social sciences

MDPI

Article

Learning from the Past to Prepare for the Future: A Thematic Review of Recommendations Following Natural-Cause Deaths in Welsh Prisons (2013–2022)

Aimée Challenger [1,*], Isobel Joy McFadzean [2], Benjamin J. Gray [1], Christie Craddock [1] and Stephanie E. Perrett [1]

[1] Communicable Disease Inclusion Health Programme, Public Health Wales, Cardiff CF10 4BZ, UK; benjamin.gray@wales.nhs.uk (B.J.G.); christie.craddock@wales.nhs.uk (C.C.); stephanie.perrett@wales.nhs.uk (S.E.P.)
[2] PRIME Centre Wales, Cardiff University, Cardiff CF14 4YS, UK; mcfadzeanj@cardiff.ac.uk
* Correspondence: aimee.challenger3@wales.nhs.uk

Abstract

Deaths from natural causes (e.g., cardiovascular disease, respiratory illness, and cancers) are increasing in prisons in England and Wales. Many are believed to be avoidable and related to prisoner premature mortality. The circumstances around each death in custody are investigated by the Prisons and Probation Ombudsman (PPO), who provides recommendations for improvement. Learning from these recommendations can inform future healthcare to prevent avoidable deaths and improve the management of chronic diseases related to natural-cause deaths. Fatal Incident reports were accessed from the PPO website for deaths from natural causes in Welsh prisons between January 2013 and December 2022. Inductive content analysis was used to organise the recommendations into themes. Descriptive analyses subsequently profiled the characteristics of the deaths. Themes were analysed to inform the design of future prison healthcare. A total of 165 PPO recommendations were analysed from 51 reports. Six themes were identified: care planning and provision, transportation, emergency response, administrative, fundamental safety, and system level. Learning from natural-cause deaths can inform suggestions for future models of prison healthcare delivery. Learning emphasises the need for improvements in electronic sharing of clinical records, strengthening the links between prison health services and governance processes of national health provision, and sharing learning at a system level to drive system improvements.

Keywords: probation; post-release; community sentence; mortality; community supervision

Check for updates

Academic Editor: Craig Boylstein

Received: 27 August 2026
Revised: 14 October 2026
Accepted: 17 October 2026
Published: 22 October 2026

Copyright: © 2026 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license.

1. Introduction

Natural causes are the most common cause of death in prisons in England and Wales, with a rate of 23 per 10,000 prisoners (Ministry of Justice 2026b). People residing in prisons have been found to die from natural causes 20 years earlier than those in the general population (Iacobucci 2024), and many of these deaths are believed to be avoidable and premature (The National Confidential Enquiry into Patient Outcome and Death 2024). The most common causes of natural deaths in prisons are cardiovascular disease, respiratory illnesses or cancers, and the mortality rates reflect the complex health needs of prisoners (Carson 2021; Eberly et al. 2025; Lüchtenborg et al. 2024; Ministry of Justice 2026b; Mundt et al. 2024).

Prison population projections for England and Wales over the next ten years will see increasing numbers across all age groups; however, older people in prison (50+ years) are the fastest-growing group (House of Commons and UK Parliament 2020; Ministry of Justice 2026a). Their numbers increased by 35% from 11,818 in September 2015 to 15,962 in 2025 (Ministry of Justice and HM Prison and Probation Service 2026). This is due, in part, to overall United Kingdom (UK) population changes, but is also driven by sentence inflation and increased prosecution rates in older populations, resulting in more people being sentenced to prison at an older age (House of Commons and UK Parliament 2020; Stürup-Toft et al. 2018). This increase in older people in prison is likely to drive trends in mortality from natural causes.

Prison healthcare, therefore, needs to prepare for predicted increases in demand from future ageing populations with complex concurrent conditions. Prison healthcare services will need to manage chronic ill health, acute illness and end-of-life care (when mortality may not be preventable), as well as offering prevention and health promotion to try and reduce premature mortality in a population already experiencing poorer health outcomes and greater socioeconomic deprivation (House of Commons and UK Parliament 2020; Stürup-Toft et al. 2018).

Whilst there has been extensive research into prison healthcare (Davies et al. 2021; Health Services Safety Investigations Body 2022; McLintock et al. 2023; McLintock and Sheard 2024), an understanding of the nature and different types (McFadzean et al. 2023; McFadzean et al. 2026a), and the rate of harm (McFadzean et al. 2026b) experienced by those in prison, to our knowledge, no study has analysed the recommendations following death. Therefore, to inform future prevention and management of natural-cause deaths, we reviewed recommendations made following formal investigations into natural-cause deaths in prisons in Wales over a nine-year period (2013–2022). We used content analysis to draw out common themes in learning. We describe how this learning can inform the future model of prison health provision.

To comply with international law (Council of Europe 1950), all prisoner deaths in England and Wales undergo an independent investigation by the Prisons and Probation Ombudsman (PPO). The PPO's investigation aims to (a) establish the circumstances and key events surrounding the death; (b) examine whether changes in policy, prison management, or prisoner care could prevent a recurrence; and (c) examine the healthcare received by the individual alongside their access to clinical care and whether the care met the principle of equivalence (Prisons and Probation Ombudsman n.d.). Following their investigation, the PPO may include recommendations alongside their findings to prevent similar deaths in the future. The findings are collated into a "Fatal Incident Report" and uploaded to the PPO website after the coroner's inquest has taken place. Publication often occurs several years after the date of death. Previous studies have analysed PPO reports to examine suicide (Dewar 2018; Tomczak 2018), deaths involving palliative care (Kirkham 2021), and drug-related deaths (Duke et al. 2024). We, therefore, believe that this is the first study to review PPO recommendations related to deaths from "natural causes."

Despite the aim of the PPO to prevent recurrence of deaths, a persistent issue identified by previous work is the repetition of recommendations and the lack of effective remedial action (Tomczak 2018; Tomczak and McAllister 2021). When interviewed, PPO staff have reported that their "recommendations and thematic lessons rarely say anything new [. . .] Nor are prisons [. . .] hostile or unsympathetic to what I have to say" (Tomczak 2018, p. 53). Tomczak (2018) suggests that the failure to prevent further similar recommendations is unsurprising given that the Ombudsman highlights issues/problems but does not provide the prisons with solutions or address the practicality of implementation.

Although the Fatal Incident reports provide a rich and accessible data archive, they have been underutilised by researchers, the PPO and HM Prison and Probation Service (HM Prison and Probation Service 2025; Duke et al. 2024; Tomczak 2018). There is not currently a national oversight group for prison deaths, and the PPO reports are not routinely shared with organisations other than those directly involved in the death under investigation. This means that learning and/or good practice is not shared more widely. The PPO does publish "Learning Lessons Bulletins"; however, the last review of deaths from natural causes was in 2012 (Prisons and Probation Ombudsman 2012). We, therefore, conducted an inductive content analysis of published learning from natural-cause deaths in prisons in Wales, UK, from 2013 to 2022. We aimed to carry out the following:

1. Categorise the recommendations by theme.
2. Identify the most frequently occurring categories and subcategories.
3. Consider how the themes inform the delivery of safe prison health services.

2. Materials and Methods

We accessed Fatal Incident Reports from the PPO website on 1st October 2024 (Prisons and Probation Ombudsman 2026). Reports were included if

1. They investigated a death between January 2013 and December 2022. This nine-year period was selected to capture repeated recommendations over time.
2. The death occurred in a prison in Wales, UK.
3. The cause of death was determined to be "natural causes".
4. The report was uploaded on the PPO website before 1st October 2024 (i.e., the date we completed our data collection).
5. The report contained recommendations.

The HMPPS oversees all public prisons in England and Wales (HM Prison and Probation Service n.d.), and in Wales, the criminal courts are integrated with the courts of England, so there is no devolution or separation of powers (Paun and Shuttleworth 2020). However, in Wales, HMPPS healthcare in prison is devolved to the Welsh Government and delivered by NHS Wales through a prison's local health board (GOV.UK 2023; Public Health Wales n.d.). Subsequently, the clinical review aspect for the PPO investigation for deaths in Welsh prisons is carried out by Healthcare Inspectorate Wales. Therefore, we included deaths that took place in Wales to direct our attention to Wales-specific recommendations. However, the recommendations are likely generalisable to other devolved nations.

