Original Article

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Decision-making in an emergency department: A nursing accountability model

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Abstract

Introduction

Nurses that work in an emergency department regularly care for acute patients in a fast-paced environment, being at risk of suffering high levels of burnout. This situation makes them especially vulnerable to be accountable for decisions they did not have time to consider or have been pressured into.

Research objective

The objective of this study was to find which factors influence ethical, legal and professional accountability in nursing practice in an emergency department.

Research design

Data were analysed, codified and triangulated using qualitative ethnographic content analysis.

Participants and research context

This research is set in a large emergency department in the Midlands area of England. Data was collected from 186 nurses using participant observation, 34 semi-structured interviews with nurses and ethical analysis of 54 applicable clinical policies

Ethical considerations

Ethical approval was granted by two research ethics committees and the National Health Service Health Research Authority.

Results

The main result was the clinical nursing accountability cycle model, which showed accountability as a subjective concept that flows between the nurse and the healthcare institution. Moreover, the relations amongst the clinical nursing accountability factors are also analysed to understand which factors affect decision-making.

Discussion

The retrospective understanding of the factors that regulate nursing accountability is essential to promote that both the nurse and the healthcare institution take responsibility not only for the direct consequences of their actions but also for the indirect consequences derived from previous decisions.

Conclusion

The decision-making process and the accountability linked to it are affected by several factors that represent the holistic nature of both entities, which are organised and interconnected in a complex grid. This pragmatic interpretation of nursing accountability allows the nurse to comprehend how their decisions are affected, while the healthcare institution could act proactively to avoid any problems before they happen.

Keywords

Accountability; decision-making; emergency nursing; clinical ethics; healthcare institution; law; motivation; nurse; values; work conditions.

Introduction

As indicated by Adriaenssens, De Gucht and Maes,[1] nurses that work in an emergency department (ED) regularly care for acute patients in a fast-paced environment, being at risk of suffering high levels of burnout. This situation makes them especially vulnerable to be accountable for decisions they did not have time to consider or have been pressured into. To solve that problem, evidence applicable in nursing practice is needed to ensure an ethical and safe practice for which the nurse can be accountable for. However, to produce that reliable evidence we need to study the nurse as a holistic individual, thus analysing nursing practice and nursing accountability from different perspectives will be necessary to ensure a complete understanding of nurses and which factors influence them.

Accountability is defined by Lewis and Batey as "the fulfillment of a formal obligation to disclose to relevant others the purposes, principles, procedures, relationships, results, income and expenditures for which you have authority".[2] Accountability mainly refers to being answerable to oneself and our actions on others.[3] Depending on the category of formal obligation, there are three branches of accountability: legal, based on law; professional, based on professional codes of conduct; and ethical, based on moral principles and values. Moreover, nursing accountability is mentioned in the International Council of Nurses code of ethics as a key part of the second principal element of ethical conduct: nurses and practice.[4]

In 2013, the Francis Report found several serious issues not only in nursing practice and education but also in how nurses were accountable for their practice. Some recurrent issues found were the lack of individual nursing accountability (e.g. leaving patients lying in their excrements for long periods of time or dehydrated without being accountable for that negligence) or the target-driven management style that discouraged nurses from expressing concerns about poor standards of care. This created a situation where neither the nurse or the institution felt accountable for the quality of the care provided.[5,6] The Francis Report recommendations also addressed the nursing accountability issue, specifically recommendations 185, 191-2 and 199.[6] However, after several years there has not been a major change in how nursing accountability is comprehended and applied in England, the exception being the severity of malpractice penalties and the Nursing and Midwifery Council (NMC) nursing practice monitoring practices.[7]

There is theoretical information linked with nursing accountability produced by renowned scholars like Johnstone[8] or Thompson et al.[9], but it has not had a significant impact on clinical practice at the moment. Krautscheid also offered a deep analysis of accountability as a theoretical concept, but its use was focused on nursing education, not nursing practice.[10]

Furthermore, a report warned of the disconnection between the literature and the clinical area in relation to the nature and extent of nursing accountability more than ten years ago.[11] This gap between nursing theory and practice is a recurrent problem in England that can jeopardise safe and ethical practice, as indicated by the Francis Report recommendations 185-6.[6] Those recommendations are based on the assumption that the theory-practice gap in nursing discourages appropriate values, attitudes and behaviours like compassion.

