Resilience in Critical Care: Elucidating the Experiences of Medical Staff.

A Qualitative Study

Thesis submitted in partial fulfilment of the requirement for the degree of

Doctorate of Clinical Psychology (DClinPsy)

Cardiff University

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List of Contents

List of Tables

Paper 1: Systematic Review and Meta-synthesis

Paper 2: Empirical Study

List of Figures

Paper 1: Systematic Review and Meta-synthesis

Paper 2: Empirical Study

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I am ever grateful to those intensivists who gave their time to be interviewed for the empirical research and approached this study with insightful openness and a willingness to engage in the process. I remain in awe of the work you do, of your resilience and of the insight you hold into your internal experience.

To my family, I am eternally grateful for your unwavering support, understanding and love. In particular, to my sister, the most resilient woman I know, whose time of vulnerability inspired this research and nourished a desire within me to understand and support her experience. Finally, an enormous thank you to my fiancé, Jack, whose unfaltering love, encouragement and belief in me has nurtured my own resilience and kept me going throughout this process.

Thesis Summary

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This thesis has been written in the format of three distinct yet connecting papers. Papers 1 and 2 have been written for submission to the Journal of the Intensive Care Society whose author guidelines can be seen in Appendix 1.

Paper 1 presents a systematic review and appraisal of the qualitative literature regarding critical care medical staff experiences of distress and resilience. Nine studies met the inclusion criteria and were subjected to a meta-synthesis of the qualitative data adopting a meta-ethnographic approach. Through interpretation of the concepts within the primary papers, a wider explanatory theory was developed describing an internal conflict within critical care staff between emotional attachment and self-protective disconnection. Implications of this theory were discussed.

Paper 2 presents a qualitative exploration of critical care consultants', frequently known as 'intensivists', experience of working in the potentially emotionally demanding and challenging environment of critical care. The aim of this empirical research was to elucidate resilience within the experience of intensivists. Semi-structured interviews were conducted with eleven intensivists working in critical care units across Wales.

The data from transcribed interviews was analysed employing a constructivist grounded theory methodology. A theoretical conceptualisation of the relationship between resilience and vulnerability within intensivists was developed, offered and discussed with consideration to current research. Implications of this theory in relation to the potential to encourage resilience and wellbeing within the intensivist population were discussed.

Paper 3 offers a critical reflection upon the entirety of the research process and as such will not be submitted for publication. This paper presents the researcher's reflections on engaging with the process of conducting qualitative research in addition to further evaluation of the review and empirical study. Implications of the research are expanded upon in relation to clinical practice and the wider organisational culture within the NHS.

DECLARATION

This work has not been submitted in substance for any other degree or award at this or any other university or place of learning, nor is being submitted concurrently in candidature for any degree or other award.

Signed ……………………………………………………(candidate)   Date …………………….………

STATEMENT 1

This thesis is being submitted in partial fulfillment of the requirements for the degree of DClinPsy

Signed……………………………………………….…………(candidate)   Date …………….……………

STATEMENT 2

This thesis is the result of my own independent work/investigation, except where otherwise stated, and the thesis has not been edited by a third party beyond what is permitted by Cardiff University's Policy on the Use of Third Party Editors by Research Degree Students. Other sources are acknowledged by explicit references. The views expressed are my own.

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I hereby give consent for my thesis, if accepted, to be available online in the University's Open Access repository and for inter-library loan, and for the title and summary to be made available to outside organisations.

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Paper 1: Systematic Review and Meta-synthesis

Distress and Resilience in Critical Care professionals: A systematic review and meta-synthesis of the qualitative data.

Josephine Allen

Abstract word count: 174

Main paper word count: 4670

Total word count: 4844

(excluding tables, figures and references)

Abstract

Background: Previous research recognises a high presence of burnout and posttraumatic stress across critical care medical professions. The aim of this review was to enhance our understanding of the interaction between distress and resilience experienced by critical care medical staff.

Methodology: A systematic search was conducted of four databases (PsychInfo; Medline; CINAHL; Web of Science) from inception until March 2017. Qualitative research exploring distress and resilience amongst medical staff working in adult medical critical care units was identified. Identified studies were subject to quality assessment. Data was synthesised using meta-ethnography.

Results: 9 studies were included in the synthesis following screening of 4560 titles, 322 abstracts, and 37 full texts. Five overarching concepts were identified through meta-ethnographic synthesis of the data: Emotional attachment and distress; Self-preservation; Finding Replenishment; Being Supported; Worldview and Culture. An overarching theory was developed of the internal conflict between the pain of emotionally attaching to patients and the self-protection of emotional disconnection.

Conclusions: This review provides a deeper understanding into the balance of distress and resilience experienced by critical care professionals.

Keywords: *Critical Care; Nurses; Physicians; Wellbeing; Psychological Resilience; Coping; Stress; PTSD; Burnout; Meta-synthesis; Qualitative; Systematic Review*

Introduction

An established body of research has begun to recognise the presence of burnout across the medical profession[1]. For example, The Point of Care Foundation (POCF, 2016) report raised concerns relating to the negative effects of burnout upon decision making, patient safety and patient experience[2].

Intensive Care, or Critical Care Units (CCUs) are regional units within medical hospitals which provide specialist care for the most critically ill patients. CCUs are highly stressful, emotionally charged environments which are physically, intellectually and emotionally challenging[3]. A recent systematic review of the quantitative data has identified a clear correlation between working in CCUs and the risk of emotional distress[3]. A developing research base reports high levels of burnout across CCU professions, with evidence identifying its presence amongst both physicians and nurses[4-9]. The impact of working as medical staff within a CCU is far reaching with research demonstrating that staff experience not only burnout, but also high levels of posttraumatic stress[10-12] and depression[13]. A recent study by Colville et al (2016)[14] reported a significant proportion of medical staff across adult and paediatric critical care and acute care disciplines report symptoms of post-traumatic stress (51.5%) and burnout (59.8%) which directly relate to experiences within the workplace.

In CCU, staff are exposed to the ongoing and unremitting suffering of patients[15] and relatives. In addition, they are continuously engaged in ethical[16] and end-of-life decision making, factors associated with decreased job satisfaction, emotional and psychological burnout[17]. Moral distress is defined as a state of psychological disequilibrium experienced as a result of not acting in concordance with moral decisions due to institutional constrictions[18]. In such emotionally charged medical

environments, professionals frequently encounter experiences which may engender moral distress, and lead them to engage in avoidance behaviour[19] in an attempt to decrease this feeling. Research with Spanish critical care nurses demonstrated a relationship between burnout symptoms and engaging in the purposeful avoidance of thoughts, feelings and sensations known as experiential avoidance[20].

However, the research regarding the impact of working in CCU is not consistent. In a recent systematic review of the research, Van Mol et al found an increased risk of experiencing emotional distress for staff working in CCUs, however a lower incidence of burnout, compassion fatigue and posttraumatic stress was identified when compared with staff in other wards[3]. Van Mol et al (2015) hypothesise that these contradictory findings may indicate the presence of personal and environmental mediating factors or influences[3]. It is suggested that personal factors which may mediate the impact of emotional distress could include resilience, emotional intelligence, the ability to empathise and one's own coping strategies[3]. Perceiving oneself to be resilient has been demonstrated to be protective against burnout and posttraumatic stress[14]. In relation to external factors, recent research indicates that environmental and organisational factors are significantly associated with stress and fatigue[9, 21], supporting Van Mol et al's (2015) conclusion. Specific organisational factors, such as being able to debrief or speak to senior staff, has been associated with reduced risks of experiencing burnout and posttraumatic stress[14].

As a result of this contradictory evidence in relation to the presence of distress within CCU staff and the influence of personal resources and qualities, further exploration into this area is required[3]. The aim of this review was to draw together disparate findings within the current research to deepen the quality of our understanding of how

personal resources of medical staff interact with their exposure to the emotionally charged environment of the CCU. The review will focus on qualitative papers so as to draw on the personal experiences and perspectives of CCU staff and disentangle the complex and subtle factors which may protect against burnout.

Methodology

Systematic Review

A database search was conducted to explore the qualitative literature around the emotional impact and experience of resilience on medical staff who work in an adult general medical CCU. The process of identification, selection and critical appraisal of relevant studies for further analysis and synthesis was undertaken in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidance[22] (see Figure 1 for flow chart). Studies were excluded if they were conducted in paediatric and other specialist CCUs, published in non-peer reviewed journals, adopted quantitative and mixed methodologies or if the studies related to specific epidemics. The search was carried out across four electronic databases from the date of their inception until March 2017: PsycInfo; Medline; CINAHL; Web of Science. The search was limited to texts written in the English language. The search terms used incorporated keywords for all four databases as well as subject headings used to index or categorise journals on the PsycInfo and Medline databases. Full search terminology can be seen in Table 1. In addition, reference lists of identified papers were searched for other potentially relevant articles. The identified records were reviewed and titles, abstracts or full texts were screened by the author. Articles which did not meet the inclusion criteria were excluded.

Table 1: Search Terminology used for database searches.

Search Terminology	
Subject Headings	Critical Care; Intensive Care; Physicians; Nurses; Consultants; Burnout, Professional; Occupational Stress; Job Satisfaction; Stress, Psychological; Depression; Major Depression; Stress Disorders, Post-Traumatic; Compassion Fatigue; Resilience, Psychological; Adaptation, Psychological; Coping Behaviour; Well Being
Keywords	Intensive Care; Critical Care; ICU; doctor*; consultant*; intensivist*; nurs*; burnout; posttraumatic stress; PTSD; depress*; compassion fatigue; stress; resilien*; cop*; well being

Quality Appraisal

The quality of the identified studies was subsequently critically appraised against the Critical Appraisal Skills Programme (CASP) qualitative research checklist[23] by the author. The papers were independently second-rated by a trainee clinical psychologist not affiliated with the study. Each made independent decisions relating to the inclusion or exclusion of studies. In addition to methodological quality, particular attention was paid to the clarity of concept descriptions within studies due to the centrality of concepts within meta-ethnography[24]. The appraisal process and results were subsequently discussed between the two psychologists and any differences considered, leading to a unified decision regarding the papers to include in the study.

Meta-synthesis

There are a number of differing methodologies which can be employed to synthesise qualitative data and underpinned by distinct epistemological understandings moving between constructivist (idealism) or realist (reality exists separate to human constructions) positions[25].

The meta-ethnography approach, as originally outlined by Noblit and Hare (1988)[24] and further described by Britten et al (2002)[26], was used in this paper to synthesise the qualitative data within this study. This approach was adopted due to its flexibility in being able to synthesise data which has been analysed in the primary studies using differing qualitative methodologies[25, 26]. Meta-ethnography is a methodology which adopts an approach of objective idealism[24-26]. Meta-ethnography has an interpretative emphasis on exploring commonalities within the data. This interpretative process develops an overarching theoretical understanding which embodies a greater understanding than standalone concepts within primary papers.

Following the identification of relevant research, the meta-ethnography followed a process of 5 steps[24, 26] (see table 2). Firstly, all included papers were carefully read through and the main concepts identified. The details of each study's settings and participants, including the profession of the participants were recorded. The second stage involved each paper being explored to seek the relationships between the concepts within them, observing commonalities. To enable a comparison of the concepts, a grid was developed in which the concepts and the original studies theories were collated enabling the formation of overarching concepts which incorporated all pertinent concepts from each study[26]. The wording in the original papers was kept to ensure the meaning within each concept was maintained[26]. Adhering to Britten et al's

(2002)[26] methodology, which draws on Schutz (1962)[27], this grid identified first order constructs, relating to ordinary understandings, and second-order constructs, referring to developing theoretical explanations. Moving into the third stage the concepts were drawn together, translating the papers. Each word and concept within the grid was carefully contemplated and reflected upon to ensure each concept within each study was reflected within the overall key concepts developed by the researcher. In doing this, the names of some of the concepts within the primary papers were used as the names of the developed key concepts whilst for others, new concept names were developed. In reviewing the developing key concepts and their engulphed original concepts, it was possible to begin to perceive the reciprocal relationships between them. From this understanding, the translations were synthesised by developing third-order theoretical interpretations, in the fourth stage of synthesis. The fifth stage of expressing the synthesis was achieved through building a line of argument[24] describing the researcher's understandings of the reciprocal relationships between the key concepts. This line of argument aimed to explain the wider picture encompassed within the theoretical interpretations within the data.

Table 2: Noblit and Hare's (1988)[24] stages of meta-ethnography (cited by Britten et al (2002)[26] pp. 210)

Noblit and Hare's (1988)[24] stages of meta-ethnography (cited by Britten et al[26] pg. 210)
1. Getting Started
2. Deciding what is relevant to the initial interest
3. Reading the studies
4. Determining how the studies are related
5. Translating the studies into one another
6. Synthesising translations
7. Expressing the synthesis

Figure 1: PRISMA flow diagram[22] depicting number of studies identified, screened, excluded and included.
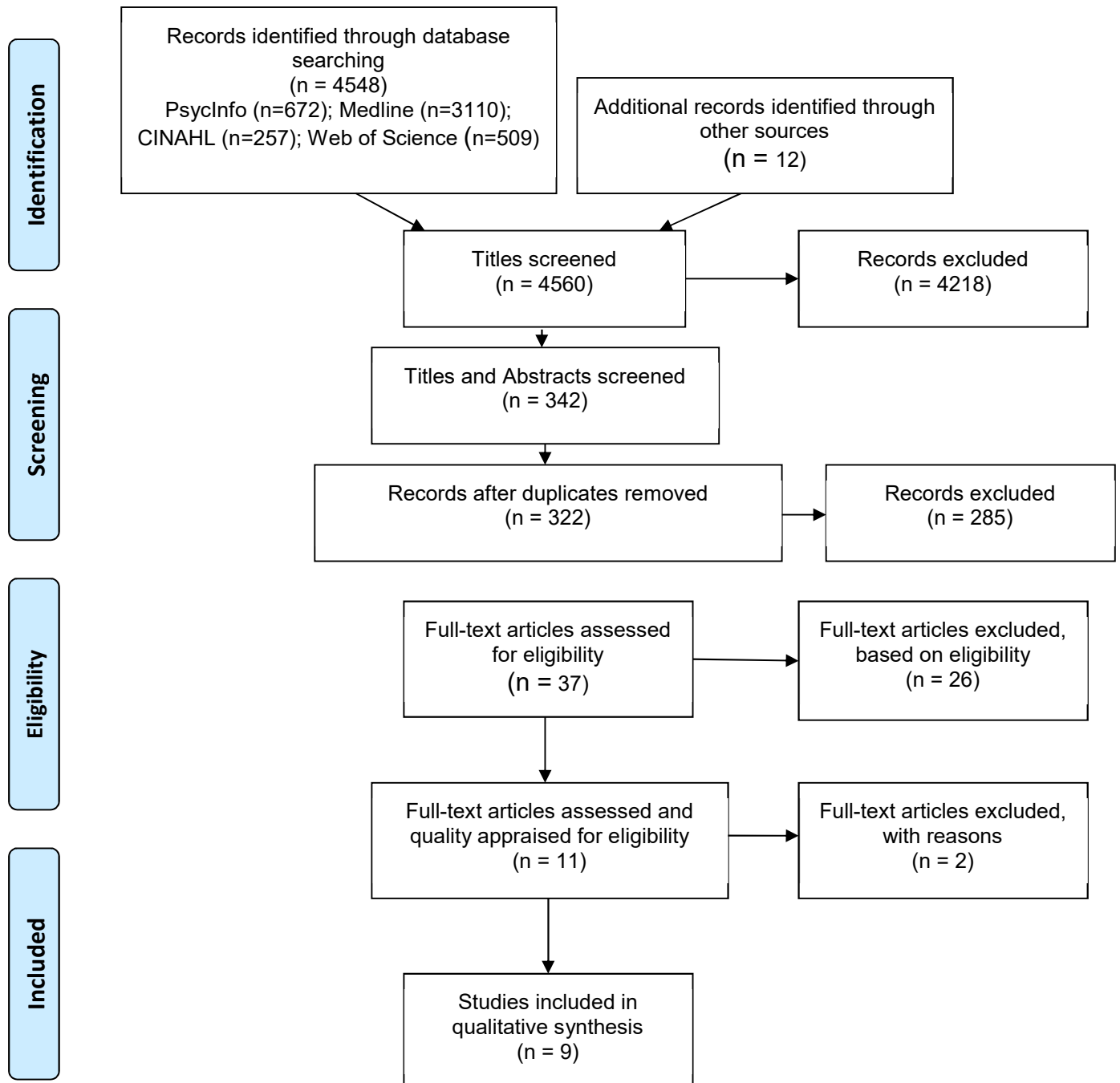
Results

Systematic Review

Altogether, 4548 studies were identified by the database search. Each of these titles were screened for relevance alongside 12 further studies identified from citations. 4218 studies were subsequently excluded. Of the remaining 322 studies, 285 were excluded following screening of abstracts. The reasons for exclusions at this stage included the subjects of papers being irrelevant to the aims of this paper, being published in a non-peer-reviewed journal, being written in a non-English language and being of a quantitative or mixed methodology. A further 26 papers were excluded after screening full texts as they did not meet this studies aims or inclusion criteria. Specifically, the main reason for exclusion at this stage was that the papers did not include reference to either the personal impact of working in CCU or to coping. Papers were also excluded at this stage due to a previously unnoticed mixed methodology and the inclusion of paediatric or other specialist CCU settings.

A total of 11 papers were appraised using the CASP Qualitative Research Checklist[23] by the author and a second appraiser, a trainee clinical psychologist unrelated to the study. It was agreed that studies would only be included if they scored 8/10 or higher on the CASP measure of quality. Both appraisers agreed that 9 studies would be included in the review (scores can be seen in Table 3). Of these, 6 studies were of an extremely high quality and rated 10/10[28-33]. Velarde-Garcia et al (2016)[34] scored 9/10 for quality due to an inadequate justification of the research design whilst Mealer et al (2012) scored 9/10 due to an inadequate consideration of the research implications[35]. Wahlin et al (2010)[36] was only just included with a score of 8/10 due to their failure to

consider the participant-researcher relationship and no discussion regarding the contribution and implications of the study.

Two studies were excluded at this stage due to their scores of 7/10. Both excluded studies did not adequately demonstrate the appropriate recruitment strategy, nor did they consider ethical issues. In addition, one of these studies did not consider the relationship between researcher and participants, whilst the other did not discuss the value and contribution of the research.

Description of Included Studies

The included studies explored the experiences of 132 nurses and 24 physicians. Whilst all studies included nurses, only two studies included the perspectives of physicians in their participant sample[30, 36] whilst the remaining seven papers focused on nurses as the sole population[28, 29, 31-35]. Included in the review were studies from a variety of countries: UK (n=2); USA (n=2); Australia (n=1); France (n=1); Norway (n=1); Spain (n=1); Sweden (n=1). All 9 studies used interviews as their process of data collection. When approaching the interview process, seven studies employed face to face individual interviews with four being semi-structured[28, 30-32] whilst two were open-ended[33, 36] and one initially adopted unstructured interviews and moved on to semi-structured[34]. Velarde-Garcia et al (2016) conducted interviews over the telephone[34]. Adopting a different approach, Hov et al (2007) collected data through 16 hours of focused, non-structured group interviews across 11 weeks[29]. In analysing the data, Siffleet et al (2015)[32] used a Grounded Theory approach, Mealer et al (2012)[35] employed Constructivist Epistemological Framework whilst Wahlin et al (2010)[36] used the Empirical Phenomenological Psychological method and Laurent et al (2014)[30]

used Interpretative Phenomenological Analysis. The remaining five studies used a Phenomenological Approach[28, 29, 31, 33, 34]. The details of each study and their quality rating can be found in Table 3.

Four studies explored the experience of nurses' reactions to patient death and grief[28, 31, 33, 34]. Hov et al (2007) explored the experience of nurses in withholding curative treatment[29]. In a more focused consideration of the impact of working in CCU, Laurent et al (2014) considered the psychological repercussions of making errors in critical care physicians and nurses from a psychodynamic perspective[30]. Recognising the presence of both distress and coping in this population, Mealer et al (2012) looked at both resilience and posttraumatic stress[35] whilst Siffleet et al (2015) explored emotional wellbeing[32] in CCU nursing populations. In a similar focus Wahlin et al (2010) endeavoured to explore empowerment in both critical care physicians and nurses[36].

Table 3: Included studies

	HINDERER (2012)[28]	HOV ET AL (2007)[29]	LAURENT ET AL (2014)[30]	MEALER ET AL (2012)[35]	SHORTER AND STAYT (2010)[31]	SIFFLEET ET AL (2015)[32]	STAYT (2009)[33]	VELARDE-GARCIA ET AL (2016)[34]	WAHLIN ET AL (2010)[36]
STUDY TITLE	Reactions to patient death: the lived experience of critical care nurses	Being an intensive care nurse related to questions of withholding or withdrawing curative treatment	Error in intensive care: psychological repercussions and defense mechanisms among health professionals	A qualitative study of resilience and posttraumatic stress disorder in United States ICU nurses	Critical care nurses' experiences of grief in an adult intensive care unit	Delivering best care and maintaining emotional wellbeing in the intensive care unit: the perspective of experienced nurses	Death, empathy and self preservation: The emotional labour of caring for families of the critically ill in adult intensive care	Facing death in the intensive care unit. A phenomenological study of nurses' experiences	Staff empowerment in intensive care: Nurses' and physicians' lived experiences
SAMPLE	6 critical care nurses	14 nurses	20 physicians and 20 nurses: total of 40	27 ICU nurses	8 nurses	15 nurses	12 nurses	22 nurses	4 registered nurses, 4 enrolled nurses, 4 physicians: 12 total
DATA COLLECTION & ANALYSIS	Semi-structured face-to-face interviews	Focused, non-structured group interviews	Semi-structured face-to-face interviews	Semi-structured telephone interviews	Semi-structured interviews	Semi-structured interviews	In-depth open-ended interviews	In-depth face-to-face unstructured and semi-structured interviews	Open-ended interviews
ANALYSIS	Phenomenological approach	Phenomenological approach	Interpretative Phenomenological Analysis	Constructivist Epistemological Framework	Phenomenological approach	Grounded Theory	Phenomenological approach	Phenomenological approach	Empirical Phenomenological Psychological (EPP) method
SETTING	Adult ICU	Adult ICU	Adult ICUs in urban teaching hospitals across two cities in France	Nurses had volunteered from across USA	Adult ICU in a large teaching hospital in UK	18 bed adult ICU	7 bed adult ICU	ICU	Two general ICUs
COUNTRY	USA	Norway	France	USA	UK (England)	Australia	UK (England)	Spain	Sweden
CASP QUALITY RATING	10/10	10/10	10/10	9/10	10/10	10/10	10/10	9/10	8/10

Meta-Synthesis: Theoretical Interpretations

From the synthesis of the qualitative studies, five overarching concepts were identified: Emotional attachment and distress; Self-preservation; Finding Replenishment; Being Supported; Worldview and Culture. Table 4 demonstrates the process of synthesis and details the data from primary studies, including primary themes, concepts reported in the primary authors' own words and participant quotes, which feed into the five overarching concepts.

Table 4: Synthesis of concepts and quotes from primary studies

Synthesised Concepts (concepts and phrases from primary studies demonstrating the synthesised concepts)	Example Quotes from the Primary Studies	Second-Order Interpretations / Theories derived from the Primary Studies (written in the primary authors' words)	Third-order Interpretations / Theories
Emotional attachment and distress (Experiencing emotional attachment; establishing strong emotional bonds; striking a chord…empathizing with a patient; meaningful engagement; emotional demands of caring; intimacy as emotionally exhausting; Personal Distress; alternation between optimism and pessimism; guilt and shame after an error; imprinting the error in memory; PTSD; trauma; Grief; bereavement; unexpected deaths [leading to] …feelings of intolerance; inability	*'I think one of the job hazards we have is accumulated grief'*[35] (page 1448) *'It hurts too much to see so much death and so much misery, and not be able to do anything about it.'*[35] (page 1448) *'I think the reason that families whose patients have died are so memorable is, I suppose that, if it comes to the point of bereavement, you've obviously put a lot of time in with them... you get to build a bond. I suppose you give a lot more of yourself into it as well and somehow feel connected to the family.'*[33] (page 1270) *'… the bonds that are established with the family … are proportional to the amount of time spent caring for them and this has an emotional influence on you …'*[34] (page 7) *'Yeah I definitely empathised with that young lad. I could really feel what he was going through and I totally shared his pain. But it was hard because I didn't understand why I felt that involved with him…I didn't feel sorry for him, it wasn't sympathy that I was feeling for him, it was more empathy…I just felt grief*	Coping with the 'raw emotion triggered by patient death'[28] (page 256). 'A critical care nurse's grief experience is influenced by the level of engagement that the nurse had with the patient and their relatives'[31] (page 165). 'A patient's death triggers certain responses in the nurses, such as sadness, sorrow, rage and frustration, and also relief…. the emotional relations that nurses establish with their patients. These emotional bonds, sometimes defined by the nurses interviewed as attachment, cause certain professional and personal aspects to	Internal conflict between emotionally attaching, risking distress, and self-preservation aimed to reduce the emotional impact and enable one to keep working.

to protect self from distress.)	*stricken. And that's why I remember it.'* [33] (page 1271)

'Although I think [having a close bond] did help me to look after her, I think it did mean that it affected me a lot more than perhaps someone who didn't know her… I think having a relationship with the patient makes it easier to look after them, and to a degree will help you look after that patient better, as you understand where they are coming from.' [31] (page 163)

'…if I have had any contact with him I take it worse than if I have seen him sedated from the start.' [34] (page 7)

'Often times I do think, what could I have done differently? Did I miss something? Was there a better way to have handled the situation? I think I do play it over in my head, after the crisis has passed.' [35] (page 1448) | frequently intermix. This, in turn causes a major and excessive emotional burden'[34] (page 8).

Professionals 'experience psychological manifestations after his/her error…(which) disappeared gradually... In the long term…the error remains fixed in the professional's memory'[30] (page 2373). |
| **Self-preservation**

(Coping; Emotional Disconnect; Block out their feelings; minimizing; emotional avoidance; developing knowledge and skills as avoidance; being prepared [expecting death]; emotional dissociation; protecting self from distress [avoid own distress]; Self-preservation [distancing tactics to maintain control]; Cognitive Flexibility.) | *'…I would like to put a barrier there, for a little self-defence, but it is very difficult…'* [34] (page 7)

'I think I just have a wall. I mean, I like to be sad for the family [of the dying patient], but I can go be happy with my other family. If I have 2 patients, I'm not going to laugh with the family who has the dying patient, but I can cut that off and go with my other family, and they can tell me something that will make me laugh or smile.' [28] (page 255)

'you get kind of hardened to it… it doesn't bother us as much' [28] (page 255)

'I can just separate myself. I think you have to separate yourself, or you will grieve over everybody.' [28] (page 256)

'…When you talk in medicine, you don't talk at all about feelings.' [30] (page 2374)

'Recognize, but not feeling guilty otherwise that inhibits the action of care. [30] (page 2374)

'Because you can't get too emotional about things really – it makes me sound really cold… but a lot of the time, you do have to keep a distance in a way, because death happens so often on our unit. You'd be an emotional wreck if you let it bother you or affect you all the time.' [31] (page 164)

'I don't get down on a lot of things. I let things fall off of me. I try to look on the bright side of everything.' [35] (page 1448) | 'Nurses disassociate emotionally themselves from a dying patient, and display complacency towards death as a means of coping with it and the associated grief'[31] (page 165).

'The effects of shame and guilt were accompanied by defence mechanisms which served to reduce the emotional load and enabled the professional to continue working. On the other hand, these same defence mechanisms hinder the subject's ability to acknowledge the error and to learn from it'[30] (page 2376).

'Issues of empathy and intimacy vs. self-preservation represent a paradox'[33] (page 1273). |

Finding Replenishment (Professional pride; self-care and balance; happiness, enjoyment and satisfaction [driving] emotional wellbeing; validating care episodes…finding meaning and perspective; caring for patients and families; achiev[ing] best care; close engaging relationship; feelings of doing good; nourishing (relational) encounters; Challenge, variety, speed and excitement; knowledge and skills; self-esteem/self-confidence [feeling valuable and safe].)	*'Well I feel like I have performed well, I have suctioned them out at the right time and I have turned them properly and their (blood) gases are good, they start the day a bit ahead of the eight ball…It just makes me feel good.'*[32] (page 308) *'And then, just the feeling that you are doing something for people suffering from some illness or pain, and when you solve this and they get better. That's a feeling that drives you to go on with this.'*[36] (page 265) *'Even very tragic contacts with next of kin to patients who have died and things like that could generate very, very much for yourself as a person. It is not seldom that I think about next of kin to a patient who has died and discussions we have had.. .situations I think could con- tribute to.. .being a better human being even as a private person.'*[36] (page 265) *'Because this is important to me.. .how I learn, how I feel that I'm growing in my tasks and can manage challenges better, I think.'*[36] (page 266) *'Well, then it is that you feel safe and confident, this is also positive in some way, to feel safe in yourself.. .and in what you are doing.'*[36] (page 266)	'The common meaning in all structures could be summarised in the essential structure that staff were empowered by both internal and external processes. Internal processes were feelings of doing good, increased self-esteem/self-confidence and increased knowledge and skills. External processes were nourishing encounters, excitement and challenge, well-functioning teamwork and a good atmosphere'[36] (page 267) 'Delivering best care emerged as central to emotional wellbeing'[32] (page 309).	Finding replenishment through the nourishing experiences and challenge of work, by doing ones best for patients and by relational encounters.
Being Supported (Social network; emotional support, communication and connectivity; formal and informal support; teamwork; verbilisation; support and understanding of nurse coworkers.)	*'it's really liberating to talk about it in the end. When you start talking about your errors, well often the others talk about them too. That does some good, that frees you to speak…'*[30] (page 2374) *'It was really good to sit down and talk about it rather than keep it into yourself and keep wondering what if.'*[35] (page 1448) *'The support you give each other, the other colleagues you work with, know exactly what you're going through, so quite often an informal chat in the coffee room is just as therapeutic.'*[31] (page 164) *'the support of everybody, normally it is not just you involved with someone's care, it's a lot of people. It's not just the doctors, it's the physios…I think the support really helps; I know that there is always someone there, someone who can go further.'*[32] (page 308) *'Working together, different professions, with the same goal in front of your eyes. And supporting each other in all directions. This is certainly the most important thing.'*[36] (page 266)	'Nurses are reluctant to access formal support, but do value informal support structures within the workplace'[31] (page 165).	Support within the team is valued, both emotionally and practically.
Worldview	*'Over the years I've come to realize…death is a part of life.'*[28] (page 256)	'The psychological characteristics of	Resilience is influenced by

		resilience that can be learned and that were present in the highly resilient ICU nurses included optimism, finding a resilient role model, developing active coping skills, social networks, exercising, developing a set of moral beliefs, and cognitive flexibility.'[35] (page 1449)	one's worldview and the culture within the team.
(Acceptance of death; normalization of death; inability to let go; something more could have been done; previous experiences [influencing world-view and skills to manage emotionally challenging care].) **Culture** (Learning from errors; don't talk at all about feelings; daring to show and discuss their feelings; teamwork; emotional support; communication and connectivity.)	*'I know logically that people die, that children die and it helps me to know that I may be able to help people process that and get through it.'*[35] (page 1448) *'To discuss the concept of death, dying etc – it's not that difficult, whereas other people can find it really difficult... I think if you work in an environment where you see death and dying all the time, it becomes easier. I don't think you can avoid thinking about your own mortality, or what it would be like if you were in that situation – and, you know, you just accept it.'*[31] (page 164) *'So, I feel that is very important that we all understand each other, this makes you work in an easier way. And if something happens, let's say I don't like what the other person does, I think we have to talk about it instead of talking to someone else behind us.'*[36] (page 267) *'We're all responsible, that's what creates this team culture.'*[30] (page 2374)*		

The key concept identified throughout the studies was a sense of professionals striving to strike a balance between being connected to emotions and attached to patients within the CCU environment whilst protecting oneself from the distress created by this attachment and connection. This balance was present in 8 of the primary papers[28-35].

Emotional attachment and distress

Three papers discuss the importance professionals attributed to emotionally attaching to patients' families[31, 33, 34]. Within Shorter and Stayt's (2010)[31] study, participants voiced their perception that building a relationship with a patient and their family is considered to be an essential part of nursing care in order to give the patient good care[31]. This perception is mirrored within Stayt's (2009)[33] study which reported that

professionals experienced a sense of satisfaction in the closeness of relationships[33]. Correspondingly, such relational experiences were described as nourishing and empowering by both physicians and nurses within Wahlin et al's (2010)[36] study. Professionals reported that they found meaning and perspective through providing the best possible care for patients and families and further that this gave them a feeling of satisfaction and happiness[32]. The authors of this study, Siffleet et al (2015), concluded that it was this satisfaction felt in providing best care which gave rise to emotional wellbeing within the nursing participants[32].

However, within these same studies and professional's narratives there is also a sense of the personal impact of caring, of the demands on one's emotional wellbeing. Stayt (2009) discusses the relational intimacy with patients and families which was reported by nurses as being both satisfying and emotionally exhausting[33]. Whilst considered a central aspect of the work within CCUs[31], emotionally attaching to a patient and a family was described as a risk by nursing participants across three studies exploring the experience of death and grief[28, 31, 34]. Nurses within these studies experienced intensified personal distress and an unleashing of raw emotions following the death of a patient to whom they had emotionally attached[28, 31, 34].

Self-preservation

Three studies explicitly described a process within which health care professionals engaged in strategies of self-preservation to protect themselves and avoid the emotional impact of the work[30, 32, 33]. In their study exploring the psychological repercussions of making medical errors, Laurent *et al* identified experiences of shame and guilt within 20 nurses and 20 physicians narratives which were experienced

alongside what the primary authors classified as 'defense mechanisms' aimed to reduce the emotional impact enabling professionals to cope and keep going[30]. Six studies reported data within which both nurses and doctors spoke of 'emotionally disconnecting', 'emotionally avoiding' and 'blocking out' their distress as a way of coping[28-33]. In protecting oneself from distress, professionals spoke of how they distance themselves from their own distress[32] as well as distancing themselves both physically and emotionally from patients and families in order to keep an internal sense of staying in control[33].

Laurent et al (2014) described five 'defense mechanisms' which arose within the narratives of 20 nurses and 20 physicians: verbalisation; minimising; developing skills and knowledge; rejecting individual responsibility; and emotional avoidance[30]. Disconnecting from or avoiding one's own and others' emotional experience was the most prominent method of protecting oneself which arose across six studies[28-33]. Laurent et al (2014), however, reported that this was the least frequent strategy referred to within professionals' narratives and in fact verbalisation, or talking with colleagues, was the most frequent method referred to in reducing the emotional impact[30]. Verbalising ones' experience and minimising the significance of mistakes were concepts which were discussed in equal amounts by both nurses and physicians within this research[30]. Yet Laurent et al (2014) highlighted the differences between how physicians and nurses attempted to reduce the emotional impact in reporting that physicians referred more frequently than nurses to considering errors to be a learning opportunity through developing skills and knowledge, rejecting individual responsibility and engaging in emotional avoidance[30]. Laurent et al (2014) concludes that these defense mechanisms protect the individual by lessening the emotional impact, allowing professionals to keep going, to keep treating patients and to keep working in

ICU[30]. Mirroring this conclusion, such strategies of protecting oneself from distress are considered by Mealer et al (2012) to be active coping strategies vital to supporting resilience[35].

Within participants' narratives across seven studies there was a theme of continual movement between the need to emotionally attach and the need to disconnect[28-33, 35]. Whilst Velarde-Garcia et al (2016) also described participants reporting feelings of intolerance stemming from unexpected deaths, they note that nurses perceived themselves to manage this experience not by disconnecting, but rather by dealing with their own expectations of recovery for each patient and assimilating within themselves the idea of death[34]. The presence of this idea of movement between emotional attachment and disconnection within participant narratives across these studies, gave rise to what Stayt (2009) refers to as a 'paradox' of intimacy versus self-protection[33] within the synthesis. Mealer et al (2012) concludes that resilient professionals managed this balance by drawing upon emotional intelligence and reflection to enable them to process intensely emotional experiences, allowing them to positively reframe the event in a way which demonstrates cognitive flexibility[35].

Finding Replenishment

Amongst the challenges and emotional demands of working in CCU, professionals spoke of experiencing pride in their work [29] which Mealer et al (2012) considered to foster resilience[35]. The sense of caring for patients and families, connecting with them and feeling that one has done their best to care for people in life and death was present in five studies[31-33, 35, 36]. Across these studies, participants reported an experience of validation in providing good care[32] which engendered feelings of happiness,

satisfaction[31-33], empowerment[36] and an overall emotional wellbeing[32]. Wahlin et al (2010) report the presence of these 'feelings of doing good' in both nurses and physicians interviewed within their study and further consider these caring experiences as nourishing a sense of inner strength and power[36].

Wahlin et al (2010) describes at length the experience of empowerment within critical care nurses and physicians[36]. Within this research, Wahlin et al (2010) recognises that rather than feeling overwhelming, professionals described the fast pace of CCUs to be exciting, challenging and empowering in the realisation of one's ability to draw rapidly on knowledge and skills in reaction to a clinical situation[36]. Across three papers such satisfying experiences were considered to nourish and empower CCU professionals[36] driving emotional wellbeing[31, 32].

In addition to finding replenishment through the nourishing and empowering experiences of work, Mealer et al (2012) cite the value of self-care and balance to maintain emotional, psychological and physical health[35]. The authors described the importance of sleep, nutrition, exercise and laughter in maintaining physical health, whilst leaving stress at work and recalling positive working experiences were judged to maintain emotional health[35]. Adopting such coping mechanisms and engaging in spirituality were considered by Mealer et al (2012) as valuable in ensuring psychological health[35]. In this way, Mealer et al (2012) deduced from their data that resilient professionals maintained an internal balance through ensuring to engage in acts of physical, emotional and psychological self-care[35].

Being Supported

Laurent et al (2014) report the presence of a group strategy in sharing responsibility which they considered a collective defence against feeling the pain of accepting individual responsibility for a medical error and perhaps a death[30]. However, there is also a protection within this group responsibility, a sense of being supported, of not being alone and of being alleviated from individual guilt and shame[30]. The narrative of rejecting individual responsibility within this study was more present in the physicians who spoke of this shared responsibility as creating a team culture[30].

