Pro-judge study: Nurses' professional judgement in nurse staffing systems

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PROTOCOL

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Pro-judge study: Nurses' professional judgement in nurse staffing systems

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Abstract

Aims: Aim of this study is to better understand the role of nurses' professional judgment in nurse staffing systems.

Design: Qualitative comparative case study design of nurse staffing systems in England and Wales.

Methods: Data will be collected through a variety of sources: individual interviews, observations of relevant meetings and analysis of key documents. Ethical approval for the study was granted in August 2020 from The Healthcare Research Ethics Committee (SREC reference: REC741). Data generation will be informed by science and technology studies and practice theories.

Discussion: Ensuring adequate numbers of nurses are available to care for patients in response to shifting demand is an international policy priority. Emerging evidence on the use of formal workforce planning methodologies across the developed world highlights both the centrality of nurses' professional judgement in nurse staffing methodologies and the urgent need for theoretically informed research to better understand and conceptualise its contribution to decision-making. This study is designed to address this gap in understanding. It takes advantage of nurses' experiences of managing the service and staffing impacts of the Covid-19 pandemic and differences in strategic approaches to nurse staffing systems between England and Wales.

Impact: The research will:

- make visible the knowledge and skills that underpin professional judgement in nurse staffing decisions and provide a conceptual language with which to articulate this;
- lay the foundations for evidence-based programmes of nurse education and continuing professional development;
- furnish the evidence to inform the development of nurse-led decision support tools to augment professional judgement; and
- generate wider insights into the effectiveness of nurse staffing systems in practice.

KEYWORDS
nurse staffing, nursing, nursing administration research, nursing workload, patient classification systems, professional judgement, qualitative research, workforce planning

1 | INTRODUCTION

Ensuring adequate numbers of nurses are available to care for patients in response to shifting demand is an international policy priority. Substantial evidence relates lower nurse staffing levels and higher workloads on hospital wards to adverse patient outcomes (Aiken et al., 2013; Ball et al., 2014; Kane et al., 2007; Rafferty et al., 2007) and nurse leaders need information to deploy nurses effectively. There is, however, an internationally acknowledged lack of evidence to inform policy and practice in this area. Recently published research on the use of formal workforce planning methodologies (Burton et al., 2016; Griffiths, Saville, Ball, Jones, et al., 2020) and safe staffing policy implementation in England (Ball et al., 2019) highlights both the centrality of nurses' professional judgement in nurse staffing systems and the urgent need for research to better understand its contribution to decision-making. This study is designed to address this gap in understanding, taking advantage of nurses' experiences of managing the service and staffing impacts of the Covid-19 pandemic and differences in strategic governmental approaches to nurse staffing systems between England and Wales.

2 | BACKGROUND

2.1 | International study context

A plethora of approaches to nurse staffing exist across international healthcare systems and a wide variety of nurse staffing methodologies are in use.

First, there are differences in strategic approaches to nurse staffing. In some countries, such as Norway, approaches to nurse staffing are determined locally. Other countries have policy-led approaches, for instance the RAFAELA system in use in Finland, which was the result of a multi-centre study and national testing during 2000–2002 (Kautto, 2016). Finally, in a small but growing number of countries, nurse staffing strategies are enshrined in law. For example, in the USA, The Registered Nurse Staffing Act of 2013 (Congress, 2013) mandates individual states legislatures to ensure that staffing is appropriate to meet patients' needs safely. Legislation is also in place mandating nurse-patient ratios in parts of Australia and more recently South Korea, Israel and Germany.

Second, across the international arena a wide variety of nurse staffing methodologies have been deployed: these include nurse-patient ratio or equivalent (Donaldson & Shapiro, 2010; Twigg & Duffield, 2009), hospital-based nurse staffing committees (Cox et al., 2005; Fitzpatrick et al., 2013; Jones et al., 2015), defined minimum and maximum staffing levels derived from national benchmarks (Hurst, 2002), patient classification systems, (Fasoli & Haddock, 2010), indicator approaches (Edwardson & Giovannetti, 1994) as well as professional judgement based approaches (Telford, 1979). Uncertainty remains about the strengths and weaknesses of different methodologies (e.g., Griffiths, Saville, Ball, Jones, et al., 2020; Hertel, 2012).

Third, while most methodologies depend on nursing expertise for their implementation, this is not always made explicit and even in those examples where the importance of nursing judgement is acknowledged, for the most part its qualities and contribution remains un-specified. For instance, in the Nursing Hours per Patient Day (NHPPD) workload monitoring system used throughout Western Australia, wards are categorised according to specified criteria for measuring diversity, complexity and nursing tasks required within a ward/unit. Whilst professional judgement is not specified, the Director of Nursing reviews every ward on its individual data and 'descriptive detail' to reach an agreement with the senior ward nurses about each ward category (Twigg & Duffield, 2009).