2.1. Data Preparation

PPO reports are not anonymised when they are published online. However, when using quotes from the PPO reports, we used an ID number we assigned to the reports for the purposes of analysis (P001–P110). Recommendations were copied verbatim into a coding template. If reports contained several recommendations across different categories, recommendations were split so that all aspects were captured (see Appendix A).

2.2. Data Analysis

Inductive content analysis: Recommendations were analysed using "inductive content analysis" (Vears and Gillam 2022). This analysis has many similarities to thematic analysis (Ahmed et al. 2025; Braun and Clarke 2006), as both involve the coding of text to group similar pieces of text. Whilst both methods allow for the inductive derivation of coding categories the PPO reports, we believe that inductive content analysis was more suitable for this study as it supported the development of an overall summary of the content of the recommendations within our dataset (Vears and Gillam 2022). Thematic analysis, meanwhile, goes beyond the descriptive to capture the nuances and implied

meanings (Braun and Clarke 2022). The categories were iteratively refined through several rounds of coding. For example, the first round of coding identified 13 categories and 24 subcategories. These were refined by clinical and non-clinical public health researchers (A.C., B.G., S.P., and C.G.) who worked in groups that rotated with each round of coding to ensure a good mix of research and clinical skills. For example, S.P. and C.C. could advise which recommendations were part of clinical care versus those more related to the organisation/administration. Disagreements were resolved through consensus and/or discussion, with academic clinician IJM appraising all themes independently to support refining the categories and subcategories. Subsequently, all codification was synthesised and analysed to answer the research questions.

Descriptive analysis: Inductive content analysis does not count instances (e.g., how many times a recommendation category was repeated during the study period (Vears and Gillam 2022)); therefore, descriptive statistics were calculated separately by A.C. in Excel.

Categorising causes of death: To provide insight into the types of natural-cause deaths in this study, we categorised the deaths according to the International Classification of Diseases-10 (ICD-10) code that matched the cause of death mentioned in the report (World Health Organization 2004). We intentionally chose ICD-10 and not ICD-11 as ICD-10 is still currently in use by the Office for National Statistics and was used during the majority of the study period (Office for National Statistics 2026). Where deaths have more than one cause mentioned, we added the category "multiple cause".

2.3. Data

A total of 110 PPO reports were available for deaths that occurred in Welsh prisons between February 2013 and August 2022 (Figure 1). We excluded reports in which the cause of death was not listed as "natural causes" (n = 38). Of the 72 remaining deaths categorised as "natural causes", 21 were excluded as they did not have any recommendations. Thus, 51 reports were included in the analysis. The leading causes of death within the 51 "natural causes" with recommendations were diseases of the circulatory system (n = 11 (22%); average age: 65.3 years; range: 35–84 years), diseases of the respiratory system (n = 11 (22%); average age: 65.3 years; range: 27–80 years), neoplasm (cancer; n = 9 (18%); average age: 63 years; range: 51–82 years), multiple cause (n = 6 (12%); average age: 57.5 years; range: 27–87 years). The overall age range was 27 years to 88 years (average: 61.7 years). Reports related to deaths from "natural causes" were available from four out of six prison sites in Wales, UK. This does not mean that there were no deaths at the other prison establishments during this period. We could only access the reports available on the PPO website.

The recommendations from the 51 reports were manually split, leaving 173 recommendations. Of these, three were excluded as the recommendations were not related to health. This left 170 recommendations.

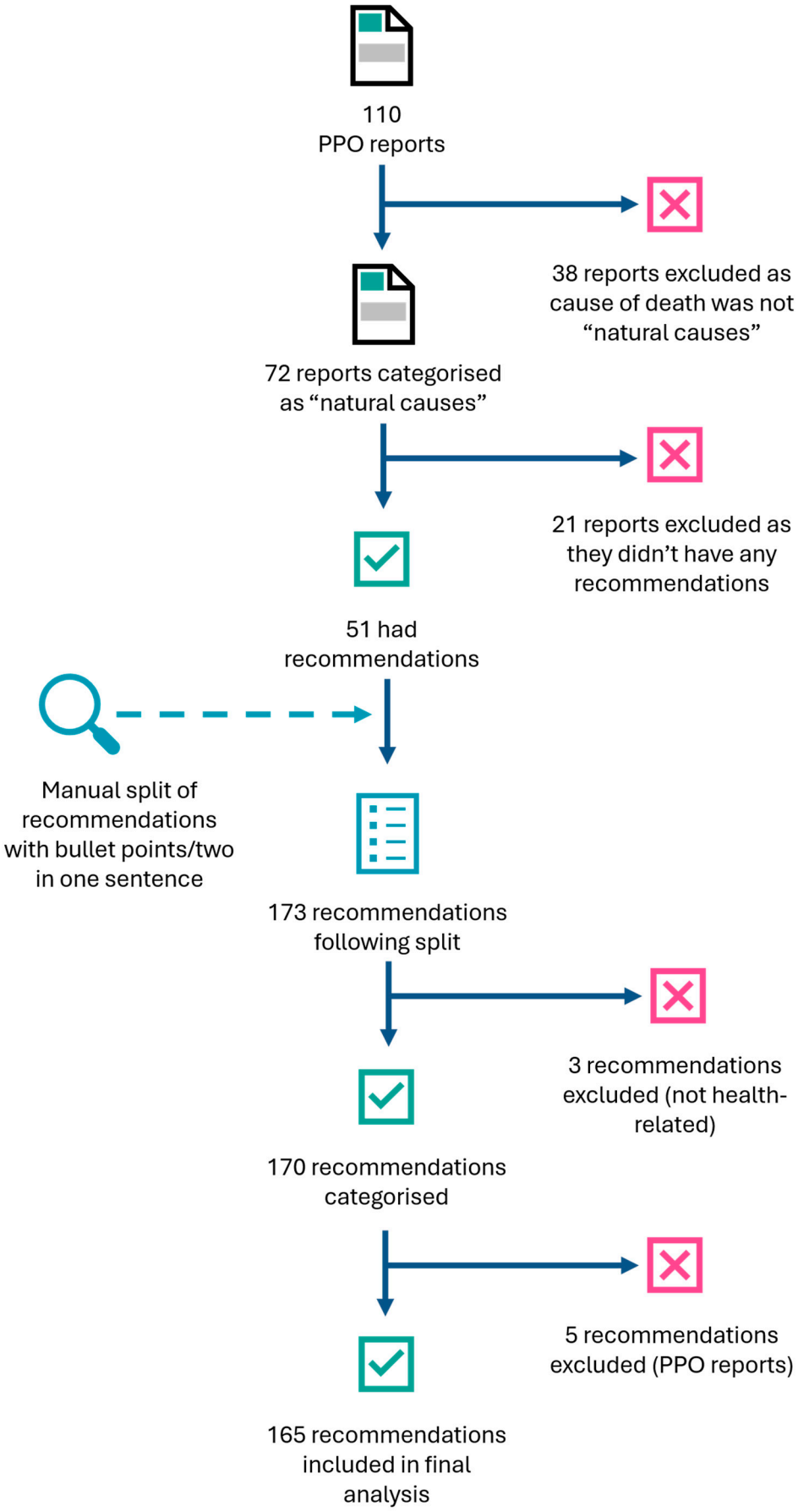


Figure 1. Flow of retrieval of recommendations.

3. Results

3.1. Categories

We identified seven descriptive categories: care planning and provision, transportation, emergency response, administrative, fundamental safety, system level, and PPO reports. The five recommendations in the "PPO reports" category were removed as they were related to communicating PPO findings after a death had occurred. This, therefore, left 165 recommendations and six categories in the final analysis (Table 1).

Table 1. Category definitions, main subcategories (n > 4), and example recommendations.