Conversely, nursing participants within Hov et al's (2007) study describe a feeling of loneliness in the responsibility of providing care to patients where there is a question of withdrawing curative treatment[29]. For these nurses, there was not a supportive culture but rather they described a culture fraught with dynamics of power and difficulties in communication which gave rise to struggles of control and responsibility between nurses and physicians[29].

However, being supported both emotionally and practically within the CCU team was recognised within six studies as a central component to facilitating the ability to cope with the personal distress experienced[28, 30-32, 35, 36]. Laurent et al (2014) described that within participants' accounts the act of verbalising their role in a medical error with colleagues and family provided a sense of being freed from the emotional burden and of being supported, an experience equally present within the narratives of both nurses and physicians[30]. Yet 23% of participants also engaged in emotional avoidance as they felt allowing themselves to experience guilt and shame would negatively impact on their ability to effectively work[30]. Wahlin et al (2010) deduced from the narratives of both nurses and physicians that when there is a culture where professionals provide

each other with continuous support, both in the work role and emotionally through courageously talking about their feelings, this can nourish a sense of empowerment[36]. Team work and social support networks were themes which emerged as pivotal in facilitating individual resilience[35] and emotional wellbeing[32].

Worldview and Culture

The culture of being supported within the team appeared to be present throughout six of the studies[28, 30-32, 35, 36]. Moreover, within this culture there was a sense of shared worldviews[35]. Here, the primary concepts meet where the culture within which group support and collective worldviews were central, was considered to influence resilience. Mealer et al's (2012)[35] concept of worldview is one which has been adopted as a concept for this synthesis. Most potently, participants described an acceptance of death and its inevitability which was common within CCU professionals across four studies[28, 31, 34, 35], a worldview which Mealer et al (2012) associated with resilience[35]. Conversely, in Mealer et al's (2012) study, nurses who had experienced posttraumatic stress reported that they could not let go but rather held regrets about negative experiences and thoughts that they could have done something more for patients who died[35].

Discussion

This review provides a valuable insight into the experiences of medical staff working in CCUs. Through engaging in an interpretative synthesis of the available and relevant qualitative research using meta-ethnography, this paper presents an extended and deepened understanding of the distress and resilience within CCU staff recently highlighted within research[3, 14]. The present paper describes a theoretically wider interpretation of the available research which depicts a sense of CCU professionals striving to strike a balance: balancing the risk of personal distress through emotional attachment to patients and families with engaging in acts of self-preservation to protect themselves from the emotional impact of the work, thus making it possible to keep working. The most prominent form of self-protection is in emotionally disconnecting from the work, from patients, families and themselves. In this way CCU professionals are emotionally avoiding distress.

The complexity of achieving a balance within CCU was explored, recognising that whilst making emotional attachments risked distress, sadness and grief, it also has an essential role within the work. Professionals find such relational connections nourishing. There is a joy in the challenge of the work, in doing one's best. These experiences replenish professionals' emotional state buffering against being lost in the devastation and providing a professional pride. In part, one's resilience, the ability to be replenished and buffer against the pain of death and suffering, is influenced by an acceptance of death which appears to be an individual worldview aligned with the general culture of CCUs. The valued culture of support within the CCU appears to be central to enabling professionals to keep going in the face of continual exposure to suffering.

This theoretical interpretation of the qualitative research reflects findings within previous quantitative research[14] and systematic reviews[3]. The theory presented in this paper supports the hypotheses offered by Van Mol et al (2015)[3] that there are both personal and organisational factors which mediate the experience of emotional distress within CCU professionals.

The protection and risk embodied within both emotional connection and disconnection presented within this theory resonates with the findings of Colville et al's (2016)[14] study. This research identifies that whilst disconnecting through the engagement in interests or hobbies outside of and separate to the CCU reduces the occurrence of posttraumatic stress, emotional disconnection through the use of alcohol in fact correlates to a doubling of the incidence of burnout[14]. Similarly this same research found that processing ones emotions by connecting with them through talking with seniors or debriefing is protective against burnout and posttraumatic stress, whilst venting emotion in perhaps an enmeshed way doubles the risk of burnout[14]. In addition, consistent with the theory identified with this meta-synthesis, Colville et al's (2016) research reverberates with the value professionals place on peer support within CCUs[14].

Strengths and Limitations of the meta-ethnography

This paper presents a systematic and rigorous process which followed recognised guidance for identifying and evaluating research quality[23, 37]. This paper drew on meta-ethnographical methodology to interpret the data of identified studies[24, 26] with the aim of synthesising the concepts within qualitative research. The interpretative nature of

meta-ethnography mirrors the processes of the primary qualitative studies presenting a strength in adopting cohesive methodology.

Whilst meta-ethnography generally focuses on a small number of studies[38], the number of studies incorporated into the present synthesis was only 9. Due to the explicit concentration of this systematic review and meta-ethnography on the distress and resilience of medical professionals working in a general medical adult CCU, studies were excluded where the focus was on more general clinical experiences, or where the setting of the research was paediatric or other specialities of CCU. Further research comparing this interpretative theory with other CCU settings such as paediatric, neonatal or surgical would be beneficial to consider the transferability of this theory.

It is a striking limitation that the qualitative research reviewed in this paper held the dominant perspective of nurses with the combined participant total being 132 nurses compared to just 24 physicians. It is significant that the perspectives of physicians remain largely unheard as the experiences of medics are likely to be quite different to those of nursing staff due to the considerable difference in roles and responsibilities within CCUs. Furthermore, there are differences in the nature of the relationships with patients; nurses have intense close contact with one patient often over 12 hour shifts, whereas patient contact is diluted for medics who balance their time between treating many patients. Finally, there are hierarchical differences which may offer differing experiences between the professions.

Implications of this meta-ethnography

The interpretative theory arisen from this meta-ethnography provides a deepened understanding of the internal conflict required to achieve balance within professionals working in CCUs. Potentially this theory offers a theoretical basis for the promotion and development of strategies to facilitate resilience within CCU professionals. Such strategies could include formalising workplace support within the culture of CCU to enable professionals to process the emotional impact of the work and thus hold a balance within one's emotional attachment.

The present study highlights the limited research which exists in relation to consultant physicians within critical care. Furthermore, whilst research recognises the emotional burden and impact of working in CCUs, there remains a lack of understanding regarding the specific processes involved in developing resilience in this area[14]. Consequently, further research exploring resilience within critical care consultants may help develop a more comprehensive understanding of how consultants maintain working in such a fast pace, high stress and emotive environment whilst protecting themselves from its impact.

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Paper 2: Empirical Research

Resilience in Critical Care Consultants: Elucidating Intensivists' Experience.

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Abstract

Background: Critical Care can potentially be an emotionally demanding work environment. Research has identified high levels of burnout and posttraumatic stress in Critical Care professionals. However most exploratory research relates to nurses. The aim of this research was to elucidate an understanding of resilience in intensivists.

Methodology: Eleven intensivists from across Welsh Critical Care Units engaged in semi-structured interviews exploring their experiences of resilience. Data was analysed adopting a Grounded Theory approach.

Results: A theoretical understanding of the relationship between vulnerability and resilience amongst intensivists was developed. Four main concepts were identified: the impact of competing demands within the intensivist role; self-resilience as continuous movement between connection and protected disconnection; relational resilience; developing resilience.

Conclusions: The developed theory of resilience conceptualised how intensivists continually move between connection and protective disconnection from vulnerabilities, employing factors of relational and self-resilience. Implications regarding nourishing resilience and wellbeing amongst intensivists were discussed.

Keywords: *Critical Care; Psychological Resilience; Wellbeing; Stress; Burnout; PTSD; Intensivist; Consultant; Physician; Qualitative; Grounded Theory.*

Introduction

Critical Care Units (CCU) are potentially emotionally demanding environments for staff. Providing intensive medical interventions to patients at a critical level of need means staff are continually challenged intellectually, physically and emotionally[1]. In a collaborative statement, American Critical Care Societies have acknowledged the intense stress physicians experience working in CCU[2]. Findings from research indicate that the emotional impact of working in CCU is a consequence of engaging in work which is challenging and has high patient mortality alongside frequent experiences involving traumatic and ethical considerations[3, 4]. In addition, reduced job satisfaction and burnout have been associated with making highly emotive decisions relating to end-of-life[5] which may contribute to the high levels demonstrated across CCU medical staff. Over the last decade, research with CCU physicians and nurses has continued to report high prevalence of burnout[6-12], posttraumatic stress[4, 13, 14], depression[15] and emotional distress[1].

Whilst psychological distress is experienced equally across medical specialisms[16], research suggests that critical care consultants, often known as 'intensivists', are particularly at risk of burnout compared to other medics[8]. Burnout describes the experience of psychological distress and emotional exhaustion as a consequence of chronic occupational and interpersonal stressors[17, 18]. Considering burnout, stress and mental health difficulties account for the highest proportion of National Health Service (NHS) employee sickness[19], the high risk of burnout across CCU staff[20] holds significant implications.

Whilst most research into psychological distress experienced by CCU staff has been with nurses, there are a few studies which have focused on the impact for intensivists.

In studies conducted in France, 46.5% of intensivists presented with symptoms related to burnout syndrome[7] whilst 23.8% experienced symptoms of depression[15]. A recent survey carried out across Wales CCUs identified 43% of intensivists have experienced health problems associated with work, with 67% fearing an increased retirement age would affect their health[21].

In addition to impacting medical professionals' well-being and absenteeism, research indicates that burnout has a negative impact upon the quality of medical care and performance of staff[22, 23]. The Point of Care Foundation has raised concerns regarding the impact of burnout experienced by physicians across the NHS on patient safety, patient experience and effective decision making[19].

As well as causing high levels of burnout, the challenges of working in highly stressful or traumatic environments of CCU can lead to posttraumatic stress[4, 13, 14, 20]. Individuals with posttraumatic stress disorder persistently and intrusively re-experience traumatic events with increased arousal and reactivity[24]. A high rate of posttraumatic stress symptoms have been found amongst CCU nursing and medical staff (52%) associated with workplace experiences[20], as assessed through the Trauma Screening Questionnaire[25].

Although working in a demanding and emotionally charged work environment such as CCU may predispose a risk to burnout and posttraumatic stress, resilience can act as a buffer to its impact[1, 4, 26, 27]. Psychological resilience has been defined as a dynamic process in which an individual may draw on a multidimensional characteristic in times of adversity, complexity and rapid change which allows this individual to positively adapt and thrive[27-29]. The characteristic of resilience encompasses multiple psychological and personal attributes which include: an optimistic perspective with a

belief that one can be strengthened by stressful experiences; personal goals; faith; the capacity to access and accept support from others[28, 29]. Within CCU, research suggests that self-care, having enough sleep, exercise, having hobbies separate to CCU[4, 26, 27], engaging in stress-reduction techniques, adopting management skills, maintaining work-life balance and setting limits[30] can be beneficial. Personal attributes such as a strong sense of morality and spirituality alongside systemic factors including engaging with a supportive social network are considered to act as buffers to developing posttraumatic stress, burnout, anxiety and depression[27].

Although resilience can buffer individual experiences of resilience, research suggests that certain professional groups in CCU may be particularly vulnerable. Colville et al (2016)[20] found that when compared to nurses, physicians are twice as likely to experience burnout, even after mediating for the individual's resilience and ability to employ coping strategies.

Despite the suggestion that resilience may be protective against burnout and post-traumatic stress for CCU medical staff[1], there are very few studies in this area and the main body of research relates to nurses rather than consultants. This is significant as the experience of intensivists is likely to differ considerably from that of nurses due to disparate relational and hierarchical dynamics in addition to distinctly different demands within their roles. Consequently, a need for further research has been identified[8]. The aim of this study is to elucidate an understanding of resilience in intensivists' through exploring their experiences of working within CCUs using a qualitative research approach. The study seeks to gain an increased understanding of possible individual and environmental factors which enable intensivists to stay working in this highly demanding and potentially traumatic specialism.

Methodology

Design

The study adopted a qualitative approach in which in depth interviews were conducted with intensivists which were subsequently transcribed and analysed in accordance with the principles of Grounded Theory. Analysis was an interactive process which incorporated an iterative approach, continually moving between data and analysis[31, 32]. As such, each interview was transcribed immediately after completion and data reviewed to identify emerging themes which informed changes in subsequent interviews. Interview questions were revised to focus increasingly on the theory which emerged from the data in an evolving process[31]. From emerging concepts, a contextualised theory was developed, which was grounded in the data[31, 32].

Consistent with Grounded Theory, the number of interviews conducted was determined by the point of data saturation, where no new theoretical insights or understandings emerged from the data[31].

Participants

Eleven intensivists (8 male, 3 female) participated in this research. All participants were NHS employees and worked within general medical adult CCUs across four University Health Boards (UHB) within Wales. Ten participants had worked as intensivists for over two years, with several having over 15 years' experience. One participant had been working as an intensivist for just under two years. Further specifics regarding individual participants are not provided to protect their anonymity.

Participants were allocated gender-neutral pseudonyms and the units in which they work are not specified to further ensure anonymity.

Table 1: Inclusion Criteria for participation in the research study.

Inclusion Criteria
- All participants were >18 years
- Consultant Intensivist
- Worked as a Consultant intensivist within Critical Care for more than 1 year
- Able to understand English and communicate responses.

The researcher

The researcher was a trainee clinical psychologist in her final year of training who often drew on attachment[33] and relational psychodynamic theories[34, 35] in clinical practice. To identify and mediate the impact of theoretical assumptions as a potential bias to analysis, the researcher used reflexive techniques through supervision and keeping a reflective log in addition to methods of triangulation described in the section on *Rigour*. The researcher was supervised by two clinical psychologists, one of whom had historically worked in a paediatric CCU whilst the other was the psychologist based within one CCU included in the study.

Procedure

Recruitment and sampling

An invitation to participate in the study was sent via email to all consultants working within CCUs across the four identified UHBs. All intensivists who expressed interest in partaking in the research and who met the inclusion criteria were accepted as

participants and interviewed in the first instance. Thereafter, consistent with Grounded Theory, theoretical sampling was adopted, enabling the selection of participants to be guided by the emerging theory within the data previously collected and analysed[31, 32].

Interview process

In accordance with a Grounded Theory approach, a semi-structured interview guide was developed which incorporated non-judgemental, open-ended questions which invited the emergence of unforeseen narratives[31]. The research protocol and interview guide were reviewed by an intensivist who did not meet the inclusion criteria due to his new appointment. The focus of the questions related to intensivists' experiences of working in Critical Care: how did the work affect them and what enabled them to keep working in this highly demanding specialism?

When conducting the interviews, an approach of intensive interviewing was adopted. This process enabled a focus on certain areas of experience whilst allowing flexibility to follow-up on ideas and consequently engage in a co-constructed conversation between interviewer and intensivist[31]. Interviews were audio-recorded to enable accurate transcription and facilitate analysis of the data.

Consistent with theoretical sampling, following identification of themes which remained unclear or unresolved within emerging concepts, questions within the interview guide were amended with the intention of learning more, to elaborate or refine categories and further develop emerging theories[31]. Concepts which led to more specific questioning included intensivists' experience of stress and vulnerability as well as

exploring intensivists' felt sense of a balance between the concepts of connection and protection.

On average, interviews were 46 minutes. The shortest interview lasted 30 minutes whilst the longest totalled 61 minutes.

Data Analysis

Interviews were transcribed and analysed through the application of core technical processes within Grounded Theory: coding, memo-writing and theoretical sampling.

The combined length of the transcriptions was 80,744 words. The average length was 7340 words, with interviews ranging from 4814 words to 9310 words.

Coding

Within Grounded Theory coding is the pivotal process of developing a theory which emerges from within the data. Coding involved two processes: initial and focused coding[31]. The initial line-by-line coding was conducted to provide a preliminary framework for analysis. This process involved studying each fragment of data in an interactive analytic process wherein ideas about the meanings within the data began to form[31].

Initial coding provided numerous possibilities for the direction of analysis. Through the process of in-depth consideration and comparison, focused codes were developed to subsume multiple initial codes at a more conceptual level. These focused codes

guided the direction of analysis and allowed evaluation of the codes against the data, enabling the beginnings of ideas to be conceptualised[31].

Memo-writing

Throughout the research process memos were written facilitating consideration and analysis of the codes[31]. The process of memo-writing involved capturing initial thoughts and ideas and engaging in a constant comparison of codes and data. This facilitated the realisation of connections and disparities essential to the consideration of new directions to explore and to the development of emerging conceptual theories[31]. This process guided theoretical sampling and subsequently led to saturation within theoretical concepts[31, 32].

Rigour

To enhance quality throughout this research and safeguard against potential bias, several techniques were employed to optimise rigour consistent with guidance[36]. This research was conducted within a systematic approach to data collection and analysis[36] with an element of flexibility, whilst maintaining a neutrality inherent within Grounded Theory[31]. To ensure reliability of the codes and developing concepts, nine transcripts were reviewed and commented on by one supervisor who had extensive experience within Grounded Theory research methods. Furthermore, the final concepts and theories were reviewed and discussed between the researcher and supervisors to ensure these were representative of the data.

Verbatim quotes were included in the report to demonstrate where the developed concepts and theories were grounded in the data.

Additionally, it was important to engage in processes of reflexive practice such as regular supervision and keeping a reflective methodological journal throughout the research process[31]. Engaging in these processes ensured the researcher's values and assumptions were not blindly predetermining the direction of theoretical development within the data but rather aided the maintenance of a critical perspective on the data[31].

Ethical considerations

Ethical approval was sought and granted by Research and Development departments affiliated with each UHB involved in this study.

A comprehensive participant information sheet was developed and provided to all potential participants. Intensivists were asked to sign a consent form before participating in the study. Participants were offered time with the researcher to 'debrief' immediately following the interviews and information was given regarding available services within each UHB for ongoing support. Participants were clearly informed of their rights to discontinue participation in the study at any stage of the research.

The small possibility for there to be a disclosure of risk issues during the interview was also considered and procedures put in place for assessment and management of the risk.

Results

The core psychological concept identified within the data was vulnerability. At a conceptual level, the experience of vulnerability was influenced by the pressures of juggling competing clinical and managerial demands of the intensivist role, within an organisational structure which was often felt to be blind to the stresses of doctors. A theory of resilience was developed within which a pivotal process was the continual movement towards and away from vulnerabilities resulting from the impact of the work. Flexibility in relation to one's contact to vulnerability appeared to be intrinsically linked to resilience. Intensivists spoke of factors which influenced their ability to achieve a balance of connecting to the vulnerabilities enough to allow them to process the impact of work whilst maintaining a self-protective distance. One significant influential factor lay in a relational process whereby a sense of being understood was highly valued. Within this concept, intensivists spoke of being understood, both in their relationships outside of work but also through support within the body of intensivists.

As such, the analysis gave rise to four main concepts; the impact of competing demands within the intensivist role; self-resilience as continuous movement between connection and protected disconnection; relational resilience; and developing resilience. These concepts are considered in turn and a pictorial representation of their interrelationship can be seen in Figure 1.

Verbatim quotes are included throughout the following section. Where surplus and irrelevant words of the verbatim quotes were cut, this is represented by the inclusion of an ellipsis "…". Where clarification is required this is provided in [brackets].

The impact of competing demands within the intensivist role

Intensivists conceptualised two distinct yet intertwining aspects to their role; clinical and managerial. Both aspects held distinct influences upon vulnerability. However, where their impact was most significant was when the two roles collided to intensify stress.

Clinical role of the intensivist

Clinical work was consistently referred to as the core of the intensivists' role; holding a philosophy of the patients at the heart of clinical work and being a good physician. Many intensivists referred to clinical work as the role they had trained for and the aspect they most enjoyed.

> *…the clinical side of things…providing the best care that you possibly can…(Chris)*

> *…being a good Intensivist; there are some technical skills that you need…being good diagnostically and having a knowledge base…(Alex)*

Intensivists described a sense that the direct impact they had on patients' and families' lives and deaths gave them a feeling of satisfaction, was consistent with their values and made them feel good. Being influential through making a difference in the lives of patients and families was viewed as rewarding and fulfilling and acted as a buffer against the emotional impact of the work.

> *…you have a good feeling inside…some change for the benefit of a patient has happened as a direct result of what you and a group of people around you have pulled together to achieve… I've left today and everything is slightly better because I was there. The values that you are part of a process that worked…(Dylan)*

Despite the joy and fulfilment felt in the clinical role shared by many intensivists, consultants also described the emotional impact of this work.

> *…a lot of it is quite stressful workload, so it's sort of patients who are nearing the end of their life becoming unwell…It [the work] is very demanding on a personal level…(Frankie)*

For some however, the work was appraised at times to not be stressful; the impact was deemed acceptable in the context of variations in the intensity of the work.

> *But not every day is like that [stressful]. There are days when the unit will be a bit emptier and those stresses aren't there...actually, throughout your working year, the shifts that you do, only maybe 40/50% of them will be like that! So that's quite good, isn't it?...(Alex)*

In a time when retirement age is ever-increasing, so too is the demand on NHS CCUs. Many intensivists expressed concern about their future wellbeing, predicting a corresponding increased demand on intensivists clinically, physically and emotionally as they age.

> *…the irony is that of course as you get older you find it physically harder to do that [work long hours into the night]…I find that increasingly difficult to cope with…the biggest stressor I would say at the moment it's probably…the physical hours that we're expected to work…(Adrian)*

Managerial role of the intensivist and the impact of the system

The second key aspect of their role emphasised by intensivists was managerial and operational duties, such as people and bed management. All intensivists commented

on organisational, managerial decisions and policies relating to resource cuts causing pressures on beds, resulting in the prioritisation of patients ultimately becoming clinical decisions. There was a frustration within this clash of worlds, a fury at the system hindering intensivists' ability to do their job well, an anger that such constraints result in the delay or acceleration of death and a sense that intensivists were expected to hold the risk of these decisions. The consultants spoke of this as the most significant challenge they face; weighing up critical clinical decisions based on limited resources.

> *I just find it very frustrating...I can understand why it happens but it makes me very cross you know…Sometimes your balance is between…do you bring that one [patient] in knowing you don't have any nurses and no staff and then you compromise everybody's care just a tiny bit, or do you sort of sacrifice one? And I don't know the answer is. But those are resource issues which wind up becoming medical decisions when they shouldn't…(Brynn)*

For some intensivists, there was a frustration in the slow pace of change within the NHS where the failings of the system were not being acknowledged and addressed. In holding both clinical and managerial roles, intensivists were in a position in which they could identify and attempt to effect systemic changes. Yet despite their position, intensivists felt unable to effect change within this organisational structure. This powerless position seemed to perpetuate a sense of vulnerability and misery.

> *What I find…extremely hard is the management world…because they are kind of a decade away from getting fixed, that's quite a miserable place to be sometimes actually. And you just think, 'I know what should happen'…I feel accountable for this and I can't do anything about it and I don't like it…I don't understand how this system changes…I've found that very, very frustrating…(Dylan)*

Underpinning these frustrations was a feeling that the pressures and stress intensivists experienced were not understood by the organisation. In this way, intensivists were not held by the organisation who instead intensified their stress and vulnerability.

> *Its bloody hard work…the organisation doesn't appreciate the stress on us and I don't think the organisation appreciates what we try to do…management don't have a clue. They don't have any insight whatsoever into what we're doing and what we do and the problems and the stresses, be that emotional resource or whatever that we're placed under on a day to day basis…(Adrian)*

Self-Resilience as continuous movement between connection and protected disconnection

Permeating intensivists' experience was a sense that whilst connecting to one's own and to patients' or families' emotional experience was seen by some as valuable, it was also considered to be risky, even *'dangerous',* within a critical care environment where death and mortality were frequently encountered. Emerging from the analysis was a theoretical concept of resilience as a continual movement between connecting to vulnerability and maintaining a protective disconnection from the intensity of emotions.

Connecting to self: vulnerability in emotional experience

The impact of working as an intensivist was highlighted by many of the consultants who described the experience as emotionally draining and challenging, holding a risk of burnout.

We've all got burnout symptoms…(Emlyn)

…they [challenging situations] are emotionally draining, I think they…require a lot of kind of emotional strength to deal with them because the challenging situation in intensive care invariably equates to somebody who's got a life-threatening illness…emotionally it's very challenging, I think it can just be tiring…(Adrian)

Whilst burnout was widely accepted to exist amongst intensivists, the experience of posttraumatic stress was consistently refuted. However, in Caerwyn's narrative, there was a glimpse into an experience of a trauma response.

…some of them [clinical incidents] change you or alter you. So I intubated a lady…and she died. Not because I'd done anything, she was just sick. But she was talking to me, I put her to sleep and then she died. And now, I think when I have a similar patient I'm more nervous about putting them to sleep just because of what happened before. So I don't change anything. But I do have more tachycardia now because you think 'what if the same happens?'…I think 'last time I did this she died. That lady died'…(Caerwyn)

In addition to the anxious relieving of traumatic events, other intensivists described engaging in equally immersed rumination about work.

There are some things which stay with me. So when I work a lot I find it very difficult to switch off…when I go to bed at night I do a ward round, so I go 1, 2, 3 - it's awful…(Brynn)

Connecting to patients and their vulnerabilities

Some intensivists placed high value on empathically responding and connecting to patients and families. Providing understanding and security to patients and families

when they were intensely frightened, was seen by these intensivists as central to their role.

> *…I try not to underestimate the impact that it has when people see you as any role model or someone they are trying to trust and take advice from; or a patient who is seeking answers when they are scared, or a family who is trying to understand what is happening to their loved one. And what they want is something that feels very firm and solid and secure. So that's part of your make up…(Dylan)*

However, intensivists recognised that continual emotional availability to patients and families weighed significantly on their emotions. Being immersed in the existential humanity of death and raw emotions of fear and loss was recognised as having significant potential for burnout.

> *…as ICU clinicians I think there's a high risk of burnout because the families' emotions and stress levels are very high…(Charu)*

Intensivists described being most affected by a patient's death or illness when they identified with the patient or felt a relational connection. Perhaps, implied within this was a sense that consultants faced their own mortality.

> *…things that will affect you…is usually…where you can see yourself in that circumstance. So it might be someone who is the same age as you…or their background is similar or something about a case will make you think of your family or something. So that's why I might be affected by death, or someone who is very sick, and then I might go home and I might think about it…(Chris)*

Disconnecting to protect self from vulnerability

A concept which consistently arose was a sense that intensivists frequently engaged in a level of disconnection which was experienced as protective and healthy. To allow oneself to truly experience the intensity of loss so prevalent in CCU would be unbearable. To survive, intensivists learned to emotionally distance themselves from work and people.

A theme which emerged throughout the analysis was a sense in empathically connecting and sharing the pain felt by families, there lay a risk of being personally vulnerable.

> *Empathy is quite a dangerous thing to undertake…if I start giving myself a hard time because I'm sharing in their [families'] situation, I think that's dangerous and that's going to break me, so I don't do that…(Eirian)*

Similarly, remaining disconnected to patients was considered helpful to protect oneself. This process of distancing from patients was made easier by patients' unconscious state and subsequent diluted contact with patients which acted as a buffer between consultant and patient.

> *I always distance myself from the patient becoming too close…maybe to protect myself…(Caerwyn)*

> *Often we don't…meet our patients awake…it's harder when you've got to know someone…in terms of longevity of career, sometimes that's a helpful mechanism…to protect yourself from becoming too involved…(Alex)*

Keeping an emotional distance from patients was also considered essential to maintain clinical objectivity. In fact, to do the job of an intensivist effectively, disconnection was seen as vital.

> *…to do your job you have to be disconnected…if you're disconnected and you're looking at them from a clinical problem perspective you can be far more objective about what you're doing than if you actually know them…(Emlyn)*

Several consultants reflected on the culture of intensivists, observing similarities in personalities. Their reflections detailed a culture wherein expressing the emotional impact of work was perhaps not fully allowed. There was normality within an ethos of getting on with it, of denying the emotional impact, giving rise to an *"emotionally blunted"* culture.

> *I don't know whether they [intensivists] don't articulate it and probably tend to hide a lot of those feelings. I think people generally, across the board, would struggle to probably own up if there was a problem…(Alex)*

> *Most intensivists are emotionally blunted…(Frankie)*

Many consultants spoke of holding alternative job roles within which they could have respite from the intensive and emotive work of CCUs.

> *…after…intensive care, where there's a lot of sadness and a lot of anxieties and a lot of uncertainties surrounding death, to step out of it…and then come back in, I think that's really quite a valuable part of my pattern of working…A useful way of taking the pressure off…a break from the chaos and mayhem that is intensive care…(Eirian)*

Detaching from the over focus on work was spoken of as helpful through engaging in activities using a different part of the brain.

> *…scheduling into my life other things outside of work…something that just uses a completely different part of my brain…it's just about detaching from that very unhealthy over-focus on one*

thing too much. So too much time thinking about the job…breaking that up with whatever you

do, whether it be exercise, any hobby, meditation. I've always thought that that's a useful thing

to do…(Dylan)

In disconnecting, intensivists remained at an emotional distance from the pain felt by families and from their own emotional responses. However, there was an acknowledgement from some that when taken to an extreme, engaging with work from a disconnected state stopped being protective and became a symptom of burnout. Intensivists observed colleagues showing disconnection from the unit, a severed disconnection from their own emotional process and a nihilism regarding patients.

…you do see people who've sort of disengaged and I wouldn't wanna be one of those people…if I stop becoming emotionally involved with any of my patients that come through the door actually it's probably time for a break because you you've probably set your wall too high…(Afon)

…I've seen intensivists who will not admit anyone and they're very nihilistic and I think that's often an early sign that intensivists are burning out!...(Alex)

Consequently, some intensivists felt strongly that this culture of hiding the emotional impact needed to change by talking more and sharing an understanding of what is normal.

…people just need to know what is normal I think. I think that's very, it's very cloak and dagger, it's just made up and get on with it and actually I think…it's not talked about as much as it should be…(Dylan)

Achieving an equilibrium in self-resilience

Throughout analysis there was a sense that each intensivist experienced a process of achieving an equilibrium through a continual movement between connecting and protectively disconnecting from vulnerability, influenced by the needs of CCU and their own needs.

This balance was epitomised by the descriptions of several intensivists of the risk to the care of all CCU patients when they allowed themselves to be immersed in the emotion of one patient's plight. Holding insight in to one's connection to patients and endeavouring to maintain an emotional balance between connection and protected disconnection enabled intensivists to continue to prioritise and provide care to the whole unit.

> *I do notice the emotional burden more than I used to…But also, it's that balance of making sure that you don't spend so much time on ones [patients] that you have got emotionally involved with at the detriment to the rest of the unit. And so, I guess just having an awareness that you have become emotionally attached to patients or relatives helps…(Afon)*

Similarly, being overly invested in problems within CCU clouded intensivists' insight into their own internal processes. In this way, distancing oneself from work was considered to enable intensivists to maintain emotional wellbeing and nourished insight; stepping back and observing their own emotional response allowed them to emotionally connect and respond to their own psychological needs.

> *I distance myself much more…I used to feel it very personally…And inevitably…it just means that…you are not keeping touch of your capacity of what you can deal with. So I think that's been a big change to what I've done; so recognising what is manageable, what actually can I take on and if I can't take it on just saying no…(Dylan)*

For many intensivists, achieving an equilibrium within psychological well-being was rooted in balancing fighting for life, whilst accepting death; this ameliorated the emotional response to death. In their fight for life, consultants understood the reasons for decline and did everything they could to retrieve the patient from death. However, intensivists understood that for some patients, death was an inevitable and expected outcome. Intensivists' pragmatic acceptance of the inevitability of death alleviated feelings of being personally responsible for a patients' death, without being disconnected from them.

> *…it can be quite rewarding, obviously, if people get better, and obviously we're quite pragmatic that a third of our patients don't get better. I think if people don't get better and you've expected that, that's fine. For me, it's about having a strategy, and hopefully that plan having come to some kind of fruition, reached a diagnosis, communicated well with the family, worked well with the team, and you kind of feel like even if they're not getting better, it's kind of expected, you've got a reason for it…as long as you've given the best possible treatment, I can reconcile it very easily that they just didn't get better and that wasn't my fault…(Alex)*

Intensivists' described that the focus on critical decision making provided a feeling of being in control which was felt to be protective over stress and burnout and central to resilience.

> *…having the burden of making decisions of whether to continue or not is actually protective and helps sort of reduce burnout because you feel you're more in control…(Frankie)*

This sense of certainty and control was conceptualised as being rooted in the comprehensive training intensivists receive. As such, the unpredictability of clinical emergencies was experienced as less chaotic than working within a management

system where intensivists' felt they lacked understanding and consequently held less control which intensified stress.

> *…where I'd instinctively think there is most chaos, cardiac arrest or something, for me that's where there's least chaos because people have trained and they understand how to manage that unpredictable...I think what you have is people working at a [management] system that they don't understand…So that's where I think the problem with stress comes…a kind of control thing…(Dylan)*

A key protection against the impact of intensivists' role arose frequently as being simple acts of self-care; keeping hydrated and nourished, taking a break, going home. These were acts which could be easily overlooked due to the business of CCU yet their importance was paramount in keeping intensivists well enough to keep going.

> *…simple things like always bringing lunch with me…always bringing more water with me to keep myself hydrated so that I don't feel as rubbish…being allowed to sit down for 10 minutes, have a cup of tea - you can still look at information, you can still keep going, but yeah that enables you to recharge…(Afon)*

This balance of self-care extended to an importance for many consultants of having a clear delineation of home and work life; disconnecting to protect home from the encroachment of work.

> *Taking things home is a big mistake. I try…and have as clear as possible delineation between work and home…(Chris)*

Frequently, intensivists spoke of holding clear values prioritising home and family life which seemed to be protective and impact personal stability at work. Conversely, intensivists observed those without stability at home as more vulnerable at work.

…people who are good at managing stress…have very solid values around stuff outside work…which for most people is family…'this is what's most important and this is my purpose for coming to work'…the manifestations at work because of that is usually the calm, cool person…who doesn't really get…all the signs of stress at work. And then there are the people I don't think handle it very well…They perhaps don't have that stability outside work, so work is all they've got and as time drifts on they become vulnerable…(Dylan)

Relational Resilience

Within analysis a central concept arose of group processes enabling intensivists to seek support from one another. In talking to one another about their frustrations and experiences, intensivists shared their suffering and felt understood which eased their individual burden and appeared to have an ameliorating influence on the personal experience of vulnerability, facilitating a relational resilience.

…in the morning we…have a coffee together and then you can discuss things with your colleagues and I don't know if that ever makes any difference but your frustrations are shared…(Brynn)

I think there's camaraderie and that's to do with all suffering together…(Eirian)

Significantly, consultants felt supported when it was possible to have discussions relating to complex ethical decisions within a formal handover.

If there are difficult ethical situations, if the time pressure isn't that great, then that's [handover] the moment in which they get discussed…So, in that respect, there's quite a lot of help from one consultant to another…(Eirian)

In this way, the group holds individuals through both a formal process of complex case discussion and an informal sense of being supported and understood.

> *So again, we're very good at supporting each other in that way, so I think that makes a huge difference…(Adrian)*

In addition, many intensivists spoke of the importance they attributed to their relationships at home. Intensivists attributed value in being able to talk with spouses about their work and be understood.

> *…your family have to understand on some level; you need to be open with them and they have to understand…(Dylan)*

There was a sense throughout all narratives of the centrality of support within intensivists' personal lives to buffer the impact of critical care and to protect against burnout.

> *Having the family support I think is one of the prime needs for an ICU clinician because of the stress that's involved…Family support to de-stress is quite a useful thing. I think it's quite important… I can see when things go badly for some people it's always been that immediate support which just hasn't been there…it just shows you how easy it is to get burnt out in this job and the more family support you have is good for you…(Charu)*

The development of resilience

Intensivists made consistent reference to resilience but they questioned its origins. Two main concepts emerged within analysis: resilience as inherent within personality; and resilience developing over time through experience as a CCU physician.

Resilience as inherent within personality

There was a consistent theme that resilience was inherent within the personalities of intensivists and considered to buffer the stresses of work. Intensivists frequently spoke of observing people with more resilient personalities self-selecting into this profession.

> *…of course people will self-select…you can actually go and interview ICU people in South Africa or North America and you'd have the same kind of characteristics…(Emlyn)*

For some, there was an understanding that this characteristic of resilience developed within formative childhood experiences.

> *…resilience really comes from what you're like as a person, which is formed…that might dictate why you went into intensive care. So, there might be formative childhood experiences that make you more resilient and therefore you don't get so stressed...(Chris)*

Habituation: Resilience developing over time within the role of a CCU physician

Conversely, a concept arose depicting the development of resilience characteristics over the course of the intensivist's career. Consequently, CCU work became more manageable and had less impact over time. This habituation at times revealed a degree of self-protection. In learning to distance oneself, intensivists were enabled to keep going, to keep working. Within this there was also a normalisation, an acceptance of death as inevitable, which buffered its impact.

> *I find – I don't know, do you become hard hearted? I find it doesn't get to me as much as it used to…when I was young…intensive care it really, really upset me but…I mean it is upsetting in a way but actually there isn't anything I can do about it. That just is the way it is…(Brynn)*

Alongside this, intensivists felt they gained increased certainty and developed pattern recognition through greater clinical experience, i.e. they noticed commonalities in presentations and consequently built confidence in their decision making.

> *I think that's probably something you learn, and in the beginning it's quite difficult. So I think part of it is experience and time, it's just the daily routine…(Alex)*

> *I guess the clinical bit…gets easier because it's just pattern recognition…(Brynn)*

Discussion

The findings within this study demonstrate the complexity of resilience experienced by intensivists across NHS CCUs in Wales. Conceptually, the findings highlight the vulnerability of intensivists in the face of complex, high pressure competing demands, both clinical and managerial. The developed theory emphasises a process of maintaining relational and self-resilience in which intensivists engaged in a continual movement between connecting to and disconnecting from vulnerabilities in a way which was experienced as protective.