2.2 | UK study context

In the United Kingdom health policy is a devolved responsibility and there is variation in the strategic approaches and methodologies adopted amongst the four nations. In Wales and Scotland, nurse staffing strategies are enshrined in law. In Northern Ireland, following industrial action in December 2019, Royal College of Nursing members voted to accept a framework agreement on safe nurse staffing that was endorsed by the Health Minister and the Northern Ireland Executive, which includes a commitment to safe nurse staffing legislation. In England, however, while the approach to nurse staffing mirrors the arrangements in place in Wales, it is guided by policy recommendations rather than legal requirements, despite lobbying from professional bodies for a legislative approach.

Across the four countries of the UK, there has been a move towards a multi-facetted methodology to inform nurse staffing requirements (Jones et al., 2015). While fine-grained differences exist in the details of the methodologies used in each nation, all deploy a 'triangulated' approach in which professional judgement is explicitly combined with formal workforce planning technologies and quality indicators to inform decision-making about nurse staffing. A number of studies have been commissioned to inform policy and practice in nurse staffing systems. This includes: a secondary evidence synthesis of NHS managers' use of nursing workforce planning and deployment technologies (Burton et al., 2016); a quantitative evaluation of the Safer Nursing Care Tool in England (Griffiths, Saville, Ball, Chable, et al., 2020.); and an evaluation of the resource implications and implementation of Safer Nursing Care Tool in England (Ball et al., 2014). Yet while we have a better

understanding of the technical and organisational aspects of implementing staffing systems, 'professional judgement' remains profoundly underspecified and to some extent is used as an open category into which all knowledge not currently supported by formal tools and quality indicators is located. By opening up this 'black box' through comparative case study research in England and Wales we seek to more fully understand and conceptualise how clinical leaders deploy professional judgement to assess need, plan staffing levels, deploy nurses, and organise nursing work on a daily basis in response to changing demand patterns and the needs of patients. Our aim is to develop a theoretically informed evidence based to support the use of professional judgement in nurse staffing systems across national and international contexts.

Healthcare services across the world have been radically reconfigured in response to the challenges presented by Covid-19. Clinical areas have been repurposed; and the construction of new facilities—such as field hospitals—has created new organisational contexts for clinical work. The workforce has been expanded to include returners to practice, medical and healthcare students, and nonclinical workers—such as dental nurses. Staff are also working differently through redeployment to new clinical areas, different skill mix and staff-patient ratios, and the adoption of new clinical leadership roles. While Covid-19 clearly changes some aspects of the context in which nurse staffing decisions are taken and the parameters which influence action, the underlying professional judgements, which inform these decisions and the skills and knowledge that underpin them are not changed by the pandemic. Rather, Covid-19 throws these judgements into sharp relief because the constraints of the pandemic on decision making is likely to intensify these judgements and render the tacit knowledge on which professional judgements rest more explicit.

3 | THE STUDY

3.1 | Aims and objectives

The primary aim of the Pro-Judge study is to explore in detail how nurses use professional judgement in making decisions about how best to organise the nursing workforce to meet patient need, taking advantage of the recent impact of service configuration in response to the Covid-19 pandemic and national differences in nurse staffing systems between England and Wales.

The questions guiding the research are:

- How do clinical leaders and nurse managers deploy professional judgement in assessing need, planning staffing levels, deploying nurses, and organising nursing work in response to changing demand patterns?
- What are the skills and knowledge that underpin nurses' professional judgments on staffing decisions?
- How do nurses articulate professional judgement in nurse staffing decisions?
- What weight is given to professional judgement in the triangulated approach to staffing decisions?
- What is the relationship between professional judgement, planning tools and nurse sensitive patient outcomes data?
- Are there elements of nurses' professional judgement that could be supported by new measurement or decision tools?
- What are the implications of the research for nurse education, professional development and leadership?
- What are the implications of the research for nurse staffing systems and future policy and practice?

The broader study objectives are to:

1. Make visible the knowledge and skills that underpin professional judgement in nurse staffing decisions and provide a language with which to communicate this;
2. Lay the foundations for evidence-based programmes of nurse education and continuing professional development;
3. Inform the development of nurse-led decision tools to support professional judgement;
4. Generate wider insights into the effectiveness of nurse staffing systems in practice to inform future policy and practice.

3.2 | Design/methodology

A cross-case comparative design is proposed which takes advantage of the different regulatory and legislative frameworks that exist in England and Wales (summarised in Table 1).

