, what is discoverable about it, and personal convictions regarding its essence.
2. **Epistemological Question:** This centres on the connection between what is known, the individual seeking knowledge, and what can be known. It delves into the process of acquiring knowledge.
3. **Methodological Question:** This delves into how the inquirer can ascertain what they believe can be known and how the study should be designed.

Beliefs regarding ontology, epistemology, and methodology play a crucial role in shaping researchers' perspectives on the world and their actions within it. Consequently, a researcher's epistemology, ontology, and methodology are embedded within their paradigm (Guba and Lincoln, 1994). Distinct paradigms embrace differing beliefs regarding ontology, epistemology, and methodology.

Positivism, for instance, is cantered on identifying essential relationships or patterns within a studied phenomenon. It aligns with confirmatory research, seeking to validate pre-specified relationships between variables. This paradigm is closely associated with quantitative methods, such as questionnaires and experiments, known for their

structured nature (Creswell, 2003). Constructivism, in contrast, is concerned with comprehending a phenomenon through the interactions and experiences of individuals involved. It adopts an interpretative approach, assuming that knowledge is socially constructed by those participating in the research study. Researchers in this paradigm aim to understand participants' experiences, viewing it as a co-construction involving both participants and the researcher (Guba and Lincoln, 1994; Creswell, 2003).

Interpretivism, another paradigm, prioritises statistical patterns and correlations that cannot be fully understood in isolation. It also underlines the need to understand the values and meanings attributed by individuals to activities contributing to observed patterns (Guba and Lincoln, 1994; Creswell, 2003). Pragmatism, on the other hand, focuses on what works as the truth in addressing the research question(s) and seeks practical solutions to identified problems. This paradigm is associated with exploratory research, aiming to identify a phenomenon or relationships between factors contributing to an investigated issue. Pragmatism is particularly linked with qualitative methods, recognised for their unstructured nature, such as in-depth interviews or participant observation studies (Ramanadhan et al., 2021).

These paradigmatic differences extend beyond philosophical considerations and can have practical implications for research conduct (Santiago-Delefosse et al., 2015). Therefore, researchers must acknowledge their worldview, define its components, and explore how it shapes their investigative approach. The subsequent section delineates the researcher's own worldview and its application to the reported work.

4.3.1. Defining the study's paradigm

A person's perspective is shaped by various factors, including their academic discipline, the beliefs of their research group, and past research experiences. In the context of this thesis, the researcher acknowledges the influences on their own worldview and aims to contribute to patient safety management and improvement in Libya through interagency working and knowledge development. To achieve this, the pragmatism paradigm was selected as the foundational framework for the research methodology. Pragmatism emphasises the practical utility of knowledge in addressing research questions, aligning with the researcher's inclination and guided by insights from qualitative method researchers such as Creswell (2003), Patton (2002), and Green and Thorogood (2018).

The researcher's affinity for pragmatism, evident in previous research endeavours, is further supported by Patton's (2002) explication of pragmatism as a paradigm that selects methods and techniques based on their effectiveness in meeting a practical demand(s) or a set of requirements of specific research. This approach prioritises positive outcomes within the researcher's value system, drawing inspiration from the works of Guba and Lincoln (1994), Patton (2002), Creswell (2003), and Green and Thorogood (2018). Pragmatism, as articulated by Patton (2002) and Creswell (2003), is characterised by a problem-centred orientation, focusing on the investigated issue rather than predetermined methods for knowledge derivation. Pragmatism has various forms, with all of which share the fundamental belief that knowledge is attained and acquired through actions, situations, and consequences, rather than antecedent conditions.

Pragmatist researchers, as noted by Creswell (2003), concentrate on the 'what' and 'how' of research, elevating research question(s) to a pivotal role in guiding study decisions. On the other hand, Pistrang and Barker (2012) assert that pragmatism allows researchers to choose the most suitable methods for studying the issue at hand and translating findings into meaningful changes within the researcher's value system. In shaping the worldview for this thesis, the researcher considered personal background, influences, and the study's objectives and questions. The research, centred on understanding perspectives on patient safety in the Libyan health system, involves participants at various levels, including those at the point of delivery and those influencing decision-making. Consequently, the pragmatic paradigm, coupled with a qualitative research approach, was deemed fitting for the study, as elaborated and justified in the subsequent sections.

4.4. Methodological approach

All study stages were interconnected, highlighting a need to carefully choose an appropriate approach for data collection and analysis. Three distinct research approaches—qualitative, quantitative, and mixed method exist (Trochim and Donnelly 2001). Qualitative research methods, extensively utilised in healthcare and social sciences (Pope et al. 2002), enable the collection of non-numerical data and outcomes, often conducted in natural settings. Creswell (2013) outlines the diverse methods available in qualitative research, including ethnography, interviews, observation, and document review.

Conversely, quantitative methods involve the statistical analysis of numerical data to test hypotheses and assess relationships between factors and variables (Denzin and Lincoln 2000). These methods prove convenient when researchers aim to quantify and analyse relationships and correlations among different factors and variables of interest. Mixed-method research combines both qualitative and quantitative approaches, leveraging their strengths to minimise biases (Trochim and Donnelly 2001). However, for this thesis, the correlational nature and hypothesis-testing focus made quantitative and mixed-method approaches inappropriate.

It is crucial to acknowledge that each approach has its strengths and weaknesses, as pointed out by Trochim and Donnelly (2001). The researcher's decision-making process considered various factors, including resource and time constraints. Most importantly, the selection prioritised what the researcher deemed was the most ethical, efficacious, pragmatic approach towards achieving the study's purpose (Khanna 2007). Consequently, a qualitative research approach was adopted, as it proves most effective in exploring issues including behaviours, emotions, feeling, cultural phenomenon, and organisational functions. This choice aligns with the recommendation of Pope and Mays (2002) for the standalone use of qualitative approaches in health service and policy research. Patton (2002) and Creswell (2003) support qualitative research methodology when investigating new fields of study or theorising prominent issues, emphasising its role in providing a comprehensive, descriptive summary of phenomena without a predetermined outcome mandate. The goal is to present information in a manner most representative of the collected data pertinent to the target audience.

Since the beginning of the millennium, a significant increase has been shown in global patient safety research (Jha et al. 2010; WHO 2021). The methods employed to investigate safety encompass both quantitative, involving questionnaires, and qualitative, utilising interviews and documentary analysis, or a combination of both. Safety culture assessment surveys widely utilised deliberately; in particular, the Middle East and the EMR, have been the prevailing method for evaluating safety culture (Hodgen et al. 2017; Seung et al. 2017) despite arguments by Runciman et al. (2008) and Rolfe et al. (2018) that qualitative methods have not received due attention, offering a more comprehensive and insightful approach than surveys.

The absence of reliable patient safety data in Libya limits the applicability of quantitative and mixed-method approaches for this thesis. As Creswell and Creswell (2018) contend, qualitative research provides a more flexible scientific approach, offering an opportunity to establish a robust understanding of under-researched aspects of healthcare quality and safety in Libya. This, in turn, serves as a solid foundation for developing context-driven patient safety improvement strategies. In addition, qualitative methods, such as interviews and document analysis, are recommended for patient safety research in the WHO EMR, providing an insightful explanation into health system challenges, including patient safety, in such a context (Elmonsri et al. 2017). Najjar et al. (2013) also advocate for research methods like interviews and focus groups to comprehend the perspectives of healthcare leaders and policymakers on patient safety in Arabic countries, aiming to produce more nuanced findings. In essence, qualitative research is seen as a valuable tool to gain deeper insights into the intricacies of patient safety, especially in regions like the WHO EMR where unique challenges may exist.

4.4.1. Qualitative strategy of inquiry

Conducted as a qualitative strategy of inquiry, this study employed an exploratory-descriptive qualitative (EDQ) research approach (Sandelowski 2000; Stebbins 2001; Sandelowski 2004), with a philosophical grounding in pragmatism. Pragmatism guided this qualitative inquiry to investigate practical 'what' and 'how' questions, aiming to develop concepts that enhance understanding of the studied phenomenon in its natural settings, drawing insights from the experiences and perspectives of participants (Creswell, 2006). Emphasising the subjective and multiple nature of reality, this a qualitative strategy of inquiry using EDQ offers a flexible, pragmatic, and rigorous research methodology suitable for health systems and service delivery research (Patton, 2002; Green & Thorogood 2018). In addition, the researcher's pragmatic orientation played a pivotal role in choosing a qualitative strategy of inquiry using the EDQ approach, viewing it as integral to addressing the research questions and achieving the study's aim—thereby marking a significant phase in their development as a pragmatic researcher.

EDQ is particularly strong in its theoretical foundation, providing a robust framework to study underexplored phenomena within healthcare such as patient safety (Sandelowski 2000; 2004). The strengths of EDQ lie in its ability to provide deep,

contextual insights into complex issues by examining participant experiences and perspectives relative to the phenomena being studied. Moreover, EDQ's flexibility and adaptability support the utilisation of various data collection methods tailored to the specific research questions and the aim of the study (Patton, 2002). In essence, the selection of EDQ was principally motivated by its effectiveness in facilitating and gaining an in-depth understanding of real-world dynamics, enabling researchers to discern what works and what does not (Sandelowski, 2000, 2004; Patton, 2002). Consequently, this approach enabled a detailed exploration of the phenomena at hand, capturing the holistic and meaningful aspects of real-life situations in the context of patient safety.

Furthermore, it is equally important to acknowledge the potential weaknesses of the EDQ research approach. One such limitation includes inconsistencies in its application due to its broad and adaptable nature, which could lead to variations in research quality and comparability (Sandelowski 2000, 2004; Stebbins 2001). Despite these challenges, Hunter (2019), drawing on insights from the work by Sandelowski (2000; 2004) and Stebbins (2001), emphasises that the EDQ's unique capacity to explore and describe phenomena comprehensively makes it ideal for initial investigations into areas with scant prior research and evidence—i.e., where evidence is extremely lacking. This is particularly effective in generating new knowledge within healthcare contexts. Given its profound ability to tackle unknown or highly complex phenomena, EDQ is exceptionally suited for situations that may be difficult or vexatious to address through quantitative structured methods such as questionnaire surveys.

Aligning pragmatism with a qualitative strategy of inquiry using an EDQ approach, the study utilised methods for population sampling, data collection, and analysis strategies commonly associated with qualitative research (Sandelowski 2000, 2004; Patton, 2002; Creswell, 2006; Green & Thorogood 2018). The researcher employed interviews and policy document review to capture a nuanced view of participants' lived experiences and opinions in relation to patient safety in Libya, including insights from WHO. The selection of these methods was guided by the mandate of gaining an insightful, in-depth understanding of patient safety and interagency working in the organisation and delivery of quality care in Libya, focusing on individuals influencing patient safety policy and decision-making therein. This approach prioritised holistic exploration and observation of meanings rather than just facts, fostering the

development of concepts through data analysis and enabling the emergence of themes—i.e., uncovering comprehensive knowledge about challenges to patient safety in Libya and effective improvement strategies.

4.5. Methods

The following section delineates the procedural steps undertaken for the qualitative inquiry, covering the selection of the study population and sample, data collection, and data analysis.

4.5.1. The study setting

This study was conducted across four distinct settings, involving the WHO, the LMoH, and two prominent hospitals situated in Tripoli, Libya. The decision to narrow the study scope to these two specific hospitals was deliberate, as they are recognised as major healthcare facilities in both Libya overall and Tripoli specifically. The focus on Tripoli's hospitals was justified by the city's substantial number of healthcare institutions, offering diverse services and the capability to address a wide range of health issues. Furthermore, the selected hospitals operate under the technical organisation and supervision of the LMoH, resulting in shared constraints related to resource deficiencies, organisational structures, as well as styles of governance and management. The four participating settings in this study were coded as follows: -

1. WHO—EMRO and the WHO Country Office in Libya: **001**
2. Libyan Ministry of Health (LMoH): **002**
3. Hospital A: **003**
4. Hospital B: **004**

Patton (2002) and Green & Thorogood (2018) argued that all research designs and approaches have limitations, including several categories of individuals influencing patient safety at different levels was therefore a focus in this qualitative study.

4.5.2. Study population

A study population denotes the entire group of potential participants from which data collection can take place, following the establishment of specific criteria for inclusion and exclusion in participation (Taherdoost, 2018). The study population, including sample type and description, size, sampling strategy, recruitment, and access, is detailed in this section.

4.5.2.1. Sample description

No specific criteria were established for participant exclusion in the study. Both Libyans and non-Libyans, irrespective of gender, aged at least eighteen years—an alignment with Libya's legal age threshold—were eligible for inclusion. Primarily, study's population comprised WHO EMRO regional health system advisors and experts, alongside health system focal points based on the WHO country office in Libya. These individuals are instrumental in shaping health systems development policies and strategies including those related to quality and patient safety within WHO EMRO countries, including Libya. Furthermore, the study encompassed national decision-makers and policymakers from LMoH, comprising directors, experts, managers, and leaders from various departments such as healthcare quality and patient safety, nursing, planning, hospitals affairs, international collaboration, and health information and documentation. Lastly, the study incorporated healthcare quality and patient safety managers operating at healthcare facilities. It was presumed that participants from these diverse settings and domains (Table 4.1) would offer invaluable insights into patient safety challenges and potential avenues for improvement in Libya.

4.5.2.2. Sampling strategy, recruitment, and access

The In Libya, LMoH contributed a vital role facilitating the process of data collection within the LMoH and the hospitals. This involvement has been secured through a circulated letter and persuasive efforts to garner their essential assistance and cooperation with the researcher. In the realm of research methodology, techniques related to sampling are classified into probability and non-probability (Showkat and Parveen 2017; Taherdoost 2018). Probability samples are meticulously chosen to represent the entire population, adhering to stringent inclusion and exclusion criteria. On the other hand, non-probability sampling is often linked with research designs (case study) as well as qualitative research. Qualitative studies, which prioritise small sample sizes, are designed to explore real-life phenomena rather than make statistical inferences about the larger population (Showkat and Parveen 2017; Taherdoost 2018). While qualitative samples do not necessitate representation or randomness, a clear rationale is imperative for the inclusion of specific individuals over others. In essence, both types of sampling yield valid and credible results.

In qualitative research, scholars often opt for a non-probability method in their sampling strategy (Showkat and Parveen 2017; Taherdoost 2018). This approach proves valuable when researchers seek information from targeted individuals whom they consider essential for inclusion. One such form of non-probability sampling is purposive sampling, where individuals are deliberately selected in specific settings to provide data and insights that may not be obtained through alternative choices (Showkat and Parveen 2017; Taherdoost 2018). Throughout this study, the identification and engagement of individuals deemed eligible for participation align with the specifications of a non-probability sampling technique, employing convenience sampling and snowball sampling strategies (Showkat & Parveen 2017; Taherdoost, 2018). The convenience sampling method helped the researcher locate individuals deemed eligible for the interviews—i.e., who were most ready, willing, and able to participate in the interviews. Consequently, the snowball sampling method was deployed, which involved asking the already-interviewed participants to refer the study further to other potential individuals or to other gatekeepers who could also share the study further. As a result, this technique facilitated recruiting further participants for the hereafter interviews during data collection.

4.5.2.3. Sample size

In qualitative research, the need for a predetermined or fixed number of participants is absent (Creswell & Creswell, 2019). The sample size is not strictly governed, and researchers have the flexibility to justify their chosen size (Marshall et al., 2013; Yin, 2018). Unlike quantitative research, where specific rules dictate sample size considerations (Green & Thorogood, 2018), qualitative research adheres to different principles. The determination of an adequate sample size is influenced by various factors, the concept of saturation being the central guiding principle (Vasileiou et al., 2018). Although extensively discussed by numerous authors, saturation remains a topic of debate and is, in some perspectives, not fully understood. A thorough understanding of the saturation process within qualitative methods is essential for researchers exploring qualitative research methodologies (Walker 2012; Vasileiou et al. 2018). Saturation serves as a strategy to ensure the collection of sufficient and high-quality data to support a research study, often regarded as the gold standard in qualitative research studies (Walker 2012).

Furthermore, a study undertaken by Mason (2010) to map qualitative PhD studies in

the literature employing interviews as a data collection method identified 560 studies, which were content analysed for their sample size, showing a mean interview sample size of 31 participants among the studies. This study carried out 30 semi-structured interviews across three distinct levels: WHO, LMoH, and two hospitals (n = 17), (n = 9), and (n = 4), respectively. As previously noted, the termination of interviews and the decision to cessation of recruitment were based on reaching a point at which redundancy in information and data saturation was reached, indicating that the interview data did not give rise to novel insights (Mason 2010; Walker 2012; Vasileiou et al. 2018).

4.5.2.4. Participants characteristics

Participants characteristics, encompassing setting, area of expertise and affiliation, along with the date of interview, were collected and are presented in Table 4.1. For the explication of findings and the inclusion of participant quotations, a systematic approach employing alphanumeric codes and pseudonyms was adopted, aligning with each participant's professional title, research setting, and the numerical order of the interview. This entailed assigning codes denoting the research setting and its sequential number, followed by the participant's professional designation and the numerical order of the interview. As such, participants were designated as WHO (W01), LMoH (LH02), Hospital A (TH03), or Hospital B (BH04), with professional titles indicated by D (Director), M (Manager), FP (Health System Focal Point), A (WHO Advisor), or C (Health System Coordinator), and concluded with the interview's numerical order (i.e., 1 – 30).

Table 4.1: Participant Characteristics and Interviews Information

Participant ID	Setting	Area of Expertise / Affiliation	Date of Interview
LH02D:1	LMoH	Health Information and Documentation	11/05/2020
LH02M:2	LMoH	International Collaboration and Coordination	21/05/2020
LH02D:3	LMoH	National Quality and Patient Safety	29/05/2020
W01D:4	WHO EMRO	Director-General Office	18/06/2020
W01A:5	WHO EMRO	Regional Advisory Committee, Hospital Care Management, UHC / Health Systems	25/06/2020
W01A:6	WHO EMRO	Regional Advisory Committee, Hospital Care Management, UHC / Health Systems	28/06/2020
W01FP:7	WHO Office – Libya	WHO–LMoH Health System Technical Coordination / Programme Management	09/07/2020
LH02M:8	LMoH	National Health System Planning	09/07/2020
W01FP:9	WHO Office – Libya	WHO–LMoH Health System Technical Coordination / Programme Management	21/07/2020
LH02C:10	LMoH	National Health System Development Coordination	03/08/2020
W01FP:11	WHO Office – Libya	WHO–LMoH Health System Technical Coordination / Programme Management	06/08/2020
LH02M:12	LMoH	Hospitals Affairs and Management	18/08/2020
W01FP:13	WHO Office – Libya	WHO–LMoH Health System Technical Coordination / Programme Management	26/08/2020
LH02M:14	LMoH	WHO–LMoH Health System Technical Coordination / Programme Management	04/09/2020 / 07/09/2020
W01FP:15	WHO Office – Libya	WHO–LMoH Health System Technical Coordination / Programme Management	23/09/2020
W01FP:16	WHO Office – Libya	WHO–LMoH Health System Technical Coordination / Programme Management	05/10/2020
LH02C:17	LMoH	National Health System Development Coordination	18/10/2020
W01A:18	WHO EMRO	Regional Advisory Committee, Information, Evidence, and Research	28/10/2020
W01FP:19	WHO Office – Libya	WHO–LMoH Health System Technical Coordination / Programme Management	02/11/2020
LH02D:20	LMoH	Nursing / Human Resources / Workforce	14/11/2020
W01FP:21	WHO Office – Libya	WHO–LMoH Health System Technical Coordination / Programme Management	23/11/2020
W01A:22	WHO EMRO	Regional Advisory Committee, Programme Management / Planning and Country Support	25/11/2020
W01FP:23	WHO Office – Libya	WHO–LMoH Health System Technical Coordination / Programme Management	12/01/2021
W01FP:24	WHO Office – Libya	WHO–LMoH Health System Technical Coordination / Programme Management	20/01/2021
W01FP:25	WHO Office – Libya	WHO–LMoH Health System Technical Coordination / Programme Management	03/02/2021
W01FP:26	WHO Office – Libya	WHO–LMoH Health System Technical Coordination / Programme Management	16/02/2021
BH04M:27	Hospital B	Hospital Quality and Patient Safety	07/10/2021
TH03M:28	Hospital A	Hospital Quality and Patient Safety	09/10/2021
BH04M:29	Hospital B	Hospital Quality and Patient Safety	17/10/2021
TH03M:30	Hospital A	Hospital Quality and Patient Safety	24/10/2021

ماذا تفهم من فكرة "سلامة المرضى & جودة الرعاية الصحية" بشكل عام وضمن سياق المستشفى الخاص بك؟

4.5.3. Data collection

This section elaborates on the methods utilised for data collection.

4.5.3.1. In-depth interviews

An interview serves as a qualitative method employed to collect perceptions and views, from individuals concerning a topic of interest (Hussey and Hussey 1997; Patton, 2002; Green & Thorogood 2018). As expounded by Alshenqeeti (2014), an interview is characterised as a data collection method involving the questioning of participants to delve into their thoughts, beliefs, feelings, or experiences. Literature to date has shown many advantages of interviews in qualitative research, including the ability of researchers (interviewers) to guide the interview process to enhance clarity about the issue being studied and the flexibility in elaborating on the topic to pursue responses in greater detail to gain valuable information and insights (Alamri 2019). However, the main disadvantage of interview is related to time consuming (Bowling, 2014)

Three interview sorts are commonly identified in literature, including structured, unstructured, and semi-structured interviews (Easwaramoorthy and Zarinpoush 200AD; Britten 1999; Marshall et al. 2013). Structured Interviews, categorised as standardised, resemble researcher-administered questionnaires comprising a predetermined set of questions for participants to respond to. However, this approach was considered less suitable, for the current study owing to the fact that it mirrors the survey data method, thereby offering limited interaction with participants for gaining a profound understanding of the explored issue (Britten 1999).

On the contrary, unstructured Interviews do not involve a predetermined set or list of questions, presenting a more informal, open, and flexible format that allows researchers to delve more deeply into a subject of interest. Nevertheless, a major drawback of unstructured interviews is that participants may occasionally venture into irrelevant territories unrelated to the research questions under investigation (Bowling 2014). Consequently, neither structured nor unstructured interviews were deemed fitting for this study.

Instead, semi-structured interview, which permits a more profound insight into participants' opinions, views, and prejudices concerning the researched issue, was the format of interview for this study's data collection purposes (Patton, 2002; Given 2008; Green & Thorogood 2018). Additionally, semi-structured interviews, also known as non-standardised, enable researchers (facilitators / interviewers) to comprehend participants' attachments to phenomena (e.g., patient safety), specific events, or meanings, contributing to a richer understanding of the research topic (Alamri 2019). Therefore, employing semi-structured interviews for data collection was considered beneficial for comprehensively addressing the overarching subject, ensuring in-depth exploration of interests and perspectives, and critically pursuing specific questions, general themes, and pertinent issues.

In summary, despite employing a semi-structured interview technique, all questions selected for the interview were open-ended. The researcher leveraged a comprehensive interview approach with semi-structured interview schedules, thereby catalysing the comparison and in-depth analysis of responses across diverse participant categories. This facilitated the expansion of answers, uncovering a nuanced understanding of ideas, opinions, and views on patient safety in Libya from various perspectives, particularly those of participants affiliated with the WHO. Ultimately, obtaining such data helped the researcher to study patient safety in Libya systematically and establish an evidence-based foundation for developing a comprehensive, context-lens framework for improving patient safety in Libya.

4.5.3.1.1. The researcher role in interviews

In qualitative research, the role of the researcher is pivotal not only in data collection but also in shaping interaction dynamics with participants as well as the depth of the insights gathered (Patton, 2002; Green & Thorogood 2018). This is particularly evident in conducting interviews and/or focus groups, where personal characteristics, training,

and relational dynamics between the researcher and those participating in the study crucially influence both the process and outcomes of the study (Fink 2005; Sutton and Austin 2015). AD, the researcher in this context, assumed the dual roles of both interviewer and facilitator, navigating through the complexities of qualitative data collection and analysis with a focus on ethical considerations and participant engagement (discussed in detail in Section 4.6.6).

As a postgraduate researcher, the researcher's background, discussed in Section 1.4, provided a foundational understanding of research methodologies, which was crucial in structuring an effective approach to carrying out the interviews. The researcher's academic and professional pursuit, reinforced by a commitment to understanding and improving the Libyan health system through qualitative inquiry, positioned them to approach the research with both rigor and a genuine curiosity. The researcher's credentials were complemented by his specific training in qualitative research methods, data collection, interviewing techniques, and ethical considerations, acquired at Cardiff University and/or other educational institutions. This was essential for ensuring that interactions with participants were productive in relation to data quality as well as adherent to ethical principles and maintaining the confidentiality of all participants. Consequently, this created a safe environment for participants to share experiences and insights related to phenomena being studied.

The researcher's expertise in the aspects alluded to above was crucial in navigating the critical context of health systems and patient safety research, particularly in settings and situations involving an exploration of systemic failures and/or experiences of those influencing phenomena within healthcare. The relational dynamics between the researcher and participants were carefully arranged and managed to foster an environment conducive to open and honest communication, engagement, and collection of insightful data. Prior to the commencement of data collection including interviews, a 'gatekeeper' was appointed at every research setting by the organisations participating in the study (Lee 2005). This role was crucial for coordinating with the researcher during data collection, facilitating efficient participant engagement, and ensuring that the research process did not disrupt the usual workflow of the settings participating in the study.

In addition, participants were adequately informed about the researcher's background and the aim of the study through an initial letter invitation sent to LMoH as well as

WHO through their country office in Libya (Appendix 3). The invitation letter, accompanied with the participant information sheets (Appendix 4), sufficiently articulated the aim of both the study and the interviews, illustrating the researcher's goals and reasons behind undertaking the current study (Aguinis and Solarino 2019). This communication helped in building trust as well as set clear expectations about the study, which is crucial in qualitative research where the depth of responses can significantly affect the quality and integrity of the data collected.

During the interviews, the researcher's role extended beyond merely collecting data to include facilitating discussions, enabling a deeper exploration of the issues being studied. As both interviewer and facilitator, the researcher was engaged in understanding and interpreting participants' responses within the broader research context. This required a high level of engagement, advanced listening skills, and, more importantly, the ability to probe thoughtfully and respectfully during the interviews. In essence, the role of the researcher in the interviews was multifaceted and instrumental in addressing the research questions and achieving the study's aim. In other words, the researcher's personal attributes, academic and professional experience, comprehensive training, and strategic relationships established within the research settings collectively enabled a thorough and ethically sound exploration of challenges to the Libyan health system and patient safety and effective improvement strategies. This enriched the data collected as well as ensured that the study was conducted with a high degree of integrity and respect for those taking part in the interviews.

[4.5.3.1.2. Interview guides](#)

The overarching purpose of the current study is to enhance comprehension of patient safety organisation, management, and concerns in Libya, along with exploring interagency working between WHO, LMoH, and provider organisations in patient safety, and how these factors impact the organisation and the provision of safe care within Libya. The interview questions were consequently derived from the primary research questions and the aim of the study, as delineated in Section 1.5. This approach enabled a deeper insight into participants' views on the challenges and contributing factors to patient safety in Libya to be gained, focusing on the areas highlighted within the research questions and study's aims. It is hoped that exploring the aforementioned areas would help generate a holistic, context-lens framework for patient safety improvement in Libya through effective interagency working, informing

national health system policymakers, provider organisations, and WHO in devising effective policies and strategies for improved organisation and delivery of quality care in Libya through effective interagency working.

In light of the considerations alluded to above, the interview guides were meticulously crafted to include a set of fundamental open-ended questions aligned with research questions and the study's objectives. Additionally, pertinent concepts drawn from existing literature on patient safety in the context of focus were integrated into the interview guides to aid the researcher (interviewer) in eliciting detailed responses and exploring participant insights throughout both the data collection and data analysis phases. Tailored to each research setting involved in the study—i.e., LMoH, hospitals, and WHO, comprising distinct yet interconnected sets of questions, were developed for the interview guides. The interview guides underwent thorough review and refinement with the PhD subject supervisory team, incorporating amendments to enhance data validity.

Initially formulated in English, the interview guides were translated into Arabic to allow interviewees to choose their preferred language before the initiation and commencement of data collection. The translation process involved several stages, starting with the researcher's initial translation (as a bilingual), followed by revisions from a certified legal translator in Libya as necessary, and concluding with the researcher undertaking a comparative analysis of the English and Arabic versions (discussed in detail in Section 4.6). This meticulous process led to the final production of the interview guides in both languages, as shown in Tables 4.2, 4.3, and 4.4.

Prior to the commencement of the actual data collection, the interview guides were rigorously piloted to ensure the relevance and clarity of the questions. This preliminary testing phase was crucial for refining the interview questions, improving and strengthening the logical flow, understandability, and readability (discussed in detail in Section 4.7). By conducting these pilot interviews, potential ambiguities in the questions were identified and rectified, thus enhancing the effectiveness of the actual interviews and ensuring a smoother data collection process.

Table 4.2: Interview Guide – WHO

Opening Question: In the first place, is there an active communication and interfacing between Libya (LMoH / national health system policy- and decision-makers) and WHO? If yes, how does this work? If not, why?

Prompting Questions

1. Could you please summarise any quality and/or patient safety work that has been performed between WHO and Libya?
2. Are there specific policies and strategies currently in place for the delivery of quality and safe health services as part of the UHC for Libya?
 - Does WHO engage with Libyan health system policymakers and healthcare managers to ensure relevance and effectiveness of these locally?
 - Does WHO support development and implementation of national policy and strategic plans and frameworks for patient safety in Libya? If yes, how? Can you please provide some examples?
 - Do Libyan health system policy makers contribute to development of WHO regional patient safety policy within the WHO EMRO? If yes, how? If not, why?
3. Are there any specific interagency programmes, initiatives, and/or other activities in place for delivery of quality and safe care in Libya? E.g., any WHO programmes/frameworks targeting patient safety, or any specific education and training for healthcare workers on, e.g., IPC, or training for managers to enable change in the healthcare system, etc. If not, why?
 - Does WHO directly monitor, oversight, and follow up progress and outcomes of such interagency activities in Libya? If yes, how does this work? E.g., is there a reporting structure or process that is followed? If not, why?
 - How committed are the national health system regulators and policymakers in Libya to these? Could you please support your answer with an example?
4. What are the most common patient safety challenges in the WHO EMR generally and in Libya specifically?
 - E.g., what are the barriers to integrating patient safety as a strategic priority into development of UHC in a context like Libya?
 - What do you think are the factors that most contribute to these?
5. How does the recent conflicts or other emergencies (e.g., the recent Covid-19 pandemic) in Libya affected interfacing between WHO and Libya?
 - What strategies and/or mechanisms put in place to keep up communication and interfacing during difficulties?
 - Are there any frameworks introduced or supported / coordinated by WHO currently taking place in Libya (such as those focusing on quality and safety during emergencies)? If yes, could you please provide examples? If no, why?
6. At the end of this interview, in consideration of what we have discussed, can you tell me what do you believe are the most effective strategies for improving patient safety in a context like Libya?

Thank you for your time and participation is much appreciated. Can I return to you later if I have any further queries?

Table 4.3: Interview Guide – LMoH

Opening Question: What is your understanding of 'patient safety' in Libya?

السؤال الافتتاحي : ما فهمك "لسلامة المرضى" في ليبيا؟

Prompting Questions

الاسئلة الرئيسية

1. Can you tell me about interfacing between LMoH and WHO at operational and strategic levels generally?

1. هل يمكن أن تخبرني عن العمل المشترك بين وزاره الصحة الليبية ومنظمة الصحة العالمية على المستوى التشغيلي والاستراتيجي بشكل عام ؟

- Is there an active communication between WHO and LMoH? If not, why?
- If yes, How does the above influence patient safety in Libya / or making it a priority?
- How does LMoH contribute, if at all, to developing WHO strategies and policy generally and for the Eastern Mediterranean Region?
- What specific WHO patient safety policies and strategic frameworks are in place in Libya (if any)? Please, can you support your answer with an example?
- How does WHO respond to changes in Libya and provide technical support for setting policies, strategies, norms for ensuring safe and quality healthcare in Libya? How? When?
- How has LMoH contributed, if at all, to the WHO patient safety policy and strategies?
- To what extent are these implemented in Libya? If not, why? And what do you think is necessary for successful implementation? Please, can you provide an example?
- Can you tell me about any facilitators and/or barriers affecting the interplay between WHO and Libya in the context of safety and quality in Libya? why?

- هل هناك اتصال نشط بين منظمة الصحة العالمية و وزارة الصحة الليبية؟ إذا لا يوجد، لماذا؟
- إذا نعم، كيف يؤثر ذلك على سلامة المرضى في ليبيا/ أو جعلها أولوية؟
- كيف تساهم وزارة الصحة الليبية، إن وجد، في تطوير استراتيجيات وسياسات منظمة الصحة العالمية بشكل عام وفي منطقة شرق البحر الأبيض المتوسط؟
- ما هي سياسة منظمة الصحة العالمية المحددة بشأن سلامة المرضى والأطر الاستراتيجية المعمول بها في ليبيا (إن وجدت)؟ من فضلك هل يمكنك دعم إجابتك بمثال؟
- كيف تستجيب منظمة الصحة العالمية للتغيرات في ليبيا وتوفر الدعم التقني لتطوير السياسات والاستراتيجيات والمعايير لضمان رعاية صحية آمنة وعالية الجودة في ليبيا ؟ كيف؟ متى؟
- كيف ساهمت وزارة الصحة الليبية وتعاونت، إن وجد، في استراتيجيات وسياسات منظمة الصحة العالمية؟ إلى أي مدى يتم تنفيذها؟ إذا لم يكن كذلك، لماذا؟ في رأيك ما هو الشيء الضروري للتنفيذ الناجح؟ من فضلك، هل يمكنك تقديم مثال؟
- هل يمكن أن نخبرنا عن أي الحوافز و/ أو حواجز/ معوقات تؤثر على العمل المشترك بين منظمة الصحة العالمية وليبيا في سياق سلامة المرضى والجودة؟ في رأيك لماذا؟

2. Can you tell me about patient safety in Libya?

2. هل يمكن أن تخبرني عن سلامة المرضى في ليبيا؟

- What are the main priorities for patient safety and quality in Libya and in the healthcare setting system specifically? Is there agreement about these within Libya? If not, why?
- What resources are provided for patient safety in Libya? E.g., is there a specific budget for patient safety, etc? Please provide an example.
- Are there specific national policies in place for patient safety and quality in Libya? E.g., for whistleblowing or error reporting in healthcare settings?
- To what extent are these implemented and committed to in hospitals? And how does LMoH ensure this? Please can you support your answer with an example?
- Are there any specific national initiatives or projects currently in place in Libya? E.g., a national programme for hand hygiene and infection control. If not, why? If yes, are there any national mechanisms in place for monitoring, oversight, and following up on these?
- What systems, approaches, or structures are provided by LMoH to support patient safety in hospitals? E.g., incident reporting and learning systems, etc? If not, why?
- Is there a national patient safety education and training programme in Libya? If not, why?

- ما هي أولويات سلامة المرضى و جودة الرعاية الصحية الرئيسية في النظام الصحي الليبي وفي نظام وحدة الرعاية الصحية على وجه التحديد؟ هل هناك اتفاق على ذلك داخل ليبيا؟
- ما هي الموارد المتوفرة لسلامة المرضى في ليبيا؟ على سبيل المثال، هل هناك ميزانية محددة لسلامة المرضى أو موارد أخرى؟ يرجى تقديم مثال؟
- هل هناك سياسات وطنية لسلامة و جودة الرعاية الصحية ؟ على سبيل المثال، سياسات وطنية للإبلاغ عن الأخطاء الطبية أو الإبلاغ عن الانتهاكات في المستشفيات؟
- إلى أي مدى يتم تنفيذ هذه السياسات الوطنية والالتزام بها في المستشفيات؟ وكيف تتبع وزارة الصحة الليبية هذا الالتزام والتنفيذ؟ هل يمكنك دعم إجابتك بمثال؟
- هل هناك أي مبادرات أو مشاريع ذات أولوية وطنية محددة قائمة حاليًا؟ على سبيل المثال، البرنامج الوطني لنظافة الأيدي ومكافحة العدوى. إذا لم يكن كذلك، لماذا؟ إذا كانت الإجابة بنعم، هل هناك أي آليات وطنية للرصد والإشراف والمتابعة؟
- ما هي الأنظمة أو الأساليب أو الهياكل التي تقدمها وزارة الصحة لدعم سلامة المرضى في المستشفيات؟ على سبيل المثال، الإبلاغ عن الحوادث وأنظمة التعلم، وما إلى ذلك؟ إذا لم يكن كذلك، لماذا؟
- هل يوجد برنامج وطني للتعليم والتدريب في مجال سلامة المرضى في ليبيا؟ إذا لا يوجد ، لماذا؟

3. At the end of this interview, can you tell me what you would change here to make:

3. في نهاية هذه المقابلة، هل يمكنك أن تخبرني ما الذي ستغيره هنا لكي نجعل:

- Healthcare safer for patients in Libya.
- Interagency working in patient safety more effective.

- رعاية صحية أكثر أماناً للمرضى في ليبيا
- العمل المشترك بين منظمة الصحة العالمية ووزارة الصحة الليبية بشأن سلامة المرضى أكثر فعالية.

4. Any other comments about patient safety or related issues in Libya?

4. هل هناك أي تعليقات أخرى حول سلامة المرضى أو القضايا ذات الصلة في ليبيا؟

Thank you for your participation. Can I return to you later if I have any further queries?

انتهت المقابلة الآن. أشكركم على مشاركتكم. هل يمكنني العودة إليك لاحقاً إذا كان لدي أي استفسارات؟

Table 4.4: Interview Guide – Hospitals

1. What do you understand by 'patient safety' in Libya generally and within your hospital specifically?

- Is there specific structures for quality / patient safety within your hospital? Who has specific and/or overall responsibility for safety? Is there a safety committee? If yes, how does it work? If no, why?
- What level of importance does your hospital management put on patient safety? Do you feel your hospital manages safety effectively? Can you provide an example?
- What specific LMoH or WHO policies, guidelines, or strategies you have in place for patient safety in your hospital? E.g., for reporting, whistleblowing, IPC, etc?
- What do you see as your role in contributing to safety in your hospital / profession?
- Are there any specific systems provided by your hospital management to support, organise, and manage patient safety? E.g., quality assurance, incident reporting, etc.
- What are common patient safety issues / concerns in your hospital? In your opinion, what are factors that most contribute to these?
- What are institutional or policy barriers to improving patient safety in your hospital?
- How have emergencies affected your hospital generally and safety specifically?
- How does your hospital respond to these? E.g., any specific frameworks or strategies developed for operation during emergencies / conflicts?
- How does LMoH respond to these? E.g., any national support, resources, strategies, or frameworks for patient safety management during emergencies / conflicts?

2. In relation to the interplay / inter-level interfacing in patient safety: -

- Is there active communication and interfacing between your hospital and LMoH / WHO in the context of patient safety? If not why? If yes, how this does that look like?
- How does this influence patient safety in your hospital / working area? How does this influence making patient safety a priority? If not, why? If yes, give me an example?
- Are there any mechanisms for inter-level engagement in and contribution to the national patient safety decision- and policy-making (e.g., at the LMoH / WHO levels)? If not, why? If yes, how does this work?
- Are there any interagency (national and local) patient safety initiatives or programmes currently in place in your hospital? E.g., quality improvement, quality and safety in adversity, IPC, training, etc. If yes, can you provide an example?

3. What strategies do you believe are best capable to improve patient safety in your hospital specifically and in Libya generally?

4. Any other comments about patient safety or other related issues?

The interview has now ended. Thank you for your participation. Can I return to you later if I have any further queries?

1. ما الذي تفهمه من عبارة "سلامة المرضى" في ليبيا بشكل عام وداخل مستشفياتكم على وجه التحديد؟

- هل هناك هياكل محددة للجودة / سلامة المرضى داخل مستشفياتكم؟ من المسؤول بشكل محدد أو شامل عن السلامة؟ هل هناك لجنة للسلامة؟ إذا كانت الإجابة بنعم، كيف هي الية العمل؟ إذا كان الجواب لا، لماذا؟
- ما هو مستوى الأهمية الذي توليه إدارة مستشفياتكم لسلامة المرضى؟ هل تعتقد أن مستشفياتكم يدير السلامة بشكل فعال؟ هل يمكن أن تعطيني مثالاً؟
- ما هي السياسات أو المبادئ التوجيهية أو الاستراتيجيات المحددة التي وضعتها وزارة الصحة أو منظمة الصحة العالمية من أجل سلامة المرضى في مستشفياتكم؟ على سبيل المثال، الإبلاغ عن الحوادث، أو الإبلاغ عن المخالفات، أو الوقاية من العدوى ومكافحتها، وما إلى ذلك؟
- ما هو دورك في المساهمة في تحقيق سلامة المرضى في مستشفياتكم / مهنتك في نظرك؟
- هل هناك أي أنظمة محددة تقدمها إدارة المستشفى لدعم وتنظيم وإدارة سلامة المرضى؟ على سبيل المثال، ضمان الجودة، والإبلاغ عن الحوادث، وما إلى ذلك.
- ما هي المشكلات/المخاوف الشائعة المتعلقة بسلامة المرضى في مستشفياتكم؟ في رأيك، ما هي العوامل التي تساهم أكثر في حدوث ذلك؟
- ما هي العوائق المؤسسية أو السياسية التي تحول دون تحسين سلامة المرضى في مستشفياتكم؟
- كيف أثرت حالات الطوارئ على مستشفياتكم بشكل عام وعلى سلامة المرضى بشكل خاص؟
- كيف يستجيب مستشفياتكم لهذه؟ على سبيل المثال، هل هناك أي أطر أو استراتيجيات محددة تم تطويرها للعمل أثناء حالات الطوارئ/الصراعات؟
- كيف تستجيب وزارة الصحة الليبية لهذه؟ على سبيل المثال، أي دعم وطني أو موارد أو استراتيجيات أو أطر لإدارة سلامة المرضى أثناء حالات الطوارئ / الصراعات؟

2. فيما يتعلق بالعمل المشترك على مختلف المستويات في مجال سلامة المرضى: -

- هل هناك تواصل وتفاعل نشط بين مستشفياتكم و وزارة الصحة أو منظمة الصحة العالمية في سياق سلامة المرضى؟ إذ لا يوجد، لماذا؟ إذا كانت الإجابة بنعم، هل يمكنك وصف ذلك؟
- كيف يؤثر ذلك على سلامة المرضى في مستشفياتكم / منطقة العمل الخاصة بك؟ كيف يؤثر هذا على جعل سلامة المرضى أولوية؟ إذا لم يكن كذلك، لماذا؟ إذا كانت الإجابة بنعم، هل يمكنك دعم إجابتك بمثال؟
- هل توجد أي آليات للمشاركة والمساهمة في صنع القرارات والسياسات الوطنية المتعلقة بسلامة المرضى (على سبيل المثال، على مستويات وزارة الصحة ومنظمة الصحة العالمية)؟ إذا لم يكن كذلك، لماذا؟ إذا كانت الإجابة بنعم، هل يمكنك وصف ذلك؟
- هل هناك أي مبادرات أو برامج مشتركة (وطنية أو محلية) لسلامة المرضى موجودة حاليًا في مستشفياتكم؟ على سبيل المثال، تحسين الجودة، والجودة والسلامة في الطوارئ/الصراعات، أو الوقاية من العدوى ومكافحتها، والتدريب في مجال سلامة المرضى ، وما إلى ذلك. إذا كانت الإجابة بنعم، هل يمكن أن تعطيني مثالاً؟

3. ما هي الاستراتيجيات التي تعتقد أنها الأنسب لتحسين وتعزيز سلامة المرضى و الجودة في المستشفى الذي تشغل به تحديدا و في ليبيا بشكل عام؟

4. هل هناك أي تعليقات أخرى حول سلامة المرضى و الجودة أو غيرها من القضايا ذات الصلة؟

انتهت المقابلة الآن. أشركم على مشاركتكم. هل يمكنني العودة إليك لاحقاً إذا كان لدي أي استفسارات أخرى؟

4.5.3.1.3. Interview procedure

A total of 30 interviews were conducted during the study (detailed in Table 4.1). The first step taken was to send an invitation letter to LMoH as well as WHO through their country Office in Libya, explaining the aim of both the study (along with its subject) and the interviews, as well as to encourage the participation of potential participants (Appendix 3). Subsequently, two official letters were acquired as follows: the first originated from the Health Information and Documentation Centre of the LMoH, granting permission to conduct the study in Libya and extending cooperation to the researcher in streamlining recruitment and data collection processes at both LMoH and hospital levels. The second letter was obtained from the WHO, indicating their willingness to participate, and granting initial permission that affirmed their involvement in the study and cooperation during the data collection phase. Following these approvals, the researcher was able to begin the interviews across three levels: WHO, LMoH, and hospitals.

As detailed in section 4.5.3.1.1, the 'gatekeeper' appointed for the researcher at every research setting played a key role in coordinating with the researcher during data collection. In each research setting, including WHO EMRO, the WHO Office in Libya, LMoH, and the hospitals, the gatekeepers identified several individuals eligible for the interviews. These individuals were initially reached out and contacted via email, receiving an invitation letter to take part in the study and to be interviewed along with a copy of the participant information sheet. Upon receiving their initial consent, potential participants were directly contacted to schedule and arrange an interview time and address any queries they might have regarding the study or their participation. Following a period of 48 hours, a follow-up contact was made to confirm their willingness for participation. Once confirmed, their formal permission was secured through the signing of an informed consent form prior to the commencement of data collection.

Furthermore, to facilitate recruitment for subsequent interviews, the already-interviewed participants were encouraged to nominate other potential participants and to share information about the study among their colleagues. As a result, additional names and contact information were obtained. These individuals were then invited to participate in the study via email including an invitation letter and a copy of the participant information sheet. Those expressing an interest and willingness to

participate were instructed to contact the researcher by email or telephone to schedule their interview and to address any inquiries about the study or their participation in the study. After a period of 48 hours, these potential individuals were re-contacted to confirm their continued willingness to participate. If affirmative, their formal consent was secured before the actual interview taking place through the signing of an informed consent form.

4.5.3.1.4. Interviewing process

All interviews were conducted via different online communication platforms, including Zoom, Microsoft Teams, WhatsApp, depending upon the choice of each interviewee. Participants could opt for a convenient time for these interviews, which implied that the researcher prioritised their comfort and ensuring privacy. A day before each scheduled interview, participants received a timely reminder. Commencing the interviews, the researcher provided a comprehensive overview, emphasising the crucial aspects of confidentiality, data protection, and the freedom to participate without fear of repercussions. This meticulous approach fostered an early and robust rapport between the researcher and interviewees.

All interviews, averaging 45 minutes, were conducted by the bilingual researcher (Arabic & English). To enhance data validity and relevance, participants were offered the choice of language (Arabic or English) for a more comfortable discussion on the research study topic, minimising comprehension, and expression issues. At the outset of the interview, participants signed, scanned, photographed, and emailed back the informed consent form. Throughout the interview, the researcher, equipped with key questions pertaining to the aims of this study, adeptly adjusted the question order based on the interview's progression (Britten 1999; Legard et al. 2003; Gill et al. 2008). This adaptive approach allowed for probing opinions and exploring new lines of inquiry. Techniques employed included attentive listening without any interruption, the use of probing questions, and rephrasing inquiries, if needed. The gradual transition from general to specific issues facilitated the extraction of nuanced views and perceptions in a relaxed atmosphere, thereby contributing to a positive rapport (Britten 1999; Legard et al. 2003; Gill et al. 2008).

Participants were informed about audio recording, and explicit consent was obtained during the informed consent process. This recording served to prevent confusion or inaccuracies and facilitated the transcription process. The recorded data were

promptly uploaded to OneDrive, an encrypted server provided by Cardiff University, managed through a password-protected computer. Following the upload, the data were deleted from the audio device to ensure confidentiality of participants information and data. Adhering to Cardiff University guidelines, all research information, including interview transcripts and notes, will be deleted permanently after five years of the completion of this study. This is inclusive of all information and data stored on computers as well as drives.

4.5.3.2. Patient safety policy document review

According to Patton (1990; 2002) and Bowen (2009), the relevance of document review as a data collection tool is contingent upon the availability of pertinent documents for analysis. In the current study, document review served as a method to explore and extract meaning, enhance understanding, and construct empirical knowledge regarding the issue being investigated. As per Atkinson and Coffey (1997), document analysis allows researchers to explore concepts, underlying meanings, contexts, and patterns related to a specific subject in a systematic way. The research environment, in this case, presented an opportune scenario for scrutinising policy documents related to patient safety within the healthcare organisations participating in the study. This approach facilitated a comprehensive understanding of the implementation, organisation, and management of patient safety practices in Libya. Relevant documents were collected at any stage of the data collection process when deemed applicable.

As such, a policy document collection in the participating hospitals was undertaken, resulting in a content analysis of 13 guidance documents relating to quality and patient safety in the healthcare organisations studied, on their contribution to patient safety (Section 5.4.3). These documents provided an insight into the contribution and commitment of the healthcare organisations in Libya to the organisation and management of patient safety in practice. This contributed to the development of the interview guides, helping identify areas to be further examined with a view to augmenting the comprehension of the phenomena under investigation. Furthermore, it provided the researcher with the opportunity to explore patterns, contexts, underlying meanings, and processes that helped guide the development of the framework for improving patient safety in Libya through enhanced interagency working.

4.5.4. Data processing and analysis

Qualitative According to Arksey and Knight (2011), qualitative data analysis is essentially an iterative procedure. Data analysis was undertaken manually, with the support of © 2018 QSR International's NVivo 12 software in managing and organising the dataset (Bazeley & Jackson 2013). The researcher was guided by Braun & Clarke's thematic analysis framework in analysing the data (Braun & Clarke 2006), using inductive reasoning, interpreted through the lens of the systems approach (MacQueen and Milstein 1999; McGill et al. 2020). This helped bring out common insights into patient safety challenges in Libya as well as how to address them systematically.

The review and analysis of patient safety policy documents, referring to the process of identifying and collating meaningful sections of the document text, was systematically undertaken using a structured framework by Merriam (1998) (the checklist is provided in Appendix 9). This process involved determining the document's production date, the rationale for its creation, and its intended purpose. Furthermore, the analysis assessed the sources of information cited in the document, explored connections to any other related documents, and identified whether these could be retrieved or accessed from the research settings. Additionally, individuals associated with the document were identified, with considerations made regarding the feasibility of contacting them for further insights, if they had not been interviewed yet.

I. Data organisation: throughout the entire analysis process, the researcher actively engaged with the data by conducting interviews, transcribing them verbatim, and personally translating most of the interviews. The verbatim transcription of interview recordings, along with the translation of Arabic interviews into English, enabled the researcher to undertake a thorough and detailed analysis. All transcripts were de-identified using a system of alphanumeric codes and pseudonyms. The transcribed interviews and policy documents were uploaded on NVivo, with data grouped to each participant. In addition, a system of alphanumeric codes and pseudonyms was used for participants according to the research setting and its number, participant professional title, and numerical order of the interview for the purpose of findings and quotations presentation, as described in Section 4.5.2.

II. Familiarisation with the data: Data collection and analysis were undertaken simultaneously, helping the researcher refine associated questions and recurring

views and opinions (Maguire and Delahunt 2017). This stage involved immersion in the raw data, reviewing notes and memos made after each data collection, listening repeatedly to the recordings, reading transcripts thoroughly to take notes on their observations to get insight into the data, and linking that to the literature to identify meaningful patterns. Consequently, the researcher became well-acquainted with the data, understanding context, meanings, concepts, and any diversities within the data, allowing a reflection on the material and taking preliminary analytic notes. Following, a brief transcription was developed with recurring ideas and subjects to proceed to the next stage of the analysis as well as to feed the following interviews.