The analysis of the key concepts was drawn together in a diagrammatic form (see Figure 1 below). Within the diagram, a central experience of vulnerability is depicted, influenced by the competing demands of the intensivist role in addition to events within home life. Conceptually, intensivists' experience of vulnerability was buffered by factors of relational resilience and self-resilience within which there was a movement between connection and protected-disconnection. Aspects of resilience were perceived as both intrinsic within personalities and developed thorough experience and habituation to the role.

Figure 1: Pictorial representation of vulnerability and resilience in intensivists
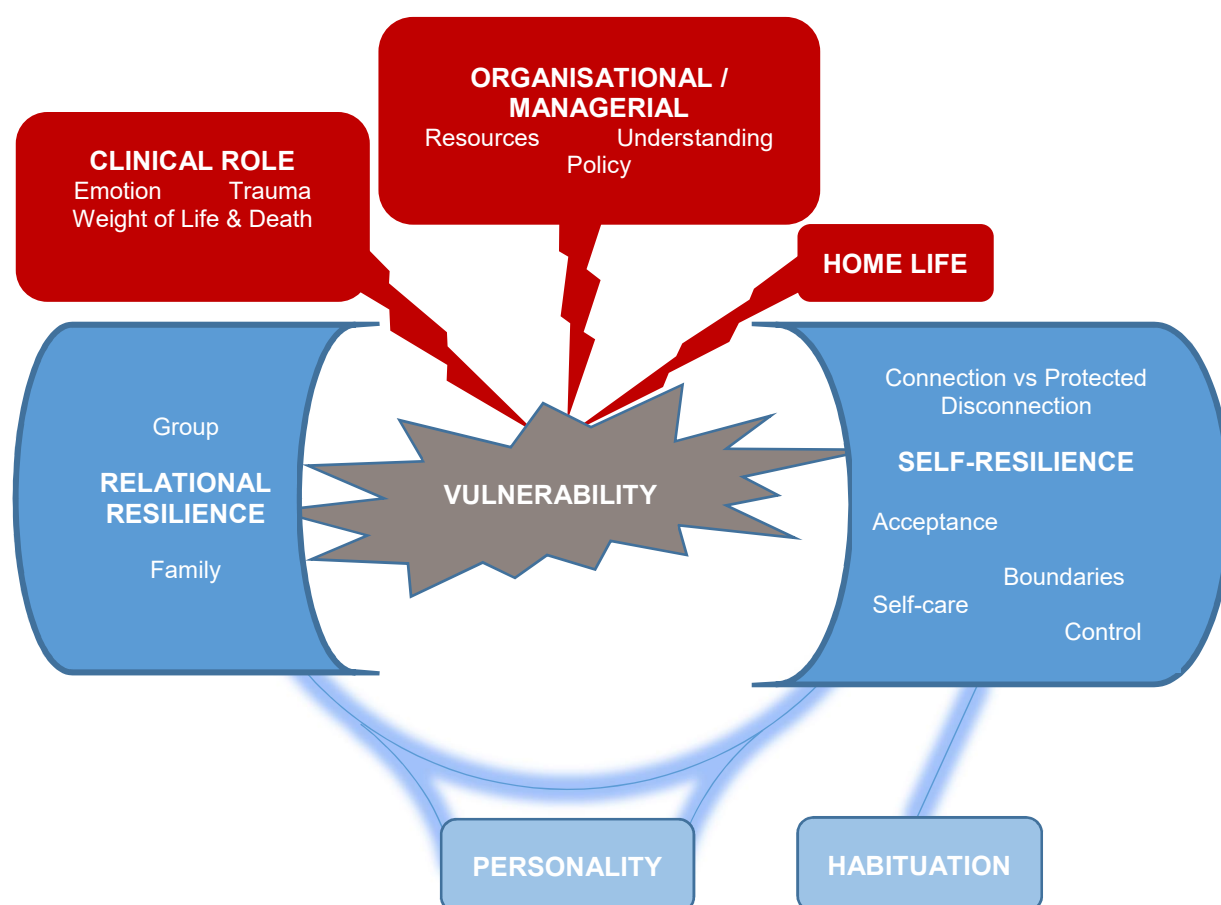
The impact of the intensivist role

This study found intensivists recognised the prolific presence of burnout within the profession. Whilst intensivists refuted the presence of posttraumatic stress, there was evidence of traumatic responses to clinical experiences within some narratives. The presence of psychological distress identified by intensivists in this study reflects the growing body of research which recognises high prevalence of burnout[6-12, 20], posttraumatic stress[4, 13, 14, 20], depression[15] and emotional distress[1] across CCU medical staff.

The experience of CCUs as emotionally demanding environments where staff engage in work which is intellectually, physically and emotionally challenging[1] was clear within intensivists' accounts. Furthermore, the physical demand of the role and its impact on health arose as a significant concern for intensivists as they looked to a future holding increasing retirement ages; a fear echoed by intensivists across Wales[21].

Intensivists within this study highlighted their continual endeavour to juggle competing demands of clinical and managerial work within an organisational culture which they felt did not understand the pressures intensivists face. This sense of the wider organisation and government failing to understand or contain anxieties which permeate the NHS is one recognised by Campling (2015)[37].

Within these findings, intensivists expressed most stress when organisational structures were imposed upon them; where a lack of resources and structural processes hindered the care and treatment of patients, increasing the weight of life and death decisions. This finding is significant given research has found an association between emotive decisions and burnout[5]. There was a feeling that organisational policymakers were not connected to the emotional reality of clinical pressures and experiences, a disconnection recognised within research[38]. In this way, intensivists and CCU were not 'held' or supported by the organisation, increasing their vulnerability.

Although stress and frustration was clear in all accounts, psychological distress was not conceptualised as inevitable. For some intensivists, there was a sense of resilience inherent within personalities and developed early in life, as protective. This concept reflects psychological theories of attachment[33] and intersubjectivity[39, 40] in recognising the formative impact of early relational experiences upon how one relates to self, other

and the world. It is possible that early formative experiences shaped how intensivists survive in the face of adversity, developing characteristics of resilience.

For other intensivists, once the inevitability of death was accepted and confidence in their clinical judgement was developed, the work was no longer as stressful. Consistent with Folkman and Lazarus' (1988) theory of coping[41], it seemed some intensivists cognitively appraised the subjective meaning of events encountered within CCU as benign and as such the demands of CCU situations were not perceived to exceed their ability to cope. Through habituation to CCU experiences, intensivists appeared to become less vulnerable and more resilient.

Self-Resilience

The findings of this study emphasise a process of self-resilience within which intensivists engaged in a continual movement between connecting to and disconnecting from vulnerabilities as a means of protecting themselves from the impact of CCU. The psychological concept of resilience can be recognised[27-29] within this dynamic process wherein intensivists draw on a multidimensional characteristic in response to complexity and rapid change within CCU, enabling them to positively adapt and thrive.

This theory of self-resilience resonates with Campling's (2015) description of the energy required of professionals to engage in a state of mind which encompasses professional detachment whilst embracing the courage to show human kindness rather than recoiling from patients' pain[37]. There is an importance in being able to step into and contain the pain of patients and families. And yet for intensivists, this connection is dangerous and risks their own pain and vulnerability. Concordantly, the

King's Fund describes compassionate responses to suffering as potentially painful experiences for those providing them if they are not adequately supported[42]. To protect themselves, intensivists engage in strategies of protective disconnection, distancing themselves from pain and vulnerability.

Supporting this theory, the engagement in multiple strategies to protect oneself from the hopelessness experienced within an emotionally traumatic environment in which suffering is prevalent has been recognised within literature[43]. Furthermore, this study's theory echoes a Greek qualitative study describing paediatric healthcare professionals' oscillation between experiencing and avoiding grief and vulnerability[44].

Within this movement between connection and protected disconnection, intensivists spoke of a variety of ways in which they manage to keep going in an emotive and stressful environment, many of which are mirrored within pre-existing literature. Consequently, this study corroborates research denoting intensivists stay well through engaging in self-care, exercise, hobbies separate to CCU[4, 26, 27], stress-reduction techniques, management skills, maintaining work-life balance and setting limits[30]. Intensivists spoke of holding high levels of control within clinical decision making as experienced to be protective against burnout. This perception is supported by research recognising individuals can cope with high workloads when they experience high levels of control within supportive environments[45]. Acceptance appeared central to resilience for intensivists, mirroring literature placing acceptance and mindfulness as fundamental aspects of resilience within trauma[46]. Engaging in these strategies, combined with a pragmatic viewpoint, acceptance of death and belief in oneself and CCU, provides the structure within which resilience can move between connection and disconnection. In this way, this study supports research signifying both personal and

organisational factors influence vulnerability and emotional distress experienced by CCU professionals[1].

The findings of this study add support to Colville et al (2016)[20] who reported that even after resilience and coping strategies are mediated for, the experience of burnout continued for CCU physicians. Such findings reflect the sense within this study that as intensivists moved towards extremes of severed disconnection or enmeshed connection, they moved into experiences akin to burnout, posttraumatic stress and distress.

Relational Resilience

Being emotionally supported within the intensivist group and personal relationships helped consultants achieve a balance between connecting with vulnerability to process emotive experiences and engaging in protective disconnection. The Francis report[47] details an investigation into the failings of care within Mid-Staffordshire Hospitals NHS Foundation Trust which reportedly led to inhumane treatment and avoidable deaths. Driving recommendations to enhance staff support, the Francis report highlighted that working within a supportive group buffers the impact of dysfunctional organisations[47], improving group and individual functioning[42]. Being able to access and accept the support of colleagues or others within a support network has been consistently reported within research as a common characteristic of resilience and protective against burnout[27-29].

It is possible that the protection of the group process in building resilience could be rooted in the development of psychological safety, a collective belief that it is safe to

take interpersonal risks within the team[48]. Within intensivists' group support, there was an acceptance of sharing the suffering within a culture of non-blaming, valuing and respecting one another. Where this shared cultural perspective was held, the group felt safe enough to share their suffering and vulnerability within relationships, safe in the knowledge they would not be blamed, punished or humiliated[48].

Implications for practice

This complex multifaceted theory of resilience has potential implications in informing the development of interventions to improve resilience and wellbeing within the intensivist population. Interventions could be implemented across three levels: individual; intensivist group; and wider organisation.

The availability of a clinical psychologist to provide individual psychological support or focused psychological interventions could enable intensivists to connect to, process and accept distressing experiences and enhance relational and self-resilience. The consistent presence of a clinical psychologist on CCUs could provide an opportunity for immediate, effective debriefing enhancing intensivists' capacity for reflection upon the psychological and emotional impact of the work alongside the processes they engage in to protect themselves.

Educational programmes could be developed and introduced focusing on the psychological impact of CCU and introducing strategies of relational and self-resilience identified by intensivists within this research to enhance self-care and improve wellbeing. Ongoing peer-mentoring programmes could embed strategies in practice

whilst emphasising the importance of nurturing relational and self-resilience within such an emotive and stressful environment, where the risk of burnout is high.

Recognising the value of being supported within the group as protective in facilitating relational resilience, group interventions could enable intensivists to explore their vulnerability in relationship with one another. Enhancing opportunities for relational support within CCUs may deepen reflective capacity of the intensivist group and provide the opportunity to improve skills in balancing the connection to vulnerability, facilitating emotional processing, and engaging in protective disconnection. Group interventions could take the form of psychological supervision or a standardised intervention such as Schwartz Centre Rounds[49]. Relational approaches to enhancing resilience in CCUs could facilitate the development of a supportive culture of openness and psychological safety[48], deepening relational resilience through a sense of sharing suffering and feeling understood, potentially improving staff wellbeing and effecting reductions in sickness levels[19].

The findings from this study highlight an importance of organisations understanding the challenges faced by intensivists and validating tensions experienced between the clinical need and organisational system. Enhancing awareness regarding the impact of resource cuts upon the ability of intensivists to do their job and provide best patient care, an experience intensivists felt contributed to burnout, may be central to addressing this tension. Exploring tensions within meetings between intensivists and managerial staff could provide opportunities to build relationships, help intensivists better understand and contribute to organisational systems and provide intensivists with a sense that they are supported and heard, reducing feelings of helplessness. Holding an understanding of the tensions alongside an awareness of the processes of

relational and self-resilience could inform organisational change, facilitating a cultural shift. Through exploring wider tensions between the clinical need and limited resources and introducing resilience based interventions to support intensivists to process the impact of the work and balance connection with protective disconnection, it is possible that wider NHS and hospital organisations could address negative effects of burnout upon wellbeing and patient care[19].

Implications for future research

Further research testing the theory presented by this study would be valuable. Quantitative research could consider the question of whether greater acceptance of relational resilience leads to reduced levels in burnout across intensivists. Recruiting larger populations, research could investigate the factors which may predict the ability to engage in strategies of relational and self-resilience, for example attachment patterns and emotional avoidance. Additionally, future research could explore the boundaries of connection and disconnection within the concept of self-resilience, their impact upon patients and further whether it is present for other medical and non-medical professions across UK.

Furthermore, evaluations of resilience based interventions as previously outlined could measure their effectiveness in improving aspects of resilience. Given previous research identifying the impact of working in CCU across medical staff, such interventions could be evaluated when implemented with differing staff groups; considering whether resilience based interventions are more effective if delivered to a closed group of intensivists, to intensivists plus trainees or to all medical staff working within CCUs.

Limitations

Given the medical specialty and regional restrictions, the available population was small. Consequently, despite endeavours ensuring anonymity, intensivists may have been reluctant to share the reality of their experience, fearing recognition. Furthermore, cultural norms within Wales CCUs may restrict the understanding gained in this study to this population.

Several methods of reflexive practice and triangulation were adopted throughout this research to safeguard against researcher bias. Despite these endeavours, researcher bias remains a possibility given the immersive and constructivist nature of Grounded Theory.

Notwithstanding limitations, this research provides a unique and in depth understanding into the complex processes of resilience and vulnerability within this intensivist group; illuminating the daily challenges and struggles experienced within a seldom studied profession.

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Paper 3: Critical Reflection

A critical reflection on the research process

Resilience in Critical Care: Elucidating the Experiences of Medical Staff.

A Qualitative Study

Josephine Allen

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Introduction

The purpose of this paper is to critically review the process of conducting a piece of qualitative research which aimed to elucidate intensivists' experience of resilience in the context of working in the potentially emotionally demanding environments of Critical Care Units (CCU). Within this review I will reflect on my experience of conducting a systematic review and meta-synthesis, reflect on the development and execution of the empirical research and critically review papers 1 and 2. Thereafter I will consider the implications of the developed theories for clinical practice.

The origins of the research idea

I first became interested in the concept of resilience within clinical staff working in acute hospital settings when my sister, a specialist physiotherapist who has worked in a variety of acute settings, experienced health anxiety. My sister has always been an incredibly resilient woman, however with a family bereavement and a house move, her resilience at home and at work waivered. She began to experience intense health anxiety relating to neurological conditions she would routinely treat at work. She experienced a period of intense psychological distress. Additionally, the distress she would previously absorb from patients, she could no longer tolerate. Despite her distress, she did not receive nor ask for psychological or practical support within the work setting. In conversations with my sister about her experience I began to wonder about the tipping point between resilience and psychological distress in healthcare professionals who witness trauma and absorb others' distress on daily basis.

Driven by this question, I conducted a brief and preliminarily review of recent documents relating to wellbeing of National Health Service (NHS) staff. Most prominently, the Point of Care Foundation (POCF, 2016) recently published a report conveying the importance of improving staff experience within NHS, highlighting high sickness rates due to stress, burnout or other mental health issues[1]. In this cursory review of the research I discovered that burnout has been increasingly identified amongst different medical professions[2].

The financial implications of such high sickness absences across the NHS in a time of austerity are significant, placing additional financial burden upon individual services and the wider organisation. Moreover, the ongoing presence of burnout in NHS staff who continue to work also hold implications with research recognising a negative impact on staff performance, the quality of care provided to patients[3, 4] and consequently patient satisfaction[5]. I was struck by the concerns raised by POCF (2016) regarding the significant impact of burnout throughout NHS staff upon patient safety, mortality and experience[1].

With the impact of burnout in mind, I mulled over this question of resilience and distress and subsequently sought support to develop this idea into a research question. To aid me in this task, I approached my now academic supervisor, Dr Victoria Samuel, and clinical supervisor, Dr Julie Highfield. Dr Victoria Samuel had previously worked as a Clinical Psychologist within a Paediatric Intensive Care Unit (PICU) and had extensive experience within research adopting a Grounded Theory approach. Likewise, Dr Julie Highfield was currently working as a Consultant Clinical Psychologist within an adult CCU within South Wales and had experience in qualitative research approaches. It was important that the supervisors of this research project had an understanding of

working in an acute medical setting to guide me within a world in which I was unfamiliar, and were able to support me in accessing a population of healthcare professionals working within an acute hospital.

Through conversations with my supervisors I became aware of the potential for the CCU environment to be highly emotive, stressful and pressurised. Considering the research in relation to the impact of working in such a potentially traumatic environment, it became apparent that there was a high prevalence of burnout across CCU medical staff teams internationally[6-10]. However, in reviewing this research I became aware that much of the research pertains to nurses. Where physicians are included in research it is often in combination with nurses and does not specify whether physicians are trainees or consultants. Given the differences in job roles, responsibilities and hierarchy resulting in differing pressures on the individual, I was curious about whether this may hold differences in how nurses, trainees and consultants experience working in CCUs and the subsequent impact on the individual.

A pivotal paper within these initial stages was Gillian Colville and her team's (2016) research on burnout and posttraumatic stress in paediatric CCUs[10]. Gillian Colville sent this paper in manuscript form prior to its publication to inform our initial thoughts regarding a research question. In reading this paper I was struck by the finding that physicians are twice as likely to experience burnout than nurses, even after mediating for characteristics of resilience[10]. This recognition made me wonder about a potentially different experience of burnout and resilience in the medical population within CCU and drove the development of the research question to explore resilience within the intensivist group.

The systematic review and meta-synthesis

Additional rationale

The principal aim of the systematic review and meta-synthesis was to contribute a deeper understanding of resilience and distress within CCU staff to the medical field. I was struck by the high prevalence of burnout and posttraumatic stress in CCU nurses and physicians[10] and agreed with Colville et al (2016) that there was a need for further exploration of this phenomenon[10] within such emotively charged medical specialisms to better understand the experiences and needs of CCU medical staff.

As I began to conduct preliminary searches I discovered that much of the research in this area was focused on quantitative prevalence rates of burnout, posttraumatic stress disorder, depression and anxiety which were quantified through parameters of medically driven diagnostic criteria. I quickly learned that a systematic review of the research relating to prevalence rates of burnout, compassion fatigue and posttraumatic stress within CCU staff, comparing these rates to staff working in different hospital settings had recently been conducted[11]. This systematic review of the available quantitative literature highlighted some valuable and interesting contradictory findings associating a heightened risk of emotional distress with working in CCU and yet noting a lower rate of psychological disorders in CCU staff compared to staff in other hospital wards[11]. It was suggested within this review that such contradictory evidence denotes the existence of personal and environmental factors which mediate distress when working in highly emotive environments, such as CCU[11].

With the growing body of evidence focusing on the prevalence rates of diagnostic psychological conditions of distress and resilience within CCU staff, there appeared to

be a scarcity of literature which explored the experiences and perceptions of CCU staff. As such, there remained a gap in the knowledge within research.

To gain a more in depth understanding of the relationship between resilience and distress within this population of medical staff working in potentially traumatic environments of CCUs, I would need to explore the existing qualitative research available and conduct a meta-synthesis of the data. The completion of systematic reviews and meta-synthesis of the data have been considered to be crucial in order for the qualitative research base to be accurately summarised in a way which is reliable[12].

Through further searching of the literature I noted that there did not seem to be another meta-synthesis of qualitative research in this area. In conducting a qualitative review of the research, I hoped I would be able to build on the conclusions made by the authors of the recently conducted quantitative review[11]. I recognised a distinct value in the conclusions of Van Mol et al (2015) indicating the presence of personal and environmental factors mediating burnout, compassion fatigue and posttraumatic stress[11]. However, I felt that there was an additional value in reviewing the available qualitative research through deepening our understanding of the experiences of CCU staff and the mechanisms by which factors enhancing resilience interact with distress relating to work and how these are employed on a day to day basis.

Searching the literature

In approaching a search of the literature, it was important to ensure the process of searching was both systematic and transparent. Consequently, I followed the

guidance for the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)[12].

Recognising that the focus of this systematic review held a psychological perspective to the experiences within a medical field, I decided to search psychological, medical and nursing, allied health research databases. Having been unable to identify a previously conducted review of the qualitative research in this area, the four identified databases (PsycInfo; Medline; CINAHL; Web of Science) were searched from date of inception.

In considering search terms, I felt it important to ensure that all relevant articles were identified. I was aware from my preliminary searches that qualitative studies focusing on the emotional impact and resilience experienced by medical staff working in CCU were potentially minimal. Central to my strategy was therefore to keep search terms open whilst maintaining a focus on the emotional impact and resilience in CCU medical staff. This was achieved by searching with keywords in addition to wider subject headings employed by the databases to categorise papers.

Previous researchers have noted that it can be difficult to complete a comprehensive search of the literature which remains sensitive enough to ensure all relevant papers are identified due to keywords relating to the qualitative methodology or title and abstract descriptions of the studies being inadequate[13-16]. Consequently, I decided to omit methodological search terms to be certain that all qualitative research would be captured within the literature search. As a result of such thorough searching, it was essential that I conduct a manual review of the titles and abstracts identified by the search in order to assess their eligibility for the study. I was initially overwhelmed by the vast quantity of 4560 titles and 342 abstracts I would need to review. However,

over the days in which screening took place, I began to feel confident that all relevant articles would be identified.

Establishing clear inclusion and exclusion criteria was vital to ensure that articles identified and screened within the literature search were relevant to the topic posed. As such, the criteria specified that articles referred to the personal experience of resilience or the emotional impact of working in an adult general medical CCU. This inclusion criteria was chosen as I had been made aware by intensivists that there are different experiences across different CCU specialisms. Furthermore, it felt important that I remain consistent with the area of practice with which my empirical paper was studying; general medical adult CCUs. This narrow focus was intended to enable a more in depth exploration of the emotional impact and resilience experienced by medical staff within this adult general medical CCU setting. However, I recognise that there are potentially several disadvantages to such a narrow focus.

Firstly, it is possible that in excluding papers which included paediatric or other adult specialist CCUs, the analysis may have missed some valuable insights into the similarities and differences across CCUs. Moreover, I was aware during the screening process that there were studies written in non-English languages which appeared to be relevant and could have given additional insights. However, these could not be included due to my own lacking linguistic skills. Likewise, there may have been unpublished literature or literature published in a non-peer-reviewed journal which could have contributed to the understanding developed within the review. However, it felt important to restrict studies to those which had been published in a peer-reviewed journal as an initial check on quality.

I was initially uncertain as to whether to include or exclude mixed methodologies within the meta-synthesis. After screening all potentially relevant full text articles, there was only one paper which met the focused inclusion criteria and adopted a mixed methodology, Laubach et al (1996)[17]. However, on closer review, this paper appeared to be predominantly of a quantitative analysis with a less prevalent qualitative analysis. Furthermore, the concepts within the qualitative analysis were poorly defined and unclear. Therefore, I assessed that the qualitative methodology of this paper was of poor quality resulting in its exclusion. Consequently, only qualitative studies were included in the meta-synthesis, gaining consistency in methodological approach.

An additional reason for the decision to focus on qualitative research was to provide a different perspective and understanding gained from the recent systematic review of quantitative research reporting the prevalence rates of burnout, posttraumatic stress and compassion fatigue in CCU staff[11].

I believe that these inclusion and exclusion criteria allowed me to focus the search from a huge array of articles to those which facilitated my understanding of the emotional impact of working in adult general medical CCUs and the experience of resilience in the face of this.

Critically appraising the studies

Historically, the critical appraisal of the quality and rigour of qualitative studies has not been considered to be central to the process of meta-synthesis with researchers attributing more importance to being inclusive and not losing relevant studies from the review[18]. However, I was aware that if the qualitative methodology was poor, the

findings of the studies may not accurately reflect the experiences of participants, thus presenting poor quality and inaccurate research. Consequently, I felt that the inclusion of a robust critical appraisal was vital when conducting a review and meta-synthesis of qualitative research to ensure the quality of the research being reviewed is of a high standard[18], establishing a robust base from which a meta-synthesis can be conducted.

In considering formal appraisal tools for qualitative research, I decided to utilise the Critical Appraisal Skills Programme (CASP) qualitative research checklist[19] as the tool which is employed most commonly. This CASP tool provided a checklist which guided a consideration of quality and gave a tangible score. However, CASP does not provide guidance regarding the interpretation of these scores. Therefore, it was difficult to ascertain a cut-off regarding which studies qualified as robust and of a high quality and therefore be included in the study. I felt strongly that the quality of research included in the meta-synthesis should be high. Consequently, I decided that studies would only be included if they scored 8/10 or above. I discussed this with my second reviewer who agreed that this cut off would be a good indicator that studies were of a high quality.

In reviewing the CASP checklist, I found that scoring of the items remained remarkably subjective which contrasted my expectations of a clear and robust determinant of quality. Therefore, to aid me in this subjective yet guided critical appraisal of the identified qualitative studies, I continuously referred to the government framework for assessing quality in qualitative research[20]. Combining these two guidance tools enabled me to make informed and critical judgements regarding the quality of each item indicated by the CASP. On reflection, this process enhanced the critical appraisal

of the research, which whilst it remained subjective and open to interpretation, became more robust through the consultation of guidance[20].

In addition to quality, it was important that attention was given to the clarity of concepts within the papers. Considering meta-synthesis describes a process of interpreting and synthesising concepts, the clarity of the concept descriptions within the original papers was vital[21]. Ambiguous and unclear concepts would therefore exclude a study from further review and meta-synthesis.

To further enhance rigour in the process and attempt to reduce subjectivity, I invited a second independent reviewer to critically appraise the qualitative studies adopting the same process. It became clear that despite these measures to enhance robustness, the process was inherently subjective. Considering the nature of qualitative research as entangled with the researcher's interpretations of the data, perhaps subjectivity in the process of evaluating such research is inevitable. However, it is important to recognise that this process of critical appraisal ensured a level of robustness and quality within the qualitative studies included.

Conducting a meta-synthesis of the studies

Recognising the numerous methodologies to synthesise qualitative research, my initial steps were to review the methodologies in turn and consider the most appropriate approach for this meta-synthesis and for me as a researcher. Within this deliberation, it was important to consider the epistemology of the differing approaches and their fit with my understanding of the world. Appreciating that I was the vessel through which the process of interpretation occurred, I recognised that my understanding of reality,

my perspectives and my interaction with the data will influence its interpretation[22]. As I reflected upon my epistemological position I recognised that my perception of reality is that we construct our realities within the context of relational interactions within a social group which collectively holds a series of shared understandings of the world. This position marries with the epistemology of objective idealism which informs grounded theory and meta-ethnographic methods of synthesis[23].

When considering approaches, I was also aware that the identified studies for this meta-synthesis adopted a variety of qualitative methodologies. Consequently, it was essential that approach would allow concepts to be synthesised across differing qualitative methodologies. This eliminated taking a grounded theory approach to synthesis due to it requiring a consistency of grounded theory methodologies in the original papers. Conversely, meta-ethnography holds a more flexible approach, allowing the synthesis of data which has originally been analysed using disparate qualitative methodologies[21, 23, 24].

Originally posed by Noblit and Hare (1988)[21], meta-ethnography was later described in a stepped process by Britten et al (2002)[24]. It was this stepped description I followed throughout the process of meta-synthesis. Through exploring commonalities in the data and engaging in an interpretative process to develop an overarching theory, I very quickly became immersed in the data. At first, this immersion was overwhelming. However, as I explored the data the disparate voices appeared to come together. I began to see commonalities and understand their world through the process of striving to balance an attachment to the emotions of self and other with protecting oneself from the distress this attachment creates within the context of CCU.

In an effort to adhere to the principles of grounded theory, I did not commence the process of this systematic review and meta-ethnography until after I had conducted the interviews and interpretation of the data for my empirical study. Consequently, as the overarching theory began to form within the meta-ethnographic interpretation of the qualitative research, I became acutely aware of the similarities between this theory and the theory which emerged from the data of my empirical study. I was concerned that my understanding of this world of adult general medical CCU and its emotional impact and efforts to remain resilient had influenced my interpretation within the meta-ethnographic analysis. I was concerned about researcher and confirmatory bias.

Through taking this to supervision and discussing my interpretation and potential assumption, I felt strongly that the concepts which had emerged within analysis and the overarching theory developed were present in the data. In an endeavour to ascertain the reliability of my interpretation of the qualitative research data, I turned to the independent second reviewer to read my meta-ethnographic interpretation and offer her judgments. The independent second reviewer confirmed that the concepts described within the original papers translated well into the concepts and theory developed within the meta-ethnography. This second perspective goes some way to enhance the reliability of the synthesis. However, it is important to acknowledge that given my empirical research theory, my understanding of the CCU reality and my perspective which had been shaped by my research will have been present, influencing my interpretation of the data within the meta-ethnography.

Conclusions and implications

This systematic review and meta-ethnography provides a deepened understanding regarding the emotional experiences of medical staff working in the context of highly emotive and traumatic environments of CCU. In line with a meta-ethnographic approach I sought to develop an overarching theory to explain a wider picture[21, 24] within the process of balancing the relationship between risking distress through emotional attachment and protecting oneself through strategies of self-preservation. In bringing concepts together which appeared disparate in a way which seeks to comprehend their relationship, this theory has provided a new and expanded understanding of the complexity within the emotional experiences of CCU medical staff.

Throughout the analysis I was aware of the significant difference between the number of nurses and physicians included within the studies. The gulf between these populations were huge. However, it could also be considered that this difference in populations studied is in fact representative of the difference in numbers within CCU nurses and physicians. Furthermore, with a higher population of CCU nurses, recruitment for studies may be easier than in the physician population. Yet I was also aware from my time spent with intensivists that the roles of nurses, trainee physicians and consultant intensivists held considerable differences. These differences are not just within clinical responsibilities, but also in hierarchy and within the types of relationships with patients and families. These differences inherent within the roles may potentially give rise to disparate experiences. Furthermore, alongside the established need for research in resilience due to a lack of understanding regarding

the process[10], I felt this review further supported the need for my empirical research in to resilience in intensivists.

Whilst the restrictions of the review meant that there was a small number of studies included potentially limiting its scientific credibility and further its transferability, I feel it provides valuable additional insight to the field. This novel interpretation and theoretical understanding of emotional attachment and self-protection within CCU medical staff, holds potentially important implications for caring for CCU staff in nourishing resilience and the opportunities to process the emotional impact of the work in a way which feels psychologically safe.

The empirical research study

Developing the research

During the initial stages of research development, I was acutely aware of my inexperience in relation to being a researcher or a clinical psychologist with a medical field. Having never worked in an acute medical unit I was unfamiliar with medical terminology and further unaware of the dynamics within CCU daily routines. In relation to my study, this was both an advantage and a disadvantage. I was aware that in not being immersed within the dynamics of the medical world I would be able to engage in the research process without holding assumptions about the intensivists' experience. However, my inexperience meant that at these first stages in development I felt somewhat overwhelmed.

After a brief review of the literature and theoretical consideration, I spent time with an intensivist who worked on one of the CCUs included in the study but had resigned and

thus would not be partaking in the research. This experience helped me appreciate the reality of the role and provided an insight in to the daily experience of an intensivist. From this first glimpse into their experience I witnessed the clinical certainty and resilience of intensivists in the face of patients' trauma and families' grief. An extract from my reflective log captures the emotion I experienced and my thoughts following this initial encounter with the intensivists world:

> *I felt a heavy emotional reaction – sadness – at the weight of trauma patients presented with. An existential sense of life being fleeting yet tangible – this is life or death. And death is common. Despair is all too familiar. Families crying as their loved ones die. What a huge pressure is on the consultants, that weigh on their decisions. And yet they are light, jovial, knowledgeable, sure, certain. (Researcher's Reflective Log Extract).*

During this visit, I attended a consultants meeting and tentatively considered the clinical relevance of the developing research question. Intensivists expressed their opinion that research to understand resilience within CCU where there is a high risk of burnout would help them understand what would keep them well and in turn improve patients' experience and outcomes, reflecting the conclusions of the POCF (2016) report[1].

Recognising my inexperience of CCUs and the impact of working as an intensivist, my supervisor connected me to a newly qualified consultant intensivist, Morgan (pseudonym) who had extensive experience of conducting research. Having written the research protocol, participant facing documents and interview schedule, I met with Morgan and discussed the clinical relevance of the research and further considered the appropriateness of questions within the interview schedule from the perspective of an intensivist working within a Welsh CCU. Morgan was particularly influential in relation to the interview schedule, giving me an insight into the nuances within

intensivist culture and ideas about how interview questions could be expanded. I felt that this consultation with Morgan within the process of research development was extremely valuable.

Rationale for the use of grounded theory as a qualitative approach

The aim of this research was to elucidate an understanding of resilience within intensivists. Implicit within this aim was seeking to gain a more in depth understanding of the processes by which intensivists stay well and keep working in the face of the potentially emotionally challenging and demanding critical care specialism. When considering this aim, I mused about what intensivists do to keep themselves well? What are the personal and environmental factors which facilitate a resilient response? What is the relationship between resilience and the emotional impact of the work?

Previous quantitative research has highlighted the high prevalence of burnout[6, 10] and depression[25] in the intensivist population in addition to burnout and posttraumatic stress across the population of CCU medical staff[10]. Furthermore, research had suggested the presence of characteristics of resilience which were thought to mediate against burnout and posttraumatic stress in medical staff working in CCU[10, 11]. Such quantitative research provides valuable knowledge regarding the significant level of diagnostic psychiatric disorders present within the intensivist and CCU professional population. However, adopting a qualitative methodology could deepen this understanding through exploring intensivists' experiences of resilience including the processes by which intensivists stay well and the relationship between resilience and distress in the context of CCU. A qualitative exploration of how intensivists interact

with and experience resilience held the possibility of the development of a theory of resilience.

The dominance of quantitative research relating to psychological distress and resilience in CCU staff is understandable given the medical nature of this field. However, despite this dominance there are some high quality qualitative studies within this area of research, most of which adopt a phenomenological approach[26-29] with a few using grounded theory[30]. When considering which qualitative methodology was most appropriate for this study, the primary aim of elucidating a theory of resilience within intensivists' and the processes within this remained central.

Throughout this contemplation I was aware that adopting a phenomenological approach such as Interpretative Phenomenological Analysis, as was often employed in previous qualitative studies in this area, could have enabled analysis providing a more immersed and idiosyncratic sense of the lived experience of intensivists' interviewed[31]. However, in consultation with my supervisors, grounded theory was decided upon to most abundantly meet the aims of this study. In adopting an approach of grounded theory, this study maintained an emphasis on elucidating and developing a wider conceptual theory of resilience within intensivists with an analytical focus on actions and processes as opposed to a description of themes[22] or an interpretative contemplation of an individual experience[31].

Ethics

I was initially daunted by the prospect of applying for NHS Research and Development ethical approval for my study as the perception of this process within Wales is that it

is incredibly difficult. It is true that the process of completing the paperwork and considering the ethics of every possible scenario was difficult. Yet with support from my supervisors I found that it was possible. In fact, this process enabled me to get to know my study, to begin to live it before it began.

I was particularly aware of the emotive nature of the interview questions and felt it important to offer some time to intensivists at the end of the interview to debrief. Moreover, as part of the consideration of the participants' wellbeing, I sought the support of involved UHBs occupational health or staff wellbeing services who agreed to allow me to signpost to their services following the interviews. This was particularly important considering emotive topics may have arisen within the interview for which intensivists potentially required ongoing support.

An additional ethical consideration related to participants' anonymity. This seemed to be particularly important in this population due to the closeness of the Welsh intensivist network. I was concerned that it would be possible for intensivists to be easily identified if any identifiable information was included in the report. For this reason, I assigned gender neutral pseudonyms to each participant. In further attempt to protect anonymity, I decided to omit ages and ethnicities of participants, nor did I associate the names of the specific hospitals or UHBs to participants. Such measures of anonymity felt intensely important due to the sensitive and emotive nature of the interviews' contents.

As part of this application, careful consideration was given to the inclusion and exclusion criteria. Most difficult was the decision regarding the length of time participants would be required to have been working in a CCU as an intensivist. Recognising the significant differences in roles between a trainee and an intensivist, I

was aware that there may be a transitional phase in which intensivists begin to take on the more senior role of consultant. Therefore, the decision was made that intensivists would be required to have been working in a CCU as an intensivist for over 1 year. This inclusion criteria would allow the intensivists to have gained sufficient experience of the realities and impact of the role and the acts of resilience they engage in to stay well.

Prior to submission of the application for ethical approval, I was put in contact with individual intensivists within each of the four UHBs who might be interested in being a principal investigator by my clinical supervisor who had links across CCUs in Wales. Engaging via email and phone to outline the proposed research and gaining the agreement of these intensivists to be principal leads was an important step.

Ethical approval was given by all four UHBs for the study to be carried out.

Following my successful navigation of this process, I was invited by the course to help deliver an ethics workshop for the 2nd year trainee clinical psychologists who were at the beginning stages of completing NHS ethics or Research and Development applications for their projects. This was an opportunity to share my learning from this experience. I understand from their feedback, that this workshop was highly valued by the 2nd year trainees.

Recruitment

Participants were recruited from across general medical adult CCUs within four Welsh NHS UHBs. This allowed for intensivists with a broad range of ages, backgrounds and clinical experience to be recruited. Despite this broad range of backgrounds, it is

notable that given the small population from which it was possible to recruit there may have been cultural norms present which may have inhibited the generalisability of the findings of this study to other UK areas.

In adherence with the research protocol approved by NHS UHB Research and Development Departments, participants were first approached by the principal lead identified in each UHB via an email invite to participate in the research written by me. In addition, where possible I attended consultants' meetings to engage with intensivists. This approach of engagement with services and intensivists was effective in activating participation in the research. In fact, many intensivists appeared intrigued by the research and were very willing to partake. I found myself to be surprised by their willingness to take part in the study and pleased by how much they valued the research being conducted. I became aware that I had entered the process of recruitment with a scepticism and an inaccurate assumption that consultants would be too busy to give their time to a trainee's study. The reality was very different. However, intensivists were very busy and booking in interviews was at times very difficult as the geographical area is large and such flexibility meant many hours of driving over many months.