Consequently, understanding nursing accountability from a practical perspective could help to reduce that gap, enabling value-based nurse training and reinforcement of positive values.

Nonetheless, after the aftermath of the Francis Report and the implementation of the new NMC code of conduct, the NMC did not encourage major changes in the understanding of nursing accountability in practice. In addition, the new NMC standards of proficiency for registered nurses mentioned the proficiencies necessary to be an accountable professional but not the nature and extent of nursing accountability, how that accountability would be applied or if the nurse should be aware of their ethical, legal and professional accountability.[12]

The same NMC documents stated how being accountable for your actions and their consequences is a fundamental aspect of nursing practice. Moreover, they mentioned that the particular circumstances linked to that practice can affect how accountability is perceived and applied. However, these concepts are only briefly mentioned without any further insight or discussion.[12,13] Therefore, the research question is: which factors influence accountability in emergency nursing practice?

Aim

The aim of this study was to find which factors influence ethical, legal and professional accountability in nursing practice in an emergency department.

Methodology

This qualitative ethnographic content analysis study was designed to obtain data from different sources to create a holistic picture of the nursing accountability phenomenon. Data were collected from participant observation, semi-structured interviews and ethical analysis of clinical policies. Ethnographic content analysis is a methodology that combines the ability of qualitative content analysis for discovering emergent patterns in data with the reflective nature of ethnography.[14] This allows finding facilitating and limiting factors of a phenomenon during the coding process while avoiding excessive abstraction and maintaining the data relevant to the context it comes from.

Setting and sampling

The setting for data collection was a large ED in England, which provides emergency healthcare services to 500-700 patients a day.

Sampling was done differently for each data source to obtain the maximum amount of quality data without skewing it. The use of different sampling methods was based on the differences between each data source, since interviewees needed to be varied across the available sample to avoid false data saturation while the wide range of nurses available for participant observation allowed a broader sampling methodology.

Interviewees were chosen using purposive sampling (Data source 1) to ensure adequate demographic distribution across different professional roles, genders, ethnicities and professional experience levels. However, interviewees had to have worked as a nurse for more than four shifts per month for more than six months in that ED to be eligible (inclusion criteria). The exclusion criteria were nurses that worked in another ED as permanent members of staff or nurses that could not give informed consent or those that withdrew it. Recruitment strategies included advertisements in the ED staff room and during the first meeting of the shift in the ED seminar room. Interviewees were recruited until data saturation was reached.

Convenience sampling was used during the complete participant observation period (Data source 2), since all nurses that worked in that ED and were able to give their consent were included. However, non-registered nurses, nurses that were not able to give their consent or nurses that could not be informed extensively about this research (e.g. non-regular agency nurses) were excluded. The reason why the recruitment criteria for observation are laxer is the large number of participants and the low level of involvement with them, while interviews have a higher involvement and a lower quantity of participants. Therefore, the limited number of interviewees needed to be screened so that they were representative.

In relation to the clinical policies chosen to be analysed, purposeful sampling was used to include every policy that regulated common ED nursing practice, the techniques performed and the management of ED nurses as human resources (Data source 3).

Data collection techniques

Data collection methods varied depending on the data source, but all data was collected, coded and analysed by the same person, a male PhD student that had extensive research training and worked as a registered nurse in the same English ED throughout the whole study.

The 34 semi-structured interviews (Data source 1) were conducted face to face between May and August 2017, took place on NHS Trust premises and were audio-recorded, anonymised and transcribed verbatim. Every interviewee gave their informed consent prior to their interview. Immediately after the end of each interview, a non recorded member check was performed (lasting between 5 to 25 minutes) to clarify any confusing points from the interview and giving interviewees the opportunity to talk without being recorded, confirm the validity of the data obtained and avoid any influence from the fact of being recorded. This provided interviewees with an opportunity to further engage with and add to the interview, further enhancing credibility.

Data from the complete participant observations (Data source 2) were obtained while working as a registered nurse in the same ED over a period of 12 months (May 2017 – May 2018), observing ED nurses during clinical practice and detailing non-confidential data in a field diary that was transcribed at the end of the observation period. A total of 1870 hours were spent observing 186 nurses during 146 observations periods in practice.