III. Generating initial codes: in this phase, the process encompassed the identification of recurring concepts and ideas, including views and opinions. This was achieved by labelling the data and categorising these phenomena, generating as many categories as required, and providing a comprehensive description of all content aspects—referred to as open coding. Each sentence from these transcribed policy documents/ interviews underwent mapping, comparison, and line-by-line reading to determine the codes that aligned with the concepts emerging from the data. This stage involved a juxtaposition process (Morgaine 2017), where the entire textual data underwent coding based on an index heading. This process entailed highlighting and assigning titles to pertinent words, sentences, and paragraphs. Notably, the textual data was drawn from various interviews conducted with WHO, LMoH, and hospital representatives, and each passage under specific sub-subjects was annotated. Through this coding process, the opportunity arose to generate clear, concise labels and highlights that described the data addressing the research questions that guide the analysis. This approach facilitated a more analytical examination of the data, ensuring a thorough review of all concepts while also aiding in the reduction of irrelevant data. Consequently, the initial versions of the codes were deeply connected to priority issues related to patient safety challenges in Libya, interagency working, and a spectrum of perspectives on enhancing patient safety in the region.

IV. Searching for themes: this phase involved thematic charting, mapping, and interpretation, where the relevant coded sections of the transcripts and policy documents were transferred into a designed thematic index. The objective was to discern consistent and meaningful patterns within the codes, amalgamate them into potential themes, and differentiate between prevalent and less prevalent themes

across the transcripts. This process was conducted concurrently with the development of initial interpretations. The categorised data underwent organisation under a thematic index, employing an annotative method where the most pertinent quotations were selected to reinforce each central issue, resulting in the creation of a highly detailed thematic chart. Subsequently, a comprehensive summary of the central issues pertaining to the Libyan patient safety system was distilled in alignment with the research questions. The development of thematic charts was executed manually, with the aid of NVivo as necessary, encompassing the core issues of the study. In these charts, rows represented participants, and columns encapsulated the diverse key issues emerging within the main themes. Each thematic chart spanned multiple pages, each dedicated to a specific study issue, harmonised under overarching perspectives, experiences, and contributing factors articulated by the participants. This approach facilitated the condensation of data to a more manageable scale, thus contributing to the transition of the textual data from a descriptive to an analytical framework.

V. Reviewing the themes: this stage involved verifying that the themes identified applied both to the extracted data as well as to the entire dataset, ensuring that the analysis remained consistent and as close to the voice of participants as possible and that coherent patterns were evident within the data. To ensure this, all transcripts alongside the finally agreed list of themes and subthemes were re-read several times, revised, and reviewed, resulting in some adjustments being made accordingly and as suggested by the PhD subject supervisory team during data analysis. Additionally, a tree diagram depicting all key objectives of this study was constructed to establish a rigorous connection with the themes and reinforce the interpretation's robustness.

VI. Writing-up: the last stage of the analysis process involved transforming the thematic patterns into interpreted, disseminated, conceptualised findings regarding the issue being investigated. This involved the reporting and presentation of the findings by weaving the analytic narratives, supported by data extracts (participants' words and direct quotes from policy documents), to take readers through a coherent story about the data and findings, contextualised within existing literature. Findings are presented herein under three broad themes, spreading out across three chapters (5–7), using verbatim quotations and the own voices of participants. Findings are then grouped as well as presented under themes/sub-themes within each theme that is

deemed appropriate. Ultimately, these findings offered a comprehensive portrayal of patient safety management within the Libyan health system, interagency working in patient safety in Libya (with a focus on WHO's role in patient safety), and strategies for enhancing patient safety in Libya through enhanced interagency working.

4.4.4.1. Development process of the study's patient safety improvement framework

Participants were asked during the interviews about strategies that could address challenges to patient safety in the Libyan health system from their perspective. The data analysis therefore produced diverse viewpoints pertaining to alterations in systems, structures, and practices necessary for improving patient safety in Libya. This was facilitated by collecting and coding relevant concepts given by participants into specific categories to align common components, which thereafter became the core components of the proposed framework. In so doing, an amalgamation of different aspects of the systems approach was incorporated, serving as the orientation that guided the researcher to take a holistic view of patient safety in Libya based on the study findings. This was drawn from work relating to the systems approach to patient safety conducted by Mcsherry (2004), Waterson (2009), Dekker and Leveson (2015), Braithwaite et al. (2018), Clarkson et al. (2018), and McGill et al. (2020). Appendix (8) presents a reflective sample of the early stages of the development process of the framework.

Following, an insightful prototype of proposed interrelated and interlinked processes, mechanisms, arrangements, and structures, derived from participants' perspectives, was produced (an example is given in Appendix 10). This allowed different components and elements to develop to construct the intended framework. The researcher was then able to integrate the different complements and elements into developing a comprehensive, context-lens patient safety improvement framework. In addition, it must be noted that existing systems approach models have only focused on internal and organisational factors that influence patient safety; therefore, the presented patient safety improvement framework of this study took into account considerations of the role of wider, complex political, organisational, socio-technical, and cultural factors influencing the Libyan health system as a whole (discussed in Section 8.4). This was also derived primarily from the study findings related to improving patient safety in Libya effectively through interagency working between LMoH, healthcare organisations, and WHO.

4.6. Research rigour and quality criteria

The present section delves into the fundamental principles of ensuring rigour in qualitative research, a crucial aspect for establishing the credibility of study findings. Numerous methods and criteria have been proposed for the purpose of upholding rigour in qualitative research, covering considerations for researcher bias, and measures to ensure validity, verification, and reliability. Denzin and Lincoln (2018) advocate for rigour assessment through trustworthiness, incorporating key principles such as credibility, transferability, triangulation, auditability, confirmability, and reflexivity. This perspective finds resonance in the works of Guba and Lincoln (1989), Shenton (2004), Robson (2011), and Silverman (2011). The study's rigour was meticulously upheld by conscientiously adhering to these aforementioned principles (Table 4.5).

Table 4.5: Research Rigour and Quality Criteria

Criteria	Definition
Credibility	Credibility involves establishing consensus among knowledgeable and qualified individuals, ensuring that the reported findings align with the actual phenomenon being studied.
Transferability	Transferability focuses on enhancing the comprehension of a phenomenon for broader applicability, assessing to extent of the applicability of findings to diverse contexts and populations
Triangulation	Triangulation is a strategic approach involving varied methods of comparison to augment the study's rigor, with a particular emphasis on bolstering credibility
Auditability	Auditability serves as a strategy enabling other researchers to trace and understand the decision-making process employed by the investigator throughout the study
Confirmability	Confirmability entails recognising the influence of the researcher and ensuring that interpretations remain firmly grounded in the original data
Reflexivity	Reflexivity involves a systematic awareness of the context wherein the construction of knowledge takes place

4.6.1. Credibility

The thesis structure was designed to enable the researcher to conduct in-depth interviews with individuals who had first-hand experience with seclusion. Credibility and authenticity were reinforced by incorporating participant quotes to inform and

illustrate the identified categories and themes presented in the final report. Throughout the research processes, a detailed reflective journal was consistently maintained. The researcher meticulously recorded interviews in audio format and transcribed them verbatim to ensure precise data collection. In addition, the researcher also carried out rigorous data analysis using inductive methods, maintaining the integrity of the analytical process by offering accurate explanations, addressing contradictions, and considering alternative conclusions drawn from the analysis. A special attention was paid to prevent misinterpretation or selective use of data, demonstrating a commitment to faithfully represent the study's findings in the final report.

4.6.2. Transferability

The goal of the research findings to be transferable and applicable in settings beyond their origin is crucial for their value in contributing to the global health discourse (Mays and Pope 2000). Throughout this study, the recognition of the transferability of findings has been consistently emphasised in multiple occasions, where these findings were disseminated and shared with the wider audience.

The transferability of the findings were effectively demonstrated at several academic events hosted by Cardiff University during the course of the study (e.g., Cardiff School of Healthcare Sciences postgraduate research symposium). The findings were presented using PowerPoint (PPT) presentations. These events, attended by a culturally and academically diverse audience, including postgraduate students from various LMICs such as the Middle East and the EMR, who were concurrently embedded in the health systems of their respective countries while pursuing their postgraduate studies and in the UK, along with academic staff from Cardiff University, provided a platform for feedback. This feedback highlighted the relevance of the study's findings to the participants' home countries, including Palestine, Iraq, Yemen, Syria, and Pakistan, where similar systemic challenges in health systems were prevalent.

In essence, the academic audience pointed out specific parallels between the systemic challenges faced by their national health systems and those emerged in the current study, providing useful insights into the broader applicability of the current study's results. This broadly includes issues such as prevalent health system governance and organisation issues, socioeconomic conditions, cultural norms, corruption in health resources, outdated healthcare infrastructure, and significantly,

political instability in some countries. By sharing and disseminating the current study findings in such academic events enriched the understanding of how contextual similarities across different LMICs could enable the potential application and implementation of identified patient safety improvement strategies.

Moreover, the findings were disseminated and shared using a PowerPoint (PPT) presentation at the 38th International Society for Quality in Health Care (ISQua) Conference in Brisbane, Australia, in October 2022 (Appendix 4). Drawing over 1,200 participants from 70 countries, with a significant representation from LMICs such as Libya, the conference was a significant venue for examining the wider applicability of the research findings. Discussions at the ISQua conference explored the implications of the findings for other health systems, emphasising the interconnectedness of health system challenges globally and the potential for shared learning and adaptation of best practices.

Feedback from ISQua conference attendees revealed a significant alignment between the study's findings and their own experiences, highlighting the practical relevance of the research to contexts similar to those in LMICs facing similar challenges, such as political instability and fragmented healthcare systems. This feedback helped validate the study's findings and allowed discussions on how the patient safety improvement strategies identified could be adapted in their respective health systems. The ISQua discussions underscored the importance of developing a holistic view of healthcare safety and quality that transcends national boundaries and leverages diverse global experiences and innovations towards improving quality and safety. This broader perspective was seen as essential for developing resilient health systems capable of addressing both global challenges and localised adversities in patient safety.

Involvement of the WHO EMRO in the study has also added an additional layer of validation for the findings' the transferability and applicability across the broader WHO EMR region. During the course of the study, a detailed overview of initial findings was shared with some of key participants from the WHO EMRO, who were directly involved in health systems and service development within the region, to obtain a WHO perspective on the transferability of the study results to other parts of the WHO EMR (detailed in Section 4.6.5). The participants explicitly affirmed that the challenges identified were reflective of wider systemic issues prevalent across the region, particularly in those such as Palestine, Tunisia, Egypt, Yemen, Syria, Iraq, Sudan, and

Somalia. The feedback from these participants illuminated specific areas where the study's insights could inform WHO health system policy development, national strategic planning (country level), particularly in relation to developing and strengthening interagency working with WHO and other health leading organisations, and the alignment and contextualisation of improvement initiatives with local needs.

In addition to what has been alluded to above, the systematic approach adopted to conducting the current study, including a detailed description given of the research setting (Chapter 2) and the study population, including participant characteristics, sampling, and data collection and analysis processes (Chapter 4), will help other researchers assess the applicability of the current study's findings to their own contexts. In essence, the study included a diverse group of participants in terms of characteristics, experience, and influence on patient safety decision-making in Libya, which is likely to produce findings that are generalisable and applicable to a wider range of other health system contexts—i.e., rendering the findings broadly generalisable to other contexts.

Furthermore, preparing the study's findings for publication in the *International Journal for Quality in Health Care (IJQHC)* is also pivotal for the transferability of the findings. This will significantly expand the dissemination and influence of the study findings globally, contributing to global health system policy and decision making. It will provide insights into the potential for broader transferability and applicability of the study results in similar contexts. By publishing these findings in esteemed scientific journals, the research will inform and potentially transform patient safety practices worldwide. This will contribute to fostering a global dialogue and enhancing the cumulative body of knowledge on health system improvement, with a particular focus on LMICs such as Libya.

4.6.3. Triangulation

The Triangulation, as the core concept, aims to enrich the comprehensiveness of research by effectively dealing with the challenge of rival explanations, a feat unachievable through a single approach. To maintain the rigor of this study, the researcher utilised two forms of data triangulation—source triangulation as well as researcher triangulation (Denzin 1989). For source triangulation, data collated from diverse participant categories across various organisational sites were consistently compared to identify similarities and differences, facilitating the identification of

divergences or commonalities. Regarding analyst (researcher) triangulation, data analysis from randomly selected interviews went through review by the researcher's PhD supervisors. The entire data collection and analysis processes were shared with the supervisory team to ensure ongoing adequacy and accuracy. Additionally, to guarantee precise data collection, an audio recording of these interviews was undertaken and the same were transcribed verbatim. Then, the collected data underwent rigorous analysis utilising an inductive approach through thematic coding, allowing for iterative engagement with the datasets, adjustments as needed, and a faithful reporting and writing-up process.

4.6.4. Auditability

The study's credibility and confirmability rely on the process's auditability, guaranteed through systematic replication and inquiry audit. The researcher diligently recorded and preserved a transparent decision trail in a daily journal and computer records. A detailed log encompassing all memos/ research activities/research journals/documentation of data collection as well as analysis processes, along with materials used throughout the study, were securely stored and will be kept for five years after the completion of this study as per Cardiff University guidelines. Data analysis was conducted in English, the target language, to ensure trustworthiness. In order to enhance data validity, three independent bilingual individuals proficient in qualitative analysis participated in a group discussion. This audit trail of coding and analysis aimed to identify differences and similarities in categorising key themes, ensuring the final framework fully captured participant responses. The data analysis and categorisation processes were systematically shared, discussed, and reviewed by the supervisory team for rigorous checks throughout the study

4.6.5. Confirmability including member-checking

The technique of 'audit' and 'triangulation' holds significance in ensuring confirmability. In accordance with confirmability principles, this final report includes meticulous documentation, referencing, and incorporation of all primary data (interview transcripts, field notes, and audiotape records), outputs of data reduction and analysis (condensed notes), synthesis products (interpretations/ thematic categories), literature searches, etc. This meticulous recording facilitates independent auditing of their accuracy and relevance. The emphasis is on preventing findings from being shaped by the researcher's biases, with supervision serving as an independent checkpoint.

Supervision sessions, involving discussions and reflections with both supervisors, covered aspects such as the researcher's interview technique, potential areas of interest during data collection, methods of transcription, coding, and decisions related to analysis and interpretation.

The utilisation of member-checking, regarded as a vital method for establishing confirmability and augmenting participant engagement in any study, shifted the validation process from the researcher to the study participants (Creswell, 2014). In this context, the researcher invited four well-established participants in the field to review their interview transcriptions, ensuring accuracy, confirming the credibility of the information, and providing a narrative account. Subsequently, these participants were asked to examine key themes, categories, and interpretations, evaluating their coherence, sufficiency of evidence, and overall realism and accuracy. Their feedback was incorporated by the researcher into the final narrative, thereby enhancing the study's credibility through the participants' reactions to both the data and the conclusive account.

4.6.6. Reflexivity and the researcher positionality within the research

The researcher was a postgraduate student in Healthcare Sciences at the time of the study, was never employed at any of the study's sites. In addition, the researcher did not have any relationships with any participant of this study. The researcher's position in this context primarily involved serving as a partial indigenous-insider and an indigenous-outsider (Kwame 2017; Hamilton 2018). The researcher's role as a partial insider stemmed from their birth, upbringing, and education in Libya, along with a substantial period of residence and cultural familiarity with the Libyan healthcare system. Concurrently, the researcher operated as an indigenous outsider due to their privilege as a doctoral student studying in the UK during the study. Despite anticipating a generally unfavourable situation regarding patient safety in Libya and the specific study hospitals, it is crucial to recognise the researcher's limited awareness of contributing factors and other significant aspects. Consequently, an inductive approach was predominantly employed.

During the course of this research study, the researcher strived to be mindful of his own belief system, assumptions, and familiarity with the study context. The researcher kept a reflexive journal documenting a range of thoughts, beliefs, difficulties, biases and assumptions as they emerged throughout the entire research process. This aided

reflexivity throughout the research and created a transparent and critical approach to the research process and served as a way to collect the researcher's thoughts and feelings during the research process. Alongside this, the researcher used PhD supervision and discussion with research supervisors to relay any concerns they had while engaging in the research.

During this study, the researcher experienced first-hand challenges. One notable challenge involved the recruitment of participants. The recruitment and interview process in Libya, particularly during conflicts and the COVID-19 pandemic, encountered significant hurdles marked by widespread distrust and rejection, leading to a minimal number of willing participants. The reluctance of most individuals to engage in the study stemmed from either perceived time constraints or unfamiliarity with the subject matter. Some outright refused to participate, expressing scepticism with comments like 'What is this for?' Others, despite prior agreement on dates and times, abruptly cancelled their scheduled interviews at the last minute, while some took weeks to attend, causing delays in accessing the required number of participants in a timely manner. Respecting participants' autonomy, the researcher did not pursue those who chose not to participate.

Another challenge involved obtaining consent forms, with participants initially hesitant despite the researcher's detailed explanations about data security, confidentiality, and privacy. Overcoming these initial reservations, participants eventually signed the consent forms after understanding the university formality and assurance of secure handling by Cardiff University and participating organisations. This situation underscored the impact of institutional procedures. These are inclusive of the need for signing consent forms and participant-researcher trust.

Additionally, the process of audio-recording interviews faced resistance from participants who questioned the necessity and raised concerns about potential misuse of the recorded information. Some participants, at times, refused to speak if the interview was being recorded. This experience led the researcher to recognise the potential hindrance that audio-recording might pose in obtaining in-depth information, since participants may restrict their responses owing to legitimate concerns about data misuse or simply personal preferences against being recorded. This delicate balance between comprehensive information collection and respecting participants' privacy concerns was a crucial aspect of the research process.

Some participants felt a sense of obligation to partake in this study due to their established connections with those who had already undergone interviews and had recommended them for further participation. In a specific instance, a participant clarified her decision, expressing, 'I am participating in the interviews because I have known [...] as a close friend for so long.' She emphasised that she wouldn't have engaged in the study if it weren't for her familiarity with the participant who had nominated her. This level of familiarity could potentially elucidate why certain participants felt more at ease and willingly shared their experiences concerning patient safety issues in Libya. This familiarity might have facilitated the collection of very accurate and highly sensitive information than if the researcher had directly selected participants or employed a purposive sampling approach.

In addition, the researcher found that, whilst some of the research settings were suffering from the conflict as well as COVID-19 pandemic, some participants spoke about other different matters that were not directly linked to the issue being studied as whole. It was not possible to easily redirect them towards the main focus of the interview. This led to producing a considerable amount of irrelevant data that were difficult to manage during transcription and analysis. Challenges outlined above were considered cross-cultural research issues. As a consequence, the study's cultural integrity was maintained by placing the emphasis on the following five salient principles (Eun et al. 2004; Liamputtong 2010).

Contextuality: Achieving contextuality involves the researcher possessing the research setting's necessary comprehension and know-how to access samples, thus ensuring the collection of sensitive and accurate information. In the capacity of a Libyan, the researcher's familiarity with the research settings facilitated access to participants and the collection of information vital for the successful completion of this study. Adhering to the Research Ethics guidelines and ensuring ethical conduct aligned with cultural integrity, permissions were obtained via the provision of not only a Plain Language Statement but also a consent form to key individuals within the research settings. Participants were personally approached through formal emails, accompanied by a Plain Language Statement that outlined the study's general background and purpose.

Cultural Relevance: Cultural relevance assesses whether the research question addresses the specific issues and interests of a cultural group in enhancing their lives.

This study's cultural relevance emanates from its core aims, intended to benefit the well-being of the Libyan people in receiving quality and safe healthcare. The research proposal was informed by the researcher's cultural knowledge, derived from an evaluation of research undertaken on Libya's culture and the researcher's personal experiences as a Libyan. The Libyan context was central to the study, guiding the framing of research and interview questions to align with the Libyan cultural worldview. Incorporating a diverse range of participants from various research sites, including leaders from the Libyan health system and WHO experts, enriched the data, offering an incisive comprehension of patient safety issues in the Libyan health system and facilitating the development of an effective patient safety improvement framework.

Mutual Respect: This entails valuing the cultures of participants as well as the research, demonstrating an understanding of power differentials, respecting beliefs, and overcoming traditional boundaries. To uphold mutual respect, the study's participants were carefully recruited congruent with Libyan context and culture's key values. Participants were given the choice to withdraw from participation at any point in time, choose their preferred interview times and locations, and experience minimised risks concerning privacy and confidentiality. All interviews were undertaken with profound respect, emphasising empathic listening and understanding of participants. In addition, an insightful, detailed summary of the study results had been shared with some participants from LMoH and WHO, further demonstrating respect for their contribution.

Appropriateness: This aspect concerns whether or not a study leverages suitable styles of communication, conceptualisations, and processes of translation. It entails using congruent languages with participants and ensuring accurate translation. Interviews in Libya were conducted in the local language (Arabic), a practice recommended in cross-cultural studies to allow participants to express perspectives on patient safety and discuss how traditional cultural values might impact changes for patient safety improvement in Libya (Ritchie and Schneider, 2010). The researcher transcribed all Arabic audio-recordings verbatim, which were then reviewed and verified by a legal translator of English at the Faculty of Languages – University of Tripoli to ensure the validity and relevance of the collected data. While there might have been some potential for inaccuracies, the researcher was confident in the translations, given the consistency with English-based interviews.

To ameliorate risks of mistranslation, besides the steps and measures underpinning data analysis mentioned in Section 4.5.4, the research safeguarded the credibility of translation process as well as data analysis through a set of strategies as follows:

- Translation of Arabic narratives into English on the part of a bilingual researcher (the researcher) followed by a review and verification by a legal translator who also happened to be a staff member at the Faculty of Languages – University of Tripoli, thus ensuring the validity of the collected data due to a shared cultural background.
- Conducting comparisons and audit trails of transcripts (English and Arabic before translation) to achieve conceptual equivalence and credibility of themes and findings.
- Content/thematic analysis by a bilingual researcher well-acquainted with the study.
- External evaluation by individuals outside the research team (PhD supervisors) of a significant portion of randomly chosen interviews, aiming to triangulate and enhance the credibility of findings from a research expertise standpoint.
- Engaging in discussions between the researcher and supervisors to refine emerging themes until the attainment of the most credible data interpretation.

Flexibility: ‘Flexibility’ pertains to whether or not the researcher demonstrated adaptability in language usage and scheduling for data collection. In this study, participants were given the liberty to choose their preferred interview language. Additionally, as mentioned earlier, interviews were scheduled based on participants' convenience and availability. The researcher-maintained flexibility to ensure participants felt and responded comfortably to all posed questions. All participants were empowered to refuse any questions they found challenging or uncomfortable, and they retained the right to refuse/stop their participation at any point. It is noteworthy that no participants refused to answer any interview questions or withdrew from participation.

4.7. Piloting

The term ‘piloting’ in research is defined as a small-scale preliminary study and pre-testing undertaken to evaluate the feasibility of a particular study data collection instrument (Kvale, 2007; Majid et al. 2017). As usefully proposed by Wengraf (2001)

for interview piloting sample size, two pilot interviews were conducted with two fellow postgraduate students studying at Cardiff University (who had some similar characteristics to the target population and had not been directly involved in the study)—one of those was an official employee in the Saudi Arabian Ministry of Health. This strengthened the quality of interview questions, technique, and feasibility through some modifications that were performed according to the piloting results. Moreover, PhD subject supervisors provided feedback, which further prompted minor adjustments to the interview question guides. These changes aimed to enhance the semi-structured nature of the interview questions and topics, ensuring smoother flow, and facilitating effective exploration of areas of interest.

4.8. Ethical considerations

Orb et al. (2001) stressed upon the significance of ethical considerations in research, underscoring the need for ethical awareness throughout all stages of the research process. Ethics in research entails ensuring the appropriateness of the researcher's conduct concerning the rights of individuals who are the subjects of or are impacted by the research (Orb et al., 2001). This ethical dimension plays a key role during research planning, when seeking access to participating organisations, and in the roles of those involved in collecting, analysing, reporting, and managing data throughout the study. In the course of conducting this study, meticulous attention was given to addressing all ethical concerns as per the General Data Protection Regulation (GDPR) and Cardiff University Research Integrity and Governance Code of Practice (Cardiff University 2019a; Cardiff University 2019b).

4.8.1. Ethical approval

Formal ethical approval was sought and obtained from the Cardiff University School of Healthcare Sciences Research Ethics Committee as the study was conducted in fulfilment of the requirements of a PhD programme under the reference number SREC: REC705 (Appendix 7). The process of obtaining ethics approval took approximately five months. Locally, as per the requirements of the individual ethical rules and regulations within research study sites in Libya, the researcher was given a permission to conduct the research study from the Libyan Ministry of Health (Appendix 8).

4.8.2. Informed consent

In this study, the researcher duly obtained informed consent from all participants. Each participant received a clear plain-language statement outlining the study and the consent process. Prior to the commencement of each interview, participants were explicitly briefed on their voluntary participation, the option of withdrawing anytime without repercussions, and the choice not to answer specific questions without justification or consequences. Given the challenges posed by the conflicts in Libya and the COVID-19 situation, interviews were conducted via telephone/online, and participants were requested to sign, scan, photograph, and email the consent forms. Before the interviews commenced, participants were informed about the audio recording, note-taking, and the rigorous measures in place to ensure data accuracy, security, and privacy (Cardiff University 2019a; Cardiff University 2019b). The use of pseudonyms/codes system in the transcription process as well as reporting further safeguarded participant anonymity. These meticulous steps aimed to foster a conducive environment for participants to share high-quality information regarding their perspectives on relevant issues.

4.8.3. Anonymity and confidentiality

Anonymity in the context of a research denotes a method that guarantees data obtained from participants remains unattributed to individuals, even by investigators (Crow and Wiles, 2008). Confidentiality, on the other hand, involves measures implemented by researchers to securely handle, respect, and protect data throughout all stages of research (Crow and Wiles, 2008). Employing snowball sampling for participant recruitment, any names provided by interviewees or other gatekeepers were stored confidentially in an electronically encrypted document on a password-protected computer, following Cardiff University guidelines on data management and ethical practices.

Moreover, all interviews underwent de-identification, assigned alphanumeric codes based on the setting and numerical order of the interview, linked to the date and time of the interview to ensure participant privacy and confidentiality. The collected data were archived with password protection and securely stored inside a (locked) cabinet designated solely for the researcher's personal use. Access to the collected materials was restricted to the researcher and their supervisory team, ensuring the confident maintenance of anonymity and confidentiality throughout the study. The final report

presented composite depictions of the data, providing an additional layer of protection to participants' identity and privacy, making it challenging to trace any participant from the responses given.

4.8.4. Risk assessment and minimisation

The interviews were designed with a commitment to avoiding sensitive inquiries, and all participants were allowed to skip any question(s) causing discomfort. The interview questions refrained from delving into information beyond what individuals typically share in their daily lives and professional routines. Prior to initiating the interviews and persisting after project completion, all participants were informed about the imperative to adhere to confidentiality principles and agreements. Despite being conducted online, participants had the autonomy to select a comfortable location and time for the interviews, ensuring a secure environment for open and confidential communication. This precaution aimed at guaranteeing complete anonymisation of participants' names and locations. In the event that participants disclosed details necessitating follow-up or if the researcher encountered information deemed hazardous or in violation of workplace policies, corresponding measures were implemented. The course of action aligned with Cardiff University's ethical guidelines for research and conformed to legal requirements and policies within the research settings.

1. The researcher was designated Two Go-To focal points at both the LMoH and WHO country office levels. These points served as formal channels for reporting any concerns, issues, or events perceived as hazardous or in violation of the policies within the research setting and workplace. Additional details can be found in Appendix 5.
2. Contacting and notifying the Information and Documentation Centre of LMoH immediately for information and advice to get any concerns remedied.
3. Notifying the subject supervisory team of any issues observed during all stages of data collection so further advice can be sought.

4.8.5. Contingency planning and response

Although While not a single participant withdrew from the study owing to unexpected causes or events during the course of the interview process, several strategies were premeditated for implementation during the initial phases of the study in order to mitigate any potential unforeseen events:

1. A number of 'mock interviews' were undertaken with individuals from Cardiff University School of Healthcare Sciences to reinforce the researcher's interviewing skills and preparation to address any issues such as those that might arise during the interview process.
2. The interview would be temporarily suspended in the case of any participant being distressed during the interview process to allow the participant to regain his/her composure.
3. Participants were afforded the option to either postpone the interview to a different schedule or to withdraw their participation from both the interview as well as the study if they so choose.

4.8.6. Safety and security of data

Both the data as well as the information related to participants were handled in strict adherence to the Research Integrity and Governance Code of Practice of Cardiff University. The researcher ensured compliance with ethical and legal practices outlined in Cardiff University's guidance on data management and storage, thus ensuring full adherence to the policies and procedures of GDPR legislation and Cardiff University. All collected data underwent processing and encryption on a computer (password-protected) and was stored on a password-protected hard disk. To maintain confidentiality, all interview transcriptions and notes were meticulously de-identified using codes and pseudonyms. Congruent with Cardiff University's guidelines and legislation governing research data and information storage (Cardiff University 2019a; Cardiff University 2019b), the data, including interview transcripts, notes, or other stored information on computers and hard drives, will be obliterated five years following the study's completion.

4.9. Chapter summary

The chapter delineated the development and implementation of the qualitative inquiry strategy. Initially, the study's philosophical foundations are outlined, followed by an exposition of the qualitative inquiry strategy leveraging an EDQ research approach and the rationale behind adoption. The chapter elaborated on the study settings, population, sampling methods, and the instruments utilised for data collection and analysis. Considerable attention was devoted to ensuring research rigour, outlining quality criteria, and expounding on the piloting and practice methods. This chapter also expounded on ethical considerations pertinent to the study. The following chapter

delves into the analysis of data derived from interviews and document analysis, focusing on the organisational and managerial aspects of patient safety within the Libyan health system and addressing the why, how, and what aspects.

Chapter Five: Findings (1) Organisation and Management of Patient Safety within the Libyan Health System: The What, How, and Why

5.1. Introduction

This chapter addresses the following research questions: i) how patient safety is operationalised, organised, and managed within the Libyan health system; and ii) what patient safety challenges and concerns are perceived by policymakers and hospital managers. It commences with **Section 5.1** for an introduction, followed by **Section 5.2**, which provides a concept mapping of the themes covered throughout this chapter. **Section 5.3** describes findings related to political and health system factors contributing to patient safety challenges in Libya. It then moves on to **Section 5.4**, which presents findings regarding the lack of national quality improvement and patient safety initiatives in Libya. **Section 5.5** discusses findings related to the weak organisation and management of patient safety at the national level (LMoH). In **Section 5.6**, attention is given to issues related to how patient safety is organised and managed in Libyan healthcare organisations. **Section 5.7** discusses findings related to flaws in oversight, communication, and coordination and consequences for patient safety. Additionally, findings regarding extreme adversity implications for patient safety, the lack of adequate resources influencing patient safety, and the common unsafe care concerns in Libya are presented in **Sections 5.8, 5.9, and 5.10**, respectively.

5.2. Concept map of themes

Figure 5.1 introduces a concept mapping diagram that visually presents the primary themes and the subthemes discussed throughout the chapter. This diagram serves as a navigational tool to delineate the interconnections and hierarchical structure of the various topics discussed, providing a holistic view of the key concepts and their interdependencies in relation to patient safety in Libya.

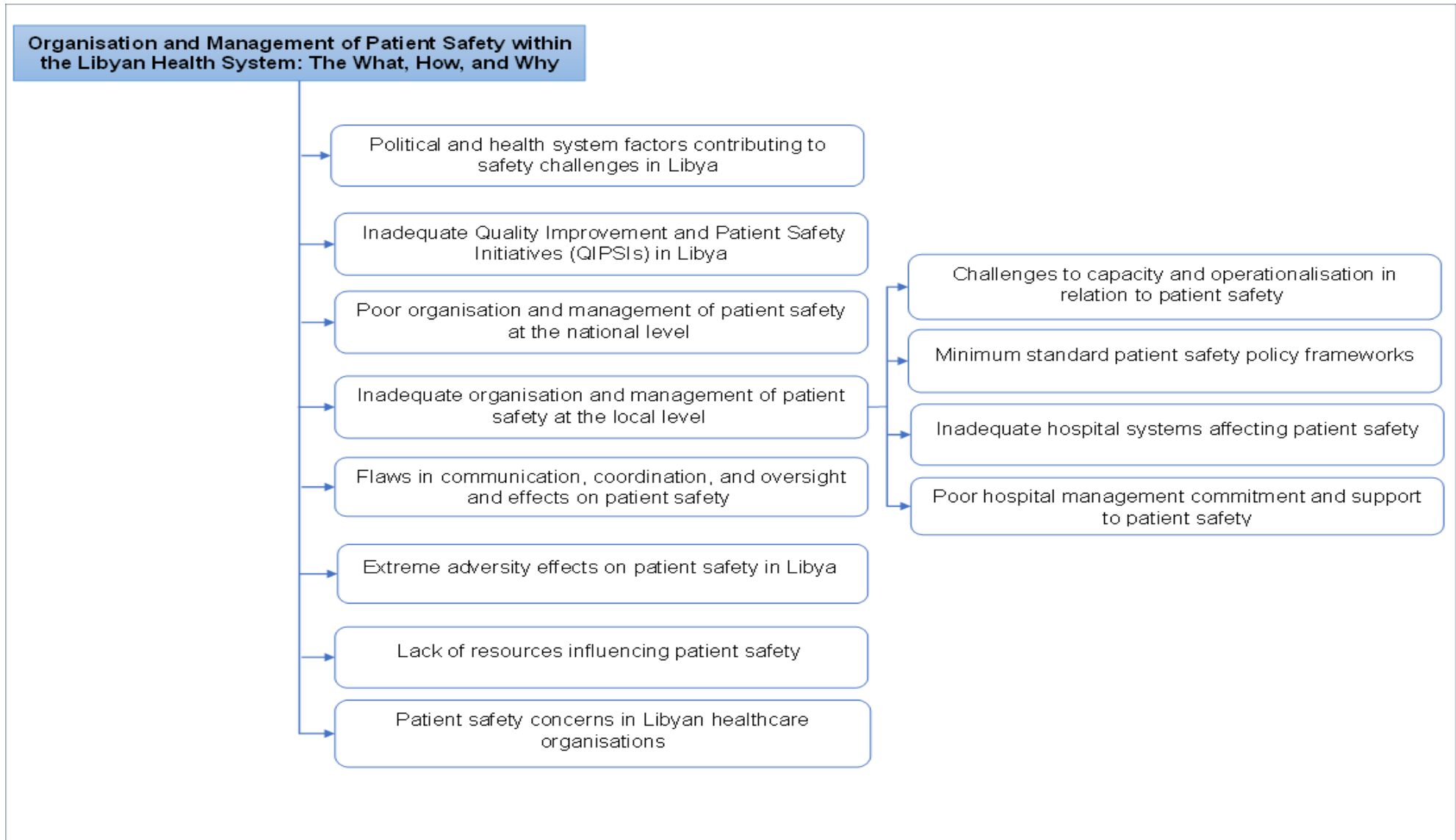


Figure 5.1: The Concept Map of Themes and Subthemes Covered throughout this Chapter

5.3. Political and health system factors contributing to safety challenges in Libya

Participants illuminated several challenges to how the health system in Libya was governed, regulated, and managed, resulting in the system being unstable and subject to persistent complex changes that might be difficult to understand. Poor health system governance and leadership, involving national policy and strategic frameworks, was perceived by participants as a major barrier to the Libyan health system (as a whole) to function effectively. As exemplified in the following data extract:

“The Libyan health system suffers from extreme challenges indeed, but I would touch on a significant one: the lack of effective governance and leadership, which is a major obstacle to the performance of the health system as a whole....Poor Libyan health system governance and leadership have obviously resulted in the system being fragmented and inefficient, thus failing to meet even the basic healthcare needs of citizens. This consequently affected patient safety, which became obvious within the Libyan health system (LH02D:1; LH02M:12).”

Inadequate health system planning and coordination were flagged as governance and leadership concerns in Libya. Participants perceived these issues as contributing to health system disorganisation, leading to a failure to examine and address current challenges and the ever-changing healthcare needs, resulting in suboptimal healthcare services. As articulated by the following participants:

“Current system problems lie in the poor planning and coordination, especially at the top level, which are neither sufficient nor adequate....The health system in Libya is not adequately planned or coordinated to respond to ever-changing situations and healthcare needs in the country....We do not yet have effective health strategic planning mechanisms in place to promote health services, workforces, capacities, infrastructures, etc. This has unfortunately weakened health system functions, resulting in gaps and failures that led to poor healthcare services (LH02D:3; W01FP:26).”

Additionally, participants indicated a lack of a comprehensive national strategic vision for enhancing the health system in Libya. This lack hindered efforts to ensure quality and safety, reflecting participants' perceptions of insufficient commitment and accountability from legislative authorities (Parliament), the government, and the Ministry of Health (LMoH) to reform the health system with a focus on improving quality and ensuring patient safety. This is evident in the following excerpts from the interviews:

“There is no clear vision for the health sector in Libya, neither from the government nor LMoH, to place healthcare as the central focus....Political vision and commitment are crucial for the healthcare system improvement in Libya to

function efficiently for supporting the delivery of healthcare services, but this is not case in Libya, especially amid the persistent challenges in the country (LH02M:12).”

“I strongly blame the government for not placing an explicit strategic vision and commitment to supporting the Libyan health sector efficiently....Every government that comes to power does not play its role effectively in leading the health system; they never set out a clear vision with effective strategic plans for the health sector in Libya. As long as this is the case, our healthcare system will, unfortunately, continue suffering from more complex challenges that in turn will affect the quality of services (LH02M:14).”

Moreover, participants criticised Libyan health legislation and regulations in terms of their development, purpose, and implementation, perceiving this as contributing to poor regulation of the Libyan health system:

“The situation of the system in Libya is attributed to the inadequate health legislation and regulations that has resulted in the deficiency of the system performance and services. The system is not working properly due to a lack of effective legislation and regulations that manage the system effectively to ensure better outcomes (LH02D:3; LH02C:10)”.

“There is no appropriate legislation in place in Libya that determine and define responsibilities, duties, and accountabilities, across all levels of the health system, in ensuring quality healthcare service. But the current legislation was developed in random ways, so no one knows who is responsible for what, resulting in inefficient and poor healthcare system and services (LH02M:8)”.

Some participants believed that the current legislation was outdated and in need of modernisation to accommodate the ever-changing health context:

“National health legislation is more than 40 years old, meaning it is not practical not effective anymore given the current health context of Libya. The current legislation has never been evolved or updated to keep pace with the ever-changing environment and context. This is a political leadership failure, which has reflected negatively on patient safety in Libya (LH02M:14).

“Before about 30 years or so, legislation was effective, but it has not been kept to date, as the society, healthcare issues, priorities, etc, change consistently....The current health legislation has to be updated and evolved to fit current and future ever-changing challenges in Libya (LH02M:2).”

Although some national health system policy documents were identified in Libya, participants were not always aware of any policies being enforced for implementation in practice:

“Unfortunately, for a long time, we have not had within LMoH an actual national policy, as what is available is only proposals and drafts (LH02D:1).”

“The Libyan National Health Policy [2030] was co-developed by the WHO Consultant together with the Health Sector Reform of the government/MoH. But it has never been endorsed/implemented because the situation changes rapidly to get worse, so everybody gets very busy, coping with emergencies and other competing priorities (W01FP:7).”

Some participants claimed that most issues lay in enforcement and implementation of policies per se:

“We do not have a clear policy, there is a set of drafts, but they were never approved or implemented, although some were endorsed, they have not entered the implementation phase....Problems lie in implementation; the lack of endorsement and implementation (W01FP:26).”

Furthermore, political instability in Libya was highlighted by participants as a significant challenge to the Libyan health system, resulting in suboptimal health service delivery and management. As pointed out by the following participants:

“In a country where civil conflicts happen recurrently, it is so difficult to keep managing the health system efficiently or keep control of the whole system, causing breakdowns in authority, governance systems, service management, etc....I believe that this is the main reason why the healthcare system in Libya is not working effectively (W01FP:7)”.

“Libya is experiencing adversities and difficulties due to the political turmoil situation in which the focus is always involuntarily shifted to emergencies taking place, so no one can think about other things... We had two governments at the same time, with armed groups fighting everywhere and using many healthcare settings for their military purposes. In such situations, policies, frameworks, communication, organisational and management systems, etc., become ineffective....Instability and conflict conditions are certainly the major obstacles to the performance and efficiency of the health system in Libya, unfortunately (LH02C:10)”.

Inadequate health workforces and the misuse of resources were also flagged as significant factors to a fragmented health system that was too fragile to ensure quality healthcare services. Participants claimed that although health resources were available, LMoH lacked the know-how to exploit and manage them appropriately, as described in the following data extracts:

“Problems related to the health workforce are my significant concern. This includes the poor management of health human resources, inadequate support, lack of supervision, inequitable distribution, lack of knowledge and qualifications, lack of education and training, etc....I believe the problems associated with health workforces in Libya should be the top priority to be addressed in Libya if the healthcare system in Libya is to improve (LH02D:1; LH02M:14).”

“Misuse of health resources is the major problem in Libya, which I believe has resulted in poor health system outcomes....There is a poor allocation and distribution of the available resources to support the development and improvement of the healthcare system in Libya....Poor use of resources, including corruption in aspects of health resources (financial allocations), and inadequate allocation and distribution mechanisms have all negatively affected the Libyan healthcare system (LH02D:3).”

In addition, participants indicated that patient safety within the Libyan health system emerged for the first time in 2009:

“Patient safety did not originally appear in the structure of LMoH except from 2009, during which an office for patient safety and quality (PSHQO) was established at the Ministry and healthcare facility levels, following an official decision passed by the Health Secretariat in late 2009 (LH02D:1).”

“As far as I know, the first national mechanisms for quality in Libya, including patient safety, were incorporated into some strategies of LMoH in 2009 (LH02D:3; LH02C:10).”

Participants believed that patient safety was considered a component within health system frameworks, including the national health policy drafts:

“When setting out policies or any sort of guidance norms, they should contain different components covering the six health system pillars [e.g., governance, service delivery, etc], quality and patient safety is considered a component of the service delivery pillar (LH02D:1).”

However, they expressed concerns over the current status of patient safety in Libya being suboptimal, indicating that the aforementioned political and health system factors contribute to these issues:

“In fact, the issue of patient safety for us [LMoH] was a basis, particularly before 2015, and we became at a level that is high, and after all this, suddenly all that matters is that the healthcare facility is open and can, as much as possible, provide services to patients as well as wounded people frequently clashing and fighting from east, west, and south (LH02D:1).”

“The healthcare system has been negatively hampered by so many challenges since the 2011-long conflict and the ensuing instability...There are recurrent significant shortages of medical supplies, healthcare staff, and medical equipment, combined with emergencies, breakdowns in governance systems, authority, infrastructure, etc, across Libya, which all have made the station complex....Unfortunately, the issue no longer extends to talking about patient safety amid such challenges....In this respect, Libya, unfortunately, is far behind....One thing to mention herein is that patient safety changes in the emergency in which Libya has become (LH02M:8; LH02C:17).”

Ultimately, the political and health system factors highlighted above resulted in poor healthcare services in Libya, which participants perceived as not meeting citizens' expectations—poor quality health services. As a result, despite guaranteed free healthcare, many citizens lost trust in public health services in Libya, opting to purchase private healthcare services or seek treatment abroad in hopes of receiving better care. As stated in the following data extract:

“Unfortunately, many citizens have suffered from the suboptimal healthcare services in the country....They have lost trust in the national healthcare services, leading them to either opt to buy private healthcare services or travel abroad for care and treatment they need, encountering great expenses paid personally and difficult care burden (LH02M:2; LH02D:3; LH02M:8).”

5.4. Inadequate Quality Improvement and Patient Safety Initiatives (QIPSI) in Libya

Participants highlighted an absence of national accountability and mechanisms for developing and implementing Quality Improvement and Patient Safety Initiatives (QIPSI) to ensure quality care in Libya. As articulated in the following data extract:

“National accountability and mechanisms for developing, facilitating, and implementing QIPSI in Libya are not existing yet....Political and national leadership commitment and support for patient safety in Libya....Government and its MoH are not passionate about patient safety, nor have they been committed to supporting healthcare providers in achieving acceptable standards of care services for patients either (LH02M:2).”

Participants were of the view about the lack of an explicit vision or strategies defining the national scope of patient safety, setting out the main objectives of the government and its MoH for patient safety, and clarifying the roles and responsibilities for patient safety across the health system in Libya:

“I have worked in the Libyan healthcare sector for so many years; there is not a specific national strategic vision for patient safety, and current unsafe care concerns and challenges in Libya are obvious consequences of such a failure (LH02D:1).”

Moreover, participants cited a lack of national legislative and regulatory mandates for Libyan healthcare providers to developing and implementing systems for quality improvement and patient safety. They also noted the lack of a national set of standardised performance indicators for reporting in relation to quality improvement and patient safety:

“To my knowledge, there is no specific legislation in place for quality improvement and patient safety in Libya...I think some available national health

legislation mentions issues surrounding safety as a broader quality component, but the continuum has still been missing (LH02M:2).”

“Libya lacks specific legislation that reinforces effective QIPs, and this is a political failure....Unfortunately, a contributing factor to the unsafe care problem in Libya is the lack of effective legislation that regulates healthcare providers, defines patients’ rights to receive quality and safe care services, and setting out mandates for provider organisations for developing systems to support quality improvement and patient safety in practice....This is currently unavailable in Libya, and as a result, patients in Libya are suffering from unsafe care implications (LH02D: 20)”.

An absence of health care accreditation was highlighted by participants as a major health system failure, hindering the assurance of effective, high-standard clinical practices and outcomes in Libya. Participants stressed that Libyan healthcare providers were not mandated to undergo accreditation, nor were they assessed and evaluated against any national accreditation mechanisms to strengthen their capability to influence and stimulate quality improvement and patient safety. As the following participant articulated:

“When we say accreditation in Libya, then we are talking about miracles! Accreditation is the primary driver of safety and quality improvements worldwide and has become a worldwide phenomenon, but it is missing in Libya, and we failed to keep pace with even a half of what has been achieved in other countries in this field....There are no national accreditation mechanisms or any sort of standard performance indicators against which healthcare providers and services can be assessed, evaluated, and monitored to ensure compliance with national frameworks as well as continuous quality improvement in Libya....I believe that this has weakened improvement efforts in this field in Libya, contributing to the perceived unsafe care problems(LH02M:8).

Participants drew attention to the absence of national coordinating and monitoring structures to support the development and implementation of and follow-up of QIPs in Libya:

“Libya lacks national independent structures to facilitate and coordinate the development and implementation of QIPs in Libya to galvanise healthcare providers around quality improvement and patient safety, supported by monitoring, inspection, evaluation, etc.....I believe this is a huge gap, unfortunately (LH02M:12).”

“Our problem is that we are lacking national bodies and constituting committees to facilitate, support, and monitor quality assurance and patient safety improvement activities such as QIPs in Libya, systematically support healthcare organisations in institutionalising and implementing patient safety policies, guidelines, tools, education and training, etc., and making healthcare

providers accountable for assuring and continually improving quality and safety of their services (LH02M:8).”

Other Additional participants criticised the lack of national establishments dedicated to collecting and managing data and information pertaining to patient safety in Libya, which they perceived a barrier to understanding patient safety challenges and devising effective strategies to address such challenges:

“We do not know much about unsafe care concerns, contributing factors, etc., in Libya....Structures or resources for research into safety aspects of healthcare and patient safety measurements has remained absent....Data and information on patient safety are scattered and are not reported nor managed within one structure so as to identify and understand the nature an root causes of unsafe care problems, how to tackle such problems, and also to develop and facilitate effective strategies for continuous improvements (LH02M:14).”

“Data is considered an important pillar of patient safety improvement worldwide, but it is not the case in Libya....Libya lacks structures to measure and monitor patient safety performance and support research activities associated with safety and quality in the Libyan healthcare to enable understanding of unsafe care problems and develop and facilitate evidence-based solutions and improvement strategies to address unsafe care challenges in Libya (LH02M:14).”

On the other hand, participants highlighted the existence of four national independent structures that were involved in managing at least one aspect related to patient safety in Libya. These included the National Centre for Disease Control (NCDC), the National Centre for Accreditation and Quality Assurance, the General Healthcare Council, and the National Medical Council. These structures worked independently but, to some extent, aligned with LMoH in supporting quality and patient safety activities in Libya. However, participants pointed out a lack of a clear line of responsibilities among these institutions, resulting in a poor contribution to effectively managing patient safety in Libya. For example, the following participants articulated this well:

“The existence of such supporting institutions is good indeed for supporting aspects related to quality, but my concern is that none of them has an explicit policy or vision that defines their specific responsibilities and duties when it comes to quality and safety (LH02M:2).”

“But they are overlapping in responsibilities and the way they are working, none of them has a clear vision or specific objectives to be achieved for quality improvement and patient safety....I am still not aware of any realistic contributions from any of them to quality and safety improvement in Libya (LH02M:12).”

Participants expressed concerns over poor working mechanisms and coordination among these monitoring institutions and LMoH in supporting patient safety. This contributed to a common misunderstanding of responsibilities and poorly organised procedures in relation to patient safety, making the situation more complex:

“Each of these entities has its own agenda and plans, working independently in random ways; none of them knows who is responsible for what in relation to quality and patient safety, especially when it comes to coordination with LMoH in supporting quality and patient safety in Libya....There is no consistent coordination in setting joint goals or standards in line with the health system regulator [LMoH] to support healthcare providers in the development and implementation of patient safety processes and practices (LH02M:2; LH02M:14).”

Some participants perceived the National Centre for Accreditation and Quality Assurance as effective in the aspect of infection prevention and control (IPC):

“We are still in the development process of the centre, gathering those national quality and patient safety experts for the operationalisation of this new establishment of its kind in Libya...We are currently preparing strategic plans for quality improvement and patient safety in Libya, which I believe will guide and inform effective improvements in quality and patient safety (LH02D:3).”

“The institution that is responsible for accreditation of healthcare and quality assurance will hopefully play a significant and vital role in organising and managing quality and patient safety activities in Libya, as I believe they are in a strong position working in line with LMoH and WHO in pushing towards improvements in quality and patient safety within Libya (LH02M:8).”

Moreover, some participants perceived the National Medical Council as an effective national structure operating within the national health legislative law regarding medical liability in Libya:

“It was established in the 1980s as an approved body from the state that determines the extent of medical responsibility resulting from medical errors and determines whether or not a healthcare professional was wrong in cases of damage inflicted to patients....They do very good work in this area, making Libya a pioneer in the application of the medical liability law in the region (LH02D:1; LH02M:8).”

However, a few participants criticised the way the Medical Council worked in relation to implementing the law regarding medical liability, indicating failures in the mechanism of application which stymied its primary purpose of preventing medical error reoccurrence as opposed to merely only giving out compensations to harmed patients:

“In fact, the Medical Council does a good job, but the task could not only be allocated to the insurance companies to pay out compensation to patients affected by harm resulting from medical practices or for their families if death occurred....The work required here should include more than that; the occurrence of medical errors should be prevented or at least eliminated; this should be their top priority (LH02M:2; LH02M:12).”

“The way I see it, loss of human life or safety is not something that can be compensated for; they [the Medical Council] should focus on preventing medical errors from occurring. Cases must be well examined, documented, and investigated to effectively prevent their recurrence and learn from them, meaning that the issue cannot be resolved only by giving out compensation (LH02M:8).”

Although a lack of adequate national programmes for patient safety in Libya was pointed out, some participants were aware of a few national mechanisms for IPC supported by the NCDC in collaboration with LMoH: -

“Speaking based on-hand experience of being a member of a hospital scientific committee previously in Tripoli, the NCDC, with coordination and cooperation with LMoH, implemented many campaigns and programmes for hygiene and sterilisation in many hospitals....In 2012-2017, IPC gained a good momentum, especially after establishing patient safety offices in hospitals (LH02D:1; LH02D:20).”

Participants stated that the few existing programmes on IPC in Libya were dependent on WHO IPC guidelines:

“Generally, national infection and hygiene programmes and campaigns in Libya were all relying on IPC guidelines set out by WHO and some of these were technically supported by WHO through their office in Libya (LH02D:1; LH02M:3).”