Category and Definition	Main Subcategories	Example Recommendation (PPO Report ID)
Care planning and provision (n = 94) Recommendation related to the planning and provision of patient mental and physical healthcare. For example: management of chronic conditions, care access, screening, and patient assessment.	Access to appropriate care (n = 29)	• **Continuity of care:** "ensure that all important information about prisoners' health is entered on SystmOne ** and that healthcare staff adequately review newly arrived prisoners' SystmOne records to ensure appropriate continuity of care" (P043). • **Prisoner assessment:** "newly arrived insulin-dependent diabetic prisoners are assessed on their understanding of diabetes management and self-care so that appropriate care is provided in line with prisoners' needs" (P033). • **Chronic diseases managed in line with NICE * guidelines:** "ensure that prisoners with chronic diseases are effectively managed and monitored in line with NICE guidelines" (P005). • **Access to specific services and medication:** "ensure that prisoners have appropriate access to GPs *** for both routine and urgent appointments" (P022).
	Clear, accurate, contemporaneous records (n = 15)	• **Clear records:** "should ensure that all staff understand their professional requirement to maintain clear, accurate, contemporaneous healthcare records" (P070). • **Record why appointments are cancelled:** "ensure. . . that hospital appointments are cancelled only as a last resort and at no detriment to a prisoner's health and that staff clearly record the **reasons for such cancellations" (P011).** • **Record rationale behind decisions:** "record all considerations and decisions in the multi-disciplinary meeting notes and SystmOne clinical record" (P092).
	Clinical observations (n = 9)	• **National Early Warning Score (NEWS):** "ensure that clinical staff consistently use assessment tools, in particular the NEWS to ensure the appropriate and timely escalation of unwell patients" (P069). • **COVID-19:** "ensure that all the necessary clinical observations are completed and documented when assessing a prisoner with symptoms of COVID-19" (P101). • **Transitioning from hospital to prison:** "ensure that a baseline medical assessment and observations are taken for all prisoners returning or arriving at the prison following general surgery or a period in hospital" (P036).
	Clinical investigations (n = 8)	• **Review and follow-up**: "should ensure that clinicians promptly and appropriately review and follow up abnormal blood test results, especially where the results reveal a significant diagnosis" (P043).
	Risk assessment (n = 8)	• **Health Assessment**: "ensure that, in line with NICE Guideline (NG57), a second-stage health assessment is carried out within seven days of a prisoner's initial health screen" (P101). • **Self harm and suicide**: "ensure that staff manage prisoners at risk of suicide and self-harm in line with national policy, in particular staff should assess risk based on all relevant information, including that held in medical records" (P033).

Table 1. *Cont.*

Category and Definition	Main Subcategories	Example Recommendation (PPO Report ID)
Administrative (n = 17) Recommendations about tasks that support prisoner care. For example: taking accurate personal histories and ensuring that there are processes to monitor appointments.	Palliative care (n = 7)	• **Compassionate release**: "ensure that staff understand the process for compassionate release and that applications are progressed in a timely manner and submitted as promptly as possible" (P107).
	Medical appointments (n = 5)	• **Hospital appointments**: "ensure that new prisoners do not miss hospital appointments unless there are properly justified, exceptional and fully recorded reasons" (P038).
	Records management (n = 5)	• **Record keeping:** "remind staff of the need for accurate record keeping and consider whether the auditing process is sufficiently robust" (P096).
Emergency response (n = 17) Recommendation about the handling of emergencies. For example: prison response, emergency code use, and ambulance communication.	Emergency codes (n = 7)	• **Responsibilities:** "ensure that all prison staff are made aware of, and understand, their responsibilities during medical emergencies, including that staff promptly use a recognised emergency code to communicate the nature of the emergency" (P096).
	Ambulances (n = 4)	• **Efficient communication**: "ensure that there are no delays in calling, directing or discharging ambulances" (P021).
Transportation (n = 17) Recommendations about the appropriate risk assessment of prisoners who need to travel. (e.g., hospital or prison transfers)	Risk assessment (n = 15)	• **Transport**: "ensure that risk assessments for prisoners taken to hospital fully take into account individual circumstances, including their health and mobility, are based on the actual risk the prisoner presents at the time and that managers communicate decisions to appropriately staffed escorts" (P002).
Fundamental safety (n = 15) Recommendations related to prisoner safety. For example: prisoner management, prisoner wellbeing, and staff wellbeing.	Observations of prisoner (n = 4)	• **Wellbeing:** "ensure that officers understand their responsibilities for checking on the wellbeing of prisoners when unlocking their cells and ensuring that there are no immediate issues that need attention" (P056).
System level (n = 5) Recommendations related to system-level changes. For example: broad policy changes.	No subcategories identified	• **Record keeping:** "HM Prison and Probation Service should discuss with the NHS England and NHS Improvement, the Welsh Government likewise with Public Health Wales whether the measures recommended by the Clinical Reviewer to ensure that details of serious but acute health issues are documented in prisoners' medical records, should be introduced in all prisons in England and Wales" (P072). • **Abdominal pain protocol:** "HM Prison and Probation Service should discuss with the Welsh Government and the Local Health Board and NHS England and NHS Improvement whether a protocol for the management of prisoners with abdominal pain should be introduced in all prisons in England and Wales" (P072). • **Prison dental care:** "ensure that prison dental surgeries in Wales are subjected to the same level of scrutiny and inspection as community dental surgeries" (P033).

* NICE: National Institute for Health and Care Excellence. ** SystmOne is the electronic health record software used in prison. *** GP: General Practitioner.

The number of recommendations each year ranged from two (2017) to 42 (2016). Most of the recommendations were related to deaths amongst older (50+ years) people in prison (n = 119) versus younger (n = 46). Similarly, most deaths were amongst those less than 75 years (n = 132) and were, therefore, considered premature (Office for National Statistics 2025). The number of recommendations in each report ranged from one to seventeen.

3.2. Repetition

As shown in Table 1, the categories were repeated between five and 94 times over the study period. To illustrate the repetition of recommendations, we will discuss the subcategories of the largest main category: "care planning and provision" category (n = 94

(57%)) in more detail (Table 2, see Appendix B for full list of subcategories). This category contained more recommendations than the other main categories combined (94 vs. 71).

Table 2. The most frequently repeated subcategories within the "care planning and provision" subcategories by mean age at death (in years) and year of death.

Care Planning and Provision Subcategory	Mean Age at Death (Range)	Number of Times Subcategory Is Mentioned										
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
Access to appropriate care	59.58 (27–88)	6	2	0	8	0	2	3	3	4	1	29
Clear, accurate, contemporaneous records	58.52 (27–87)	2	1	0	3	1	0	2	5	1	0	15
Clinical observations	68.88 (37–88)	0	0	0	1	0	1	2	3	2	0	9
Clinical investigation	69.86 (56–88)	0	0	0	2	0	1	2	0	2	1	8
Risk assessment	53.88 (27–75)	1	1	0	2	0	0	2	1	1	0	8

3.2.1. Access to Appropriate Care

Almost one-third (31%) of the care planning and provision recommendations fell into the "access to appropriate care category. These recommendations focused on ensuring that prisoners receive assessments and care provision appropriate for their needs, have their long-term conditions managed in line with NICE guidelines, receive continuity of care when they transfer from the community into prison, and that they have appropriate access to specific services and medication. The mean age at death was 59.6 years (range: 27–88 years), and the causes of death included in these recommendations were neoplasms (e.g., prostate cancer and pancreatic cancer), diseases of the circulatory system (e.g., ischaemic heart disease and cardiac failure), and diseases of the respiratory system (e.g., bronchopneumonia and aspiration pneumonia). The recommendations in this subcategory were present in the first year of our study period (2013) and were repeated most years during the study period. The year with the highest number of recommendations in this subcategory was 2016 (n = 8).

3.2.2. Clear, Accurate, Contemporaneous Records

Fifteen recommendations (16%) were assigned to the subcategory "clear, accurate, contemporaneous records". These recommendations focused on ensuring that healthcare staff kept clear and accurate records in line with the required standards of their professional councils (e.g., recording the rationale behind decisions and why healthcare appointments are cancelled). The mean age at death for this subcategory was 58.8 years (range: 27–87 years). The causes of death associated with these recommendations included pneumonia, COVID-19, heart disease, and sepsis. The "clear, accurate, contemporaneous records" recommendations were first mentioned in 2013 and appeared in seven of the ten years of the study period. The year with the most recommendations in this category was 2020, with five recommendations.