As recruitment continued, this initial surge of interest died down and recruitment became more difficult. With the challenge of recruitment becoming more difficult in a small pool of possible participants, it was important for me to continue strategies of engagement and email principal investigators to generate additional participants.

Recruitment was staggered between UHBs to allow for the process of analysis occurring simultaneously to inform the subsequent interviews in line with the principles of grounded theory[22]. Following these staggered initial phases of recruitment across

the four UHBs a process of theoretical sampling was adopted, consistent with grounded theory[22].

Interviews

The interview schedule

In developing the interview schedule, the guidance outlined by Charmaz (2014)[22] was closely followed. The development of the questions within the interview guide were constructed in conjunction with conversations with supervisors and with reference to relevant literature. It was important to have some awareness of the previous research conducted in the area as a tentative tool from which I could begin to develop ideas and thoughts, guiding the conception of the interview schedule and initial stages of analysis[22].

The process of developing the interview schedule enabled me to begin to contemplate more fully the aims of the research question. The development of the questions facilitated an increased insight into my own assumptions and interests in the study and how this might shape the interviews[22]. I was particularly aware of my own assumptions that being exposed to the physical traumas of patients would be traumatic for intensivists'. I was further aware of my clinical interests in attachment[32] and relational psychodynamic psychological theory[33, 34]. With this awareness, I reflected upon my assumptions rooted in my clinical interests and recognised that in engaging in the interviews and analysis I may have a tendency to interpret intensivists to be engaging in defence mechanisms in order to defend themselves against an emotional experience hidden within their subconscious. Supervision was essential throughout this process to enable me to reflect on these assumptions and interests and ensure

that the interview schedule remained consistent with the grounded theory approach. Through supervision and with these assumptions in mind, I recognised that it was important for me to ensure that questions were open-ended and focused on the intensivists' experiences of the work rather than being guided by my clinical interests and assumptions. As a result of this reflexive process, questions were developed to be open-ended and non-judgemental throughout[22]. Questions were initially broad in exploring intensivists' experiences of working in Welsh CCUs and subsequently moved towards becoming more focused to invite more in depth discussion regarding the emotional impact of the intensivist role and strategies of resilience, in line with grounded theory[22]. The construction of the interview guide was essential in influencing the balance between open and focussed exploration within the interview process[22].

Engaging in this process of reflection and construction of the questions prepared me for the interview. Through creating and refining questions I began to understand their purpose, enabling me to begin to comprehend how these questions could be asked in an open and non-judgemental way within a conversational style of interview[22].

Given the flexible though systematic nature of the iterative and inductive approach inherent to grounded theory, I was continually engaged in an interactive process of the collection and analysis of the data which occurred concurrently, continually moving between the two[22, 35]. Within this evolving and iterative process, as themes and concepts began to emerge from the analysis, I revised and refined the interview questions to guide the interviews towards an increasing focus exploring these in a more detailed way.

The experience of interviewing

Recognising the importance for intensivists to feel comfortable in their environment given the potentially sensitive nature of the conversation, participants were offered a choice of locations. Interestingly almost all intensivists chose for interviews to be conducted in an office on NHS premises within CCUs. Only one intensivist requested the interview be conducted in their home.

Interviewing in an office based on CCUs meant that there were often frequent interruptions to the interview. Interviews were often arranged for times when intensivists were at the beginning or end of a shift, or had come in for a meeting. Despite intensivists being present on CCU at a time when they were not on duty, they were frequently called upon to assist in urgent clinical situations. Consequently, it was a regular occurrence for intensivists to arrive late or pause the interview due to being required for a consultation or for urgent clinical intervention. Initially I recall feeling frustrated and irritated by having to wait. I imagined the consultant's perceptions of me to be as a lowly student, an inferior professional, an inferior being who could afford to wait. Yet as they arrived, consistently consultants apologised. On one instance, the intensivist explained that s/he had been drawn in to a cardiac arrest and had been the person who had decided to cease intervention, to allow the patient to die. In this moment, my viewpoint shifted dramatically. I reflected on my previous internal assumptions which I now recognised as rooted in my own history, my own self-critical beliefs of inferiority. Instead I was awe struck, in complete admiration of this intensivist who had endeavoured to prevent death but ultimately felt it was kinder to allow the patient to succumb to it. I began to wonder about the societal perception of doctors, of

the power society gives to them and how this links to life and death. An extract from my reflective log captures my thoughts at this time:

> *Waiting for the consultant I felt a sense of irritation. Yet noticing this feeling subsiding I hold in mind the reason – the knowledge that the doctor has been occupied by an emergency, a cardiac arrest – preventing and allowing death. I wonder if this is a sensation often felt when others encounter doctors in this and in other emergency fields of medicine? A cacophony of awe, admiration and a sense that by comparison my task is unimportant. I wonder about the societal perception of doctors' superiority and question whether it is this which feeds it – the knowledge that a doctor defies death at every corner. A feat which us lowly mortals can never do. We as humans have an ever-closer sense of mortality and death. Doctors defy this. Perhaps playing into our fantasy of the immortal. The avoidance of death. (Researchers' Reflective Log Extract).*

In this and in other interviews, I was aware of there being a palpable power dynamic which could have influenced the dynamics and subsequent direction and content of the interviews[22]. Consultants were highly qualified and at the top of their field both clinically and hierarchically whilst I was a trainee, beginning my career. In addition, at the time of conducting this research, I am a 29 year old female interviewing an older and predominantly male population potentially adding to a societally imposed power imbalance. Yet having reflected on this dynamic I believe that its potential impact on the interview content was minimal. Intensivists appeared very willing to engage in the study and had extensive experience of and interest in the focus of the interviews. Furthermore, I worked hard to achieve a positive relational rapport with intensivists from the moment we met, enabling us to move quickly through this power imbalance and begin to explore the topic more openly.

Prior to meeting, I had emailed participants a research overview, participant information sheet and consent form (Appendix 10 and 11). However, these were

revisited and discussed prior to commencing the interview to ensure intensivists fully understood and consented to partake in the research. Establishing a report within a relationship with the intensivists was essential to the interview process. Although I had met some participants during prior visits to CCUs, some I had not. Furthermore, due to the nature of the research, this interview would be an isolated conversation. As such, holding an engaging manner within these first moments of meeting in which we completed the relevant forms was vital.

As a novice to grounded theory, I was daunted by the task of conducting the first interview. I was anxious. My anxiety was especially rooted in my desire to get it right, to balance an openness with the movement towards more focused questioning, to not sound ridged and to embody the intensive interview style. This felt intensely important to me as I recognised the centrality to the research of facilitating intensivists' exploration and expression of their experience. Consequently, I was intently mindful of not leading the participant down a route of exploration which was based in my own assumptions whilst allowing a flexibility within an open interactional space to explore arising ideas and themes, consistent with the approach of intensive interviewing[22]. In these initial interviews this was difficult and thus I often read from the interview schedule, not yet knowing the questions well enough to be more conversational.

As my confidence increased this balance became easier. I began to develop a more relaxed, curious, flexible and conversational interview style. I did not need to read from the schedule and felt freer to follow arising themes whilst remaining focused on the exploration of the topic and returning to questions within the interview schedule. As my confidence grew I began to adopt a more emergent technique of interviewing combining both flexibility and control, consistent with intensive interviewing[22]. My

emerging interview technique and natural, open questioning style was reflected on by my supervisor who read the transcripts and further commented on how successfully I had developed a good rapport with intensivists.

Following this first interview, I recall my surprise at how open and insightful the intensivist was with me. It was at this point that I was able to reflect on my prior assumptions that intensivists might be closed and lacking insight into their internal world. I considered this within my reflective log engaging in a process of reflexivity:

> *I am taken aback by the insightfulness of this intensivist and their willingness to share experiences of burnout, distress and their subsequent clamber to process this and regain a semblance of resilience. Their honesty was remarkable. I feel privileged that they felt able to share their experience with me with such openness. Yet I am left wondering about why this feels so surprising. I recognise now that I entered this interview expecting the intensivist to be closed, to be disconnected from their internal world. And yet I am struggling to comprehend why I assumed this would be the case and I wonder again about societal perception of consultants…did I carry into this interview a societal construction of consultants as cold and disconnected? With this assumption now in my awareness, I must endeavour to not allow this to influence future interviews, I must ensure that I will be open to intensivists' experience of their internal and external world, in whichever way they experience it. (Researcher's Reflective Log Extract).*

This first experience challenged my assumptions and enabled me to continue the process of interviewing having shed such assumptions and instead approach subsequent interviews with a greater openness to the internal world of intensivists.

As interviews progressed I noticed a pattern within intensivists' communication style. The rate of conversation was fast paced, moving quickly between differing yet interconnecting themes. The complexity of conversation was high. Through the process of interviewing and transcribing I noticed a discrepancy between what I

understood implicitly within the interviews and what consultants actually said. Much of the emotional content which I felt implicitly when I was with each intensivist, remained unsaid by the consultants or was said by me in an attempt to communicate my understanding. Consequently, this unsaid implicit content remained non-existent for the purposes of coding the transcripts and further analysis. Recognising this occurrence of content remaining unsaid, I could have employed discourse analysis[36] to capture the dynamics of the conversation itself; considering what was not said through structure, syntax, tone, pace and pitch. However, without undertaking formal discourse analysis, I began to make parallels between unspoken emotions and the emerging concepts of connection and protected disconnection. Holding an awareness of this common relational pattern enabled me to ensure that I sought clarification of the unspoken content.

Theoretical sampling

Consistent with the concept of theoretical sampling embedded within grounded theory[22], questions within the interview scheduled were amended. The purpose of this form of theoretical sampling was to gain increased insight into aspects of the data which were beginning to form into concepts yet remained unclear and to develop and refine emerging concepts and theories. This process of amending the interview schedule occurred throughout interviews but became more focused towards the latter half of the set of interviews when concepts and theory began to emerge. Questions moved to enquire more deeply and in a more focused way regarding intensivists' experience of vulnerability and stress alongside exploring intensivists' perception of the risks and benefits of protected disconnection and connection. By engaging in this

process, I was able to deepen the understanding within the emerging concepts, adding a richness to the data. Yet at times, due to the complexity of the processes and experiences described by intensivists', such questions contributed ambiguity which if fact added to my confusion rather than adding clarity to the emerging concepts. However, as the theory began to crystallise, through conducting theoretical sampling, it was possible for me to tentatively present and explore the emerging concepts and theory to three intensivists and encourage them to express their perceptions regarding whether my interpretations accurately reflected their own or their observations of colleagues' experiences.

Alongside this focusing of questions, guided by the developing concepts and theory emerging from the data[22], at two points within the research process theoretical sampling took place in relation to the selection of participants. After interview 5, sampling was directed by an awareness that there was a need to speak with intensivists who worked in smaller units. After interview 8, it appeared the theory was staring to emerge. As such, the final interviews were used to clarify and test out the emerging theory by further developing and refining categories which had emerged yet perhaps remained a little unclear. Consequently, in the second incidence of theoretical sampling, the final two interviewees were sought through principal investigators to embody differing aspects to previous participants. Previous intensivists had all mentioned challenges of the role. Consequently, for interview 10 I sought out an intensivist who the principal investigator knew denied being stressed because of experiences at work. This perspective was important to capture as it contrasted with the concept relating to the impact of the intensivist role and added depth to the concept of self-resilience. The final interview was with a less experienced intensivist. This intensivist's narrative felt important to hear due to the emerging concept of experience

and habituation to the role as central in developing self-resilience. Both intensivists added significant value and clarity to the emerging concepts and theories, adding a richness in contrasting viewpoints essential to grounded theory[22].

Participants' experience of interviews

Reflecting upon what it was like for intensivists to engage in the interviews I am reminded of the interview with Caerwyn. As Caerwyn explored his/her experience of trauma s/he began to connect to the emotional and psychological experience which had previously been avoided and dissociated from. In connecting to the emotion, Caerwyn began to process the trauma. Debriefing after the interview, Caerwyn thanked me for the interview, stating that talking through this experience had been in some way healing. In bringing this feeling into Caerwyn's awareness, s/he was able to process it and release some of the power it held over him/her. I ensured that Caerwyn had the information regarding relevant support networks in addition to my clinical supervisors contact details (the CCU psychologist) to enable a continued psychological intervention.

For other intensivists, the interview was less profound. For one intensivist, I experienced a sense that my questions were experienced as psychologically threatening. This perceived threat appeared to raise the intensivists' defences as s/he became distant, short and dismissive. Within this dynamic there was a co-created tension in which neither of us felt safe. I was interested to reflect upon the differences in reactions to the interview and began to recognise a parallel process in how intensivists' experience the interview with the emerging concepts and theory of resilience.

Analysis

Transcribing

Initially I had hoped that I would be able to transcribe all interviews myself, recognising transcription as a potentially valuable aspect of qualitative research. As I commenced this task I became aware that there was a significant amount of data within each interview. I reflected on the role of an intensivist which requires rapid thinking and communication. I noticed how this appeared to translate into a fast-paced way of communicating which is rich in facts and free of pauses. Consequently, the data which I collected held more content per hour of interview than one might normally expect.

Given the quantity of content in each interview combined with my inexperience in transcribing, this became an overwhelming and impossible task to complete within the time constraints. Consequently, after transcribing 4 interviews, I recruited a professional transcriber, who signed a confidentiality agreement, to complete further transcriptions.

Coding and Memos

Following the transcription of each interview, I analysed the data through the use of coding and memo writing as the principles of constructivist grounded theory dictate[22]. I engaged in this process of analysis in conjunction with ongoing data collection to allow the concepts and theories emerging from the data to shape and guide the alterations within the interview schedule and theoretical sampling aimed to clarify and deepen the understanding of developing concepts.

Due to challenges in relation to time constraints and the restricted availability of intensivists, it was not always possible to analyse transcripts prior to the next interview being conducted. This was a huge challenge and resulted in the concurrent analysis of several interviews. On reflection, I wonder whether I prioritised the schedules of intensivists over my own needs and the needs of my research. Within this, I am again reminded of the power imbalance I experienced; I needed intensivists to partake in my study and with an awareness of their job roles, I was prepared to be overly flexible to meet them at their convenience at the sacrifice of my own. I took this dilemma to supervision, recognising that this was not in line with grounded theory. On the advice of my supervisor I took a break from interviews in order to complete the coding and analysis of interviews prior to continuing with the interview process. Subsequently, I re-engaged with the concurrent process of data collection and analysis, in line with grounded theory. If I were to replicate this study or conduct further research adopting a grounded theory methodology, I would ensure that I allowed adequate time between interviews to properly engage in the process of coding and memo writing, prioritising adherence to the methodology.

As recommended as a measure of quality in qualitative research to ensure rigour, nine of the coded transcripts were subjected to being checked by a second researcher, my academic supervisor. These checks of credibility and quality indicated that the second researcher was largely in agreement with my initial and focused codes, with only a few suggestions regarding additional codes or raising an initial code up to a focused code. Two examples of coded transcripts which have been second coded can be seen in Appendix 16. In addition, the emerging theory was checked with my clinical supervisor who confirmed that the theory resonated with her clinical experiences of intensivists, as a psychologist within CCUs.

Throughout analysis I engaged in the process of memo-writing whereby I was absorbed in a continuous comparison of the codes, enabling analysis and the recognition of connections and discrepancies within the data giving rise to new avenues of exploration[22]. During this process, I consistently experienced a sense of being overwhelmed by the enormity of the data, of the analysis and of the processes present within intensivists' narratives. There were many times I felt as if I was being buried under transcripts and words. As I moved towards the end of the analysis process I began to experience moments of clarity, however, these moments were fleeting and my brain quickly felt clouded and overwhelmed. I began to wonder about a possible parallel process. I had noticed that within the interviews a pattern of communication was a fast-paced narrative in which threads were often lost or dropped and later remembered and returned to. I wondered if this in some way reflected the experience of working in the highly intense environment of CCU where the pace is fast and the balance of psychological safety continually moves inhibiting your thought processes.

It wasn't until I began to write the report, that the theory which had been moving in and out of focus for some time, became clearer. My experience of drawing concepts together to crystallise my theory within the report writing process is consistent with grounded theory which recognises that this methodological approach extends throughout this aspect of the process[22].

Further psychological consideration of the developed theory

Due to the target journal for this research being medical, it was not always possible to incorporate and make explicit links to psychological theory. As I feel this psychological

perspective is important in understanding the processes identified within resilience in intensivists I will discuss this further below.

Psychological Resilience

Within the current literature, there is no conclusive and consistent definition of psychological resilience, with multiple authors posing slightly differing conceptualisations[37]. Frequently, psychological resilience is considered to be the capacity to positively adapt and thrive when faced with adversity, stress or trauma which risks psychological distress through engaging in a dynamic process of psychological resilience, drawing upon multidimensional personal characteristics and environmental resources[38-41].

Much of the research base into resilience is rooted in developmental psychology. However, recognising the presence of resilience across the lifespan, a further definition of resilience in adulthood has been posed as the capacity to remain psychologically stable and resist maladaptive reactions in the face of adversity and challenging situations; to keep living life[42, 43]. As such, resilience is perceived across the literature to be a protective and dynamic process of positive adaptation to challenging, stressful and adverse life events.

This definition resonates with the characteristics of resilience elucidated within my empirical research: intensivists engage in acts to mediate their connection to vulnerability in order to keep working, to keep going. The majority of research into resilience in adults has focused on individual factors[41]. However, within the consideration of the protection of resilience, psychological literature has

conceptualised there to be three layers of resources which facilitate resilience through a dynamic process: individual characteristics, immediate social support, and wider societal factors[41, 44, 45]. Presenting a more systemic understanding of the interconnected interactions between the individual with group and societal, cultural, institutional resources in facilitating resilience, this theory mirrors the developed model of resilience in intensivists within my empirical study.

Inherent within the definition of resilience is the presence of adversity experienced as a significant threat with a perceived harmful outcome[41]. It is notable therefore that for one of the intensivists interviewed, the intensivist role was experienced to not be stressful. Considering the psychological theory in relation to this experience, it possible that intensivists who do not experience the role as stressful may be engaging in a process of appraising the subjective meaning within the encounter with their environment as non-stressful[46]. Some intensivists are not interpreting the events in the environment to be threatening or adverse and consequently they do not experience a stressful response. This may be because they have developed protective characteristics of resilience; for some intensivists, the role is genuinely experienced as non-aversive, non-threatening and subsequently not stressful. However, it is also possible that they are denying the reaction of stress through distortion of reality or efforts to detach oneself, consistent with Folkman and Lazarus' (1988) theory regarding the appraisal of stress[46].

Development of resilience: A psychological consideration

Within the analysis of the data, a concept arose in the intensivists' contemplation of how resilience developed and why they as a population felt they were more resilient

than trainees who had not been able to cope with this specialism. Throughout this contemplation, intensivists' spoke of two perceptions; resilience was a stable aspect of personality which formed during childhood experiences and that resilience emerged through a process of habituation to the role of an intensivist and the CCU environment. Whilst these two perceptions initially appear disparate, it is feasible that both positions can be held within psychological theory.

Within the theory of attachment, infants are driven by an innate instinct to seek proximity to caregiving adults in order to survive and regulate affect[32]. Within these early childhood experiences we learn the skills of affect regulation through engagement in a dynamic intersubjective relational process where the parent soothes and co-regulates the infant's emotional experience[47, 48]. Early experiences of affect attunement are recognised as fundamental in the development of our emotional and social world on an experiential and neuropsychological level, influencing the way we communicate our experience in relationship with others throughout life[49, 50]. Attachment theory considers that our experiences within these early relational encounters shape our internal working model, how we perceive ourselves in relation to others and the world, influencing how we understand and interpret experiences throughout life[32].

Without fully understanding the histories of the intensivists interviewed, it is impossible to make conclusive statements regarding their patterns of attachment and relating. However, it is possible to hypothesise generally that early relational experiences may have shaped how intensivists perceive themselves in relation to patients, colleagues and to the nature of their work and CCU environment. For some, there was evidence of the ability to manage stressful situations and regulate their affect whilst for other this

was more difficult potentially resulting in attempts to survive through disconnection, avoidance and engaging in coping strategies which dissociated them from emotion.

Psychodynamic and psychological interpretation of the theory of resilience

Drawing on a psychodynamic theoretical position, it is possible to understand the developed theory of resilience and vulnerability through the concept of defence mechanisms as a means to defend against a hidden feeling too painful to allow into consciousness[33, 34, 51].

The psychodynamic model of the triangle of conflict[51] facilitates a formulation of the relationship between vulnerability and resilience. To represent this theoretical perspective, I will consider a psychodynamic formulation of intensivists' descriptions of empathy as an example.

Sitting with a family in their despair, the intensivist knows that the family need their support, their understanding, their empathy. As the intensivist allows in the family's pain of loss and death, they experience a rising of anxiety in their body. Truly empathising with the depths of their pain is just too '*dangerous*'. There may be a fear that if this pain of loss and death is allowed in, it will be overwhelming and the intensivist may not be able to continue working. Responding to these feelings of anxiety, the intensivist adopts a defence, distancing him/herself from the family and disconnecting from the emotional experience. This defence is employed to push down the emotion and rising anxiety. The feeling experienced triggers anxiety which is immediately responded to by a defence which represses and hides the feeling[33, 51].

In this formulation, the underlying feeling becomes hidden, defended against. And yet, psychodynamic approaches to interventions would consider the therapeutic process to involve bringing the hidden feeling and dynamic defensive response into conscious awareness to enable an individual to process feelings which are experienced as dangerous[33].

In this way, it is possible to make a connection to the developed theory of a movement between connection and protected disconnection to vulnerability in intensivists. Intensivists held an awareness of the need to connect to their own emotional experience to enable them to process the psychological impact of the work. In a reflection of this process, intensivists described talking about their frustrations and emotional experiences within the support network and with partners, enabling them to connect to their feelings and process them safely. Yet, getting too close to the intensity of the emotional experiences so prolific within CCU remained for many, just too *'dangerous'*. Consequently, intensivists frequently described engaging in what could be perceived as defences such as avoidance, disconnection or denial, to protect themselves from the pain which they feared would *'break'* them.

The psychodynamic perception of the active process of bringing hidden feelings into awareness could be seen to be mirrored in the psychological literature which highlights the role of mindfulness and acceptance as central elements of psychological resilience in the face of trauma[37]. Furthermore, research demonstrates that engaging in experiential avoidance, dissociation and coping strategies which incorporate a disconnection from emotion, is associated with greater symptoms of posttraumatic stress and psychological distress[37]. The presence of experiential avoidance within

CCU nurses has been recognised within research which demonstrates its association with burnout[52].

Within the literature, mindfulness is described as the ability to self-regulate attention and accept present experience encompassing a letting go of judgements regarding experience[53, 54]. In an overlapping construct, acceptance is considered to involve the perception of psychological experiences as understandable reactions to events which are temporary, as opposed to an excruciating psychological experience which cannot be tolerated and must be avoided[55]. Engaging in this process enables a decentring of the events and resulting psychological and emotional reaction[55]. It is possible to again recognise the process of resilience within the balance of connection and protective disconnection intensivists are engaged in within this psychological theory. Through connecting to and accepting the psychological response to emotion and death permeating CCU, intensivists can process this, acknowledge the experience as transient and accept death as part of life, enabling them to keep going.

Rigour and Reflexivity

Engaging in strategies of rigour was vital throughout this research process in order to enhance the standard of quality within this study, in line with the quality framework for qualitative research[20]. Throughout this paper, I have reflected upon such processes of rigour. Engaging in supervision and practices of reflexivity enabled me to recognise and bracket off my assumptions and interests ensuring that these did not predetermine how I interpreted the data and consequently the developing theory.

Critical evaluation of the research

As mentioned in the empirical paper, due to the medical specialty and specifics of the geographical area, the population available from which I could recruit was relatively small. In addition, the networks between CCUs across Wales are strong and as such intensivists know each other well. Consequently, it is possible that the accounts of the intensivists may not have fully represented their experience due to concerns that their comments could identify them to their colleagues and organisational structures.

In a further limitation of the process of this study I acknowledge that due to the focus of this study, questions posed to intensivists were centred around resilience. Consequently, it is possible that the interview questions implicitly quashed discussion around challenges consultants experience, creating an inaccurate sense of its subordinate position to resilience in this intensivist population.

Conclusions and implications

The theory which has emerged from the data within this study has provided a unique and in depth understanding of the complex processes of resilience engaged in by intensivists. As mentioned in the empirical paper, such an understanding in to resilience in this population of medics could have significant clinical implications, informing future interventions to improve intensivists' resilience and wellbeing. Such interventions could be targeted across three levels of influence: individual; the intensivist group; and the wider organisation.

At an individual level, the presence of a psychologist within CCUs could enable the provision of individual psychological support. Individual, focused psychological

interventions could enable intensivists to express and process their personal struggle with trauma, burnout and with connecting to the pain embodied within CCU.

At a group level, interventions could incorporate educational programmes around resilience, self-care and the impact of CCU on intensivists. Recognising the connection between resilience and support within the intensivist group, further interventions could involve developing group psychological interventions focused around exploring the emotional and psychological impact of the work, facilitating psychological safety and encouraging a culture of openness[56]. Such groups could follow a format of psychological supervision or be rooted in a more structured programme such as Schwartz Centre Rounds which have been successfully established across England[57] and have recently been introduced within some Welsh hospitals. Evaluations of Schwartz Centre Rounds within England have found that those who attend report that they are significantly more likely to be able to cope with the psychological and emotional demands of clinical work with enhanced empathy and experienced significantly reduced levels of stress[58]. Moreover, attendees experienced improvements in their capacity to address their own emotional and psychological needs[58]. The provision of Schwartz Centre Rounds within CCU could therefore provide a potentially effective group structure as means to support intensivists and encourage their connection to emotional experience and improve resilience within the population.

Research has shown that acceptance and mindfulness are influential in building resilience to trauma[37]. Interventions drawing on Acceptance and Commitment Therapy[59] could help intensivists to continue to provide care and further develop resilience[37]. In addition, findings from research indicate that mindfulness interventions which incorporate lovingkindness increase self-compassion[60] and positively impact on

the physical and mental health of healthcare professionals[61]. Consequently, introducing mindfulness based interventions for medical professionals holds significant potential to reduce stress and improve patient care[60].

A further possible intervention could be the introduction of peer-mentoring programmes in which experienced intensivists offer guidance and support to newly qualified consultants. The development and implementation of such interventions may have an impact upon intensivist wellbeing, reducing sickness levels[1] and consequently influencing the sustainability of Critical Care Services.

Research highlights improvements within patient care and a reduction in mortality rates when there is increased working satisfaction and compassion to self, colleagues and patients[1, 62]. In providing individual and group psychological interventions to facilitate emotional expression, compassion and acceptance, nourishing resilience, the organisation would represent a shift within their culture, taking care of intensivists and other NHS professions, enabling them to more effectively care for patients.

In recent years, the Welsh Assembly Government has legislated a strategy to improve the psychological wellbeing of the Welsh population[63] and consequently develop a culture within which a psychologically informed approach is adopted across Welsh NHS[64]. As part of the Welsh population, it is essential that our medical staff are not forgotten within this policy. In recognising the possible psychological impact upon intensivists in continuing to work in a highly traumatic environment with increasing patient demand where they are expected to work longer with an increasing retirement age, the importance of psychologically supporting these consultants becomes clear. To this end, there are significant implications regarding the management structure in recognising the need to validate the struggles faced by intensivists and the impact of

this work. It feels important for there to be wider awareness regarding the significant impact resource cuts have, not just on patient care but on the ability for professionals to do the job to the best of their ability and furthermore, on professional burnout. I agree with Frith-Cozens et al (2009) who conclude in their report that the wider hospital and NHS organisation must show compassion towards their staff to enable their staff to show compassion for their patients, embodying principles of compassionate care[62].

This unique research adds value to both the current evidence and the clinical realities of intensivists working within CCUs. The complexities of understanding gained through this qualitative research may have remained hidden within a quantitative research design in identifying the presence of psychological distress. Yet it will be important for the developed theory within this study to be tested in future research. Such research could elucidate further the relational and self-resilience strategies identified within this theory to be protective against psychological distress. In addition, further research exploring the factors which might predict intensivists' ability to engage in these strategies. Such studies could consider the impact of life experiences which potentially have a formative impact upon resilience and within this to explore factors such as attachment and emotional avoidance. Further research could also be conducted to evaluate the feasibility and impact of possible interventions to nourish resilience as outlined above. It would be useful to replicate this study across UK to ascertain if there are regional variances or cultural norms that impact on intensivists' resilience. Finally, considering echoes of this process within Greek paediatric healthcare professionals[65], future research could explore whether this theory of resilience is present for other medical and non-medical professions. Such explorations would allow consideration as to whether this resilience process is unique to this group of Welsh intensivists or is something more fundamental in the human relationship to vulnerability and resilience.

My learning

The experience of conducting a systematic review and empirical study has given me an appreciation of the importance of research within the clinical psychology profession. As a psychologist engaging a process of qualitative research within a medical setting I became acutely aware of the pivotal role clinical psychology has to play is supporting the emotional and psychological wellbeing of medical staff in a world where psychological health is considered to be a theoretical topic rather than a lived experience. Recognising the multifaceted role of a clinical psychologist encompassing clinical, research and leadership responsibilities,[66, 67] I began to comprehend our unique opportunity to engage with organisational structures to improve psychological awareness and develop appropriate interventions to enhance wellbeing and resilience within medical professions.

In this way, not only have I learned the mechanics of conducting research through engaging in this process, but I have also grown as a psychologist to understand the value of research in practice. This has been a challenging yet enlightening process. In recognising its value, I hope to engage in research throughout my future career to enhance and appraise the evidence-base, informing my clinical practice and further guiding a psychological perspective within organisational and service development.

Dissemination

In ensuring that this research is seen by the intensivist community for whom this study is most significant, it was important for the target journal to be directly linked to Critical Care and intensivists. As such I plan to submit both the review and empirical papers

to the peer-reviewed Journal of the Intensive Care Society (JICS). I am aware that there is discrepancy between the word count advised in the author guidelines for submission, however I felt that given the requirements of a doctoral thesis and the complexity of the findings, additional exploration of this topic was required. Furthermore, my clinical supervisor has spoken with the editor of JICS who has expressed his agreement to consider publication of these papers with a higher word count.

In addition to publication, I plan to submit an abstract to present at the Division for Clinical Psychology conference in Wales in 2018. Furthermore, I have agreed to present both the review and empirical papers at the UK Intensive Care Society Conference in September 2017 which will focus on wellbeing. Moreover, I have spoken with the Welsh Intensive Care Society and plan to also present the findings of this study at their next conference.

I believe it is important to disseminate the findings of this research directly to intensivists themselves. Such direct dissemination may lead to an acceptance and normalisation of the psychological impact of their work and further give permission for intensivists to openly discuss the experiences and dilemmas within their role.

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Appendices

Appendix 1: Journal of the Intensive Care Society author guidelines

Journal of the Intensive Care Society | SAGE Publications Ltd

Aims and Scope

The *Journal of the Intensive Care Society* (*JICS*) is a peer-reviewed journal published four times a year in February, May, August and November. The journal publishes original papers, review articles, critically appraised topics, case reports and audits of interest to all those involved in caring for critically ill patients. The editorial board recognises the multidisciplinary nature of critical care and encourages submissions from all specialities involved in research, clinical practice and management.

JICS is the official journal of the UK Intensive Care Society (ICS). The (ICS) was founded in 1970 as the first national society for intensivists, bringing together all clinicians involved in intensive care. The primary aims of the ICS are to foster education and research, to develop clinical standards, to enhance patient safety and to encourage professional development.

This journal is a member of the Committee on Publication Ethics (COPE).

1. Peer review policy

The *Journal of the Intensive Care Society* (*JICS*) adheres to a rigorous double-blind reviewing policy in which the identity of both the reviewer and author are always concealed from both parties. Each manuscript is reviewed by at least two referees. All manuscripts are reviewed as rapidly as possible, and an editorial decision is generally reached within (eg) 4-6 weeks of submission. Reviewers will have expertise in the field and must be independent. Reviewers will be made aware of the expectations of *JICS* and the review process, whether successful or unsuccessful, will be fed back the authors. Any potential conflict of interest between the reviewer, the work, or the authors will be stated.

All scientific articles will be subject to peer review. The reviewer will consider the study design and methodology, the quality of the data and its interpretation, the usefulness of the conclusions and the quality of discussion of the study, including its limitations. In a review article, the breadth, depth and the conclusions of the review should be acceptable to the reviewer. The editors consider the discussion of opinion to be an important part of *JICS* – opinion pieces will state that they constitute opinion and will also be peer-reviewed. Letters will be subject to editorial approval but are not peer reviewed. Final decision on acceptance lies with the editor.

2. Article types

The Journal considers the following kinds of article for publication:

- Original submissions: should be between 2,000-3,000 words with up to 50 references. These should follow standard format: on the first page there should be a summary of approximately 150 words. Structured abstracts are not required. The text of the article should follow "IMRAD" (Introduction, Methods, Results, and Discussion) sequence.
- Surveys: will only be considered for publication if the response rate is of 70% or more; in exceptional circumstances, lower response rates may be acceptable.
- Case Report, audits: up to 3,000 words, 30 references. Written patient consent for publication is mandatory.
- Invited editorials: up to 2000 words, 20 references.
- Special articles: with invited editorials, are usually commissioned by the editor. Spontaneous submissions are welcomed but should be discussed with one of the editors before submission; up to 3,000 words.
- Correspondence – should be limited to 500 words with no more than five references.
- Selected abstracts from ICS meetings: 500 words.
- Review articles, summaries of dissertations from diplomats of the Inter-Collegiate Board: up to 3,000 words, 50 references.

The suggested length is a guide only, but exceptions should generally be discussed with the editor before submission.

3. Authorship

Papers should only be submitted for consideration once the authorization of all contributing authors has been gathered. Those submitting papers should carefully check that all those whose work contributed to the paper are acknowledged as contributing authors.

The list of authors should include all those who can legitimately claim authorship. This is all those who:

- have made a substantial contribution to the concept and design, acquisition of data or analysis and interpretation of data

- drafted the article or revised it critically for important intellectual content

- approved the version to be published.

Authors should meet the conditions of all of the points above. Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content.

When a large, multicentre group has conducted the work, the group should identify the individuals who accept direct responsibility for the manuscript. These individuals should fully meet the criteria for authorship.

Acquisition of funding, collection of data, or general supervision of the research group alone does not constitute authorship, although all contributors who do not meet the criteria for authorship should be listed in the Acknowledgments section.
Please refer to the ICMJE Authorship guidelines at http://www.icmje.org/ICMJE-recommendations.pdf.

4. How to submit your manuscript

Before submitting your manuscript, please ensure you carefully read and adhere to all the guidelines and instructions to authors provided below. Manuscripts not conforming to these guidelines may be returned.

JICS is hosted on SAGE track, a web based online submission and peer review system powered by ScholarOne™ Manuscripts. Please read the Manuscript Submission guidelines below, and then simply visit http://mc.manuscriptcentral.com/inc to login and submit your article online.

IMPORTANT: Please check whether you already have an account in the system before trying to create a new one. If you have reviewed or authored for the journal in the past year it is likely that you will have had an account created. For further guidance on submitting your manuscript online please visit ScholarOne Online Help.

All papers must be submitted via the online system. If you would like to discuss your paper prior to submission, please

refer to the contact details below. Each manuscript should contain:

(i) title page with full title and subtitle (if any). The title page should contain the following:

- Address of the corresponding author in the top left hand corner with contact details including email
- The title of the paper
- All authors listed with their affiliated institutions (with first names included)
- If different, the institution where the work was performed should be listed.
- Any disclaimers or statement of conflict of interest
- Any financial support received should be acknowledged
- Five key words for indexing on the website which should be MeSH terms.
- Case reports must have signed written consent by the patient or assent from next of kin.

(ii) structured (where appropriate) abstract of up to 150 words

(iii) up to 10 key words

(iv) main text and word count suggested target is about 8000 words. Text to be clearly organized, with a clear hierarchy of headings and subheadings and quotations exceeding 40 words displayed, indented, in the text. Texts of a length greatly exceeding this will be considered

as interest warrants and space permits.

(v) end notes, if necessary, should be signalled by superscript numbers in the main text and listed at the end of the text

before the references

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For more information on open access options and compliance at SAGE, including self author archiving deposits (green open access) visit SAGE Publishing Policies on our Journal Author Gateway.

6. Statements and conventions

6.1 Acknowledgements

Any acknowledgements should appear first at the end of your article prior to your Declaration of Conflicting Interests (if applicable), any notes and your References.

All contributors who do not meet the criteria for authorship should be listed in an 'Acknowledgements' section. Examples of those who might be acknowledged include a person who provided purely technical help, writing assistance, or a department chair who provided only general support. Authors should disclose whether they had any writing assistance and identify the entity that paid for this assistance.

6.2 Declaration of conflicting interests

Within your Journal Contributor's Publishing Agreement you will be required to make a certification with respect to a declaration of conflicting interests. It is the policy of *JICS* to require a declaration of conflicting interests from all authors enabling a statement to be carried within the paginated pages of all published articles.

Please include any declaration at the end of your manuscript after any acknowledgements and prior to the references, under a heading 'Declaration of Conflicting Interests'. If no declaration is made the following will be printed under this heading in your article: 'None Declared'. Alternatively, you may wish to state that 'The Author(s) declare(s) that there is no conflict of interest'.

When making a declaration the disclosure information must be specific and include any financial relationship that all authors of the article has with any sponsoring organization and the for-profit interests the organization represents, and with any for-profit product discussed or implied in the text of the article.

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6.3 Funding acknowledgement

To comply with the guidance for Research Funders, Authors and Publishers issued by the Research Information Network (RIN), *JICS* additionally requires all Authors to acknowledge their funding in a consistent fashion under a separate heading. Please visit Funding Acknowledgements on the SAGE Journal Author Gateway to confirm the format of the acknowledgment text in the event of funding or state in your acknowledgments that: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

6.4 Other statements and conventions

6.4.1 Research ethics
All papers reporting animal and human studies must include whether written consent was obtained from the local Ethics Committee or Institutional Review Board. **Please ensure that you have provided the full name and institution of the review committee and an Ethics Committee reference number.**

Audit or service evaluation papers must have been assessed and approved by an external body such

as a research and development department and include a statement to that effect.