Other participants highlighted some IPC programmes supported and facilitated directly by WHO in Libya to combat the recent COVID-19 crisis in Libya: -

“Currently, with the epidemiological situation, the WHO office has appointed 10 experts to be present in various Libyan cities, supporting in putting safety measures in place to prevent infections in the largest medical centres, whether they are isolation centres for COVID-19 patients or providing basic health services (LH02M:3; W01FP:26)”.

However, some participants had doubts about the efficiency of such IPC programmes in general, perceiving them as insufficient in ensuring effective infection control and overall surveillance in hospitals:

“Although some IPC programmes are, to some extent, present in Libya, I cannot see any real improvements in this regard specifically....The infection rate in healthcare facilities is still high; I think it is even worse than it was, clearly indicating that such programmes are still inadequate/insufficient (LH02D:3; LH02M:8).”

Other participants believed that such IPC efforts alone were insufficient to be counted as comprehensive patient safety improvements in Libya:

“In improving patient safety in our context [Libya], it is not only a matter of controlling infections; the issue is much more than that....National patient safety improvement programmes should be comprehensive, covering different aspects of patient safety to include, e.g., education and training, safety culture, reporting and learning, etc., which are not existing in Libya due to poor political commitment to improving patient safety (LH02D:3; LH02M:14; LH02C:17).”

5.5. Poor organisation and management of patient safety at the national level

The relevant policy documents identified during data collection, as well as the interviews data, revealed that in 2009, a Healthcare Quality and Patient Safety Office (HQPSO) within the extensive central organisational structure of LMoH was established as ruled by the following governmental/Ministerial Resolutions **62/2009**, **71/2009**, and **76/2009**. The HQPSO was authorised to guide, lead, and supervise quality and patient safety programmes within the Libyan health system. Following, Ministerial Resolution **No. 11** of 2013 was issued to promote the HQPSO to a directorate, with wider responsibilities appointed out towards supporting the organisation and management of patient safety within the system as a whole. As illustrated in the following data extract:

“In the new structure of LMoH followed the Ministerial Resolution No. 11 of 2013, the HQPSO became a directorate as a new mechanism to support activities related to patient safety in the Libyan health system, which was indeed a great move in such an important field in healthcare in Libya (LH02D:1; LH02D:3).”

In 2018, the directorate of quality and patient safety was turned back into a small unit under the LMoH' directorate of Hospitals and Medical Affairs—a move that most participants were dissatisfied with, criticizing the way patient safety was governed within the LMoH:

“In 2018, the directorate of HQPS was turned into a small department/office so not a directorate anymore, but rather it was integrated into the LMoH' directorate of Hospitals and Medical Affairs....To be honest, this was disappointing because it was a move back at a very critical time in which we

were supposed to move forward in patient safety, not the opposite (LH02D:3; LH02M:8; LH02M:14).”

Participants expressed concerns over the fluctuating evolution of organisation and management practices and mechanisms in relation to patient safety within LMoH, which they believed contributed to patient safety being unregulated across the health system as a whole:

“The directorate of HQPS has recently been turned into a smaller department, and a kind of negligence and overlooking of the respective issue is increasingly observed...This is sort of bad governance and management practices for the patient safety issue within LMoH...No one cares about quality and safety anymore, reflecting negatively on patient safety in hospitals (LH02D:3).”

“This shows the inadequate governance and management mechanisms existing within LMoH because when you place patient safety under the Hospital and Medical Affairs Directorate, as if you say, e.g., that primary care and clinics have nothing to do with safety and quality, it is not just hospitals....This clearly shows a poor commitment of health system leaders to patient safety; because they do not care, they are not bothered by the poor quality and suboptimal patient safety practices in healthcare organisations (LH02M:14).”

Participants indicated that the current HQPS department within LMoH had operated through an administrative and a technical team organising and managing quality and patient safety-related work at the national level, although most participants perceived its capacity and capability for effective functioning as weak:

“Given patient safety is still new discipline in Libya, we [LMoH] do not have a team with sufficient capacity, capabilities, and expertise in safety and quality....I believe this is a factor contributing to the suboptimal management of patient safety across the healthcare system in Libya (LH02D:20).”

Moreover, participants expressed that even those organising and managing patient safety-related work within LMoH often lacked sufficient competencies, lacking knowledge, abilities, skills and expertise required to ensure effective organisation and management of patient safety related-work within LMoH:

“Having staff with poor or no expertise and the right mix of skills and experience to manage patient safety-related work at the Ministry level has certainly caused the organisation and quality of work to suffer a lot, which could likely lead to devastating complications for patient safety management at other levels (LH02M:2).”

“Honestly, those organising patient safety issues within LMoH lack solid knowledge and sufficient competencies that put them in a strong position to manage patient safety related work and activities properly....I am not sure if

any of those have any qualifications and experience or sort of training in such a field either (LH02C:10; LH02M:14).”

Furthermore, participants highlighted poor leadership commitment and support for patient safety within LMoH, which had adverse effects on patient safety in practice:

“Unfortunately, there is a failure of leadership commitment within LMoH to reform the health system while maintaining a focus on patient safety improvement. Health system leaders [LMoH] do not retain leadership competencies critically required for making a change and improving system outcomes, including patient safety (LH02C:17).”

“National leaders are not active, productive, or supportive of ensuring and improving quality and safety in Libya....Our health system is, unfortunately, lacking well-committed leaders who can lead the system effectively and strive for developing a quality and safety-driven health system for Libya (LH02M:14).”

They believed that poor leadership commitment and support within the LMoH for patient safety was a major factor leading to inadequate strategic planning and decision-making regarding patient safety across the entire health system. This contributed to the chaos and significantly exacerbated problems related to unsafe care in Libya. The following comment from a participant is a cogent example:

“The health system regulator [LMoH] is not committed nor willing to put things right for strengthening quality and patient safety in Libya....Without their best efforts in fostering system-wide patient safety improvements, change will not be possible, and suboptimal healthcare concerns will continue to exist (LH02D:3).”

Participants, especially at the hospital level, criticised the lack of strategic vision, policy, cross-functional decision-making, strategy, and clear action plans from LMoH to strengthen the capacities of provider organisations to ensure ever-improving quality healthcare services. This is demonstrated in the following data extracts:

“There is an absence of strategic thinking and planning at the national level—the absence of a strategic vision to deal with the ever-changing healthcare environment including safety issues and get things done accordingly.... Unfortunately, our national leaders lack insights into patient safety problems in Libya and lack thinking and planning strategically to make effective decisions to put effective solutions in place (LH02D:3).”

“We lack competent leaders who are capable to think and plan consciously and critically to produce an effective strategic vision that places quality and safety as a priority across the health system, taking into account all factors influencing the system....Unfortunately, strategic planning and decision-making for quality and patient safety are lacking within LMoH, have these been embodied into the health system as a whole yet, and I truly believe this is the reason why we are far behind (LH02C:17).”

Still, there was strong congruence among participants about the selection of inappropriate staff for executive, senior, and managerial roles within LMoH, which was highlighted as a health system leadership failure in ensuring quality and safety. Participants claimed that the way those working within LMoH were selected was inappropriate in terms of leadership characteristics, competencies, and dedication to undertaking assigned work efficiently. Rather, their selection was perceived to be often based on their loyalty and dedication to other staff of higher levels (e.g., the Minister of Health), as described in the following data extract:

“The Libyan health system is not led by competent leaders with needed expertise and leadership qualities; critical roles within LMoH are usually assigned to inappropriate people, which has led to a complex dysfunction in the management and the overall system....I am totally dissatisfied with the way those people are selected and appointed for roles that are outside of their area of experience and expertise....Those incompetent people are usually selected and assigned because of their loyalty to specific people from a higher level than theirs, not to their efficiency and ability to conduct the respective work (LH02M:2; LH02D:3).”

More specifically, for participants, most of those holding roles in quality and patient safety within LMoH were perceived as ‘none-bothered’ about patient safety challenges across the health system. Participants’ perceptions of managing quality and patient safety within LMoH constituted a lack of ability to reason and make strategic decisions and strategies in response to patient safety challenges, as well as to steer provider organisations towards quality improvement and patient safety in Libya:

“Those managing patient safety work in LMoH have never supported us [Patient Safety Teams PSTs] in dealing with patient safety challenges....Honestly, they never place emphasis on addressing patient safety issues, nor have they any explicit vision, goals, or any sort of strategic plans for ensuring the delivery of quality and safe healthcare....I believe they [national patient safety leaders] are not well supported by higher authorities either, but they lack even very basic emergency plans or protocols that can help deal with patient safety issues in hospitals....Unfortunately, this significantly contributed to the current patient care and safety concerns in Libya (LH02D:3).”

5.6. Inadequate organisation and management of patient safety at the local level

This section presents findings regarding how patient safety is organised, operationalised, and managed within healthcare organisations. These findings are grouped and discussed under four sub-themes below.

5.6.1. Challenges to capacity and operationalisation in relation to patient safety

Following a Ministerial Resolution – **No:179/2009**, a Healthcare Quality and Patient Safety Office (PSHQO) was established in healthcare organisations and operationalised by PSTs to manage patient safety therein. Participants, however, were not always satisfied with the function and efficiency of the PSHQO and PSTs, conveying a negative impression over the way patient safety was organised and managed in most hospitals. These concerns were often related to a lack of clear responsibilities and accountabilities for effective management of patient safety in hospitals, impacting negatively on patient care and safety. As pointed out in the following data extract:

“Patient safety at the hospital level is inadequately managed although there is PSHQO and PSTs that are responsible for organising and supervising patient safety issues and activities therein....They [PSHQOs/PSTs] lack resources work effectively or fulfil their allocated responsibilities and duties properly, thus falling to achieve positive outcomes....This has subsequently impacted safety and quality of healthcare services, unfortunately (LH02D:1; LH02C:17).”

Some patient safety managers criticised the absence of national commitment and support to strengthening patient safety capacities in hospitals:

“In my observation, they [PSHQOs/PSTs] are not well supported nor well-resourced by LMoH to carry out their tasks effectively, resulting in negative outcomes on patient safety management in hospitals....They lack national support and required resources that allow them to conduct their work properly, including training and capacity building....Some hospitals do not even have a well-established/fully equipped PSHQO or PST to facilitate and support quality and patient safety activities therein (BH04M:27; TH03M:30).”

Some participants highlighted issues related to understaffing and poor staff competencies encompassing expertise, skills, and knowledge pertaining to patient safety among PSTs. This hindered effective organisation and management of patient safety in hospitals, resulting in negative patient care and safety outcomes:

“Most hospitals lack sufficient/competent staff for the operationalisation of their PSHQO, with some hospitals having only one person in charge of managing patient safety issues, while others might not have at all; for example, [...] hospital in Tripoli does not have anyone directly responsible for patient safety issues, which I believe is a significant factor contributing to safety concerns in hospitals....I worked as a [...] manager within LMoH, during which I engaged a lot with hospitals and observed many issues in PSTs therein in terms of incompetencies and poor capacity building, which have contributed to

suboptimal organisation and management of patient safety issues, unfortunately (LH02D:3).”

Participants underscored the absence of essential training programmes for PSTs to facilitate and enhance the effective management of patient safety in hospitals. Hospital patient safety managers specifically criticised the inadequate support from the LMoH in providing training for hospital PSTs to excel in their roles managing patient safety:

“When we talk about those managing patient safety issues in hospitals, they have not been well-trained in dealing with safety issues, especially during emergencies. They [PSTs] extremely lack the necessary training that is based on continuous development and improvement to address patient safety issues and ensure optimal patient care and safety outcomes are achieved (TH03M:30).”

“I work within a PST in [...] hospital for a long time now, my team has never received any specific training on patient safety.... Honestly, this impacted negatively on the team’s ability to carry out day-to-day tasks and activities relating to quality and patient safety to ensure quality services and safe practices, etc (BH04M:29).”

Moreover, participants stressed the absence of effective coordination between healthcare staff and PSTs and concerning improvement in quality and patient safety. This constituted participants’ views of a reluctance to communicate and coordinate with each other to allow effective understanding of patient safety issues to be obtained and feed into supporting the development of effective systems to deliver quality care and integrate quality improvement as well as patient safety activities into practice. As illustrated in the following data extracts:

“The problematic issue we [PST] are facing is poor communication and interaction from most healthcare staff in facilitating and coordinating quality and patient safety activities effectively to ensure successful outcomes are achieved. This is a significant gap hindering our efforts to manage patient safety effectively (LH02D:3; BH04M:27).”

“We extremely lack regular dialogues and conversations through communication and coordination between my hospital staff and PST to inform understanding of issues affecting safety practices and patient care outcomes as well as in carrying out quality and safety activities so that so that any potential barriers can be overcome....I believe this type of communication and engagement is crucial if we are to improve practices and working conditions in our hospital so that change is reinforced (TH03M:30).”

5.6.2. Minimum standard patient safety policy frameworks

As discussed in Section 5.3, there was a clear absence of national-agreed upon and endorsed policy frameworks for patient safety in Libya, flagged by participants as a major contributor to patient safety challenges therein. As the following patient safety manager stated:

“I have been working in [...] hospital as a PST manager for a long time, I have never heard of any national patient safety policies for quality and/or patient safety at all (BH04M:27).”

According to the interviews data and policy document analysis, as a result of the lack of national patient safety policy frameworks, Libyan provider organisations tended to self-formulate guidance protocols to support patient safety (as part of Standard Operating Protocols SOPs), although many of these primarily focused on quality assurance broadly, rather than patient safety per se directly. As illustrated in the following interview data extracts:

“Libya has lacked national policy and guidance frameworks on patient safety, which has led us [PSTs] to have developed our own protocols to support patient safety and ensure care provided to patients is at an acceptable level of quality so that patients are not harmed while receiving care (BH04M:27; BH04M:29; TH03M:30).”

“We [PSTs] have formulated our own mechanisms for quality assurance, including patient safety, based on WHO guidelines and international patient safety goals. These protocols are put into practice and our job as a PST is to ensure that the protocols are implemented and followed by healthcare staff on a day-to-day basis so that patients receive safe care services without harm as much as possible (TH03M:28).”

Table 5.1 presents relevant policy documents to organising and managing patient safety, which were developed and implemented in the participating hospitals.

Table 5.1: Relevant Policy Documents Available in Participating Hospitals

Type of Document	Organisational Location
Policy	
Quality & Patient Safety Policy	TH04
Medication Administration Process & Safety	TH04
Rights, Responsibilities & Duties of Patients & their Families	BH03
Patient Medical File & Medical Records Policy / Booklet	BH03
Protocols	
Patient Identification Process & Safety Protocol	TH03
Critical Safety Concerns Reporting/Whistleblowing Protocol	TH03
Surgical Safety Protocol	TH04
Safety Concern Solution Protocol	BH04
Guidelines	
IPC Guidelines	TH03
IPC Guidelines	BH04
Patient Safety Guidelines for Pressure Ulcers Control	BH03
Other Guidelines / Norms	
Patient Safety Checklist	TH03
Patient Satisfaction Questionnaire for Quality and Patient Safety	BH04
Patient Safety Issues Reporting Form	TH03
Patient Safety Issues Documentation Form	TH03
Patient Safety Incident/Complaint Form	BH04
Patient Information & Safe Handover Checklist	TH04

Participants believed that the existing guidance documents were formulated using available relevant WHO guidelines as well as the six international patient safety goals to create a patient safety-friendly hospital environment. As articulated by the following participants:

“Our current guidance protocols were developed using available WHO quality and patient safety guidelines and tools as a minimum standard protocol to support safe clinical practices (BH04M:27; BH04M:29).”

“We [PST] designed some patient safety guidance frameworks based on the six international patient safety goals as appropriate, along with available WHO patient safety guidelines and manuals to support the visibility of our safety protocols (TH03M:30).”

However, there was a perceived doubt about the effectiveness of the existing hospital patient safety protocols, which some participants perceived them as neither effective nor capable enough of ensuring patient safety, as stressed in the following data extract:

Although some relevant minimum protocols are in place in some hospitals, it is not guaranteed that they are effective or capable for ensuring acceptable level of quality and safety, considering working within such a complex situation, I guess (LH02D:3; BH04M:27)."

Still, despite the existing of minimum patient safety protocols, healthcare staff compliance with them was perceived as particularly poor by patient safety managers. They stated that existing patient safety guidelines and protocols, especially those related to IPC, were not effectively followed and often were not taken seriously by healthcare staff. As the following hospital patient safety manager noted:

"There is what I call as resistance from healthcare staff to follow and comply with the existing quality and patient safety protocols in some hospitals....They find these protocols as a burden, so they opt not to follow them, this made the situation even worse when you see even basic guidelines are not followed (BH04M:29)."

Other hospital patient safety managers highlighted a lack of healthcare staff's confidence in patient safety protocols, considering such protocols either irrelevant or disruptive to their practices and thus tending to ignore them:

"I have observed that most healthcare staff, especially nurses, do not follow safety guidelines put in place... The response I always got from some of them was *'do not tell me what to do with patients and the practice; I know what patient safety is'* (TH03M:30)."

"But the problem is that our guidelines and procedures are often unfollowed and ignored. Healthcare staff are not confident in our patient safety protocols, perceiving them as useless and disrupting their practices. There is a resistance to whatever mechanisms we put into practice, compounding the already suboptimal patient safety practices in our hospital (BH04M:27)."

5.6.3. Inadequate hospital systems affecting patient safety

There was consensus in participants' views regarding poor systemic failures contributing to patient safety incidents in hospitals. Participants were emphatic that hospital systems were often in place but perceived as vulnerable to lapses and failures:

"Most hospitals have systems in place but are often not well capable of ensuring clinical procedures are carried out properly and

safely....System failures in hospitals are a clear example of poor hospital systems, contributing to making clinical practices complex, which in turn results in poor outcomes on patient care and safety (LH02M:2; LH02D:3).”

For example, a lack of adequate systems for patient identification was indicated as a factor leading to patient misidentification, resulting in patient harm or distress:

“We are suffering from challenges associated with patient identification processes as a result of our hospital lacking proper systems to facilitate and help undertake patient identification procedures adequately so that incidences of patient misidentification can be minimised....We have had many cases of patients experiencing near misses and adverse events when undergoing different stages of care. Such issues have not been addressed yet, leading to many patients continuing to suffer adversely (TH03M:30).”

There was also a perceived concern about outdated information technology (IT) in hospitals, which was seen by participants as a major contributor to the inefficiency of care processes and procedures, increasing the risk of human errors resulting in safety lapses and incidences. As noted in the following data extract:

“The issue is that IT in the Libyan healthcare system is completely outdated, fragmented, and inefficient, especially in hospitals, which is a significant problem that affects care procedures and service delivery, resulting in adverse outcomes for patients receiving the care....Some hospitals do not even have access to the internet, proper computers, or necessary equipment. Even in those hospitals that do have IT in place, it is inadequate and outdated, meaning they are not capable of performing tasks and procedures effectively. This has imposed a further burden on care processes and service delivery, leading health care systems to be neither well-organised nor functioning effectively, thus posing risks to patient care and safety [LMoH] (LH02M:8; LH02M:12)

Also, poor hospital systems for medicine management were flagged as a concern, believed to expose patients to potential preventable incidents and adverse events linked to medical practices:

“Proper systems for effective management of medicines are almost non-existent, at least [I would say] in more than 65% of hospitals. This means that medicines management practices in most hospitals are below an acceptable level, unfortunately resulting adversely on medicines prescribing, transcribing, dispensing, administration, and monitoring. This has potentially resulted in suboptimal clinical outcomes, affecting patient care and safety....Such concerns have existed in practice and cannot be avoided or minimised unless effective systems for medicine management are in place (LH02C:17).”

Participants cited inadequate hospital systems for communication and coordination as contributing to poor teamwork and collaboration between hospital departments and teams during patient care processes, resulting in preventable adverse events for patients. As highlighted in the following data extract:

“The other problem worth mentioning herein is poor hospital systems to facilitate communication and coordination among clinical/non-clinical teams/departments, which hindered establishing teamwork and collaboration during carrying out patient care processes and procedures, potentially exposing patients to safety risks....We had many cases when patient information was missed and scattered between units/departments, which led to adverse implications for the patient...I would say that communication and coordination across departments/teams are a contributing factor to safety incidents in hospitals (LH02M:2; TH03M:30).”

Participants highlighted a lack of systems for quality assurance and improvement to ensure compliance against national standards and continuous improvement in care practices and processes, respectively:

“Hospitals are suffering from a lack of effective quality assurance activities, including clinical governance, which has made it difficult for providers to assess their practices and performance of care services to ensure continuous quality improvement. This is hampering improvement efforts, especially when it comes to quality and patient safety in practice (LH02M:14).”

For example, participants highlighted a lack of systems to facilitate clinical audit and risk management as a significant failure contributing to suboptimal clinical practices:

“Significantly, hospitals are lacking systems/mechanisms for risk management and clinical audits so that adverse events/incidences are well reported, assessed, and evaluated, as well as corrective actions can be taken to prevent reoccurrence (e.g., auditing of IPC practices, medication practices, implementation of protocols and guidelines) and quality is continuously improved....We very much miss such processes and measures for assessing safety risks and learning from them to ensure safe and quality care delivery (LH02M:2; LH02M:12).”

Still, poorly developed patient safety incident reporting systems were viewed as a concern impeding the reporting of events that led to or could have potentially harmed patients, contributing factors, and how these could have been prevented:

“Well-developed systems for safety incident reporting have not been in place yet in Libya. Safety incidents and adverse events reporting (and learning form which) remain a challenge in Libya, with very few hospitals completing manual

reporting of incidents and adverse events, which I believe is still insufficient....One of the contributing factors is the lack of access to the internet and computers in most hospitals, which has made the problem worse when it comes to reporting (LH02M:2; LH02D:3; BH04M:27).”

Some participants noted a lack of hospital systems for disinfection and sterilisation as well as for the management of the risk of infection, which they believed contributed to fuelling HAIs, thus compromising patient safety:

“HAIs are a serious risk to patient safety in our hospital, which is still lacking even basic systems or sort of mechanism for disinfection and sterilisation or for monitoring HAIs so that control measures can be put in place effectively....Would you imagine how we can work on patient safety if such basic mechanisms are still unavailable? (TH03M:28; BH04M:29)”

5.6.4. Lack of commitment and support to patient safety by hospital management

Participants highlighted insufficient commitment and support from hospital top management towards patient safety, which they identified as a factor contributing to suboptimal patient safety practices. Patient safety managers, in particular, asserted that patient safety was not regarded as a top priority by hospital leadership unless a safety incident occurred:

“The top hospital management do not care about patient safety much, literally....They do not know even what we [PSTs] are doing in hospital as they consider safety not a priority and do not give it any importance unless something serious occurs like patient has been harmed, otherwise they are not bothered (BH04M:29; TH03M:30).”

Hospital participants expressed their dissatisfaction and disappointment with poor hospital management’s commitment to developing effective policy frameworks to support patient safety efforts within their hospital. As illustrated in the following quote:

“They (top management) are not well committed to making strategic decisions and action plans to support quality and patient safety efforts in our hospital, e.g., they are not committed to putting policies or strategic plans for patient safety in place, they, even, have never provided us [PSTs] with any sort of resources to help us carry out our work in ensuring safe practices within our hospital. This has been a significant leadership problem we have faced for years (BH04M:27; BH04M:29; TH03M:30).”

Participants conveyed a negative impression about the absence of management support for providing education and training in patient safety across all categories of

hospital staff. This was indicated as a barrier to promoting knowledge and awareness of safety practices in hospitals, resulting in patient safety being less prioritised:

“I have worked within a PST in [...] hospital for about 7 years now. I have never been provided with any sort of training in patient safety, not for healthcare staff either; they have never been allowed any opportunities for education and training in quality or patient safety, no I have not seen such initiatives in our hospital at all....The top management has never shown an interest in supporting education and training in such an important matter....To me, this demonstrates hospital management’s poor recognition of such necessary training for effective and safe patient care practices at all levels, including us as a PST, resulting in less prioritisation of safety in our hospital, thereby leading to negative outcomes on patient care and safety(BH04M:27; BH04M:29; TH03M:30).

Still, expressions of criticism and discontentment about hospital management’s accountability and responsibility for effective monitoring of clinical practices and health care staff performance were raised by participants, who believed increased irresponsible unsafe behaviours and malpractices in hospitals:

“Our hospital management is least bothered when it comes to safety matters, lacking accountability and responsibility for monitoring clinical practices and performance as a means to identify and address irresponsible unsafe behaviours and reduce malpractices breaching patient care and safety....Even when it comes to our tasks as a PST, we are not highly supported or given absolute authority by the management to carry out what I have just mentioned, unfortunately (BH04M:29; TH03M:30).”

This was compounded by poor hospital management’s contribution to supporting PSTs in establishing robust patient safety systems within hospitals, which patient safety managers perceived as a consequence of the top management not being committed to patient safety. As illustrated in the following data extract:

“I have never seen our hospital management do ‘Executive and Leadership Walk Rounds’ to show their commitment and support for patient safety....This has had a significant adverse influence upon safety culture within our hospital. I still do not know all the managers working at the top management level because I have never seen them having a walk around to support patient safety efforts....I believe that poor hospital top management practices is really a direct factor contributing to an underdeveloped safety culture within our hospital (BH04M:29; TH03M:30).”

Significantly, hospital participants indicated that the hospital management was most likely to adopt a blame-oriented, punitive approach when incidents occurred. They perceived such an approach as creating an environment in which a culture of blame

and punishment overshadowed their hospital workplace, hindering the culture of open reporting and learning from incidents. As explained in the following quotation:

“Poor safety culture has increasingly flourished and permeated in our hospital....E.g., if a nurse is doing something with a patient on a half-broken/inadequate bed, and if the patient falls off the bed, the first response to come from the management will be to blame the nurse for the accident, not to consider the broken/inadequate bed or trolley a leading factor....I [PST manager] had a similar situation a few months ago when a nurse and also a doctor were accused of being guilty of a patient fall incident that was not their absolute fault but rather a system failure, but the management was not convinced of this at all (BH04M:27).”

5.7. Flaws in communication, coordination, and oversight and effects on patient safety

Participants highlighted failures in oversight, communication, and coordination across the health system in Libya, which they believed resulted in poor patient safety outcomes. They expressed concerns over the health information system in Libya, which suffered upheavals and setbacks affecting its capacity and capability of managing data and information. This was perceived to serve as a barrier to informing rational decision-making and policymaking to improve patient care and service quality:

“The health information system in Libya is poorly functioning, hampering top-down and bottom-up communication and coordination in facilitating and implementing different arrangements, including those related to patient safety....I work in LMoH and believe that LMoH, as the health system regulator, has not known much about the situation in hospitals due to challenges associated with the poorly functioning health information system....Change in overall system functions and outcomes, including quality and safety, cannot be possible unless a robust information system with adequate inter-level communication and coordination mechanisms is in place (LH02M:2; LH02M:8)

Participants noted that the Libyan health system had been centrally managed by two separate health ministries in an uncoordinated manner due to political instability. This was perceived to cause conflicts in the way healthcare providers were managed as well as coordination of arrangements, leading to healthcare services being operationalised and delivered in an unregulated manner, thus posing further patient safety challenges. As the following participants commented:

“We have had another problematic issue related to governance, coordination, supervision, and oversight due to duplication in working mechanisms. We sometimes have two governments, which means we have two ministries of health....This has created confusion and conflicts in working mechanisms as healthcare providers are managed by two separate ministries, causing conflicts

and flaws in communication and coordination mechanisms and procedures to carry out arrangements across different levels, which has implicated poor quality healthcare services and increased the risk of unsafe care at the operational level! (LH02D:1 LH02D:20).”

According to the participants, this led to an absence of national supervision over service delivery and management. As a consequence, many provider organisations tended to function with varying degrees of autonomy from the health system regulator—LMoH. Participants viewed this as problematic, as it fostered an emphasis on service quantity rather than quality, particularly evident in Libya. An illustration of this can be found in the following data excerpt:

“Unfortunately, turning healthcare into business has permeated Libya as some providers have taken advantage of the absence of national monitoring and inspection, shifting their focus to service quantity and business....This is very problematic, seeing as patients have made complaints stating that they were requested by public hospitals to pay for parts of treatment, especially those needing critical surgeries or so....Loss of control as well as oversight of providers have resulted in such issues, unfortunately reflecting negatively on service delivery and patient care (LH02M:8; LH02M:14; LH02M:14).

Participants were also of the view that the lack of national cross-system communication and coordination impeded oversight arrangements, including monitoring, follow-up, and reporting on patient safety across all levels of the system. This contributed to failures in informing rational patient safety decision and policy making at the national level, as articulated by the following participant:

“There is still no consistent systematic follow-up and monitoring of patient safety issues at the healthcare facility level, including reporting on these to LMoH, which is a significant problem hindering change in quality and safety in Libya... Factors including poor communication and coordination, along with a lack of providers’ adherence to reporting to the policymaking level on patient safety matters, have contributed to a failure to achieve a coordinated response to patient safety challenges. As such, when it comes to monitoring, follow-up, and reporting on patient safety between top and bottom levels, these have not permeated into our system yet (LH02D:1; LH02D:3).”

Furthermore, flaws in inter-level communication and coordination were perceived by participants as reflecting negatively on the healthcare referral system and procedures. These flaws combined to undermine effective transmission and dissemination of patient information and data during referrals, contributing to putting patient care and safety at serious risk, as stated in the following data extract:

“As mentioned previously, poor communication and coordination across the health system have led to complex challenges to developing an effective referral system. The referral system is functioning poorly and even not existing in/between some healthcare settings/health units/centres. I believe this has caused problems in patient information and data sharing and dissemination, which are very scattered when patients are referred from one care provider to another, contributing to patients suffering harm from not receiving care and treatment on time, thus affecting their safety and life (LH02M:2; LH02D:3).”

5.8. Extreme adversity effects on patient safety in Libya

Participants expressed concerns over the prolonged political instability in Libya, which debilitated the already-weak health system, resulting in a considerable breakdown of health authority and fragmented governance systems. This was perceived to serve as the most significant barrier to ensuring an attainable level of healthcare quality and safety, thus putting the lives of patients at risk:

“Unfortunately, Libya is experiencing difficulties due to post-revolution conflicts, which have contributed to a severe deterioration of public health infrastructure and services, with many healthcare facilities being blockaded or severely damaged by frequent armed-conflicts....The political instability and the onsets of frequent armed-conflicts have resulted in fragmented health system governance and organisation, heavily affecting the whole health system and making it extremely difficult for us [MoH] to think about safety and quality as such things need stability and security because all health plans were transformed from development to emergency in order to cope with emergency situations in the country (LH02D:1; LH02D:3; LH02M:12; LH02M:8; LH02D: 20).”

This stymied the organisation and delivery of quality care in Libya, as exemplified in the following data extract out:

“Our country’s unfortunate situation has resulted in several majors problems, including difficulties in accessing healthcare services, destructed and damaged infrastructure, severe breakdowns in system governance, shortages of resources including medical supplies and material, along with failures in the implementation of policies, protocols, frameworks, etc....Unfortunately, these have taken priority over safety and quality as the situation becomes involuntarily out of control and out of hands due to emergencies (LH02D:3; LH02D:20).”

Problems of access to healthcare facilities for both healthcare staff and patients due to the unsafe environment and security threats were indicated by participants as presenting a significant risk to staff and patient safety and wellbeing:

“Many healthcare facilities during conflicts become occupied by those fighting, during which healthcare staff and/or patients frequently were badly assaulted,

kidnapped or even killed due to armed attacks, etc, and thefts or destruction of medical supplies and equipment were also reported many times. This has implicated in the poor-quality healthcare services as you can see (LH02D:1; LH02D:3).”

Besides, health infrastructure destruction resulting from reoccurring conflicts was pointed out by participants, who perceived this, as well as the fact that most Libyan healthcare facilities were already not well prepared for emergencies, as resulting in negative outcomes upon service delivery and contributing to compromising patient safety. As shown in the following ensuring quote:

“The major armed conflicts since 2011 have resulted in heavy damage to health facilities in Libya....When wars take place, healthcare facilities are eventually end up either being seriously damaged or partially deteriorated as happened in the last years, making them not functioning and inaccessible, and exposing people in need of services to a significant risk (LH02M:2; LH02D:3; LH02M:8; LH02M:14).”

Another relevant implication expressed by participants was regular disruptions to water and electricity supplies to healthcare facilities, which exerted additional adverse pressure on healthcare facilities and services:

“Damage to public infrastructure extends to include shortages of water and electricity supplies to healthcare facilities due to the frequent armed conflicts, which is another significant burden on even those healthcare facilities that are out of war zones....Many hospitals currently have a functioning backup generator for electricity supplies, but this is still insufficient, seriously affecting healthcare services delivery (LH02M:2; LH02D:3; LH02D: 20).”

Moreover, participants highlighted a significant scarcity of crucial medications and medical supplies in many healthcare facilities, attributed to political instability. The severe disruptions in the medical supply chain and distribution throughout Libya had enormous implications for hospitals in maintaining an attainable level of quality care services, therefore exposing patients’ lives to risk:

“Shortage of essential medicines and medical materials and equipment is another significant problem resulting from security issues in the country....Many healthcare facilities have lacked even basic medical materials and top essential medicines and vaccines to maintain very normal service provision....This has made the situation worse, within which many patients are likely exposed to the risk of life-threatening and safety concerns due to a lack of access to essential medicine or medical material (LH02D:3; LH02M:8; BH04M:27; TH03M:30).

Participants also expressed concerns over the lack of specific action plans for patient safety during emergencies in Libya, which adversely affected people's access to safe healthcare services and treatment during emergencies. As articulated in the following data extract:

“The other important thing to mention is that there is an extreme lack of specific protocols or frameworks for ensuring quality and patient safety during emergencies, making the situation worse since conflicts in Libya take place frequently....This has compounded safety concerns because some hospitals during emergencies become dangerous and access to others is lost, exposing people's lives and safety to risk due to a lack of access to healthcare (LH02D:3).”

Still, the consequences of the emerging COVID-19 pandemic were highlighted by participants as having placed considerable challenges that overburdened healthcare services in Libya, resulting in debilitating safe and quality care service delivery:

“COVID-19 pandemic has severely impacted the already overburdened health system in Libya....Our system lacks preparedness plans to deal with infection outbreaks, such as COVID-19....This has resulted in healthcare providers being overwhelmed with caring for COVID-19 patients while also maintaining normal services for other patients....There is also a lack of personal protective equipment and inadequate IPC measures in healthcare facilities, which significantly contributed to an increased infection rate and led healthcare staff to experience high levels of anxiety, depression, fear, anger, and stress as a result of excessive work pressures and the possibility of being infected.... This has consequently placed further pressure on the healthcare system, compounding unsafe care concerns (LH02D:1; LH02D:3).”

5.9. Lack of resources influencing patient safety

Participants identified a lack of resources as a significant patient safety challenge in Libya. Specifically, they cited a severe shortage of healthcare staff, which exacerbates challenges related to staffing, such as multitasking, increased workload, heightened pressure, and fatigue, ultimately resulting in suboptimal patient care and safety:

“There is a lack of competent nursing staff and doctors in hospitals; an entire hospital department or unit sometimes has one or two nurses only, which increases work pressure and fatigue among staff, in turn leading to poor patient care and safety (TH03M:30).”

Compounding the problem was that the unstable situation in Libya led foreign healthcare staff to leave the country and fail to return, contributing to a severe lack of, and immense need for, highly qualified healthcare staff:

“The other problem affecting healthcare services in Libya is that foreign healthcare staff fled the country because of ongoing conflicts and never returned back, leaving a gap and creating a need for trained healthcare staff in hospitals, which has adversely affected patient care and safety (LH02D:3).”

Moreover, a lack of essential medical equipment and material, such as beds, trolleys, disinfectants, gloves, and sterilisers, etc., was seen as a concern in hospitals, contributing to poor clinical practices that breach patient safety. As noted in the following data extract:

“The other problem that healthcare facilities have suffered from is shortages of essential medical equipment and material.... Our hospital lacks even basic equipment and material like disinfectants, gloves, and sterilisers, and I am sure many hospitals can relate. So, imagine how providers can keep up safe practices in such a situation....There is even a shortage of appropriate beds that can ensure our patients are admitted comfortably and are treated safely during their admission. These are examples of safety concerns herein (BH04M:27).”

Concerns were also expressed by participants regarding the absence of national research resources to address patient safety challenges in Libya, which was indicated to hamper understanding unsafe care problems as well as making patient safety improvements extremely challenging. As articulated in the following data extract:

“What has compounded the problem of unsafe care in Libya is a lack of national commitment to prioritising research into safety aspects of healthcare and resources to support that across all levels....Lack of research has directly hampered obtaining a clear picture patient safety challenges in Libya, contributing to making achievement of effective improvement in patient safety difficultData on patient safety is not available at all, and the extent of unsafe care problems in Libya have not been understood yet....This is a major reason leading to patients safety concerns in Libya, so research into this needs to be a priority on the political and health system agenda so that patient safety improvements can be facilitated and achieved based on evidence and so on (LH02M:14; W01FP:21; TH03M:30).”

Similarly, participants expressed dissatisfaction with the inadequate resources available for training and education purposes related to patient safety for healthcare staff in Libya, which they perceived as contributing to poor accountability and unsafe acts in medical practices:

“Education and training for healthcare staff in patient safety are absent in Libya....Healthcare staff have not been educated on the concept of patient safety, nor have they been continuously trained on how to practice safely....National mechanisms whereby all medical and clinical students are

educated and trained on concepts related to safety and medical accountability before joining service as well as in practice are lacking...There is no national interest in placing this as a priority. Some people from LMoH tried to take care of such an issue, looking for opportunities with WHO to build capacities for patient safety education and training in Libya in hopes of achieving something on the ground, but then things changed rapidly. Up to date, patient safety concepts have not been integrated into medical curriculum/on-the-job training programmes because the country has gotten into trouble, leading all to think about other critical priorities (LH02C:10; W01FP:21).”

Furthermore, a lack of financial allocations for patient safety related activities was perceived as compounding patient safety challenges across the Libyan health system:

“No, there are not any sort of financial resources/budgets for patient safety in Libya, which is unfortunate, I believe. I worked as a [...] director at LMoH for a long time, during which I officially requested the Minister of Health’s consideration for sort of a national budget to be allocated for patient safety-related work in Libya, but none of which were approved, and I perceived this as a leadership failure that has made improvements in patient safety difficult and not easy to achieve. There is a major problem in health system financial resource allocation and utilisation in Libya. While Libya is a well-to-do country with sufficient financial resources to support and improve its health system, the government and its MoH lack effective mechanisms to effectively manage and ensure making appropriate utilisation of the health system resources to improve its efficiency and outcomes, including patient safety (LH02D:3).

5.10. Patient safety concerns in Libyan healthcare organisations

Participants were aware of patient safety concerns within Libyan hospitals. As discussed in earlier in the Chapter, security in most Libyan healthcare facilities was extremely lacking due to weapons’ proliferation and the lack of protection provided by national police in the country. This was perceived as resulting in what participants called ‘physical patient safety concern’ during hospitalisation, representing concerns over patients being seriously harmed, kidnapped, beaten, exposed to bodily harm, or even death resulting from armed attacks. The following participants described this problem well:

“Physical safety, specifically as a result of Libya being in a state of war and split, there is a fear for the physical safety of the patient, as a result of the presence of different divisions and armed groups in Libya, there is a fear by the patient even from the process of entering the hospital, fear that they will be kidnapped, beaten or exposed to bodily harm, or even be killed! (LH02D:1; LH02D:3).”

Patient misidentification, including patients having the incorrect diagnosis or being treated incorrectly, was highlighted by participants as a concern, which they believed was, although often harmless, likely to result in severe harm to patients:

“Patient misidentification is a common concern in our hospital settings as a result of the absence of proper systems that ensure patient identification processes are performed to a high standard. Because what makes things particularly problematic is that traditionally, the similarity of names is common in Libya, and patients accessing healthcare often have the same or similar names, leading to wrong procedures performed on the wrong patient, another patient receiving the wrong drug, or mislabelling of a pathology collection (BH04M:27; TH03M:30).

Diagnostic errors, encompassing missed, delayed, or wrong patient diagnosis, were perceived by participants as a patient safety concern in Libyan hospitals, contributing to significant threats to patients during care provision:

“Poor patient diagnosis is my concern in our hospital. It is often performed improperly due to, I believe, a lack of clear procedures, protocols, and systems to carry out patient diagnosis effectively without encountering errors that breach patient safety (TH03M:30).”

Participants flagged HAIs as a significant patient safety concern in Libyan hospitals, with bloodstream infections, ventilator-associated pneumonia, post-surgery and surgical-site infections, and urinary tract infections being the most common types, resulting in length of hospitalisation, admission to ICUs, readmission, or even risk of mortality. As described by the following participants:

“Infection has been a critical issue in Libyan hospitals. Many patients undergoing surgery usually end up with a severe surgical or post-surgery wound infection, causing significant implications for the patients (LH02D:1).”

“The most harmful hospital safety lapses are HAIs. Patients, especially those with long-term hospitalisation, acquire urinary tract, bloodstream, infections, and ventilator-associated pneumonia, affecting their safety negatively and resulting in readmission or even death (LH02M:14; LH02D:20; BH04M:27).”

Some participants particularly pointed out a significant problem of new-born deaths and neonatal mortality resulting from HAIs such as sepsis or pneumonia:

“Over the last few years, we have had many new-born deaths as a consequence of HAIs, including sepsis or pneumonia infection. I am taking about a huge figure of deaths due to such a significant clinical problem. We are trying to control the situation to reduce the infection incidence rate, and some hospitals are well responsive accordingly, but the situation is to date still a concern (LH02D:1; LH02D:3; BH04M:27).”

Participants perceived surgical errors as well as postoperative complications caused by invasive surgical procedures as a life-threatening concern for patients in Libya:

“Surgical and postoperative complications are one of the most potentially serious safety lapses compromising patient safety in Libya....Several incidental cases are reported frequently in which patients having surgeries ended up with surgical instruments such as gauze or cotton pieces left inside the abdomen....This patient safety concern is common in our operation theatres, resulting in severe implications for patients (BH04M:27; TH03M:28).”

In addition, hospital-acquired pressure ulcers (PUs) were perceived by participants as a patient safety problem in Libya, with a high incidence and prevalence rate, contributing to increasing life-threatening morbidity and mortality among patients:

“Cases associated with PUs or bedsores are frequently reported in our hospital, which is a serious clinical safety problem affecting patients during hospitalisation....This problem is the common patient safety concern in our hospital and has many times resulted in severe life-threatening implications for many patients (BH04M:27; TH03M:30).”

Participant also raised concerns over medication errors as a serious patient safety concern in Libya, which they perceived as a major cause of patient harm, frequently contributing to a severe life-threatening condition or death of hospitalised patients. The following example was given by two participants:

“Medication errors have been a life-threatening cause in Libyan hospitals more than anywhere else worldwide....Issuing the wrong drug to the wrong patient, administering an expired drug to a patient, drugs omission—failure to administer prescribed drugs, giving a wrong dose/intravenous fluid to a patient—are all very common in our hospitals. The irrational use of medication by clinicians, including drugs being prescribed to patients without a clear rationale or prescription of high quantities of drugs outside recommended doses, has been a challenging issue in our hospital that is still affecting patient safety in many aspects (LH02D:3; TH03M:28).

Furthermore, several participants expressed their concern over fall injuries among patients in Libyan hospitals, resulting in serious physical injuries, including contusions, lacerations, subdural hematomas, or fractures, or severe psychological and social consequences such as fear and decreased quality of life:

“I have seen many patients fall off beds, commonly due to broken side rails of beds, and many cases are reported, almost once every week, especially during nights....Patient fall off stretcher trolley incidents occur during patient transfer or handover too, resulting in the patient being harmed or seriously distressed (BH04M:29).”

Finally, participants perceived concerns over communication errors, due to system and human factors, as a serious problem compromising patient safety in Libyan hospitals. As illustrated in the following data extract:

“Communication failures between healthcare staff about patient care processes as well as information are a major cause of medical errors leading to patient harm in our hospitals. Communication between healthcare professionals and patients about patient care and treatment and informing the patient of what risks and complications could arise during the care process is also a significant contributing factor to adverse events affecting patients in our hospitals. Fuelled by system failures as well as human factors, communication errors in Libyan hospitals have increased patient harm, length of stay, or sometimes life-threatening outcomes such as death.

5.11. Chapter summary

This chapter focused on patient safety organisation, management, and concerns in Libya from the perspective and experience of national health policymakers and healthcare managers. In line with the aims of the study, findings found that patient safety across the Libyan health system was highly fragmented and loosely regulated, mostly as a result of extreme adversity. There was a lack of legislation and regulations for patient safety as well as a lack of QIPs, which explicitly constituted political and health system factors that contributed to patient safety challenges in Libya. Moreover, an absence of adequate national policies and strategies for patient safety in Libya emerged, reflecting poor political awareness of the importance of patient safety. As a result, some healthcare organisations tended to formulate minimum guidelines on patient safety, although these primarily focused on quality, rather than patient safety directly.

More importantly, findings pointed out a lack of legislative or regulatory mandates for Libyan healthcare organisations to develop and implement patient safety systems or strategies, with national accountability and mechanisms for developing and implementing patient safety initiatives not clearly defined nor introduced. This has resulted in a lack of effective systems to organise and manage patient safety, also suggesting an absence of effective proactive approaches to reducing patient harm in practice. In addition, findings indicated significant flaws in cross-health system communication, coordination, and oversight at both national and operational levels. These issues were perceived as barriers to informing planning and decision-making and policymaking regarding patient safety across the health system as a whole in Libya.

Furthermore, a lack of adequate health system resources, including financial and physical resources influencing patient safety, was also significant, serving as a factor contributing to the suboptimal patient safety outcomes in Libya. As a result of these

failures, along with the factors alluded to above, security incidents, misidentification of patients, HAIs, medication errors, diagnostic errors, surgical-site and postoperative complications falls, communication errors, and hospital-acquired pressure ulcers emerged as the most common concerns breaching patient care and safety in Libya.

Having obtained a clear picture of patient safety in Libya, the next chapter will present findings regarding the interagency working in patient safety as well as influence on the organisation and delivery of safe care in Libya.

Chapter Six: Findings (2) Interagency Working in Patient Safety in Libya

6.1. Introduction

This chapter addresses the research question of how interagency working, particularly between LMoH and provider organisations, as well as their interface with WHO, influences the organisation and delivery of quality care in Libya. The analysis of the data found support for five themes to constitute participants' views of interagency working in patient safety, presented over five sections. The chapter begins with **Section 6.1**, providing an introduction, followed by **Section 6.2**, which offers a concept mapping of the themes covered throughout this chapter. **Section 6.3** describe findings regarding what interagency working in patient safety looks like. **Section 6.4** presents findings on factors affecting the development of interagency working in patient safety. The chapter thereafter moves on to **Section 6.5**, which presents findings related to challenges to communication in interagency working in patient safety. In addition, **Section 6.6** sheds light on interagency coordination of health system resources and its effects on patient safety in Libya. Finally, **Section 6.7** presents findings on poor interagency organisation and management of QIPsIs in Libya, with a focus on engagement in planning and decision-making, challenges to implementation, and inadequate oversight, contributing to a failure in producing a holistic approach to improving the organisation and delivery of quality care in Libya.

6.2. Concept map of themes

Figure 6.1 introduces a conceptual map that visually outlines the primary themes and subthemes discussed throughout the current chapter related to interagency working in patient safety and influence on the organisation and delivery of quality care in Libya. The diagram offers a structured visual guide, highlighting the complex interplay of factors that influence the establishment of interagency working in patient safety in Libya, particularly between LMoH and provider organisations, as well as the interfacing with WHO.

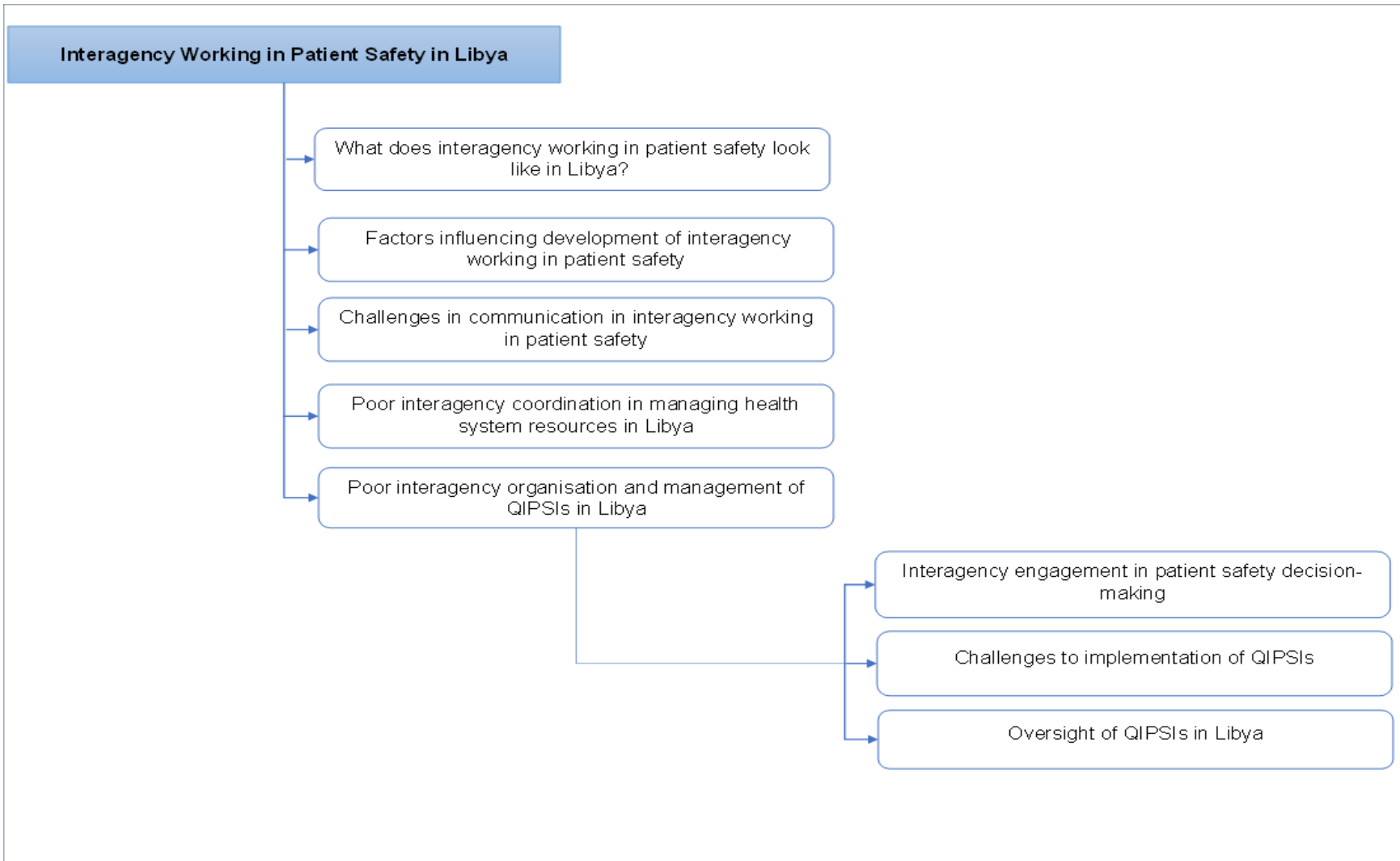


Figure 6.1: The Concept Mapping of Themes and Subthemes Covered throughout the Chapter

6.3. What does interagency working in patient safety look like in Libya?

Participants acknowledged the importance of 'systematic' interagency working as valuable in and of itself, although the inverse of this was reported. In practice, according to participants, there was not sufficiently developed or effectively performed interagency working in patient safety across all levels. But rather it had evolved in somewhat of an ad hoc way, notwithstanding a lack of understanding of the concept per se and several obstacles (discussed later). The following participants commented on the above as follows:

“We [LMoH] work together with WHO, but when you say interagency working, that means working in a systematic way on a consistent, continuous basis, which is not usually the norm between us [LMoH and WHO]. But we work together on a continuous basis in line with our mutual agreements (LH02D:1; LH02M:14).”