3.2.3. Clinical Observations

The "clinical observations" subcategory contained nine recommendations (9.6%). The recommendations in this subcategory encouraged clinical staff to complete and document clinical observations and use National Early Warning Scores (NEWSs) to appropriately escalate the clinical response. They were first mentioned in 2016 and were repeated in five of the ten years. The average age at death for this subcategory was 68.88 years (range: 37–88 years). Causes of death in this subcategory included diseases of the digestive system, heart disease, and liver cancer.

3.2.4. Clinical Investigation

There were eight (8.5%) recommendations in the subcategory "clinical investigation". Recommendations in this category focused on the effective completion and follow-up of medical tests, such as blood samples/tests. The average age at death was 69.86 years (range: 56–88 years). The "clinical investigation" subcategory first appeared in 2016 and also appeared in five of the ten years. Causes of death in this subcategory included sepsis, respiratory failure, and pneumonia.

3.2.5. Risk Assessment

The "risk assessment" subcategory had eight recommendations (8.5%). Recommendations in the risk assessment category focused on the completion of health assessments and screening (e.g., cardiac risk factors, weight, and substance use). The average age at death was 53.88 years (range: 27–75 years). The subcategory was first recorded in 2013 and was seen in six of the ten years. Causes of death in this subcategory included bladder cancer and diseases of the respiratory system.

4. Discussion

We reviewed 165 recommendations related to natural-cause deaths. Recommendations fell into six themes: care planning and provision, transportation, emergency response, administrative, fundamental safety, and system level. The themes are not mutually exclusive and instead were often dependent on each other; for example, administration is required to support care planning and provision, and arguably, care planning and provision is fundamental to safety. As the recommendations stemmed from natural-cause deaths, predominantly cardiovascular, respiratory or cancer, most recommendations, other than those categorised as emergency response, were in relation to the safe and timely management of chronic ill health within the prison environment. Many recommendations were fundamentally about coordination and continuity across organisational boundaries, including prison and the community.

4.1. Context Within the Existing Literature

Compared with the general population, people in prison experience a 67 times greater risk of avoidable significant healthcare-associated harm (McFadzean et al. 2026b) and have disproportionately poorer mental and physical health outcomes (Favril et al. 2024; Miller et al. 2024; Munday et al. 2019). This reflects the health inequalities linked to sociodemographic deprivation seen in the general population (Office for National Statistics 2025). Notably, people in prison are more likely to come from lower socioeconomic backgrounds (World Health Organization 2014). Prison residents shoulder a higher prevalence of disabilities than those in the general population, particularly amongst older people in prison (Miller et al. 2024). Geriatric conditions (e.g., hearing impairment; multimorbidity; urinary incontinence; and falls) are observed amongst people in prison at an average of 59 years; this is significantly lower than the average age of 75 years in the general population (Greene et al. 2018). The deaths evident in our review, and the recommendations that follow them, are testimony to the complex poor health seen in this population.

Most recommendations were aimed locally, directed at those delivering healthcare, for example, a missing care plan, risk assessment or the need for blood results to have been checked. At an operational level, they provide useful feedback for health providers to check processes and embed learning. Collating the local recommendations by theme enables observation of trends pointing to areas that may benefit from system changes. This learning is critical for system planning of prison health services that must prepare for increasing

populations and a greater number of older people at increased risk of chronic ill health, comorbidities and elevated risk of natural-cause mortality (McFadzean et al. 2026a).

4.2. Repetition of Recommendations

In line with previous work (Tomczak 2018; Tomczak and McAllister 2021), we found that similar recommendations were repeated both within the same year and across the ten-year study period. We found that access to appropriate care was the primary challenge within the care planning and provision category. This was followed by difficulties maintaining high-quality clinical records. Policies to mitigate these issues, and many of the other repeated recommendations identified, already exist. For example, the need for healthcare workers to keep clear, timely, and accurate records is outlined in their professional standards for practice (General Medical Council n.d.; Nursing and Midwifery Council 2015). Thus, our study highlights an implementation gap between strategic policies and practical implementation. One possible explanation for the gap could be due to a breakdown at the implementation stage, whereby prison staff disregard health promotion (Woodall 2016). In the context of the PPO recommendations, we found that some policies were not implemented by the prison staff (e.g., wellbeing checks upon cell unlock). Another explanation, however, could be a broader symptom of a system under strain (i.e., understaffed/under-resourced prisons).

PPO reports have been criticised as "technocratic"; that is, they reduce complex systemic issues to individuals who fail to comply with prison policies and/or procedures (Aitken 2022; Tomczak et al. 2024). Prisons are complex systems, and the risk of deaths amongst people in prison can rarely be reduced to one faulty factor. For example, drug-related deaths in prison can be viewed through the lens of a "risk matrix" that looks beyond an individual to include the social and political factors that play a role in harm (Duke et al. 2024). When viewed through this lens, individual vulnerabilities are identified alongside risky circumstances (e.g., delayed emergency responses by the prison) and a risky environment (e.g., overcrowding and staff shortages).

In England and Wales, between December 2024 and December 2025, there was a 4.2% decrease in prison officers (Ministry of Justice and HM Prison and Probation Service 2026). Meanwhile, approximately 25% of prisoners were in crowded conditions (HM Prison and Probation Service 2025). Persistent recruitment and retention issues were cited as challenges in certain prisons (Ministry of Justice and HM Prison and Probation Service 2026). When viewed alongside the criticisms of PPO investigations and evidence on avoidable healthcare-associated harm in prisons, our findings indicate that deaths in prisons represent the extreme end of a broader pattern of routine system difficulties. Improving safety and outcomes in prison healthcare will require a shift away from individual blame and the generation of additional policies, towards addressing the implementation and capability of existing care processes.

4.3. Implications for Policy and Practice

We consider findings from the content analysis as informing four areas of system planning: future models of prison healthcare delivery, electronic sharing of clinical records, embedding prison health services within the governance structure of national health provision, and sharing learning at a system level.

4.3.1. Area 1: Future Models of Prison Healthcare Delivery

The challenges to delivering healthcare within a secure environment that is structurally designed for public protection are well known (Mills and Kendall 2018; Plugge and Watson 2026). Prisons are typically overcrowded, poorly ventilated, and poorly climate-controlled and consist of small living spaces with cumbersome security processes to enter and exit. The impact of

these things could be seen in the learning from natural-cause deaths within the themes of 'care planning and provision' and 'emergency response', particularly around the ability to access specialist care, with this typically being off-site, and enabling ambulances to get swift access to patients. These challenges were as evident in recommendations made to Victorian-era prisons as those built this century.

Future prison health provision must address the logistical challenges evident from the natural-cause deaths recommendations and consider ways of ensuring timely access to specialist clinical care that does not compromise the prison's ability to maintain public protection. Management of long-term conditions frequently requires access to specialist care, the need for which will increase alongside an ageing population. Novel models to address this, such as telemedicine, have been adopted with varying degrees of success (Edge et al. 2021; Tian et al. 2021). In-reach models are often logistically easier for prisons to deliver and are typically used to provide mental health care (Brooker and Webster 2017; McKenna et al. 2015). Prison outreach, often in partnership with community specialists, has been found to be successful in providing assessment and treatment of hepatitis C (Lloyd et al. 2013). Where need creates enough demand, some prisons have developed their own nurse-led specialist services on-site, such as for sexual health (Kelly et al. 2020), diabetes (Mills 2014) and the use of advanced nurse practitioners for meeting primary care needs (Wong et al. 2018). Mixed models of delivery will be needed depending on population need and availability of local specialist community services. The responsibility of providing this should not just fall to prison health providers. Secondary care providers have equal responsibility in making sure their specialisms can be accessed by those in prison (Edge et al. 2020).

The review of learning from natural-cause deaths identified administration as its own category with several recommendations around booking specialist appointments (n = 5) and organising end-of-life care (n = 7). Such tasks may seem basic, and yet recommendations in this area are frequently repeated, highlighting the administrative burden that is essential to coordinate quality care. Imprisonment, by design, removes the ability for individuals to organise any of their own healthcare beyond requesting an appointment with a prison doctor; thus, administration that, in the community, would be undertaken by the patient themselves needs to be resourced by the prison health provider. Administrative tasks such as booking specialist appointments, organising transportation, confirming community prescriptions and reaching out to previous case workers all fall to the prison health provider. This is an additional administrative burden unique to the prison setting and should be recognised by service planners to ensure provision is built in accordingly.