We accept manuscripts that report human and/or animal studies for publication only if it is made clear that investigations were carried out to a high ethical standard. Studies in humans which might be interpreted as experimental (e.g. controlled trials) should conform to the Declaration   of Helsinki http://www.wma.net/en/30publications/10policies/b3/index.html and typescripts must include a statement that the research protocol was approved by the appropriate ethical committee. In line with the Declaration of Helsinki 1975, revised Hong Kong 1989, we encourage authors to register their clinical trials (at http://clinicaltrials.gov or other suitable databases identified by the ICMJE, http://www.icmje.org/about-icmje/faqs/clinical-trials-registration). If your trial has been registered, please state this on the Title Page. When reporting experiments on animals, indicate on the Title Page which guideline/law on the care and use of laboratory animals was followed.

6.4.2 Patient consent
Authors are required to ensure the following guidelines are followed, as recommended by the International Committee of Medical Journal Editors, Uniform Requirements for Manuscripts Submitted to Biomedical Journals (http://www.icmje.org/about-icmje/faqs/icmje-recommendations). Patients have a right to privacy that should not be infringed without informed consent. Identifying information, including patients' names, initials, or hospital numbers, should not be published in written descriptions, photographs, and pedigrees unless the information is essential for scientific purposes and the patient (or parent or guardian) gives written informed consent for publication. Informed consent for this purpose requires that a patient who is identifiable be shown the manuscript to be published.

Identifying details should be omitted if they are not essential. Complete anonymity is difficult to achieve, however, and informed consent should be obtained if there is any doubt. For example, masking the eye region in photographs of patients is inadequate protection of anonymity. If identifying characteristics are altered to protect anonymity, such as in genetic pedigrees, authors should provide assurance that alterations do not distort scientific meaning and editors should so note. When informed consent has been obtained it should be indicated in the submitted article.

In the UK, Caldicott Guardian approval must be granted before the publication of manuscripts containing patient data but not requiring Ethics Committee consent. Details of approvals granted should be provided in the main body of the text (usually in the Methods section). An   algorithm that explains how to determine whether a project requires ethical approval can be accessed at the following link: http://www.nres.nhs.uk/news-and-publications/news/nres-sops-version-5/.

The *JICS* patient consent form can be downloaded here.

6.4.3 Relationship with the Intensive Care Society
The responsibility of the editors is to provide a journal that will inform, educate and allow proliferation of ideas by engaging in debate within the intensive care community. This will be provided to the readership in an accurate and discerning fashion that will protect and enhance the   integrity of the specialty. Currently *JICS* is funded by the Intensive Care Society. The editors have full authority over the contents of *JICS*, i.e. 'editorial independence;' editorial
decisions are made purely on the validity and utility of submitted work. There is at this time no financial involvement between the editors and *JICS* or the Intensive Care Society
beyond provision of reasonable expenses.

6.4.4 Responding to Allegations of Misconduct
JICS has a responsibility to share reasonable concerns with the relevant authorities, such as the employer, University or Granting authority. It   is not the role of *JICS* to conduct formal enquiries or to reach conclusions regarding potential misconduct. That is the role of the authorities mentioned above.

The areas that should be considered are:

- Falsification of data
- Plagiarism
- Improprieties of authorship
- Misappropriation of ideas
- Violation of accepted research practices
- Failure to comply with regulatory requirements affecting research.

All allegations of misconduct will be referred to the editors who will review the circumstances. Initial fact-finding will include a request to all the involved parties to state their case, and explain the circumstances, in writing. In questions of research misconduct centering on methods or technical issues, the editors may confidentially consult experts who are blinded to the identity of the individuals, or if the allegation is against an editor, an outside expert. The editors will arrive at a conclusion as to whether there is enough evidence to lead a reasonable person to believe there is a possibility of misconduct. Their goal is not to determine if actual misconduct occurred, or the precise details.

When allegations concern authors, the peer review and publication process for the manuscript in question will be halted while the process   above is carried out. The investigation described above will be completed even if the authors withdraw their paper, and the responses below   will still be considered. In the case of allegations against reviewers or the editors, they will be replaced in the review process while the matter is investigated. All such allegations should be kept confidential; the number of inquiries and those involved should be kept to the minimum necessary to achieve this end. Whenever possible, references to the case in writing should be kept anonymous. In the event of misconduct the following options in order of severity are

available:

- A letter of explanation to the person against whom the complaint is made
- A letter of reprimand
- A formal letter, including a request to the supervising authority to investigate
- Publication of a notice of duplicate publication or plagiarism if warranted
- Formal withdrawal or retraction of the paper from the *scientific* literature. This will be published in *JICS* and communicated to the indexing authorities. It does not require the consent of the authors and will be reported to the institution where the author(s) work. This conforms to the International Committee of Journal Editors guidance. See http://www.icmje.org.

7. Permissions

Authors are responsible for obtaining permission from copyright holders for reproducing any illustrations, tables, figures or lengthy quotations previously published elsewhere. For further information including guidance on fair dealing for criticism and review, please visit our Frequently Asked Questions on the SAGE Journal Author Gateway.

8. Manuscript style

8.1 File types
Only electronic files conforming to the journal's guidelines will be accepted. Preferred formats for the text and tables of your manuscript are Word DOC, RTF, XLS. LaTeX files are also accepted. Please also refer to additional guideline on submitting artwork below.

8.2 Journal Style
JICS conforms to the SAGE house style. Click here to review guidelines on SAGE UK House Style.

8.3 Reference Style
JICS adheres to the SAGE Vancouver reference style. Click here to review the guidelines on SAGE Vancouver to ensure your manuscript conforms to this

References should be relevant and useful. There is no merit in large numbers of unhelpful references. All material from other papers must be referenced. The list of references is placed at the conclusion of the paper, starting on a new sheet. It should be set out as follows:

• References must be numbered consecutively in the order in which they are first mentioned in the text. They should be superscripted in the text.

• Text references to 'unpublished observations' or 'personal communications' should not be included in the final list of references. Personal communications should be cited in the text as (Brown AB, personal communication, year). Authors are responsible for verifying that the wording of references to unpublished work is approved by the persons concerned. This should be provided in writing with the first submission of the manuscript.

• *Journals*
List names and initials of up to four authors (if more than four, list three followed by et al.), title of paper, abbreviated title of journal as it appears in Medline (in italics) year of
publication, volume number, page numbers, formatted as shown in the example: Smith PR, Jones A, Clarke EW et al. How to write an article. Br J Anaesth 2008;654:321-26.

• *Electronic references*
List author if known, or institution, title of article, title of journal or book if applicable (in italics), year of publication, volume, page numbers, available at: URL or doi, date accessed: Arrami M, Garner H. A tale of two citations. Nature (Online) 2008;451(7177):397-99. Available from: http://www.nature.com/nature/journal/v451/n7177/full/451397a.html Accessed 20th January 2008.

• *Monographs*
List name of author and initials, title of book (in italics), number of edition, place of publication, publisher, year of publication: Tallis R. Hippocratic Oaths: Medicine and its Discontents. London: Atlantic Books; 2005.

• *Chapter in a book*
List chapter author, title of chapter, In: editor's name (ed), title of book (in italics), edition, place of publication, publisher, year, pages: Hull CJ. Opioid infusions for the management of post-operative pain. In: Smith G, Covino BG, (eds). Acute Pain. London: Butterworths; 2005.
p.155-79.

8.4 Manuscript Preparation
The text should be double-spaced throughout and with a minimum of 3cm for left and right hand margins and 5cm at head and foot. Text should be standard 10 or 12 point.

8.4.1 Your Title, Keywords and Abstracts: Helping readers find your article online
The title, keywords and abstract are key to ensuring readers find your article online through online search

engines such as Google. Please   refer to the information and guidance on how best to title your article, write your abstract and select your keywords by visiting SAGE's Journal Author Gateway Guidelines on How to Help Readers Find Your Article Online.

8.4.2 Corresponding Author Contact details
Provide full contact details for the corresponding author including email, mailing address and telephone numbers. Academic affiliations are required for all co-authors. These details should be presented separately to the main text of the article to facilitate anonymous peer review.

8.4.3 Guidelines for submitting artwork, figures and other graphics
For guidance on the preparation of illustrations, pictures and graphs in electronic format, please visit SAGE's Manuscript Submission Guidelines.

Figures supplied in colour will appear in colour online regardless of whether or not these illustrations are reproduced in colour in the printed version. For specifically requested colour reproduction in print, you will receive information regarding the costs from SAGE after receipt of your accepted article.

8.4.4 Guidelines for submitting supplemental files
This journal is able to host approved supplemental materials online, alongside the full-text of articles. Supplemental files will be subjected to peer-review alongside the article. For more information please refer to SAGE's Guidelines for Authors on Supplemental Files.

8.4.5 English Language Editing services
Non-English speaking authors who would like to refine their use of language in their manuscripts might consider using a professional editing service. Visit English Language Editing Services on our Journal Author Gateway for further information.

9. After acceptance

9.1 Proofs
We will email a PDF of the proofs to the corresponding author.

9.2 E-Prints

SAGE provides authors with access to a PDF of their final article. For further information please visit Offprints and Reprints on our Journal Author Gateway.

9.3 SAGE Production
At SAGE we place an extremely strong emphasis on the highest production standards possible. We attach high importance to our quality service levels in copy-editing, typesetting, printing, and online publication (http://online.sagepub.com/). We also seek to uphold excellent author relations throughout the publication process.

We value your feedback to ensure we continue to improve our author service levels. On publication all corresponding authors will receive a brief survey questionnaire on your experience of publishing in *JICS* with SAGE.

9.4 OnlineFirst Publication
A large number of journals benefit from OnlineFirst, a feature offered through SAGE's electronic journal platform, SAGE Journals Online. It allows final revision articles (completed articles in queue for assignment to an upcoming issue) to be hosted online prior to their inclusion in a final print and online journal issue which significantly reduces the lead time between submission and publication. For more information please visit our OnlineFirst Fact Sheet.

10. Further information
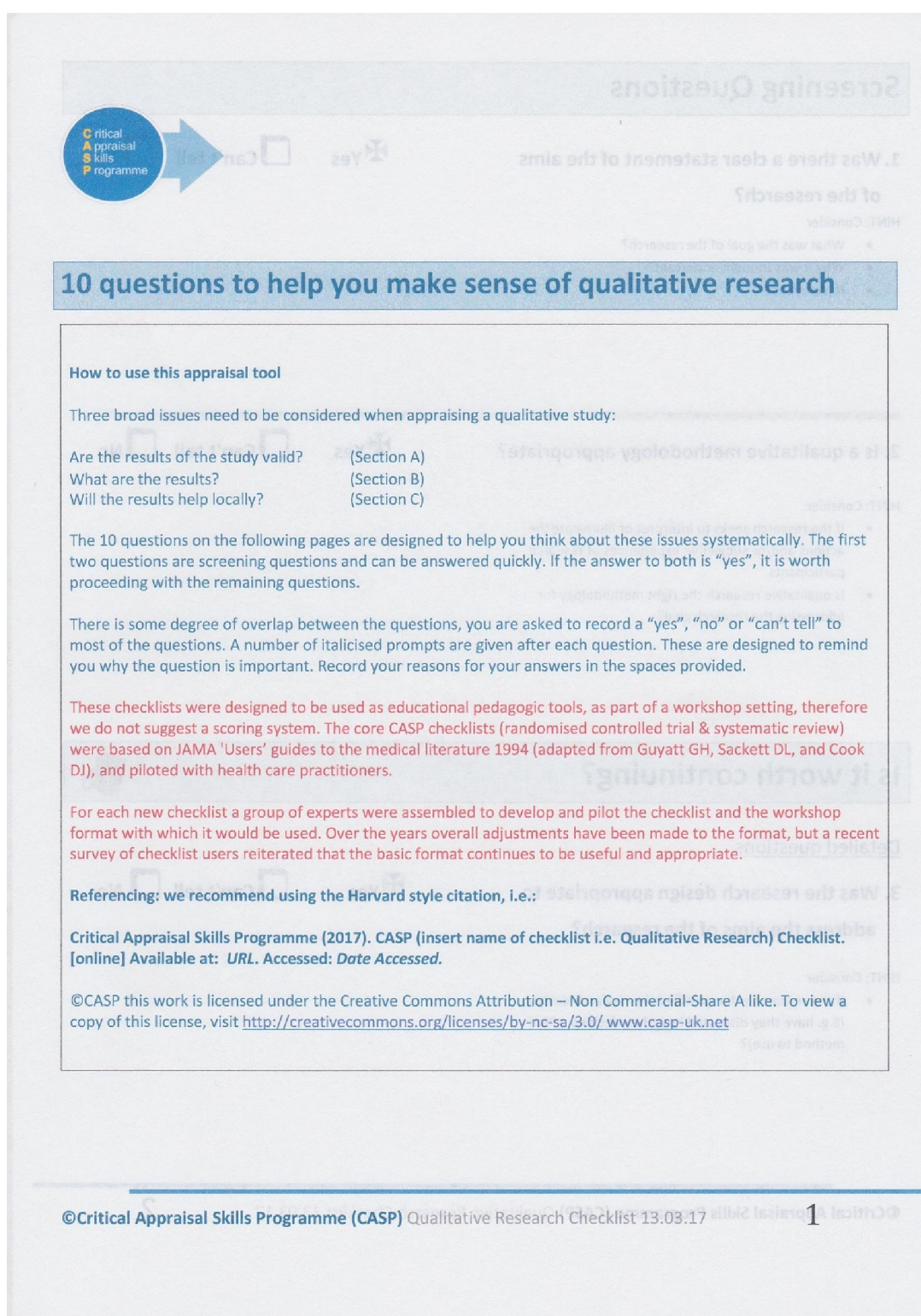
Any correspondence, queries or additional requests for information on the Manuscript Submission process should be sent to the

Editorial Office as follows:

The Journal of the Intensive Care Society
The Intensive Care Society
Churchill House,
35 Red Lion Square,
London, WC1R 4SG

jenny@ics.ac.uk

Appendix 2: CASP checklist for qualitative research – completed example.

10 questions to help you make sense of qualitative research

How to use this appraisal tool

Three broad issues need to be considered when appraising a qualitative study:

Are the results of the study valid?   (Section A)
What are the results?   (Section B)
Will the results help locally?   (Section C)

The 10 questions on the following pages are designed to help you think about these issues systematically. The first two questions are screening questions and can be answered quickly. If the answer to both is "yes", it is worth proceeding with the remaining questions.

There is some degree of overlap between the questions, you are asked to record a "yes", "no" or "can't tell" to most of the questions. A number of italicised prompts are given after each question. These are designed to remind you why the question is important. Record your reasons for your answers in the spaces provided.

These checklists were designed to be used as educational pedagogic tools, as part of a workshop setting, therefore we do not suggest a scoring system. The core CASP checklists (randomised controlled trial & systematic review) were based on JAMA 'Users' guides to the medical literature 1994 (adapted from Guyatt GH, Sackett DL, and Cook DJ), and piloted with health care practitioners.

For each new checklist a group of experts were assembled to develop and pilot the checklist and the workshop format with which it would be used. Over the years overall adjustments have been made to the format, but a recent survey of checklist users reiterated that the basic format continues to be useful and appropriate.

Referencing: we recommend using the Harvard style citation, i.e.:

Critical Appraisal Skills Programme (2017). CASP (insert name of checklist i.e. Qualitative Research) Checklist. [online] Available at: URL. Accessed: Date Accessed.

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Screening Questions

1. Was there a clear statement of the aims of the research?

☒ Yes   ☐ Can't tell   ☐ No

HINT: Consider
- What was the goal of the research?
- Why it was thought important?
- Its relevance

2. Is a qualitative methodology appropriate?

☒ Yes   ☐ Can't tell   ☐ No

HINT: Consider
- If the research seeks to interpret or illuminate the actions and/or subjective experiences of research participants
- Is qualitative research the right methodology for addressing the research goal?

Is it worth continuing?

Detailed questions

3. Was the research design appropriate to address the aims of the research?

☒ Yes   ☐ Can't tell   ☐ No

HINT: Consider
- If the researcher has justified the research design (E.g. have they discussed how they decided which method to use)?

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4. Was the recruitment strategy appropriate to the aims of the research?   ☒Yes   ☐Can't tell   ☐No

HINT: Consider

- If the researcher has explained how the participants were selected
- If they explained why the participants they selected were the most appropriate to provide access to the type of knowledge sought by the study
- If there are any discussions around recruitment (e.g. why some people chose not to take part)

---

5. Was the data collected in a way that addressed the research issue?   ☒Yes   ☐Can't tell   ☐No

HINT: Consider

- If the setting for data collection was justified
- If it is clear how data were collected (e.g. focus group, semi-structured interview etc.)
- If the researcher has justified the methods chosen
- If the researcher has made the methods explicit (e.g. for interview method, is there an indication of how interviews were conducted, or did they use a topic guide)?
- If methods were modified during the study. If so, has the researcher explained how and why?
- If the form of data is clear (e.g. tape recordings, video material, notes etc)
- If the researcher has discussed saturation of data

---

6. Has the relationship between researcher and participants been adequately considered?   ☒Yes   ☐Can't tell   ☐No

HINT: Consider

- If the researcher critically examined their own role, potential bias and influence during
  (a) Formulation of the research questions
  (b) Data collection, including sample recruitment and choice of location
- How the researcher responded to events during the study and whether they considered the implications of any changes in the research design

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7. Have ethical issues been taken into consideration?   ☒Yes   ☐Can't tell   ☐No

HINT: Consider

- If there are sufficient details of how the research was explained to participants for the reader to assess whether ethical standards were maintained
- If the researcher has discussed issues raised by the study (e.g. issues around informed consent or confidentiality or how they have handled the effects of the study on the participants during and after the study)
- If approval has been sought from the ethics committee

8. Was the data analysis sufficiently rigorous?   ☒Yes   ☐Can't tell   ☐No

HINT: Consider

- If there is an in-depth description of the analysis process
- If thematic analysis is used. If so, is it clear how the categories/themes were derived from the data?
- Whether the researcher explains how the data presented were selected from the original sample to demonstrate the analysis process
- If sufficient data are presented to support the findings
- To what extent contradictory data are taken into account
- Whether the researcher critically examined their own role, potential bias and influence during analysis and selection of data for presentation

9. Is there a clear statement of findings?

☒ Yes ☐ Can't tell ☐ No

HINT: Consider

- If the findings are explicit
- If there is adequate discussion of the evidence both for and against the researchers arguments
- If the researcher has discussed the credibility of their findings (e.g. triangulation, respondent validation, more than one analyst)
- If the findings are discussed in relation to the original research question

---

10. How valuable is the research?   Very valuable – all points addressed

HINT: Consider

- If the researcher discusses the contribution the study makes to existing knowledge or understanding e.g. do they consider the findings in relation to current practice or policy?, or relevant research-based literature?
- If they identify new areas where research is necessary
- If the researchers have discussed whether or how the findings can be transferred to other populations or considered other ways the research may be used

Study appraised: Laurent et al (2014)
SCORE: 10/10

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5

Appendix 3: Inclusion and exclusion criteria for systematic review papers

Inclusion Criteria	Exclusion Criteria
Qualitative Methodology (any design)	Quantitative Methodology
English Language	Non-English Language
Peer-reviewed article	Not published in peer-reviewed journal
Adult General Medical CCU / ICU	Paediatric / Neonatal CCU / ICU / wards
Relevance: Looking at the **emotional impact and experience** of nurses and physicians in CCU / ICU in relation to **resilience, coping, burnout, PTSD, distress, Compassion Fatigue** etc.	Specialist Adult CCU / ICU
Clarity within concept descriptions	

Appendix 4: Cardiff University Sponsorship confirmation letter and indemnity insurance

Research and Innovation Services
Director Geraint W Jones
Gwasanaethau Ymchwil ac Arloesi
Cyfarwyddwr Geraint W Jones

CARDIFF
UNIVERSITY

PRIFYSGOL
CAERDYDD

Cardiff University
7th Floor
30 - 36 Newport Road
Cardiff CF24 0DE
Wales UK

Tel Ffôn +44(0)29 2087 5834
Fax Ffacs +44(0)29 2087 4189

Prifysgol Caerdydd
Llawr 7
30 - 36 Heol Casnewydd
Caerdydd CF24 0DE
Cymru Y Deyrnas Unedig

06 June, 2016

Dr Victoria Samuels
School of Psychology
Cardiff University
11th Floor,
Tower Building
Park Place,
Cardiff, CF10 3AT

Dear Dr Samuels,

Title: Resilience in Critical Care Consultants: Elucidating Intensivists' Experience

Short title: Resilience in Critical Care Consultants

I understand that you are acting as Chief Investigator for the above Professional PhD project to be conducted by Josephine Allen.

I confirm that Cardiff University agrees in principle to act as Sponsor for the above project, as required by the Research Governance Framework for Health and Social Care.

Scientific Review
I can also confirm that Scientific Review has been obtained from Dr Victorial Samuels (SWDP in ClinPsy) and Dr Julie Highfield Consultant Clinical Psychologist in Critical Care (Adult and Paediatric), University Hospital of Wales.

Insurance
The necessary insurance provisions will be in place prior to the project commencement. Cardiff University is insured with UMAL. Copies of the insurance certificate are attached to this letter.

Approvals

On completion of your IRAS form (for NHS REC and NHS R&D approvals), you will be required to obtain signature from the Sponsor ('Declaration by the Sponsor Representative').

Please then submit the project to the following organisations for approvals:

- Health & Care Research Wales Permissions Coordinating Unit (formerly known as NISCHR PCU) - to arrange host organisation R&D approval for Welsh NHS sites.
- School of Psychology Research Ethics Committee (REC).

Once Research & Innovation Services has received evidence of the above approvals, the University is considered to have accepted Sponsorship and your project may commence.

Roles and Responsibilities
As Chief Investigator you have signed a Declaration with the Sponsor to confirm that you will adhere to the standard responsibilities as set out by the Research Governance Framework for Health and Social Care. In accordance with the University's Research Governance Framework, the Chief Investigator is also responsible for ensuring that each research team member is qualified and experienced to fulfill her delegated roles including ensuring adequate supervision, support and training.

THE QUEEN'S
ANNIVERSARY PRIZES
2013

INVESTORS
IN PEOPLE

Registered Charity, 1136855 Elusen Gofrestredig

If your study is adopted onto Health & Care Research Wales Clinical Research Portfolio you are required to upload recruitment data onto the portfolio database.

Contracts

No research-specific tasks delegated to NHS Host Organisation (staff acting as participants) – no contract required.

May I take this opportunity to remind you that, as Chief Investigator, you are required to:

- ensure you are familiar with your responsibilities under the Research Governance Framework for Health and Social Care;
- undertake the study in accordance with Cardiff University's Research Governance Framework and the principles of Good Clinical Practice;
- ensure the Research complies with the Data Protection Act 1998;
- inform Research, Innovation & Enterprise Services of any amendments to the protocol or study design, including changes to start /end dates;
- co-operate with any audit inspection of the project files or any requests from Research, Innovation & Enterprise Services for further information.

You should quote the following unique reference number in any correspondence relating to sponsorship for the above project:

SPON 1524-16

This reference number should be quoted on all documentation associated with this project.

Yours sincerely

Dr K J Pittard Davies
Head of Research Governance and Contracts
Direct line: +44 (0) 29208 79274
Email: resgov@cardiff.ac.uk

Cc   Josephine Allen

Hasilwood House
60 Bishopsgate
London EC2N 4AW
Tel: 020 7847 8670
Fax: 020 7847 8689

UMAL

TO WHOM IT MAY CONCERN

18th July 2016

Dear Sir/Madam

**CARDIFF UNIVERSITY
AND ALL ITS SUBSIDIARY COMPANIES**

We confirm that the above Institution is a Member of U.M. Association Limited, and that the following covers are currently in place:-

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Yours faithfully

Susan Wilkinson
For U.M. Association Limited

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Registered in England and Wales No. 2731799

Hasilwood House
60 Bishopsgate
London EC2N 4AW
Tel: 020 7847 8670
Fax: 020 7847 8689

UMAL

TO WHOM IT MAY CONCERN

20th July 2015

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If you have any queries in respect of the above details, please do not hesitate to contact us.

Yours faithfully

Susan Wilkinson
For U.M. Association Limited

QMS

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REGISTERED FIRM

U.M. Association Limited
Registered Office: Hasilwood House, 60 Bishopsgate, London, EC2N 4AW
Registered in England and Wales No. 2731799

Appendix 5: NHS Research and Development ethical approval letters

R&D Department
Clinical Research &
Innovation Centre
St Woolos Hospital
Block C, Stow Hill
Newport, South Wales
NP20 4SZ

Ymchwil Iechyd
a Gofal Cymru
Health and Care
Research Wales

GIG Bwrdd Iechyd Prifysgol
NHS Aneurin Bevan
WALES University Health Board

Research and Development Department
Research Risk Review Committee

☎ 01633 656353
✆ ABB.R&D@wales.nhs.uk

Dr Nicholas Mason
Critical Care Consultant
Critical Care Department
Royal Gwent Hospita
Cardiff Road
Newport
NP20 2UB

5th August 2016

Dear Dr Mason,

Title: Resilience in Critical Care Consultants
Chief Investigator: Miss Josephine Allen
Principal Investigator: Dr Nicholas Mason
R&D Reference Number: RD/1468/16
IRAS Number: 207368
Portfolio Status: Review in Progress
Commercial Status: Non-Commercial

The Aneurin Bevan University Health Board Research Risk Review Committee at their meeting on
the 3rd **August 2016** decided that overall the project does not appear to pose any risk to the
University Health Board and can be approved.

If you or any member or your team require a Research Honorary Contract or Letter of Access
please contact the R&D Department at the above email address.

May I take this opportunity to wish you success with your study and remind you that the study
team are required to do the following:

a) Inform the University Health Board R&D Office if any external funding is awarded for this study
   in the future.
b) Inform the R&D Office of any substantial amendments/changes to your protocol.
c) Maintain a record of the number of research participants recruited into the study.
d) Complete any questionnaires sent to you by the University Health Board's R&D Office
   regarding this project.

Advancing Knowledge, Enhancing Care

e) Comply fully with the Research Governance Framework, and co-operate with any audit inspection of the project files.
f) Undertake the project in accordance with ICH-GCP and the University Health Board's Guidelines on Good Research Practice.
g) Adhere to the protocol as approved by the Local Research Ethics Committee.
h) Ensure that your research complies with the Data Protection Act 1998.
i) Report any Serious Adverse Events to the R&D Office.
j) Please note that approval lapses if the project does not commence within 12 months of approval.
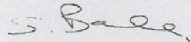
If your study is adopted onto the Health and Care Research Wales Clinical Research Portfolio (CRP), it will be a condition of this NHS research permission, that you will be required to regularly upload recruitment data onto the portfolio database.

To apply for adoption onto the Health and Care Research Wales CRP, please go to
http://www.healthandcareresearch.gov.wales/get-your-study-on-the-clinical-research-portfolio/

To upload recruitment data, please follow this link:
http://www.healthandcareresearch.gov.wales/uploading-recruitment-data/

Uploading recruitment data will enable Health and Care Research Wales to monitor research activity within NHS organizations, leading to NHS R&D allocations which are activity driven. The uploading of recruitment data will be monitored by your colleagues in the R&D office. If you need any support in uploading this data, please contact the ABUHB R&D office.

Yours sincerely

Professor Sue Bale OBE
Research and Development Director
Research Risk Review Committee Chairman

Advancing Knowledge, Enhancing Care

Dyddiad/Date: 12th October 2016

ABMU Health Board Research & Development
Swansea University
Floor 1, Institute of Life Science 2
Singleton Park
Swansea
SA2 8PP
☎   01792 530888
✉   abm.rd@wales.nhs.uk

Miss Josephine Allen
Trainee Clinical Psychologist
South Wales Doctoral Programme in Clinical
Psychology
School of Psychology,
Cardiff University,
11th Floor, Tower Building,
Park Place,
Cardiff
CF10 3AT

Dear Miss Allen,

Re: Resilience in Critical Care Consultants
IRAS Ref: 207368
Sponsor: Cardiff University

Thank you for submitting the above named research proposal to ABMU Health Board for NHS R&D permission. The attached listed documents were reviewed.

Health Board R&D Governance checks have been completed and passed. Please accept this letter as confirmation of local NHS R&D Health Board permission.

As part of Research Governance, you are required to:

1.   Adhere to the protocol approved and inform the R&D office and the relevant Research Ethics Committee of any changes to the study, including the end date, for review/approval and record update.

2.   For Health Board Sponsored studies, notify the R&D office of serious adverse events immediately upon knowledge, in accordance with local Standard Operating Procedure on Pharmacovigilance and as outlined in your Study Initiation meeting.

3.   For Externally Sponsored studies, the Health Board should only be notified of SAEs or Suspected Unexpected Serious Adverse Reaction (SUSAR) arising in local ABMU Patients.

4.   Complete any interim and final reports requested by the R&D office. If sponsored by ABMU Health Board, you will be asked to complete a 6 monthly progress report for submission to the Joint Scientific Review Committee along with your final report at study completion.

5.   Ensure that your research complies with any relevant regulatory requirements and legislation relating to: Clinical Trials, Data Protection Act 1998, Health & Safety, Caldicott Guidelines, the use of Human Tissue for research purposes, Mental Capacity and ICH Good Clinical Practice (GCP). The R&D team can advise you on applicable regulatory and statutory requirements relevant to your study.

6.   Comply with Data Protection requirements, notably no personal or patient identifiable data should leave the Health Board unless explicit consent from the individual or patient has been taken and documented. Unless consent is present, all study related documents must be either fully or linked anonymised. *'Identifiable patient data includes name, address, full*

Reda Ref: 207368   Page 1 of 5

postcode, date of birth, NHS number and local patient identifiable codes as well as photographs, videos, audio tapes or other images of patients. Personal identifiable information includes the member of staff's name, address, full post code, date of birth, NI number and staff number as well as photographs etc' – ABMU Data Protection & Confidentiality Policy, Version 2.1 September 2013.

7. Ensure that all training courses requested by the Sponsor are completed by all relevant members of the research team before any research activity is carried out. All research staff undertaking clinical trials of an investigational medicinal product (CTIMPs) must be GCP trained, and should continue to update their GCP training every 2 years. Copies of GCP certificates should be filed in the Trial Site File, with a copy forwarded to the R&D Department.

8. Ensure the research is undertaken in compliance with all Health Board R&D Standard Operating Procedures (SOPs). The latest versions of all SOPs can be obtained by contacting the R&D Department or from the R&D Intranet pages

9. If the study is sponsored by ABMU Health Board you must notify the R&D Office of your intention to open the study in other sites.

10. For ABMU Health Board Sponsored studies, sign a Conditions of Sponsorship Agreement & attend a Study Initiation meeting as organised by the R&D Department.

Clinical Research Portfolio Studies

If your study has been adopted onto the Clinical Research Portfolio (CRP), it will be a condition of our permission that the Chief Investigator site uploads local recruitment data onto the portfolio database.

For more information on the process of uploading recruitment data please look at the following link:
http://www.healthandcareresearch.gov.wales/uploading-recruitment-data/

Uploading of recruitment data will enable Health and Care Research Wales to monitor research activity within Health Boards, resulting in NHS R&D allocations to be driven by activity.

For more information and advice on the Health and Care Research Wales Portfolio please email:
portfolio@wales.nhs.uk

Amendments to the Study

Any changes made to the study after the issue of this letter will be treated as an amendment. Amendments can be 'substantial' or 'non-substantial'. It is the duty of the Sponsor to classify the amendment and notify all relevant regulatory bodies accordingly, this duty may be delegated to the Chief Investigator or other authorised individual.

For a substantial amendment, the Sponsor or delegated individual will be required to submit a Notice of Substantial Amendment form to the REC, the lead permission co-ordinating function for the study and the MHRA (if applicable). For all ABMU sponsored studies substantial amendments must first be submitted to the Joint Study Review Committee (JSRC) for approval prior to submitting to REC and Health and Care Research Wales Permissions (**Research-permissions@wales.nhs.uk**).

For non-substantial amendments, the Sponsor or delegated individual are required to submit the amendment details to the lead permission co-ordinating function for the study. They will then pass the amendment details onto all relevant nations, for Wales this would be Health and Care Research Wales who will notify ABMU R&D Department for review.

Details of how to classify your amendment as substantial or non-substantial are available from Health Research Authority - http://www.hra.nhs.uk/research-community/during-your-research-project/amendments/

Indemnity Arrangements

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www.abm.wales.nhs.uk

Reda Ref: 207368   Page 2 of 5

The Sponsor indemnifies and holds harmless ABM University Health Board, its employees and agents for any harm caused by negligence on behalf of the Sponsor, including any harm caused to participants by the administration of the investigational product. However, please note that the Sponsor will not indemnify ABM University Health Board for any harm caused by negligence on behalf of the research team or other individual or agent. Researchers employed by ABM University Health Board, including those holding Honorary Contract status are indemnified against actions for negligent harm via standard arrangements with Welsh Risk Pool (WRP).

Please discuss any planned use of in-house work instructions/sops with the Sponsor company during Initiation to ensure localised documents correctly summarise the protocol requirements and this is agreed to, in writing, by the Sponsor Company.

ABM University Health Board reserves the right to suspend approval of any research study where deviation from appropriate RG & GCP standards is uncovered.

May I take this opportunity to wish you well in undertaking the research. We will write to you in the future to request updates on the progress of the research and look forward to receiving outcomes of the study.

Yours sincerely,

Professor J W Stephens
Deputy Assistant Medical Director (R&D)
ABMU Health Board

c.c   **Dr Ausama H Mohammed, Consultant Anaesthesia & Intensive Care Medicine, ABMU (Named Local Collaborator for ABMU HB)**

Reda Ref: 207368   Page 3 of 5

Re: Resilience in Critical Care Consultants
IRAS Ref: 207368
Sponsor: Cardiff University

SSI Documents Received

Document:	Subtitle:
Other (please specify)	Confirmation of CD support - Paul Temblet
Other (please specify)	Clinical Director support - Dr Hamish Laing
Site-Specific Information form checklist	ABMU SSI checklist
Site-Specific Information Form (signed/authorised pdf or hard copy)	ABM UHB - Critical Care Unit, Morriston Hospital

Reda Ref: 207368   Page 4 of 5

Re: Resilience in Critical Care Consultants
IRAS Ref: 207368
Sponsor: Cardiff University

R&D Application Documents Received

Document:	Subtitle:	Version:
GCP Certificates	Highfield GCP Certificate	
Evidence of insurance or indemnity (non-NHS sponsors only)	Employee & Public Liability - 31 Jul 2016	20 Jul 2015
Other (please specify)	Additional Research Sites	v2.0, Sep 2013
Other (please specify)	Advanced Project Information Proforma	27 May 2016
Written final confirmation from the organisation(s) acting as sponsor	Cardiff University	06 Jun 2016
Summary CV for Chief Investigator (CI)	J R Allen	
Summary CV for Principal Investigator (PI)	J Highfield	
Summary CV for Academic Supervisor	V Samuel	
GCP Certificates	J R Allen	06 Oct 2015
GCP Certificates	V Samuel	28 Jun 2016
Other (please specify)	Research Proposal	
Interview schedules or topic guides for participants		v1.0, 24 Jun 2016
Research participant consent form		v1.0, 26 May 2016
Other (please specify)	Participant Debrief Sheet	v1.0, 24 Jun 2016
Research participant information sheet (PIS)		v1.0, 26 May 2016
Other (please specify)	Research Outline for participants	v1.0, 24 Jun 2016
Research protocol		v1 24 Jun 2016
R&D Application checklist		
R&D Form (Parts A-D) (signed/authorised pdf or hard copy)		24 Jun 2016

Reda Ref: 207368   Page 5 of 5

GIG CYMRU NHS WALES | Bwrdd Iechyd Prifysgol
Abertawe Bro Morgannwg
University Health Board

☎ Direct line/Rhif llinell union: 01792 530888

✉ abm.rd@wales.nhs.uk
Research & Development Deptartment
ABM University Health Board
ILS2, First Floor
Swansea University
Singleton Park
Swansea

3 August 2016

Miss Josephine Allen
Clinical Psychologist
Cardiff and Vale UHB
Doctoral Programme in Clinical Psychology, School of Psychology
Cardiff University, 11th Floor,
Tower Building, Park Place,
Cardiff
CF10 3AT

Dear Miss Allen

Letter of access for research – NHS to NHS

**Re: Resilience in Critical Care Consultants: Elucidating Intensivists'
Experience**
REF: 207368

This letter should be presented to each participating organisation before you
commence your research at that site, Abertawe Bro Morgannwg University Health
Board.

In accepting this letter, each participating organisation confirms your right of access
to conduct research through their organisation for the purpose and on the terms and
conditions set out below. This right of access commences on 1st February 2016 and
ends on 31st October 2017 (Study End Date on ABMU HB SSI Form) unless
terminated earlier in accordance with the clauses below.

As an existing NHS employee you do not require an additional honorary research
contract with the participating organisation(s). The organisation(s) is/are satisfied that
the research activities that you will undertake in the organisation(s) are
commensurate with the activities you undertake for your employer. Your employer is
fully responsible for ensuring such checks as are necessary have been carried out.
Your employer has confirmed in writing to this organisation that the necessary pre-
engagement checks are in place in accordance with the role you plan to carry out in
the organisation(s). Evidence of checks should be available on request to Abertawe
Bro Morgannwg University Health Board.

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Version 2.3, August 2013
Research in the NHS: HR Good Practice Resource Pack   Page 1 of 3

GIG CYMRU NHS WALES | Bwrdd Iechyd Prifysgol
Abertawe Bro Morgannwg
University Health Board

You have a right of access to conduct such research as confirmed in writing in the letter of permission for research from this organisation. ***Please note that you cannot start the research until the Principal Investigator for the research project has received a letter from us giving permission to conduct the project.***

You are considered to be a legal visitor to Abertawe Bro Morgannwg University Health Board premises. You are not entitled to any form of payment or access to other benefits provided by Abertawe Bro Morgannwg University Health Board or this organisation to employees and this letter does not give rise to any other relationship between you and Abertawe Bro Morgannwg University Health Board or this organisation, in particular that of an employee.