Six case studies, selected to represent a variety of district general and tertiary hospitals (urban, rural, city), will be used to examine the role of professional judgement in nurse staffing systems inpatient services in NHS Trusts (England) or University Health Boards (Wales).

3.3 | Data collection

3.3.1 | Interviews

In each case virtual interviews (n = 30) will be deployed to examine the nurse staffing system within the organisation: the people involved, the tools and methodologies in use, the concepts and data deployed, and the events and occasions when nurse staffing is considered (for example, board meetings, workload assessment, nursing handover, safety briefings, board rounds, clinical and service managers' meetings). We will explore perceptions of the assessments, skills and knowledge that inform nurses' professional judgement; how professional judgment is articulated and mobilised within the organisation; the intersection of professional judgement with workforce planning tools and nurse sensitive quality indicators; the relative power of professional judgment in shaping safe staffing decisions and the factors that contribute to or detract from its effectiveness

TABLE 1 Examples of similarities and differences in approaches to calculating and deploying nurse staffing in England and Wales

Wales	England
Nurse Staffing Levels (Wales) Act passed March 2016 detailing a range of statutory duties relating to registered nurse (RN) staffing levels in NHS Wales Local Health Boards (LHBs) adult medical and surgical wards; gradual implementation of various aspects of the Act up to April 2021	NQB staffing guidance (National Quality Board 2016) developed by Dept of Health, NHS Improvement, NHS England, NICE, CQC, HEE, Public Health England covering acute hospital wards. Provides 'an updated set of NQB expectations for nursing and midwifery staffing to help NHS provider boards make local decisions that will deliver high quality care for patients within the available staffing resource' (p. 7)
Legal duty imposes a triangulated approach to determine RN staffing levels, based on nurses' professional judgement, evidence-based workforce planning tools and current state of patient care. A 'Wales Levels of Care' (WLC) patient acuity tool is being piloted to estimate nursing workload and deployment of RNs and healthcare support workers (HCSW). The WLC consists of 5 levels of patient acuity which are used to inform nurse staffing decision making about skill mix requirements (ratio of RNs to HCSWs) and RN to patient requirements. It ranges from Level 5 where the patient is highly unstable and at risk, requiring an intense level of continuous RN care on a 1:1 basis; to Level 1 where the patient's condition is stable and predictable, requiring routine nursing care by RNs and HCSWs	A 'triangulated methodology' approach is recommended. 'Care hours per patient day' (CHPPD) is the measure being piloted to estimate nursing workload and deployment. CHPPD is calculated by dividing total registered nursing and healthcare support worker hours by the total number of inpatients and can include decisions taken in the context of the multi-professional team. The acuity or dependency of the patient is not formally measured. CHPPD is not used in isolation but as part of a local quality dashboard that includes patient outcome measures alongside workforce and finance indicators
Responsibility for nurse staffing levels ultimately rests with the Board	Responsibility for nurse staffing levels ultimately rests with the Board
To maintain staffing levels agency nurses can be used (alongside use of bank nurses) and beds can be closed. However, several Health Board areas in Wales currently prohibit the use of agency nurses	Minimizing the use of agency nursing through more efficient employment practices is clearly stipulated. When staffing levels are low use of bank staff is acceptable as is bed closure
Wales identifies three patient safety outcomes (pressure ulcers, medication admin errors, falls) as being sensitive to nurse staffing levels, which should feature in UHBs nurse staffing reports to Welsh Government. UHBs may also consider any other indicator that is sensitive to the nurse staffing level they deem appropriate for the ward where the nurse staffing level is being calculated	A number of ways to monitor the impact of nurse staffing on quality are identified: patient safety outcomes; including, avoidable harms (such as falls, medication administration errors and pressure ulcers), cancellation of elective surgery and staff outcomes/feedback via staff survey and nursing staff numbers attending mandatory training

in this context. Additionally, we will assess how professional judgement informs service reconfiguration and staffing patterns in response to demand surges due to Covid-19.

Interviews will be arranged to take place via a secure video conferencing software, audio-recorded with permission, and transcribed in full to ensure accuracy. Summary notes on key issues will also be undertaken to expedite the concurrent analysis. Interviews will be semi-structured (with content tailored to role and the emerging analysis). Prospective interviewees will be sent a topic list before the interview. Initial interviews will last approximately an hour. We will seek permission to undertake shorter, focused follow-up interviews with some stakeholders in order to clarify any areas of uncertainty and build up and deepen our understanding of the case.