Robust health assessment emerged frequently, particularly within the category of 'care planning and provision'. This included general health assessment on admission to prison and clinical assessments to monitor acute deterioration. Admission to prison is a critical period for identifying acute health concerns and immediate safety risks. Multiple assessments are advised to take place on admission, including for substance use, mental health, suicide and self-harm risk and any acute medical needs (National Institute for Health and Care Excellence 2016). Examples of learning from natural-cause deaths to improve assessments include supporting health promotion by monitoring weight and blood pressure. Robust triage systems will help future prison health providers to identify immediate health needs and then plan to meet non-urgent care needs according to the length of time an individual will be in custody. It is likely that prisons with a higher turnover of residents and holding those on shorter sentences will need to develop robust triage pathways as they will have a shorter period of time to work with the patient.

The category of transportation included repeated recommendations around the risk assessment of safely transporting those in prison to external appointments and is another example of the challenges of delivering healthcare within a non-healthcare environment. Transportation challenges by ambulance were included within the emergency response category. Prisons often place a high demand on ambulance services (Hodson et al. 2026) and have been a catalyst for solutions such as on-site paramedics that have proved successful in providing emergency care on-site and facilitating a smoother transition to hospital (Johnson 2020). This provision should be considered in future models of prison healthcare.

4.3.2. Area 2: Improving the Ability to Share Clinical Records

The long-term conditions associated with natural-cause deaths require specialist care from multiple providers, including primary and secondary care. The management of such conditions is frequently multidisciplinary, with support provided by nurses, doctors, pharmacists and physiotherapists who are often external to the prison. Clinical record keeping is not only a legal requirement but is also essential to the sharing of information, ensuring the patient receives a safe and high standard of care. In the review of natural-cause deaths, recommendations around record keeping were made multiple times. These included ensuring staff adhere to the requirements for clear and accurate records and that existing clinical records were reviewed on admission to ensure continuity of care. The need for prison healthcare providers to be able to access community health records was made multiple times. Similarly, the sharing of prison health information back to community providers on release was also advised as needing improvement. Reform and digitalisation of prison health records has long been called for (Bes et al. 2024; Farrell et al. 2025). Recent authors note that without advances in digitalising prison health records, services will be left behind in advances in AI to improve efficiencies across the prison health system (Whitford 2025). For service planners, this remains an area of need that is widely acknowledged but remains largely unaddressed, as it requires investment and drive at a systems level and is often beyond the ability of a single provider to implement. Recommendations are likely to continue in this area until system-wide digital reform for prison health records is introduced.

4.3.3. Area 3: Embedding Prison Health Systems Within the Governance Structure of National Health Provision

In 2013, the World Health Organization (WHO) recommended that health ministries should be responsible for the delivery of healthcare in prisons (World Health Organization 2013). The WHO recommended that the health and wellbeing of prisons was a whole-of-government responsibility and, therefore, each ministry should support its own area, and that health ministries should be accountable for health services in prisons. The recommendation was also designed to ensure independence in clinical practice (Pont et al. 2018). By 2013, the healthcare for prisons in England and Wales was either commissioned by or provided directly by the UK Health Ministry of the National Health Service, a change since seen across many other nations (Van Hout et al. 2024). The change was made to modernise prison healthcare, bringing it in line with what was considered the more robust governance of community services. Over a decade since this transition and despite multiple advantages, some areas of prison health provision still appear to be poorly tied to wider health service governance processes. Such gaps were evident in the recommendations made in response to natural-cause deaths in custody, for example, the need to ensure prison dental care is subject to the same level of scrutiny as community provision and checks to ensure medication dispensing in prisons complies with regulations. Several recommendations remind providers of the need to provide care in line with published national guidance. Recommendations were made twice to ensure prisons are managing long-term conditions in line with national clinical guidance and three times in relation to improving use of the widely recognised National Early Warning Score (NEWS; National Institute for Health and Care

Excellence 2020), suggesting prison settings may struggle to embed practices considered standardised elsewhere. Further investigation would be useful to understand any challenges faced by implementing the NEWS assessment within prisons, as use in other community settings suggests a tailored approach may be beneficial (Brangan et al. 2018). Implementation may also be improved by ensuring prison services are embedded within the governance of national health agencies and that prison health leads are linked to and supported by peers within community services to be able to deliver care in line with national guidance. Recommendations for ensuring long-term conditions are managed in line with national guidance are particularly pertinent for future service planning, given the increase in chronic disease that prisons are likely to see.

4.3.4. Area 4: Sharing Learning at a System Level

Our review of the learning from natural-cause deaths in prison yielded rich information that can inform the delivery of healthcare and prevention of future deaths. Just eight of 173 recommendations were made at a national level. Recommendations made following a death in custody are shared with the prison in which the death occurred, but to the best of our knowledge, they are not routinely shared with other prisons or healthcare providers. This risks leading to a post-code lottery of care where some prisons are unaware of improvements they could be making based on the learning given to other sites. To our knowledge, this content analysis of learning from prison deaths across Wales is the first time recommendations from Wales have been collated and themed. Processes to improve learning locally appear robust, but much more could be done to share learning more widely and to improve delivery at a system level.

The fatal incident reports that we analysed are a publicly available resource and provide a wealth of information that could be used more widely for research as well as by service providers. This study focused on PPO recommendation narratives, whereas future research could consider factors such as which deaths were associated with a large number of recommendations (e.g., cause of death, socioeconomic status of patient, the patient's family involvement, disability, type of prison, and age of prison).

4.3.5. Area 5: Improvements Cannot Be Made if the System Itself Is Broken

It has been widely acknowledged that the prison healthcare system is under strain in England and Wales. Prison healthcare in England and Wales has been described as existing in a state of perpetual crisis due, in part, to inadequate staffing, overcrowding and political/societal indifference (McLintock and Sheard 2024; Sheard et al. 2023).

Some have even argued that the prison system is in a state of permacrisis whereby its state of perpetual crisis is treated as a politically useful operational condition (Ismail 2026). That is, it is used to "legitimise pre-existing failures, suspend reform, and displace long-term accountability" (Ismail 2026, p. 3). This perpetual state of crisis has been worsened by populist politics and the UK government's austerity measures (Ismail 2020, 2026).

A system in perpetual crisis, one that is struggling to maintain basic functioning, lacks the resources to enact remedial change. Until this is addressed, we are unlikely to observe change within the prison healthcare system.

4.4. Strengths and Limitations

This study used a decade of independent death investigations to identify recurring systemic weaknesses and future priorities for prison healthcare in Wales. The Fatal Incident reports are completed by the Prisons and Probation Ombudsman following every death in custody. A strength of this method is that the PPO reports provide rich information and an evaluation of the circumstances surrounding an individual's death. The investigations use information recorded in a prisoner's His Majesty's Prison and Probation Service and medical records.

We must note, however, that the information available is dependent upon the quality of the records and the recording practices of the PPO investigators. For example, ethnicity, religion, disability, and other sociodemographic factors are not systematically reported in the PPO reports. There has been some criticism in the literature regarding the narrow remit of PPO investigations (Tomczak et al. 2024). Although many of the recommendations were aimed at those delivering healthcare, we observed that the more recent PPO reports in our sample distanced themselves from the clinical review (which is not made publicly available). The reports included statements such as "The PPO investigator investigated the non-clinical issues relating to [patient]'s care". It is not clear why this change was made. The Ombudsman Terms of Reference explicitly state that an aim of the Ombudsman investigation is to "examine relevant health issues and assess clinical care" (Prisons and Probation Ombudsman 2021, p. 11) and that investigations include "an examination of the clinical issues relevant to each death" (p. 12). This bias towards the prison procedures risks worsening the divide between prison healthcare and the prison regime and widening the implementation gap. Furthermore, it is perhaps another example of the PPO's function as a process of defensible decision making, which serves neither the best interests of the dying prisoner nor the prison officers and healthcare staff (Robinson 2023). It strengthens the argument that PPO investigations function to assign blame/defend practice rather than inform future care.