LMoH participants alluded to the notion of the unique status of WHO as a science- and evidence-based organisation setting out globally applicable norms and guidelines for different aspects of healthcare. They viewed the role of WHO as ultimately vital in the rapidly changing world and healthcare complexities, and thus the purpose of Libya was to seize the opportunity of WHO as a 'guidance resource' to support patient safety improvement in Libya. As the following quotation illustrates:

“LMoH has a good relationship with WHO, and there is interactive information exchange and communication through different channels. WHO is not directly responsible for the ministries of health; it is rather a consultant agency that provides some sorts of consultancies and expertise to LMoH in different health matters, which we [LMoH] exploit to inform and support our efforts towards developing and improving our health system to ensure quality health services....We have a working agreement with WHO based on different priorities, according to what LMoH usually determines a priority (LH02D:1).”

Figure 6.2, was developed based on participants' responses, illustrates inter-level interfacing in patient safety. Participants noted that the interplay between WHO and Libya was primarily carried out in line with the Country Cooperation Strategy (CCS). The CCS served as the basis that aligns WHO's work with Libya, providing a strategic framework for WHO's work in Libya—a foundation and strategic basis for the WHO's collaboration with Libya to support the health system's vision, policy, and development. That is, addressing health system priorities and challenges, including those related to patient safety, within a holistic approach. Participants outlined that the

development and implementation of the CCS was based within the scope of the WHO General Programmes of Work as well as the Sustainable Development Goals (SDGs):

“Interaction between Libya and WHO is made through LMoH as the central point of contact....We are interconnected, and interfacing based on CCSs that stipulate mutual work to be performed in Libya in line of WHO General Programmes of Work as well as Sustainable Development Goals (SDGs). This is to address Libya’s health and system priorities and challenges systematically, including those related to quality and safety (LH02M:2; W01A:6; W01FP:26).”

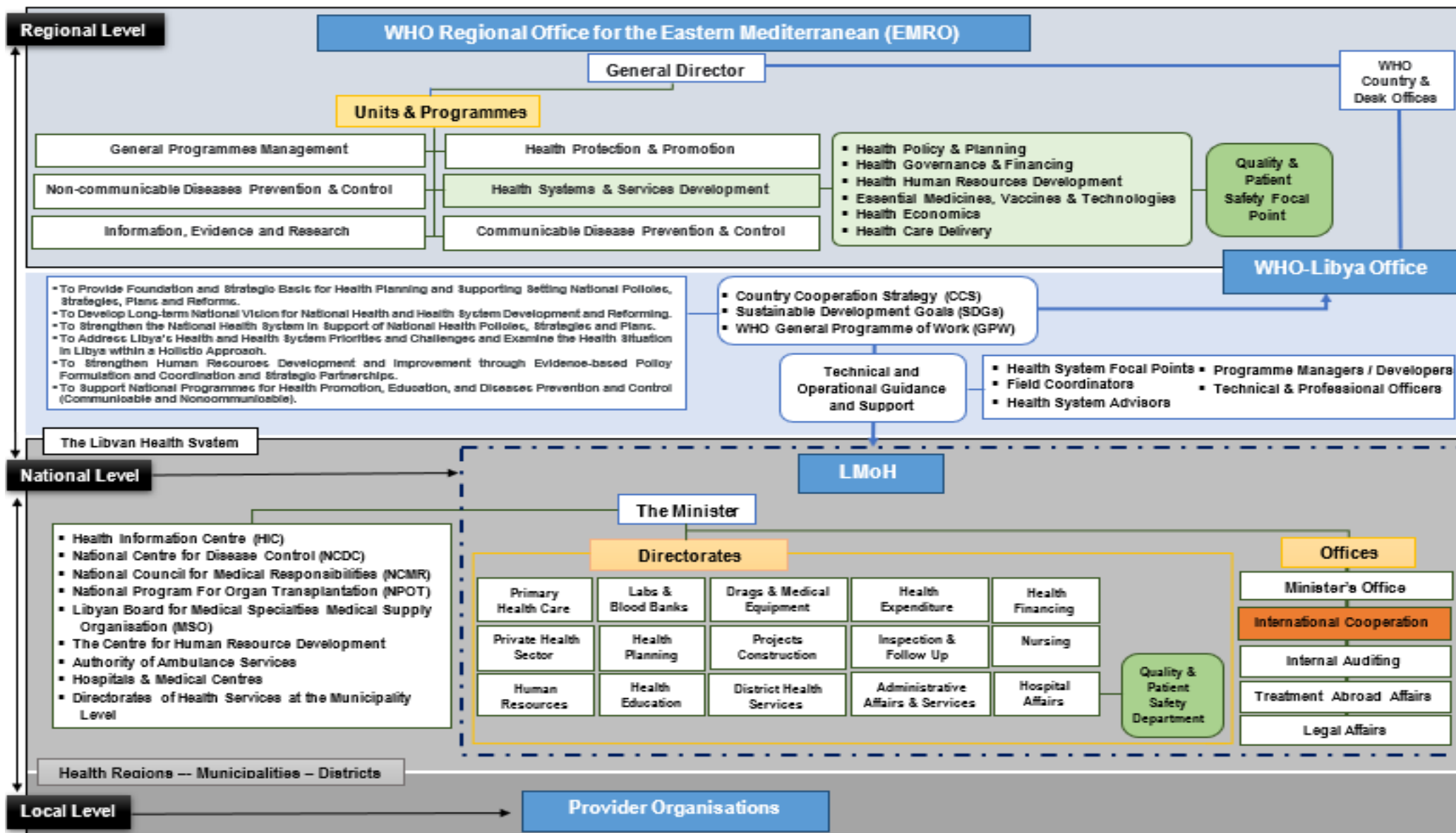


Figure 6.2: Inter-level Interfacing Diagram Based on Participants' Responses

In setting out CCSs, participants indicated that a series of meetings were held, attended by WHO experts and Libyan health system leaders, often alongside representatives from LMoH's arm agencies such as the Health Information Centre (HIC). During the meetings, bilateral dialogues began to examine the Libyan health system issues within a holistic approach, so that strategic priorities, mostly according to what LMoH deemed appropriate, were determined, set out, and agreed upon, accompanied by implementation agenda and plans. As demonstrated in the following data extract:

“CCSs are developed through several meetings held and attended by WHO and health system leaders from LMoH and its allied agencies, within which we [LMoH and WHO] discuss health and health system priorities and challenges to produce a mutual working agreement and agenda, often according to what LMoH deems a priority. Once this is in hand, work starts to take place jointly to achieve what has been agreed upon in line with the CCS (LH02D:1; W01D:4).”

Following, a biennial collaboration and cooperation agreement between WHO and LMoH was established and is renewed biennially. Notably, participants expressed that in the next few years, the primary focus would be placed on rebuilding and strengthening the health system in Libya, transforming it to a more resilient one against contextual emergencies through the most efficient exploitation of available resources. As for the significant issue of quality and safety, it was perceived by participants as one of the priorities, as reflected in the following data extract:

“The strategic priorities outlined in the CCSs of Libya precisely target all areas of the health system and service delivery, including quality and safety, and are addressed and implemented through joint coordination of LMoH and WHO. For example, the recent CCS explicitly emphasises the need to treat quality and safety as a central component of the UHC and health system policy in Libya. This shows the commitment of both WHO and LMoH to patient safety through supporting aspects like infrastructure, education and training (LH02D:1; BH04M:27).”

Participants stated that Libya contributed an annual amount of \$250,000 to the WHO programme budget as part of the biennial collaborative agreement. According to participants, this financial contribution was often almost equal to what WHO usually allocates to Libya annually. This budget was allocated specifically for the implementation of WHO activities in Libya, meaning what needs to be performed in line with the biennial collaborative and cooperative working agreement. As disclosed by the following participant:

“We [LMoH] contribute around \$250,000 annually to the WHO funding programme....WHO usually allocates a simple amount of money annually to Libya for work to be undertaken therein because of the current situation of the country. This is almost equal to the amount of the contribution that Libya pays annually....Usually poor countries take an amount that exceeds the amount of their annual subscription, while rich ones give but do not take back that much (LH02D:1).”

A relevant example given by participants was that a high proportion of the financial allocations for Libya were directed towards supporting healthcare staff training programmes on IPC, emergency preparedness and response, and more often, for the provision of medical material to support safe healthcare service delivery during emergency:

“Several large-scale training projects were recently implemented in about 8 hospitals here [Tripoli] on IPC and hand washing for safe practices, which were all fully supported by WHO in coordination with LMoH (LH02D:3).”

“Libya has recently received continuous supportive supplies of medical material and equipment from WHO to help the Libyan healthcare system cope with the unfortunate situation resulting from both armed conflicts and the COVID-19 pandemic hitting the country (LH02M:12).”

In explicating the mechanisms and dynamics of the interface between WHO and LMoH, extending down to the service delivery level, the process was organised and achieved through planning, coordination, communication, information exchange, engagement, supported by resource pooling and mobilisation, as well as oversight. Participants stated that WHO headquarters in Geneva, Switzerland, held the ultimate authority to set out policy and the programme of work of WHO as a whole. To put it another way, WHO-EMRO programmes, including patient safety, were officially reviewed and approved by the WHO Executive Board and World Health Assembly in Geneva prior to implementation, in collaboration with the Regional Director:

“WHO is headquartered in Geneva, where all decisions and programmes of WHO-EMRO are subjected to approval at the outset...Once that is in hand, it is then communicated and disseminated to our office in Libya, which facilitates and coordinates our work therein....Our office, through its network of focal points, works in line with LMoH and its aligned institutions in light of the CCS as agreed upon....The inverse of this interaction occurs down-top the same way around too (W01D:4; W01A:6).”

Regionally, the work of WHO was governed and organised by the WHO-EMRO Committee—the WHO's decision-making body in EMRO. This committee convened once per year, attended by member countries including Libya, to discuss and endorse

regional policies, programmes, and financial plans. Additionally, ministerial meetings (summits) were organised by the EMRO Committee and attended by the health ministries of member countries, including Libya, as a means to strengthen the interplay with WHO and its bilateral partners. During these meetings, countries were briefed on up-to-date WHO commitments and developments and were allowed to seize the opportunity to share information and experience, bringing about change in health system quality outcomes. As pointed out by the following participant:

“The EMRO Regional Committee, which is the decision-making body of EMRO, is responsible for organising WHO regional meetings and ministerial summits, which are attended by all countries in the region, including Libya. During which WHO-EMRO can share and disseminate its programmes and activities to member countries for endorsement and putting forward for implementation....Member countries are also allowed the opportunity to share experience and knowledge on different relevant issues, including patient safety, to encourage learning from best practices and each other's experiences (W01D:4).”

According to participants, within the WHO-EMRO structure, patient safety had been placed as a focal point within the Health System and Service Development Unit (Figure 6.2). Participants identified three core interface-based activities between WHO and member countries, including Libya, in relation to patient safety. These activities are the WHO-EMRO PSFHI, the Quality and Safety in Extreme Adversity Framework, and the Quality in Primary Care Framework. Participants expressed that these were introduced to raise awareness and support capacity-building of health policymakers and decision-makers, resource institutions, the public, and healthcare providers on the importance of patient safety, particularly in settings experiencing extreme adversity such as Libya. However, participants noted a failure in implementation in Libya, attributing it to the country's fragile situation, weak health system capacities, and poor national commitment, as further elaborated by the following participants:

“We [WHO] have led the development of several initiatives for improving patient safety in our region and also supported national ones, if any....Some of which are unique to the EMR and cannot be seen in other regions, like the PSFHI, which was introduced to support countries in developing and interpreting policies, guidelines, frameworks, and programmes for patient safety and translating these into action and practice (W01A:6).”

“We [WHO] are supporting all countries, including Libya, to achieve high-standard, quality, and safe healthcare services, although this is often faced by resistance in some countries, like Libya, due to contextual factors. But we still stand by their shoulders, pushing forward towards strengthening health system capacities to achieve the best outcomes despite such challenges....Two

actionable frameworks for quality improvement are currently being finalised: one for quality in extreme adversity and the other for quality in primary care. For Libya, I think it is difficult to put them forward into practice due to a lack of national commitment to that, political instability, and the weak health capacities and infrastructure that are not capable enough to ensure effective implementation of such frameworks, unfortunately (W01FP:21).”

Nationally, the WHO office in Libya, through a taskforce of WHO health system focal points, was responsible for facilitating and implementing the functions of WHO within Libya, reporting back to WHO-EMRO accordingly as shown in Figure 6.2. Participants highlighted what they interpreted as mediators—a network of national health system coordinators from LMoH who worked coordination with WHO focal points to perform patient safety-related work under the CCS. This was hitherto fairly supported through the coordinating authority of the LMoH’s International Cooperation Office (ICO). The ICO was the basis for aligning LMoH’s collaboration and work with WHO, exercising its authority to facilitate a stimulating and supportive environment where LMoH and WHO could plan, build cooperative mechanisms, share roles and responsibilities, and mobilise resources for joint work related to patient safety. The following participant summarised the above as follows:

“We [LMoH] have a network of focal points that interface with WHO focal points in undertaking the collaborative work as agreed upon in CCSs. This is usually facilitated and supervised by the ICO of LMoH to some extent, but this is not always the case due to informal communications and so on. So, focal points from both sides work together under the authorisation and planning of LMoH and WHO to achieve what has been agreed upon in CCSs, using resources available to support the implementation of mutual activities (LH02D:3).”

In explicating the interfacing between national and local levels in Libya, LMoH’s directorates, in coordination with what participants referred to as the LMoH’s arm agencies such as the HIC, have thus far worked together in a coordinated manner to develop and implement health system policy, strategies, programmes, operational frameworks, and associated action plans, including quality and patient safety (Figure 6.2). Participants noted that the Quality and Patient Safety Department within the LMoH served as a focal point for consolidating actions related to planning, coordination, and implementation of patient safety initiatives across the entire system, extending down to healthcare organisations through the coordination of district health offices at the municipal level. At the healthcare organisation level, Patient Safety Teams (PSTs) were tasked, with high accountability, to develop and implement

national and local quality and patient safety activities, and to maintain communication with, and report to, top management at the LMoH.

6.4. Factors influencing development of interagency working in patient safety

There was strong convergence in participants' views regarding factors that influence the development of interagency working in patient safety in Libya. A significant lack of understanding of interagency working per se was evident at all levels, characterised by poor knowledge and misunderstandings of the roles across agencies, and a lack of commitment to interagency working in patient safety. These issues were perceived as barriers to developing effective interagency working in patient safety to improve quality and safety outcomes in Libya, as illustrated below:

“The understanding of the concept itself might be an issue, individuals across different levels still do not know how to work on an interagency basis yet....This systematic way of interacting with each other has not yet been built up within our systems of work. I believe this is the leading factor in the underdevelopment of effective systematic working not only in patient safety issues but all other issues too (LH02M:2; W01FP:19).”

“I, to some extent, understand what it means. but when it comes to practice, I cannot guarantee I do it productively, not other people in workplace either, I guess (LH02D:1; W01FP:13; W01FP:15).”

Still, a lack of interagency-based strategic vision was identified as a barrier to developing effective interagency working in patient safety in Libya. This issue was perceived to stem from the absence of a strategy, protocol, or framework to define the objectives and scope of interagency working and to facilitate its arrangements. Additionally, a lack of clarity regarding roles and explicit mechanisms for assigning responsibilities and accountabilities in patient safety-related work was noted by participants as an obstacle to effective interagency working. This lack of clear norms was perceived as leading to clashes when interfacing across different levels, thus hindering systematic interagency working:

“A conflict may result from differences in the vision of the agencies....WHO sometimes views issues from a different point of view than LMoH, and still, providers view the same issues differently. The limited understanding of each one's role and responsibilities and the non-existence of a clear mechanism that defines everyone's role and responsibilities in carrying out mutual work related to safety on an interagency basis are problematic....We [LMoH] sometimes get confronted by WHO claiming that some sort of work (e.g., oversight) is out of their remit, although LMoH sometimes is not able to do that on their own too; consequently, conflict happens to affect the development of effective interagency working (LH02D:3; W01FP:21).

Participants also expressed concern over a lack of supportive structures and systems that would enable systematic performance of patient safety-related functions while maintaining interagency communication and engagement. This deficiency was seen as an obstacle to developing effective interagency collaboration in patient safety, as indicated in the following quotation:

“I should mention national inadequate organisational capacities and infrastructure, encompassing ineffective structures and systems to support active interfacing among levels as a reason behind the underdevelopment of interagency working in patient safety. This is impeding us from working in a systematic way or on a sort of interagency basis that ensures patient safety-related work is facilitated and carried out systematically and smoothly across all levels (W01FP:23; W01FP:25; W01FP:26).”

Notably, participants highlighted policy and procedural differences, along with variances in ideologies and working cultures across levels, have resulted in a lack of vertical and horizontal understanding and integration of interagency working into practice. The following statement reflects on the above as follows:

“When we say interagency working, it is often hard to achieve or maintain effectively because I believe that differences in organisational policies, procedures, and cultures across different levels have potentially made it challenging for such a pattern of systematic interface to be developed and grown promptly (W01FP:16).”

Furthermore, there was broad convergence in participants’ opinions about a lack of willingness to engage in interagency working and a preference for independence and autonomy in their approaches to patient safety-related work across all levels. Participants believed that LMoH, healthcare organisations, and WHO had not provided momentum or recognition of interagency working towards achieving shared and joint goals in relation to patient safety and relevant arrangements. For example, they noted a lack of emphasis on maximising working on an interagency basis in implementing the PSFHI and the quality and safety in extreme adversity frameworks in Libya. The following participants expressed:

“People like the way they currently work with each other across levels a bit more than working on an interagency basis, maybe due to the high level of commitment needed to achieving working on a systematic basis or so. Well, for me, I do prefer effective interagency working basis because it is more effective and promising when it comes to quality and patient safety (LH02M:2).”

“The other point I would mention is that leadership commitment to interagency working is lacking, especially at the national level, which might have contributed

to a non-conducive environment within which interagency working could not be developed as it should (W01FP:13).“

In addition, conflicting interests posed another barrier to developing effective interagency working in patient safety within the Libyan health system. There was a consensus among participants that hospitals were often more interested in adopting guidelines, tools, and strategies set out by WHO, to which they were strongly committed, over those endorsed by LMoH. For instance, hospital participants expressed a preference in interacting and engaging with WHO directly when seeking guidance on patient safety:

“We [hospital managers] prefer what comes from WHO and as you can see that our safety protocols were all developed in light of WHO guidelines because literally, we are already being overlooked by LMoH in such matters (BH04M:29;TH03M:30).”

This was perceived by LMoH participants as creating conflicts in the interface between LMoH and hospitals due to hospitals bypassing and untethering from going through LMoH to WHO. This action, along with differing views on relevant national and WHO guidelines, was believed to impede the development of effective interagency working:

“I would say that personal and institutional interests over relevant guidelines WHO and national guidelines have affected ways of working across levels and boundaries....Providers are often interested in what comes from WHO while ignoring what is put in place by LMoH. This has somehow skewed providers towards being more interactive with WHO, bypassing and ignoring LMoH mechanisms, and leaving a gap in the interface between national and operational levels (LH02D:1).”

Significantly, participants identified 'political savvy' as a concern, which they believed distinctly limited the development of effective interagency working in patient safety in Libya. Several LMoH participants repeatedly viewed this as a failure on the part of WHO, demonstrating WHO ignorance and negligence in properly interfacing with national key patient safety focal points to adequately address patient safety challenges in Libya. This was seen as having a detrimental effect on the development of interagency working in patient safety in Libya, leading to failures in achieving desired outcomes. As illuminated in the following data quotation:

“I am dissatisfied with the way WHO works with us [LMoH]. I have recently noticed that WHO has somehow shifted their interactions more than ever to the political level, skewing intentions towards other inappropriate interests or so. This has made them often view quality and safety issues in Libya from the perspective of those holding critical positions only, not from us as key focal

points who are directly involved in the battle against patient safety complexities in Libya...If interagency working is to be developed effectively, WHO needs to show off their savvy way of working and interplaying appropriately with all key individuals, not only those with high authority or some sort of power.” (LH02D:3).”

On the other hand, WHO participants criticised the duplication within the Libyan health system regulating body (MoH) and the frequent turnover of health system leaders, which they believed hindered the development of effective interagency working in patient safety. Some WHO participants, for example, pointed out political failure stemming from the duplication of LMoH in Libya as well as the inadequate change and turnover of those holding key positions therein, affected progress in patient safety improvement efforts in Libya as follows:

“The other issue I should highlight is the existence of two health ministries in Libya and the quick and frequent turnover of health system leaders without a clear rationale, whenever we [WHO] reach a high level in building an effective relationship with let us say the Health Minister, the other day the Minister is changed so we need to start what I have just said again over and over....This is one factor that affects facilitating the development of desirable promising systematic ways of working with LMoH and hospitals (W01A:6; W01A:22; W01FP:7).”

Yet, upon further exploration, the impact of political turmoil in Libya was cited as a challenge to developing effective interagency working in patient safety, resulting in disjointed, inconsistent, and often unclear top-down and bottom-up interfacing. This situation was perceived by participants as contributing to the difficulties faced by WHO, LMoH, and provider organisations in establishing a clear and informed understanding of the patient safety challenges in Libya, as well as determining the necessary actions to address them adequately. The following data extract elaborates on what has just been alluded to:

“Unfortunately, we [LMoH] as a central point sometimes cannot keep up working with WHO steadily, or even with providers, due to emergencies taking place frequently. During such situations, the focus is involuntarily shifted to what is happening; therefore, it becomes out of our hands....Working on an interagency basis with WHO and down with providers, as well as keeping up this systematic pattern of work, needs an acceptable level of contextual stability; otherwise, this cannot occur, notwithstanding that it is much desirable (LH02M:2; LH02D: 20).”

6.5. Challenges in communication in interagency working in patient safety

Participants identified two patterns of inter-level communication that existed in interagency collaboration for patient safety: formal and informal. These patterns are illustrated in Figure 6.3, as viewed through the participants' lens.

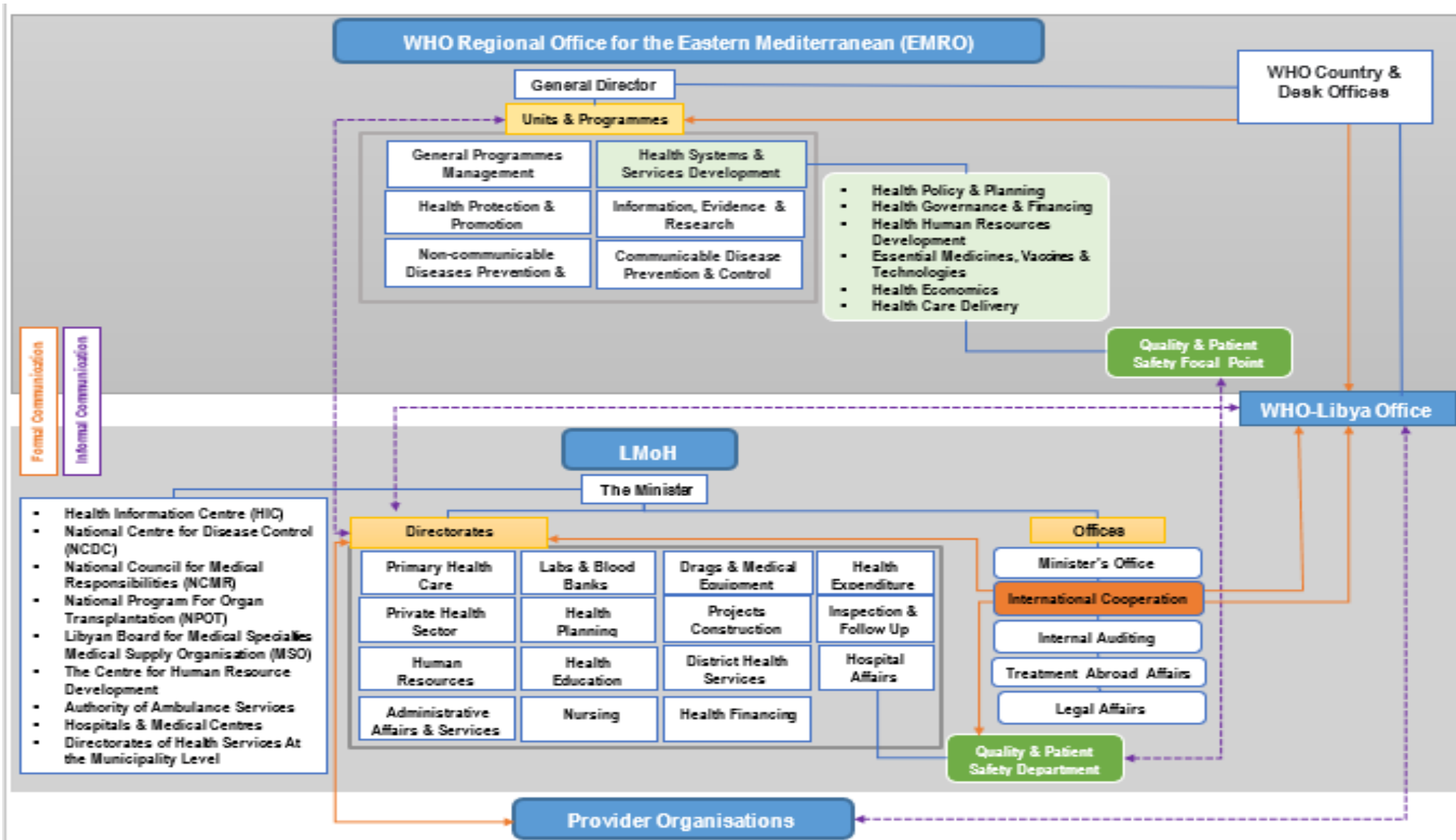


Figure 6.3: Channels of Interagency Communication across all Levels Based on Participants' Responses

There was broad congruence among participants that communication between WHO and LMoH, extending down to healthcare organisations, has been poor and has become less direct since 2011 due to extreme adversities. This was perceived as major challenge to developing effective interagency working in patient safety, thus limiting the ability of WHO and LMoH to formulate strong, coordinated, actionable responses to patient safety challenges in Libya. As the following participants commented:

“Communication is poor between all levels; it is not well established and is always affected by many factors, especially those related to conflicts and organisational factors like poor infrastructure for communication at the national level. This has constrained our ability [LMoH] to formulate strong interagency working with WHO and downwards with providers (LH02D:1; W01FP:9; LH02M:12; W01FP:15).”

As previously noted, communication between WHO and LMoH was mainly coordinated by the International Cooperation Office (ICO) of LMoH, routing through the WHO-Libya Office to the regional office (EMRO) on an ad-hoc basis. Nationally, this formal channelling of communication, endorsed by the ICO, encompassed information exchange and pursuits for collaborative and corporative arrangements between WHO and LMoH, such as meetings and dialogues. While this was the most common method, it was perceived as difficult to achieve, especially since the ICO was seen by participants as less competent in coordinating effective communication between LMoH and WHO:

“Interfacing with WHO is mainly facilitated by the ICO, which is directly supervised by the health minister, so all connections with WHO go through them, although I am not satisfied with the way they work. I mean, the ICO is not capable enough of taking on a role like that, and this has been raised to the top level many times but without any response....The ICO has lacked proper technical capacity and capability needed in order for them to excel effectively in such a role (LH02M:12).”

As a result, informal communication methods such as telephone calls and personal meetings based on relationships were perceived by LMoH participants as a more effective route for communicating with WHO, thereby bypassing the ICO. They often tended to communicate with WHO informally for effective implementation of interagency arrangements. For instance, the following LMoH directors indicated that most interagency arrangements with WHO were initiated with informal communications, without utilising the formal channels of the ICO:

“For me, I communicate with people within WHO directly through personal relationships, as I have found it much faster and more effective than formal channels through the ICO, and my team does too (LH02D:3).”

“Going through the ICO for external communications is not making any changes but rather delaying and complicating things more; thus, I prefer going out of boundaries in such matters as long as I believe it makes a difference (LH02M:8).”

However, WHO participants were more interested in formal communication, which they perceived as more effective for developing and implementing interagency agreements. Specifically, formal communication facilitated by the ICO of LMoH (led by the Minister of Health) was seen as effective for coordinating collective efforts related to quality and patient safety in Libya. As stated in the following data extract:

“Although we [WHO] can accept requests informally from Libya given the situation and accompanying priorities, we still think that formal communication is essential too due to the organisation system of WHO in managing requests from countries based on priority and urgency. So, requests made informally might experience delays due to coming through informally, not formally, e.g., not endorsed by the Minister of Health, as they should. Therefore, formal communications can ensure some sort of meaningful and efficient outcomes in interaction, mutual arrangements, and so on with countries including Libya (W01A:6).”

Participants noted that communication coordination had been carried out without a well-defined protocol, leading to varied communication approaches. This situation was perceived by participants as creating a non-conducive environment for building consistent interagency collaboration, which was extremely challenging. Further probing during interviews revealed a lack of clear strategic plans for facilitating and maintaining effective communication between the WHO and LMoH, extending to healthcare organisations. This issue was compounded by deficiencies in the systems and structures related to communication and weaknesses in the infrastructure that supports it. Such issues posed significant challenges to establishing effective communication across all levels, thereby hindering the development of effective interagency working in supporting the organisation and delivery of quality care in Libya. As echoed by the following participants:

“There is a lack of clear national protocols to facilitate high and consistent levels of communication with us [WHO] or even with providers, so there is no national mechanism for active communication and information sharing between levels to facilitate decision-making, or so, no at all. Even basic facilities for communication like the internet and IT are not often in place, making the situation so difficult to establish and maintain communication, interaction, and

engagement with key health system focal points regarding quality and patient safety issues in Libya (W01A:5; W01FP:16; W01FP:23).”

“Apart from the effects of the country’s situation on interplay with the external world, Libya lacks even basic means or sort of robust facilities that can help us communicate and interact with the external world, not only with WHO, unfortunately (LH02D:1).”

As a result, efficient top-down and bottom-up information sharing related to patient safety was not ensured, hindering patient safety planning and decision-making. This contributed to the failure to produce an informed, coordinated response to patient safety challenges in Libya, as illustrated in the following data quotation:

“Such inter-level information exchange in relation to quality and patient safety is not active, if not absent, due to poor communication across different levels, including with WHO. Active and consistent top-down/bottom-up sharing, transmission, and dissemination of information/data about patient safety, considering the role of all key players including WHO and PSTs, that can help tailor policy- and decision-making to current patient safety challenges in Libya are underdeveloped, not exist, And the outcome is obviously reflected in the perceived suboptimal patient safety management across the health system (LH02D:3).”

Still, conflicting perspectives were identified among participants regarding responsibilities for establishing communication for interagency working in patient safety in Libya. For example, several WHO participants claimed that establishing active lines of communication had not been considered a priority at the LMoH level, alluding to a lack of strategic intent to create opportunities for communication with WHO, extending down to healthcare organisations. This hindered the establishment of a conducive environment for efficacious interagency working among the involved agencies to support the organisation and delivery of quality care in Libya, as articulated by the participant below:

“LMoH is not prioritising effective communication and interaction with WHO on their agenda/strategic plans, which seems to me like they are not often interested in achieving so. I mean, they [LMoH] lack the intention to establish robust national platforms and structures that can bring all of us [LMoH, WHO, policymakers, etc.] under one roof to engage and interact actively so that information and knowledge can be shared, effective joint decisions can be made, producing a coordinated response to safety challenges in Libya (W01FP:7; W01FP:15).”

That was often perceived by WHO and hospital participants with varying levels of hesitancy and inconsistency, which they believed hindered unlocking the power of LMoH, provider organisations, and WHO to generate an interagency coordinated

response to patient safety challenges in Libya . Participants from LMoH had different perspectives, however. They believed that the fragile situation in Libya did not offer an enabling or conducive environment for establishing adequate capacities for active top-down and bottom-up communication for effective interagency working in patient safety. Moreover, LMoH participants claimed that WHO did not play an active role in supporting Libya in establishing and maintaining lines for active communication with WHO, considering the current situation in the country:

“WHO has not done a lot in establishing and maintaining effective communication during emergencies as part of our working together agreements. There has been no real effort from WHO towards establishing context-focused routes and channels for mutual communications, etc. For us [LMoH], maintaining interaction and consistent active communication is really challenging, as we cannot focus on so many issues at once. I believe that WHO should have done a lot in this regard, and they [WHO] know well that what I have just mentioned is a much-needed intervention from their side more than ever to contribute to strengthening mutual communication at this difficult transitional period that Libya is passing through (LH02D:3).

6.6. Poor interagency coordination in managing health system resources in Libya

Participants expressed concerns over poor interagency coordination in managing health system resources, including financial, human, physical resources allocated by the government, which they believed resulted in suboptimal care quality in Libya. Participants asserted that despite the availability of national health resources in Libya that could optimally reinforce its health system functions, poor interagency coordination in managing such resources had made it difficult to ensure maximum exploitation of resources for driving effective patient safety improvements:

“Despite national health resources are available in Libya that can support patient safety improvement efforts so adequately, such resources are not exploited appropriately, reflecting negatively on health system functions and hence suboptimal quality and patient safety (W01FP:13; W01FP:21; W01FP:24).”

Participants expressed concern over a lack of an interagency-based strategic protocol for effective resource management across different levels. They believed that without such a protocol, maximum exploitation of resources could not be achieved. The following statement reflects on what has just been alluded to and the negative impact on health system functions, resulting in poor quality and safety of health services, as follows:

“The problem with health resources in Libya is associated with poor governance, including poor planning and coordination of resource use, and a

lack of national strategic mechanisms for effective use of such resources to support the healthcare system....There is no coordination between LMoH, providers, or WHO concerning resource management in Libya. Resources are set/allocated at the top level [LMoH] but are not well communicated to the operational level for maximum use, resulting in poor outcomes, especially when it comes to improving quality and safety. This is another prolonged challenge that cannot be addressed easily in Libya (W01FP:21; W01FP:19; W01FP:26).”

Participants drew attention to the lack of interagency-based mechanisms to ensure meaningful distribution of health system resources to support system functions for quality outcomes. This was highlighted as a reason why health system resources failed to reach different levels of the system and match the priority needs of healthcare organisations to function adequately for quality healthcare service provision. As demonstrated in the following quotation:

“Resources are distributed in an arbitrary manner across different levels in a context of poor relevant decision-making, communication, and coordination across different levels as well as a lack of accountability and transparency in resource distribution processes....There are no clear mechanism in place to ensure an effective, transparent flow of resources from allocation to distribution and mobilisation across different levels to support the healthcare system in Libya in providing quality health services that meet expectations. This has contributed to posing further challenges to health system functions, which in turn affected the delivery of quality care in Libya (W01FP:9; W01FP:16; W01FP:26).”

Particularly, WHO participants criticised the absence of incorporating WHO expertise into health system resource management processes in Libya. This was perceived to create the impression that WHO had not been recognised by national health system leaders as a strength and, too often, had been an underutilised resource. As highlighted by the following WHO health system focal point:

“LMoH sometimes ignores involving WHO in resource administration in Libya; they are not making good use of WHO expertise in such matters to support their efforts; this is a national leadership failure....Despite the availability of resources that can be coupled with WHO technical assistance and capacity building towards reinforcing health system development and improvement in Libya, LMoH is often not committed to this to support quality health services in Libya (W01FP:19; W01FP:21).”

In addition, hospital patient safety managers criticised the lack of decentralised decision-making in health system resource allocation and administration, which they believed would maximise effects on the organisation and delivery of quality care. This contributed to hindering provider organisations’ capacities to ensure provision of quality health services, as elaborated in the following data extract:

“Decision-making related to resource administration at the top level should not be centralised, and healthcare managers need to be given a sort of authority to contribute to resource administration to ensure efforts are jointly coordinated and not centralised. This is still absent in Libya, resulting in our capacities being fragile and not robust enough to bring change in quality and patient safety specifically (TH03M:28; TH03M:30).”

Furthermore, a lack of interagency-based mechanisms for monitoring health system resource utilisation and outcome-based planning was highlighted as a concern. This includes tracking and reporting on implementation and evaluation of outcomes. This contributed to a lack of understanding of whether or not the resources had been effectively distributed and utilised to support health system functions, ensuring quality health services. As stated in the following statement:

“As soon as resources are set and released at the top level, they are not followed up/monitored all the way up to mobilisation and implementation at the bottom level....There is an absence of coordinating arrangements between the central and facility levels in resource administration in Libya, compounded by a lack of national accountability and transparency in the distribution of funds and medical supplies, making things more complex....Mechanisms/protocols for following up and monitoring the use of resources at different levels have not existed, nor are there any sort of inter-level joint practices towards effective resource use across the healthcare system....Making what I have just mentioned worse is a lack of mechanisms to evaluate what/how health system resources are distributed/used to meet the priority needs of service providers to ensure provision of quality care services....Such issues are unfortunate, leading to the perceived suboptimal health services in Libya (LH02M:14; W01FP:23; W01FP:26; TH03M:30).”

For instance, participants expressed that funding, as an aspect of health system resources, was not a barrier in Libya but was perceived as not being used appropriately. That is, a finance-focused problem—corruption in aspects of health system resource use was cited as a significant point of concern and a detractor from appropriating health resources in an effective manner. This issue was repeatedly indicated to have diverted funds that were allocated for and should have been prioritised for the health system development and improvement to ensure quality health services in Libya. As described in the following data quotation:

“Libya is a well-to-do country with sufficient funding in place for its health system forming part of resources, but the problem is corruption, unfortunately. Huge funds allocated by the Libyan government for the health system are increasingly taken away for inappropriate purposes by some individuals using their power for such acts, and what makes things worse is the silence of the government/MoH in addressing such a significant problem....If the allocated

funding is exploited appropriately, effective improvements can be initiated to support health system functions as well as the quality of services in Libya (W01FP:7).”

6.7. Poor interagency organisation and management of QIPSI in Libya

This section presents findings regarding poor interagency organisation and management of implementing QIPSI in Libya, with a particular focus on the three frameworks introduced by WHO. These include the WHO-EMRO PSFHI, the Quality Healthcare in Extreme Adversity Framework, and the Quality in Primary Care Framework, referred to herein as the WHO frameworks. Three core subthemes emerged from participants’ views regarding the implementation of the WHO frameworks in Libya, discussed below.

6.7.1. Interagency engagement in patient safety decision-making in Libya

Engagement herein refers to involving individuals who have a degree of influence upon patient safety planning and decision-making, particularly in coordinating, resourcing, and implementing QIPSI in Libya. Participants acknowledged the importance of engagement between national health system leaders (LMoH), healthcare organisation managers (including patient safety managers), and WHO health system focal points in patient safety planning and decision-making. These groups were viewed by participants as ‘key players’ in implementation of WHO frameworks in Libya. However, there was strong convergence among participants, indicating that such engagement was not achieved in Libya, serving as a barrier to establishing an interagency-based co-production approach through which key players could explicitly put forward opinions, experience, and responsibility for planning and decision-making of implementing QIPSI frameworks therein. As expressed in the following statement:

“We [PST managers] have never been allowed an opportunity to contribute to patient safety planning or decision-making at the top level by any means to lead the leap towards achieving high-quality outcomes. This has unfortunately led to a lack of agreement on decisions being made at the top level upon relevant policy and programmes, hence resulting in failures when it comes into practice (BH04M:27; TH03M:30).”

Participants indicated that although LMoH was a central point of interfacing between different levels, it was viewed as not making enough efforts towards endorsing engagement of key players in planning and decision-making of implementing WHO frameworks in Libya. For example, despite perceived considerable efforts by WHO

towards such engagement, LMoH was often viewed to lack commitment to establishing a 'bottom-up' and 'top-down' approach, through which information, knowledge, and experiences of those influencing patient safety in Libya could be brought into informing planning and decision-making of QIPs. As stated in the following data extracts:

“LMoH is a central point of connection between WHO, decision-makers/policymakers, and those at the operational level, but it has not committed to engaging those influencing groups in the decision-making of patient safety improvement efforts, nor is there any involvement of WHO in that either. This is a national leadership failure that undermines pushing towards effective patient safety improvement in Libya (W01FP:13; W01FP:24; W01FP:26).”

“I mean, we [PST managers] have never been involved in national decision-making relating to patient safety improvement, so I believe this is a leading factor behind patient safety improvement efforts being extremely less effective (BH04M:29).”

This contributed to impeding healthcare organisations capacities and capabilities for ensuring readiness and ownership of QIPs implementation including WHO frameworks, resulting in a failure to integrate relevant policies and strategies into practice. In other words, the lack of engagement of healthcare managers, including those managing patient safety, in national decision-making made the cohesiveness and productiveness of patient safety improvement efforts in Libya extremely difficult. As explained in the following data quotation:

“Policies and decisions that are made in isolation without engaging key individuals cannot be effective; it is just a waste of time...Success in developing and implementing effective policies and improvement programmes can be achieved only by engagement, involvement, and interaction with key individuals at all levels in national decision-making relating to patient safety, which is currently not existing in Libya. This has undermined operational-level capacities and capabilities for ensuring an acceptable level of implementation of any relevant policy/improvement programmes put into practice (W01FP:7; W01FP:26).

Moreover, WHO participants expressed concerns over national health system leaders' lack of willingness to engage with WHO to inform planning and decision-making and of implementing WHO frameworks in Libya. This was perceived to result in a failure in producing a joint, interagency-based response to complex patient safety challenges associated with implementation. As elaborated by the following WHO focal points:

“We [WHO] have not seen any willingness/intention from national leaders to engage with WHO in an effort towards developing and implementing quality and

patient safety improvement programmes in Libya....We, e.g., have a research programme, along with WHO expertise, through which countries can be supported in improving quality and patient safety based on evidence and best practices. But we have never received any requests from Libya in this regard, which, to me, means they are not interested in engaging with us as a means to support patient safety improvement efforts in Libya (W01A:6; W01A:22).”

In response to the above criticisms, LMoH participants pointed out contextual factors resulting in deteriorations in health system governance. These factors were seen as contributing to the weakening of national capacities and capabilities of making a way forward towards effective engagement of key players in planning and decision-making of WHO frameworks implementation in Libya:

“In a country experiencing political instability like Libya, system capabilities are down, making it challenging to keep up active engagement with WHO to think about large-scale patient safety improvement programmes, etc. Such things need stability, as in the current situation, attention is involuntarily shifted to only making sure healthcare facilities can provide patients with care at an acceptable level of quality using the best resources/means possible (LH02D:3).”

6.7.2. Challenges to implementation of QIPs in Libya

Participants expressed concern over failures in implementation WHO frameworks in Libya, attributing these failures to interagency management practices that were underestimated and not effectively addressed. WHO participants criticised the lack of a national strategy for the LMoH’s role in leading the implementation of WHO frameworks in Libya. They believed that the implementation of QIPs was often undermined by a lack of strategic plans, mechanisms, resources to be committed, and clearly defined roles, responsibilities, and partners in the process and procedure—e.g., WHO and healthcare managers. As remarked by the following participant:

“Implementation failures of WHO patient safety initiatives in Libya are a prolonged problem, which I believe is caused by a lack of national foundations for effective implementation, including strategies and mechanisms for planning, coordination, and monitoring of the multiple phases of policy and programme implementation into practice. But WHO can relate too since they are supposed to contribute to efforts in development and implementation at different levels through capacity building, etc (TH03M:30).”

Participants highlighted an interagency coordination problem in the implementation of WHO frameworks in Libya, especially as implementation needed to be centrally coordinated (top level) but implemented at the healthcare organisation level. This was perceived to pose a major challenge to ensuring an acceptable and adequate degree

of implementation, serving as a barrier to understanding and bridging gaps at/between national and local levels in relation to the implementation of WHO frameworks:

“Lack of inter-level coordination has been a leading factor in failures associated with patient safety policy and programme implementation in Libya; this is a complex problem creating gaps in implementation at different levels, including those frameworks introduced by WHO. Even the few existing quality and patient safety guidance protocols have suffered from a coordination problem, especially when communication was is not well established (W01FP:7; W01FP:15).”

Still, some WHO participants repeatedly criticised Libya’s lack of what they interpreted as a national intermediary body—e.g., an ‘implementation support agency’—to facilitate close liaison with and an understanding of the direction and position of LMoH and WHO in implementing WHO frameworks in Libya:

The other issue is the absence of a national structure to help coordinate and oversee implementation....Without some sort of implementation supporting body or agency liaising with LMoH, providers, and WHO to facilitate coordination of implementing WHO patient safety-related frameworks in Libya, it is going to be difficult to bring about change in patient safety there (W01A:6; W01FP:23; W01FP:25).”

Furthermore, a lack of political leadership commitment from the Libyan government through its MoH was highlighted by participants as a barrier to prioritising the implementation of WHO frameworks in Libya. This was perceived as problematic, as it did not allow a joint focus and understanding to be made on implementation challenges and how to address them jointly to ensure effective implementation. As illustrated in the following data extract:

“Political leadership is not often willing to make things right or show any commitment to working with WHO to ensure that implementation of relevant policies and programmes is achieved to the highest standards....We [WHO] have no direct power to influence implementation at all levels, including that of WHO frameworks, on our own without strong national leadership commitment to that, and therefore whatever we do is faced with resistance nationally (W01FP:9; W01FP:26).”

Moreover, conflicting views regarding roles in the implementation of QIPsI emerged, demonstrating a misunderstanding of roles and accountability and misaligned interests and perspectives, which contributed to implementation failures. There was a consensus that implementation was primarily the mandative role of LMoH, with provider organisations being accountable for and well committed to implementation, supported by WHO through technical assistance and capacity building at all levels. However, participants expressed concerns over the evasion of responsibility and

accountability for implementation, which was increasingly perceived as ‘other agency’s matter’ among the involved agencies:

“LMoH expresses the notion that implementation of improvement initiatives/activities is totally not their task [especially with those introduced by WHO], while providers often acknowledge their role in implementation but claim this is dependent on how much they are supported by LMoH in this regard. This has created a conflict and misunderstanding of who does what when it comes to implementation, hence failures occur (W01FP:16; W01FP:21).”

Although some participants acknowledged the few attempts being made by healthcare organisations to straddle patient safety improvement efforts in Libya, healthcare organisations’ poor commitment to supporting implementation was flagged as a concern. Poor adherence and compliance with the implementation standards at the healthcare organisation level were perceived to result in resistance to implementing WHO frameworks in Libya, contributing to persistent failures in achieving effective patient safety improvement outcomes. As elaborated in the following data extract:

“Viewing the issue holistically, commitment to implementation [in all aspects] has not been optimal at the healthcare facility level too....Provider organisations are not well committed to putting whatever comes into practice, although I believe that such a problem is associated with a lack of national support for providers too....Some providers have made positive efforts towards improving patient safety by developing minimum standard guidance protocols in the absence of national relevant guidance, so this is great to see, honestly. But perhaps because of the poor interface between top and bottom levels, there is no clear commitment or sort of adherence to implementing improvement initiatives into practice, which has contributed to failures in putting WHO frameworks into practice herein. It is a multidimensional problem centralised at the top level and permeated down to the health facility level (LH02M:8; W01FP:19).”

On the other hand, hospital participants claimed that local capacities had not been adequately supported to enable them to fulfil their roles in implementation to a high standard. This was viewed as a barrier to developing mechanisms to facilitate implementation of WHO frameworks into practice, such as problem-solving focused on the ‘what’ and capacity building concentrating on the ‘how’ to respond to associated challenges. Therefore, implementation problems could not be avoided, resulting in a failure in ownership of such frameworks, which led to a lack of a holistic approach to improving the organisation and delivery of quality care in Libya. The following data quotation sheds light on the above as follows:

“We [PST managers] are being overlooked by MoH, lacking national support to ensure high levels of improvement initiatives implementation in practice. This has made implementation a non-easy task to achieve, especially in the absence of involving PST managers in the cycles of national patient safety decision-making as well as development phases of relevant policies/programmes. What makes the situation worse is the unresponsive of MoH in other aspects like resources, funding, capacity building, and protocols, etc. They never know what happens at the bottom level in such matters, leading our efforts in implementation as well as addressing associated challenges being ineffective (BH04M:27; BH04M:29).”

Significantly, political and security concerns in Libya, along with too often existence of two Ministries of Health with overlapping mandates, were perceived by participants to contribute to implementation challenges of WHO framework in Libya. These challenges were compounded by inappropriate national funding allocations, which were often highlighted as insufficient relative to the work required for implementation activities in Libya. These issues were cited as factors that forced WHO to postpone its mission and caused delays in making critical decisions regarding the implementation of WHO frameworks in Libya. As the following WHO health systems focal point commented:

“The fragile situation in Libya has been a significant barrier to implementing the PSFHI along with other relevant frameworks introduced by WHO. Libya often has two governments resulting in two ministries of health, each trying to take control over the health system, leading to a sort of duplication in work between WHO and Libya, and also LMoH and providers, which makes things complicated. This has made it difficult for WHO to work effectively with national leaders towards putting the PSFHI and other WHO patient safety frameworks into practice in Libya effectively (W01FP:26).”

In addition, WHO participants expressed concerns over the lack of national leadership commitment to implementing WHO-EMRO PSFHI in Libya. They criticised LMoH for not integrating the PSFHI within a national patient safety programme to ensure an acceptable level of safe practices within Libyan hospitals. As pointed out by the following WHO focal point

“LMoH has not yet shown any clear commitment to adopting PSFHI in Libya, despite many efforts made by us [WHO] towards helping Libya rolling out the PSFHI, especially when Libya used to be in more stability before 2011 (W01A:6).”

Concerns were raised by other participants regarding the poor national commitment in Libya to adhering to the minimum, mandated 20 critical standards of PSFHI to ensure a minimum standard patient safety-friendly environment in Libyan hospitals:

“PSFHI is based on a set of standards [critical, core, and developmental] for hospitals to meet in order to be a patient-safety-friendly environment for patients. Unfortunately, there is a lack of national commitment to even adopting the 20 critical standards of the PSFHI, which, if not achieved/met in a hospital, this hospital cannot be allowed to operate because healthcare services provided by such a hospital would not be safe or even at an acceptable level of quality (W01A:22).”

LMoH participants, on the other hand, were dissatisfied with WHO’s support in building national capacities for the PSFHI to take place in Libya. They criticised what they termed ‘procrastination’ associated with WHO’s interactions with LMoH in preparation for implementing PSFHI. This was seen as impeding the adoption of the PSFHI in Libya, causing perceived delays in its implementation. The following participant described WHO’s procrastination in responding to national efforts to implement the PSFHI in Libya:

“I have made an official request to WHO for support in training 20 national leaders as part of an action plan to commence the introduction of PSFHI in Libya. However, I had not received any response from WHO accordingly for a long time, even after many attempts, which means to me that WHO is not interested in supporting us doing so. But they [WHO] have recently responded to our request, asserting the need for a clear nationally endorsed strategic plan for implementation in Libya, and implementation cannot commence until this is in hand....WHO sometimes makes things complicated and tends to be less collaborative/cooperative in supporting us in what should be done (LH02D:3).”

Ultimately, there was convergence in participants’ opinions, reflecting a leading factor in such tensions being the independence of working across the three levels from each other—i.e., LMoH, healthcare organisations, and WHO. This was highlighted to contribute to poor understanding across all levels of the context within which the implementation of WHO frameworks was to take place from the perspective of each other; thus, failures in implementation occurred easily. The following statement illustrates this point

“Failures in implementation are often attributable to the lack of effective inter-level interplay, resulting in a limited understanding of what is going on in reality across different levels....Effective implementation of any policy or improvement programmes cannot be easily achieved in an environment within which individuals/agencies are working independently, ignoring or lacking the willingness to work jointly with each other across boundaries to achieve more effective outcomes, and this is why, e.g., hospital-level issues are not well understood nationally and so on with other different levels. On such occasions, gaps in the implementation of policies/strategies can easily take place because the environment is conducive for which (LH02D:3).”