While undertaking research through Abertawe Bro Morgannwg University Health Board, you will remain accountable to your employer Cardiff University, Cardiff & Vale NHS Trust but you are required to follow the reasonable instructions of Dr Ausama H Mohammed, Consultant Anaesthesia & Intensive Care Medicine, Morriston Hospital, ABMU HB in this organisation or those given on his behalf in relation to the terms of this right of access.

Where any third party claim is made, whether or not legal proceedings are issued, arising out of or in connection with your right of access, you are required to co-operate fully with any investigation by [Insert organisation] or this organisation in connection with any such claim and to give all such assistance as may reasonably be required regarding the conduct of any legal proceedings.

You must act in accordance with Abertawe Bro Morgannwg University Health Board policies and procedures, which are available to you upon request, and the Research Governance Framework.

You are required to co-operate with Abertawe Bro Morgannwg University Health Board in discharging its duties under the Health and Safety at Work etc Act 1974 and other health and safety legislation and to take reasonable care for the health and safety of yourself and others while on Abertawe Bro Morgannwg University Health Board premises. Although you are not a contract holder, you must observe the same standards of care and propriety in dealing with patients, staff, visitors, equipment and premises as is expected of a contract holder and you must act appropriately, responsibly and professionally at all times.

If you have a physical or mental health condition or disability which may affect your research role and which might require special adjustments to your role, if you have not already done so, you must notify your employer and each participating [Insert organisation] prior to commencing your research role at each site.

You are required to ensure that all information regarding patients or staff remains secure and *strictly confidential* at all times. You must ensure that you understand and comply with the requirements of the NHS Confidentiality Code of Practice and the Data Protection Act 1998. Furthermore you should be aware that under the Act, unauthorised disclosure of information is an offence and such disclosures may lead to prosecution.

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Pencadlys ABM / ABM Headquarters, 1 Talbot Gateway, Port Talbot, SA12 7BR. Ffon / Tel: (01639) 683344
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Version 2.3, August 2013
Research in the NHS: HR Good Practice Resource Pack   Page 2 of 3

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The organisation(s) will not indemnify you against any liability incurred as a result of any breach of confidentiality or breach of the Data Protection Act 1998. Any breach of the Data Protection Act 1998 may result in legal action against you and/or your substantive employer.

You should ensure that, where you are issued with an identity or security card, a bleep number, email or library account, keys or protective clothing, these are returned upon termination of this arrangement. Please also ensure that while on the premises you wear your ID badge at all times, or are able to prove your identity if challenged. Please note that the organisation(s) accept no responsibility for damage to or loss of personal property.

This letter may be revoked and your right to attend the organisation(s) terminated at any time either by giving seven days' written notice to you or immediately without any notice if you are in breach of any of the terms or conditions described in this letter or if you commit any act that we reasonably consider to amount to serious misconduct or to be disruptive and/or prejudicial to the interests and/or business of the organisation(s) or if you are convicted of any criminal offence. You must not undertake regulated activity if you are barred from such work. If you are barred from working with adults or children this letter of access is immediately terminated. Your employer will immediately withdraw you from undertaking this or any other regulated activity and you MUST stop undertaking any regulated activity immediately.

Your substantive employer is responsible for your conduct during this research project and may in the circumstances described above instigate disciplinary action against you.

If your circumstances change in relation to your health, criminal record, professional registration or suitability to work with adults or children, or any other aspect that may impact on your suitability to conduct research, or your role in research changes, you must inform the organisation that employs you through its normal procedures. You must also inform the nominated manager in each participating organisation..

Yours sincerely

Srlees.

Samantha Rees
R&D Administrator
ABMU Health Board

GIG CYMRU
NHS WALES | Bwrdd Iechyd Prifysgol Caerdydd a'r Fro
Cardiff and Vale University Health Board

Ysbyty Athrofaol Cymru
University Hospital of Wales

Heath Park,
Cardiff, CF14 4XW
Phone 029 2074 7747
Fax 029 2074 3838
Minicom 029 2074 3632

Parc Y Mynydd Bychan,
Caerdydd, CF14 4XW
Ffôn 029 2074 7747
Ffacs 029 20743838
Minicom 029 2074 3632

Tel: 029 20746986

CAV_Research.Development@wales.nhs.uk

From: Professor C Fegan
        R&D Director
        R&D Office, 2nd Floor TB2
        University Hospital of Wales
        Cardiff
        CF14 4XW

08 August 2016

Dr Julie Highfield
Consultant Clinical Psychologist
Adult Critical Care
A3 Corridor
University Hospital of Wales
Heath Park
Cardiff
CF14 4XW

Dear Dr Highfield

**Cardiff and Vale UHB Ref: 16/JUL/6564**
IRAS Project ID: 207368
Title: Resilience In Critical Care Consultants: Elucidating Intensivists'
Experience

The above project was forwarded to Cardiff and Vale University Health Board R&D
Office by the Health and Care Research Wales Permissions Service. A Governance
Review has now been completed on the project.

Documents approved for use in this study are:

Document	Version	Date
NHS R&D Form	5.3.1	20/07/2016
SSI Form	5.3.1	20/07/2016
Protocol	1	24/06/2016
Research Outline	1	26/05/2016
Participant Information Sheet	1	26/05/2016
Participant Debrief Sheet	1	24/06/2016
Inteview/Topic Schedule	1	24/06/2016
Participant Consent Form	1	26/05/2016

Bwrdd Iechyd Prifysgol Caerdydd a'r Fro yw enw gweithredol Bwyrdd Iechyd Lleol Prifysgol Caerdydd a'r Fro
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Ymchwil Iechyd
a Gofal Cymru
Health and Care
Research Wales

POSITIVE ABOUT
DISABLED PEOPLE
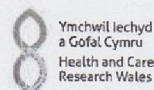
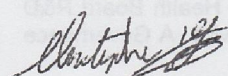I am pleased to inform you that the UHB has no objection to your proposal.

You have informed us that Cardiff University is willing to act as Sponsor under the Research Governance Framework for Health and Social Care. Please accept this letter as confirmation of permission for the project to begin within this UHB.

I note that Health and Care Research Wales has determined that this study is ineligible for adoption onto the Clinical Research Portfolio and your Directorate R&D Lead has determined that it does not meet the criteria for Pathway-to-Portfolio. The Directorate R&D Lead has confirmed that she is satisfied that arrangements are in place for meeting any costs from outside of the R&D Activity Based Funding allocation. Your Directorate R&D Lead has raised no objections to providing Directorate support for this study.

May I take this opportunity to wish you success with the project and remind you that as Chief / Principal Investigator you are required to:

- Inform the R&D Office of the date which this study opens to recruitment. If this project has not opened within 12 months of the date of this letter. Failure to do so may invalidate R&D approval,
- Inform the Health and Care Research Wales Permissions Service and the UHB R&D Office if any external or additional funding is awarded for this project in the future.
- Ensure that all study amendments are submitted to the Health and Care Research Wales Permissions Service,
- Ensure the Health and Care Research Wales Permissions Service is notified of the study's closure,
- Ensure that the study is conducted in accordance with all relevant policies, procedures and legislation,
- Provide information on the project to the UHB R&D Office as requested from time to time, to include participant recruitment figures.

Yours sincerely,

Professor Christopher Fegan
R&D Director / Chair of the Cardiff and Vale Research Review Service (CaRRS)

CC   **R&D Lead: Mrs Nicki Palmer**
      Student: Miss Josephine Allen, Cardiff University
      Sponsor Contact: Chris Shaw, Research Innovation Enterprise Services, Cardiff University
      Academic Supervisor: Dr Victoria Samuel, School of Psychology, Cardiff University
      Finance: Anthony Williams, University Hospital of Wales

Version 2.0 8-7-13   Page 2 of 3

Clinical Board Assistant Head of Finance: Chris Bimson, Specialist Service
Group, University Hospital of Wales

GIG CYMRU NHS WALES
Bwrdd Iechyd Prifysgol
Cwm Taf
University Health Board

Your Ref/ eich cyf:	
Our ref/ ein cyf:	JG/AJE
Date/ dyddiad:	12/09/16
Tel/ ffôn:	01443 443421
Fax/ ffacs:	01443 443420
Email/ ebost:	CTUHB_RD@wales.nhs.uk
Dept/ adran:	Research & Development Dept

Dr Bethan Gibson
Consultant Anaesthetist
Royal Glamorgan Hospital
Llantrisant
CF72 8XR

Dear Dr Gibson

Re: CT/679/207368/16 Resilience in Critical Care Consultants

Thank you for clarifying the points raised at the Risk Review Group (RRRG) held on 18th August 2016. I have pleasure in confirming that this project now has full approval to commence in Cwm Taf University Health Board. However commencement of the project should be upon the receipt of ethical approval if required. If the project is a multi site study it is advised that you also obtain approval from all other Health Boards before commencing the project at individual sites.

The Group reserve the right to information on the progress of the project at any time and should receive a progress report six monthly and a written report on completion.

Random audits will be carried out to ensure that projects comply with the clinical guidelines of research. Any serious adverse incidents relating to the project should be reported to the R&D office and a Clinical Incident Form filled in.

If your project includes participants or resources from other Health Boards it is your responsibility to contact the relevant R&D Office(s) in order to gain R&D approval to commence. Without individual R&D approval from all Health Boards involved in the study Welsh Risk Pool indemnity will not be afforded to the researcher.

On completion of the project it is important that you inform the Health Board Research & Development office.

It is a requirement of approval that a synopsis of your project and its findings (if not commercially too sensitive) be submitted to the R&D department upon completion. This synopsis can then be placed on the R&D departments' web page to provide a useful R&D resource for other research active professionals across the Health Board.

It is also a requirement that an abstract is submitted for review and possible inclusion in the Health Boards annual R&D conference. This facilitates the distribution of all researchers' findings and any resultant changes in clinical practice.

Return Address: Research & Development Department, Royal Glamorgan Hospital, Llantrisant, Rhondda Cynon Taff, CF72 8XR

Chair/Cadeirydd: Dr C D V Jones, CBE   Chief Executive/Prif Weithredydd: Mrs Allison Williams

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If your study is adopted onto the Health & Care Research Wales Clinical Research Portfolio (CRP), it will be a condition of this NHS research permission, that you will be required to regularly upload recruitment data onto the portfolio database.
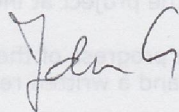
To apply for adoption onto the Health & Care Research Wales CRP, please go to: https://www.ukctg.nihr.ac.uk/Once adopted, Health & Care Research Wales CRP studies may be eligible for additional support through the Health & Care Research Wales Workforce. Further information can be found from your NHS R&D office colleagues.

Uploading recruitment data will enable Health & Care Research Wales to monitor research activity within NHS organizations, leading to NHS R&D allocations which are activity driven. Uploading of recruitment data will be monitored by your colleagues in the R&D office. If you need any support in uploading this data, please contact, Research & Development department.

I would like to take this opportunity to wish you well with your research and look forward to the presentation of your findings.

If you require any further assistance please contact the Research & Development Department, Royal Glamorgan Hospital, ext 3421.

Yours sincerely

Professor John Geen MSc, PhD, FRCPath
Assistant Director for Research & Development

Enc. Notification of Start Form, Interim Progress Report Form, Notification of End Form

c.c. Dr Vikram Sinha, Clinical Director for Anaesthetics, Critical Care & Theatres, Royal Glamorgan Hospital
Miss Josephine Allen, Trainee Clinical Psychologist, Doctoral Programme in Clinical Psychology, School of Psychology, Cardiff University, 11th Floor, Tower Building Park Place, Cardiff, CF10 3AT

Document	Subtitle	Version
Evidence of insurance or indemnity (non-NHS sponsors only)	Employee & Public Liability - 31 Jul 2016	20 Jul 2015
Other (please specify)	Additional Research Sites	v2.0, Sep 2013
Other (please specify)	Advanced Project Information Proforma	27 May 2016
Written final confirmation from the organisation(s) acting as sponsor	Cardiff University	06 Jun 2016
Summary CV for Chief Investigator (CI)	J R Allen	
Summary CV for Academic Supervisor	V Samuel	
GCP Certificates	J R Allen	06 Oct 2015
GCP Certificates	V Samuel	28 Jun 2016
Other (please specify)	Research Proposal	
Interview schedules or topic guides for participants		v1.0, 24 Jun 2016
Research participant consent form		v1.0, 26 May 2016
Other (please specify)	Participant Debrief Sheet	v1.0, 24 Jun 2016
Research participant information sheet (PIS)		v1.0, 26 May 2016
Other (please specify)	Research Outline for participants	v1.0, 24 Jun 2016
Research protocol		v1 24 Jun 2016
R&D Application checklist		
R&D Form (Parts A-D) (signed/authorised pdf or hard copy)		24 Jun 2016

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Your Ref/ eich cyf
Our ref/ ein cyf: JG/TTW
Date/ dyddiad: 31/08/16
Tel/ ffôn: 01443 443421
Fax/ ffacs: 01443 443420
Email/ ebost: CTUHB_RD@wales.nhs.uk
Dept/ adran: Research & Development Dept

Miss Josephine Allen
Trainee Clinical Psychologist
Doctoral Programme in Clinical Psychology
Cardiff University
11th Floor Tower Building
Cardiff
CF10 3AT

Dear Miss Allen

Letter of access for research

As an existing NHS employee you do not require an additional honorary research contract with this NHS organisation. We are satisfied that the research activities that you will undertake in this NHS organisation are commensurate with the activities you undertake for your employer. Your employer is fully responsible for ensuring such checks as are necessary have been carried out. Your employer has confirmed in writing to this NHS organisation that the necessary pre-engagement check are in place in accordance with the role you plan to carry out in this organisation. This letter confirms your right of access to conduct research through Cwm Taf University Health Board for the purpose and on the terms and conditions set out below. This right of access commences on 31/08/16 and ends on 31/10/17 unless terminated earlier in accordance with the clauses below.

You have a right of access to conduct such research as confirmed in writing in the letter of permission for research from this NHS organisation. Please note that you cannot start the research until the Principal Investigator for the research project has received a letter from us giving permission to conduct the project.

You are considered to be a legal visitor to Cwm Taf University Health Board premises. You are not entitled to any form of payment or access to other benefits provided by this organisation to employees and this letter does not give rise to any other relationship between you and this NHS organisation, in particular that of an employee.

While undertaking research through Cwm Taf University Health Board, you will remain accountable to your employer Cardiff and Vale UHB but you are required to follow the reasonable instructions of your nominated manager Dr Vikram Sinha, Clinical Director for Anaesthetics, Critical Care and Theatres in this NHS organisation or those given on her/his behalf in relation to the terms of this right of access.

Where any third party claim is made, whether or not legal proceedings are issued, arising out of or in connection with your right of access, you are required to co-operate fully with any investigation by this NHS organisation in connection with any such claim and to give all such assistance as may reasonably be required regarding the conduct of any legal proceedings.

Return Address: Research & Development Department, Royal Glamorgan Hospital, Llantrisant, Rhondda Cynon Taff, CF72 8XR

Chair/Cadeirydd: Dr C D V Jones, CBE   Chief Executive/Prif Weithredydd: Mrs Allison Williams

Cwm Taf University Health Board is the operational name of Cwm Taf University Local Health Board/Bwrdd Iechyd Prifysgol Cwm Taf yw enw gweithredol Bwrdd Iechyd Lleol Cwm Taf

You must act in accordance with Cwm Taf University Health Board policies and procedures, which are available to you upon request, and the Research Governance Framework.

You are required to co-operate with Cwm Taf University Health Board in discharging its duties under the Health and Safety at Work etc Act 1974 and other health and safety legislation and to take reasonable care for the health and safety of yourself and others while on Cwm Taf University Health Board premises. Although you are not a contract holder, you must observe the same standards of care and propriety in dealing with patients, staff, visitors, equipment and premises as is expected of a contract holder and you must act appropriately, responsibly and professionally at all times.

You are required to ensure that all information regarding patients or staff remains secure and *strictly confidential* at all times. You must ensure that you understand and comply with the requirements of the NHS Confidentiality Code of Practice (http://www.dh.gov.uk/assetRoot/04/06/92/54/04069254.pdf) and the Data Protection Act 1998. Furthermore you should be aware that under the Act, unauthorised disclosure of information is an offence and such disclosures may lead to prosecution.

Cwm Taf University Health Board will not indemnify you against any liability incurred as a result of any breach of confidentiality or breach of the Data Protection Act 1998. Any breach of the Data Protection Act 1998 may result in legal action against you and/or your substantive employer.
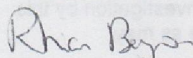
You should ensure that, where you are issued with an identity or security card, a bleep number, email or library account, keys or protective clothing, these are returned upon termination of this arrangement. Please also ensure that while on the premises you wear your ID badge at all times, or are able to prove your identity if challenged. Please note that this NHS organisation accepts no responsibility for damage to or loss of personal property.

We may terminate your right to attend at any time either by giving seven days' written notice to you or immediately without any notice if you are in breach of any of the terms or conditions described in this letter or if you commit any act that we reasonably consider to amount to serious misconduct or to be disruptive and/or prejudicial to the interests and/or business of this NHS organisation or if you are convicted of any criminal offence. Where applicable, your substantive employer will initiate your Independent Safeguarding Authority (ISA) registration in-line with the phasing strategy adopted within the NHS and the applicable legislation. Once you are ISA-registered, your employer will continue to monitor your ISA registration status via the on-line ISA service. Should you cease to be ISA-registered, this letter of access is immediately terminated. Your substantive employer will immediately withdraw you from undertaking this or any other regulated activity and you MUST stop undertaking any regulated activity.

Your substantive employer is responsible for your conduct during this research project and may in the circumstances described above instigate disciplinary action against you.

If your circumstances change in relation to your health, criminal record, professional registration or ISA registration, or any other aspect that may impact on your suitability to conduct research, or your role in research changes, you must inform the NHS organisation that employs you through its normal procedures. You must also inform your nominated manager in this NHS organisation.

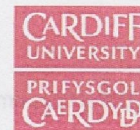Yours sincerely

Rhian Beynon
R&D Manager

Appendix 6: Research Protocol

PROTOCOL

Title of Project:

Resilience in Critical Care Consultants: Elucidating Intensivists' Experience.

Background

Burnout describes a pattern of psychological distress and emotional exhaustion which occurs within professionals as a result of chronic occupational and interpersonal stressors (Maslach *et al.*, 1996; Maslach & Schaufeli, 1993). Burnout is recognised to comprise of negative emotions, attitudes and behaviours towards work (Maslach *et al.*, 2001). Furthermore, burnout is associated with physical illness and emotional or psychological distress impacting upon absenteeism and high turnover (Maslach *et al.*, 2001) including intensivists' retraining to a different specialism (Jones *et al.*, 2011). A recent report by the Point of Care Foundation identified that sickness rates for NHS staff are amongst the highest across the UK, with the highest proportion of sickness being related to stress, burnout and mental health difficulties (POCF, 2016).

The implications to care of Burnout across NHS staff are significant with research identifying burnout to impact negatively upon performance and the quality of medical care provision (Shirom *et al.*, 2006; Weisman & Teitelbaum, 1985) in addition to predicting lower patient satisfaction (Garman *et al.*, 2002; McCue, 1982). This identified impact of burnout within research is reflected within the NHS workforce, recognised within the recent POCF report which raised concern relating to the negative effects of burnout upon decision making, patient safety and patient experience (POCF, 2016). Empirical studies have indicated that improved working satisfaction (Michie, 2004) and compassion to self and colleagues improves patient care and reduces mortality rates (POCF, 2016).

The past decade has seen recognition within research of the presence of burnout across the medical profession (Shanafelt *et al.*, 2012). It is of note however that a comparison study of Paediatric Intensivists with General Paediatric Consultants identified burnout as more prevalent in Paediatric Intensivists (Garcia et al, 2014).

Critical Care Units are highly stressful environments in which medical staff are required to provide intensive medical interventions to patients at a critical level of medical need. The working life of an intensivist involves delicate yet highly emotive and high stakes decisions. Decisions such as those relating to end-of-life have been associated with decreased job

satisfaction, emotional and psychological burnout (Flannery et al., 2015). Furthermore, a recent British survey identified that 43% of intensivists reported health problems related to work, in particular a link with the intensity of on-call duty being highlighted (Jones *et al.*, 2014). Research consistently reports a high presence of burnout within Intensive Care or Critical Care medical staff teams (Guntupalli *et al.* , 2014; Merlani *et al.*, 2011; Curtis & Puntillo, 2007; Teixeira *et al.*, 2013) In studies conducted in the context of the French equivalent Intensive Care Units, 33% of medical staff (Poncet et al., 2007) and almost half (46.5%) of intensivists (Embriaco et al., 2007) showed severe Burnout Syndrome related symptoms. The experience of psychological distress is prevalent within both general medics and more specialist consultant intensivists (Coomber *et al.*, 2002) with research reporting that 23.8% of ICU intensivists demonstrate symptoms of depression (Embriaco et al., 2012). Moreover, a significant proportion of medical staff across adult and paediatric critical care and acute care disciplines report symptoms of post-traumatic stress (51.5%) and burnout (59.8%) which directly relate to experiences within the workplace (Colville *et al.*, submitted for publication). An interesting finding reported by Colville et al. (submitted for publication) identified that doctors are more likely to experience burnout than nurses even after the individual's resilience and ability to employ coping strategies is mediated for.

Yet despite the demands of the role and ongoing exposure to potentially traumatic experiences, many intensivists remain in the specialism of Critical Care. As such, questions arise from this body of research: when burnout is more prevalent in this specialism, what keeps Critical Care intensivists in the profession and further, what keeps them psychologically healthy? Although indicated as a protective factor against the risk of burnout and post-traumatic stress (Colville *et al.*, submitted for publication) and consequently an area in need of further study (Garcia et al, 2014), research into resilience in Critical Care Intensivists remains elusive. The principle aim of this research is to bring clarity to the understanding of resilience in Critical Care Intensivists.

Brief outline of proposed research study

The proposed study adopts a qualitative design exploring consultant intensivists' experiences of working within a Critical Care unit and within this to consider experiences of resilience and changes within resilience.

Objectives:

1. To explore in depth consultant intensivists' experience of Critical Care, what keeps them working in this highly demanding and potentially traumatic specialism. To

Resilience in Critical Care Consultants: PROTOCOL Version 1: 26/05/2016

explore within this the individual characteristics and environmental shifts which might impact on feelings of resilience.

2. To consider how this relates to current psychological theory and NHS policy / guidelines relevant to the Critical Care Unit.

Method

Inclusion/Exclusion Criteria is the same for both phases of the research study.

Inclusion Criteria	Exclusion Criteria
- All participants must be >18 years - Consultant Intensivist - Worked as a Consultant intensivist within Critical Care for more than 1 year - Must be able to understand English and communicate responses.	- Working in Critical Care Specialism for less than 1 year - Working as a Consultant Intensivist / Critical Care Consultant for less than 1 year

Design:

Semi-structured interviews will be conducted to explore in depth consultant intensivists' experience of working in Critical Care, what keeps them working in this highly demanding and potentially traumatic specialism. In particular questions will guide exploration of individual characteristics and environmental factors which might impact on feelings of resilience. Participants will be given a choice of venue for conducting the interview which will be neutral but confidential to ensure participants feel comfortable. Venue options will be presented for interviews to be undertaken either at Cardiff University, in consultation rooms separate to the Critical Care Units across four research sites (Adult Critical Care Units within University Hospital Wales, Cardiff and Vale University Health Board; Royal Gwent Hospital, Aneurin Bevan University Health Board; Royal Glamorgan Hospital, Cwm Taf University Health Board; Morriston Hospital, ABM University Health Board), or via telephone. Interviews will last no more than 1 hour. The interviews will be audio-recorded in order to enable the researcher to accurately transcribe the interview data to support the researcher with data analysis. Participants will be made aware of this in advance on the consent form.

The Researcher will be guided by a Grounded Theory approach to the development of questions, data collection and analysis. In line with the Grounded Theory approach to qualitative research, the number of interviews conducted will be determined by the point of

Resilience in Critical Care Consultants: PROTOCOL Version 1: 26/05/2016

data saturation, the point in which no new theoretical insights or understandings emerge from the data (Charmaz, 2006, 2014).

Sample Size:
We envisage data saturation will be achieved by 12 participant interviews, in line with the literature within Grounded Theory (Charmaz, 2006, 2014). However, if saturation is not achieved up to 25 interviews may be undertaken.

Sampling:
Initially sampling will be purposeful in order to access wide variation in consultant intensivists' experience of resilience during their time working in Critical Care. As such, participants who express interest in partaking in the research will be interviewed in the first instance. Thereafter, theoretical sampling will be adopted, enabling the selection of participants to be influenced and guided by the emerging theory within the previous data, again in line with the Grounded Theory approach.

Recruitment:
Participants will be recruited from the Critical Care Units across four NHS University Health Boards: Cardiff and Vale University Health Board, Aneurin Bevan University Health Board, Cwm Taf University Health Board, ABMU University Health Board. Participants will consist only of critical care consultants / consultant intensivists.

Participation will be voluntary. A Research Outline detailing information about the study will be made accessible to the relevant Critical Care Units. The researcher will also attend meetings with the Consultants to inform them of the project. In addition, the named local clinician will email the participant information sheet to critical care consultants within their corresponding Critical Care Units, inviting their participation. Consultants will be able to volunteer to participate, registering their interest to be involved by contacting the researcher directly.

All interested participants will be provided with a research outline, written participant information sheet and consent form.

Data Protection:
All participants will be assigned a non-gendered pseudonym throughout the transcription, analysis and report write up to ensure confidentiality and protect the identity of participants. In addition, services and specific geographical locations will not be specified to further

Resilience in Critical Care Consultants: PROTOCOL Version 1: 26/05/2016

protect participants' identity. Direct quotes will be used in the final report but will not be paired with any identifiable information. Transcriptions and audio recordings will be stored on a computer which is password protected. Each participant will be offered a copy of the transcript and will be given the opportunity to confirm if it is accurate. Recordings will be deleted following transcription and the transcripts will be kept for 5 years (in line with Cardiff University policy for arrangements and systems for the management and monitoring of research) in a secure location to maintain confidentiality.

Analysis:

Grounded Theory will be adopted as an approach for the collection and analysis of qualitative data which will occur concurrently. Grounded Theory holds a 'systematic, yet flexible' inductive approach to the collection and analysis of data which serves to detect emerging themes from the data and from this construct contextualised theories which are "grounded" in the data (Charmaz, 2014 p.1; Strauss & Corbin, 1997). This is an interactive process which incorporates an iterative approach, continually moving between data and analysis. As such, each interview will be transcribed immediately after and the data reviewed to identify emerging themes which will inform changes in the subsequent interviews. Interview questions will be reviewed and amended to focus increasingly on the theory which is emerging from the data in an evolving and interactive process.

Potential for Risk & Benefit

Risk to Participants:

Participating in interviews within which consultant intensivists' will be invited to reflect upon their experience of working in Critical Care, a potentially traumatic environment, may result in the experience of distress. With this in mind, the potential for distress will be clearly outlined in the participant information sheet provided before they give consent to take part in the study. If participants find the interview distressing, they will be offered time with the researcher who is a clinical psychology trainee, to 'debrief' immediately following the interviews. If distress continues, or if the interview give rise to an awareness of difficulties experienced by the participant raising concern regarding wellbeing, participants will be given information regarding available services within each UHB for ongoing support. For Cardiff and Vale this is the in-house Consultant Clinical Psychologist or the Employee Wellbeing Service. For other UHBs this their UHBs Employee Wellbeing Service. Participants will be clearly informed of their rights to discontinue participation in the study at any stage of the research. Information detailing local support services (e.g. Staff Wellbeing Occupational Health Services) will be provided.

Resilience in Critical Care Consultants: PROTOCOL Version 1: 26/05/2016

There is also a small possibility for there to be a disclosure of risk issues during the interview. Should the potential for risk arise, the Clinical Supervisor, will be notified immediately for further assessment and management of the risk.

Participation in interviews will take approximately 30-60 minutes depending on the answers given by participants. Participants will be made aware of this burden within the consent process. Furthermore, conversations with the relevant Critical Care Units will ensure agreement regarding when the interviews take place to ensure they do not place addition burden upon the Unit (these agreements may site specific and differ according to site requirements but could include the interviews being conducted out of working hours, or when cover is arranged).

Benefits:
This research will contribute to the knowledge base in relation to Burnout and Resilience. Such understanding in to resilience in this population embedded within a traumatic environment may inform the development of future interventions (both at a site and organisational level) to improve resilience and wellbeing within the intensivists. Such interventions may have an impact upon the improvement of staff retention across the Critical Care Specialism and potentially influence a reduction sickness levels (POCF, 2016). As such, this research may have implications for the sustainability of Critical Care Services.

Furthermore, recognising the identified negative impact of burnout across the NHS workforce upon wellbeing, patient safety and mortality (POCF, 2016), the positive implications of this research could facilitate and inform organisational change to incorporate the understanding gained around resilience into concepts of intelligent kindness, compassionate care. Research highlights improvements within patient care and a reduction in mortality rates when there is increased working satisfaction (Michie, 2004) and compassion self, colleagues and patients (POCF, 2016; The Kings Fund, 2009). As such, informing the development of individual and organisational interventions to draw upon an understanding of resilience to address the negative effects of burnout upon decision making, patient safety and patient experience.

Risk to Researchers:
Participants will be NHS employees who have been subject to NHS employment checks. The ID badges of all staff will be checked to confirm their identity.

Resilience in Critical Care Consultants: PROTOCOL Version 1: 26/05/2016

Appendix 7: Email sent to Occupational Health Services Requesting their support

Request to signpost to your service: Qualitative research project exploring resilience in consultant intensivists

From: Josephine Allen

Mon 13/06/2016 15:36

To:

Adrian.Neal@wales.nhs.uk;

Debbie.Rees-Adams@wales.nhs.uk;

Judith.Sinnott@wales.nhs.uk;

employee.wellbeing@wales.nhs.uk

Cc:

Victoria Samuel (Cardiff and Vale UHB - Dclinpsy) <Victoria.Samuel@wales.nhs.uk>;

Julie Highfield (Cardiff and Vale UHB - Psychology) <Julie.Highfield@wales.nhs.uk>

To Whom it May Concern,

My name is Josie Allen, I am a Trainee Clinical Psychologist on the South Wales Doctoral Programme in Clinical Psychology at Cardiff University. As my Doctoral Thesis, I am proposing a research project exploring the experience of resilience for consultant intensivists working within Critical Care Directorates. This research project is being supervised by Dr Julie Highfield and Dr Victoria Samuel who have been copied into this email.

I am hoping to interview consultant intensivists from several Critical Care Directorates across multiple Health Boards within Wales. Critical Care Units associated with Cardiff & Vale UHB, AB UHB, ABM UHB and Cwm Taf UHB have agreed to take part in the qualitative research study. We are now in the process of completing an application to the relevant UHB R&D departments. As part of the research protocol we would like to be able to advise consultants of where they can access additional support following the interviews should anything come up for them during the interview process for which they would like support. Prior to submission therefore, we wanted to contact each Employee Wellbeing Service / Occupational Health Service to gain your permission. With this in mind, I would be grateful if you could consider whether your service is happy for consultant intensivists in your UHB who participate in the research to be signposted to the relevant Employee Wellbeing / Occupational Health Service should anything arise for them.

I have attached the participant information sheets and debrief sheet for your information. Please note that I have included the details of each UHB Employee Wellbeing / Occupational Health Service on the debrief sheet. Please let me know if these details are incorrect or if you do not wish for your service to be included so the debrief sheet can be amended accordingly. If you require any further information or have any queries regarding this research project please do not hesitate to contact me.

I look forward to hearing from you.

Your Sincerely,

Josie Allen
Trainee Clinical Psychologist

Cardiff & Vale UHB
Cardiff University

Appendix 8: Invitation to participate for prospective principle investigators within

identified CCUs

<div align="center">

Proposed research:

Resilience in Critical Care Consultants: Elucidating Intensivists' Experience
Exploring the experience of resilience of consultant intensivists working within Critical Care

</div>

My name is Josie Allen, I am a Trainee Clinical Psychologist on the South Wales Doctoral Programme in Clinical Psychology at Cardiff University. As my Doctoral Thesis, I am proposing a research project exploring the experience of resilience for consultant intensivists working within Critical Care Directorates.
I am hoping to interview consultant intensivists from several Critical Care Directorates across multiple Health Boards within Wales. This document is an initial proposal to provide information to units who may like to be involved in the study prior to submission to Local UHB R&D departments. I would like to invite your team to be part of this prospective research study. **If after reading through this proposal you decide that you would like your team to partake in the research or if you have any additional questions, please email either myself (AllenJ17@cardiff.ac.uk), Dr Julie Highfield or Dr Victoria Samuel who are supervising this study.**
Thereafter, a final research proposal will be submitted to the relevant R&D departments with interested sites specified and a named contact for each site identified.

Clinical Supervisor: Dr Julie Highfield, Consultant Clinical Psychologist: Critical Care Directorate, Cardiff and Vale University Health Board;
Julie.Highfield@wales.nhs.uk
Academic Supervisor: Dr Victoria Samuel, Senior Research Tutor, South Wales Programme in Clinical Psychology, Cardiff University;
Victoria.Samuel@wales.nhs.uk

Research Project Title:
Resilience in Critical Care Consultants: Elucidating Intensivists' Experience.

Background:
Burnout describes a pattern of psychological distress and emotional exhaustion which occurs within professionals as a result of chronic occupational and interpersonal stressors (Maslach *et al.*, 1996; Maslach & Schaufeli, 1993). Burnout is recognised to comprise of negative emotions, attitudes and behaviours towards work (Maslach *et al.*, 2001) and is associated with physical illness and emotional or psychological distress impacting upon absenteeism and high turnover (Maslach *et al.*, 2001). A recent report by the Points of Care Foundation identified that sickness rates for NHS staff are amongst the highest across the UK, with the highest proportion of sickness being related to stress, burnout and mental health difficulties (POCF, 2016).

The implications to care of burnout across NHS staff are significant with research identifying burnout to impact negatively upon performance and the quality of medical care provision (Shirom *et al.*, 2006; Weisman & Teitelbaum, 1985) in addition to predicting lower patient satisfaction (Garman *et al.*, 2002; McCue, 1982). This identified impact of burnout within research is recognised within the recent POCF report which raised concern relating to the negative effects of burnout upon decision making, patient safety and patient experience (POCF, 2016). Empirical studies have indicated that improved working satisfaction (Michie, 2004) and compassion to self and colleagues improves patient care and reduces mortality rates (POCF, 2016). The past decade has seen recognition within research of the presence of burnout across the medical profession (Shanafelt *et al.*, 2012).

Critical Care Units are highly stressful environments in which medical staff are required to provide intensive medical interventions to patients at a critical level of medical need. The working life of an intensivist involves delicate yet highly emotive and high stakes decisions. Decisions such as those relating to end-of-life have been associated with decreased job satisfaction, emotional and psychological burnout (Flannery et al., 2015). Furthermore, a recent British survey identified that 43% of intensivists reported health problems related to work, in particular a link with the intensity of on-call duty being highlighted (Jones *et al.*, 2014). Research consistently reports a high presence of burnout within Intensive Care or Critical Care medical staff teams (Guntupalli *et al.* , 2014; Merlani *et al.*, 2011; Curtis & Puntillo, 2007; Teixeira *et al.*, 2013)

 In studies conducted in the context of the French equivalent Intensive Care Units, 33% of medical staff (Poncet et al., 2007) and almost half (46.5%) of intensivists (Embriaco et al., 2007) showed severe Burnout Syndrome related symptoms. The experience of psychological distress is prevalent within both general medics and more specialist consultant intensivists (Coomber *et al.*, 2002) with research reporting that 23.8% of ICU intensivists demonstrate symptoms of depression (Embriaco et al., 2012). Moreover, a significant proportion of medical staff across adult and paediatric critical care and acute care disciplines report symptoms of post-traumatic stress (51.5%) and burnout (59.8%) which directly relate to experiences within the workplace (Colville *et al.*, submitted for publication). A comparison study of Paediatric Intensivists with General Paediatric Consultants identified burnout as more prevalent in Paediatric Intensivists (Garcia et al, 2014). Colville et al. (submitted for publication) identified that doctors are more likely to experience burnout than nurses even after the individual's resilience and ability to employ coping strategies is mediated for.

Yet despite the demands of the role and ongoing exposure to potentially traumatic experiences, many intensivists remain in the specialism of Critical Care. As such, questions arise from this body of research: although burnout is more prevalent in this specialism, what keeps Critical Care intensivists in the profession and what keeps them psychologically healthy? Although indicated as a protective factor against the risk of burnout and post-traumatic stress (Colville *et al.*, submitted for publication), and consequently an area in need of further study (Garcia et al, 2014), research into resilience in Critical Care Intensivists remains elusive. The principle aim of this research is to bring clarity to the understanding of resilience in Critical Care Intensivists.

Aims and Objectives:
To explore in depth consultant intensivists' experience of Critical Care, what keeps them working in this highly demanding and potentially traumatic specialism. To explore within this the individual characteristics and environmental factors which might impact on feelings of resilience.
To consider how this relates to current psychological theory and NHS policy / guidelines relevant to the Critical Care Unit.

Clinical Relevance:

Implications for patient care and staff retention e.g. informing organisational strategies to improve the wellbeing of Consultants within Critical Care

Methodology: Grounded Theory
Sample (size): 12
Sample Source: Critical Care Consultants from across multiple sites in Wales
Inclusion Criteria: Critical Care Consultants; working in Critical Care Unit as a Consultant intensivist for more than 1 year
Exclusion Criteria: Working as a Consultant intensivist in Critical Care Unit for less than 1 year
Measures: Semi-structured interview questions (subject to changes)

Appendix 9: Email invitation to participate in research sent to intensivists via principle

investigators

From: Julie Highfield (Cardiff and Vale UHB - Psychology)
Sent: 05 October 2016 08:23
To: Josephine Allen & all consultant intensivists
Subject: FW: Invitation to participate in research: Resilience in Critical Care Consultants.