Another criticism is the significant time lag between the deaths and the reports being available for analysis. The PPO reports can take years to be made available on the website. This means that there are often fewer reports available compared with the number of deaths reported in national statistics. For example, less than a third of the reports investigating deaths in 2022 (29%) had been uploaded when we completed our data collection. Therefore, we must be cautious about comparisons across time for the more recent years in our analysis. The delay between the deaths and the availability of the information in the reports also means that learning is delayed.

The content analysis was a useful tool to identify themes within a large set of qualitative recommendations. The process is subjective in that many of the recommendations could cut across several themes. We mitigated this by two authors separately coding the same data and then coming together to compare differences and agree on themes through discussion and consensus. Similarly, there may be some subjectivity in the recommendations themselves from unconscious bias from the individual undertaking the death investigation.

5. Conclusions

With rising prison populations, particularly amongst older age groups, prisons in England and Wales need to prepare to meet increases in chronic ill health and, where illness cannot be prevented, natural-cause deaths. The fatal incident reports from previous deaths provide rich learning to inform future models of delivery. Using content analysis, we considered the application of recommendations across the themes of care planning and provision, transportation, emergency response, administrative and fundamental safety, to the future of prison healthcare. Our analysis provides considerations for future models of delivery, including strengthening governance processes around prison healthcare. It calls for system changes to improve the sharing of clinical records and to improve the way learning from deaths is shared between services and across the system to inform system improvements.

Author Contributions: Conceptualization, A.C., B.J.G., C.C., and S.E.P.; methodology, A.C., B.J.G., C.C., and S.E.P.; formal analysis, A.C., I.J.M., B.J.G., C.C., and S.E.P.; writing—original draft preparation, A.C., I.J.M., and S.E.P.; writing—review and editing A.C., I.J.M., B.J.G., C.C., and S.E.P.; visualization, A.C. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Ethical review and approval were waived for this study due to the data being publicly available.

Informed Consent Statement: Not applicable.

Data Availability Statement: Fatal Incident reports published by the Prisons and Probation Ombudsman are publicly available.

Conflicts of Interest: The authors declare no conflicts of interest.

Abbreviation

The following abbreviation is used in this manuscript:

PPO Prisons and Probation Ombudsman

Appendix A

An example of a recommendation set across several bullet points:

In this example, all bullet points would belong to the same main category "care planning and provision". They would, however, have different subcategories. The first bullet would belong to the subcategory "risk assessment", the second would be "access to appropriate care", the third would be "multidisciplinary team" and the fourth would be "staff skill mix".

> The Governor should ensure that prison staff manage prisoners at risk of suicide or self-harm in line with national guidelines, including that:
> 1. ACCT assessors use all other available information to complete assessments, when a prisoner does not engage in the assessment process.
> 2. ACCT observations are made at irregular intervals.
> 3. A multi-disciplinary case review is held within 24 hours of an ACCT plan being opened.
> 4. All staff in contact with prisoners have training in suicide and self-harm prevention procedures with appropriate refresher training.

An example of two recommendations ([1,2]) in one sentence:

In this case, both would belong to the same main category (emergency response). They would, however, have different subcategories. The first recommendation would belong to the subcategory "emergency codes", whereas the second would belong to the "ambulances" category.

> The Director should ensure that all prison staff are **made aware of and understand PSI 03/2013 and their responsibilities**[1] during medical emergencies and ensures there **are no delays in calling for emergency assistance**[2].

Appendix B

List of subcategories.

Table A1. The number of recommendations within each subcategory.

Category	Subcategory	Number of Recommendations
Care planning and provision	Access to appropriate care	29
Care planning and provision	Clear, accurate, contemporaneous records	15
Transportation	Risk assessment	15
Care planning and provision	Clinical observations	9
Care planning and provision	Clinical investigation	8
Care planning and provision	Risk assessment	8
Administrative	Palliative care	7
Emergency response	Emergency codes	7
Administrative	Medical appointments	5
Administrative	Records management	5
Care planning and provision	Staff skill mix	5
Care planning and provision	Communication	4
Care planning and provision	History taking	4
Care planning and provision	Medicines management	4
Emergency response	Ambulances	4
Fundamental safety	Observations of prisoner	4
Care planning and provision	Discharge	3
Fundamental safety	Staff skill mix	3
Fundamental safety	Prisoner management	3
Care planning and provision	Multidisciplinary team (MDT)	2
Emergency response	Equipment	2
Emergency response	Prison response	2
Fundamental safety	Infection prevention and control	2
Care planning and provision	Health promotion	1
Care planning and provision	Out of hours	1
Care planning and provision	Prisoner management	1
Emergency response	Care of the unwell patient	1
Emergency response	Resuscitation	1
Fundamental safety	Prison strategies	1
Fundamental safety	Staff wellbeing	1
Fundamental safety	Translator services	1
Transportation	Procedure	1
Transportation	Staffing	1

References

Ahmed, Sirwan Khalid, Ribwar Arsalan Mohammed, Abdulqadir J. Nashwan, Radhwan Hussein Ibrahim, Araz Qadir Abdalla, Barzan Mohammed M. Ameen, and Renas Mohammed Khdhir. 2025. Using thematic analysis in qualitative research. *Journal of Medicine, Surgery, and Public Health* 6: 100198. [CrossRef]

Aitken, Dominic. 2022. Investigating prison suicides: The politics of independent oversight. *Punishment & Society* 24: 477–97. [CrossRef]

Bes, Julia M., Isabelle Bos, B. Elffers, Marianne J. Heins, and Robert A. Verheij. 2024. Enhancing Data Quality through Electronic Health Records in Prison Settings: Towards a Learning Health System. *European Journal of Public Health* 34: ckae144.675. [CrossRef]

Brangan, Emer, Jonathan Banks, Heather Brant, Anne Pullyblank, Hein Le Roux, and Sabi Redwood. 2018. Using the National Early Warning Score (NEWS) outside acute hospital settings: A qualitative study of staff experiences in the West of England. *BMJ Open* 8: e022528. [CrossRef] [PubMed]

Braun, Virginia, and Victoria Clarke. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology* 3: 77–101. [CrossRef]

Braun, Virginia, and Victoria Clarke. 2022. *Thematic Analysis: A Practical Guide*. Thousand Oaks: SAGE Publications Ltd. Available online: https://www.sagepub.com/shop/buy-a-book/thematic-analysis-1-248481 (accessed on 16 September 2026).

Brooker, Charlie, and Russell Webster. 2017. Prison mental health in-reach teams, serious mental illness and the Care Programme Approach in England. *Journal of Forensic and Legal Medicine* 50: 44–48. [CrossRef] [PubMed]

Carson, Ann E. 2021. Mortality in State and Federal Prisons, 2001–2018—Statistical Tables. Available online: https://bjs.ojp.gov/library/publications/mortality-state-and-federal-prisons-2001-2018-statistical-tables (accessed on 26 May 2026).

Council of Europe. 1950. Convention for the Protection of Human Rights and Fundamental Freedoms. Available online: https://rm.coe.int/1680a2353d (accessed on 30 September 2026).

Davies, Miranda, Eilís Keeble, and Rachel Hutchings. 2021. Injustice? Towards a Better Understanding of Health Care Access and Challenges for Prisoners. Available online: https://www.nuffieldtrust.org.uk/sites/default/files/2021-10/1634637809_nuffield-trust-prisoner-health-2021-final.pdf (accessed on 17 August 2026).