6.7.3. Oversight of QIPSI in Libya

Participants indicated that oversight of interagency patient safety-related work in Libya was inadequate, or almost absent, implying a lack of clearly defined interagency-based mechanisms for monitoring, tracking, and reporting on progress and outcomes. This lack of oversight was perceived to impede the coordination and stewardship of interagency patient safety-related work in Libya, leading to a degradation in patient safety improvement efforts:

“There is not any sort of systematic oversight of activities relating to quality and patient safety in Libya. I mean, clearly defined mechanisms for patient safety activities have not existed yet in Libya, including structures and strategic plans for follow-up monitoring of and reporting on relevant activities, which is one of the leading factors for gaps in developing and implementing improvement initiatives. Also, the fragmented national capacities, which are incapable of managing information/data systematically to support oversight of patient safety improvement initiatives. Such issues have made it difficult to ensure implementation of patient safety policy and improvement programmes, resulting in the perceived failures (W01FP:21).”

To add complexity, conflicting perspectives emerged regarding whose responsibility it was to oversee interagency patient safety-related work in Libya. WHO participants claimed that oversight in Libya was outside the WHO’s remit, perceiving it as fully laying on the country itself and that WHO could not meaningfully compel LMoH to undertake this role. Nonetheless, WHO participants expressed that their task in oversight was only to provide technical support and capacity building, in line with Libya’s CCS. They asserted should not displace LMoH’s role in oversight. As illustrated in the following data extract:

“Leading oversight of collaborative patient safety activities in Libya is out of our remit but is LMoH as per the WHO constitution and also Libya’s CCS; this needs to be carried out by the country itself. We can support oversight through our office out there that is working in line with LMoH, but we cannot be fully responsible for oversight of any activities on our own. This can be effectively supported by WHO at all levels, but not on our own because it is still the task of the country itself, so we cannot push countries to do that when they do not want to (W01A:22).”

LMoH participants criticised WHO’s failure to communicate its role in oversight, leaving the LMoH to respond to associated issues ineffectively on its own. This was seen to result in a non-coordinated response to such issues, contributing to failures in patient safety improvement efforts in Libya. For instance, these participants believed that the successful implementation of WHO frameworks in Libya would necessitate active

coordination and effective oversight from WHO, aiming for exemplary stewardship. They argued that this approach holds significant potential if there is strong national commitment (LMoH), adequate development, and effective execution. As demonstrated in the following data excerpt:

“WHO is sometimes ambiguous when it comes to oversight of patient safety-related activities in Libya. I believe that oversight is a core part of our mandate [LMoH], but WHO too needs to communicate its relevance in oversight so we can take that into account to ensure a consistent standard of performing collaborative arrangements related to patient safety in Libya. When roles and tasks of each other in performing such work are not clearly defined and communicated, no efficient outcomes can be achieved (LH02D:3).”

Similarly, WHO participants expressed that without a clear national strategy for oversight of interagency patient safety-related work in Libya, WHO would not have the capacity to perform oversight independently:

“We [WHO] cannot lead the oversight of any activities in Libya on our own, but we can technically assist and build capacities for doing so. But without LMoH coming up with an explicit strategy for oversight of patient safety activities in Libya, our hands will still be cuffed because we cannot help in doing that without a clear national strategy or sort of a strategic plan for oversight, as is the case in other countries. So, LMoH needs to take into account that what I have just said should not displace its leadership/commitment to oversight as per the WHO constitution as well as Libya’s CCS (W01FP:7).”

Still, mismanagement of healthcare organisations in Libya, including poor monitoring, supervision, and inspection, emerged as a challenge to oversight of interagency patient safety-related work in Libya. This, according to participants, led to a lack of commitment among healthcare organisations to coordinating oversight of interagency patient safety-related work and to taking responsibility for outcomes, thereby resulting in perceived deficiencies. As illuminated in the following data extract:

“National capacities for oversight of the health system as a whole are fragmented, hence the perceived poor oversight of patient safety policy and improvement programmes in Libya....Health system governance and organisation have been affected by the political instability and deteriorations in infrastructure, making our capacities not strong enough [even almost impossible] to facilitate effective oversight of patient safety-related work in Libya. I believe such issues have seriously contributed to failures in achieving successful outcomes in patient safety improvement programmes herein (LH02M:8).”

Accordingly, participants alluded to the notion that LMoH had not exercised its authoritative power to reinforce local-level commitment to oversight of patient safety-

related work. They perceived LMoH as not being assertive enough (not challenging enough) to put things right to compel healthcare organisations to contribute to oversight of patient safety-related work so that it could not be easily resisted or ignored in practice. The following participant, for example, described LMoH as ‘toothless’ in this regard:

“LMoH sometimes is not serious about ensuring local adherence to implementing and reporting on patient safety-related work when in practice....LMoH is not committed to putting mechanisms in place to ensure oversight of any initiatives introduced into practice; it has not given it sufficient power to influence health facilities’ commitment to contributing to ensuring effective oversight outcomes, hence negative outcomes, unfortunately (W01FP:7).”

Additionally, participants highlighted a lack of national monitoring structures to manage information and data related to patient safety work in Libya. This deficiency was indicated to hamper the identification and understanding of potential shortcomings, as well as the development of strategies to address these deficiencies, thus undermining interagency efforts towards improving patient safety in Libya:

“Weak national capacities have made it challenging for LMoH to monitor and follow up on relevant improvement initiatives in Libya on its own. Libya lacks national structures to facilitate monitoring, tracking, and reporting on patient safety activities, which results in suboptimal outcomes. There is an absence of managing data and information for the assessment and evaluation of the extent to which, by some agreed point, e.g., patient safety policy or programme objectives have been met or not; therefore, bringing about change has not been achieved. This is a failure! (LH02D: 20).”

6.8. Chapter summary

In response to the study's aim of improving understanding of interagency working in patient safety across different levels of the Libyan health system, including WHO's contributions to patient safety and effects on the organisation and delivery of quality care in Libya, this chapter pointed to broad challenges that undermined developing effective interagency working in patient safety. Notably, these challenges include a poor understanding of interagency working, a lack of a shared vision for patient safety, unclear roles and responsibilities in relation to patient safety-related work and arrangements, policy and procedural differences across levels, a lack of commitment to interagency working, and the implications of political turmoil. These factors have contributed to the underdevelopment of interagency working in patient safety in Libya. Communication between LMoH, healthcare organisations, and WHO was perceived

as poor, contributing to less interfacing between those involved agencies in improving the organisation and delivery of quality care in Libya. This issue was mainly attributed to a lack of a well-defined protocol and clear strategic plans for facilitating and maintaining active communication, leading to a non-conducive environment within which developing consistent interagency working was extremely challenging.

Moreover, there was a lack of interagency coordination in managing national health system resources in Libya, including financial, human, and physical resources. Despite the availability of national health resources allocated by the Libyan government that could optimally reinforce health system functions, including patient safety, poor interagency coordination in managing these resources made it difficult to maximise their utilisation and exploitation for driving patient safety improvements. This was associated with a lack of an interagency-based strategic protocol for effective resource management across different levels, insufficient incorporation of WHO expertise into health system resource management processes, decentralised decision-making about health system resource allocation and administration, and a lack of interagency-based mechanisms for monitoring and following up combined to constitute interagency coordination in managing health system resources to maximise effects on patient safety outcomes.

In addition, poor organisation and management of interagency patient safety-related work in Libya emerged as a concern, including WHO-EMRO PSFHI, the Quality Healthcare in Extreme Adversity Framework, and the Quality in Primary Care Framework, referred to herein as WHO frameworks. Overall, a lack of engagement in planning and decision-making about implementation, challenges associated with implementation in practice, and inadequate oversight mechanisms and arrangements combined to constitute the poor interagency organisation and management of the adoption of these frameworks in Libya. Ultimately, the challenges to interagency working elaborated above combined to contribute to underdeveloped interagency working in patient safety in Libya, resulting in a failure to produce a holistic approach to understanding, managing, and improving patient safety effectively in Libya.

The next chapter will shed light on strategies suggested by participants for improving patient safety through enhanced interagency working in Libya.

Chapter Seven: Findings (3) Improving Patient Safety in Libya through Enhanced Interagency Working

7.1. Introduction

A key primary research question of this qualitative inquiry was to identify effective strategies for addressing patient safety challenges in Libya through enhanced interagency working, as perceived by the participants. Accordingly, several priority recommendations were proposed for responding to complex patient safety challenges in Libya through enhanced interagency working. These suggestions are presented throughout this chapter under four broad themes and subthemes as appropriate. The chapter commences with an introduction in **Section 6.1** and then moves on to **Section 6.2**, which offers a concept mapping of the themes covered throughout this chapter. **Section 7.3** focuses on developing mechanisms for interagency working in the domain of the Libyan patient safety. **Section 7.4** discusses developing an interagency action plan for managing patient safety during emergencies in Libya, emphasising the implementation of WHO patient safety-related frameworks. In **Section 7.5**, attention is given to rebuilding the health system to bring patient safety to the forefront. The chapter thereafter moves on to **Section 7.6**, which focuses on building national capacities for research, education, and training in patient safety in Libya. Subsequently, the strategies suggested by participants will be integrated into the development of a comprehensive, context-lens framework for improving patient safety in Libya through interagency working, presented and discussed in the next chapter.

7.2. Concept map of themes

Figure 7.1 presents a conceptual map that visually shows the primary themes and subthemes addressed in the chapter related to improving patient safety in Libya through enhanced interagency working. This diagram offers a structured overview of strategies that are needed for improving patient safety in Libya, detailing a holistic approach, taking into account the socio-technical, cultural, and political factors influencing the Libyan health system, to improving patient safety through effective interagency working.

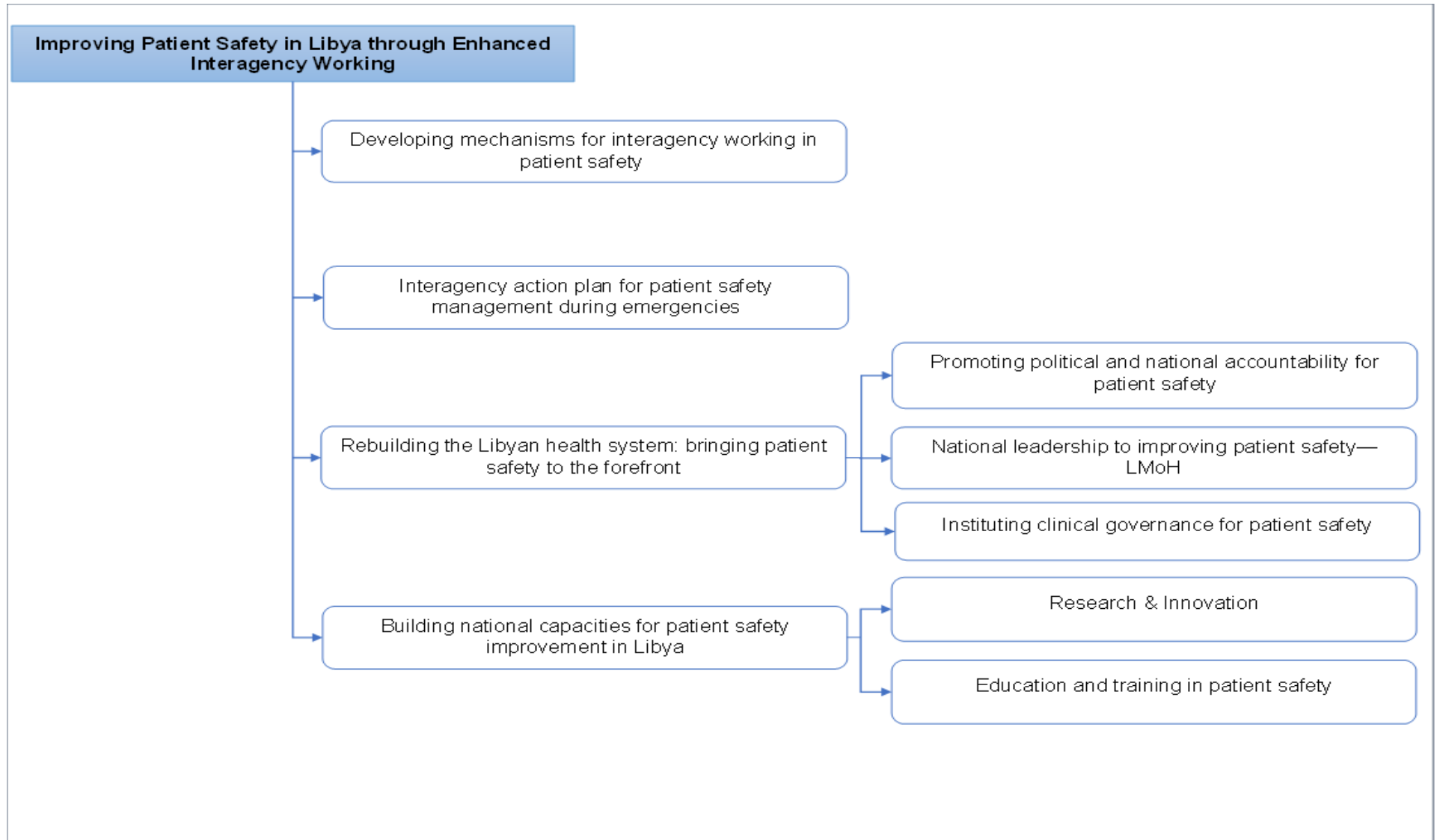


Figure 7.1: The Concept Map of Themes and Subthemes Covered throughout the Chapter

7.3. Developing mechanisms for interagency working in patient safety

Participants asserted over establishing mechanisms for developing effective interagency working in patient safety in Libya. This was highlighted as a fundamental step that should be rooted in leadership commitment of LMoH and WHO to building the momentum for improving patient safety:

“The core actors in establishing effective interagency working are LMoH and WHO. Without their best efforts and commitment to this, improving patient safety in Libya is going to be challenging more than it is (TH03M:30).”

Participants were firmly of the view that functional mechanisms through a 'centralised coordinating structure' with a mandate of supporting interagency working in patient safety should be established. They suggested forming a broad-based interagency working committee, co-led by the LMoH and WHO, with defined roles and responsibilities for facilitating and overseeing interagency collaboration. This was seen as necessary for developing protocols and guidance for interagency arrangements, effectively bringing WHO, LMoH, and provider organisations together to engender and foster reciprocal understanding, knowledge sharing, and information dissemination regarding the Libyan health system patient safety strategy. As articulated in the following data extract:

“I assume that to support the development of effective interagency working across different levels, national mechanisms, including systematic approaches and normative standards, will need to be in place, e.g., committee/agency, through which functional coordination and communication can be smoothly facilitated and interaction and interface between different levels can be maximised for patient safety improvement in Libya (W01FP:15; W01FP:16; W01FP:23; TH03M:30).”

Participants suggested that the committee should be mandated with setting out a clear policy that stipulates the principles of interagency working. They stated that the policy should clarify the roles and responsibilities of the LMoH, provider organisations, and WHO in the context of patient safety in Libya, so joint tasks and actions to be taken and in which way can be determined and assigned accordingly. This was emphasised by participants to ensure commitment to interagency working, thus increasing reciprocal predictability and consistency of interagency actions and procedures without interdependence or overreliance on any one side for performing patient safety-related work in Libya. Furthermore, formulating a strategic plan was considered by participants a prerequisite for developing interagency working in patient safety in

Libya, outlining and enumerating a joint protocol for patient safety. As the following participant elaborated:

“For me to work on an interagency basis within, beneath, and across boundaries more systematically, an interagency working policy, supported by a strategic and visionary plan, outlining common mandates and responsibilities of all parties [LMoH, providers, and WHO] will need to be developed and committed to by those parties. This, I believe, will help develop consistent and sustainable interagency working in patient safety so inter-level contribution and effects can be maximised for reinforcing patient safety improvement efforts in Libya (W01FP:9; W01FP:21).”

Additionally, participants highlighted the importance of commitment and contribution of LMoH and WHO towards leveraging and developing a comprehensive approach to resource allocation, encompassing funding, human, and physical capacities needed for the operationalisation and revitalisation of the aforementioned mechanisms:

“Resources, including funding, should be in place for the development of interagency working and the operationalisation of any coordinating structures supporting this in Libya. This can be easily achieved by LMoH with continuous support and capacity building from WHO. Once this is in hand, the development and sustainability of effective interagency working in patient safety can be ensured (W01A:6).”

Moreover, establishing a set of indicators to measure the effectiveness of operationalisation and performance, aligned with the policy and strategy alluded to above, was considered important for monitoring and evaluating interagency working on an ongoing basis. This was perceived by participants as essential to ensure the optimum functionality of interagency working and the achievement of associated objectives. As illuminated in the following statement:

“To maintain a consistent level of working on a systematic basis towards joint targets related to quality and safety in Libya [particularly between LMoH and WHO], monitoring and evaluation of performance and progress of interagency working and associated outcomes should not be forgone. Doing so using appropriate performance indicators will help identify associated gaps or shortcomings so these can be addressed and a consistent level of effective interagency working without any failures at all levels can be maintained (LH02D:3).”

7.4. Interagency action plan for patient safety management during emergencies

Participants emphasised the need for developing a pragmatic action plan for producing an approach to patient safety management during emergencies, for which WHO participants showed a readiness to lead with the direct coordination of LMoH. For

example, implementing WHO-EMRO PSFHI, the Quality Healthcare in Extreme Adversity Framework, and the Quality in Primary Care Framework in Libya was repeatedly highlighted as a priority to respond to patient safety challenges therein, especially during emergencies where action is immediately needed. Participants suggested using countries that have successfully implemented these frameworks as peers to share experiences and best practices for successful implementation in Libya. As expressed by the following participant:

“Implementing WHO frameworks is a priority to begin with patient safety improvement in Libya. This should be achieved through a well-designed, agreed upon, and fully endorsed action plan, preferably co-developed by WHO, to address patient safety challenges in Libya according to urgency and priority, starting from those needing immediate action until reaching the stage of thinking about long-term comprehensive improvements....WHO involvement should be maximised in the implementation of such frameworks in Libya, starting from the top level to service delivery [systematically] so that efforts are catalysed towards leaving no stone unturned to bring about change in patient safety in Libya....We [WHO] can support Implementing such frameworks in Libya by facilitating sharing and learning from best practices between Libya and those countries that have already implemented the frameworks into practice to inform their implementation in the Libyan context (W01FP:23; W01FP:26).”

For effective implementation, participants stressed political leadership and commitment so that arrangements are performed jointly without reliance on one side and efforts are not met by resistance in Libya. They added that LMoH should be committed to setting out resources for the implementation of WHO-supported patient safety-related frameworks in Libya. As emphasised in the following data extract:

“Political/national leadership, commitment, and engagement, particularly from LMoH is critical to producing a joint action for implementing WHO patient safety frameworks in Libya—an interagency collective effort towards achieving effective improvements...We need to first view the system as a whole from every angle, involving those working at all levels in the improvement efforts along with other influencing hands [LMoH’s arm and resource institutions] to guide and steer improvement efforts in Libya. This, along with WHO’s contribution, should be a priority if we are to bring change in patient safety, supported by the implementation of WHO patient safety frameworks (W01A:22).”

Participants argued that fragile-focused guidance protocols to help the Libyan healthcare system maintain functionality during emergencies should be developed. This was considered imperative to support emergency assessment, preparedness, and response—that is, to improve system resilience to absorb during protracted

emergencies (e.g., conflicts, COVID-19) and transform accordingly so that an acceptable level of quality healthcare services can be maintained. Additionally, ensuring the security and safety of staff and patients in healthcare facilities during emergencies was highlighted by participants as a priority to maintain access to quality healthcare services. The following participant, for example, stated:

“Joint efforts need to be directed towards developing a context-orientated, multi-prolonged protocol to support healthcare system functions as effectively as possible during adversities to ensure that services provided to patients are safe and not putting them at risk of clinical harm (LH02D:1; W01FP:26). Going from where WHO and member countries, including Libya, are now in developing frameworks for quality healthcare in extreme adversity, we [WHO], with the collaboration of LMoH, can cross the way thorough towards initiating the implementation of such frameworks which I truly believe should be placed as a priority. This, if well achieved, can help prepare practical protocols to support access to quality care services effectively when emergencies take place, including conflicts, COVID-19, etc. (W01A:6; W01FP:13; W01FP:15).”

Participants drew attention to the urgent need to re-establishing healthcare facility basic infrastructure, including electricity, water, and sanitation. For example, developing back-up plans for water and power supplies. Besides, establishing and operationalising mobile field care facilities, ambulances, and advanced communication technologies were perceived as needed to alleviate challenges in access quality healthcare services during emergencies. Such immediate interventions considered critical for maintaining access to quality healthcare services possible during emergencies:

“A focus should primarily be directed towards developing urgent interventions targeting care service problems during difficulties to ensure service continuity with an acceptable level of quality and safety. Important aspects like mobile field care facilities, context-orientated ambulance services, advanced communication technologies and equipment, and infrastructures including power and water provisions, and so on are priority means to achieve the continuity of care services at an acceptable level of quality during emergencies (LH02D:3; LH02M:8).”

Furthermore, participants alluded to the need for WHO technical and operational support for maintenance of pharmaceutical and medical material supplies during emergencies in Libya. For instance, participants stressed the importance of involving the private health sector in supplementing shortages and disturbances in public medical supplies, especially during difficulties. As stated by the following participants:

“The private healthcare sector in Libya needs to be seen as taking a vital role in such improvement efforts to be accomplished, and therefore a jointly well-developed protocol should be introduced [introduced by WHO and endorsed and imposed by LMoH] stipulating the role and responsibilities of private healthcare providers for helping close any gaps and supplement shortages in the public services, especially during emergencies [which must be committed to by private healthcare providers]. E.g., providing private ambulatory services for patient transportation during adversities, thus making up a mobilised referral system from unstable zones to health facilities in stable zones and supplementing public shortages of pharmaceutical and medical material supplies, and so on (LH02D:3; W01A:22; W01FP:25).”

Participants also emphasised the need for supporting health workforce capacity building in Libya through training in line with the WHO quality healthcare in extreme adversity framework. This was perceived as important for promoting the health workforce in Libya to be prepared to respond effectively to patient safety challenges during emergencies. For instance, the following participant stated:

“Looking at the problem from the standpoint of health system blocks, weaknesses in the health workforce in Libya should be considered a priority in patient safety improvement in Libya, taking into account the current situation. This can be best supported by the WHO quality healthcare in extreme adversity framework, which is being implemented in many settings similar to Libya. Once this has been achieved, it will, in turn, reflect positively on quality and safety outcomes in Libya (W01A:5; W01FP:9; W01FP:11; W01FP:23).”

Participants suggested undertaking a baseline assessment of patient safety in Libya using PSFHI standards to identify the magnitude of the problem and priority gaps. This was perceived as important for determining what seems to work effectively in such a context so that capacities for improvements can be established accordingly, providing an avenue for change in patient safety. As demonstrated in the following quotation:

“Situational analysis and assessments of patient safety should be undertaken at the outset in Libya using WHO patient safety assessment tools introduced by PSFHI, which have proved effective in many EMR countries, so we need to bring them to Libya for the same purpose. This will help identify priority areas from which we [WHO and LMoH] can start working towards improvements and the way forward. Doing so can support Libyan hospitals to take strong actions for building comprehensive patient safety improvement interventions [e.g., IPC and training in patient safety] as well as providing practical guidance to healthcare workers in implementing such interventions and developing systematic approaches to identifying the “what” and the “how” relating to responding to patient safety challenges (W01FP:7; W01FP:15).”

In addition, participants suggested, using WHO patient safety-related frameworks, developing a policy development guidance protocol for managing patient safety from extreme adversity lens in Libya, including the standardisation and implementation of priority interventions, such as staff training in patient safety during adversities. This was particularly considered important for enabling the task of Libyan healthcare organisations to develop and implement minimum standard guidelines to maintain an acceptable standard of patient safety during adversities. As pointed out in the following data extract:

“Patient safety should not be seen as a luxury/secondary thing to think about, even in such a difficult context as Libya, as there is no point in providing care that is unsafe or at a poor level of quality! Therefore, LMoH and providers need to work actively with WHO in developing effective guidance standards for quality and safety, considering the current situation in Libya. There is a need to put in place a protocol/approach to patient safety management during emergencies in Libya....This is to support decision-makers in setting out guidelines and interventions like training in patient safety during emergencies and so on, which should be a priority in Libya, and WHO is there to help lead this initiative whenever national readiness for that is shown up (W01FP:9; W01FP:19; W01FP:24).”

To maximise effects on what has been alluded to above, participants recognised the importance of introducing changes to the WHO office in Libya to make it more responsive to patient safety improvement efforts. Establishing sub-national WHO offices in Libya was considered by participants to be imperative in bringing WHO support closer to the local context, reducing geographical and fragmentary variations across regions of Libya during emergencies. That is, to ensure inter-country information networking is strengthened and actions are contextualised according to each region’s setting effectively. As emphasised in the following data quotation:

“In dealing with the current situation in Libya, establishing sub-regional offices of the main WHO office in Libya is crucial. We [WHO] are currently directing efforts towards establishing two sub-regional offices in the east and north of Libya but still headquartered in the Tripoli office. This will help improve across-country information networking, especially during adversities, thus intensifying and making WHO efforts responsive to national patient safety improvement efforts effectively, taking into account differences across Libyan regions, and so on (W01FP:19; W01FP:26).”

Ultimately, what has been alluded to in this section was considered important in driving the implementation of the improvement strategies presented throughout this chapter.

7.5. Rebuilding the Libyan health system: bringing patient safety to the forefront

Participants emphasised the importance of rebuilding the Libyan health system to effectively respond to existing patient safety challenges. Accordingly, a set of interrelated and interlinked changes were suggested, aimed at advancing the progressive realisation of the public right to quality healthcare in Libya. This was envisioned to be primarily reliant on and anchored to interagency working—nationally led, starting with commitment from the state through the government and its MoH to that, supported and capacitated by WHO. Ultimately, the changes were mainly focused on national accountability for patient safety and clinical governance.

7.5.1. Promoting political and national accountability for patient safety

Participants stressed the need for promoting accountability for the quality of care and patient safety in Libya. They emphasised that the Libyan health system should be quality- and patient safety- accountability driven. Participants expressed that roles and responsibilities in patient safety accountability across the health system in Libya should be defined and well understood by all individuals across all levels. Thus, top-down and bottom-up power relationship can be clustered into joint understanding and informed decision-making at, within, and across all levels, so that actions can be translated into improved patient safety outcomes:

“Everyone across the system should be accountable for patient safety. Currently, it is unknown who is responsible/accountable for what when it comes to quality and safety in Libya. Accountability for quality and safety should therefore be penetrated at all levels; otherwise, things cannot fall in the right place as wished. Mechanisms stipulating roles and responsibilities for patient safety across the system should be in place at the outset if patient safety is to improve systematically (LH02D:3; W01FP:21; W01FP:24).”

Prominently, state power was considered crucial for placing patient safety as a priority in Libya. Participants emphasised that the state (Parliament) through the government Libya should be accountable for patient safety. That is, a state-mandated role for achieving the public right to high-quality healthcare in Libya, involving political commitment to developing a national vision and strategy for patient safety, combined with explicit legislative and legal mechanisms for patient safety. Moreover, Participants also stressed that patient safety should be at the centre of Universal Health Coverage (UHC) in Libya, emphasising that it should not only be about coverage and affordability but also patient safety. The following participant alluded to political accountability for the public’s right to quality care in Libya as follows:

“The Parliament, going through the government/its MoH, should be committed to developing a vision and enacting legislation that explicitly support/place patient safety as a public health priority [and right]. They should be held responsible/accountable for the public’s right to quality care by making this a core element of UHC in Libya, which needs to be seen in Libya at the outset more than ever (W01A:6).”

Participants believed that where such legislative mandates exist, patient safety improvement efforts would be accelerated. Accordingly, WHO participants expressed their commitment to supporting Libya in launching a national legislative initiative for patient safety. As illuminated in the following data extract:

“Legislative and regulatory mechanisms are the key to regulating the healthcare system so that a high-quality care can be ensured. We [WHO] can work at all levels with the government through MoH towards achieving this goal by broadening our scope to devise strategies and mechanisms for setting out national legislation and regulatory mechanisms for quality and safety in Libya to reinforce quality care as a public right (W01A:22).”

Furthermore, to ensure national patient safety decision-making is people-centred, participants highlighted the importance of incorporating the views of service recipients. They suggested that the government should establish mechanisms to allow service users to voice their satisfaction and expectations regarding service quality, for example, through direct public reporting or social audits. This was considered vital in facilitating bottom-up influencing of planning and decision-making about patient safety, ensuring the relevance and meaningfulness of national decisions and actions. Participants believed that national legislation should not only recognise the public’s right to quality care but also their contribution to relevant planning and decision-making:

“The other point I should mention herein is that service users should be allowed the opportunity to raise their voice/opinion about the care they receive so that their say can be incorporated into informing policy- and decision-making. They should have the right to do so, which I would strongly recommend should be imposed through legislative and legal mechanisms for improving service delivery and also quality and safety using the lens of those using the services, etc., (LH02D:3; W01FP:7; W01FP:9).”

Participants were of the strong view that the government should be accountable for financing and resourcing efforts towards developing and improving health system to ensure quality care services, combined with appropriate monitoring mechanisms to ensure ethical exploitation of resources. This, according to participants, should involve

the allocation of a national dedicated budget for patient safety in Libya, covering aspects such as education and training for professional development and technical competence improvement, research into patient safety to strengthen the knowledge base to inform patient safety policy and decision-making and guide the introduction of QIPs in Libya. As elaborated by the following participant:

“LMoH needs to put in place effective mechanisms for health resource administration/use across the system [including monitoring and tracking] in coordination with providers and with support from WHO as needed. This is to ensure effective use of resources for health system development and improvement, including a dedicated budget for patient safety....If I am to say one thing that can help transform the health system into a patient safety-driven one, I would emphasise research, education and training first and foremost in starting the improvement journey towards a real change in patient safety in Libya (W01A:18).”

In particular, the government was perceived as needing to support the development and implementation of national QIPs in Libya (e.g., IPC and accreditation programmes), which WHO participants showed a strong commitment to supporting at all levels. This was considered critical for facilitating and continuously supporting patient safety improvements in Libya. As demonstrated in the following data quotation:

“Resources are not exploited properly, reflecting negatively on healthcare outcomes....LMoH needs to put in place transparent mechanisms, including monitoring and tracking, to ensure ethical/effective use of health resources for maximum effect on quality including patient safety. The government should be committed to resourcing/funding improvement efforts in quality/patient, they should be accountable for allocating funds for developing/implementing national large-scale quality/patient safety improvement initiatives, which can be supported technically by WHO, to improve healthcare services effectively. Otherwise, it is difficult to bring about a change. (LH02D:3; W01FP:11).”

Equally important, participants emphasised that the government should be accountable for establishing national monitoring institutions for patient safety in Libya. Participants strongly recommended establishing national institutions focused on quality improvement and patient safety; research, with a particular focus on quality and safety; as well as healthcare accreditation. Such national supporting structures were seen as critical for developing a national holistic approach to improving patient safety in Libya. As illustrated in the ensuing data extract:

“The government, through its MoH, with WHO support, needs to strive to establish structures to support different aspects of patient safety, e.g., for monitoring, healthcare research, and healthcare accreditation. Establishing

such supporting structures will help in the assessment, evaluation, and monitoring of patient safety, setting out relevant indicators, guiding the development/implementation of improvement initiatives, and so on. By doing so, patient safety challenges/problems can be identified and addressed effectively....If this is to be in Libya, I guarantee that a considerable transformation/change in patient safety outcomes will be seen (W01A:6).”

7.5.2. National leadership to improving patient safety—LMoH

LMoH, as the directing and coordinating authority for the health system in Libya, was perceived to need to take an effective role in leading efforts towards patient safety improvement. Participants emphasised that LMoH should guide the principles of the state for patient safety, alluded to in the preceding section, and act, accordingly, to establish a national focus on patient safety. As illuminated in the following data extract:

“LMoH should play its role in facilitating/translating national legislation and vision related to patient safety into effective improvements in Libya. This is a top-level priority as a starting point to ensure ongoing focus on quality improvement in Libya (W01A:22).

This, according to participants, should be geared towards producing explicit policy and regulatory frameworks for patient safety in Libya. In particular, a national patient safety strategy, a national framework for patient safety including setting out relevant indicators of effectiveness, and national patient safety improvement programmes should be set out. In participants’ view, this should be combined with effective oversight filtering down to the healthcare organisation level, crystallising and clarifying regulatory frameworks so that they can be understood, effectively committed to, and implemented. This was considered a prerequisite for ensuring a robust system-wide patient safety regulation in Libya. As highlighted in the following data quotation:

“A clear national policy/strategy for patient safety is extremely needed and should be a requirement for LMoH to be committed to. This should outline goals/principles in relation to patient safety, shadowed by effective mechanisms for oversight to ensure implementation of and compliance with national the national relevant standards and requirements relating to quality and patient. Also, national patient safety programmes (e.g., IPC) need to be introduced, mainly rooted in the top-level leadership commitment, supported by WHO, and committed to/facilitated by healthcare organisations. These are priorities, which should be placed as a core element of the national health system strategy in Libya once well developed, committed to, and endorsed at all levels, primarily by LMoH (TH03M:30; W01FP:7; W01FP:24).”

Furthermore, participants highlighted the importance of adopting a ‘bottom-up’ strategy towards national patient safety planning and decision-making, urging the

endorsement of such an approach by the LMoH. They recommended actively involving those responsible for managing patient safety in practice to contribute to national patient safety planning and decision-making. Participants proposed leveraging the expertise of WHO to inform this process, enhancing understanding at the policymaking level of the local patient safety challenges, and ensuring the acceptability and feasibility of top-level decisions and policies in practical application, and addressing uncertainties in implementation. That is, closing the gap between policy and practice, ensuring actions are relevant and meaningful:

“Local leaders should be involved in national patient safety planning and decision-making; LMoH needs to be committed to that to ensure effective policy/programme development and implementation across the system, supported by WHO expertise as appropriate. Top-bottom, bottom-up engagement in this regard can usefully produce a shared understanding of patient safety issues at different levels, helping bridge any associated disagreements, uncertainties, or gaps in implementation when it comes to practice (W01FP:15; W01FP:21; W01FP:25).”

Importantly, strong support from LMoH for patient safety in practice was viewed by hospital participants as critical to improving patient safety. This requires, according to participants, LMoH to be committed to providing directives for the developing and implementing guidance protocols for supporting and building capacities for patient safety regulation as well as improvement. To reinforce this, participants recommended that LMoH should aggregate the national resources alluded to in the preceding section and channel them efficiently to bring about change in patient safety across the system as a whole. As the following informant commented:

“Most importantly, we [PST managers] need political will/support to reinforce our approach to patient safety management in practice effectively (BH04M:27).”

Moreover, participants strongly asserted that effective patient safety strategies requires secure physical infrastructure and the creation of a safe patient environment. This involves robust buildings with well-designed spaces for various healthcare service. For example, wards, operating theatres, labs, and toilets, along with an effective navigation system in healthcare facilities to prevent confusion or disorientation therein, and essential facilities like built-in oxygen systems, ramps, electric elevators, efficient ventilation, and ample natural lighting. Crucially, the provision of equipment, including wheelchairs, beds with side rails, and trolleys, was

identified as integral to patient safety. These elements were seen as fundamental to establishing a quality- and patient safety- driven healthcare system in Libya:

“To me, a safe healthcare environment is characterised as having adequate facilities, which are essential for quality patient care, hence their safety. Adequate hospital buildings, rooms, wards, laboratories, oxygen systems, toilets, lighting, and water supplies are priorities for achieving quality care delivery. There is also a need for adequate equipment like beds with side rails, trolleys, and appropriate medical materials required for the day-to-day routines, and so on. These are essential resources that should be in place to achieve quality healthcare in Libya (TH03M:30).”

Importantly, WHO participants alluded to the notion that LMoH should exercise its authority effectively to reinforce quality outcomes. This involves effective national monitoring, supervision, and inspection, which was considered by participants a cornerstone for a comprehensive strategy for change, compelling provider organisations to adopt and implement national patient safety standards and protocols put into practice. Participants suggested LMoH should avoid the ‘persuasion concept’ with healthcare providers when putting guidance protocols and policies into practice to enforce implementation so that it could not be easily ignored by healthcare providers. The following participant expressed that LMoH should avoid being ‘toothless’ when putting policies into practice to ensure effective compliance:

“LMoH should avoid being toothless; they should practise their authoritative power to influence providers to adhere and be committed to implementing whatever comes into practice. This needs to be supported by putting in place national mechanisms for systematic monitoring and supervision (W01D:4).”

7.5.3. Instituting clinical governance for patient safety

Participants strongly recommended rebuilding and strengthening healthcare organisations’ capacities for quality improvement and patient safety to ensure that the delivery of high-quality care remains effective and that relentless improvements are made in that direction. This was perceived as challenging without instituting clinical governance in healthcare organisations, as illuminated in the following data extract:

“For patient safety to be systematically managed and effectively maintained, I strongly recommend a focus be placed on clinical governance in hospitals. To me, the issue is all about clinical governance; if this is in place, improvements can be effectively made (W01FP:11; W01FP:16; W01FP:21).”

WHO participants expressed a readiness to lead an initiative, in direct coordination of LMoH and healthcare organisations, to scale up joint efforts to institute effective

clinical governance into practice. This would focus on core areas corresponding to patient safety, including management support and leadership, monitoring committees, risk management, clinical audit, incident reporting and learning, resources, education and training, communication and information systems, and patient and staff involvement. As expressed in the following data extract:

“We [WHO] can support developing/prepare action plans for building capacity for instituting important requirements for governance in hospitals. Along with national commitment [LMoH], our technical assistance/expertise can support leadership and policy development, systems/committees, planning, risk management, training, patient involvement, communication/IT, and mechanisms for managing patient safety in practice. If this is endorsed/advocated by LMoH, we can lead the leap towards promoting hospital capacities to a level at which patient safety improvements can be achieved smoothly (W01A:6).”

Participants strongly recommended augmenting leadership and management support to vocalise their vision for safe, compassionate, and care and committing to this vision throughout the healthcare setting, coupled with efficacious organised and monitoring with regard to the practices/process of patient safety. In participants’ views, management support and leadership should be translated into developing and implementing explicit patient safety policies, protocols, and guidelines, according to which healthcare staff are obligated to make informed decisions and carry out appropriate procedures so that any associated complications can be prevented. As pointed out in the following data extract:

“Leadership is the key to making healthcare systems effective and safer by committing to putting in place policies, protocols, and guidelines for patient safety, as well as ensuring implementation in a systematic way so that patients are provided with safe care (LH02D:3).”

Participants believed that patient safety should be ingrained in Standard Operating Procedures (SOPs), including procedure manuals and protocols for patient care processes, to ensure high levels of safety practices. This would help establish clear expectations and ensure patient care processes are carried out with minimal risk—patients are managed safely by following the correct actions and procedures and using the right processes and methods. As illustrated in the following data quotation:

“I regard patient safety as safe care processes; thus it should be an integral part of the SOPs and protocols so that all patient care processes/procedures are carried to a high standard to ensure patients are not exposed to any risks (TH03M:28).”

Also, participants believed that risk management, entailing effective systems to identify, understand, monitor, minimise the risk of harm to patients, and learn from mistakes and errors, should be instituted in practice:

“Risk management systems/processes should be in place and imposed by strong polices to enable the identification, reporting, analysis, and investigation of problems and risks associated with healthcare so that effective approaches/measures can be taken to address such issues on a regular basis (LH02M:12).”

Equally important, participants highlighted instituting a formal incident reporting system in practice as necessary for reporting and learning from errors. To work effectively, a clear policy articulating and encouraging open reporting and learning from errors was considered essential, supported by management's commitment to creating a system which encourages incident reporting and learning among healthcare staff to optimise safe practices. This was recognised as critical to establishing a blame-free and non-punitive environment that encourages reporting and learning, as well as serving as data and information base to support continuous quality improvement. As illuminated in the following data extract:

“Formal safety incident/adverse events reporting systems and malpractice are highly needed to be in place, combined with clear policies for encouraging open reporting and learning from errors. This is a critical requirement to ensure an approach to patient safety management in practice....Incident reporting systems can facilitate the collection and analysis of types and contributing factors of adverse events and errors, which can then be translated into informing and guiding the development/implementation of strong policies, strategies, action plans, interventions, etc. This needs to be a priority (W01FP:19; W01FP:24).”

Participants recommended the implementation of clinical auditing to gauge patient safety and identifying areas of concern within healthcare settings. This includes routine audits to assess adherence to national standards, IPC practices, retrospective and prospective audits of medication practices (e.g., to identify and understand medication related adverse events), and the adoption of standards, protocols, SOPs, guidelines, and checklists. These measures were considered reliable indicators of overall quality and safety and associated improvements. As stressed by the following participant:

“First of all, once things put in place, including policies and protocols, you have to see that whether these there or not, or whether they are followed/implemented. E.g., Are national standards being followed/implanted? Is there SOPs, or are they effective? Is hand washing practices followed? How are staff throwing the needles? You have to find out such processes are

implemented/followed/effective or not. Here comes the role of clinical audits, which I believe should be considered a priority on the outset, along with required guidelines to undertake these (W01D:4).”

In addition, establishing monitoring committees was considered important for managing patient safety in practice, taking into account developing what has already been existing so that they are suitable and capable of effective functioning. For participants, these committees should be tasked with steering and rule-making functions related to organising and managing patient safety, with associated mechanisms for enforcing relevant policy frameworks and directing the introduction and oversight of resources as well as improvement activities in practice. They recommended establishing committees for patient safety, clinical governance, quality improvement, morbidity and mortality, and medical complications and complaints to produce a systematic approach to patient safety management and improvement in practice, reporting accordingly through the top management level to the national level. As stressed by the following participant:

“Committees for patient safety, quality improvement, morbidity/mortality, clinical governance, medical complications and complaints should be established in health facilities to support the delivery of quality care. This should be a priority to ensure steady steps towards comprehensive patient safety improvements in Libyan hospitals (W01FP:21).”

Also, participants highlighted the importance of involving staff (e.g., hospital managers and administrators) in planning and decision-making processes relating to patient safety. In their view, conducting regular meetings and dialogues on patient safety would help optimise safe practices, enabling the identification of issues of concern related to patient safety as well as the development of solutions to address them effectively:

“Another approach to improving patient safety is involving healthcare staff, including managers in decision making related to patient care, advocating for patient safety and safe practices, etc. E.g., regular meetings/discussions about patient safety issues are so useful, from which outputs can be fed back into patient care decision-making so that safety practices can be maximised (W01FP:7; W01FP:13).”

Equally important was the perception that patient involvement would play a crucial role in enhancing processes and practices related to patient safety. Participants suggested developing mechanisms to actively involve patients in decision-making concerning their care and safety. This approach was seen as effective in ensuring accurate

diagnosis procedures and outcomes, improved self-management and treatment monitoring, safe use of medications, and effective reporting on care and/or treatment complications—ensuring their safety. As pointed out in the following data extract:

“Patients should be involved/consulted in shaping quality services [making care better and more patient-centred]. Involving patients in their care decision-making allows providers to be able to understand their needs effectively so as better services can be provided....It can also help identify and address any adverse events might occur during, e.g., diagnosis, treatment, medication administration, infection control process, etc (W01D:4; W01FP:7).”

Having adequate resources, including trained personnel and equipment, was deemed fundamental for building capacity to enable the delivery of quality care. Participants believed that highly skilled, trained staff working within an efficient team in a well-supported workplace could ensure quality care outcomes. They were also adamant that healthcare organisations should have functional medical equipment as well as constant supplies of drugs and medical materials to enable effective delivery of care services—the right treatment for patients at the right time. The following participants commented on resources as follows:

“Nothing can be achieved to bring about change in patient safety without having adequate resources, including competent staff, appropriate medical equipment, and a constant supply of medicine and medical materials. These have to be in place to allow good environment/working conditions in which patients can be provided with care safely and at a high level of quality (TH03M:30).”

Linked to above, there was convergence in participants’ opinions regarding the provision of appropriate support to enable healthcare professional to competently perform their jobs and continuously develop and improve their skills. Education and training in patient safety were seen as essential for all healthcare staff, including managers and administrators. This would enhance their comprehension of the significance of patient safety and empower their involvement in reinforcing patient safety practices and activities. Education and training, according to participants, should be combined by regular assessments and appraisals to ensure that education and training are appropriate and to identify weaknesses as well as opportunities for personal and professional development. The following data extract sheds light on the above as follows:

“An urgent priority to consider is to educate and train those across different levels of the hierarchy in hospitals about patient safety concepts to improve their commitment to patient safety. This should be placed on the patient safety

improvement agenda if we are to improve healthcare quality effectively in Libya (LH02M:2).”

Effective communication was perceived as critical to improving patient safety in practice (i.e., safety processes and practices). Participants opined that improving teamwork and interpersonal relationships among healthcare staff could contribute to sharing patient safety learnings and opportunities. They stressed that healthcare staff should have good interpersonal relationships and the ability to comfortably communicate and collaborate openly, especially with those in positions of authority (e.g., top management), to inform patient care and safety decision-making in practice:

“Communication, in particular teamwork and collaboration, are pillars of patient safety culture, including building interpersonal relationships and understanding relating to patient safety issues at/across different levels of hierarchy in practice so that they can be addressed effectively. This is a key to reducing chances of a breakdown in continuity of high-quality care services (LH02D:3).”

For what has just been alluded to above to work effectively, effective information systems were considered essential for monitoring patient safety in practice, including up-to-date IT, equipment, and other information management infrastructure. This was seen as important for improving communication, implementation and compliance with guidelines and protocols, healthcare processes and procedures, relevant data collation and analysis, and, most importantly, incident reporting and learning. As illustrated in the following data extract:

“The improvement journey should start with strengthening information systems and infrastructure within hospitals as a priority, including information technology and equipment to support patient safety management and improvement in hospital settings. This will help improve communication and monitoring mechanisms, implementation of protocols, and healthcare data and information collation and analysis to support patient safety improvements, etc (LH02D:3).”

7.6. Building national capacities for patient safety improvement in Libya

Participants indicated the need for building national capacities for improving patient safety in Libya through research and innovation, training, and education focused on patient safety.

7.6.1. Research and innovation

Participants believed that improving patient safety in Libya would only be possible with a robust research and evidence base—a backbone for patient safety improvement. Therefore, a comprehensive interdisciplinary programme of research was strongly suggested to support patient safety improvement in Libya. This was considered

important for understanding patient safety challenges and identifying priority areas and opportunities for improvements. According to participants, the outputs can inform the development and implementation of evidence-based strategies, particularly context-tailored, for improving patient safety effectively in Libya:

“Libya is still in its infancy stage when it comes to quality and patient safety, and so is research in such a field too....There needs to be a comprehensive research programme introduced by LMoH and its aligned institutions, supported and coordinated by WHO, targeting all aspects of healthcare, with the ultimate goal of patient safety improvement in the Libyan context. This should be considered a health system priority. If this is well developed and committed to, the patient safety improvement wheel can start pulling forward effectively (W01A:18; W01FP:25).”

Participants emphasised that such a programme should be strengthened by multifaceted efforts and endeavours from LMoH along with national resource, research, and monitoring institutions to provide leadership, commitment, coordination, and multi-pronged strategies. WHO participants showed readiness to play a vital role in research governance and capacity building in Libya, such as developing an agenda, determining priorities, conducting and commissioning research, and, importantly, mobilising resources required for what has been mentioned. The following WHO patient safety research programme advisor expressed WHO’ readiness and commitment to supporting patient safety research capacity building in Libya as follows:

“Through our regional research programme, substantial research expertise and support can be disseminated to Libya to help build capacities for national patient safety research, including agenda, priority setting, and resource allocation to support research activities jointly with LMoH and other national leading institutions in Libya (W01A:18).”

In particular, health policy and systems research, operational research, health services research, and implementation research focusing on the Libyan health system were broadly highlighted as priorities. These areas were considered fundamental to understanding the complexities and challenges associated with the health system, providing the basis for planning and implementing effective responses to challenges to the health system and patient safety. For the purpose of this section, examples of research priorities as suggested by participants will be presented herein in the form of direct data extracts (quotations). Following this, a comprehensive description of these priorities, including topics and potential outcomes based on participants’ views, is provided in Table 7.1.

Most participants were of the view that research into the aspects mentioned above would help produce a baseline understanding and situational analysis, offering a comprehensive picture of the health system and service status. This was perceived by the participants to identify the enablers and barriers to health system and service delivery improvement initiatives, taking into account contextual requirements:

“I strongly recognise the importance of research for the development and improvement of the health system of the health system in Libya. Health system and policy research is essential for evaluating the system as a whole and its outcomes, informing development and improvement initiatives....Research focusing on health system governance and management, organisation, and regulation, health service planning, human resources, HIS, etc., is highly needed in order to successfully develop a dynamic, effective health system in Libya that ensures high-quality outcomes meeting people's expectations and context needs to a high standard, especially in light of the fragility taking place. This is a priority for research in Libya to guide effective quality improvement and patient safety (LH02C:10).”

Other participants highlighted the significance of health system and policy research to inform health system and service delivery improvement initiatives in Libya:

"To me, addressing the health system's challenges including those related to quality and safety necessitates comprehensive health system and policy research targeting all aspects of the health system. There is a need to develop a baseline understanding of the current health system dynamics, including governance and regulation to enable the tailoring of improvement strategies that directly respond to the country specific needs and health challenges. I believe this will inform effective health services provision as well as policy and programme implementation, aligning with the national health strategy (W01FP:9).”

Moreover, some participants flagged the need for operational research for evidence-based improvement strategies:

"When it comes to evidence-based improvement, the current situation in Libya indicates a critical need for comprehensive research focusing on optimising, e.g., health resource allocation, strengthening healthcare delivery mechanisms, communication, medical equipment and technology, etc. This will help us evaluate and reform how our health system is organised, operated, and managed, mapping and identifying key areas where strategic changes and improvements are needed. That is, to strengthen health planning and decision-making, including the allocation and distribution of health system resources, which in turn reinforces efforts for quality improvement and patient safety in Libya, based on evidence and best practices (LH02M:8; W01FP:11; LH02M:14).”

Another participant resonated on the importance of operational research into the Libyan health system to enhance outcomes:

“A national health research programme needs to be introduced in Libya, targeting those critical aspects of human resources, health information systems, communication, and coordination mechanisms. Research in these areas can effectively inform and guide efforts towards improving health system planning and governance frameworks, contributing to effective performance and outcomes of the health system, services, and programmes. This will substantially reflect on quality and safety at all—it is all about evidence-based efforts hence why research is an urgent priority to achieve improvements needed in Libya (LH02M:12).”

In addition, several participants emphasised the need for research to be directed towards health services and service delivery in Libya to strengthen service delivery systems and mechanisms:

"As a priority, research is critical for identifying and addressing challenges to health services and service delivery in Libya. In-depth research enables the identification of factors leading to suboptimal healthcare systems and inadequate service delivery so that effective interventions can be developed and implemented to address them effectively, strengthening healthcare systems to ensure the quality and effectiveness of health services. We need comprehensive research focused on the performance of clinical practices, including measurement of the magnitude and burden of poor medical practices, for the identification of factors leading to and the root causes of unsafe care in Libya. Evidence to be generated will systematically help inform the development and implementation of policies, strategies, and frameworks for evidence-based, enhanced clinical practices and continuous quality improvement (LH02D:1; W01FP:9; W01FP:13; BH04M:27)”

Other participants raised the importance of prioritising implementation research to inform and guide the development and implementation of health programmes, including patient safety:

"Health system interventions and health programmes should be guided and informed by research and evidence to ensure effective integration and implementation into practice for better outcomes. Considering the current situation in the country, there is a need to assess the impact and influence of socio-economic, cultural, and political factors on the health system as a whole, as well as effectiveness and outcomes of health programmes, etc. Research is needed to identify system, provider, community and individual factors that influence the implementation of policies, programmes, and interventions in the Libyan health system. These are priorities for research to identify and address complex challenges to the Libyan health system, reinforcing the functions of healthcare systems and medical practices based on evidence for continuous

quality and practice improvement, with a focus on quality and patient safety (LH02D:3; W01FP:25; TH03M:30).