Dear All

Please see below.
Josie is a trainee clinical psychologist conducting her research with critical care consultants.
Participation should only take about 1.5 hours of your time and would greatly help us
understand the factors that maintain consultant's resilience in a critical care setting.

If you are interested in participating, please contact Josie directly, or if you are happy for me
to know you are participating, reply to this email.

Many thanks for considering this.

Julie

Dr Julie Highfield
Consultant Clinical Psychologist in Critical Care (Adult and Paediatric)

Working Days Monday-Thursday

Adult Critical Care
A3 Corridor
University Hospital of Wales
Heath Park
Cardiff. CF14 4XW
Tel: 029 20 745114 (45114 internal)

Paediatric Critical Care
Level 3 - Star Floor
The Noah's Ark Children's Hospital for Wales
Cardiff
CF14 4XW

DCP Wales Committee Ordinary Member

From: Josephine Allen [mailto:AllenJ17@cardiff.ac.uk]
Sent: 18 August 2016 14:32
To: Julie Highfield (Cardiff and Vale UHB - Psychology)
Subject: Invitation to participate in research: Resilience in Critical Care Consultants.

Dear consultant intensivists,

My name is Josie Allen. I am a Trainee Clinical Psychologist on the South Wales Doctoral Programme in Clinical Psychology at Cardiff University. Some of you may already be aware of a prospective research study which I am undertaking as part of my Doctoral Thesis under the supervision of Dr Julie Highfield and Dr Victoria Samuel. The research project we are undertaking aims to explore the **resilience of consultants working within Critical Care**, recruiting from Wales. This project has now received approval from Cardiff and Vale UHB R&D department [*relevant UHB Research and Development Department*]. As such, I have asked Julie [*UHB Principle Investigator*] to forward this email inviting you to participate in this study.

Attached to this email are documents which provide information relating to the project in addition to a consent form. **If after reading through the attached research outline and information sheet you decide that you would like to partake in the research or if you have any additional questions, please email either myself (AllenJ17@cardiff.ac.uk), Dr Julie Highfield or Dr Victoria Samuel who are supervising this study.** Thereafter, please read through the participant information sheet and indicate that you have read this information by completion and signing of the consent form.

I hope that you will consider participation in this study. I look forward to hearing from you.

Kind Regards

Josie Allen
Trainee Clinical Psychologist
Cardiff University
Cardiff & Vale UHB.

Confidentiality
 This message is strictly confidential and intended for the person or organisation to whom it is addressed. If you are not the intended recipient of the message then please notify the sender immediately. Any of the statements or comments made above should be regarded as personal and not necessarily those of Cardiff & Vale University Health Board, any constituent part or connected body. Email communication is subject to monitoring; for further
information http://www.wales.nhs.uk/sitesplus/864/page/50329
 Mae'r neges hon yn gyfrinachol. Os nad chi yw'r derbynnydd y bwriedid y neges ar ei gyfer, byddwch mor garedig b rhoi gwybod i'r anfonydd yn ddi-oed. Dylid ystyried unrhyw ddatganiadau neu sylwadau a wneir uchod yn rhai personol, ac nid o angenrhaid yn rhai o eiddo Bwrdd Iechyd Prifysgol Caerdydd ar Fro, nac unrhyw ran gyfansoddol ohoni na chorff cysylltiedig. Mae cyfathrebu drwy e-bost yn amodol l fonitro; am fwy o wybodaeth. http://www.wales.nhs.uk/sitesplus/864/cymraeg
Freedom of Information
 Please be aware that, under the terms of the Freedom of Information Act 2000, Cardiff and Vale University Health Board may be required to make public the content of any emails or correspondence received. For further information on Freedom of Information, please refer to the Cardiff and Vale UHB website http://www.cardiffandvaleuhb.wales.nhs.uk/freedom-of-information-new
Cofiwch fod yn ymwybodol ei bod yn bosibl y bydd disgwyl i Bwrdd Iechyd Prifysgol Caerdydd ar Fro roi cyhoeddusrwydd i gynnwys unrhyw ebost neu ohebiaeth a dderbynnir, yn unol ag amodau'r Ddeddf Rhyddid Gwybodaeth 2000. I gael mwy o wybodaeth am Ryddid Gwybodaeth, cofiwch gyfeirio at wefan Bwrdd Iechyd Prifysgol Caerdydd ar
Fro http://www.wales.nhs.uk/sitesplus/864/cymraeg

Appendix 10: Participant information sheets

Research Outline

Resilience in Critical Care Consultants: Elucidating Intensivists' Experience.

Exploring the experience of resilience of consultant intensivists working within Critical Care

My name is Josie Allen. I am a Trainee Clinical Psychologist on the South Wales Doctoral Programme in Clinical Psychology at Cardiff University. As my Doctoral Thesis, I am proposing a research project exploring the experience of resilience for consultant intensivists working within Critical Care Directorates.

I am hoping to interview consultant intensivists from several Critical Care Directorates across multiple Health Boards within South Wales. This document is an outline of the research project to provide information to participants who may like to be involved in the study. **If after reading through this research outline you decide that you would like to partake in the research or if you have any additional questions, please email either myself (AllenJ17@cardiff.ac.uk), Dr Julie Highfield or Dr Victoria Samuel who are supervising this study.** Thereafter, please read through the participant information sheet and indicate that you have read this information by completion and signing of the consent form.

Clinical Supervisor: Dr Julie Highfield, Consultant Clinical Psychologist: Critical Care Directorate, Cardiff and Vale University Health Board; Julie.Highfield@wales.nhs.uk

Academic Supervisor: Dr Victoria Samuel, Senior Research Tutor, South Wales Programme in Clinical Psychology, Cardiff University; Victoria.Samuel@wales.nhs.uk

Background:

Burnout describes a pattern of psychological distress and emotional exhaustion which occurs within professionals as a result of chronic occupational and interpersonal stressors (Maslach *et al.*, 1996; Maslach & Schaufeli, 1993). Burnout is recognised to comprise of negative emotions, attitudes and behaviours towards work (Maslach *et al.*, 2001) and is associated with physical illness and emotional or psychological distress impacting upon absenteeism and high turnover (Maslach *et al.*, 2001). A recent report by the Points of Care Foundation identified that sickness rates for NHS staff are amongst the highest across the UK, with the highest proportion of sickness being related to stress, burnout and mental health difficulties (POCF, 2016).

The implications to care of burnout across NHS staff are significant with research identifying burnout to impact negatively upon performance and the quality of medical care provision (Shirom *et al.*, 2006; Weisman & Teitelbaum, 1985) in addition to predicting lower patient satisfaction (Garman *et al.*, 2002; McCue, 1982). This identified impact of burnout within research is recognised within the recent POCF report which raised concern relating to the negative effects of burnout upon decision making, patient safety and patient experience (POCF, 2016). Empirical studies have indicated that improved working satisfaction (Michie, 2004) and compassion to self and colleagues improves patient care and reduces mortality rates (POCF, 2016).

The past decade has seen recognition within research of the presence of burnout across the medical profession (Shanafelt *et al.*, 2012).

Critical Care Units are highly stressful environments in which medical staff are required to provide intensive medical interventions to patients at a critical level of medical need. The working life of an intensivist involves delicate yet highly emotive and high stakes decisions. Decisions such as those relating to end-of-life have been associated with decreased job satisfaction, emotional and psychological burnout (Flannery et al., 2015). Furthermore, a recent British survey identified that 43% of intensivists reported health problems related to work, in particular a link with the intensity of on-call duty being highlighted (Jones *et al.*, 2014). Research consistently reports a high presence of burnout within Intensive Care or Critical Care medical staff teams (Guntupalli *et al.* , 2014; Merlani *et al.*, 2011; Curtis & Puntillo, 2007; Teixeira *et al.*, 2013)

In studies conducted in the context of the French equivalent Intensive Care Units, 33% of medical staff (Poncet et al., 2007) and almost half (46.5%) of intensivists (Embriaco et al., 2007) showed severe Burnout Syndrome related symptoms. The experience of psychological distress is prevalent within both general medics and more specialist consultant intensivists (Coomber *et al.*, 2002) with research reporting that 23.8% of ICU intensivists demonstrate symptoms of depression (Embriaco et al., 2012). Moreover, a significant proportion of medical staff across adult and paediatric critical care and acute care disciplines report symptoms of post-traumatic stress (51.5%) and burnout (59.8%) which directly relate to experiences within the workplace (Colville *et al.*, submitted for publication). A comparison study of Paediatric Intensivists with General Paediatric Consultants identified burnout as more prevalent in Paediatric Intensivists (Garcia et al, 2014). Colville et al. (submitted for publication) identified that doctors are more likely to experience burnout than nurses even after the individual's resilience and ability to employ coping strategies is mediated for.

Yet despite the demands of the role and ongoing exposure to potentially traumatic experiences, many intensivists remain in the specialism of Critical Care. As such, questions arise from this body of research: although burnout is more prevalent in this specialism, what keeps Critical Care intensivists in the profession and what keeps them psychologically healthy? Although indicated as a protective factor against the risk of burnout and post-traumatic stress (Colville *et al.*, submitted for publication), and consequently an area in need of further study (Garcia et al, 2014), research into resilience in Critical Care Intensivists remains elusive. The principle aim of this research is to bring clarity to the understanding of resilience in Critical Care Intensivists.

Aims and Objectives:

To explore in depth consultant intensivists' experience of Critical Care, what keeps them working in this highly demanding and potentially traumatic specialism. To explore within this the individual characteristics and environmental factors which might impact on feelings of resilience.

To consider how this relates to current psychological theory and NHS policy / guidelines relevant to the Critical Care Unit.

Clinical Relevance:

Implications for patient care and staff retention e.g. informing organisational strategies to improve the wellbeing of Consultants within Critical Care, considering compassionate care.

Methodology: Grounded Theory

Sample (size): 12-25

Sample Source: Critical Care Consultants from across multiple sites in South Wales

Inclusion Criteria: Critical Care Consultants; working in Critical Care Unit as a Consultant intensivist for more than 1 year

Exclusion Criteria: Working as a Consultant intensivist in Critical Care Unit for less than 1 year

Measures: Semi-structured interview questions (subject to changes)

Resilience in Critical Care Consultants: Research Outline Version 1: 24/062016
Josie Allen

Participant Information Sheet

Title of Project:
Resilience in Critical Care Consultants: Elucidating Intensivists' Experience.

You are being invited to take part in this project on the experience of resilience for consultant intensivists working within Critical Care Units. It is a research study conducted by a Trainee Clinical Psychologist, Josie Allen who is studying for the Doctorate in Clinical Psychology at Cardiff University.
Before you decide whether to take part, we would like you to understand the purpose of the study and what it will involve for you. Please do ask Josie if there is anything that it not clear or if you have any questions.

The purpose of this study
This project is looking at how consultant intensivists experience working within Critical Care, with a focus on exploring perceptions of resilience. Within this, there will be a focus on individual characteristics and environmental factors which might impact on feelings of resilience. It is hoped that this study will bring clarity to the understanding of resilience in Critical Care Intensivists and help us to to improve the wellbeing of consultants within Critical Care.

Why have I been invited to take part?
You have been invited to take part because you are a consultant intensivist who has been working as a consultant in a Critical Care setting for more than 1 year. We would like to find out about your experience of working in Critical Care and your understanding of your own resilience, what helps you manage difficulties and what keeps you in this specialism. We are aiming to speak to a maximum of 25 consultant intensivists who work in Critical Care Units across South Wales. It is important to remember that participation or non-participation in this study will have no bearing on your present or future employment.

What will happen?
If you agree to take part in this study you will be asked to join Josie Allen for an interview. You have a choice of venue which will be neutral and confidential. The choices for venue are: in a confidential room at the hospital in which you work (away from the ward in which you work); Cardiff University; telephone interview. You will be interviewed about your experience of working in Critical Care for up to 60 minutes. The interview will be audio-recorded. Following this Josie will transcribe the interview and anonymise any identifiable information.

What will happen next?
After your interview has been transcribed, Josie will look for common themes between what you and others have explained. This will form the basis of the report.

Do I have to take part?
It is entirely up to you to decide to take part in the study or not. Please ask Josie if you have any questions after reading this information sheet. If you are interested in participating, you will be asked to sign a consent form and offered another opportunity to ask questions about the study before the interview begins. During the interview you may take a break at any point or to withdraw from the project.

What are the potential disadvantages of taking part?
It is important to know that during the interview you will be asked about your experience of working in Critical Care (e.g. how you managed to return to work after

a difficult case) and it is possible that you could find this distressing. We do not have to talk about anything that you do not wish to, and you will be encouraged to talk only about those things which you feel able and comfortable discussing. If you would like to bring someone along with you, either to sit and wait outside or join you throughout part or all of the interview, that is fine. Following this, you will also be given the opportunity to discuss the experience of being interviewed and any thoughts/feelings that this brought up for you and ask further questions about the study - this is known as a debrief.

If following the interview any points of concern have been raised for you regarding your wellbeing you will be given information regarding how to access your local provision of employee support. For Cardiff and Vale this will be the in-house Consultant Clinical Psychologist or the Employee Wellbeing Service. For other UHBs this will be your Employee Wellbeing Service or Occupational Health.

The interview process will take up to 60 minutes. There is an agreement regarding when your interview will take place with each partaking Critical Care Unit to ensure there is no impact on provision of care on the unit.

What are the benefits of taking part?
Whilst taking part in the study will not benefit you directly, it is hoped that the project will lead to an increased understanding of resilience when working as a consultant intensivist in Critical Care. This may help services to be better able to support intensivists in the workplace, informing potential strategies to improve the wellbeing of consultant intensivists and thus improving patient care and staff retention.

Will my taking part remain confidential?
All information will be made anonymous and you will not be able to be identified by reading the report. This means that names of participants, services and specific geographical locations will not be specified to protect your identity. Direct quotes will however be used in the final report but will not be paired with any identifiable information. Non-gendered pseudonyms (made up names e.g. Sam) will be used to replace your name and will appear next to the quotes only. Transcriptions and audio recordings will be stored on a computer which is password protected.

You will be offered a copy of the transcript and will be given the opportunity to confirm if it is accurate. Recordings will be deleted following transcription and the transcripts will be kept for 5 years in a secure location to maintain confidentiality. If you disclose information which relates to your own or others safety your confidentiality may be waivered. In this case discussions regarding how to best ensure your own and other's safety will also be held with the other named researchers (as below).

Who else is involved in this research?

Project Lead: Josie Allen
                    Role: Trainee Clinical Psychologist
                    Email: AllenJ17@cardiff.ac.uk
                    Telephone: 02920 870582
                    Address: South Wales Doctoral Programme in Clinical
                    Psychology, 11th Floor, School of Psychology, Tower Building,
                    70 Park Place, Cardiff, CF10 3AT.

Clinical Supervisor: Dr Julie Highfield
                       Role: Consultant Clinical Psychologist
                       Email: Julie.Highfield@wales.nhs.uk

Resilience in Critical Care Consultants: Consent Form Version 1: 26/05/2016
Josie Allen

Telephone: 029 20 745114 (45114 internal)
Address: Adult Critical Care Directorate, A3 Corridor,
University Hospital of Wales, Heath Park, Cardiff. CF14 4XW

Academic Supervisor: Dr Victoria Samuel
Role: Senior Research Tutor
Email: Victoria.Samuel@wales.nhs.uk
Telephone: 02920 870582
Address: South Wales Doctoral Programme in Clinical
Psychology, 11th Floor, School of Psychology, Tower Building,
70 Park Place, Cardiff, CF10 3AT.

Site specific collaborator / named contact:

UHW Adult Critical Care Cardiff & Vale UHB	Dr Julie Highfield Role: Consultant Clinical Psychologist Email: Julie.Highfield@wales.nhs.uk Telephone: 029 20 745114 (45114 internal) Address: Adult Critical Care Directorate, A3 Corridor, University Hospital of Wales, Heath Park, Cardiff. CF14 4XW
Royal Gwent Adult Critical Care Aneurin Bevan UHB	Dr Nick Mason Role: Critical Care Consultant Email: Nick.Mason@wales.nhs.uk Telephone: 01633 234179 Address: Royal Gwent Hospital, Cardiff Road, Newport, NP20 2UB
Morriston Hospital Adult Critical Care ABMUHB	Dr Ausama H Mohammed MBChB, MRCS, FRCA, EDIC, FFICM Role: Consultant Anaesthesia & Intensive Care Medicine Email: AusamaHassan.Mohammed@wales.nhs.uk Telephone: 07968733652 Address: Morriston Hospital, Heol Maes Eglwys, Morriston, Swansea, SA6 6NL
Royal Glamorgan Adult Critical Care Cwm Taf UHB	Dr Bethan Gibson Role: Consultant Anaesthesia Email: Bethan.Gibson@wales.nhs.uk Telephone: 01443443600 Address: Royal Glamorgan Hospital, Ynysmaerdy, Pontyclun, Mid Glamorgan, CF72 8XR

What if I have concerns about this research?
If you have any concerns or complaints about this project, please direct these in the first instance to: Reg Morris (Honorary Professor and Director of the Doctoral Programme in Clinical Psychology). Address: 11th Floor, School of Psychology, Tower Building, 70 Park Place, Cardiff, CF10 3AT. Telephone: 02920 870582
You can also contact Helen Falconer in the Concerns Department at Cardiff and Vale University Health Board. Address: Cardiff and Vale University Health Board, Whitchurch Hospital, Park Road, Cardiff CF14 7XB. Telephone: 02920 336365.

Appendix 11: Participant consent form

School of Psychology
Ysgol Seicoleg

South Wales Doctoral Programme in Clinical Psychology
De Cymru Rhaglen Doethuriaeth mewn Seicoleg Glinigol

NHS WALES GIG CYMRU

CARDIFF UNIVERSITY
PRIFYSGOL CAERDYDD

Participant Consent Form

Title of Project:
Resilience in Critical Care Consultants: Elucidating Intensivists' Experience.

Participant non-gendered pseudonym:

Research Team:

Project Lead: Josie Allen
Role: Trainee Clinical Psychologist
Email: AllenJ17@cardiff.ac.uk
Telephone: 02920 870582
Address: South Wales Doctoral Programme in Clinical Psychology, 11th Floor, School of Psychology, Tower Building, 70 Park Place, Cardiff, CF10 3AT.

Clinical Supervisor: Dr Julie Highfield
Role: Consultant Clinical Psychologist
Email: Julie.Highfield@wales.nhs.uk
Telephone: 029 20 745114
Address: Critical Care Directorate, University Hospital Wales, Cardiff

Academic Supervisor: Dr Victoria Samuel
Role: Senior Research Tutor
Email: Victoria.Samuel@wales.nhs.uk
Telephone: 02920 870582
Address: South Wales Doctoral Programme in Clinical Psychology, 11th Floor, School of Psychology, Tower Building, 70 Park Place, Cardiff, CF10 3AT.

Resilience in Critical Care Consultants: Consent Form Version 1: 26/05/2016
Josie Allen

Title of Project:
Resilience in Critical Care Consultants: Elucidating Intensivists' Experience.

Please initial each of the following statements if you agree:

	Please initial
1. I confirm that I have read and understood the information sheet for the above named study	
2. I have been given the opportunity to ask any questions, and have had any questions answered to my satisfaction	
3. I understand that taking part in the study will have no impact on my employment either positively or negatively presently or in the future	
4. I understand that my participation is voluntary and that I am free to withdraw from participating in the study at any time, without giving any reason	
5. I understand that relevant sections of the data collected during the study may be looked at by members of a Cardiff University research team, from regulatory authorities or from NHS Health Boards, where it is relevant to my taking part in this research.	
6. I understand that information I give will be published as part of the project (in the form of quotations), but I will not be able to be identified by this information (quotations will be made anonymous). I give consent for anonymous quotations of mine to be published in the study write-up	
7. I consent to being interviewed about my experience of working as a consultant intensivist in Critical Care including exploring ideas about resilience.	
8. I consent to the interview being recorded and transcribed. I understand that the audio recordings will be destroyed once they have been transcribed, but the transcriptions will be kept securely for a period of 5 years.	
9. I understand that the research team will discuss issues of safety and the Clinical Lead attached to my Critical Care Unit may be contacted in the event of concerns about my safety or the safety of others.	
10. I agree to take part in the above study	

Signature of Participant: _____   Date _____

Signature of Researcher: _____   Date _____

My choice of venue for the interview
For the interview I would like to:

Meet Josie at a neutral and confidential room within the hospital where I work, away from the Critical Care Unit   ☐

Meet Josie at a neutral and confidential room at Cardiff University   ☐

Be telephoned by Josie to hold the interview over the phone   ☐

          My phone number is: _____

Resilience in Critical Care Consultants: Consent Form Version 1: 24/06/2016
Josie Allen

Appendix 12: Participant debrief sheet

Participant Debrief Sheet

Title of Project:
Resilience in Critical Care Consultants: Elucidating Intensivists' Experience.

Thank you for taking part in this study. This debrief sheet will provide information about the purpose of this study. Please take the time to read through this information. Please do ask the researcher, Josie, if you have any questions about the research.

The purpose of this study
This project is looking at how consultant intensivists experience working within Critical Care, with a focus on exploring perceptions of resilience. Within this, there was a focus on individual characteristics and environmental factors which might impact on feelings of resilience. It is hoped that this study will bring clarity to the understanding of resilience in Critical Care Intensivists and help us to to improve the wellbeing of consultants within Critical Care. This may help services to be better able to support intensivists in the workplace, informing potential strategies to improve the wellbeing of consultant intensivists and thus improving patient care and staff retention.

The impact of the interview
You have partaken in an audio-recorded interview which lasted for up to 60 minutes. During the interview you were asked about your experience of working in Critical Care (e.g. how you managed to return to work after a difficult case). These questions may have aroused some difficult thoughts, feelings or memories which you may have found distressing at the time or may find yourself thinking about over the coming few days.

This debrief time gives you an opportunity to discuss the experience of being interviewed and any thoughts/feelings that this brought up for you and ask further questions about the study.

If following the interview any points of concern have been raised for you regarding your wellbeing there is information at the end of this form regarding how to access your local provision of employee support. For Cardiff and Vale this will be the in-house Consultant Clinical Psychologist or the Employee Wellbeing Service. For other UHBs this will be your Employee Wellbeing Service or Occupational Health.

What will happen next?
After your interview has been transcribed, Josie will analyse the data across all transcripts using a qualitative methodology called "Grounded Theory". The results of this analysis will form the basis of the Doctorate in Clinical Psychology dissertation. "Key findings" will also be submitted for publication in a relevant peer reviewed journal. A summary of findings will be available to participants, please let me know if you would like this.

Confidentiality
All information will be made anonymous and you will not be able to be identified by reading the report. Non-gendered pseudonyms will be used and any direct quotes used in the final report will not be paired with any identifiable information such as services and specific geographical locations. Transcriptions and audio recordings will be stored on a computer which is password protected.

Resilience in Critical Care Consultants: Debrief Form Version 1: 24/06/2016
Josie Allen

Please do request a copy of the transcript if you would like opportunity to confirm if it is accurate. Audio recordings will be deleted following transcription and the transcripts will be kept for 5 years in a secure location to maintain confidentiality. If you disclose information which relates to your own or others safety your confidentiality may be waivered. In this case, discussions regarding how to best ensure your own and other's safety will also be held with the other named researchers (as below).

Who else is involved in this research?

Project Lead: Josie Allen
                     Role: Trainee Clinical Psychologist
                     Email: AllenJ17@cardiff.ac.uk
                     Telephone: 02920 870582
                     Address: South Wales Doctoral Programme in Clinical
                     Psychology, 11th Floor, School of Psychology, Tower Building,
                     70 Park Place, Cardiff, CF10 3AT.

Clinical Supervisor: Dr Julie Highfield
                     Role: Consultant Clinical Psychologist
                     Email: Julie.Highfield@wales.nhs.uk
                     Telephone: 029 20 745114 (45114 internal)
                     Address: Adult Critical Care Directorate, A3 Corridor,
                     University Hospital of Wales, Heath Park, Cardiff. CF14 4XW

Academic Supervisor: Dr Victoria Samuel
                     Role: Senior Research Tutor
                     Email: Victoria.Samuel@wales.nhs.uk
                     Telephone: 02920 870582
                     Address: South Wales Doctoral Programme in Clinical
                     Psychology, 11th Floor, School of Psychology, Tower Building,
                     70 Park Place, Cardiff, CF10 3AT.

Employee Wellbeing Services / Occupational Health:

Cardiff & Vale UHB
Health for Health Professionals
http://www.hhpwales.co.uk
Employee Wellbeing Service, University Hospital Wales

You can contact Cardiff & Vale Employee Wellbeing Service via:

Telephone: 029 2074 4465 or

Email: employee.wellbeing@wales.nhs.uk

For further information, including self-referral forms, their website is:
http://www.cardiffandvaleuhb.wales.nhs.uk/contact-the-employee-wellbeing-service

Alternatively, intesivists working in UHW Critical Care can access support with the attached consultant clinical psychologist:
UHW   Dr Julie Highfield
Adult Critical Care Role: Consultant Clinical Psychologist
Cardiff & Vale UHB   Email: Julie.Highfield@wales.nhs.uk
                     Telephone: 029 20 745114 (45114 internal)
                     Address: Adult Critical Care Directorate, A3 Corridor,
                     University Hospital of Wales, Heath Park, Cardiff. CF14 4XW

Resilience in Critical Care Consultants: Debrief Form Version 1: 26/05/2016
Josie Allen

Aneurin Bevan UHB
Employee Wellbeing Service
You can contact Aneurin Bevan Employee Wellbeing Service confidentially via:
Telephone: 01633 623798

For further information on the services available to you their website is:
http://www.wales.nhs.uk/sitesplus/866/page/40699

ABM UHB
There are a range of options where you can access support:
Occupational Health Services at Morriston Hospital: 01792 703610
Staff Counselling: 0845 604 8178
Well-being through work Team: 0845 601 7556

For further information on the services available to you visit this website:
http://www.wales.nhs.uk/sitesplus/863/page/65040

Cwm Taf UHB
Occupational Health Services
01443 443443 extension 3231
Cwm Taf Occupational Health Services also promote the free counselling service for
doctors, see the link below:
http://cthb-
intranet/SiteDirectory/WorkforceOD/WorkforceManagement/OccHealth/Stress/Useful
%20Documents/Counselling%20for%20Doctors.pdf

What if I have concerns about this research?
If you have any concerns or complaints about this project, please direct these in the
first instance to: Reg Morris (Honorary Professor and Director of the Doctoral
Programme in Clinical Psychology). Address: 11th Floor, School of Psychology,
Tower Building, 70 Park Place, Cardiff, CF10 3AT. Telephone: 02920 870582
You can also contact Helen Falconer in the Concerns Department at Cardiff and Vale
University Health Board. Address: Cardiff and Vale University Health Board,
Whitchurch Hospital, Park Road, Cardiff CF14 7XB. Telephone: 02920 336365.

Resilience in Critical Care Consultants: Debrief Form Version 1: 26/05/2016
Josie Allen

Appendix 13: Interview schedule

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CARDIFF UNIVERSITY
PRIFYSGOL CAERDY+D

Interview Schedule
Resilience in Critical Care Consultants: Elucidating Intensivists' Experience.

Before commencing interview revisit confidentiality and ensure the consent form is signed and the participant has read the information sheets.

Confirm preferred role terminology with participants: "I understand there are differing names given to roles within the profession of critical care consultants depending on background training (intensivist, anaesthetist, critical care consultant). Before we begin, can I confirm with you which term you would prefer me to use throughout the interview?"
If preference is not intensivist replace with preferred term throughout interview.

1. **How would you describe your experience of working as a consultant intensivist within an Adult Critical Care Unit in South Wales?**

2. **What does it mean to you to be a good intensivist?**
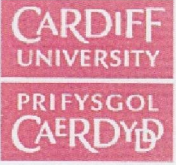
    a. *When do you feel "I've done a good job"?*

    b. *Are there things you do to try to reduce the impact of work related stress / distress on patients' / parents' experiences.*

    c. *What do you think they notice / appreciate?*

3. **When you hear terms like 'burnout' or 'post-traumatic stress' is this something you can relate to in terms of the experiences of intensivists as a profession?**

4. **Thinking of particularly challenging situations in ICU, what do they tend to have in common?**

    a. *How have such experiences affected you (personally, emotionally and in work)?*

5. **What strategies do you use for managing the impact of particularly difficult days at work – both at work and outside of work?**

    a. *How do you keep going?*

6. **Are there any ways in which your approach to managing stress and distress have changed since you've worked as an intensivist?**

7. **Thinking about some of the most demanding / challenging situations you have had to manage, how has this changed your relationship to work / how you now respond, if at all?**

8. **How does work impact upon your relationships and life outside of work, if at all?**

9. **How do your relationships and life outside of work support your resilience, if at all?**

Resilience in Critical Care Consultants: Interview Schedule Version 1: 24/06/2016
Josie Allen

10. **Tell me about your experience of your working hours and how this impacts upon wellbeing.**

11. **What do you notice about how your colleagues experience and manage stress?**

12. **If you could change one thing about you or your role that would help buffer the impact of its demands, what would it be?**

13. **What do you notice about the factors which balance the chaos within the service or influence the culture within the team?**

   a. *Tell me about the people / organisational factors which might influence this balance or culture*

14. **Is there anything else you would like me to understand about your experience of resilience as an intensivist within Critical Care in Wales?**

Resilience in Critical Care Consultants: Debrief Form Version 1: 26/05/2016
Josie Allen

Appendix 14: Interview schedules with amendments

Revised Interview Schedule (Jan 2017)
Resilience in Critical Care Consultants: Elucidating Intensivists' Experience.

Before commencing interview revisit confidentiality and ensure the consent form is signed and the participant has read the information sheets.

Confirm preferred role terminology with participants: "I understand there are differing names given to roles within the profession of critical care consultants depending on background training (intensivist, anaesthetist, critical care consultant). Before we begin, can I confirm with you which term you would prefer me to use throughout the interview?"
If preference is not intensivist replace with preferred term throughout interview.

1. **How would you describe your experience of working as a consultant intensivist within an Adult Critical Care Unit in South Wales?**

2. **What does it mean to you to be a good intensivist?**

   a. *When do you feel "I've done a good job"?*

   b. *Are there things you do to try to reduce the impact of work related stress / distress on patients' / parents' experiences.*

   c. *What do you think they notice / appreciate?*

3. **When you hear terms like 'burnout' or 'post-traumatic stress' is this something you can relate to in terms of the experiences of intensivists as a profession?**

4. **Thinking of particularly challenging situations in ICU, what do they tend to have in common?**

   a. *How have such experiences affected you (personally, emotionally and in work)?*

5. **What strategies do you use for managing the impact of particularly difficult days at work – both at work and outside of work?**

   a. *How do you keep going?*

6. **Are there any ways in which your approach to managing stress and distress have changed since you've worked as an intensivist?**

7. **Thinking about some of the most demanding / challenging situations you have had to manage, how has this changed your relationship to work / how you now respond, if at all?**

8. **How does work impact upon your relationships and life outside of work, if at all?**

9. **How do your relationships and life outside of work support your resilience, if at all?**

Resilience in Critical Care Consultants: Interview Schedule Version 2: 05/01/2017/2016
Josie Allen

10. Thinking about your personal experiences throughout your life, how have these life experiences contributed to your resilience, if at all?

11. Tell me about your experience of your working hours and how this impacts upon wellbeing.

12. What do you notice about how your colleagues experience and manage stress?

13. If you could change one thing about you or your role that would help buffer the impact of its demands, what would it be?

14. What do you think are the factors which counteract any chaos within the service?

15. Tell me about the people or organisational factors which might influence the culture within the service?

16. Is there anything else you would like me to understand about your experience of resilience as an intensivist within Critical Care in Wales?

<u>Additional Questions</u>

<u>Connecting vs Distancing</u>

From my initial analysis what I am starting to find is an idea around differing perspectives of the degree to which it is helpful to connect to patients + families vs distancing oneself.

How do you reconcile yourself connection whilst still doing your job? Got to connect but got to stay sane. What are your thoughts about this from your persp? lots of colleagues.

<u>Familiarity vs Unfamiliarity</u>

This has come up before - how do you know you have made the transition to being comfortable?

<u>Balancing home + work life</u>
How do you switch off?

<u>Managerial Stress</u>

Second Revision of Interview Schedule (February 2017)
Resilience in Critical Care Consultants: Elucidating Intensivists' Experience.

Before commencing interview revisit confidentiality and ensure the consent form is signed and the participant has read the information sheets.

Confirm preferred role terminology with participants: "I understand there are differing names given to roles within the profession of critical care consultants depending on background training (intensivist, anaesthetist, critical care consultant). Before we begin, can I confirm with you which term you would prefer me to use throughout the interview?"
If preference is not intensivist replace with preferred term throughout interview.

1. **How would you describe your experience of working as a consultant intensivist within an Adult Critical Care Unit in South Wales?**

2. **Thinking of particularly challenging situations in ICU, what do they tend to have in common?**

   a. *How have such experiences affected you (personally, emotionally and in work)?*

3. **What strategies do you use for managing the impact of particularly difficult days at work – both at work and outside of work?**

   a. *How do you keep going?*

4. **From my initial analysis, I have noticed variations in intensivists' experiences of stress within the role. What are your thoughts or observations about this?**

   a. *Consider the culture*

   b. *Consider whether it is helpful or not to convince oneself its 'okay'*

   c. *Consider habituation – getting used to the work*

5. **From the analysis what I am starting to find is an idea around differing perspectives of the degree to which it is helpful to connect to patients and families versus distancing oneself. What, if any, are your thoughts about this from your perspective or observations of colleagues?**

   a. *Consider quote about empathy as dangerous*

   b. *What is it like to connect to a patient and family?*

   c. *How do you keep going in the face of distress around you?*

6. **I am interested that intensivists are talking about a vulnerability both in themselves and in patients / families.**

   a. *What have you noticed, if anything, about vulnerability in self and others?*

Resilience in Critical Care Consultants: Interview Schedule Version 3: 01/02/2017
Josie Allen

      b.   What impact does CCU have on your vulnerability?

      c.   Is it death or your own vulnerability which is difficult to deal with?

7.   What do you think intensivists fear?

8.   How do you navigate being with patients and being aware of your own vulnerability and still stay okay?

9.   How do you deal with the demand of the role and still stay okay?

      a.   How do you hold all that the role entails in mind and not fall apart?

10. Can you tell me a bit about your experience of the intensivist culture?

      a.   I have noticed a strong non-blaming culture within intensivists. Is this something you recognise?

11. How do your relationships both at work and at home support your resilience, if at all?

12. What do you notice about how your colleagues experience and manage stress?

13. Tell me about the people or organisational factors which might influence the culture within the service?

      a.   How do these factors impact on your resilience / stress?

14. Is there anything else you would like me to understand about your experience of resilience as an intensivist within Critical Care in Wales?

Resilience in Critical Care Consultants: Interview Schedule Version 3: 01/02/2017
Josie Allen

Appendix 15: Confidentiality agreement between researcher and transcriber

ABJ UK TRANSCRIPTION SERVICES
CONFIDENTIALITY AGREEMENT

This confidentiality agreement has been prepared and is being distributed on behalf of ABJ TRANSRCIPTION SERVICES ("the Service Provider") who acknowledge and accept the terms and conditions of this Confidentiality Agreement.

This agreement is made between the Service Provider and Josephine Allen

The Service Provider agrees that they shall not during the course of the contract and at all times (without limit) after the termination thereof (howsoever the same is determined), either directly or indirectly, make use of, or disclose (to a third person, company, firm, business entity or other organization whatsoever) or exploit for their own purposes or for those of any other person, company, firm, business entity or other organization whatsoever, any trade secrets or Confidential Information (as defined below) relating or belonging to my client or any of their clients.

Confidential Information includes, but is not limited to, any information relating to clients (including clients with whom my client is negotiating), client lists or requirements, charge out rates or charging structures, marketing information, intellectual property, business plans or dealings, precedents, technical data, financial information and plans, any document marked "confidential" or any information which the Service Provider has been told is confidential or which might reasonably be expected to be regarded as confidential, or any information which has been given to my client in confidence by clients, suppliers or other persons.

The obligations contained in this provision shall not apply:

To any information or knowledge, which may subsequently come into the public domain, other than by way of unauthorised disclosure (whether by the Service Provider or by a third party);

To any act of the Service Provider in the proper performance of their contractual duties where such use or disclosure has been properly authorised by my client;

To any information which the Service Provider is required to disclose in accordance with an order of a Court of competent jurisdiction.

In complying with these confidentiality obligations the Service Provider must refrain from discussing, reading or disclosing Confidential Information openly in public areas, such as, on trains, buses and airplanes, on mobile telephones, or in restaurants. If the Service Provider is in any doubt as to the extent and/or the ambit of these obligations they should, in the first instance address any queries to my client using the contact details supplied at the time of booking, either in writing (via email) or via telephone contact.

The Service Provider acknowledges that the client reserves the right to terminate any contract should they become aware of any unauthorized use of the Confidential Information.

Signed

Mrs Bridget Postlethwaite
Dated 6th January 2017

Appendix 16: Transcript passages with initial (lower case and black) and focused (CAPITAL and red) coding; including second researcher codes (purple) to enhance reliability.