Dewar, Claire. 2018. Exploring the Relationship Between Domestic Violence Perpetration and Suicide Risk in Male Prisoners. Ph.D. thesis, Cardiff Metropolitan University, Cardiff. [CrossRef]

Duke, Karen, Helen Gleeson, Susanne MacGregor, and Betsy Thom. 2024. The risk matrix: Drug-related deaths in prisons in England and Wales, 2015–2020. *Journal of Community Psychology* 52: 1056–77. [CrossRef] [PubMed]

Eberly, Lauren A., Kaitlyn Shultz, Sanjay Kishore, Margaret Hayden, Sarah Turecamo, Howard M. Julien, Emily Niklaus Davis, Ashwin Nathan, and Sameed Ahmed M. Khatana. 2025. Cardiovascular Death and Access to Health Care Among Individuals Incarcerated in US State Prisons From 2001 to 2019. *Journal of the American Heart Association* 14: e040983. [CrossRef] [PubMed]

Edge, Chantal, Georgia Black, Emma King, Julie George, Shamir Patel, and Andrew Hayward. 2021. Improving care quality with prison telemedicine: The effects of context and multiplicity on successful implementation and use. *Journal of Telemedicine and Telecare* 27: 325–42. [CrossRef] [PubMed]

Edge, Chantal, Rich Stockley, Laura Swabeye, Emma Kinga, Fabien Decodts, Jake Hardg, and Georgia Blacka. 2020. Secondary care clinicians and staff have a key role in delivering equivalence of care for prisoners: A qualitative study of prisoners' experiences. *eClinicalMedicine* 24: 100416. [CrossRef] [PubMed]

Farrell, Caitlin, Benjamin A. Barsky, Alice Bukhman, Nishi Kumar, Mark Fenig, and William Weber. 2025. Improving Electronic Health Record Access for People Incarcerated in the United States. *Journal of Correctional Health Care* 31: 340–44. [CrossRef] [PubMed]

Favril, Louis, Josiah D Rich, Jake Hard, and Seena Fazel. 2024. Mental and physical health morbidity among people in prisons: An umbrella review. *The Lancet Public Health* 9: e250–e260. [CrossRef] [PubMed]

General Medical Council. n.d. The Professional Standards. Available online: https://www.gmc-uk.org/professional-standards/the-professional-standards (accessed on 11 March 2026).

GOV.UK. 2023. Healthcare for Offenders. Available online: https://www.gov.uk/guidance/healthcare-for-offenders (accessed on 23 February 2023).

Greene, Meredith, Cyrus Ahalt, Irena Stijacic-Cenzer, Lia Metzger, and Brie Williams. 2018. Older adults in jail: High rates and early onset of geriatric conditions. *Health & Justice* 6: 3. [CrossRef] [PubMed]

Health Services Safety Investigations Body. 2022. Management of Chronic Health Conditions in Prisons. Available online: https://www.hssib.org.uk/patient-safety-investigations/management-of-chronic-health-conditions-in-prisons/ (accessed on 17 August 2026).

HM Prison and Probation Service. n.d. About HM Prison and Probation Service. Prison and Probation Jobs. Available online: https://prisonandprobationjobs.gov.uk/about-hmpps/ (accessed on 31 March 2026).

HM Prison and Probation Service. 2025. HMPPS Annual Digest 2024 to 2025. Available online: https://www.gov.uk/government/statistics/hmpps-annual-digest-april-2024-to-march-2025/hmpps-annual-digest-2024-to-2025--2 (accessed on 18 May 2026).

Hodson, Cath, Laura-Sarona Fox, Richard Pilbery, Caitlin Wilson, Elisha Miller, Martin Sutcliffe, Nat Wright, Philippa Hearty, Martin Wilkie, Alison Walker, and et al. 2026. Ambulance service demand from prisons: A service evaluation. *British Paramedic Journal* 10: 53–61. [CrossRef] [PubMed]

House of Commons and UK Parliament. 2020. Ageing Prison Population (Fifth Report of Session 2019–21). Available online: https://committees.parliament.uk/publications/2149/documents/19996/default/ (accessed on 16 October 2026).

Iacobucci, Gareth. 2024. Prisoners die from natural causes 20 years earlier than the general population, finds review. *BMJ: British Medical Journal* 384: q198. [CrossRef] [PubMed]

Ismail, Nasrul. 2020. Rolling back the prison estate: The pervasive impact of macroeconomic austerity on prisoner health in England. *Journal of Public Health* 42: 625–32. [CrossRef] [PubMed]

Ismail, Nasrul. 2026. The permacrisis prison: Why the carceral state is too fast to learn and too cyclical to change. *Punishment & Society*, 14624745261464440. [CrossRef]

Johnson, Lewis. 2020. Paramedics working in a prison-based healthcare setting: An exploratory mixed methods study. *British Paramedic Journal* 4: 1–9. [CrossRef] [PubMed]

Kelly, Carmel, Michelle Templeton, Karen Allen, and Maria Lohan. 2020. Improving sexual healthcare delivery for men in prison: A nurse-led initiative. *Journal of Clinical Nursing* 29: 2285–92. [CrossRef] [PubMed]

Kirkham, Joanne. 2021. A thematic analysis of Prison and Probation Ombudsman fatal incident reports involving prisoners on palliative/end-of-life care pathways in the long-term high security estate in England and Wales. *medRxiv*. [CrossRef]

Lloyd, Andrew R., Jac Clegg, Jens Lange, Aleta Stevenson, Jeffrey J. Post, David Lloyd, Giulia Rudge, Leng Boonwaat, Gary Forrest, Jenny Douglas, and et al. 2013. Safety and Effectiveness of a Nurse-Led Outreach Program for Assessment and Treatment of Chronic Hepatitis C in the Custodial Setting. *Clinical Infectious Diseases* 56: 1078–84. [CrossRef] [PubMed]

Lüchtenborg, Margreet, Jennie Huynh, Jo Armes, Emma Plugge, Rachael M Hunter, Renske Visser, Rachel M Taylor, and Elizabeth A. Davies. 2024. Cancer incidence, treatment, and survival in the prison population compared with the general population in England: A population-based, matched cohort study. *The Lancet Oncology* 25: 553–62. [CrossRef] [PubMed]

McFadzean, Isobel J., Kate Davies, Thomas Purchase, Adrian Edwards, Stuart Hellard, Darren M. Ashcroft, Anthony J. Avery, Sandra Flynn, Tom Hewson, Melanie Jordan, and et al. 2023. Patient safety in prisons: A multi-method analysis of reported incidents in England. *Journal of the Royal Society of Medicine* 116: 236–45. [CrossRef] [PubMed]

McFadzean, Isobel J., Lauren Donovan, Thomas Hewson, Jake Hard, Jenny Shaw, Adrian Edwards, and Andrew Carson-Stevens. 2026a. Critical illness in prisons: A multi-methods analysis of reported healthcare safety incidents in England. *British Journal of General Practice* 76: e244–e252. [CrossRef] [PubMed]

McFadzean, Isobel Joy, Saied Ibrahim, Verity Wainwright, Maria Panagioti, Melanie Jordan, Sandra Flynn, Richard N. Keers, Tim Millar, Darren M. Ashcroft, Adrian Edwards, and et al. 2026b. The incidence of avoidable healthcare-associated harm in prisons in England: A retrospective case note review. *BMJ Quality & Safety* 35: 602–13. [CrossRef] [PubMed]

McKenna, Brian, Jeremy Skipworth, Rees Tapsell, Dominic Madell, Krishna Pillai, Alexander Simpson, James Cavney, and Paul Rouse. 2015. A prison mental health in-reach model informed by assertive community treatment principles: Evaluation of its impact on planning during the pre-release period, community mental health service engagement and reoffending. *Criminal Behaviour and Mental Health* 25: 429–39. [CrossRef] [PubMed]

McLintock, Kate, and Laura Sheard. 2024. Prison healthcare in England and Wales is in perpetual crisis. *BMJ* 384: q562. [CrossRef] [PubMed]

McLintock, Kate, Robbie Foy, Krysia Canvin, Sue Bellass, Philippa Hearty, Nat Wright, Marie Cunningham, Nicola Seanor, Laura Sheard, Tracey Farragher, and et al. 2023. The quality of prison primary care: Cross-sectional cluster-level analyses of prison healthcare data in the North of England. *eClinicalMedicine* 63: 102171. [CrossRef] [PubMed]

Miller, Katherine E. M., Karen Shen, Yang Yang, Brie A. Williams, and Jennifer L. Wolff. 2024. Prevalence of Disability Among Older Adults in Prison. *JAMA Network Open* 7: e2452334. [CrossRef] [PubMed]

Mills, Alice. 2014. A prison based nurse-led specialist diabetes service for detained individuals. *European Diabetes Nursing* 11: 53–57. [CrossRef]

Mills, Alice, and Kathleen Kendall, eds. 2018. Care Versus Custody: Challenges in the Provision of Prison Mental Health Care. In *Mental Health in Prisons: Critical Perspectives on Treatment and Confinement*. Berlin/Heidelberg: Springer International Publishing, pp. 105–29. [CrossRef]

Ministry of Justice. 2026a. Annual Statement on Prison Capacity: 2025. Available online: https://www.gov.uk/government/publications/annual-statement-on-prison-capacity-2025 (accessed on 23 June 2026).