Table 7.1 provides a comprehensive description of research priorities based on participants' views, including types of research, topics of focus, and potential outcomes and outputs.

Table 7.1: Research Priorities Given by Participants for Improving Quality and Patient Safety in Libya

Type	Topics	Potential Output
Health Policy & Systems Research	<ul style="list-style-type: none"> ▪ The current status of the Libyan health system, especially in light of the contextual factors resulting from political instability. ▪ Health system planning, governance, organisation, and management, including regulations and leadership, and associated challenges. ▪ How health policies and statutes are prioritised, developed, and implemented to achieve the health system goals and overall health system strategy, including associated challenges. 	<ul style="list-style-type: none"> ▪ Creation of a baseline assessment and understanding of the context for planning and implementation of effective responses in light of context-specific requirements and needs. ▪ Identification of priorities for action as well as for the roll-out of further in-depth research for system and policy development and improvement. ▪ Evidence-based improvement initiatives targeting health system governance, regulation, organisation, and overall management that contribute to effective outcomes. ▪ Identification of the contextual enablers and hindlers for improvement thus customising actions and responses accordingly to ensure quality outcomes.
Operational Research	<ul style="list-style-type: none"> ▪ Operation and performance of healthcare organisations and factors influencing these. ▪ Effectiveness and outcomes of health programmes and interventions and associated challenges. ▪ Health system resource allocation and associated challenges. ▪ Issues associated with health workforces and human resources, health information systems, communication, coordination, equipment, and technologies, along with associated challenges. 	<ul style="list-style-type: none"> ▪ Enhancement of the quality, effectiveness, performance, and outcomes of the health system, services, and programmes, aligned with the aim of UHC and SDGs. ▪ Informing and guiding the planning, decision-making, and allocation and distribution of health system resources, with a focus on quality improvement and patient safety. ▪ Strengthening health information systems, coordination, communication, and inspection and oversight mechanisms. ▪ Identification of critical areas where proactive organisational and management improvement and change are needed.
Health Services / Service Delivery Research	<ul style="list-style-type: none"> ▪ How healthcare services are/can be better resourced, organised, and delivered and associated challenges. ▪ Issues associated with healthcare infrastructure and organisational capacities, including staffing, work conditions, and healthcare systems, processes, and protocols. ▪ The nature and extent of poor medical practices and associated outcomes, including factors contributing to medical errors and adverse events (e.g., infections), and effective strategies for addressing them. 	<ul style="list-style-type: none"> ▪ Generation of systematic data and information on the causality of harm associated with medical practices and measurement of its magnitude and burden (e.g., healthcare-associated infections). ▪ Development and implementation of stepwise and iterative investigative processes, systems, and mechanisms for the identification, control, and management of problems, malpractice, errors and adverse events associated with clinical practices. ▪ Development and implementation of policies, strategies, guidelines, tools, and frameworks for risk management and medical error prevention and control and to maximise safe practices through reporting and learning, etc.
Implementation Research	<ul style="list-style-type: none"> ▪ The system, provider, community and individual factors influencing the implementation of policies, programmes, and interventions. ▪ How health programmes and interventions are/can be integrated and provided in specific contexts of social, economic, political, system and environmental factors influencing their development and implementation. ▪ Models and tools for adopting and integrating interventions, policies, strategies, guidelines, and protocols into practice. 	<ul style="list-style-type: none"> ▪ Development and implementation of methods and tools for translating research outputs and evidence into policy and practice (e.g., informing policy and decision making and guiding development and implementation of safety programmes and interventions). ▪ Adoption and integration of evidence-based interventions and policies into practice for maximum effect on outcomes. ▪ Development and implementation of effective evidence-based strategies, tools, and protocols to support healthcare systems and medical practices for continuous quality improvement.

According to participants, research into the broad aspects of health system is considered on the background of health service delivery research, with a specific focus on quality improvement and patient safety, as shown in Figure 7.2. This aims to enable more specific research for examining patient safety challenges in Libya and for designing effective strategies to address these challenges effectively, considering broad contextual factors influencing the health system as a whole:

“Quality and patient safety research should be an important subset of a larger and more established health system research in Libya, as I mentioned, along with a focus on services delivery and organisational studies to explore and understand the shortcomings and malfunctions of healthcare systems and services delivery, thus studying the system as a whole (W01A:6; W01A:22).”

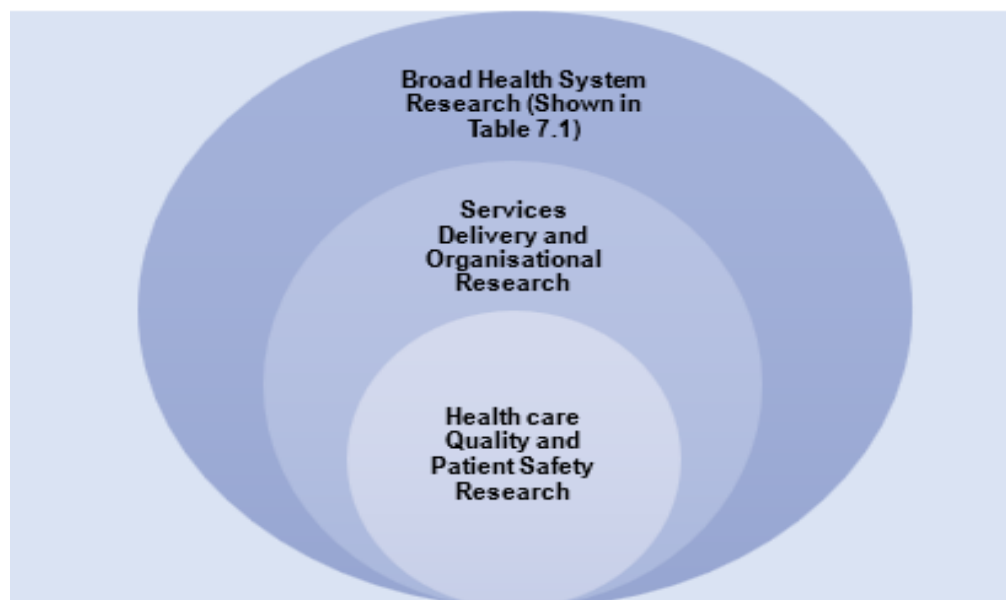


Figure 7.2: Participants' View of Patient Safety as a Sub-area of Health System Research in Libya

Participants believed that patient safety should be subjected to systematic research in Libya. There was convergence in several participants' views that systems approach and thinking concepts should be prominent within patient safety research in Libya. This was deemed vital for understanding and addressing patient safety challenges in the broad context of the complex, dynamic systems comprising healthcare in Libya through a holistic approach—i.e., at the micro (clinical teams), meso (facilities), and macro (health system) levels:

“One important thing I would mention herein is that the patient safety research paradigm globally has shifted focus towards using the systems approach/thinking in addressing health system challenges, including patient

safety. This should gain importance in Libya too as a health system research approach to address patient safety challenges....Research using system theories in patient safety can produce a holistic view of patient safety across the system as a whole, studying it from the perspective of multiple core areas/dimensions, such as policy, communication, decision-making, planning, and more. Incorporating the systems approach in patient safety research in Libya at the outset is useful to comprehensively understand safety issues systematically so effective actionable responses can be produced to deal with patient safety challenges from system and policy to health facility levels (W01A:22).”

In addition, participants emphasised establishing a national structure with a defined policy to act as a governing body for the portfolio of patient safety research in Libya, providing leadership for facilitating conducive engagement between LMoH, WHO, and national leading institutions in the planning and development of patient safety research. To work effectively, participants were of the opinion that a funding scheme should be set up to resource patient safety research, with a human capacity that should not be foregone, including research competencies strengthening, such as research commissioners with the skills needed to perform research—facilitating an environment conducive to research to take place. This was considered important for active inter-level interaction in research development and implementation to bridge the gap between research and practice:

“Research in patient safety in other countries is highly prioritised and placed as an approach to patient safety improvement, e.g., UK....This is what should be seen in Libya too....There is a need for establishing a national body for patient research that should work jointly with LMoH, WHO, and other national agencies involved in research. This body should be tasked with research governance, including implementation and follow-up on research activities, stimulating knowledge and learning for implementation, and translation of outputs into policy and practice for patient safety improvement in Libya (W01A:18).”

Furthermore, the importance of translating research outputs into policy and practice for health system development and improvement, including patient safety, should be recognised and well committed to nationally. Participants suggested preparing an action plan endorsed and sustained nationally to consolidate efforts towards translating and utilising research outputs ‘actionable messages’ into clinical practice and systems change to optimise quality and safety. To support this, WHO participants showed commitment to providing technical support and research expertise for

stimulating the application of research outputs into policy and practice effectively in Libya, as illustrated in the following data extract:

“WHO can mobilise its facets of expertise to support Libya in translating patient safety research outputs [if this is to be] into effective actions into policy and practice to inform patient safety policy- and decision-making as well as provide accurate evidence and knowledge to guide health system strengthening and QIPs in Libya (W01A:18; W01A:22).”

7.6.2. Education and training in patient safety

Participants highlighted the need for medical education reforms in Libya to optimise professional competencies related to patient safety. They emphasised that the current medical and nursing curriculum in Libya should be updated to keep pace with up-to-date content and learning material based on international standards and best practices. Compounding the issue was the inadequate national medical and nursing education accreditation and assessment methods in Libya, which were perceived to need to be strengthened and updated to meet relevant international standards. As pointed out in the following data quotation:

“The quality of medical and nursing education in Libya is poor, including major problems in medical educational institutions, outdated medical and nursing curriculum, poor infrastructure and facilities, inadequate educational assessment strategies, poor medical education accreditation, and poor linkage between continuing medical education programmes and professional career development, which demonstrates inadequate health and medical education inputs, hence the poor outputs. This requires comprehensive reforms that should be introduced by LMoH in collaboration with the Ministry of Education, and [WHO can support this technically. The reforms should be in pace with the international best-practice standards, e.g., through benchmarking and improvement partnerships in the field to ensure coping with changes and advancements globally (LH02D:3; W01FP:23).”

Participants also noted that patient safety had not been realised in the Libyan medical education—not prioritised nor incorporated into the medical and nursing curriculum and staff development programmes. They expressed that patient safety should be recognised as an integral part of medical education in Libya (both clinical and theoretical health education). For example, the following participant commented:

“Medical and nursing education in Libya should incorporate sciences underpinning patient safety as a core element. It should be a core part of national medical and nursing education in Libya. Medical students/professionals need to be educated on concepts relating to patient

safety. This will help raising awareness about safe practices and creating a positive culture of safety in practice (W01FP:9; W01A:22; W01FP:24).”

WHO participants expressed commitment to providing technical guidance for developing a national patient safety education and training programme in Libya, covering formal, informal, and continuing medical and nursing education. They referred to the WHO Patient Safety Curriculum Guide, which should be integrated into the teaching, learning, and training materials of medical and nursing educational institutions in Libya. This was considered critical to promoting understanding and knowledge about patient safety among undergraduates, apprentices, postgraduates, and professionals. That is, contributing to building a competent, skilled, and compassionate health workforce with sufficient knowledge to practice safely. The following participant underlined the above as a prerequisite for strengthening and sustaining safe clinical practices in Libya:

“The WHO Patient Safety Curriculum Guide for Medical Schools had been widely adopted in many countries globally but Libya. The same should be seen in Libya to keep pace with advancements and changes in the field globally....This should be placed as a priority if we are to start addressing patient safety challenges at source in Libya. Using this guide, I strongly recommend developing a national patient safety education and training programme covering all levels of medical and nursing education in Libya. This can be supported by WHO effectively at all levels. Achieving so will help engrain the necessary understanding, behaviours, attitudes, skills, and knowledge of healthcare workforces about delivering high-quality, person-centred care and safe healthcare (W01FP:21).”

To effectively achieve this, national leadership and support were considered essential. Participants stressed the need for LMoH to introduce a robust national mechanism with strong policy and guidelines, combined with appropriate funding, to build capacity for education and training in patient safety. This was perceived to serve as a catalyst for liaison between LMoH, WHO, academic, professional, monitoring, and research bodies, and healthcare leaders to achieve meaningful convergence in supporting patient safety education and training in Libya. As illustrated in the following data extract:

“National leadership, support, and mechanisms, including physical/financial resources for patient safety education and training, should be in place. A clear policy and guidelines should be set out by LMoH and leading agencies to support patient safety education and training....LMoH should lead the task in facilitating liaison between with WHO, providers, and national allied institutions

in building capacities for patient safety education and training therein (W01D:4; W01FP:26).”

In education and training, participants emphasised upon focusing on core patient safety competencies, such as those outlined in WHO guidelines. This includes patient safety core-based knowledge, skills, and attitudes competencies, such as culture of change, teamwork, and communication; risk management; patient-centred care; understanding systems, human factors and complexities in patient care; team-based problem-solving and community-based learning; emergency management; and adverse event prevention. This focus was considered paramount for making effective contributions to promoting patient safety mindset on an ongoing basis through education and training and, thereby optimising safe practices effectively. As expressed by the following participant:

“There is a set of core patient safety competencies outlined in WHO guidelines that have been widely incorporated into relevant education and training, including teamwork, communication, risk management, patient-centred care, human factors, a culture of change, team-based problem solving, community-based learning, and so on. These should be well embedded and integrated in medical and nursing curriculum and professional development programmes in Libya to establish safety mindset among healthcare professionals to maximise safe practices (W01A:6).”

In addition, participants highlighted the importance of providing opportunities for continuous practical and scientific development in patient safety for both students and professionals. Suggestions included optimising safe practices through simulation-based education and learning, hands-on training, active student participation in discussions, and the application of team-based problem-solving techniques. Besides, allowing opportunities attending courses, seminars, workshops, and conferences related to patient safety was also considered paramount for medical and nursing students and professionals to keep pace up-to-date with patient safety changes and advancements globally. Such professional development opportunities were perceived as necessary for achieving a leap in patient safety improvement efforts in Libya:

“Medical education needs to be upgraded. Up-to-date learning advancements, including simulation-based education and learning, hands-on training, involving students in discussions, and problem-solving, etc., need to be incorporated into medical education in Libya to reinforce safety skills, knowledge, and attitudes of medical and nursing students and professionals. Also, opportunities for attending courses, seminars, symposiums, and conferences should be allowed for students/professionals as a means to further develop/improve their

knowledge and skills in patient safety to keep updated with advancements and changes in relation to patient safety, thereby enabling continuous improvement in safe practices (W01A:18).”

Linked to education and training, participants stressed the importance of strengthening professional licencing and accreditation processes in Libya. This was seen as necessary to ensure healthcare professionals are adequately examined and assessed based on their qualifications and experience to be appropriately licenced and accredited. Participants recognised the importance of licencing and certifying healthcare professionals prior to commencing practice based on patient safety competencies. This was considered important for ensuring those in practice have appropriate knowledge and attitudes to practice safely so that safe practise are increased and the risk of patient harm is minimised. The following data extract sheds light on the above as follows:

“One of the issue worth touching on is professional licencing and accreditation in Libya, which is inadequate. Medical licencing, certification, and accreditation in Libya should be brought to attention as such practices truly influence patient safety. In doing so, the issue of transparency should be ensured to avoid corruption in licencing and/or recruitment processes, and LMoH needs to put in place strong mechanisms to ensure what I have just mentioned....The other point to mention herein is that I think knowledge and competencies of safety practices need to be considered in processes of professional licencing/certification so professionals are examined and assessed according to their knowledge and competencies of patient safety, and so on. This is another point that should be considered priority in Libya to ensure effective licencing and certification of competent healthcare professionals (W01FP:15; W01FP:19; BH04M:27)

Equally important, participants emphasised the need for a well-defined national professional code of conduct/practice in Libya to increase medical accountability in practice, given its influence on patient safety:

“There is currently no national code of conduct for healthcare professionals in Libya, which has led to a mess in practice, including the risk of a lack of accountability in medical practices. This should be a priority area to be looked at to optimise patient safety practices in hospitals (TH03M:30).”

7.7. Chapter summary

In response to the research question regarding strategies needed to address patient safety challenges in Libya, this chapter presented a composite depiction of the strategies suggested by participants. These strategies aim to address patient safety challenges in Libya through interagency working. At the outset, establishing robust

mechanisms for developing effective interagency working in patient safety was considered fundamental to leading patient safety improvement efforts in Libya. Initially, findings revealed the need for developing an action plan for producing an approach to patient safety management during emergencies in Libya, emphasising the implementation of WHO frameworks related to patient safety. Equally important was the need to rebuild the Libyan health system to prioritise patient safety—bringing patient safety to the forefront. This includes promoting political accountability in the context of patient safety, national leadership to improve patient safety, and clinical governance for quality improvement and patient safety. Furthermore, building and strengthening national capacities for research, education, and training in patient safety was highly recommended to transform the Libyan health system into a quality and patient safety-driven one.

The strategies discussed throughout this chapter are integrated into the development of a comprehensive, context-lens framework for improving patient safety in Libya through enhanced interagency working, as enunciated and expounded upon in the following chapter.

Chapter Eight: Discussion

8.1. Introduction

A comprehensive discussion of findings derived from data analysis, interpreted in light of the existing literature, is provided throughout this chapter. In summary, the interviews involved 30 participants, comprising WHO health system experts (n = 17), national health system policymakers (n = 9), and hospital patient safety managers (n = 4). A system of alphanumeric codes and pseudonyms was used for participants according to the research setting and its number, participant professional title, and numerical order of the interview, as explained in **Section 4.4.4**. Additionally, a review of 13 policy documents related to quality and patient safety in the participating hospitals was conducted to assess their contributions.

The data analysis yielded a comprehensive understanding of patient safety issues and potential strategies to address challenges in Libya. The focus here is on critically discussing the significance, implications, and interpretations of the findings, with comparisons drawn from existing literature. Despite the importance of all findings, this chapter emphasises key significant results from this novel study in Libya, presented under separate subheadings for detailed exploration and discussion. To this end, this study provides a valuable contribution to patient safety research in Libya, not only because of the high level of detail that the data provided but also because of the population that the study described (e.g., WHO). Informed by such discussion, conclusions are drawn, and recommendations are foreshadowed for further consideration in the following chapter, together with an indication of a comprehensive practical action that should be taken to inform the development of appropriate solutions for patient safety complexities in Libya through enhanced interagency working.

8.2. Statement of aim, research question, and objectives of the study

To summarise, aligning with the three overarching goals outlined by the WHO for health system performance: promoting good health, responsiveness to population expectations, and ensuring fairness in financial contributions (WHO, 2000), the aim of this study was to improve understanding in two key areas:

1. Patient safety organisation, management, and concerns in Libya, explored through the perspectives and experiences of national health policymakers and managers; and

2. Interagency working in patient safety throughout different levels of the Libyan health system, encompassing WHO's contributions to improving patient safety in Libya and effects on the organisation and delivery of safe care in Libya.

The current study's key purpose and intended outcome were derived from three key interrelated concepts. Primarily, patient safety is a multidimensional concept; therefore, synthesising the views of different interest groups at different levels, based on the perspective of the systems approach, is necessary to augment and enhance patient safety practices in Libya. Second, the participation of WHO in the present study helped draw an informed judgement on addressing the ambiguity and multi-dimensionality of the patient safety issue as well as inform the priorities and basis for patient safety improvement in Libya (Flott et al. 2019). Third, and of greater significance, this study addresses the lacuna in scientific research within the context of Libya. It marks the initial substantial contribution of empirical data towards understanding patient safety in Libya. By illuminating the challenges to patient safety, the study introduces a locally adapted framework for improving patient safety through enhanced interagency working, with the ultimate goal of ensuring the effective organisation and delivery of quality care in Libya.

Throughout this chapter, the findings are methodically considered and discussed in conjunction with each of the following research questions:

1. How is patient safety operationalised, organised, and managed within the Libyan health system?
2. What patient safety challenges and concerns have been perceived by Libyan health decision-makers, policymakers, and healthcare managers?
3. How does the interplay and interface between WHO and the Libyan health system's patient safety strategy affect the organisation and delivery of safe care in Libya?
4. What strategies can be effectively employed to address challenges to patient safety in Libya?

That is, a structure to guide the discussion, ensuring a systematic presentation of the data and findings in relation to the specified research questions. This approach facilitates a coherent analysis and discussion of the results, allowing for a direct

examination of how findings address the corresponding research question, with interpretations and comparisons drawn from existing literature.

8.3. How is patient safety operationalised, organised, and managed within the Libyan health system?

According to WHO (2007), a proficient, well-functioning health system ensures access to high-quality, efficient, and safe healthcare services. However, the current study reveals complex challenges across various components of the Libyan health system—such as governance, leadership, workforce, medical supplies, technologies, service delivery, and financing (WHO 2010b)—leading to poor quality and patient safety outcomes. These deficiencies significantly weakened service delivery and management, contributing to patient safety being highly unregulated and unorganised across the Libyan health system. This could be attributed to the fact that patient safety, viewed from a broader system perspective, involves considering the numerous ways in which the health system may malfunction—a scope that is inherently more extensive than the acceptable modes of operation to ensure high-quality healthcare services (Vincent et al. 2014; Feachem et al. 2017). This indicates that ensuring patient safety in Libya involves going beyond specific metrics and exploring feasible ways to guide and oversee the system's functioning to ensure optimal patient safety standards.

According to findings, the perturbations in the Libyan health system are primarily due to a lack of clear vision, strategic planning, adequate regulations, and effective legislation. Additionally, weaknesses in goal setting, policy development, supervision, and inspection—referred to as 'stewardship' by WHO for its role in steering and regulating health systems (Olmen et al. 2012)—along with poor infrastructure and resources, have compromised the Libyan government and its MoH's regulatory capacities and decision-making regarding patient safety in Libya. Supported by multiple studies, these factors are identified as the primary deficiencies in the Libyan health system, posing heightened risks of harm to patients, and in severe cases, leading to loss of life due to substandard clinical practices (SARA | WHO 2017; UNSMIL 2017; Elmontsri et al. 2018c). Therefore, urgent reforms are imperative, targeting various system levels to strengthen the entire system and ensure the delivery of quality care to all citizens

8.3.1. Political, national, and local health leadership commitment to patient safety

The study highlights a significant lack of leadership commitment at all levels to prioritising patient safety in Libya. The findings reveal that leaders at political (state and government), national (LMoH), and local (healthcare organisation) levels are not adapting to the evolving and challenging context of the Libyan health system. Over the years, the Libyan health system has suffered from political and national neglect, denial, and a lack of developmental will, overlooking the necessity for a modern healthcare system to ensure the effective delivery of quality services. This observation aligns with a recent publication evaluating the Libyan health system (Çelik and Taguri, 2021), suggesting the government and political efforts should focus on fostering an explicit vision as well as a strong leadership and commitment to reforming the system to ensure improved healthcare quality outcomes.

As per the findings, it is often difficult to know who is or can be correctly held accountable for which decision or outcome for patient safety. This suggests that roles and responsibilities in patient safety accountability across the health system have not been defined. As a result, achieving improvements in patient safety could have proven to be difficult in Libya. There is a leadership's lack of accountability and responsibility for placing patient safety as a national health system priority. To date, national health system leaders have not placed any emphasis on or shown an explicit commitment to patient safety, thus undermining the organisation and management of patient safety across the system as a whole. This indicates that moving towards efficient quality and safer care has not yet galvanised significant interest at the political level. This is consistent with the study findings of Rages (2014) that demonstrated that Libya's political ecosystem does not prioritise patient safety hence the perceived poor outcomes.

Consequently, patient safety in Libya has not been adequately enforced through the development and implementation of necessary national legislation and legal mechanisms, extending down to the level of healthcare organisations. The palpable absence of clear national legislative and regulatory frameworks in Libya stymies patient safety, lacking definition in scope, objectives, and roles. This gap contributes to the absence of structured mechanisms for developing and implementing QIPs, resulting in an unregulated and disorganised patient safety landscape in the Libyan

health system. This aligns with similar findings in WHO EMR countries, such as Lebanon and Jordan (Alameddine et al., 2015; El-Jardali and Fadlallah, 2017a).

Notably, insufficient leadership commitment to patient safety at the national level, particularly within the LMoH, has led to inadequate strategic planning and decision-making for patient safety across the health system. This deficiency directly and indirectly contributes to chaos and exacerbates issues of unsafe care in Libya. Consequently, the improvement of patient safety has not progressed within the Libyan health system. This underscores the vital role of strong leadership support in the success of patient safety programmes, as reported elsewhere (Lee et al., 2023b; Murray & Cope, 2021; Silva et al., 2016b; West et al., 2015b). Therefore, for patient safety to advance in Libya, robust leadership support, especially at the national level, is imperative.

Furthermore, Libya lacks national monitoring and supporting structures for quality improvement and patient safety, responsible for ensuring compliance with safety protocols and demonstrating efforts toward QIPs in practice. This absence serves as a barrier to effectively institutionalising and enhancing patient safety, thus hindering the development and implementation of evidence-based clinical guidelines. Additionally, the absence of national patient safety programmes in practice, such as patient safety monitoring committees, and the limited involvement of healthcare managers in national patient safety decision-making further contribute to these challenges. Similar findings have been observed in research conducted in various WHO EMR countries (WHO, 2015e; Aljuaid et al., 2016; Elmontsri et al., 2017a; Alhawassi et al., 2018; Hamid et al., 2020).

In addition, an absence of national health care accreditation structures, programmes, and standards to strengthen the performance of care systems and support continuous quality improvement emerged as a concern. According to the findings, Libyan healthcare providers are not mandated to undergo accreditation, nor are they evaluated or monitored against performance and accreditation standards or indicators for stimulating performance and quality improvements. Such issues have combined to pose further challenges to healthcare systems in Libya. This could be a significant factor contributing to the lack of accountability among Libyan healthcare providers in ensuring and continuously improving the quality of care. The absence of an

environment that prioritises patient safety may be a key reason why it is not consistently upheld. This finding is comparable with WHO report findings about the kind of contribution health care accreditation has in ensuring the delivery of quality care in LMICs (WHO 2022a).

Furthermore, there is insufficient resource allocation for research at the national and political level to help tackle unsafe care challenges in Libya. This has served as an obstacle for the identification and understanding of challenges to patient safety in Libya, thus making patient safety improvements extremely challenging. Equally importantly, the findings conveyed a negative impression about the lack of education/training resources for all patient safety-related healthcare professionals in Libya. Libya has yet to introduce education and training programmes in patient safety, encompassing all levels of formal and informal medical education, as well as on-the-job training. This has negatively impacted patient safety, with a significant number of healthcare staff lacking the necessary competencies to practice safely and uphold accountability in medical practice. It is worth noting that the inadequate support for patient safety research is not exclusive to Libya but is prevalent in many developing countries as well (Elmontsri et al. 2018d; Yang 2018b; Kang et al. 2021b; WHO 2021b).

Furthermore, poor financial resource allocation and misuse in the Libyan health sector has been a health system problem, which has reflected adversely on patient safety (e.g., no national budgets dedicated for patient safety activities). According to findings, poor financial plans and associated decision-making for health system financial resource administration have threatened the efficiency of the system, contributing to suboptimal quality healthcare services. While Libya has sufficient national resources for the health system allocated by the government, LMoH lack the know-how or expertise to manage these resources appropriately so that the provision of quality health services can be ensured. This could have been one of the contributing factors for the lack of QIPs in Libya.

8.3.2. Governance and organisation

The study findings show that health system governance in Libya is highly fragmented and loosely regulated, which has undermined the system's capacity and capability to respond effectively to patient safety challenges. The system, particularly at the service delivery level, misused power, undermining its capacity to provide high-quality care

services. This misuse stems from the system's poor structure, inefficient organisation, and ineffective leadership. This resulted in various failures in accessibility, availability, quality, as well as the referral system across the country, resulting in lower quality outcomes. These findings are consistent with those resulting from the Libyan health system assessment work by SARA | WHO (2017b); UNMAS | WHO (2020b); and Çelik and Taguri (2021).

Thus, the system, as a result of poor governance and organisation, often fails to align its functions and service delivery arrangements towards ensuring the provision of high-quality healthcare services. This demonstrates an urgent need for reforming system-wide governance arrangements in order to accelerate the necessary change in health system outcomes, including quality and patient safety. This situation is not unique to Libya. Research conducted in Indonesia, Singapore, Malaysia, the Philippines, Thailand, and Vietnam has shown similar trends (Ciccone et al. 2014; Naher et al. 2020; Lokot et al. 2022a).

This study's findings illustrate that extreme adversity in Libya has weakened health system governance and organisation capacities, resulting in health services to frequently come to a halt. Nationwide, the complex political turmoil in Libya has limited governance and organisation capacity, preventing the health system from delivering quality healthcare services. This result is in congruent with the findings of a recent publication that indicated Libya's complex political situation as a major barrier to health system governance and policy implementation (Allen et al. 2022b). Extreme adversity consequences on health systems and patient safety have also been documented in multiple studies (Leatherman et al. 2020; Letaief et al. 2021; Neilson et al. 2021; O'Brien et al. 2022).

Furthermore, the prolonged political instability is not the only concern that has had enormous implications for the health system and hence patient safety in Libya; the COVID-19 crisis also overburdened the system as a whole. The capacity and capability of the system to respond to the COVID-19 crisis had already been debilitated by more than a decade of political turmoil, with a serious obstacle to responding to the pandemic being the weak and fragmented governance of the system. This is relevant to many countries at all levels of development (Abbas et al. 2021; Al-Shaya et al. 2021; Hignett et al. 2021; Rodríguez and Hignett 2021; Arsenault et al. 2022a).

Issues alluded to above have combined to result in a destructed infrastructure, disregard for national health system frameworks, delivery system breakdowns as a result of a shortage of human resources and medical supplies, and vulnerable referral systems. This situation is particularly aggravated in remote and rural areas where healthcare facilities are not well prepared to effectively address emergency challenges. Owing to successive system governance failures, prioritising and improving patient safety in Libya have involuntarily become particularly difficult without political and national leadership commitment and support. This finding is in aligned with the observations of Lachman et al. (2020) related to challenges to improving patient safety in developing countries.

Furthermore, a lack of national oversight emerged as a concern in Libya. A key reason behind this is that the Libyan health system has been centrally managed by two separate health ministries in an uncoordinated manner as a result of political instability. This has resulted in conflicts in the way healthcare providers are regulated and managed, leading to healthcare services being operationalised and delivered without monitoring at the point of delivery, which has a high potential to breach patient safety. Another consequence is that multiple provider organisations have operated with varying degrees of independence from the system regulator without systematic oversight. This have posed a problem as an emphasis on the quantity of services as opposed to the quality of services, when it comes to patient care, has proliferated among many healthcare organisations in Libya, contributing to patient safety challenges. These findings are comparable to those found in Libya by Rages, (2014) and Elmontsri et al. (2018b).

Linked to the above, cross-system communication and coordination were lacking, resulting in breakdowns in regular monitoring, reporting, and following up across the system as a whole due to unreliable systems and mechanisms for effective top-down and bottom-up interfacing. This has resulted in poor regulation of service provider organisations, which are already challenged by nature, especially in chaotic settings with very limited capacities for operation. According to the findings, flaws in communication and coordination reflected negatively on the referral system and procedures in Libya, undermining effective transmission and dissemination of patient information during referrals. This suggests that, as a result of that, patient care and safety could be put at risk of harm. Issues associated with communication and

coordination in the Libyan health system have been identified in multiple WHO reports as a factor behind challenges to the current system's functions and quality (UNMAS | WHO 2020; WHO 2022).

8.3.3. Patient safety regulation

The findings indicated an increasing concern among health system policymakers and healthcare managers about patient safety regulation across the health system. One of the striking findings for this relates to the absence of regulatory frameworks for ensuring safe, compassionate, and standard-driven care in Libya. This is evident in the perceived absence of comprehensive national direction on patient safety, encompassing explicit policies, established standards for care quality, strategic plans dedicated to quality improvement and patient safety, and a national patient safety programme that includes patient safety committees. This constitutes a notable factor contributing to patient safety challenges in Libya, underscoring a deficiency in recognising the significance of patient safety at the national level, particularly within the LMoH. Similar findings are documented in other developing countries (Abu-El-Noor et al. 2017; Elmontsri et al. 2017c; Elmontsri 2019b; Konlan and Id 2022; Lokot et al. 2022).

The first quality and patient safety mechanism in Libya was initiated only in 2009, following a new awareness that promoted LMoH to establish a quality and patient safety unit at the ministry and healthcare facility levels. This followed a series of governmental decrees (No. 62/2009, No. 71/2009, and 76/2009) to guide the development/enforcement of initiatives related to quality and patient safety in Libya. Since then, attention has not been given to shifting a focus towards prioritising patient safety in Libya, as policymakers and healthcare providers and managers have not been well committed to patient safety, notably as indicated by the study findings. According to the findings, patient safety in Libya is still in its early stages, and any progress has been perceived as regressive. This underscores the pressing need for a new patient safety paradigm in Libya, transitioning from the current perception of quality and patient safety as a 'luxury' to recognising it as a public health priority.

Additionally, the study highlights a significant alignment in the findings, pointing to insufficient human capacity building at the national level. The inappropriate selection of personnel for executive, senior, managerial, and administrative roles within the LMoH exacerbates a leadership failure at the national level in ensuring patient safety.

Many national directors, managers, and officials, including those overseeing patient safety at LMoH, lack adequate knowledge of governance and management responsibilities, and often fall short of possessing the necessary leadership capabilities. The selection process for individuals working at the national level is flawed, as it does not prioritise leadership characteristics, efficiency, competence, and dedication required for efficient task execution. Instead, their selection is often based on personal connections, loyalty, and dedication to those at higher levels, such as the Minister of Health.

Linked to the above, a national patient safety strategy, as the case in many countries (WHO SEARO 2014; Abu-El-Noor et al. 2019), that defines the scope of patient safety, sets out the national objectives for patient safety, clarifies roles and responsibilities related to patient safety across the system, and supports national QIPs in Libya is lacking. This finding aligns with research conducted in Palestine, Egypt, Lebanon, Saudi Arabia, and Qatar, which highlighted a lack of clear patient safety policies as a contributing factor in suboptimal patient safety (Albalawi et al., 2020b; Alfaqawi et al., 2020; El Shafei & Zayed, 2019; El-Jardali & Fadlallah, 2017b; Qoronbleh, 2021).

In addition, the findings indicated that Libyan healthcare organisations are not mandated by legislation and regulations to implement patient safety policies, systems, or strategies. As a result, there is no accountability and a lack of clarity on national mechanisms to introduce effective strategies for improving patient safety. This national health system leadership failure might have been a leading reason behind the lack of healthcare organisations' management and leadership commitment to patient safety. This finding corresponds with findings of Rages (2014) who pointed out that legislative mandates for Libyan healthcare providers to develop and implement patient safety policies, strategies, and systems have not been in place yet. This situation is not unique to Libya, other developing countries also relate (Otero et al. 2017; Yang 2018). As a result of the absence of national patient safety regulatory frameworks, there has been a spread of several (disjointed) pieces of minimum standard patient safety policy documents formulated and self-organised by healthcare organisations, although many of which primarily focus on quality broadly rather than patient safety directly (Section 5.6). Patient safety, however, is considered among healthcare providers as one specific aspect of quality, so it is not visualised in isolation. According to the findings, these policy documents are principally located in the participating hospitals. There are

potential limitations on two fronts. Firstly, the minimum standards set out for quality assurance (on a broader scale) may not align or equalise with those expected for patient safety specifically (Mitchell, 2008; Young & Smith, 2022). Secondly, since these policy documents are currently exclusive to two hospitals, there is a risk that the broader health system may miss out on opportunities to enhance its overall standards of care and safety outcomes. However, it is important to note that this interpretation may not be definitive.

Nonetheless, the findings revealed a concern over guidelines not being implemented in a systematic way. The key reasons for this, according to the findings, are twofold: a lack of healthcare staff's confidence in the guidelines, or they deem the guidelines as either irrelevant or disruptive to their practices, thus ignoring them. Similar reasons have also been identified in many studies as factors behind implementation failures of patient safety guidelines in practice (Vaismoradi et al., 2020b). This critical finding indicates a clear need for education and training interventions targeting healthcare staff to raise their understanding and influence upon patient safety and awareness of their role in bringing about change in their workplaces.

8.3.4. Organisational factors leading to patient harm in Libya

The findings suggested that most patient safety incidents in Libyan healthcare organisations are not made deliberately, negligently, or through serious incompetence, but rather through providers normally working in inadequate systems. This argument is usefully supported by (Braithwaite et al. 2017). Patient safety concerns in Libya are various, ranging from security incidents, misidentification of patients, HAIs, medication errors, diagnostic errors, surgical-site and postoperative complications falls, communication errors, and hospital-acquired pressure ulcers. These safety concerns are comparable with those reported in studies undertaken in Egypt, Oman, Yemen, Tunisia, and Malaysia (Al-Mandhari 2015; El-Asady et al. 2018b; Kenawy and Kett 2019b; Khalid et al. 2022).

Factors contributing to the identified concerns, according to the findings, include human factors (lapses, slips, and violations) and system factors (latent failures). The majority of patient safety concerns and contributing factors identified in Libya are commensurate with those reported in Europe, Latin America, and Aisa (Brunsveld-Reinders et al. 2016b; Tanaka et al. 2019; Khalid et al. 2022; WHO 2022d). Unlike other industrialised nations, one of the significant patient safety challenges in Libya is

the inadequacy of national infrastructure and structures that have not been capable enough to manage quantifiable data and information related to healthcare, including patient safety to help inform improvements in patient safety. This has also been reported elsewhere (Global Health Cluster 2020a). Such a data and information management practice to guide improvements in patient safety is commonly prioritised in high-income/developed nations, such as the UK and Australia (Darzi 2022) (Yu, Flott, et al., 2016b).

8.2.5.1. Human factors

The study findings reveal that patient safety incidents in Libyan healthcare practice are often linked to human factors, encompassing, but not limited to, slips, lapses, violations, and mistakes made by staff in clinical practice. These may result from myriad factors such as forgetfulness, aberrant mental processes, carelessness, inattention, negligence, poor motivation, recklessness, or a lack of competencies and knowledge (Reason 1990; Hignett et al. 2015). Lapses are often attributed to attentional failures, while violations take place in occasions where staff consciously diverge from safe operating procedures, standards (e.g., SOPs), or rules (Reason 2000; WHO 2013; Carayon et al. 2015). Mistakes can arise due to poor application or non-application of appropriate rules, often stemming from a lack of professional competency and knowledge.

Notably, the study identifies human factors contributing to patient safety incidents, including inadequate knowledge, a lack of skills and experience, or an appropriate attitude to practice safely as a result of patient safety competencies that are crucial for fostering a safety culture in practice. Deficiencies in skills and knowledge extend to performing clinical procedures accurately, prescribing the right drugs, preventing cross-infection, and other essential aspects. These findings align with studies in Asia and Gulf countries, indicating a lack of knowledge and skills among healthcare staff in clinical procedures, accurate patient assessments, safe use of complex equipment, and infection prevention and control (Harrison et al. 2015b; Graham and Eslami 2019; Kang et al. 2021b). The study attributes the lack of patient safety competencies in Libyan medical practice to inadequate education and training on safe practices and a poor skill mix among qualified healthcare professionals. Similar issues are reported in other WHO EMR countries, including Egypt, Sudan, and Jordan, emphasising the

need for improved education and qualifications among healthcare professionals (El-Shazly et al. 2017; Thomas et al. 2017; Ta'an et al. 2021).

Additionally, a significant human factor problem emerged in the study related to slips, lapses, and violations attributed to a 'botherless' attitude among healthcare staff, resulting in a lack of attention and concentration during the processes of care provision to patients. Instances of healthcare staff failing to follow protocols or taking shortcuts during clinical procedures are reported. Similar trends are observed in various countries, including Kuwait, Egypt, Saudi Arabia, and Jordan, where nurses' failures to follow orders or protocols, performance lapses, and lack of awareness of proper procedures contribute to medical errors (Ahmed et al. 2019; El-Shazly et al. 2017; Al-Harkan et al. 2020; Hammour and Jalil 2016).

In response to these findings, a key strategy to address human factors issues would be to enhance staff education and qualifications. However, this alone may be ineffective to address issues associated with 'botherless' attitudes of healthcare staff in practice. Another strategy could involve the introduction and the indentation of explicit guidance documents for clinical procedures, including decision trees and process maps detailing each patient care process.

8.2.5.2. System factors

System factors contributing to patient safety concerns arise from decisions and actions made by the healthcare organisation's top management as well as developers and designers of procedures and processes (Reason 1990; 2000). System factors can be employed to construct a defensive system aimed at preventing errors or minimising their impact. Put succinctly, human factors frequently act as a trigger for incidents arising from organisational and systematic processes—whether human or mechanical—that breach the comprehensive defences of a system or a set of interlinked systems. Three primary system factors emerged to lead to unsafe care problems in Libyan medical practices, including the absence of clinical governance, poor management leadership support, inadequate financial and physical resources, and poorly designed healthcare facilities.

The absence of clinical governance (defined in Section 1.2.2.2) is a significant system factor contributing to poor clinical practices and medical accountability in Libya. According to the findings, Libyan healthcare organisations lack effective quality and patient safety monitoring systems, including incident reporting, risk management, and

clinical auditing—systems to manage patient safety and proactive measures to ensure patients face less risks during care provision. These issues have combined to hinder producing a comprehensive approach to understanding, managing, and improving quality and patient safety. Arguably, it might not be possible to address this challenge in the absence of a well-structured national patient safety programme with a particular focus on instituting clinical governance and quality assurance practices. Lack of clinical governance practices is common in LMICs, such as Indonesia (Amelia et al. 2015), South Africa (Basu 2019), and other resource-limited countries (Oboirien K et al. 2017). In contrast, clinical governance has been considered an integrated approach to patient safety across other countries, including the UK, Canada, Australia, Ireland, Italy, the Netherlands, and Iran (Botje et al. 2014; Amelia et al. 2015a; Azami-Aghdash et al. 2015a; Brault et al. 2015; Flynn et al. 2015; ACSQHC 2017; Halton et al. 2017; Meads et al. 2017).

Moreover, poor top management's accountability for effective monitoring and supervision of the performance of providers and clinical practices emerged as a concern in Libya. This could have increased irresponsible, unsafe behaviours among staff and malpractice for patients in practice. According to the findings, most patient safety concerns are attributable to top management being careless and unbothered about patient safety or supporting their PSTs' capacities to establish an effective approach to patient safety management in practice. This aligns with the outcomes of safety culture investigations carried out in Libya, highlighting inadequate support and commitment from top management to ensuring and improving patient safety as a notable issue (Rages 2014; Eltarhuni et al. 2020). Comparable studies in Eastern Mediterranean Region (EMR) countries also pointed out insufficient management support and supervision as a significant factor contributing to subpar patient safety practices (Elmontsri et al. 2017a; Thomas et al. 2017; Lawati et al. 2018).

Notably, the lack of clinical governance and management and leadership support for patient safety in Libyan healthcare organisations, along with poor communication, and coordination in clinical practices, combined to undermine establishing a positive safety culture. These, according to the findings, were implicated in fostering a blame and punitive' culture within healthcare settings. This could be another significant barrier to patient safety practices in Libya since even if a formal reporting system were to be introduced, errors would likely go unreported as long as a fear of humiliation as well

as blame punitive culture permeate healthcare settings. This is because, as has been contended elsewhere, reporting systems are not promising in blame and punitive healthcare environments (Stavropoulou et al. 2015; Brunsveld-Reinders et al. 2016). To redress this, interventions for education and training in patient safety, with strong leadership support, would be critical (Nakamura et al. 2014; Donnelly 2015).

Moreover, a notable factor impacting patient safety in Libya is the insufficiency of resources, particularly financial resources. The study indicates that healthcare organisations in Libya have experienced deficits in financial allocations (specifically for quality improvement and patient safety endeavours, including training), infrastructure (encompassing buildings, rooms, and equipment), and human resources (in terms of an appropriate skill mix of qualified staff). It could be argued that such challenges have impeded the capacities and capabilities of healthcare organisation to ensure patient safety, acting as substantial barriers to improving patient safety in practice. Similarly, such challenges to patient safety have been reported in multiple African countries (Konlan and Shin 2022) and other LMICs (Loftus et al. 2019).

In addition, the inadequate design (architectural) and infrastructure of healthcare facilities, especially in the aftermath of conflict, contribute to patient safety concerns in Libya. These issues include shortages of essential medical equipment and supplies (such as medicines and biomedical products); insufficient facilities and spaces for the isolation of communicable disease patients (e.g., COVID-19 patients); inadequate systems, mechanisms, and facilities for environmental hygiene (such as handwashing basins); a general lack of IT and communication systems (such as automated information, documentation, and decision-making systems); poor lighting; low-quality ventilation systems; and deficient visitation systems and facilities. As a result, these issues have made healthcare settings in Libya high-risk areas for patients seeking care and treatment. These findings are consistent with studies conducted in countries experiencing extreme adversity, such as Yemen, Syria, Iraq, and Afghanistan (Leatherman et al. 2020; Letaief et al. 2021b; Neilson et al. 2021b; O'Brien et al. 2022).

8.4. How interagency working influences the organisation and delivery of safe care in Libya?

As elaborated in Section 1.3 in Chapter 1, the existing literature on interagency working has typically been limited to certain sectors (e.g., child welfare and family

support, education, public service delivery, and youth justice in the UK and Ireland) and often focuses on specific / certain issues. This leaves a gap in considering interagency working more broadly across other sectors that engage in different types of activities, such as those related to the safety aspect of healthcare. Although interagency working has been an approach to improvement on multiple political agendas of sectors, as highlighted earlier, empirical evidence concerning its proliferation specifically within the context of patient safety remains absent. That is, it is the healthcare sector that has not seen the greatest proliferation of interagency working to address common challenges, as predominantly seen in other sectors. This may be attributed to the nature of complexity in healthcare, which involves various interacting systems and a complex, loosely coupled conglomeration of organisations, individuals, activities, and environmental characteristics at different levels that interact and interface with each other and are connected in various nonlinear ways (Plsek and Greenhalgh 2001).

Nonetheless, the findings of the current study provided a comprehensive insight into interfacing between those influencing patient safety in the Libyan health system, which operates through various levels and boundaries (Çelik and Taguri 2021). The overarching message emerging from the study findings was that while interagency working does exist to some extent, its effectiveness on the ground has been severely undermined by several factors, which will be discussed shortly. To this end, findings related to interagency working in patient safety in Libya, particularly the interface and interplay between those influencing the health system and patient safety in Libya, ranging from LMoH, healthcare organisations, and WHO (referred to herein as involved agencies in interagency working in patient safety), are discussed under two main headings: integration into practice and operationalisation. As highlighted in the opening chapter, due to the paucity of empirical literature on interagency working in patient safety per se, the findings herein are discussed and interpreted as appropriate with the existing literature on interagency working in other sectors.

8.4.1. Integration of interagency working into practice

According to the findings, interagency working between LMoH, WHO, and healthcare organisations in patient safety is organised around communication, coordination in managing resources, engagement in decision-making, and interagency management of patient safety-related work in Libya. This interfacing aligns out in line with CCS,

which forms as the foundation and strategic basis for the WHO's collaboration with Libya to support the health system's vision, policy, and development. Duggan et al. (2009) argued that interagency working is structured around communication, coordination, engagement, and joint decision-making of mutual activities. However, the findings indicate a notably lower degree of integration of interagency working into the structures, policies, and vision of the agencies influencing patient safety in Libya. This finding concurs with the view of Garthwaite (2016), who argued that although interagency working is central to the Welsh government policy to deliver public services, it continues to be difficult to achieve in a meaningful way across boundaries. Significantly, there is inadequate knowledge and a lack of understanding of the concept of interagency working in patient safety per se among the involved agencies in Libya. This has led to underdeveloped interfacing and interplay among the involved agencies in relation to patient safety, resulting in a failure to establish a holistic approach to improving patient safety in Libya. The findings suggest that the main areas of concern relating to interagency working are poor knowledge and understanding of each other's roles in patient safety-related work as well as the way each agency operates without a common objective when it comes to patient safety in Libya. This has been a barrier to developing effective interagency working in patient safety in Libya, leading to interagency blame. This finding is commensurate with the argument of Atkinson (2007) that a shared understanding of interagency working as well as each other's roles accordingly is central to its success. It could be argued that interagency working in patient safety in Libya is still not viewed as a 'systematic way' to attain a collaborative advantage and coordinate joint efforts towards producing informed solutions to complex problems with maximum effect and contributing to achieving better patient safety outcomes.

Moreover, the findings reveals a lack of a joint vision between the involved agencies to work on an interagency basis towards improving patient safety in Libya. The findings showed a lack of an explicit strategy that defines the objectives and scope of interagency working or draws up relevant action plans for supporting and facilitating this mode of working to improve the organisation and delivery of quality care in Libya. Linked to the previous, the lack of clarity over roles, encompassing allocation and distribution of responsibilities and tasks among the involved agencies in performing patient safety-related work has still been a challenge in Libya. In particular, the findings

alluded to challenges involving individuals (e.g., managers) lacking the knowledge of what exactly their role is in developing interagency working in patient safety in Libya. In turn, this has created clashes in ways of interfacing between LMoH and WHO, going down to healthcare organisations, thus minimising working on an interagency basis and relevant arrangements. This observation aligns with the perspective of Warmington et al. (2004), who underscored the importance of having clarity and a defined framework for the roles and responsibilities of all agencies engaged in interagency working right from the very beginning. This suggests a need to introduce a clear mechanism that stipulates responsibilities and accountabilities for the involved agencies, including LMoH, healthcare organisations, and WHO (sense of contribution), for performing patient safety-related work (systematically) in Libya to archive positive outcomes.

In addition, policy and procedural differences across the involved agencies have severely limited the development of effective interagency working in patient safety in Libya. According to the findings, there is no shared agenda among the agencies, with each agency maintaining its own goals in relation to patient safety. This has resulted in a failure in the vertical and horizontal integration of interagency working into the organisational system of the involved agencies due to divergences in policy, procedures, and agendas at the agency level. Moreover, differences in ideologies and conflicting professional and agency cultures emerged as a further challenge to interagency working in patient safety in Libya. The differences in organisational routines have served as a significant barrier to developing and maintaining a consistent level of working on interagency basis for supporting the organisation and delivery of quality care in Libya. This suggests a need for a shared mechanism to harmonise interagency agendas so that a coterminous strategic vision for 'developing a holistic approach to improving patient safety' can be produced, well understood, and agreed upon across the involved agencies.

Furthermore, a significant concern is a lack of willingness and commitment to interagency efforts to improving patient safety in Libya. According to the findings, commitment to interagency working at all levels (LMoH, WHO, and healthcare organisations) has largely remained on an ad hoc rhetorical basis; independence and autonomy in working jointly and interfacing with each other have still been common among the agencies. In Libya, interagency working in patient safety has frequently

been characterised as 'ad hoc, partial, or/and temporary.' However, it has often been implemented at the individual level, with several participants recognising its importance and expressing commitment to working on an interagency basis to strengthen efforts to improve patient safety in Libya. In particular, participation by some agencies, such as WHO, for example, is often seen by its members as bolt-on expert input rather than a functioning part of a genuine interagency process. This has resulted in a failure to provide momentum for interagency approach to coordinating joint efforts towards achieving a common goal in relation to the Libyan patient safety strategy. The lack of shared commitment from the involved agencies to interagency working is documented in the literature as a barrier to ensuring a consistent level of interagency working (Duggan et al. 2009; Murphy and O'Searcaigh 2009; Patsios et al. 2010).