3.3.2 | Documents/materials

We will locate and analyse the content of relevant documents, tools, technologies and artefacts in each case study and explore how they are used (e.g., Board papers, records of Matrons/Senior Nursing/Nursing and Midwifery Board meetings; results and reports of applying nurse staffing tools to determine establishment requirements and quality reports). Documents and artefacts will be treated as both a resource and a topic. Their content will be analysed in order to develop better understanding of their role in decisions made around staffing and their ability to mobilise professional judgement.

3.3.3 | Meetings

With permission, we will attend relevant organisational meetings either virtually or in person, depending on COVID-related restrictions within the case study sites. Data will be digitally recorded if possible, low inference field notes, which document what was said without interpretation will also be recorded. Field notes will be word processed as soon as possible after the meeting; relevant sections of the digital transcript will also be transcribed.

3.3.4 | Sampling strategy

We will start by identifying and interviewing key informants in order to map the core components of nurse staffing systems within the organisation. These data will inform our initial

sampling strategy and enable us to identify relevant stakeholders (Board Members, Safe Staffing Leads, service managers (Medical, Surgical and other relevant Directorates, Patient Experience, Quality and Safety, Freedom to Speak Up Guardians, PPI Representatives), ward managers, and staff nurses), documents, and meetings. Hereafter, data generation and analysis will be undertaken concurrently to build up an understanding of each case. Researchers will be introduced to participants initially through key informants and thereafter purposively selected, with agreement, in light of the emerging findings. Researchers will contact participants individually via both email and telephone.

3.3.5 | Inclusion criteria and exclusion criteria

NHS staff will be included if they are involved in decision making around nurse staffing, are able to give informed consent and communicate in English.

3.3.6 | Theoretical framework

The study is informed by a practice-based approach (Nicolini, 2012), the origins of which can be traced through praxeology (Bourdieu, 1977, 1990), ethnomethodology (Garfinkel, 1967), structuration (Giddens, 1984) and activity theory (Engeström, 2008; Engeström et al., 2002). These shared orientations will inform the data generation strategy (Nicolini, 2012).

First, social phenomena will be understood as created through human agency and continuously in process. Apparently durable social structures are conceptualised as verbs rather than nouns, that is, as an on-going practical accomplishment. This orientation directs attention to the processes through which relevant organisational concerns, such as 'safety', 'quality of care', 'staffing levels' and 'professional judgement' are negotiated in practice.

Second, practices will be conceptualised as activities made possible by an array of resources. Human subjects do not relate to the world directly; artefacts always mediate activity. This directs attention to the material and psychological artefacts that mediate decision making about nurse staffing levels, how these are deployed by nurses, and their relationship to professional judgement.

Third, practice will be understood as emerging from nurses' dynamic interactions with the material and social world as they seek solutions to their problems. Our concern is with how nurses make sense of and act on those factors consequential for nurse staffing levels, by attending to their material and discursive activities (Weick, 1995).

Fourth, practice-based approaches underline the importance of power. Practices serve certain interests and they do this through the relationships that are created through networks of practices and how these fit into a given context and its distribution of power and privileges (Ortner, 1984). So, in studying nursing, we will attend to the power relationships that shape the use of professional judgements and their consequences for practice.

Finally, from a practice perspective knowledge is understood as the capacity to undertake a social and material activity, it is a 'set of practical methods acquired through learning, inscribed in objects, embodied, and only partially articulated in discourse' (Nicolini, 2012: 5). Becoming a contributor to a particular field of practice entails learning how to act and how to speak, but also what to feel, what to expect and what things mean. This has important implications for our understanding of nurses' professional judgement and how this is integrated into education and professional development.

3.4 | Data analysis

Data generation and analysis will proceed concurrently with the involvement of the whole team. Interim analyses will enable the assessment of the quality of the data in terms of the study aims and inform subsequent data generation strategies. All materials will be uploaded into computer-supported qualitative data analysis software (NVivo11) and coded to augment management. Each case study will be written up individually and shared with the study sites to check accuracy. The case studies will then be used as the basis of the comparative analysis both within each country and between each country.

3.5 | Ethical considerations

The study protocol was approved on 28th July 2020 by Cardiff University's School of Healthcare Sciences Ethics Committee. Every effort will be made to protect both the participant and the researcher in accordance with ethical principles regarding studies and research involving human beings stated in the The World Medical Association (2013) and established ethical frameworks (Beauchamp & Childress, 2001).

A number of ethical challenges relating to this study have been considered. First, participation in interviews will make certain demands on staff. To mitigate against the risk of interfering with workflow, researchers will be flexible in arranging interviews and modify plans if required.