Fifty-four policies and guidelines (Data source 3) were obtained from the hospital intranet in 2017. These were analysed searching for any incongruities with the NMC Code[15] applying the Clinical Policy Ethics Assessment Tool (CliPEAT).[16] Findings were transcribed to enable triangulation with the rest of the data.

Data analysis

Data from all sources were compiled in a narrative format to aid codification and triangulation. The methodology chosen was ethnographic content analysis, a method that delineates patterns of human action in relation to their environment through fieldwork.[14] This method included 17 phases (see Figure 1).

Every transcript was transferred to Nvivo (version 11.4.1.1064) for organisation purposes, but no automated computerised methods were used to code or triangulate data.

Categories and subcategories that represented all transcripts were created using descriptive coding and subcoding.[17] Those categories and subcategories were then organised in three coding frames, one per data collection method (phase 1). Subsequently, all transcripts were divided into units of coding following a thematic criterion (phase 2) and the coding frames were applied to 25% of the transcripts from each data source, which were randomly selected. This step was performed twice 13 days apart as part of the two pilot coding phases (phases 3 and 4) to allow the comparison of both results.

Both pilot phases were evaluated using the requirement for coding frames as described by Schreier (unidimensionality, mutual exclusiveness, exhaustiveness, saturation, reliability and validity) (phase 5).[18] Since all requirements were met, the three coding frames were utilised with all the corresponding transcripts during the first and second main coding phases, which were 11 days apart (phases 6 and 7). Schreier's requirements were also met during the main coding phases (phase 8).

After codifying data from each data source separately it was triangulated, coding all the information together. The triangulation process was the same as the codification one, but to create the triangulation frame we utilised pattern coding and simultaneous coding, which are specific coding techniques for triangulation (phase 9).[17] To test the triangulation frame, 25% of the transcripts were triangulated twice 10 days apart in two pilot triangulation phases (phases 10 and 11); maintaining the same division for the units of coding.

After the triangulation pilot phases, the triangulation frame met all Schreier's requirements aside from mutual exclusiveness, which was a predictable result of using simultaneous coding that did not affect its reliability (phase 12). Consequently, the triangulation frame was used with all the transcripts twice nine days apart in the two main triangulation phases (phases 13 and 14), meeting all Schreier's requirements apart from mutual exclusiveness, as expected (phase 15). Therefore, a list of categories with their subcategories that represented all the data collected was created.

When everything was triangulated, the corresponding categories and subcategories were recontextualised to link them with relevant information and to explain the causes and

consequences of these relations (phase 16). The final result (phase 17) was two models that explained the cycle of nursing accountability through the decision-making process at the moment that it happens and which factors influenced that decision before the decision-making process begins.

Ethical considerations

Ethics committee approval was obtained from: the National Health Service Health Research Authority, University Hospitals of Leicester Research and Innovation Department and De Montfort University Faculty of Health and Life Sciences Research Ethics Committee (reference 1933). Moreover, a research permit was obtained from the ED nursing management team.

Several measures were implemented to avoid bias, potential coercion and to ensure participant privacy. In the case of the semi-structured interviews, potential participants contacted the researcher to ascertain eligibility and arrange a date and time for the interview. All potential participants were sent the participant information sheet in advance and were contacted before the interview to ask any questions. Informed consent was obtained before each interview, offering a second opportunity for the participant to ask any questions before obtaining informed consent. Contact information was also provided to participants prior to the start of the interview should anyone have concerns about any aspect of the study and who to complain to if something should go wrong. All semi-structured interviews were undertaken in a private setting face-to-face to promote confidentiality.

In relation to the participant observation, the ethical committees waivered the need for individual written informed consent due to the minimal risk of this data collection technique. However, in order to obtain oral consent, I informed potential participants of the purposes and procedures of the research, the risks and benefits of the study, the right for participant withdrawal at any time without penalty and how data would be protected and stored to protect confidentiality. As an added measure, participants were reminded again about the research through posters displayed in the ED Staff Room and during nursing clinical handovers, giving them the opportunity to withdraw their consent and/or to have their contributions withdrawn from the data collected to date.

No participants refused to participate or withdrew after being recruited.

Trustworthiness

Quality criteria in quantitative research cannot be used in qualitative research, so trustworthiness criteria are used in qualitative research to ensure that research findings can be trusted.[19] Korstjent and Moser's definition of trustworthiness criteria was used.[19] Prolonged engagement, persistent observation, member checks after each interview and data and method triangulation were used to boost credibility, while a thick description of the methodology, data and results increased transferability.