According to the findings, conflicting interests are another obstacle to developing effective interagency collaboration in patient safety in Libya. For instance, Libyan healthcare organisations, such as hospitals, are often more interested in adopting WHO patient safety guidelines, to which they are more committed than those endorsed by the LMoH. The findings indicate that Libyan hospitals have advocated for establishing and strengthening direct interfaces with WHO rather than going through the LMoH. However, the latter has remained strongly insulated from both WHO and the hospitals. In such instances, the hospitals' interest in establishing direct connections with WHO has been constrained by macro-political recognition (LMoH) of this approach as problematic and non-hierarchical. This is often expressed as anxiety over hospitals bypassing and becoming untethered from the LMoH to interface directly with WHO.

As a result, this has created a conflict in ways of interfacing between LMoH and healthcare organisations due to some hospitals viewing policies put into practice differently. Arguably, conflicting interests are a common challenge in interagency working but can also drive positive change by forcing agencies and individuals to challenge assumptions, stimulate innovation, foster resilience, and contribute to robust decision-making, as also supported by multiple studies (Warmington et al. 2004b; Atkinson 2007; Garthwaite 2016). This principle can arguably be applied to interagency working in patient safety in Libya to bring about change in policy and practice.

In addition, inappropriate 'political savvy' has emerged as a concern, significantly constraining the development of effective interagency working in patient safety in Libya. Specifically, political savvy has often been inappropriately applied by WHO in its interactions with the LMoH regarding patient safety. According to the findings, WHO has tended to view 'patient safety' from the perspective of those at the macro-political level of the hierarchy (e.g., government and/or minister of health), thereby ignoring the key focal points directly managing patient safety in Libya (e.g., operational managers' opinions). This approach has hindered the advocacy and implementation of policies that support patient safety in Libya effectively. This finding aligns with a WHO report indicating that WHO has focused on building relationships with high-level political leaders in Libya, rather than engaging traditionally with LMoH (e.g., national patient safety leaders) (WHO 2021c).

Thus, it is likely that this tendency could be the key reason behind the lack of willingness and commitment to interagency working at the national level (LMoH). This demonstrates that WHO often acts to develop trusting relationships with members at the macro-political level of the hierarchy, prioritising decisions and actions that benefit those individuals, which is not always aligned with the overarching goal of working together (between WHO and LMoH) to support the Libyan health system for improved outcomes, including patient safety. This suggests that inappropriate political savvy has adversely interfered with and increasingly permeated the relationship between WHO and the LMoH, posing a further challenge to interagency working in patient safety. While this is revealed in this study, other studies have demonstrated that appropriate political savvy can be a trigger for health system and health service change (e.g., improved patient safety outcomes) (Gilson 2016; Clarke et al. 2021).

Furthermore, according to the findings, political turmoil in Libya has posed a challenge to national capacities that have failed to facilitate and maintain interagency working. This has contributed to creating significant non-coterminous boundaries between LMoH, WHO, and healthcare organisations. As a result, top-down and bottom-up interfacing has been disjointed, inconsistent, and often unclear, preventing patient safety-related arrangements from being effectively communicated and coordinated across all levels. This, in turn, has made it difficult for WHO, the LMoH, and healthcare organisations to establish a clear and informed understanding of patient safety challenges in Libya and what needs to be performed to address them jointly.

Similarly, political instability has been reported in multiple studies as a significant contributor to breakdowns in communication between conflict-affected countries and WHO to coordinate joint efforts towards addressing quality of care challenges therein (Leatherman et al. 2020; Letaief et al. 2021; Lokot et al. 2022b; Eddib and Eddib 2023). This suggests that in such a situation, focus can easily and inevitably be shifted away from interagency working, demonstrating a critical need for a centralised coordinating structure to help maintain a consistent level of interagency working in patient safety, especially during emergencies in Libya.

Linked to political instability, the existence of two parallel health ministries (east and west) with differing governance agendas, as well as the frequent turnover of health system leaders (e.g., the Minister of Health), have emerged as barriers to interagency working between WHO and LMoH. The findings indicate that ambivalence in health system governance and leadership changes have influenced the dynamics of the interface between WHO and LMoH, affecting relationships, communication, and coordination. Adapting to such governance and leadership changes could therefore be challenging for WHO and healthcare organisations due to differing priorities and the emergence of new leadership approaches that may potentially reshape the relationships and interactions between the involved agencies in interagency working. As a result, this situation will necessitate the alignment of new strategies and commitments so that interagency working can be developed and maintained. These results explicitly mirror those of various international reports related to the Libyan health system, which have highlighted challenges associated with governance and leadership failures in Libya, such as those just alluded to (Global Health Cluster 2020 2021; Devi 2022).

8.4.2. Operationalisation of interagency working

In examining the practical dynamics of interagency working in patient safety in Libya, it is centred on communication, interagency coordination in managing health system resources in Libya to maximise effects on patient safety, and poor interagency organisation and management of patient safety-related work in Libya. This includes a lack of engagement in planning and decision-making, implementation challenges, and inadequate oversight. Studies conducted by Stokes (2000), Serrano (2003), and McInnes (2007) collectively argue that high-standard communication, engagement,

and coordination among the involved agencies are principles constituting effective interagency working in practice for improved outcome.

The findings revealed two types of communication to have existed between the involved agencies: formal and informal. However, communication between the involved agencies remains poor and has become less direct in recent years as a result of multiple issues, such as extreme adversity. Notably, communications through telephone calls and personal relationship-based meetings have been favoured at the individual level in LMoH. WHO, on the other hand, is more interested in formal communication, viewing this as fundamental and more effective for carrying out interagency arrangements.

In this context, communications go through the ICO of LMoH led by the minister of health, for information exchange in relation to collective pursuits related to the health system, including patient safety. It could be argued that conflicting preferences in communication modes could have contributed to challenges in developing effective interagency working in patient safety in Libya. This is further corroborated by Duggan et al. (2009), who argue that if various forms of interagency communication are not appropriately handled, it could lead to unfavourable consequences such as diminished commitment and inconsistent communication levels.

The findings also show that communication is carried out with no well-defined protocol, national-endorsed plans, or appropriate strategies for active communication. Additionally, infrastructure weaknesses, often due to extreme adversity in Libya, have hindered effective communication. These factors have not allowed an enabling or conducive environment for effective interagency working to develop, thus remaining challenging to achieve to a high standard. In a similar vein, scholarly literature demonstrates that ineffective communication, both horizontally and vertically, within the involved agencies, can pose a formidable challenge to the effectiveness of interagency working (Tomlinson 2003; Sloper 2004; Atkinson et al. 2005).

According to the findings, poor communication among the involved agencies has resulted in a failure to achieve efficient top-down and bottom-up information sharing, transmission, dissemination, and reciprocal dialogues across the involved agencies regarding patient safety in Libya. This has contributed to fragmented interagency-based planning and decision-making in supporting effective organisation and delivery

of quality care in Libya, leading to poor attributes for producing a coordinated response to unsafe care challenges. This could likely be a key barrier to unlocking the power of LMoH, healthcare organisations, and WHO to generate and implement a broad scale, coordinated response to patient safety challenges in Libya.

Another significant finding related to interagency working is poor interagency coordination in managing national health system resources, including physical and human resources and medical material and supplies, allocated by the government through its MoH, with the aim of supporting quality healthcare services. These findings imply that the key challenge in enhancing patient safety in Libya lies not so much in a lack of awareness of what needs to be done, but rather in prioritising actions. Specifically, it involves optimising and effective utilisation of resources to reinforce the organisation and delivery of quality care in Libya. However, despite the availability of health system resources in Libya that could optimally reinforce patient safety improvement, the maximum effect of resource use and exploitation has not been achieved. A key contributing factor to this failure is poor interagency coordination in managing health system resources to maximum exploitation for supporting health system functions to ensure the organisation and delivery of quality care in Libya.

For instance, there is an absence of interagency-based strategies or mechanisms to manage health system resources in Libya, involving resource distribution, utilisation, and outcome-based monitoring and planning. As a result, putting resources to distribution and utilisation to maximum effect has not often had the capacity to take place effectively, failing to reach target levels of the system or match the needs of providers to support their functions to ensure quality healthcare provision. Thus, planning and decision-making related to health system resources should not only be about distributing those resources but also be translated into improved functions at the sharp end so that organisation and delivery of quality care can be ensured.

Notably, the findings indicated a poor incorporation of WHO expertise into health system resource management in Libya to provide capacity building for effective resource management to maximise effects on patient safety outcomes. A Polish study of joint coordination with WHO Europe in managing health system resources revealed improved outcomes in the allocation and utilisation of health care resources to best serve the quality of the Polish health care system (Nagy 2015). This suggests that

WHO has not been recognised as a strength by health system leaders in Libya but could probably be an underutilised resource.

Moreover, a further finding related to interagency working is poor interagency organisation and management of implementing QIPSI in Libya, with a particular focus on WHO frameworks, including WHO-EMRO PSFHI, the Quality Healthcare in Extreme Adversity Framework, and the Quality in Primary Care Framework (Leatherman et al. 2020; Elnakib et al. 2021; Letaief et al. 2021). According to the findings, poor engagement in planning and decision-making about patient safety related work, challenges in implementation of QIPSI into practice, and inadequate oversight of interagency patient safety related work, have constituted the main contributing factors to the failures of QIPSI in Libya. In comparison to other studies showing some extreme adversity work already performed in countries such as Afghanistan (Shoib et al. 2022), Iraq (Michlig et al. 2019), and the Yemen (Elnakib et al. 2021), results emerged herein are distinctive in that they revealed no extreme adversity work related to patient safety has been performed in Libya. This could be attributed to a lack of shared commitment among the involved agencies to implementing QIPSI in Libya.

Poor interagency engagement in patient safety planning and decision-making emerged as a significant challenge to implementing QIPSI in Libya. There is still a lack of multiple-level typology engagement among those influencing patient safety: national health system leaders (LMoH), healthcare managers (including patient safety managers), and WHO health system focal points in planning and decision-making related to QIPSI (e.g., policy and programme development and implementation). This has resulted in a failure to build common consensus among involved agencies on policy and strategic directions through meaningful dialogues and consultations, thus impeding the mobilisation of greater relevance, uptake, and usefulness of outcomes (e.g., an implementation plan outlining roles, responsibilities, and timelines). This has been observed in studies underscoring poor engagement of some countries with WHO in efforts towards quality of healthcare (Fadlallah et al. 2019b; Ravaghi et al. 2022) .

Furthermore, the findings reveal a lack of willingness from national health leaders to engage with WHO in relation to patient safety. This suggests that they are commonly reluctant to engage with WHO actively in order to attain a collaborative advantage to facilitate patient safety improvement efforts in Libya or to be involved in contribution to

the regional patient safety policy—i.e., engaging in the WHO EMRO patient safety research programme. As a result, this has made it difficult to achieve a high-level mutual agreement on and shared understanding of patient safety issues in Libya, especially for WHO, thus minimising joint contributions to the planning, development, and implementation of QIPs in practice. Multiple studies have reported similar issues, showing that a lack of engagement and information sharing among involved agencies in relevant decision-making is an indicator of poor interagency working (Atkinson 2007b; Barnes et al. 2018; Connolly et al. 2020).

The implementation of QIPs in Libya have often been ad hoc and fragmented as a result of a variety of reasons. There is a lack of interagency-based strategies and mechanisms associated with the implementation and oversight of QIPs in Libya (including those introduced by WHO). Moreover, implementation and oversight have often been hindered by a lack of a national interagency-based protocol that defines the distribution of roles, responsibilities, tasks, and key players involved in the procedure—e.g., hospital patient safety managers and WHO focal points. This situation indicates a need for a national supporting structure with clear mechanisms to coordinate and facilitate stewardship of QIPs in Libya.

A further notable finding emerging indicates that Libya lacks what has been interpreted in the findings as a national intermediary monitoring agency to facilitate close liaison with and an understanding of the direction and position of LMoH and WHO in supporting the implementation and oversight of QIPs in Libya. It could be argued that this has made it challenging for LMoH on its own to effectively monitor and follow up on programme implementation and oversight. Moreover, a lack of political and national leadership commitment (from the Libyan government through its MoH) has been a barrier to the implementation and oversight of QIPs in Libya. This demonstrates that effective implementation and oversight of QIPs cannot be possible without a high level of explicit political and national commitment to what has just been alluded to. This situation reflects the view of WHO about factors leading to failures in patient safety interventions in countries such as Libya (WHO 2015e; WHO 2016e; WHO 2021b; WHO 2022a).

In addition, poor health system capacities and infrastructure due to conflicts and the ensuing political instability have contributed to failures in the implementation and oversight of QIPs. As a result, regular and systematic monitoring, tracking, and

reporting on QIPsIs using relevant information to assess and evaluate the extent to which, by some agreed point, programme implementation objectives are met or not has not been ensured. This has undermined the identification of associated shortcomings in the implementation and oversight of QIPsIs as well as the designation of strategies to overcome them, especially when programmes are deemed to be complex and long-term in nature (e.g., WHO EMRO PSFHI), resulting in the perceived failures. These results are in consonance with other studies highlighting weak national capacities and infrastructure, which led to unnecessarily lengthening and, too often, complicating processes of development, adoption, and scaling up of patient safety programme best practices (Jaff et al. 2019; Shaw et al. 2021; Lokot et al. 2022).

To add complexity, conflicting perspectives emerged regarding roles and responsibilities for the implementation and oversight of QIPsIs in Libya. According to the findings, implementation and oversight of QIPsIs is a primarily mandated role of LMoH, with provider organisations accountable for and committed to implementation and oversight in practice and WHO to support implementation and oversight at all levels through technical assistance and capacity building. However, there is an evasion of responsibility and accountability for implementation and oversight at the national level—i.e., implementation has often been tended to, or increasingly, seen by LMoH as ‘another agency’s matter’. Indeed, this is a significant leadership failure that have contributed to suboptimal patient safety practices in Libya.

To elaborate further, the findings alluded to the notion that implementation and oversight of QIPsIs are outside the WHO’s remit, demonstrating that implementation and oversight are fully assigned to Libya as a country itself (LMoH) and that WHO cannot meaningfully bind them to do so. In this instance, WHO’s task is only centred on providing technical and advisory support on the implementation and oversight of any interagency initiatives at the national level in line with Libya’s CCS as well as the Libyan health system strategy. However, WHO’s contribution to the implementation and oversight of QIPsIs should not displace LMoH’s leadership in implementing and overseeing (leading) interagency patient safety-related work in practice. This suggests that without a clear national strategy or protocol to manage interagency patient safety-related work in Libya, implementation and oversight will not have the capacity to take place effectively.

In addition, healthcare organisations capacities have not been adequately supported by LMoH to the extent necessary to enable them to carry out their roles in the implementation and oversight of QIPs to a high standard when they come into practice. This, according to the findings, has been a barrier to healthcare organisations capacities and capabilities in developing mechanisms and processes to support implementation and oversight—e.g., problem-solving focusing on the “what” and capacity building concentrating on the “how” to effectively respond to implementation shortcomings in practice. As a result, implementation challenges in practice could not be avoided. This shows a similarity to results reported in studies conducted in Arab countries (WHO 2015b; Al-Mandhari et al. 2018; Foda et al. 2020). Arguably, the dearth of engaging healthcare leaders (e.g., hospital patient safety managers) in the early development and preparation phases of improvement programmes at the national level is a leading factor in challenges to implementation in Libya. This suggests a key reason that could have contributed to poor ownership of patient safety improvement programmes and initiatives in practice.

8.5. What strategies can address challenges to patient safety in Libya?—The way forward—Improving patient safety through enhanced interagency working

The present research study investigated patient safety in Libya systematically from different perspectives, ranging from policymaking to operational levels, to develop a holistic view of the issue as well as inform patient safety improvements. A solid notion emerged from the findings, emphasising that the national belief that ‘quality and safety are only relevant to richer and more stable nations’ should be avoided. In addition, literature to date has shown that improving patient safety in developing countries such as Libya is complicated by a tendency towards adopting and bringing in solutions from the developed world, which have often failed to address local challenges and not worked out in contexts such as Libya (Aveling et al. 2015; Elmontsri et al. 2018c; Kang et al. 2021a). Furthermore, existing literature on patient safety in countries similar to Libya has shown that a focus therein has been placed only on identifying challenges to patient safety rather than introducing an evidence-based approach to patient safety improvement (Ottersen et al. 2017; Slawomirski et al. 2017a; Lachman et al. 2020).

Literature to date has shown that the existing systems-based models associated with healthcare safety improvement tend to focus mainly on the internal factors and the organisational aspects of safety (Pronovost et al. 2015a; Sampson et al. 2021). Such

common models include 'Swiss Cheese Model of Accident Causation' introduced by Reason (1990; 2000), quality framework introduced by Donabedian (2003), complexity of healthcare delivery framework introduced by Vincent et al. (1998), a systems engineering approach proposed by Carayon et al. (2006), and the Yorkshire contributory factors framework (Lawton et al. 2011; Carfield and Franklin 2019). Yet, complex socio-technical, cultural, and political issues influencing health systems as a whole have not been much considered within such system approach-based models, with no current equivalent for the wider contextual factors Leveson (2004), Li and Thimbleby (2014), Buist and Middleton (2016), and Wiegmann et al. (2022). This suggests that such system approach-models cannot fit contexts such as Libya.

That is, none of the existing models has provided a holistic approach to understanding and improving patient safety across the Libyan health system as a whole, although some have highlighted the importance of staff training and education, teamwork, and communication, as well as having the required resources in place to ensure high-quality and safe care. Even though, they still have not taken into account the complex socio-technical, cultural, and political issues that have a direct influence on patient safety. For example, none of the existing models highlighted the role and importance of political leadership or regulatory and monitoring bodies at the national level in supporting patient safety improvement. Health systems in a context such as Libya operate within a dynamic, complex socio-technical, cultural, and political systems (JafH. 2019a; Leatherman et al. 2020a; Letaief et al. 2021a). Therefore, it is important to focus on such wider systemic and contextual factors that influence patient safety across all levels of the health system.

It is for this reason that addressing patient safety challenges in Libya requires a holistic, locally adoptable improvement approach targeting all health system strata. From such a standpoint, a holistic and convenient framework must be adopted to improve patient safety in Libya based on systems approach (MacQueen and Milstein 1999; Clarkson et al. 2018), along with taking into account considerations of the role of complex political, organisational, socio-technical, and cultural factors influencing the Libyan health system as a whole. As such, the study findings, derived from participants' perspectives, suggested a series of related and interrelated activities, processes, mechanisms, and structures that should be developed and implemented

in a systematic pattern through enhanced interagency working between the involved agencies.

8.5.1. The study findings-based Patient Safety Improvement Framework (PSIF)

Figure 8.1 introduces the PSIF in the Libyan context. The framework's development/implementation in the country will require a holistic and pragmatic mechanism facilitated by well-developed interagency working across all levels, including WHO support and capacity building. The importance of interagency working and coordinated efforts has been recently highlighted in the responses to the COVID-19 crisis, where agencies within and outside health systems across different nations harmonised efforts and commitment to managing the risk and minimising harm resulting from the outbreak (Takemoto et al. 2021; Arsenault et al. 2022; Maliqi et al. 2023).

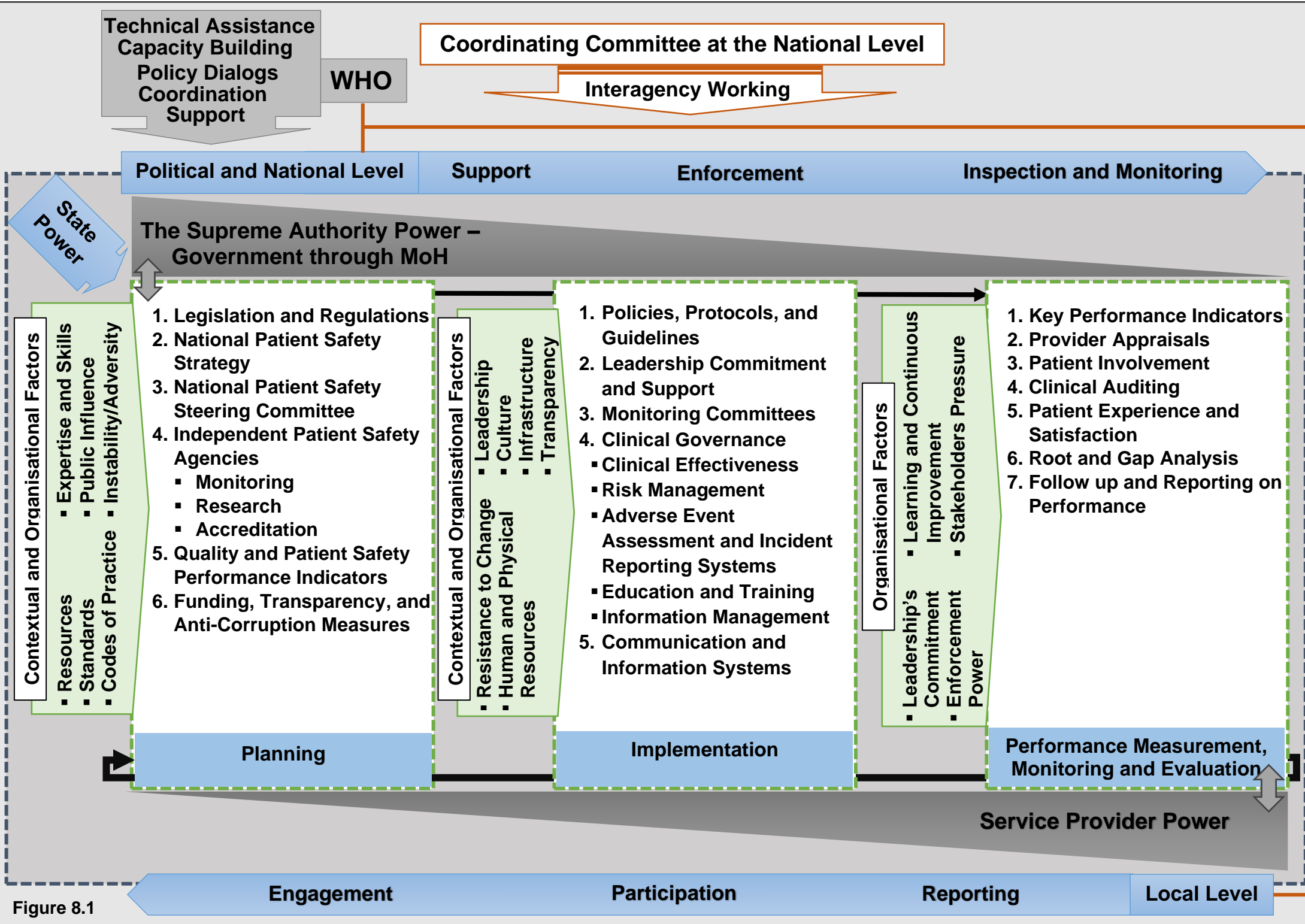


Figure 8.1

The PSIF can be used as an approach to managing patient safety as well as a blueprint for change in patient safety across the Libyan health system. It can guide and strengthen national (the Libyan government and its MoH) and WHO efforts towards turning the Libyan health system into a patient safety-driven one. In accordance with the study outcomes and in line with immediate imperatives for a comprehensive, context-lens approach to addressing patient safety challenges in Libya, the researcher anticipates that the PSIF will play a central role. This framework is expected to offer a substantiated, holistic, and potent strategy, considering the diverse factors influencing the Libyan health system. As a result, it is poised to provide a roadmap that guides contemplation and fosters commitment towards enhancing the efficiency of healthcare systems throughout Libya.

8.5.2. The components and mechanisms of the PSIF for the Libyan health system

The PSIF, viewed through a whole system approach, is structured horizontally into three phases: planning, implementation, and performance measurement, monitoring, and evaluation. It encompasses components that span all levels of the health system, from the national to the healthcare organisation levels. The PSIF's three phases, along with their components and influencing factors, will be detailed in the subsequent sections. Notably, many components of the framework are akin to those implemented in other countries, particularly in the developed world (Aceves-González et al., 2021; Elmontsri, Banarsee, et al., 2018a; Kruk et al., 2018; Ricciardi & Cascini, 2021; Tingle, 2017b, 2018; Yu, Flott, et al., 2016a). Table 8.1 provides a breakdown of the key terms and components of the framework and its operational dynamics. Subsequently, there will be a discussion on the specific elements covered the framework's components.

Table 8.1: Description of the PSIF Components

Component/Term	Description
<p>▪ Planning</p>	<p>Planning involves the formulation of policies and protocols for patient safety, necessitating leadership from the Libyan government, including health system policymakers. This phase requires the introduction of national legislation, regulations, financing mechanisms, and human and physical resources. It also involves setting standards, codes of practice, expertise, skills, and performance indicators to reinforce planning efforts.</p>
<p>▪ Implementation</p>	<p>Implementation encompasses the effective execution of regulatory frameworks, policies, protocols, and action plans. It involves establishing a national reporting system integral to the health system, implementing processes, practices, resources, tools (such as WHO patient safety manuals), information technology, procedures, and expertise to translate patient safety policies into practice</p>
<p>▪ Performance Measurement, Monitoring and Evaluation</p>	<p>National monitoring structures play a crucial role in inspecting and ensuring healthcare organisations adhere to relevant standards. This phase ensures that results and outcomes are systematically reported and fed back into the planning phase for continuous improvement.</p>
<p>▪ State Power</p>	<p>The state, represented by Parliament and politicians through the government, holds primary responsibility for the quality of care. Core functions include empowerment, provision, legislation, development, improvement, assessment, monitoring, inspection, and evaluation. That is, the state power, which is critical to developing and implementing the framework to a high standard.</p>
<p>▪ The supreme Authority (LMoH)</p>	<p>The supreme authority, represented by the LMoH, exerts control and impact on the entire health system and the framework. An indicator determines the extent and direction of the supreme authority's functions, including support, enforcement, inspection, and monitoring.</p>
<p>▪ Service Providers Power</p>	<p>Service provider power, located at the bottom right, indicates healthcare organisations' contribution to national-level decision-making, with core functions such as reporting, participation, and engagement.</p>
<p>▪ Arrows</p>	<p>Arrows illustrate the interrelationship between the three phases, indicating how planning, implementation, and performance measurement, monitoring, and evaluation feed into each other for a holistic approach. Arrows outside the framework signify the indirect influence of supporting structures on the framework by facilitating interagency working.</p>
<p>▪ Contextual and Organisational Factors</p>	<p>Various factors influence each phase of the framework, requiring effective consideration at each stage: planning, implementation, and performance measurement, monitoring, and evaluation.</p>
<p>▪ Coordinating Committee at National Level</p>	<p>A 'centralised coordinating structure' is proposed to support interagency working among key players, including LMoH, healthcare organisations, WHO, and national monitoring and resource institutions. This committee should establish clear policies governing interagency working in patient safety.</p>
<p>▪ WHO</p>	<p>The role of WHO involves providing technical assistance, capacity building, policy dialogs, coordination, and support for QIPs in Libya, utilising frameworks like WHO-EMRO PSFHI, the quality healthcare in extreme adversity framework, and the quality in primary care framework.</p>

The following sections will discuss the different elements and components covered with each under each phase of the PSIF framework.

8.5.2.1. Planning

The planning phase covers the following components:

- Legislation and regulations

The state (Parliament) through the Libyan government should be accountable for patient safety, that is, a state-mandated role for achieving the public right to high-quality healthcare in Libya, involving political support and leadership commitment and legislative and legal rules (laws) regarding quality/patient safety. The introduction of national regulations for patient safety can also reinforce patient safety improvements in Libya. It is critical that the legislation and regulations set out a system of enforcement for quality and patient safety, including laws on patient rights, legislative mandates on healthcare staff quality, care of services (hospitals, PHCs, and clinics), quality and safety of drugs, performance indicators, and technologies. This will help ensure that patients are treated safely, fairly, and equally. Such political commitments have been proven effective in improving patient safety worldwide (OECD, 2020b; Pilarska et al., 2020).

- National patient safety strategy

Without a national patient safety strategy from the top in Libya, improvements in patient safety cannot be made. Therefore, a national patient safety strategy that defines the scope of patient safety, sets out the national objectives for ensuring patient safety, clarifies roles and responsibilities for patient safety across the system, and identifies mechanisms for developing and implementing QIPs in Libya should be introduced at the planning stage. The prioritisation of involving all stakeholders (those influencing patient safety in Libya such as hospital patient safety manager and WHO focal points) in the planning and decision-making of patient safety at the national level should be a central focus of the national patient safety strategy. This emphasis aims to improve the cohesion and effectiveness of patient safety policies and programmes, ultimately leading to the institutionalisation of quality improvement and patient safety practices throughout the system as a whole.

- National patient safety steering committee

This committee should be set up and constituted within the aegis of LMoH. This committee should have wide representation from relevant governmental and non-

governmental partners and stakeholders, as well as WHO, in matters related to patient safety. The committee should be mandated to implement robust patient safety policies and strategies in Libya as well as coordinate with those influencing patient safety in Libya, including WHO focal points. The committee should be supported by a dedicated patient safety secretariat/team in LMoH to provide technical support for drafting policies and guidelines and developing training material for patient safety, with a direct liaison with patient safety teams at the healthcare organisation level. .

- Independent patient safety agencies

Independent institutions to monitor and support patient safety have been widely recognised as crucial to monitoring and addressing issues relating to patient safety (e.g., NPSA in the UK and AHRQ in the US) (AHRQ, 2023; NPSA, 2023). Such institutions operate independently of health system regulators and healthcare providers with the primary goal of ensuring and improving patient safety within health systems. Three main independent patient safety agencies need to be established in Libya. These include an independent patient safety monitoring institution for coordination and implementation of QIPsIs, an independent institution for health and care research with the mission of improving the overall quality of care through research, and a national institution for health care accreditation. The establishment of such institutions will contribute to increasing awareness and advocacy for patient safety throughout the health system. These entities will play a key role in education and training, data collection and analysis, incident reporting and investigation, as well as implementing evidence-based QIPsIs to enhance the standards of care with a particular focus on quality assurance and patient safety.

- Quality and patient safety performance indicators

Globally, various quality and patient safety performance indicators, such as complications, complaints, and disease coding schemes, are widely utilised by healthcare systems to enhance care standards. Implementing these established indicators in Libya can significantly contribute to improving the overall quality of care. As part of the planning phase in the PSIF, it is crucial to define a set of key performance indicators for each facility level, which should be regularly reported and revised. This adoption of key indicators will not only raise awareness among healthcare staff but also among patients in Libya regarding quality and patient safety (Awa et al. 2011; Alameddine et al. 2015; Azami-Aghdash et al. 2015b).

- Funding, transparency, and anti-corruption measures

The study findings indicate that corruption in health system resources has diverted government-allocated funds for illicit purposes, adversely impacting the quality of care in Libya. It is imperative for the Libyan government to prioritise anti-corruption efforts related to health system resources. This entails implementing transparent national measures, including tracking and reporting mechanisms, to combat corruption effectively. Such measures will ensure that health system resources are utilised appropriately, contributing to improving the organisation and delivery of quality care throughout Libya (Çelik and Taguri 2021b; Eddib and Eddib 2023)

8.5.2.2. Implementation

The implementation phase covers the following components:

- Policies, protocols, and guidelines

The development and introduction of policies (set the overarching principles), protocols (provide detailed procedures), and guidelines on patient safety are an essential component of organisational governance to provide a comprehensive framework for decision-making, behaviour, compliance, and processes related to patient safety. This should entail patient safety policies, protocols, as well as guidelines, focusing on a range of areas such as medications, procedures and processes such as safe patient identification and diagnosis, IPC, or other SOPs. The systematic implementation of such regulatory mechanisms is essential to prevent patients from being exposed to risks of harm and to enhance the overall quality of care. Additionally, patient safety policies, protocols, and guidelines play a crucial role in ensuring that healthcare staff adhere to relevant rules and requirements, promoting high standards of care.

- Leadership and management commitment

Leadership is not synonymous with power; rather, it entails the responsibility of driving change (Braithwaite et al., 2017c). That is, to articulate an explicit vision for high-quality care and act upon it throughout the system as a whole. Leadership and management should take responsibility for effectively monitoring and supervising healthcare staff performance, ensuring a healthcare environment that prioritises quality improvement and patient safety, as well as committing to its implementation. A whole system leadership and management commitment are crucial for developing and implementing patient safety systems and improvement programmes. The

development and implementation of patient safety policies, protocols, guidelines, and regulations are therefore contingent on strong leadership and management commitment and support to achieve high-quality outcomes (AHRQ, 2019b; Murray & Cope, 2021).

- Monitoring and supporting committees

Establishing quality and patient safety committees is imperative for the purpose of effectively institutionalising quality and patient safety. These committees can cover various aspects, such as quality improvement, patient safety, morbidity and mortality, medical records, clinical governance, and medical complications and complaints. They play a pivotal role in steering functions, rule-making, enforcing regulatory frameworks, encouraging incident reporting and learning, overseeing resources and improvement programs, and providing training and development (Dowell 2013). This will help inform patient safety planning and decision-making with regard to patient safety improvement in healthcare organisations (Dowell 2013).

- Clinical governance

Implementing effective clinical governance emerges as a key strategy for improving patient safety. This aligns with recommendations from the UK CQC (CQC | UK 2022) and IOM (Kohn et al. 2000). The key principles and requirements for clinical governance encompass clinical effectiveness, risk management, formal adverse event assessment, incident reporting systems, education, training, continuing professional development, and information management. Integrating clinical governance requirements fosters a collective responsibility for patient safety in practice. Key requirements for clinical governance should include clinical effectiveness, risk management, formal adverse event assessment and incident reporting system, education, training, and continuing professional development, as well as information management (as described in Sections 1.2.2.2 and 7.3.2). The introduction and implementation of clinical governance requirements will help make patient safety everyone's responsibility in practice.

- Communication and information systems

Promoting communication and information systems across the Libyan healthcare system is crucial for informed decision-making, reinforcing patient safety processes, and ultimately improving quality assurance. Investing in new technologies and medical equipment is essential for coordinating care processes to a high standard, ensuring

that patients are provided with the best quality of care. This strategic investment aligns with global recommendations emphasising the importance of technology and equipment for effective care processes and continuous quality improvement (WHO 2016a; Aldawood et al., 2020).

8.5.2.3. Performance measurement, monitoring, and evaluation

This phase covers the following components:

- Key performance indicators

As outlined in the planning phase, healthcare organisations need to be performance-measured against a set of national key performance indicators to be defined and introduced at the planning stage. Performance and practice measurement can be facilitated and coordinated by monitoring bodies (identified in the planning stage) so that healthcare organisations and providers can be ranked based on their performance. In so doing, healthcare providers will be encouraged to engage in QIPs as well as contribute to performance measurement, monitoring, and evaluation activities to improve outcomes (Azami-Aghdash et al. 2015b).

- Provider appraisals

It is crucial that healthcare providers are assessed with regard to their performance and achievement of their objectives. Provider performance appraisals, also known as performance evaluations or assessments, have proven effective in the identification of areas for development and further improvement (Rana et al. 2022). This will help improve patient safety practices as well as increase healthcare staff's confidence in their profession and contribution to improving patient safety.

- Patient involvement and advocacy

It is highly important to put patients at the centre of healthcare by involving them and their families in patient care and safety. This will help patients understand care processes, raise their awareness about adherence to medications and self-care, and share their concerns and insights accordingly (Bishop and Macdonald 2017; Skagerström et al. 2017). Patient involvement can also help recognise and rescue adverse events during the different stages of healthcare. Moreover, involving patients helps to optimise healthcare staff's behaviour, for example, in hand hygiene, obtaining patient care history and referrals, and treatment prescriptions, so that adverse events can be reduced effectively.

- Clinical audits

Clinical audit has been established an effective method to measure patient safety so that issues of concern and variations can be identified and addressed (Macfarlane, 2019b; Travaglia et al., 2011b). This should be adopted in Libya, with written SOPs and guidelines for enforcement and implementation, to ensure the establishment of an overseeing mechanism to evaluate whether healthcare staff is complying with all necessary procedures and ensure high safety standards. Regular audits can be carried out on the implementation of standards, SOPs, or guidelines; IPC; and auditing of medication practices in both retrospective and prospective manners. To work effectively, clinical audits can be combined and/or followed by regular inspections, which can be carried out by monitoring/regulatory agencies (alluded to in the planning stage) so that healthcare organisations/providers' compliance with national and local standards is ensured.

- Patient experience and satisfaction

Patient satisfaction levels should be measured so that useful information can be obtained to improve patient safety outcomes. This can be done through patient satisfaction surveys, patient interviews, observation of patients' behaviours in different care processes (e.g., discharge), and keeping track of and reviewing patient complaints. This should be combined by instituting proper systems whereby patients can provide feedback and share their experience so that the feedback can be analysed, reviewed, and used to inform improvements in the healthcare system. Such practices will help provider organisations understand impediments to high-quality care, whilst identifying strengths which can help inform and expedite improvements in practices.

- Root cause and gap analysis

Gap analysis and root cause analysis as systematic tools should be adopted and used in healthcare organisations to identify shortcomings (gaps between the current and desired state of processes) and factors contributing to problems and concerns so that corrective measures can be taken (Stojkovic et al. 2021; Driesen et al. 2022). By using such tools, healthcare organisations can address appropriate appropriately and efficaciously.

- Following up and reporting on performance

Healthcare organisations should be mandated by regulatory mechanisms to report on performance through the national level (LMoH). This will ensure feeding relevant

information and data back into the planning stage to inform decision-making and policy-making.

8.6. Chapter summary

Overall, this chapter emphasised the significances as well as ramifications of the current study's findings, drawing connections to research conducted in other developing nations, LMICs, and developed countries. Additionally, a patient safety improvement framework, shaped by the study's outcomes, is introduced and discussed. The next chapter will offer concluding remarks, propose actions for the future, highlight the study's contributions to knowledge, policy, and practice, acknowledge study limitations, and suggest avenues for future research.

Chapter Nine: Conclusions and Recommendations

9.1. Introduction

Chapter nine, among other chapters, focuses on summarising the findings and discussions from the preceding chapters. It also brings together the key threads of the study, presents conclusions, and provides recommendations for actionable steps to boost patient safety improvement efforts in Libya.

9.2. Summary of the overall findings and conclusions

This study was conducted in alignment with the patient safety global research programme launched by WHO (WHO 2008b; WHO 2021a). The programme emphasises the need to understand the extent of unsafe care problems and contributing factors, particularly in LMICs such as Libya, to devise appropriate solutions and improvement strategies. Utilising a qualitative strategy of inquiry, the study employed an EDQ research approach, collecting data through in-depth interviews and a review of patient safety policy documents in Libya. The data underwent inductive analysis through the adoption of content as well as thematic analysis strategies, interpreted through the lens of a whole systems approach to managing and improving patient safety effectively.

As elaborated in the opening chapters, Libya, as a middle-income transitional country, faces challenges with its underdeveloped health system, lacking capacities and infrastructure to manage quantifiable data and information that could support patient safety improvements. In Libya, challenges pertaining to patient safety have not been well-documented or understood, necessitating empirical evidence for the Libyan health system regulators—LMoH, healthcare managers, and WHO to inform and guide improvement efforts. Therefore, this qualitative exploratory study aimed to improve understanding of patient safety organisation, management, and concerns in Libya, in conjunction with exploring the effects of interagency working between LMoH, healthcare organisations, and WHO on the organisation and delivery of quality care therein. The study further provided an evidence-based framework for improving patient safety across the Libyan health system through enhanced interagency working.

In explicating overall conclusions, the study identified various political and health system factors contributing to patient safety challenges in Libya. Notably, the lack of political accountability and a national strategic vision for quality and safety in Libya hindered improvement efforts towards patient safety. There was inadequate

commitment and accountability from legislative authorities (Parliament), the government, and LMoH for reforming the health system to ensure effective health services. Inadequate and outdated health legislation and regulations further posed a threat to the Libyan health system, hence suboptimal patient safety practices. Deficiencies in health system governance and leadership in Libya, including inadequate strategic planning, poor policy enforcement and implementation, and a lack of communication and coordination across the health system, impeded the efficient functioning of healthcare systems, thus failing to ensure quality health services.

Furthermore, the study revealed that the misuse and mismanagement of health system resources in Libya led to a fragmented healthcare system vulnerable to patient safety concerns. Insufficient medical and technological infrastructure, a shortage of medical teams and specialised healthcare staff, a lack of education and training in patient safety, and inadequate medical supplies contributed to the patient safety challenges in Libya. The prolonged political instability in Libya also presented a significant challenge to the health system, resulting in unorganised and unregulated patient safety across the system. The complex political turmoil led to a deterioration in health system governance, capacities, and infrastructure, exacerbating challenges to patient safety regulation across the health system as a whole, particularly in conflict-affected and vulnerable areas.

In addition, the study identified a lack of national legislation and legal mechanisms for healthcare quality and safety in Libya. The study findings revealed that healthcare organisations in Libya were not mandated to develop and implement patient safety systems and strategies, contributing to healthcare settings being a high-risk area for patients. There was also a lack of national legislative and regulatory mandates for healthcare organisations to report on and follow up using a standardised set of performance indicators for patient safety and continuous quality improvement. In summary, healthcare service providers in Libya have, thus far, operated without regulation or monitoring. The lack of systematic oversight has therefore led to emphasis on quantity as opposed to quality, when it comes to patient care and services, resulting in breaching patient safety in Libya.

The absence of national coordinating and monitoring establishments has inexorably hindered the collection and management of information and data related to patient

safety, thus impeding improvement initiatives in Libya. The study also revealed a significant issue of inadequate regulations, policies, strategies, and guidelines on patient safety in Libya, which contributed to unsafe care challenges. This highlighted a lack of awareness and understanding of patient safety importance, particularly at the national level (LMoH). Decision-makers and policy influencers lacked awareness and commitment to prioritise quality improvement and patient safety. In the absence of national guidance on patient safety, healthcare organisations in Libya developed self-organised minimum standard patient safety guidelines, though many focused broadly on quality rather than patient safety. Nonetheless, these guidelines have been found not effective in managing quality and patient safety in practice.

Despite the few efforts, the organisation and management of patient safety in practice was found to be highly fragmented in this study. Factors contributing to this fragmentation included poor capacity and operationalisation challenges, inadequate hospital systems and frameworks for the organisation and management of patient safety (e.g., clinical governance, risk management, incident reporting, and communication), and insufficient commitment and support for patient safety from healthcare organisations' top management and leadership. This precarious situation resulted in various patient safety concerns in the Libyan healthcare organisations such as hospitals, including security incidents, misidentification of patients, healthcare-associated infections (HAIs), falls, diagnostic and medical mistakes, postoperative/surgical-site issues, hospital-acquired pressure ulcers, and communication challenges.

In addition, the study's crucial insights focused on interagency working between LMoH, healthcare organisations, and WHO in patient safety, indicating its underdevelopment in Libya due to several factors. A significant challenge was the suboptimal understanding of the concept of interagency working per se. Additionally, there was a lack of joint vision, planning, and decision-making, unclear roles and responsibilities, coordinating structures, policy differences, and a lack of commitment, inappropriate political savvy and interference, and prolonged political instability. These factors have collectively hindered effective interagency working in patient safety. Interagency working was further stymied by inconsistent and disjointed top-down and bottom-up communication across all levels. This made it challenging for those influencing patient safety in Libya, including LMoH, healthcare managers, and WHO

to develop an informed understanding of patient safety challenges in Libya and formulate effective resolutions to address them. Identified contributing factors included a lack of well-defined protocols and strategic plans for communication, as well as weaknesses in systems, structures, and infrastructure hindering interagency communication and interfacing. This served as a barrier to top-down and bottom-up information sharing, impeding a holistic approach to addressing patient safety challenges and improving the organisation and delivery of quality care in Libya.

The study also revealed poor interagency coordination in managing health system resources in Libya to reinforce system functions for influencing patient safety improvements. This involved a lack of an interagency-based strategic protocol for health system resource management and mechanisms for monitoring health system resource distribution and utilisation, as well as outcome-based planning. Moreover, there was a lack of incorporating WHO expertise into health system resource management in Libya, which emerged as a concern, creating the impression that WHO was too often an underutilised resource in Libya. Such issues resulted in a failure to ensure maximum exploitation of health system resources, which in turn undermined the enhanced organisation and delivery of quality care in Libya.

Furthermore, a notable concern that emerged was the inadequate organisation and management of patient safety-related interagency working in Libya. This specifically involved a failure to implement WHO supported frameworks pertaining to patient safety, including WHO-EMRO PSFHI, the Quality Healthcare in Extreme Adversity Framework, and the Quality in Primary Care Framework. The key reasons behind failure to implement these frameworks were attributable to a lack of engagement among the involved agencies in the planning and decision-making process of implementation, challenges associated with implementation in practice, and inadequate oversight of associated activities and outcomes in Libya. As a result, these issues combined to contributed to hindering the development of a holistic approach to improving the organisation and delivery of quality care in Libya.

Overall, the study suggests a robust foundation for identifying, developing, and implementing effective strategies through improved interagency working. Fundamentally, Libya requires a holistic approach that takes into account different factors influencing the health system, including political, organisational, socio-technical, and cultural factors influencing the health system as a whole and patient

safety. To achieve this, the study pointed out the need for establishing robust mechanisms for developing effective interagency working among the involved agencies in patient safety in Libya. In addition, findings suggest the need for developing an action plan for producing an approach to patient safety management during emergencies in Libya, emphasising the implementation of WHO frameworks related to patient safety, especially those related to quality and safety in extreme adversity.

The most notable important strategy in this context entailed rebuilding the health system to prioritise patient safety. This involves promoting political accountability for patient safety (legislation, legal mechanisms, and financial and physical resources), national leadership commitment to patient safety (regulations, policies, strategic vision, supervision, and monitoring), and clinical governance (a combination of management practices to create a safer healthcare environment and achieve clinical excellence). Equally crucial is the need to enhance national research capabilities to guide patient safety improvement and bolster education and training in patient safety to reinforce understanding and risk management processes. This was considered critical to transforming the Libyan health system into a quality- and patient safety-driven one.

The strategies proposed by the study participants highlighted the crucial requirement for embracing a comprehensive, holistic approach to improving the organisation and delivery of quality care in Libya. Consequently, utilising these strategies, a patient safety improvement framework based on a whole systems approach was developed and presented in the preceding chapter. That is, a pragmatic, context-lens patient safety improvement framework that, if well facilitated and implemented through enhanced interagency working between LMoH, healthcare organisations, and WHO, will help ensure effective organisation and delivery of high-quality care in Libya.

9.3. The contribution of the study to knowledge about patient safety in Libya

This comprehensive study delivers varied contributions that are valuable to health policymakers, healthcare managers, researchers, and academics by improving the understanding of the patient safety issue in Libya. Moreover, the study findings are also poised to inform WHO's efforts and initiatives aimed at improving patient safety not only in Libya but potentially in other LMICs as well. The primary contributions of this study provide a profound understanding of patient safety challenges in the Libyan

context and deliver evidence-based insights into potential effective solutions. Supported by WHO's expertise in the field of patient safety, the study contributions informed and facilitated the development of effective strategies for improving patient safety in the Libyan context. These contributions align with the perspective presented by Harris (2015), who contends that a research study's impact on and contributions to the knowledge may involve:

- Enhancing the comprehension of phenomena for readers, researchers, academics, and policymakers.
- Introducing innovative approaches for the application and implementation of existing theories or scientific principles.
- Providing cohesive explanations and demonstrations for various events and circumstances.
- Discrediting invalid theories.

In particular, Gill and Dolan (2015) described originality in research as the fact that the study has not been conducted previously and is new in form, style, and focus, without any imitation or copying. The comprehensive literature review presented in Chapters 2 and 3 indicated a notable knowledge gap in relation to patient safety in the WHO EMR generally and Libya particularly. The scoping review presented in Chapter 3 emphasised the absence of comprehensive strategies for tackling unsafe care challenges across WHO EMR countries, including Libya. WHO EMR countries including Libya lack a formal, holistic approach to efficiently managing patient safety throughout all health system strata therein, a situation particularly pronounced in countries with constrained health system capacities due to extreme adversity, such as Libya.

To this end, the present study was conducted to provide comprehensive insights into patient safety challenges in a WHO EMR country, specifically Libya, and to suggest a whole system-based framework for improving patient safety therein. The study highlights that various regulatory, governance, and policy functions and mechanisms focused on patient safety must be introduced and integrated into the entire health system. This integration should occur alongside enhancing effective political accountability and national leadership for quality and patient safety to foster substantial improvements targeting all health system strata. Equally important, interagency working between LMoH, Libyan healthcare organisations, and WHO must

be strengthened, aimed at producing a holistic approach to enhancing the organisation and delivery of quality care in Libya. Ultimately, the overall study contributions are summarised as follows:

- This pioneering research study, conducted exclusively in Libya, employing a two-data source methodology involving interviews and policy document analysis, aimed to systematically investigate the patient safety issue in Libya.
- Prior research by Rages (2014), Elmontsri et al. (2017, 2018), and Eltarhuni et al. (2020) stressed upon the necessity for a clearly defined patient safety policy in Libya. Building upon this foundation, the current study serves as a baseline for decision-makers, policymakers, researchers, healthcare leaders, and the WHO, guiding and informing future improvement endeavours targeting patient safety in Libya.
- The study builds upon the existing body of knowledge by highlighting the significance of interagency working between those influencing the health system in enhancing the organisation and delivery of quality care cohesively and efficiently.
- Introducing a practical, whole system approach-based framework rooted in empirical evidence, including WHO expertise in patient safety, the study offers a unique contribution to knowledge related to patient safety in a LMICs context. Existing theoretical frameworks for patient safety often overlook the intricate political, organisational, socio-technical, and cultural factors influencing the health system as a whole and hence patient safety, as noted in literature by Pronovost et al. (2015), Yang (2018), OECD (2020), and O'Brien et al. (2022). The proposed PSIF in this study therefore takes all these factors into account to ensure effective, holistic response to challenges of unsafe care in the Libyan context.
- The study's insights are not limited to Libya; they have the potential to contribute internationally, informing and guiding decision-making and policymaking efforts, especially for organisations such as WHO in their initiatives to augment efforts towards improving quality and patient safety in other LMICs.

This study introduces novel insights to the literature, reinforcing the evidence base regarding patient safety in Libya, an area that has been inadequately explored. The

research delves into macro, meso, and micro aspects related to the operationalisation of the Libyan health system, as identified by Ong et al. (2014). Consequently, the study holds significant policy and practice implications by offering health system regulators, decision-makers, healthcare managers, and the WHO a holistic approach to enhancing patient safety in Libya. This approach can potentially catalyse substantial alterations across health system policies and functions within the country, aiming to improve the quality of healthcare services. These changes encompass the development of new legislative and legal mechanisms, the establishment of regulatory and monitoring structures, the formulation of codes of practice, allocation of resources, and the creation of guidance protocols and standards. Collectively, these strategies will help improve and manage patient safety effectively across the entire health system in Libya.

9.4. Recommendations

Patton (2002) and Green and Thorogood (2018) argue that recommendations are a crucial element of qualitative research studies. In line with the study's objective of addressing immediate priorities for comprehensive improvement strategies targeting patient safety in Libya, the following recommendations are presented to enhance the Libyan health system functions to ensure quality outcomes. This will help the Libyan health system regulators and healthcare managers in Libya, with the support of WHO, to coordinate further efforts towards improving patient safety as a 'supportive complement' to the proposed PSIF presented in the preceding chapter. These recommendations are categorised into three main areas, encompassing policy, practice, and research. This classification will help in directing these recommendations to the appropriate stakeholders and ensuring that they are implemented in a structured and effective manner.

Recommendations for policy:

- Expanding the role of WHO in Libya to support national health system capacity building for patient safety improvement, facilitating a dynamic response to contextual challenges.
- Reviewing existing health legislation, health system policies, governmental health structures and mechanisms in relation to the ever-changing context in line with priorities and health system needs, with a focus on patient safety.

- Establishing national independent institutions with the mandate of monitoring healthcare organisations and providers to ensure compliance with relevant standards and requirements, inspired by the CQC in the UK.
- National mechanisms and policies for transparency, accountability, and anti-corruption in the Libya health sector should be established.
- Health care accreditation should be prioritised in Libya by adopting national / international standards to commit to healthcare professional development and healthcare quality excellence.