Second, a risk with all studies involving staff members is the chance (however small) of disclosures of poor practice/negligence or safeguarding issues. Should this occur, the researchers would notify any disclosures to the Chief Investigator who would report these through the appropriate NHS mechanism.

Third, all staff taking consent are experienced in consent taking procedures and have received training in Good Clinical Practice. All participants will be provided an electronic Participant Information Sheet and allowed at least 24 h to consider whether they wish to contribute to the study. Information sheets will provide detailed information about the nature and purpose of the study and make it clear that all personal/demographic data from both interviews and

meetings and all digital recordings and transcripts will be coded to ensure anonymity. Information sheets will clearly outline that participants have the option to opt out or withdraw at any time point during the data collection phase. They will also make clear that any data collected prior to their withdrawal will be retained and that once the study is being disseminated it may not be possible to withdraw their contribution. Participants will be given the opportunity to ask questions and will be free to decide whether to take part.

All interview participants will need to provide signed consent, prior to the interview. Consent will be sought electronically, where the participant will be asked to initial each consent statement and then sign or type their name and return to the researcher via email. For relevant meetings, verbal consent will be required from all those present. Participant Information Sheets will be provided ahead of the meeting, and verbal consent for researchers to attend the meeting will be sought from the Chair.

3.6 | Rigour

Regular meetings will be held to ensure data collection and analysis remains consistent. A shared data generation framework will be developed and refined iteratively to aid concurrent analysis and data generation. Throughout the study, the quality of the on-going analysis will be continuously evaluated and tested through the constant comparative method. Constant comparison is the process whereby each interpretation and finding is compared with existing findings as it emerges from the data analysis. The face validity of our findings will also be assessed through Joint Interpretative Fora (one in England and one in Wales), where provisional findings will be shared and jointly interpreted. These events will be recorded, and the insights folded back into the final analysis and recommendations for policy and practice. The generalizability of the findings beyond the acute sector will be explored in four sense-checking workshops with Mental Health (inpatient), Paediatric (inpatient), Community (health visiting, district nursing, mental health nursing) and Care Homes.

4 | DISCUSSION

Determining optimal staffing is a complex process. Robust workforce planning tools require high quality staffing and patient data. The International Council of Nurses, the global health policy-making body for nursing recommends that these tools must be used in conjunction with professional judgement (ICN, 2018 Position statement on staffing). Recent evidence demonstrates that even the implementation of staffing mandates involving nurse to patient ratios requires judgement in operationalising the flexible design of the recently evaluated model in Queensland, Australia (McHugh et al., 2021). Identifying the operation and dynamics of professional judgement also enhances transparency in the implementation of staffing policies. This is important since it is assumed that even in countries with publicly funded national health services have similar staffing across large institutions. Research evidence demonstrates that this is not the case and that large variations exist between hospitals with consequences for patient outcomes and nurse retention (Aiken et al., 2013, 2014).

5 | LIMITATIONS

A study that uses the advantages offered by technology, also brings with it a specific set of challenges. There may be practical and logistic challenges in the organization of online interviews with healthcare professionals. Researchers will need to work effectively to develop rapport online. In addition, researchers and participants will need to be proficient in the use of video conferencing technology. At the same time, conducting interviews via this medium means that they can take place at a time that is convenient for participants.

6 | CONCLUSION

This paper presents the background, rationale and design for a qualitative study of the use of nurses' professional judgement in staffing decisions in England and Wales. Health service managers across international arena need information to deploy nurses effectively. While there is wide variation in the nurse staffing methodologies in use, professional judgement is a core component of most approaches, but its role in nurse staffing system is poorly understood. By opening up this black box this study aims to more fully understand the dynamics of nurse staffing decisions; describe and explain how professional judgement triangulates with the other components of nurse staffing systems; specify the support that might be necessary for professional leadership in different domains; and identify whether there is the potential for the further development of decision support tools which formalise nursing knowledge in this context. Approaches to nurse staffing are different in England and Wales. Through capitalising on these differences, this study will facilitate a comparison of the two strategic approaches towards nurse staffing and policy implementation. The study will also consider the use of nurses' professional judgment in relation to service configurations in response to COVID-19; a singular event which throws professional judgment into sharp relief. The findings of this study will make visible the nursing knowledge that informs staffing decisions and produce recommendations for policy, practice and professional education in the UK and beyond.

CONFLICT OF INTEREST

No conflict of interest has been declared by the author(s).

AUTHOR CONTRIBUTIONS

All authors meet the ICMJE recommended criteria. All authors have made substantial contributions to the design of the manuscript. NJ

has drafted the manuscript and all of the other authors have substantively revised it. DA is the principal investigator.

PEER REVIEW

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DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

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