Dependability and confirmability was established by following the Standards for Reporting Qualitative Research **(**SRQR) checklist,[20] providing a thorough description of the research steps taken and by presenting detailed records through publications [21,22] and public repositories.[23–25] Furthermore, the researcher's role in the field was integrated as a pivotal part of the analysis, as is common practice in ethnographic content analysis, enhancing reflexivity.

Results

The result of the codification and triangulation process was two models: the clinical nursing accountability cycle model, which explains the accountability flow at the moment after the decision happens, and the relations amongst clinical nursing accountability factors model, which explore the factors that influence the decision before it happened.

Clinical nursing accountability cycle

The clinical nursing accountability cycle model (see Figure 2) showed accountability as a subjective ethical, legal and professional concept that flows between the nurse and the healthcare institution, which can be predicted and managed to promote appropriate decision-making.

The cycle began with a problem relative to a patient (e.g. which patient to give medications to first), which had several possible solutions. To choose one of those solutions, the nurse applied both their clinical intuition and their subjective beneficent knowledge, the latter being the theoretical and practical knowledge that the nurse decided to apply to a specific situation based on the patient's benefit (e.g. unstable patients tend to be a priority for medication because the nurse knows the theoretical consequences of delaying treatment and has experienced them during practice).

> Participant (P) 4: I follow my clinical knowledge, which will go always with my gut feeling. So, for me, clinical knowledge and gut feeling goes always together and, if I have a doubt, I will follow them.

However, the healthcare institution also influenced this decision through the resources it provided to the nurse (e.g. other nurses that could help them) and the protocols through which nursing practice was regulated (e.g. time frame to administer medication in sepsis protocols).

> P28: I found out that if you don't have the right amount of staff sometimes you'll be rushed to do something, [..] we don't have the time to do all these things, so we have to prioritise.

Once the decision had been made, it entailed consequences for both the nurse and the healthcare institution. Nonetheless, in most cases it was not clear if it was the nurse or the healthcare institution who was accountable for the consequences of the decision. Therefore, we identified two phenomena that transferred accountability from the nurse to the

healthcare institution and vice versa: vicarious hierarchical accountability and subjective contractual individual accountability.

Vicarious hierarchical accountability is the dispersion of accountability linked to a decision through the hierarchical structure, involving employees with greater influence than the nurse but without affecting the healthcare institution per se. High influence employees had training and experience in conflict resolution that allowed them to relax the patient and minimise their perception of the negative experience, hence avoiding the beginning of a legal process (e.g. convincing the patient that the delay in administering their medication was an unavoidable issue due to clinical workload).

> P14: Try to avoid complaints because at the moment we've got long waiting times and they [patients] are all complaining.

On the other hand, being an employee of a public healthcare institution entailed following the employment contract clauses as in any company, but there was also a subjective factor in how nurses felt as part of the healthcare institution for which they worked. Subjective contractual individual accountability is a phenomenon that explains when accountability is identified by decisions not only based on their job role or the applicable legal and professional regulations but according to what they believed they should be accountable for. Therefore, nurses could feel accountable for the consequences of decisions that they had not made or were beyond their control. For example, nurses would work extra hours, cut their breaks or perform actions that displeased them if they believed it was their responsibility as a nurse employed by a public healthcare institution or that their patients needed them.

> P13: When they say "go on break", please, break can wait, I'm not going to die from hypoglycaemia.

Another manifestation of subjective contractual individual accountability was when the healthcare institution made nurses feel accountable for decisions that were its responsibility, indoctrinating them into following its goals (e.g. pressure to meet the 4-hour target for at least 95% of patients). This was undertaken using active or passive pressure, or in other words, aggressively persuading the nurse to take responsibility for something or making them feel guilty of the consequences of the decision made so that they decide to consider themselves accountable for it.

> P4: We have bed managers coming out to us shouting "right, move this patient, this patient needs to move, it's going to breach [the 4-hour target]"

Summarising, when there is a problem relative to a patient and there are several possible solutions for it a decision-making process starts. The decision made as a result of this process has consequences for both the nurse and the healthcare institution, since both of them contributed to it. However, since being accountable for those consequences can bring a negative effect to them, each of them tries to shift the accountability to the other. This entails that if a third party is not involved this cycle could continue indefinitely if neither the nurse nor the healthcare institution made themselves accountable for the consequences

of the decision made. However, this cycle also shows how the nurse and the healthcare institution learn every time they have to be accountable, since their accountability is linked to them and the factors they use to make decisions.