Recommendations for practice:

- Placing a national focus on establishing health system capacities for emergency preparedness and response, particularly focusing on patient safety.
- Introducing a comprehensive national patient safety education and programme in Libya.
- Reforming medical and nursing education systems based on the latest in evidence-based quality and patient safety science to ensure a future generation of competent healthcare workforces.
- Establishing national awareness and focus on patient safety through conducting mass media campaigns, community projects, conferences, workshops, and social events.

Recommendations for research

A national research programme needs to be introduced, focusing on, but not limited to, the following:

- Identifying the strengths and weaknesses of Libyan health system by utilising six primary inputs designated by WHO (WHO 2010) as imperative for health systems, with a focus on patient-centred safety and quality care.
- Interagency working in quality improvement and patient safety initiatives, particularly with health leading organisations such as WHO, to enhance the organisation, effectiveness, and delivery of quality health services in Libya.
- Developing and implementing strategies and frameworks to maintain and manage patient safety in extreme adversity, taking into account the complex

socio-technical, cultural, and political factors influencing the health system as a whole in Libya, to ensure resilient healthcare systems capable of withstanding severe challenges.

- Adoption and roll-out of best practices, as well as internationally recognised standards for healthcare (e.g., accreditation), to achieve improved patient and health outcomes in Libya, ensuring high-quality, consistent, and effective healthcare services.

Section 9.6 further elaborates on further research required based on the findings of the current study.

9.5. Study limitations

The execution of this PhD study was led by the researcher (AD), with continuous support from an excellent and dedicated supervisory team throughout the entire process. It is necessary to recognise that no research study is impervious to shortcomings. Despite employing various strategies to bolster the reliability, validity, and rigorousness of the study results, certain limitations and constraints were encountered in the research process. As such, it is important to acknowledge these constraints when interpreting and considering the findings of the study. Researchers who conduct research for the first time usually face some difficulties that may result from limited experience and a lack of resources when carrying out lengthy research studies, especially in a context such as Libya. The main limitations encountered in this study are therefore discussed in the section.

Firstly, the researcher, originally from Libya, may have brought a potential bias or strong identification with the context under investigation. Nonetheless, this also served as a strength, owing to the fact that the researcher's familiarity with Libyan culture and the overall healthcare system facilitated a nuanced approach to participant recruitment and data collection, a task that might have been otherwise onerous for those unfamiliar with the local context. Secondly, unforeseen circumstances, such as civil conflicts and the COVID-19 pandemic, significantly hindered the planned data collection in Libya between 2019 and 2020. These events led to substantial delays in overall study progression.

Thirdly, the qualitative approach employed in the current study, while providing deep insights into patient safety challenges in Libya, might have been limited by the potential

subjectivity in interpreting data and limited-transferability of findings. However, due to the nascent state of evidence on patient safety in Libya, where data are scarce, the qualitative approach was justifiably deemed the most appropriate over quantitative and mixed methods. WHO has specifically recommended qualitative research findings to understand quality and safety in Libya (WHO 2015). Moreover, the scoping review presented in Chapter 3 emphasised the need for more qualitative research to better understand patient safety challenges across the WHO EMR (Najjar et al. 2013; Elmontsri et al. 2017), indicating a significant gap this study aimed to address. Following this foundational qualitative inquiry, further quantitative and mixed method research could further validate the qualitative findings of the current study (e.g., testing and validating the proposed patient safety improvement framework), thus building a more robust evidence base for patient safety improvement strategies in Libya.

Fourthly, convenience sampling, often used for its practicality, may lead to biased results due to its non-systematic representation of the population (Jager et al. 2017). This method involves selecting the most accessible participants, potentially causing over- or under-representation of specific groups, which could have limited the transferability of the study findings. In this study, however, the convenience sampling strategy was employed for participant recruitment due to the challenging circumstances posed by the political instability as well as the COVID-19 pandemic, which undermined access to participants in research settings and data collection. These conditions made other sampling strategies impractical, necessitating a more appropriate approach to access research settings to recruit participants (Wu Suen et al. 2014; Jager et al. 2017).

Subsequently, the snowball sampling strategy that was utilised for participants recruitment could have mitigated the limitations of convenience sampling (if any) (Browne 2005). This technique leveraged the recruitment of a wider and more relevant range of participants, as nominated by those already interviewed, thereby strengthening the appropriateness of the study population. Despite limitations associated with convenience sampling and the potential for bias due to the predominance of participants from the WHO office in Libya, the inclusion of WHO focal point individuals, who were physically based in Libya, as participants in this study is justifiable, offering distinct advantages. These individuals work closely with both LMoH and Libyan hospitals, placing them in a unique position to provide comprehensive

insights into challenges to the Libyan health system and patient safety therein. Their day-to-day interaction and engagement in the health landscape of Libya equip them with a nuanced understanding and practical perspective that are crucial for an in-depth analysis of patient safety challenges in Libya. This ensures that the findings are not only relevant but also deeply informed by firsthand experiences of WHO focal point individuals, thus reinforcing the practical relevance of the study's outcomes despite the methodological constraints associated with convenience sampling.

Lastly, acknowledging potential challenges to translating management theories into practice, a thorough local needs assessment is crucial for the validation and successful implementation of the PSIF. The PSIF's implementation may encounter limitations across various management aspects, such as planning, governance, leadership, and resource allocation. The application of PSIF should therefore be seen in the context of integrating system theories into practice, systematically managing and improving patient safety by considering interdependent and interrelated elements making up the health system as a whole. Linked to above, time, and resource constraints, exacerbated by the conflicts and funding limitations, hindered the researcher's ability to validate and facilitate the implementation the PSIF in Libya. Future research endeavours should, therefore, aim to address this limitation by implementing and refining the PSIF to identify potential gaps as well as areas for improvement.

9.6. Directives for future research

Considering the challenges and insights derived from this study, several potential avenues for future research are suggested:

- To direct further research towards quality and patient safety in other Libyan cities beyond Tripoli, preferably using observation methods.
- To test, implement, and further enhance the PSIF for application in Libya as well as to evaluate its suitability for application in other LMICs alike.
- To further evaluate the role and usefulness of interagency working between different sectors and healthcare in producing as a holistic and sector-wide approach toward enhancing quality and patient safety.

- To investigate the factors that are expected to facilitate and/or hinder the development and implementation of QIPs in Libya, taking into account different levels of the health system.
- To investigate the perspectives of both patients and healthcare professionals on patient safety and potential enhancements to patient safety practices/processes, utilising both qualitative and quantitative research methodologies.
- To investigate patient safety in the private healthcare sector in Libya and observe how outcomes compare with those of the public health sector.
- In order to successfully establish a dynamic and resilient health system in Libya along the lines suggested above, areas related to human resources, governance, leadership and management styles, the health information system, service delivery, and education and training in medical schools need to be studied to allow opportunities for effective development and improvement.

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Appendix 1: Scoping Review – Findings of HSOPSC in the WHO EMR

The table below shows the average performance of 11 WHO EMR countries on the dimensions of the HSOPSC based on 53 included studies in the scoping review (Section 3.5.2.3.1 in Chapter 2).

Per cent of Positive Score in Each Dimension of HSOPSC

Country		Year	Safety Culture Dimensions (Percentage of Positive Score %)											
			1	2	3	4	5	6	7	8	9	10	11	12
Saudi Arabia	(Aboshaiqah and Baker 2013b)	2013	36	67	61	22	90	49	82	52	54	49	55	70
	(Aljabri 2012)	2012	51	71	57	52	73	22	79	57	31	66	59	77
	(Al-Awa et al. 2012)	2012	36	58	57	47	61	16	74	46	15	51	51	68
	(Alquwez et al. 2018b)	2018	37.3	56.3	20.3	64.1	60.3	16.6	83.3	48.8	21.1	54.3	59.3	85.8
	(El-Jardali et al. 2014)	2014	42.9	63.3	59.4	51.5	70.4	26.8	79.6	65.3	35.1	60.6	61.6	78.5
	(Alswat et al. 2017b)	2017	45	71.8	68.8	55.8	75.3	24.8	86.3	59.5	33.8	60.8	67	84.8
	(Alshammari et al. 2019)	2019	37	55	36.4	63	55	-	62	51	86	51	75	73
	(Alrowely and Baker 2019)	2019	42.3	66.4	35.8	40	42.3	9.5	80.7	37.6	7.4	31.8	50.9	77.5
	(Alharbi et al. 2018)	2018	17.3	56.1	62.4	14.2	27.8	11.3	65.3	49	27.6	27.8	6.1	69.3
	(Alahmadi 2010b)	2010	60	77	63	61	74	22	87	59	27	70	50	84
	(Alenezi et al. 2019)	2019	41.3	54.1	43.1	19.6	49.2	15.8	62.1	38.7	23.7	32.9	44.2	69.8
	(Al Mahmoud et al. 2020)	2020	48.6	56.6	50	74	-	34.3	73.6	70.5	-	72	-	77.7
	(Alrabae et al. 2021)	2021	36.3	63.9	64.8	50.7	61	15.6	72.9	50.3	18.7	51.8	54.7	75.3
	(Aboshaiqah 2010)	2010	36	67	61	22	90	49	82	52	54	49	55	70
	(Elmorsy 2019)	2019	47.3	51	34.3	47.1	58.2	26.6	64.8	58.1	64.5	62.9	82.9	83.2
	(Alrasheadi et al. 2022a)	2022	48	55.9	44	56	61	34.9	69	70.2	55.9	47	51	52
	(Rawas and Abou Hashish 2023)	2023	55.8	81.2	39	70.1	-	43.8	81.9	-	40.8	72.8	67.2	82.9
	(Alaska and Alkutbe 2023)	2019	53	65.1	56.5	53.5	63.6	24.9	79.7	57.3	31.7	63.6	59.3	69.7
		2021	53.3	65.2	59.5	55.5	64.3	26.1	80.5	59.1	31.9	64.3	60.1	70.2
		2022	64.6	72.8	66.6	69.2	62.9	55.6	76.2	57.3	46.8	70.8	-	79.8
(Titi et al. 2021)		2012	42.9	63.3	59.4	51.5	70.4	26.8	79.6	65.3	35.1	60.6	61.6	78.5
		2015	45	71.8	68.8	55.8	75.3	24.8	86.3	59.5	33.8	60.8	67	84.8
		2017	48.5	68.7	64.9	49.6	73.3	27.2	82.2	59.6	30.8	60.4	64.1	81.6
2019	49.8	72	66.6	52.2	73.8	27.2	83.9	61.7	31.9	60	65.8	84.5		
Egypt	(Aboul-Fotouh et al. 2012)	2012	34.6	39.7	33.4	24.6	27.2	19.5	78.2	33.9	49.3	46.4	38	58.1
	(Anwar 2017)	2017	31.2	32.9	23.2	38.4	34.5	30.3	43.7	39.6	47.5	53.5	39.5	57.4
	(Abdelhai et al. 2012)	2012	38.2	63.1	43.5	57	57.3	44.8	50.5	71.1	40.5	35.5	41.1	51.7
	(Mohamed et al. 2015)	2015	66.7	66.7	60	75	80	66.7	73.3	60	60	75	70	80
	(Salem et al. 2019)	2019	43	39.6	6	24.3	25.6	15.6	51	36	31	27	24	30
	(El-Sherbiny et al. 2020)	2020	17.9	20.2	30.4	55.1	59.5	34.7	65.3	48.3	57.6	59.8	46.5	63
	(Foda et al. 2020)	2020	34.6	31.9	28.6	19.4	29.1	12	56.4	59.7	39.5	49.2	36.7	63.5
1. Communication Openness; 2. Feedback and Communication about Error; 3. Frequency of Events Reported; 4. Hand offs and Transitions; 5. Management Support for Patient Safety; 6. Non-punitive Response to Error; 7. Organisational Learning—Continuous Improvement; 8. Overall Perceptions of Patient Safety; 9. Staffing; 10. Supervisor/manager Expectations and Actions Promoting Safety; 11. Teamwork across Units; 12. Teamwork within Units														
Continued														

Country		Year	Safety Culture Dimensions (Percentage of Positive Score %)											
			1	2	3	4	5	6	7	8	9	10	11	12
Palestine	(M. and A.A. 2013)	2013	36	46	35	48	37	17	62	43	38	56	44	71
	(Hamdan and Saleem 2018b)	2011	36.4	46.4	35.2	46.8	36.5	15.8	63.0	43.0	37.4	56.4	44.5	72.2
		2016	39.7	52.3	44.3	51.5	44.2	19.3	62.7	48.3	26.0	60.1	48.3	78.6
	(Najjar et al. 2018a)	2018	49	49	39	45	42	17	64	55	58	55	45	75
Oman	(AL Lawati et al. 2019)	2019	68	65	40	46	75	27	84	55	23	59	82	85
	(Al-Mandhari et al. 2014)	2014	54	62	54	44	67	25	84	53	30	60	64	83
	(Ammouri et al. 2015b)	2015	49.7	68.7	58.8	57.7	25.2	21.4	81.1	50.7	27	60	66.1	88.4
	(Al Dhabbari 2018)	2018	43	81	61	37	56	11	79	40	18	48	53	84
	(AL MA'MARI et al. 2019)	2019	45.6	77.7	61.7	15.3	65.9	54.8	86.3	61.4	57	59.9	50.2	94.2
Jordan	(Khater et al. 2015)	2015	49	59.5	69.1	41.1	53.5	21	68.1	60	34.5	57.9	41.7	78.8
	(AbuAIRub and Abu Alhijaa 2014)	2014	60.3	75	64.3	33.5	70.3	26.2	84.8	60.6	32.9	56.5	57.3	83.8
	(Suliman 2015)	2015	38	57	42	46	43	25	61	51	35	54	42	74
	(Saleh et al. 2015)	2015	46.1	46	37	44.3	44.5	30.7	49.2	43.3	30.4	43.3	43.8	49.8
	(M et al. 2017)	2017	62	67	63	47	72	44	73	66	55	76	61	81
	(Hamaideh 2017b)	2017	33.7	56.2	46.4	44.6	53.3	13.4	63.4	50.4	41.4	61.6	54.5	81.2
Tunisia	(Aouicha et al. 2021b)	2021	61.8	-	76.7	-	27.4	62	68.3	61.9	54.8	75.2	47.7	59.6
	(Cheikh et al. 2016)	2016	24	-	19.2	-	33.8	18.6	36.9	32.3	31	37.6	32	47.8
	(MA et al. 2020)	2020	42.1	-	27.7	-	51	36.5	48.6	53.6	34.7	53.4	45.9	70.6
	(Tiili et al. 2020)	2020	29.5	-	19.6	-	36.8	19.8	38.8	40.8	22.8	38.3	30.3	46
Kuwait	(Ghobashi et al. 2014)	2014	45	62	32	47	67	24	75	61	41	53	63	82
	(Alqattan et al. 2018)	2018	44.8	67.2	57.1	54.3	67.3	23.9	86.6	55.6	30.1	70.3	56.7	88.2
	Qoronfleh, (2021)	2021	51	73	62	41	73	28	89	54	35	56	65	88
Qatar	(Ali et al. 2018)	2018	46.9	70.7	59	62.2	77.8	27.7	86.1	60.6	39.9	77.1	64.1	89.7
	(Stewart et al. 2018)	2018	50.5	61.9	58.1	53.1	75.4	24	85.8	59.1	36.2	56.5	67.7	82.1
	(Qoronfleh et al. 2023)	2023	51	73	62	41	73	28	89	54	35	56	65	88
	(Abdulla et al. 2023)	2023	46.	70.1	70.8	59.2	79.2	27.7	82	62.7	40.1	68.1	67.1	83.1
Libya	(Rages 2014a)	2014	35.7	35.7	30.5	39.0	42.8	31.1	54	44.2	50.2	44.9	46.4	59.7
	(Eltarhuni et al. 2020a)	2020	54	56	31	31	35	30	69	44	43	62	42	72
Lebanon	(F. et al. 2010)	2010	57.3	68.1	68.2	49.7	78.4	24.3	78.3	72.5	36.8	66.4	56.0	82.3
Iraq	(Hassan and Mansour 2018)	2018	44	85	37	43	53	63	63	54	59	72	56	88

1. Communication Openness; 2. Feedback and Communication about Error; 3. Frequency of Events Reported; 4. Hand offs and Transitions; 5. Management Support for Patient Safety; 6. Non-punitive Response to Error; 7. Organisational Learning—Continuous Improvement; 8. Overall Perceptions of Patient Safety; 9. Staffing; 10. Supervisor/manager Expectations and Actions Promoting Safety; 11. Teamwork across Units; 12. Teamwork within Units

Appendix 2: COREQ checklist

The table below provides the completed COREQ checklist for the research study, encapsulating critical elements including the research team and reflexivity, design and methods, analysis, findings, and interpretations.

Topic	Item No.	Guide Questions/Description	Reported on Page No.
Domain 1: Research team and reflexivity			
<i>Personal characteristics</i>			
Interviewer/facilitator	1	Which author/s conducted the interview or focus group?	108 – 110 / 127 - 131
Credentials	2	What were the researcher's credentials? E.g. PhD, MD	108 – 110
Occupation	3	What was their occupation at the time of the study?	127 – 131
Gender	4	Was the researcher male or female?	108 – 110
Experience and training	5	What experience or training did the researcher have?	18 – 19 / 108 – 110
<i>Relationship with participants</i>			
Relationship established	6	Was a relationship established prior to study commencement?	108 – 110
Participant knowledge of the interviewer	7	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	108 – 110 / 127 - 131
Interviewer characteristics	8	What characteristics were reported about the interviewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	102 – 106
Domain 2: Study design			
<i>Theoretical framework</i>			
Methodological orientation and Theory	9	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	94 – 100
<i>Participant selection</i>			
Sampling	10	How were participants selected? e.g. purposive, convenience, consecutive, snowball	102 – 106
Method of approach	11	How were participants approached? e.g. face-to-face, telephone, mail, email	108 – 110
Sample size	12	How many participants were in the study?	108 – 110
Non-participation	13	How many people refused to participate or dropped out? Reasons?	N/A
<i>Setting</i>			
Setting of data collection	14	Where was the data collected? e.g. home, clinic, workplace	102 – 106 / 116 - 117
Presence of nonparticipants	15	Was anyone else present besides the participants and researchers?	108 – 110

Topic	Item No.	Guide Questions/Description	Reported on Page No.
Description of sample	16	What are the important characteristics of the sample? e.g. demographic data, date	102 – 106
<i>Data collection</i>			
Interview guide	17	Were questions, prompts, guides provided by the authors? Was it pilot tested?	110 – 114
Repeat interviews	18	Were repeat inter views carried out? If yes, how many?	N/A
Audio/visual recording	19	Did the research use audio or visual recording to collect the data?	116 – 117
Field notes	20	Were field notes made during and/or after the interview or focus group?	126 - 127
Duration	21	What was the duration of the inter views or focus group?	116 – 117
Data saturation	22	Was data saturation discussed?	103 – 104
Transcripts returned	23	Were transcripts returned to participants for comment and/or correction?	108 – 110 / 126 – 127
Domain 3: analysis and findings			
<i>Data analysis</i>			
Number of data coders	24	How many data coders coded the data?	118 – 121 / 355 – 359
Description of the coding tree	25	Did authors provide a description of the coding tree?	118 – 121
Derivation of themes	26	Were themes identified in advance or derived from the data?	118 – 121
Software	27	What software, if applicable, was used to manage the data?	118 – 121
Participant checking	28	Did participants provide feedback on the findings?	108 – 110 / 126 – 127
<i>Reporting</i>			
Quotations presented	29	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	137 – 234
Data and findings consistent	30	Was there consistency between the data presented and the findings?	137 – 234
Clarity of major themes	31	Were major themes clearly presented in the findings?	137 – 234
Clarity of minor themes	32	Is there a description of diverse cases or discussion of minor themes?	137 – 234

Appendix 3: A letter Invitation



Invitation Letter

SREC Reference: 705

A letter of invitation to take part in a study titled: Exploring Interagency Patient Safety Policies and Strategies in the World Health Organisation Eastern Mediterranean Region (WHO-EMR): A Qualitative Study of Libya

Dear Participant,

I am Aseel Dardur. I am currently enrolled in a Doctorate in Philosophy (PhD) course at Cardiff University in Wales, United Kingdom. I would like to invite you to take part in a PhD research study I am currently conducting, which aims to improve understanding of patient safety organisation, management, and concerns in Libya, as well as interagency working in patient safety and its effects on the organisation and delivery of quality care in Libya. I would like to explore and understand how patient safety is operationalised, organised, and managed within the Libyan health system and what associated challenges and concerns. Also, I would like to explore and understand how the interplay and interface between WHO and the Libyan health system's patient safety strategy, if any, affect the organisation and delivery of quality care in Libya. This understanding will be used to generate comprehensive, context-lens strategies for improving patient safety in Libya.

Before you decide whether to take part in this research would like you to read the information sheet that explains why the research is being conducted and what your participation will involve. If you would like to discuss any aspect of this research, then please call Aseel Dardur on [REDACTED], Viber/WhatsApp available on these numbers, or send an email to (darduras@cardiff.ac.uk) if there is anything that needs to be more explained.

Thank you for your time and consideration. Your participation will be appreciated.

Aseel Dardur

Postgraduate Research Student at Cardiff University School of Healthcare Sciences
Eastgate House
35-43 Newport Road
CF24 0AB



ISQua's 38th International Conference
Brisbane Convention & Exhibition Centre
Brisbane, Australia
17th – 20th October 2022

Aseel Dradur

Has attended

**ISQua's 38th International
Conference, Brisbane, Australia**

A black rectangular redaction box covers the name of the signatory. To the right of the box, a handwritten signature in blue ink is visible. A horizontal line is drawn below the signature area.

Carsten Engel
ISQua CEO



Participant Information Sheet

(Arabic Version Available)

Research Study Title: Exploring Interagency Patient Safety Policies and Strategies in the World Health Organisation Eastern Mediterranean Region (WHO-EMR): A Qualitative Study of Libya

SREC Reference and Committee: 705

Main Contact: Aseel Dardur

My name is Aseel Dardur, and I am a Postgraduate Research Student at Cardiff University. My key interest area is Patient Safety.

You are being invited to take part in a research project. Before you decide whether to take part or not, it is important for you to understand why the research is being undertaken and what it will involve. Please take time to read the following information carefully and discuss it with others, if you wish.

What is the purpose of this research study?

The research study aims to improve understanding of patient safety organisation, management, and concerns in Libya, as well as interagency working in patient safety and its effects on the organisation and delivery of quality care in Libya. I would like to explore and understand how patient safety is operationalised, organised, and managed within the Libyan health system and what patient safety challenges and concerns have been perceived by Libyan health system decision-makers, policymakers, and healthcare managers. Also, I would like to explore and understand how the interplay and interface between WHO and the Libyan health system's patient safety strategy, if any, affect the organisation and delivery of quality care in Libya. This

understanding will be used to generate comprehensive, context-lens strategies, informed by recommendations, for improving patient safety in Libya through enhanced interagency working. The findings of this research study are likely to have relevance not only for the Libyan health system but potentially for health systems in other WHO-EMR countries.

Why have I been invited?

You have been invited to take part in this research study as you are an employee/staff member working in LMoH / WHO / hospital so you can help us improve our understanding of patient safety organisation, management, and concerns in Libya, as well as interagency working in patient safety and its effects on the organisation and delivery of quality care in Libyan hospitals. Your views will be important to help inform recommendations that support the planning, development, and implementation of effective patient safety policies and improvement strategies (including how to adapt them to the local context) and to present and support the WHO's current and future contribution to Libya in improving patient safety.

Do I have to take part?

Whilst your contribution would be valuable, it is entirely your choice whether you would like to take part in any or all stages of the study or not. If you agree to take part, I will then ask you to sign a consent form. You are free to withdraw at any time, without a need to give any reason or explanation, without any adverse consequence. If you decide to withdraw from the study, with your permission I would like to keep and use any information that you have provided whilst taking part in the study.

What will happen to me if I take part?

You have been invited to take part in a telephone/Skype interview, which will be conducted in Arabic (or English if you prefer). If you decide to take part in this research study, you will be contacted by Aseel Dardur to arrange to arrange a mutually convenient time and place for the interview to take place. The interview procedure will be clearly explained to you before the interviewing process commences by providing you with a broad overview of the research study and the need for your participation. All the questions will focus on the interagency working between the WHO and the LMoH Libya in the context of technical cooperation and strategic frameworks for working in and with Libya and effects. If any, on the organisation and delivery of safe

care in Libyan hospitals. The interview will not include any sensitive questions, and you may omit any questions you feel uncomfortable answering.

What will I have to do?

I would like you to participate in a telephone/Skype interview which will last approximately 45-60 minutes and will be conducted using the Arabic language (or in English if you prefer). The interview will also be audio recorded and will then be typed up into a written/transcribed (transcript) anonymously for the purposes of analysis in this research study. The result of the analysis may be used for publication in the future; however, you cannot be identified from the research study results, and your anonymity will be confidently maintained and retained at all stages of the research study. Also, with your permission I would like to use your 'word-for-word' (verbatim) quotes in the final publications and presentations, but I will ensure that no one will be able to identify you from your quotes.

What are the risks of taking part in this study?

If you decide to take part in this research project, no risks are anticipated. Your participation is voluntary and that you are free to withdraw at any time without giving any reason or explanation. However, the collected data will be treated confidentially, and your name will be anonymised to protect your identity during the analysis and writing phases of this study. All the information to be collected in the research study will also be securely stored and subsequently destroyed, using the guidance for storing research information set out by Cardiff University.

What are the possible benefits of taking part?

There are no personal benefits but there is a general benefit to enhancing and increasing knowledge and understanding of patient safety and possibly improving care quality and patient outcomes in Libya.

Will participation in this study be kept confidential?

Absolutely. Throughout the course of the research study, the confidentiality and privacy of all participants will be entirely respected. Data will be managed in accordance with Cardiff University Research Integrity and Governance Code of Practice. Moreover, the researcher will be fully adhered to legal requirements and policy of the setting/workplace and will familiarise them-self with the key elements of

these requirements and policy. The identity of your organisation/setting will be known, but your identity and place of work (e.g. name of unit) will be fully protected. The researcher will follow the ethical and legal practice of Cardiff University and will be fully adhered to with GDPR Legislation and Cardiff University Policies and all information about you will be handled in confidence. The recorded conversation will be transcribed anonymously and stored electronically on a secure encrypted server (OneDrive) provided by Cardiff University. I will use a digital audio device to record the conversation and will immediately upload the conversations on a secure encrypted server (OneDrive) provided by Cardiff University. The conversation will then be deleted from the audio device. The previous steps will be followed to maintain the confidentiality of the participants. Only the research team (the researcher and supervisory team) will access the saved data and information. If unethical practices are observed or there are safety concerns such as breach of information containing participants identifiable details, or disclosure of sensitive information, this will be dealt with the utmost importance. In such scenarios, the relevant authorities will be informed as per the Cardiff University policies as well as the policies and legal requirements of the setting/workplace. Moreover, in the case that the researcher sees something that is dangerous, or against the policy of the workplace (e.g. incidence of dangerous unsafe practice), they will notify the Head of Administrative Affairs and Services Directorate and the Legal Affairs Office in the Ministry of Health immediately.

What will happen to the results of the research study?

Cardiff University is the sponsor for this research study. We will act as the data controller for this research study. This means we are responsible for looking after your information and using it properly. The results of this research study will be published as part of Aseel Dardur's Cardiff University School of Healthcare Sciences PhD thesis. Cardiff University will keep all research data for 5 years once the study is completed.

Your rights to access, change or move your information is limited, as we need to manage your information in specific ways in order for the research to be reliable and accurate. If you withdraw from the study, we will keep the information about you that we have already obtained. To safeguard your rights, we will use the minimum personally identifiable information possible.

You can find out more about Cardiff University Data Protection policy and procedures by visiting the site below:

<https://www.cardiff.ac.uk/public-information/policies-and-procedures/data-protection>

or by contacting the University's Data Protection Officer: inforequest@cardiff.ac.uk

Individuals from Cardiff University and regulatory organisations may look at your research records to check the accuracy of the research study. The only people in Cardiff University who will have access to information that identifies you will be those who are conducting or supervising the research study; those who need to contact you about the research or audit the data collection process. Cardiff University will keep personal identifiable information about you from this study for up to six months after the study has finished.

Who is organising and funding the research?

This study is funded by the Ministry of Higher Education in Libya and the Libyan Embassy – Academic Attaché, London.

Who has reviewed the study?

The research study has been reviewed by the School of Healthcare Sciences Research Screening and Ethical Review Committee in Cardiff (Wales, the United Kingdom). The study has also been reviewed by the Health Information Centre and Health Affairs in the Ministry of Health in Tripoli, Libya. This is to ensure that this research study is fair and is being conducted in the light of related guidelines and policies set out.

What if there is a problem?

In case if you have any concern about any aspect of the study, you could ask to speak to the research team who will do their best to answer your questions. Email Aseel Dardur at darduras@cardiff.ac.uk or call UK: [REDACTED] or Libya: +[REDACTED]. Alternatively, you can contact the researcher's academic supervisors Professor Aled Jones (Tel: [REDACTED] or email jonesa97@cardiff.ac.uk) or Dr Dominic Roche (Tel: [REDACTED] or email roched1@cardiff.ac.uk). If you remain unhappy and wish to complain formally, you can contact the Cardiff University School of Healthcare Science Research Governance Lead, Dr Kate Button by emailing buttonk@cardiff.ac.uk or contacting [REDACTED]

or you may speak to Dr Tina Gambling, Director of Post Graduate Research, School of healthcare science, Cardiff University by contacting [REDACTED] or emailing gamblings@cardiff.ac.uk.

Contact for further information

If you would like to discuss any part of the project in greater detail then please do not hesitate to contact Aseel Dardur at:

School of Healthcare Sciences, Cardiff University

Eastgate House

35-43 Newport Road

CF24 0AB

Cardiff

[REDACTED]

Email: darduras@cardiff.ac.uk

Thank you for your time and consideration

Aseel Dardur

Appendix 6: Sample Consent Form



Individual Interviews Consent Form – LM011

Centre Number:

Participant Identification Number:

Research Project Title: Exploring the Effectiveness of Interagency Working on the Organisation and Delivery of Safe Care in the Eastern Mediterranean Region (EMR): A Qualitative Case Study of Libya

SREC Reference and Committee: 705

Main Contact: Aseel Dardur

Please Initial box

- 1- I confirm that I have read the information sheet dated [28 November 2019] version [2] for the above research project.
- 2- I confirm that I have understood the information sheet dated [28 November 2019] version [2] for the above research project and that I have had the opportunity to ask questions and that these have been answered satisfactorily.
- 3- I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, and without any adverse consequence. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
- 4- I understand that my interview will be recorded on a digital recording device that can connect to the telephone/computer for the purpose of voice recording. I give permission for this.
- 5- I understand that data collected will not be transferred to any commercial organisation but may be used anonymously for publication, presentation at conferences, for teaching purposes and for future studies. I understand how the findings and results of the research project will be written up and published. I give permission for this.
- 6- I agree if the researcher uses my word-for-word (verbatim) quotes in any publications about the research and I understand that they will be totally anonymised and no one will be able to identify me from my quotes.
- 7- I understand that all information collected will be kept held in accordance with all applicable data protection legislation and in strict confidence, unless disclosure is required by law or professional obligation. I understand that all my data will be kept securely at Cardiff University for 5 years post publication and will be made publicly available.
- 8- I agree to take part in the above research project.

Full Name of Participant	Date	Signature
[REDACTED]	27.05.2020	[REDACTED]
Name of Researcher	Name	Signature

Appendix 7: Ethical Approval



School of
Healthcare Sciences

Ysgol y Gwyddorau
Gofal Iechyd

Interim Head of School and Dean / Pennaeth yr Ysgol Dros Dros a Deon Professor David Whitaker

Cardiff University

Eastgate House
35-43 Newport Road
Cardiff
www.cardiff.ac.uk

Prifysgol Caerdydd

Ty Eastgate
35 - 43 Heol Casnewydd
Caerdydd
www.caerdydd.ac.uk

6 JUNE 2020

ASEEL DARDUR
CARDIFF UNIVERSITY
SCHOOL OF HEALTHCARE SCIENCES

Dear Aseel

Research project title: Exploring Interagency Patient Safety Policies and Strategies in the Eastern Mediterranean Region (EMR): A Qualitative Case Study of Libya

BREC reference: REC705

The School of Healthcare Research Ethics Committee has reviewed the above application via its proportionate review process.

Ethical Opinion

The Committee gave a favourable ethical opinion of the above application on the basis described in the application form, protocol and supporting documentation.

Additional approvals

This letter provides an ethical opinion only. You must not start your research project until all appropriate approvals are in place.

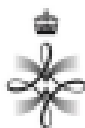
Amendments

Any substantial amendments to documents previously reviewed by the Committee must be submitted to the Committee via HCAREEthics@cf.ac.uk for consideration and cannot be implemented until the Committee has confirmed it is satisfied with the proposed amendments.

You are permitted to implement non-substantial amendments to the documents previously reviewed by the Committee but you must provide a copy of any updated documents to the Committee via HCAREEthics@cf.ac.uk for its records.

Monitoring requirements

The Committee must be informed of any unexpected ethical issues or unexpected adverse events that arise during the research project.



The Queen's
ANNIVERSARY PRIZE
FOR HIGHER EDUCATION
2019



INVESTORS
IN PEOPLE



Athena
SWAN
Silver Award



UK Quality Assured
Approved Award to DSU

Registered Charity No. 1138855
Queen's Anniversary Priz. 1138855

The Committee must be informed when your research project has ended. This notification should be made to HCAREEthics@cf.ac.uk within three months of research project completion.

Complaints/Appeals

If you are dissatisfied with the decision made by the Committee, please contact Dr Kate Button in the first instance to discuss your complaint. If this discussion does not resolve the issue, you are entitled to refer the matter to the Head of School for further consideration. The Head of School may refer the matter to the University Research Integrity and Ethics Committee (URIEC), where this is appropriate. Please be advised that URIEC will not normally interfere with a decision of the Committee and is concerned only with the general principles of natural justice, reasonableness and fairness of the decision.

Please use the Committee reference number on all future correspondence.

The Committee reminds you that it is your responsibility to conduct your research project to the highest ethical standards and to keep all ethical issues arising from your research project under regular review.

You are expected to comply with Cardiff University's policies, procedures and guidance at all times, including, but not limited to, its Policy on the Ethical Conduct of Research Involving Human Participants, Human Material or Human Data and our Research Integrity and Governance Code of Practice.

Yours sincerely,



Senior Lecturer
Director of Research Governance

Cc: Alad Jones, Dominic Roche



Registered Charity No. 1136959
Queen's Anniversary Prize, 1136959

Appendix 8: Data Collection Permission

State of Libya
Ministry of Health
Health Information Center



دولة ليبيا
وزارة الصحة
مركز المعلومات والتوثيق

التاريخ: 1 / 1
الموافق: 2019 / 10 / 13

الاشارة: 19 / 263

Initial permission to conduct a study in Libya

Dear. Mr Aseel Salem Almokhtar Dardur, Cardiff University
School of Healthcare Sciences

With reference to your Invitation Letter dated 06 October 2019, to the ministry of Health in Libya asking for initial approval to conduct a study Titled :

"A Qualitative Study of Operationalisation, Management and Healthcare Employees' Perceptions of Patient Safety in the Libyan Healthcare System: Micro to Macro Perspectives" In two hospitals and Ministry of Health in Libya.

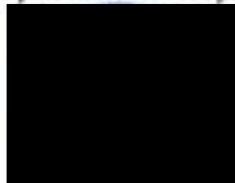
I am Pleased to inform you that Health Information Centre of the Ministry of Health Libya has Approved your Request and Issued this letter as initial permission (letter of access) for your above mentioned Study .

Please don't Hesitate to contact Health Information Center / MOH /LIBYA for any further assistant.

Best Regards

[Redacted Signature]
General Information Centre

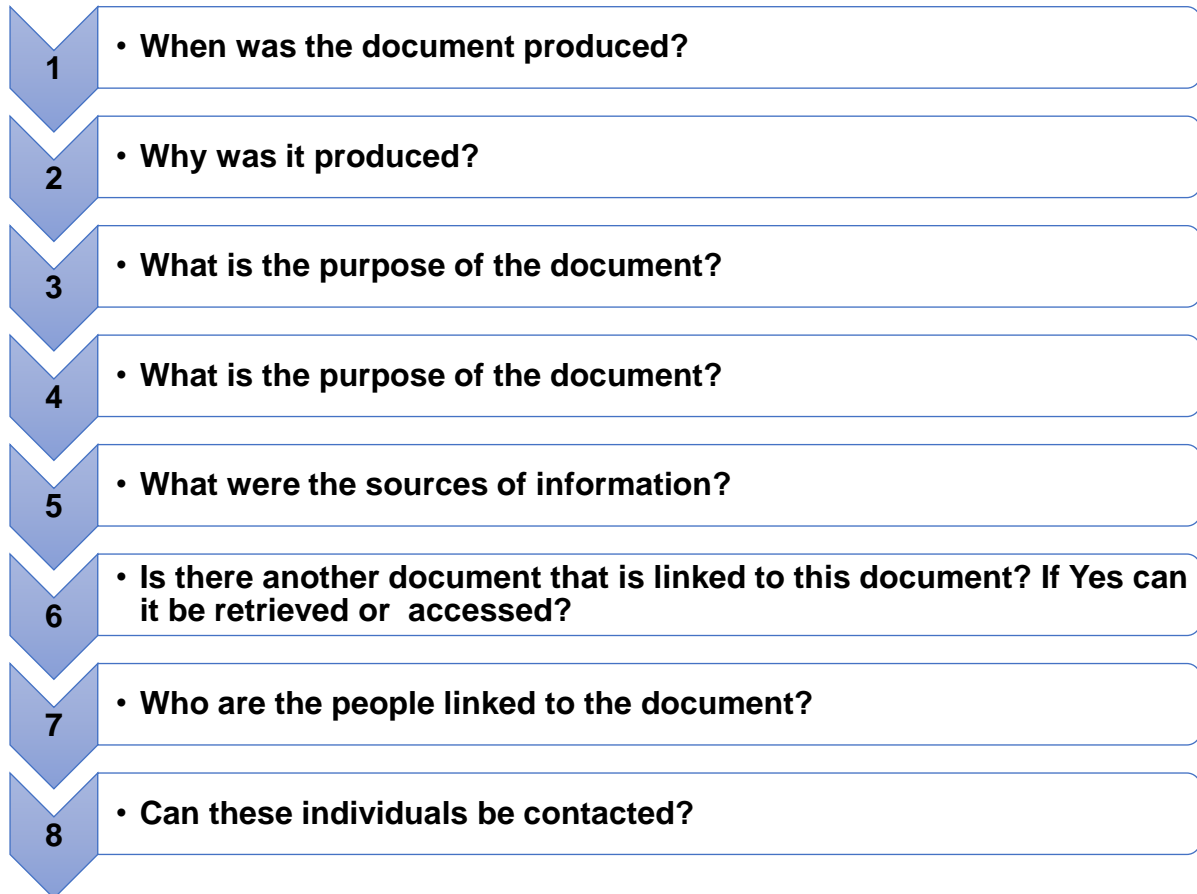
Ministry of Health – Libya



Appendix 9: Reflective Samples of Data Categorisation and Thematic Coding

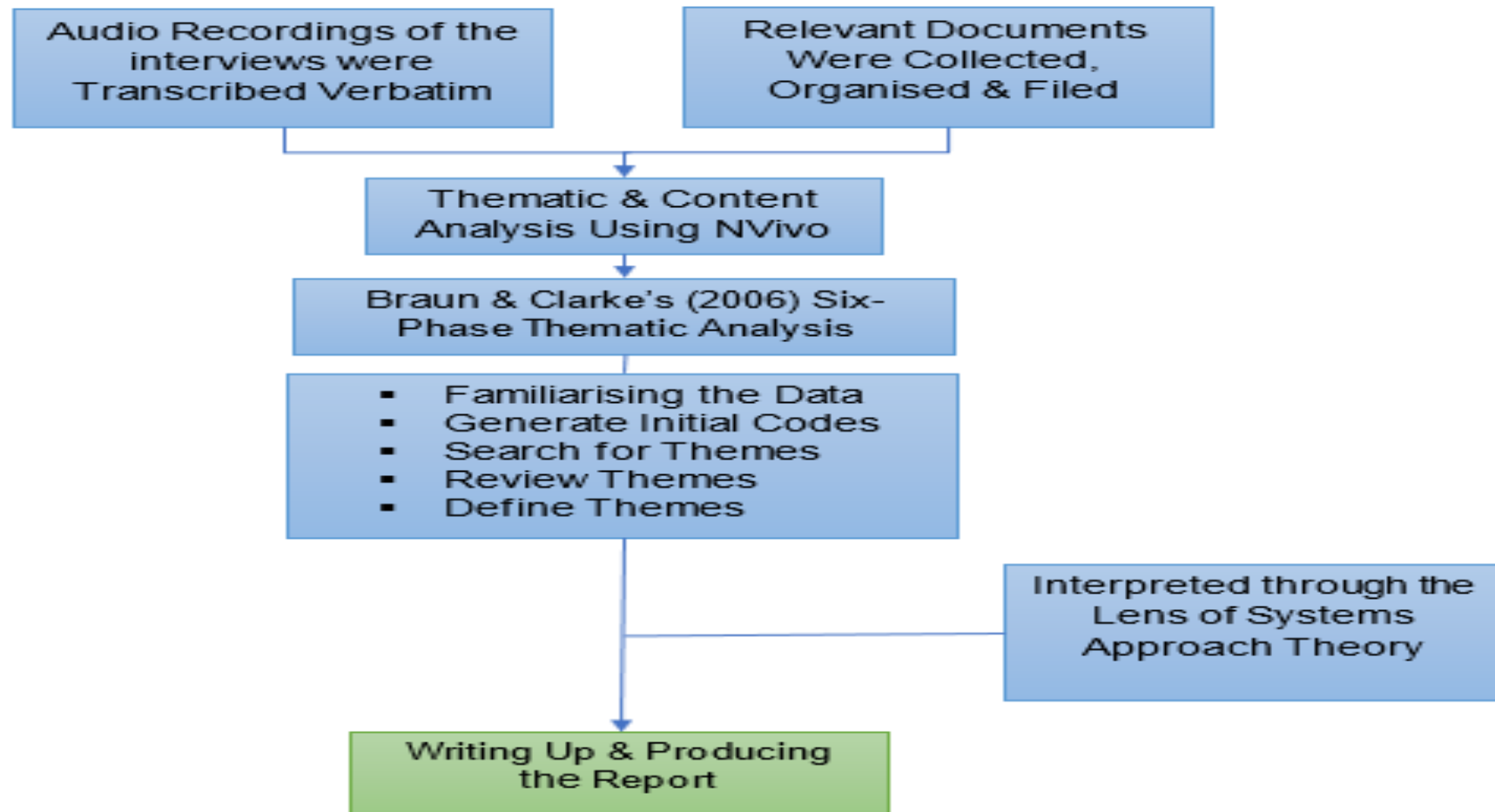
A. Patient safety policy document analysis framework

The figure below presents the structured framework used for patient safety policy document analysis in the study.



B. Thematic and coding process

B.1. Data analysis process



B.2. Sample of codes collation and themes generation for Chapter Five

Patient safety Organisation in Libya: the What, How and Why

1. Poor overall health system governance and leadership	5. Conflicts and the complex political system in Libya
	<ul style="list-style-type: none"> ▪ Lack of patient safety regulation. ▪ Security issues in healthcare facilities. ▪ Deterioration and damage to health care facilities. ▪ Shortages of medical supplies.
2. Poor patient safety governance and organisation	6. Lack of adequate resources influencing patient safety
<ul style="list-style-type: none"> ▪ Highly fragmented and loosely regulated ▪ Poor leadership and commitment. ▪ Poor structures and systems. ▪ Poor capacity and competencies. ▪ Absence of adequate policies, legislation, and regulations. ▪ Self-developed and -organised guidelines. 	<ul style="list-style-type: none"> ▪ Lack of qualified and skilled health care staff. ▪ Lack of proper systems and processes. ▪ Lack of medicine, medical material, and equipment. ▪ Lack of research, education, and training. ▪ Poor financial resources allocation.
3. Lack of national quality improvement and patient safety initiatives.	7. Patient safety concerns in Libya
<ul style="list-style-type: none"> ▪ Accountability and mechanisms not clearly defined. ▪ Inadequate national mentoring structures and organisations. ▪ Hospitals not mandated by national legislation or regulations to implement patient safety systems or strategies. ▪ Lack of improvement programmes. 	<ul style="list-style-type: none"> ▪ Security incidents. ▪ Misidentification of patients. ▪ Healthcare-Associated Infections (HAIs). ▪ Medication/drug errors. ▪ Diagnostic errors. ▪ Surgical errors and post-operative complications. ▪ hospital-acquired pressure ulcers. ▪ Fall injuries. ▪ Communication errors.
4. Absence of communication and coordination	
<ul style="list-style-type: none"> ▪ Lack of adequate supervision, monitoring, reporting and follow up. ▪ Poorly functioning referral systems 	

B.3. Sample of codes collation and themes generation for Chapter Six

Interagency Working

1. Patient safety in Libya from the WHO' standpoint	5. WHO patient safety guidance and programmes in Libya— implementation failure and gaps
<ul style="list-style-type: none"> ▪ Poor national understanding and awareness of patient safety. ▪ Lack of robust patient safety programmes and initiatives. ▪ Poor leadership, advocacy, and support for patient safety. ▪ Extreme adversity and emergencies (e, g., Covid-19). ▪ Poor patient safety culture. ▪ Inadequate funding and resources. ▪ Lack of research, education, training. 	<ul style="list-style-type: none"> ▪ Lack of patient safety regulation. ▪ Security issues in healthcare facilities. ▪ Deterioration and damage to health care facilities.
2. What interagency working in patient safety looks like?	6. WHO Support and resources at the national level
<ul style="list-style-type: none"> ▪ Mutual agreement and priorities. ▪ Mechanisms, procedures, dynamics, and processes. ▪ Effects on organisation and delivery of safe care in Libya. 	<ul style="list-style-type: none"> ▪ Accessibility and distribution. ▪ Inadequate deployment of WHO resources in Libya. ▪ Issue of Libya not making use of WHO resources.
3. Fluctuating and incoherent communication	7. Poor national engagement and involvement with the WHO
<ul style="list-style-type: none"> ▪ Lack of national mechanisms and systems for communication. ▪ Poor information sharing and dissemination 	<ul style="list-style-type: none"> ▪ National decision- and policy-makers' reluctance to engage with the WHO in patient safety issues. ▪ Lack of engagement and involvement of key stakeholders in patient safety decision-making at the national level.
4. Fluctuating interagency monitoring and follow up	8. Challenges to interagency working and communication
<ul style="list-style-type: none"> ▪ Lack of commitment to monitoring and follow up. ▪ Lack of coordination and mechanisms at the national level. 	<ul style="list-style-type: none"> ▪ Lack of clear strategies and protocols. ▪ Conflicts. ▪ Conflicting perspectives. ▪ Political Savvy.

B.4. Sample of codes collation and themes generation for Chapter Seven

Improving Patient Safety in Libya through Enhanced Interagency Working

1. Instituting effective governance for patient safety at the national level — a priority for patient safety in Libya

- Advocacy, leadership, and top management support.
- Interagency communication and information sharing.
- Policies, strategies, and guidelines.
- Capacity building.
- Action plan.
- Monitoring and evaluation.
- Programmes and committees.

2. Prioritising patient safety within health system framework and Universal Health Coverage (UHC) in Libya — an interagency endeavour for improving patient safety in Libya

3. Establishing national structures and robust systems for interagency communication and coordination of patient safety related-work across all levels

4. Interagency collaboration and coordination for reinforcing research, education, and training and benchmarking in patient safety in Libya

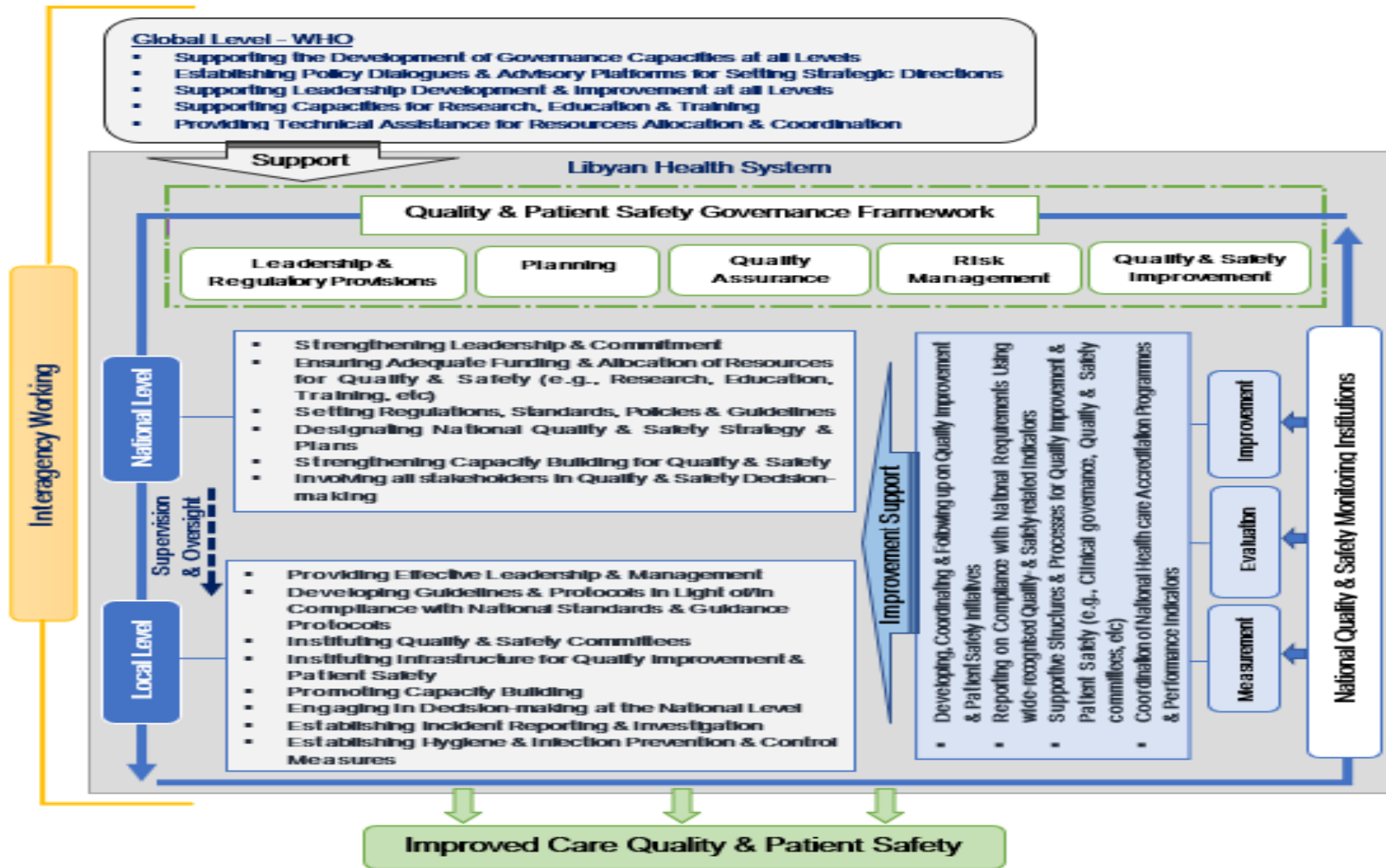
5. Promoting engagement and involvement in patient safety decision-making across all levels

6. Promoting engagement and involvement in patient safety decision-making across all levels

- Framework and protocols.
- Policies and strategies
- Improvement programmes and initiatives.
- Resources allocation and mobilisation.

Appendix 10: Reflective Samples of the PSIF Development Process

8.A. Sample of data and concept collation for patient safety improvement in Libya based on participant views



8.B. Sample of the systematic construction of PSIF components up based on participant views