Ministry of Justice. 2026b. Safety in Custody Statistics, England and Wales: Deaths in Prison Custody to March 2026 Assaults and Self-Harm to December 2025. Available online: https://www.gov.uk/government/statistics/safety-in-custody-quarterly-update-to-december-2025/safety-in-custody-statistics-england-and-wales-deaths-in-prison-custody-to-march-2026-assaults-and-self-harm-to-december-2025 (accessed on 30 April 2026).

Ministry of Justice and HM Prison and Probation Service. 2026. Offender Management Statistics Quarterly. Available online: https://www.gov.uk/government/collections/offender-management-statistics-quarterly (accessed on 30 April 2026).

Munday, David, Jane Leaman, Éamonn O'Moore, and Emma Plugge. 2019. The prevalence of non-communicable disease in older people in prison: A systematic review and meta-analysis. *Age and Ageing* 48: 204–12. [CrossRef] [PubMed]

Mundt, Adrian P., Pablo A. Cifuentes-Gramajo, Gergő Baranyi, and Seena Fazel. 2024. Worldwide incidence of suicides in prison: A systematic review with meta-regression analyses. *The Lancet Psychiatry* 11: 536–44. [CrossRef] [PubMed]

National Institute for Health and Care Excellence. 2016. [NG57] Physical Health of People in Prison. *NICE*, November 2. Available online: https://www.nice.org.uk/guidance/ng57 (accessed on 29 April 2026).

National Institute for Health and Care Excellence. 2020. National Early Warning Score Systems That Alert to Deteriorating Adult Patients in Hospital. *NICE*, February 18. Available online: https://www.nice.org.uk/advice/mib205 (accessed on 19 August 2026).

Nursing and Midwifery Council. 2015. The Code: Professional Standards of Practice and Behaviour for Nurses, Midwives and Nursing Associates. Available online: https://www.nmc.org.uk/standards/code/ (accessed on 19 August 2026).

Office for National Statistics. 2025. Geographical Inequalities in Premature Mortality in England and Wales. Available online: https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthinequalities/bulletins/geographicalinequalitiesinprematuremortalityinenglandandwalesmarch2021todecember2023/may2025 (accessed on 19 August 2026).

Office for National Statistics. 2026. Avoidable Mortality in England and Wales: 2024. Available online: https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/causesofdeath/bulletins/avoidablemortalityinenglandandwales/2024 (accessed on 16 October 2026).

Paun, Akash, and Kelly Shuttleworth. 2020. *Criminal Justice and Devolution*. London: Institute for Government. Available online: https://www.instituteforgovernment.org.uk/explainer/criminal-justice-and-devolution (accessed on 31 March 2026).

Plugge, Emma, and Caroline Watson. 2026. Healthcare provision in prisons: An ongoing challenge. *BMJ Quality & Safety* 35: 583–86. [CrossRef] [PubMed]

Pont, Jörg, Stefan Enggist, Heino Stöver, Brie Williams, Robert Greifinger, and Hans Wolff. 2018. Prison Health Care Governance: Guaranteeing Clinical Independence. *American Journal of Public Health* 108: 472–76. [CrossRef] [PubMed]

Prisons and Probation Ombudsman. n.d. How We Investigate Deaths [Prisons and Probation Ombudsman—Independent Investigations]. Available online: https://ppo.gov.uk/investigating-deaths/how-we-investigate-deaths/ (accessed on 31 March 2026).

Prisons and Probation Ombudsman. 2012. Learning Lessons Bulletin: Natural Cause Deaths 2007–2010. Prisons and Probation Ombudsman. Available online: https://ppo.gov.uk/learning_research/learning-lessons-bulletin-natural-cause-deaths-2007-2010/ (accessed on 1 April 2026).

Prisons and Probation Ombudsman. 2021. Terms of Reference. Prisons and Probation Ombudsman. Available online: https://ppo.gov.uk/corporate_document/terms-of-reference/ (accessed on 6 October 2026).

Prisons and Probation Ombudsman. 2026. Death Investigations & Reports. Available online: https://ppo.gov.uk/death-investigation-reports/ (accessed on 6 February 2026).

Public Health Wales. n.d. *Prison Health in Wales*. Cardiff: Public Health Wales. Available online: https://phw.nhs.wales/topics/prison-health-in-wales/ (accessed on 31 March 2026).

Robinson, Carol. 2023. The anticipation of an investigation: The effects of expecting investigations after a death from natural causes in prison custody. *Criminology & Criminal Justice* 23: 3–19. [CrossRef]

Sheard, Laura, Sue Bellass, Kate McLintock, Robbie Foy, and Krysia Canvin. 2023. Understanding the organisational influences on the quality of and access to primary care in English prisons: A qualitative interview study. *British Journal of General Practice* 73: e720–e727. [CrossRef] [PubMed]

Stürup-Toft, Soren, E.J. O'moore, and Emma H. Plugge. 2018. Looking behind the bars: Emerging health issues for people in prison. *British Medical Bulletin* 125: 15–23. [CrossRef] [PubMed]

The National Confidential Enquiry into Patient Outcome and Death. 2024. Inside Prison Healthcare. Available online: https://www.ncepod.org.uk/2024prisonhealthcare.html (accessed on 22 July 2026).

Tian, Esther Jie, Sooraj Venugopalan, Saravana Kumar, and Matthew Beard. 2021. The impacts of and outcomes from telehealth delivered in prisons: A systematic review. *PLoS ONE* 16: e0251840. [CrossRef] [PubMed]

Tomczak, Philippa. 2018. *Prison Suicide: What Happens Afterwards?* Bristol: Policy Press.

Tomczak, Philippa, and Sue McAllister. 2021. Prisoner death investigations: A means for improving safety in prisons and societies? *Journal of Social Welfare and Family Law* 43: 212–30. [CrossRef]

Tomczak, Philippa, Kaitlyn Quinn, Catherine Traynor, and Lucy Wainwright. 2024. (Re)constructing Prisoner Death Investigations: A Case Study of Suicide Investigations from England and Wales. *Law & Social Inquiry* 49: 1842–76. [CrossRef]

Van Hout, Marie Claire, Ulla-Britt Klankwarth, Simon Fleißner, Jörg. Pont, and Heino J. Stöver. 2024. State of transition to Ministry of Health governance of prison healthcare in the Council of Europe region. *Public Health* 229: 151–59. [CrossRef] [PubMed]

Vears, Danya F., and Lynn Gillam. 2022. Inductive content analysis: A guide for beginning qualitative researchers. *Focus on Health Professional Education: A Multi-Professional Journal* 23: 111–27. [CrossRef]

Whitford, William G. 2025. Digitalization of Prison Records Supports Artificial Intelligence Application. *Journal of Correctional Health Care* 31: 219–26. [CrossRef] [PubMed]

Wong, Ides, Eryn Wright, Damian Santomauro, Raquel How, Christopher Leary, and Meredith Harris. 2018. Implementing two nurse practitioner models of service at an Australian male prison: A quality assurance study. *Journal of Clinical Nursing* 27: e287–e300. [CrossRef] [PubMed]

Woodall, James. 2016. A critical examination of the health promoting prison two decades on. *Critical Public Health* 26: 615–21. [CrossRef]

World Health Organization. 2004. *ICD-10: International Statistical Classification of Diseases and Related Health Problems: Tenth Revision*, 2nd ed. Geneva: WHO.

World Health Organization. 2013. *Good Governance for Prison Health in the 21st Century: A Policy Brief on the Organization of Prison Health*. Geneva: World Health Organization. Available online: https://www.drugsandalcohol.ie/20743/1/Good-governance-for-prison-health-in-the-21st-century.pdf (accessed on 18 August 2026).

World Health Organization. 2014. *Prisons and Health*. Geneva: World Health Organization. Available online: https://www.who.int/europe/publications/i/item/9789289050593 (accessed on 6 October 2026).

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.