Alex: Transcript excerpt

Interviewer	I think I've framed it a bit trickily, but what I mean is, are there certain things that ____ do to reduce the impact that the work or the stress has on you or how you relate ___ families and patients?
Alex	And again, like I say, I am interested in this and we see trainees who get quite u___ or quite stressed. I think it is a very stressful environment when you come into it ___ done three years of medicine before I started in Intensive Care and it is a difficu___ environment and I think it's important to remember that. So I think part of it is ___ experience and time, it's just the daily routine. Talking to colleagues is probably ___ best means, I think, you'll talk about problems. And I think as long as you feel ___ confident that you've made a good decision and you're giving the right treatmen___ then actually whether they get better or they die is immaterial. That sounds a bi___ callous, doesn't it? It's not immaterial, of course it's not, we're here to make pe___ better, but actually, you know from the outset that not everyone is going to get ___ better, but as long as you've given the best possible treatment, I can reconcile i___ easily that they just didn't get better and that wasn't my fault. And that's coming ___ Anaesthesia, the mentality is very different. So Anaesthesia I found quite stressful and I probably couldn't have done that a___ career, because you take very well people and make them very sick, and that's ___ fault. Actually, it's not my fault they've come to me, it's not my fault the surgeon___ messed up in theatre, it's not my fault that something's gone wrong or someone___ missed a diagnosis, and actually, you're just there to try and do your best, to ge___ them better from something

Comments (right margin):

- **Commented [JA132]:** Expressing interest in area of resilience and how manage stress
- **Commented [JA133]:** Seeing trainees who become quite upset or stressed
- **Commented [JA134]:** Evaluating ICU to be a stressful environment when first come into it.
- **Commented [JA135]:** Explaining had 3 years working in medicine before moving into ICU
- **Commented [JA136]:** Citing importance of remembering that ICU is a difficult environment to work in
- **Commented [JA137]:** EMPHASISING ICU AS A HIGHLY STRESSFUL ENVIRONMENT
- **Commented [V138R137]:** This definitely seems key – something about it being uniquely & highly stressful.
- **Commented [JA139]:** Perceiving process of development of ways to manage stress over time as accrue experience in the daily routine.
- **Commented [JA140]:** DEVELOPING ABILITY TO MANAGE THE IMPACT OF ICU THROUGH EXPERIENCE AND TIME; HABITUATING
- **Commented [V141R140]:** Habituating
- **Commented [JA142]:** Talking to colleagues about problems as a way to reduce the impact of stress
- **Commented [V143R142]:** I would maybe raise this to a FC – it seems to come up quite a lot?
- **Commented [JA144]:** REDUCING / MANAGING THE STRESSFUL IMPACT OF ICU THROUGH TALKING WITH COLLEAGUES
- **Commented [JA145]:** Considering the patient's recovery or death as immaterial providing you feel confident in y ... [1]
- **Commented [V146]:** Yikes!
- **Commented [JA147]:** HAVING CONFIDENCE IN CLIN ... [2]
- **Commented [JA148]:** Questioning whether stateme ... [3]
- **Commented [JA149]:** Correcting self; stating death i ... [4]
- **Commented [JA150]:** Recognising that not all patie ... [5]
- **Commented [JA151]:** Reconciling patient outcome ... [6]
- **Commented [JA152]:** Reconciling self that the patie ... [7]
- **Commented [JA153]:** UNDERSTANDING AND ACCEP ... [8]
- **Commented [JA154]:** Perceiving professional backg ... [9]
- **Commented [JA155]:** Expressing stress in Anaesth ... [10]
- **Commented [JA156]:** Experiencing self at fault for ... [11]
- **Commented [JA157]:** Relinquishing fault & blame; ... [12]
- **Commented [V158R157]:** Something about relinq ... [13]
- **Commented [JA159]:** Challenging own thoughts: n ... [14]
- **Commented [JA160]:** QUESTIONING FAULT WHEN ... [15]

8

Interviewer	So that mindset, that philosophy is really helpful for you when you relate to other people and when you reconcile it with yourself?
Alex	Yeah, they came to you very sick and you'll do your utmost to get them better, [...] the fact that the best didn't work, that's an expected outcome and that's not my [...]
Interviewer	So when patients are awake, or families, what do you think they notice or appre[...] about you and the work that you do?
Alex	Well, we have to get feedback. I am empathic, or I'd like to think I am, but what [...] think and what the reality is are often two different things and I'm mindful of that [...] I'd like to think I was empathic. What they go through, the families sitting by a [...] bedside day in and day out, I've never been through that, so I can only imagine [...] it's like to sit here for 12 hours and go home and have phone calls, 'How's John[...] doing?' No sleep and the worry and waking up hoping. So I can imagine what it [...] be like, so I just like to think that we know it, we're here to care for the families a[...] well as the patients, and sometimes we can't get the patients better, but actuall[...] kind word or a hand on the shoulder is just, hopefully, the best you can do for th[...] family.
	I think communicating is really important and there's nothing worse than an [...] investigation you've done and not knowing what the result is, so spending the ti[...] even when you're not feeling like it, to actually go out of your way to find a famil[...]

Commented [JA161]: Doing your utmost to get patients better when they come to you very sick.

Commented [JA162]: Relinquishing fault when your best didn't work and death is an expected outcome in treating a sick patient.

Commented [JA163]: RELINQUISHING FAULT & BLAME AND ACCEPTING AN EXPECTED DEATH

Commented [JA164]: Having to get feedback from families

Commented [JA165]: Perceiving self as empathic

Commented [JA166]: Being mindful that your perceptions of self and the reality are often two different things

Commented [JA167]: DIFFERING INTERNAL PERCEPTION OF EMPATHY WITH REALITY OF HOW EXPERIENCED

Commented [JA168]: Liking to think one is empathic

Commented [JA169]: Recognising that has been through what the families do in sitting by a bedside day in day out.

Commented [JA170]: Imagining what it would be like for families to sit in the ICU for 12 hours, go home and have phone calls about their loved one.

Commented [JA171]: Imagining families to have no sleep, to worry and wake up hoping.

Commented [JA172]: Being able to imagine what its like for families; Thinking consultants know it.

Commented [JA173]: Considering role as in part being there to care for families as well as the patients.

Commented [JA174]: Being unable to get patients better sometimes

Commented [JA175]: Hoping that a kind word or a hand on the shoulder is the best a consultant can do for a family

Commented [JA176]: VALUING AND STRIVING TO SHOW EMPATHY TO A FAMILY

Commented [JA177]: Evaluating communication as really important

Commented [JA178]: Evaluating there to be nothing worse than not knowing the result of an investigation

Commented [JA179]: Going out of your way to find and spend time with a family even when you don't feel like it

9

	just have a quick chat at the bedside; I think that goes quite a long way. It's just being kind really, isn't it?	**Commented [JA180]:** Evaluating that having a quick chat at the bedside with a family goes a long way **Commented [JA181]:** Being kind to families. **Commented [JA182]:** CITING THE CENTRALITY AND IMPORTANCE OF COMMUNICATION TO FAMILIES
Interviewer	Yes, so reaching out and being empathic and being kind and making sure that communication pathway is always open?	
Alex	Yeah, and approachable, I think, and we're quite hands-on on the shop floor 24 hours a day and making the time to just update a family, or even joke with them. Even though they're going through a bad time, you can still lighten up their day. sounds a bit strange, maybe.	**Commented [JA183]:** Citing the importance of being approachable **Commented [JA184]:** Being available and hands-on on the 'shop floor' 24 hours a day **Commented [JA185]:** Making the time to update families; Joking with families even **Commented [JA186]:** Lightening up a family's day, even though they are going through a bad time.
Interviewer	Not at all. It sounds like how a lot of human beings cope, or see some light in the world.	**Commented [JA187]:** Wondering whether giving moments of joy to a family in a time of desperation sounds a bit strange. **Commented [JA188]:** BEING HUMAN, DEVELOPING A CONNECTION; CITING THE IMPORTANCE OF BEING APPROACHABLE FOR FAMILIES, OF MAKING THE TIME TO UPDATE FAMILIES, TO JOKE WITH THEM **Commented [V189R188]:** Being human, developing a connection
Alex	Yeah, but I think it's much easier to care for the family, in some ways, and be very sympathetic, because you can see what they're going through, and the patient is asleep, you actually can see the distress, so it's easier to do that and it's not a challenge.	**Commented [JA190]:** Finding it easier to care for the family **Commented [JA191]:** Considering that being able to see what the family are going through makes it easier to care for them and be sympathetic **Commented [JA192]:** Finding it harder to care for the patient as they are asleep **Commented [JA193]:** Perceiving that it is easier to care for someone when you can see their distress; evaluating that caring for the family is not a challenge.
Interviewer	So when you hear terms like burnout or post-traumatic stress, is that something you can relate to in terms of the experiences of Intensive Consultants in Critical as a profession?	**Commented [JA194]:** CARING FOR AND SYMPATHISING WITH THE FAMILY IN SEEING THEIR DISTRESS EXPERIENCED AS EASIER THAN THE CHALLENGE OF TREATING AN ASLEEP PATIENT

10

Alex	Definitely, yeah. I'm not sure about PTSD. I don't know anyone who's suffered t... certainly haven't. I think in terms of PTSD, I suppose if I make a mistake or thing... don't go right, you learn to move on and put it behind you. I don't dwell too muc... the past and just learn from it, so it's not something I'd ruminate on for years an... just an experience, someone who's made mistakes, so that's the kind of philoso... that we take, or I will take, and you discuss it with colleagues. I guess I've been... lucky in my career in that I don't think I've ever done anything too drastic! ((laughingly)) Because I'm not sure how I'd cope if something really bad went w... and you felt really responsible and you've missed something really serious. May... I'm just blissfully unaware or I've put it away somewhere.

But in terms of the burnout, yeah, I do a burnout questionnaire once a year and... what I'm like. Yeah, it's a difficult one. I've worked as a consultant for six years ... and actually my motivation within this area, actually, it feels like the unit is just g... down a plug hole, really. There's a constant increase in the workload from pres... that are uncontrollable within the unit, so they want to do this service or that ser... and you kind of burst. And the clinical work isn't the most stressful part, it's the ... of beds, rather than actually looking after the patients, and where you're going t... the next patient, and that's the risk you're intended to assume. And that's a com... theme amongst colleagues that I talk to, and actually keeping the motivation to ... improve the service, to put effort into making it better, can become quite difficul... would classify that as kind of burnout really, where you just think, 'Well, I'll come ... and do my job,' whereas you have to give yourself a shake, to think, 'That's not ... attitude,' because if everyone thought like that then it really would just fall apart. |

Commented [JA195]: Relating to burnout in consultants

Commented [JA196]: Expressing uncertainty about the presence of PTSD in the profession; Explaining hasn't suffered with PTSD himself nor seen others who has.

Commented [JA197]: UNCERTAINTY ABOUT THE PRESENCE OF PTSD IN INTENSIVISTS

Commented [JA198]: Learning to move on from a mistake or things not going right; putting mistakes behind you

Commented [JA199]: Learning from the past; Not dwelling on the past

Commented [JA200]: Viewing mistakes as just an experience; not ruminating on mistakes

Commented [JA201]: ADOPTING A PHILOSOPHY OF PUTTING MISTAKES BEHIND YOU AND LEARNING FRO... [16]

Commented [JA202]: Sharing a collective philosop... [17]

Commented [JA203]: SHARING DIFFICULT EXPERIE... [18]

Commented [JA204]: Considering self as lucky in c... [19]

Commented [JA205]: Expressing uncertainty abou... [20]

Commented [JA206]: Expressing uncertainty in ho... [21]

Commented [JA207]: Wondering whether self is ju... [22]

Commented [JA208]: QUESTIONING HOW I WOUL... [23]

Commented [JA209]: Recognising burnout in the ... [24]

Commented [JA210]: Completing a questionnaire ... [25]

Commented [JA211]: COMPLETING A QUESTIONN... [26]

Commented [JA212]: Expressing difficulty in burnout

Commented [JA213]: Explaining length of time wo... [27]

Commented [JA214]: Expressing declining motivat... [28]

Commented [JA215]: DECLINING MOTIVATION OV... [29]

Commented [JA216]: Experiencing an uncontrolla... [30]

Commented [JA217]: Expressing a sense that will l... [31]

Commented [JA218]: BURSTING AT THE CONTINU... [32]

Commented [JA219]: Identifying the lack of beds a... [33]

Commented [JA220]: Assuming the risk of where t... [34]

Commented [JA221]: IDENTIFYING BED MANAGEM... [35]

Commented [JA222]: Identifying a collective stress... [36]

Commented [JA223]: Struggling to find the motiva... [37]

Commented [JA224]: Classifying burnout as a lack... [38]

Commented [JA225]: Considering burnout to be th... [39]

Commented [JA226]: JUDGING A COMMON ... [40]

Commented [JA227]: Shaking self to think that's n... [41]

Commented [JA228]: Predicting that the service w... [42]

Commented [JA229]: SHAKING SELF OUT OF A BU... [43]

Page 8: [15] Commented [JA160]	Josie Allen	30/01/2017 17:27:00

QUESTIONING FAULT WHEN PATIENTS GET SICK, FEELING AT FAULT IN ANAESTHESIA ROLE

Page 11: [16] Commented [JA201]	Josie Allen	30/01/2017 18:04:00

ADOPTING A PHILOSOPHY OF PUTTING MISTAKES BEHIND YOU AND LEARNING FROM IT, OF NOT DWELLING, NOT RUMINATING

Page 11: [17] Commented [JA202]	Josie Allen	20/01/2017 14:07:00

Sharing a collective philosophy of learning from the past and viewing mistakes as an experience.

Page 11: [18] Commented [JA203]	Josie Allen	30/01/2017 18:05:00

SHARING DIFFICULT EXPERIENCES WITH COLLEAGUES

Page 11: [19] Commented [JA204]	Josie Allen	20/01/2017 14:08:00

Considering self as lucky in career as never done anything too drastic

Page 11: [20] Commented [JA205]	Josie Allen	20/01/2017 14:08:00

Expressing uncertainty about how would cope if something really bad went wrong

Page 11: [21] Commented [JA206]	Josie Allen	20/01/2017 14:09:00

Expressing uncertainty in how would cope if felt responsible for something going wrong having missed something really serious

Page 11: [22] Commented [JA207]	Josie Allen	20/01/2017 14:09:00

Wondering whether self is just blissfully unaware, or has repressed experiences / feelings.

Page 11: [23] Commented [JA208]	Josie Allen	30/01/2017 18:05:00

QUESTIONING HOW I WOULD COPE IF SOMETHING WENT SERIOUSLY WRONG, IF I FELT RESPONSIBLE; PONDERING DENIAL OF EMOTIONAL EXPERIENCE

Page 11: [24] Commented [JA209]	Josie Allen	20/01/2017 14:11:00

Recognising burnout in the profession.

Page 11: [25] Commented [JA210]	Josie Allen	20/01/2017 14:11:00

Completing a questionnaire on burnout annually.

Page 11: [26] Commented [JA211]	Josie Allen	03/02/2017 10:05:00

COMPLETING A QUESTIONNAIRE TO GAIN KNOWLEDGE ABOUT OWN INTERNAL WORLD IN RELATION TO BURNOUT

Page 11: [27] Commented [JA213]	Josie Allen	20/01/2017 14:12:00

Explaining length of time working as a consultant; 6 years

Page 11: [28] Commented [JA214]	Josie Allen	20/01/2017 14:12:00

Expressing declining motivation within this area; describing the unit as going down a plug hole

Page 11: [29] Commented [JA215]	Josie Allen	03/02/2017 10:09:00

Page 8: [1] Commented [JA145]	Josie Allen	20/01/2017 13:18:00

Considering the patient's recovery or death as immaterial providing you feel confident in your decisions and treatment.

Page 8: [2] Commented [JA147]	Josie Allen	30/01/2017 17:22:00

HAVING CONFIDENCE IN CLINICAL DECISIONS; PERCEIVING DEATH AS IMMETERIAL IF HAVE CONFIDENCE IN CLINICAL DECISIONS.

Page 8: [3] Commented [JA148]	Josie Allen	20/01/2017 13:20:00

Questioning whether statement about death being immaterial is callous

Page 8: [4] Commented [JA149]	Josie Allen	20/01/2017 13:20:00

Correcting self; stating death is not immaterial; being here to make people better

Page 8: [5] Commented [JA150]	Josie Allen	20/01/2017 13:21:00

Recognising that not all patients will recover

Page 8: [6] Commented [JA151]	Josie Allen	20/01/2017 13:21:00

Reconciling patient outcome easily as long as one has given the best possible treatment

Page 8: [7] Commented [JA152]	Josie Allen	20/01/2017 13:22:00

Reconciling self that the patient just didn't get better; Relinquishing blame and fault

Page 8: [8] Commented [JA153]	Josie Allen	30/01/2017 17:24:00

UNDERSTANDING AND ACCEPTING DEATH IS INNEVITABLE FOR SOME PATIENTS; RECONCILING PATIENT DEATHS AS NOT MY FAULT AS LONG AS GIVEN THE BEST TREATMENT POSIBLE

Page 8: [9] Commented [JA154]	Josie Allen	20/01/2017 13:24:00

Perceiving professional background in Anesthesia as holding a different mentality to enable to recognise a patient's death is not my fault.

Page 8: [10] Commented [JA155]	Josie Allen	20/01/2017 13:26:00

Expressing stress in Anaesthesia resulting in not being able to do this as a career

Page 8: [11] Commented [JA156]	Josie Allen	20/01/2017 13:27:00

Experiencing self at fault for taking well people and making them sick in Anesthesia.

Page 8: [12] Commented [JA157]	Josie Allen	20/01/2017 13:28:00

Relinquishing fault & blame; Allocating fault elsewhere towards the reason they are in surgery which has occurred before they have gotten to you, the surgeons mistake, someone missing a diagnosis.

Page 8: [13] Commented [V158R157]	Vic	16/02/2017 13:32:00

Something about relinquishing blame as things have already gone wrong before get to you?

Page 8: [14] Commented [JA159]	Josie Allen	20/01/2017 13:29:00

Challenging own thoughts: not at fault but rather there to try and do your best and get them better

DECLINING MOTIVATION OVER TIME

Page 11: [30] Commented [JA216]	Josie Allen	20/01/2017 14:15:00

Experiencing an uncontrollable pressures increasing workload from within the unit

Page 11: [31] Commented [JA217]	Josie Allen	20/01/2017 14:16:00

Expressing a sense that will burst due to increased demands for doing different services

Page 11: [32] Commented [JA218]	Josie Allen	03/02/2017 10:10:00

BURSTING AT THE CONTINUAL INCREASE IN WORKLOAD OF UNCONTROLABLE PRESSURES OF SERVICE DEVELOPMENT

Page 11: [33] Commented [JA219]	Josie Allen	20/01/2017 14:20:00

Identifying the lack of beds as the most stressful part rather than clinical work, looking after patients

Page 11: [34] Commented [JA220]	Josie Allen	20/01/2017 14:21:00

Assuming the risk of where to put the next patient

Page 11: [35] Commented [JA221]	Josie Allen	03/02/2017 10:11:00

IDENTIFYING BED MANAGEMENT AS THE MOST STRESSFUL ASPECT OF THE JOB; ASSUMING THE RISK OF MANAGING WHERE TO PUT THE NEXT PAITENT

Page 11: [36] Commented [JA222]	Josie Allen	20/01/2017 14:24:00

Identifying a collective stress in the lack of beds and assuming the risk of where to put the next patient.

Page 11: [37] Commented [JA223]	Josie Allen	20/01/2017 14:24:00

Struggling to find the motivation to put in the effort to improve the service

Page 11: [38] Commented [JA224]	Josie Allen	20/01/2017 14:25:00

Classifying burnout as a lack of motivation

Page 11: [39] Commented [JA225]	Josie Allen	20/01/2017 14:29:00

Considering burnout to be thinking I'll just do my job

Page 11: [40] Commented [JA226]	Josie Allen	03/02/2017 10:14:00

JUDGING A COMMON PRESENTATION PF BURNOUT IN CONSULTANTS AS A LOSS OF MOTIVATION TO IMPROVE THE SERVICE

Page 11: [41] Commented [JA227]	Josie Allen	20/01/2017 14:29:00

Shaking self to think that's not the attitude

Page 11: [42] Commented [JA228]	Josie Allen	20/01/2017 14:30:00

Predicting that the service would just fall apart if all everyone just did their job and lost motivation to improve the unit.

Page 11: [43] Commented [JA229]	Josie Allen	03/02/2017 10:20:00

SHAKING SELF OUT OF A BURNOUT RESPONSE OF A LOSS OF MOTIVATION TO IMPROVE THE SERVICE; PREDICTING THE COLLAPSE OF THE SERVICE IF ALL CONSULTANTS LOSE MOTICATION

Dylan: Transcript excerpt

	which is largely summarized by us just getting bigger too quickly. And a Clinical	**Commented [JA58]:** Conceptualising difficult transition phase as the ICU getting bigger too quickly
	Director, who again was very junior, working alongside me, who I felt we got on	**Commented [JA59]:** Working alongside a very junior clinical director
	together and I understood what he needed to have help. So I think it was kind of	**Commented [JA60]:** Deciding to pursue clinical lead position in part due to judgement that one got on well with the clinical director and understood what he needed help with.
	combination of things that prompted me to step forward with that but was early	**Commented [JA61]:** JUSTIFYING WHY ONE TOOK ON THE ROLE WAS NOT CREDITABLE FOR; OBSERVING OTHERS TO NOT BE ENTHUSIASTIC ENOUGH
	me and I have to say I have found it hard. I have found two years very tough in	**Commented [V62]:** There's something here and in other transcripts re taking to additional roles and this having -ve or +ve impact
	no prior manage – real credible management experience in that area at all, so v	**Commented [JA63]:** Reflecting on a combination of reasons driving one's decision to step forward into the role of clinical lead
	much at the bottom of the learning curve and straight up in an era – in a phase	**Commented [JA64]:** Judging stepping into the clinical lead role in one's career and finding this role hard because of this.
	our history here, which is quite – it's quite high pressured. And albeit that's look	**Commented [JA65]:** Experiencing two years as clinical lead as very tough due to having no credible management experience
	back in retrospect because I haven't been here for the 10 or 15 years that all my	**Commented [JA66]:** Judging self to be at the bottom of the learning curve in relation to management when commenced role as clinical lead
	colleagues have but, you know, listening to the story and trying to understand it	**Commented [JA67]:** EMBARKING ON A STEEP LEARNING CURVE WITHIN A MANAGEMENT ROLE AND FINDING THIS HARD
	looking back over the last two years, I think we are going through a very difficult	**Commented [JA68]:** Coming into the clinical lead rol... [1]
	at the moment and I – yeah, it has been hard actually.	**Commented [JA69]:** HIGH PRESSURE OF CONTEXT – ... [3]
Interviewer	So that learning curve's been really tough over the last couple of years?	**Commented [V70]:** There's something here re conte... [2]
		Commented [JA71]: Looking at historical culture wit... [4]
Dylan	Yes, it has, definitely.	**Commented [JA72]:** Comparing oneself to colleague... [5]
		Commented [JA73]: Endeavouring to listen to and ... [6]
Interviewer	So what does it mean to you to be a good intensivist, to do your job well?	**Commented [JA74]:** Evaluating that this unit is goin... [7]
		Commented [JA75]: Expressing a sense that being c... [8]
Dylan	The core of it is about a patient. So it's always just the core things you would ex	**Commented [JA76]:** PERCEIVING THE CURRENT TIM... [9]
	you would like anyone in healthcare to say you were a servant (a) to patients an	**Commented [JA77]:** Experiencing a tough learning ... [10]
	surrounding your… you know, occupying your focus and your mind and your	**Commented [JA78]:** Judging the core of the intensi... [11]
	purpose constantly referencing it back to people, patients. It's what the core of b	**Commented [JA79]:** Holding a sense of the shared ... [12]
	anyone working in healthcare is; so that for me is a very firm foundation and, yo	**Commented [JA80]:** Being a servant to ones patients
	know, directly surrounding that is the specific skills that make you a doctor; so	**Commented [JA81]:** Focusing ones' mind and purp... [13]
		Commented [JA82]: Emphasising the a shared core... [14]
		Commented [JA83]: Holding a firm foundation of t... [15]
		Commented [JA84]: HOLDING ONTO THE PATIENT... [16]
		Commented [JA85]: Surrounding the core of patie... [17]

	diagnostic and resuscitation skills for an intensivist and they are what I love. Tha[t's]	**Commented [JA86]:** Identifying the specific skills of an intensivist to be diagnostic and resuscitation
	what I really enjoy doing. And then the sort of bolt on parts of my job, then I gue[ss]	**Commented [JA87]:** Expressing love for the clinical skills of an intensivist
	my mind feel as though they pull me away from that purpose sometimes; althou[gh]	**Commented [JA88]:** Experiencing enjoyment in doing diagnostics and resuscitation.
	you try and maintain that when you are in a management role, because actually [it's]	**Commented [JA89]:** ENJOYING THE TECHNICAL SKILLS WHICH MAKE YOU A DOCTOR
	still about the same thing ultimately at the end of the day – because that world i[s]	**Commented [JA90]:** Bolting on other non-clinical aspects of the job
	not... doesn't have direct patient contact in it very often, you find yourself some[...]	**Commented [JA91]:** Being pulled away from the core purpose of healthcare (patient care) by the other non-clinical bolt on parts of the job
	and a lot of other people who perhaps never have direct patient contact, you do[...]	
	you are working round in a world where you don't truly believe that people	**Commented [JA92]:** BEING PULLED AWAY FROM CLINICAL ROLE INTO THE BOLT ON MANAGEMENT PARTS OF THE JOB
	understand it like you do, to be a front line healthcare worker.	**Commented [JA93]:** Endeavouring to hold on to the core purpose of patient care when in a management role
		Commented [JA94]: Perceiving the core of healthcare to be the same in both clinical and managerial roles – the patient.
Interviewer	*And what's that like coming across those people who don't – you don't feel quit[e]*	
	understand the front line aspect of it?	**Commented [JA95]:** HOLDING ON TO THE CORE PURPOSE OF THE PATIENT IN MANAGEMENT ROLES
		Commented [JA96]: Observing the management world to not have direct patient contact very often
Dylan	I guess the ways I've kind of rationalized it for myself is just understanding hum[an]	**Commented [JA97]:** Observing people in management to not have direct contact with patients
	to be honest. ((laughs)) So I don't – I never interpret that as, which I do see the	**Commented [JA98]:** Working in a management world
	hostility amongst, particularly doctors actually, for management. I don't really ha[ve]	**Commented [JA99]:** Working with people in the management world who you observe and believe to n... [18]
	that hostility at all. I think they are just victims of normal human behaviour in the	**Commented [JA100]:** Working with people in the ... [19]
	situation that they find themselves in their daily job. And, you know, why would [an]	**Commented [V101]:** This para is so rich in content ... [20]
	accountant really have that focus when they are completing – their task is to	**Commented [JA102]:** NOT BEING UNDERSTOOD B[Y] ... [21]
	complete a spreadsheet by the end of the week. So it's not a – it doesn't manife[st]	**Commented [V103R102]:** Interesting – this is com... [22]
	kind of anger against anyone in particular, it's just frustration I think with the sys[tem]	**Commented [JA104]:** Rationalising lack of underst[...] [23]
	and yeah, I guess that's probably the...	**Commented [JA105]:** Observing doctors to show h[...] [24]
		Commented [JA106]: Not having hostility towards ... [25]
	INTERVIEW PAUSED DUE TO CLINICAL CONVERSATION	**Commented [JA107]:** OBSERVING HOSTILITY TOW[...] [26]
		Commented [JA108]: Perceiving management to b ... [27]
		Commented [JA109]: Observing management to b ... [28]
		Commented [JA110]: Understanding accountants [...] [29]
		Commented [JA111]: UNDERSTANDING THE PURP[...] [30]
		Commented [V112]: I think you've got all the key ... [31]
		Commented [JA113]: Judging own emotional resp[...] [32]
		Commented [JA114]: Expressing frustration at the ... [33]
		Commented [JA115]: LOCATING FRUSTRATION WI[...] [34]

Interviewer	*Okay, yeah, so you were just saying that you were holding on to the core of what makes you an intensivist as the patient focus and the kind of diagnostics, the things that make you a good doctor…*
Dylan	Yes, I guess it's just having a very, very simple way.
Interviewer	*Yeah, okay.*
Dylan	Just a fall back foundation question to ask yourself when it's all kind of, you are losing perspective and you just ask why? So for me that's very important; and th[ ] doesn't sometimes make it easier I have to say. In fact it sometimes makes it ha[ ] because, yeah, if you find yourself not able to fulfill that why as you would want [ ] think that's where a lot of the… a lot of the stress comes from actually.
Interviewer	*Right, specifically relating to patients or relating to…?*
Dylan	Yeah, always relating to patients and that maybe a population of patients or ma[ ] one patient where you – you feel for whatever reason that they are not getting w[ ] they should do and you are accountable for it and there's nothing you can do ab[ ] it. I think that's – that's really what it fundamentally comes down to and what's h[ ]
Interviewer	*So how do you… what… when do you go home at the end of the day and feel I[ ] done a good job?*

Commented [JA116]: Having a fall back foundation question

Commented [JA117]: Asking self 'why' when one is losing perspective

Commented [V118]: Wow, this is great stuff from a resilience point of view – I'm having to refrain from conceptualising this within ACT – values, value based goals etc

Commented [JA119]: Citing importance to ask oneself 'why'

Commented [JA120]: Reflecting that asking self 'why' does not always make things easier

Commented [JA121]: HOLDING CORE PURPOSE IN MIND, ASKING WHY

Commented [JA122]: Reflecting that asking oneself why sometimes makes things harder

Commented [JA123]: Reflecting that finding oneself not being able to fulfil the answer to why in the way one would want to can make work harder

Commented [JA124]: Reflecting that the a lot of the stress of work comes from not being able to fulfil the answer to 'why' in the way one would want to

Commented [JA125]: NOT FULFILLING ONES PURPOSE (CLASHING WITH VALUES) - good

Commented [JA126]: Keeping once core focus on patients

Commented [JA127]: Judging that patents are not getting what they should do

Commented [V128]: This is really interesting, when you have a strong sense of what is 'right' and what is what patients deserve, and you take responsibility for this, there is a dissonance that feels uncomfortable

Commented [JA129]: Being accountable for a patient not getting what they should and feeling powerless to change this

Commented [JA130]: Considering the fundamental challenge of the intensivist is being accountable for a patient not receiving the care you feel they should and being powerless to change it

Commented [JA131]: FEELING ACCOUNTABLE YET HELPLESS TO MEET THE NEEDS OF A PATIENT

Dylan	((pause)) I think, so to know you've done a good job; yes, so you have a good feeling inside. You've had some pleasure and I guess what that is, is that some change for the benefit of a patient has happened as a direct result of what you a group of people around you have pulled together to achieve. And I guess that c from a feeling that that would not have happened unless me working with those people has made that happen. So yeah, I guess that's what makes you feel goo You know, I wouldn't articulate that on a daily basis like that but that probably is it boils down to is, I've left today and everything is slightly better because I was there. The values that you are part of a process that worked and I guess that the probably ties in to the previous answer of what makes you go home and feel ba And that's where actually when you turn up in that system you may not perform team may not perform, the system may not perform and actually either some ha has come to someone or it's just – it's not achieved what you thought the poten that system could have achieved, or the team could have achieved, or you coul have achieved, particularly when there's just simple, silly factors that got in the of that.
Interviewer	So if you're having one of those days perhaps, and you are feeling a bit frustrat stressed, are there any things that you try and do to reduce the impact of your s on patients or families?
Dylan	So things that I do to negate my stress? Well specifically to not impact on famili would say any direct human contact actually; so that would be patients, families anyone you come into contact with – so other healthcare workers – so I think ju step aside, looking from outside in to see how other people deal with that. I thin

Commented [JA132]: Having a good feeling inside

Commented [JA133]: Experiencing some pleasure

Commented [JA134]: Seeing beneficial change for a patient

Commented [JA135]: Holding direct and shared responsibility for beneficial change for a patient

Commented [JA136]: Awareness of the direct impact consultant and group of people around one on a patients life

Commented [V137]: Feeling a sense of personal agency

Commented [JA138]: Expressing feeling good due to a knowledge that one has directly influenced and been responsible for patient positive outcome.

Commented [JA139]: Not always acknowledging the experience of the job has having made something better

Commented [V140]: Your codes are totally on track but I would maybe make sure you don't lose the basics here re "making a (positive) difference"

Commented [JA141]: Believing that everything is slightly better because I was there

Commented [JA142]: Holding values of being part a process which has had a positive impact on a patients life

Commented [JA143]: EXPERIENCING PLEASURE IN BEING PART OF A CHANGE FOR THE BENEFIT OF A PATIENT; ACHIEVING ONES OWN VALUES OF MAKING SOMETHING BETTER FOR A PATIENT

Commented [JA144]: MAKING A POSITIVE DIFFERENCE

Commented [JA145]: Tentatively considering that feeling bad at the end of a day links to feeling that something has been missed in a patient focused approach

Commented [JA146]: Not performing within the system

Commented [JA147]: Observing the team or system to not perform

Commented [JA148]: Observing the system, team or consultant to not perform causing some harm to a patient

Commented [JA149]: Not achieving the potential that the system, the team or the consultant is capable of achieving.

Commented [JA150]: Feeling especially bad when not achieving what could when simply, silly factors get in the way

Commented [JA151]: JUDGING THE SYSTEM TO CA ... [35]

Commented [JA152]: Clarifying question

Commented [JA153]: Negating stress through dire ... [36]

Commented [JA154]: Citing   impact of own stres ... [37]

Commented [V155R154]: I understood this to me ... [38]

Commented [JA156]: JUDGING DIRECT HUMAN C ... [39]

Commented [V157]: Getting a perspective

Commented [JA158]: Taking an outside perspectiv ... [40]

of the ugliest things you can see is when people are taking it out on other peopl

and that may be treating patients badly or not performing how they should do

clinically and you can see that that is manifested not out of malice, but out of pu

stress or families or colleagues or whatever. I think again it comes down to

rationalizing your emotions. So saying, well I feel the way I do because I'm tired

frustrated. Yeah, so it's about having some core traits that you think are very

important to have at work. So you know, I couldn't – everyone will have their

threshold presumably if pushed hard enough, but being very mindful, to use a te

but being very aware of your – what behaviours are the absolute pillars that you

should stick to at work. So, you know, I never try to be rude to anybody. And the

usual thing, you try to speak to people like you want to be spoken to and your tr

trust, honesty, all of those things are very important, core things that actually ar

you'd never, ever want to breach. And I think those are fairly well grounded with

because I think if you have those kind of – those core traits – life becomes much

more simple then and dealing with stress and all the rest of it becomes a lot eas

But nevertheless you maybe have a conversation with someone and are thinkin

God, I'd rather be anywhere else than this – but that's about, I think that's summ

up with professionalism isn't it really? That's what sums up professionalism; it's

you behave when internally you perhaps don't feel like that. But…

Interviewer	So what do you think… sorry, carry on…
Dylan	I was just going to say because actually part of your role is the impact that you
	on other humans when they are looking at you. So yeah, and that is part of your
	and don't underestimate, you know, I try not to underestimate the impact that it

Commented [JA159]: Evaluating people taking stress out of others as ugly

Commented [JA160]: Observing colleagues treating patients badly due to own stress

Commented [JA161]: Observing colleagues not performing how they should clinically as a result of stress

Commented [JA162]: Observing colleagues treating patients badly or not performing clinically not out of malice but out of stress

Commented [JA163]: SEEKING TO AVOIDE IMPACT OF OWN STRESS TO NEGATIVELY AFFECT PATIENT CARE

Commented [V164R163]: See above, I think s/he might be meaning she seeks to avoid it impacting on others

Commented [JA165]: Rationalising ones emotions ... [41]

Commented [V166]: Self awareness, emotional lite ... [42]

Commented [JA167]: Understanding why feeling ... [43]

Commented [JA168]: Citing the importance of hav ... [44]

Commented [JA169]: Recognising each person to l ... [45]

Commented [JA170]: Identifying important core tr ... [46]

Commented [JA171]: Being aware of your behavio ... [47]

Commented [V172]: Behaving with personal integrity

Commented [V173]: Strong values about decorum

Commented [JA174]: BALANCING AWARENESS OF ... [48]

Commented [JA175]: Endeavouring to not be rude ... [49]

Commented [JA176]: Drawing on a commonality i ... [50]

Commented [JA177]: Endeavouring to speak to pe ... [51]

Commented [JA178]: Citing the importance of one ... [52]

Commented [JA179]: Holding core principles of tr ... [53]

Commented [V180]: Wow

Commented [JA181]: Perceiving values of truth tru ... [54]

Commented [JA182]: Perceiving life to be more sir ... [55]

Commented [JA183]: Perceiving dealing with stres ... [56]

Commented [JA184]: EMBODYING CORE TRAITS OF ... [57]

Commented [JA185]: Thinking that one would rath ... [58]

Commented [JA186]: Categorising way of being wi ... [59]

Commented [JA187]: Defining professionalism as ... [60]

Commented [V188]: Acting consistent with values ... [62]

Commented [V189]: Im getting quite emotional wi ... [61]

Commented [JA190]: CONCEPTUALISING MISMAT ... [63]

Commented [V191R190]: Hum I think it's about h ... [64]

Commented [JA192]: Considering the impact one ... [65]

Commented [JA193]: Not underestimating the ... [66]

Endeavouring to listen to and understand the story of the history of ICU and comparing it with own experience of ICU over the past 2 years

Page 3: [7] Commented [JA74]	Josie Allen	03/03/2017 09:49:00

Evaluating that this unit is going through a very difficult time at the moment in the context of the history of the ICU

Page 3: [8] Commented [JA75]	Josie Allen	03/03/2017 09:49:00

Expressing a sense that being clinical lead in a very difficult time has been hard.

Page 3: [9] Commented [JA76]	Josie Allen	16/03/2017 11:42:00

PERCEIVING THE CURRENT TIMES TO BE VERY DIFFICULT COMPARED TO PREVIOUS TIMES

Page 3: [10] Commented [JA77]	Josie Allen	03/03/2017 09:50:00

Experiencing a tough learning curve in becoming clinical lead

Page 3: [11] Commented [JA78]	Josie Allen	03/03/2017 09:51:00

Judging the core of the intensivists work to be about the patient

Page 3: [12] Commented [JA79]	Josie Allen	03/03/2017 09:51:00

Holding a sense of the shared core purpose with everyone who works in healthcare

Page 3: [13] Commented [JA81]	Josie Allen	03/03/2017 09:53:00

Focusing ones' mind and purpose and referencing back to people, to the patients

Page 3: [14] Commented [JA82]	Josie Allen	03/03/2017 09:54:00

Emphasising the a shared core of patient care as the focus of anyone working in healthcare

Page 3: [15] Commented [JA83]	Josie Allen	03/03/2017 09:55:00

Holding a firm foundation of the core of healthcare in the focus of mind and purpose on the patient