Relations amongst clinical nursing accountability factors

The relations amongst clinical nursing accountability factors model (see Figure 3) show 32 clinical nursing accountability factors that can also be divided into five main groups: connectors, legal factors, professional factors, ethical factors and personal factors. These factors are linked by direct or inverse relations (see Table 1) and have specific contextualised descriptions (see Table 2). These relations have been captured in the extended version of the model (see Figure 4). When we mentioned factors we refer to any phenomenon that influences accountability, while entities are the two main categories that affect and are affected by these factors, the nurse and the healthcare institution.

The two connectors, clinical workload and protocolisation, were the factors that did not affect the decision made by themselves but connected and affected the rest in different ways. Through them we could understand phenomena such as the inverse relationship between patient safety and defensive practice, the positive feedback loop between staff shortages and staff satisfaction or the effect of etiquette on patient satisfaction.

Because of this, clinical workload can be used as an indicator that there is a problem in the nurse-healthcare institution relationship, but it does not provide the solution to it or revoke the existence of any problem. This is due to the fact that dozens of factors affected clinical workload at the same time and that a moderate clinical workload did not indicate on its own that there was not any problem linked with care provision.

The other four groups of factors were different facets of the nurse and the healthcare institution, which interact with each other to create a holistic concept of both entities. Within the dozens of interactions that can affect decision making and the accountability for those decisions, we will describe three of the most recurrent ones throughout all the data collected (staff satisfaction, the public and care provision), even though all of them were presented in table 2 and pictured in Figure 4.

Human resource management was a process regulated by several loops that focused on staff satisfaction, whether in relation to staff safety, training, staff shortages or client flow, among others. This indicated that these factors must be considered if a stable and motivated workforce is to be maintained, especially if the supply of nurses does not cover care demand.

> P19: That’s your core requirement, without people you cannot do your role effectively.

The public was an integral part that was taken into account by both the nurse and the healthcare institution, so that their opinion modified future care provision. This happened when public expectations translated into demands that the healthcare institution could protocolise within clinical practice. Although this phenomenon can be positive, the lack of

context in public requests can misuse public resources in unnecessary requests like changing the name of an area without solving the root of the problem.

> P29: Sometimes it's very difficult to manage the demands for things that probably are entitled to. We just can't do it in a timely manner or in the way that they expect.

Nonetheless, the most important phenomenon was how all factors directly or indirectly affected care provision. Factors that affected a decision related to patient care, how they interacted with each other and the accountability of the nurse and the healthcare institution in relation to that decision can be analysed and predicted, facilitating a framework for continuous high-quality care provision.

> P31: Not everyone would be able to have the same level of care, you judge that in many different factors, but you've made a decision as to why you're with one patient more than with the others.

Discussion

Nurses have been subject to accountability issues without supporting evidence, as mentioned in the introduction. Finding the factors that regulate ED nursing accountability in the two models presented show how accountability can be affected by factors before the decision for which someone is accountable for happened.

Traditionally, nursing accountability takes into account factors that affect decision-making mostly at the time the decision is made, which facilitates its analysis and simplifies the search for a possible culprit to answer for the negative consequences. However, the factors that affect decision-making have been previously influenced by other factors, which are represented in the relations amongst the clinical nursing accountability factors model, so that the latter must also be considered during nursing decision-making analysis.

The retrospective understanding of the factors that regulate nursing accountability is essential to promote that both the nurse and the healthcare institution take responsibility not only for the direct consequences of their actions but also for the indirect consequences derived from previous decisions. This would promote prudence in decision-making and increase error reporting, thus facilitating a safer practice and a consistent provision of healthcare.

The results show that nursing accountability is affected by legal, professional, ethical and personal factors. However, these factors not only describe how different variables affect decision-making and its consequences but they also represent nursing professional duty, which is based on three main concepts: professional ethics, professional deontology and legal regulations.[26] The ethical, professional and legal factors identified coincide with the concepts of professional ethics, professional deontology and legal regulations respectively, while the personal factors represent the moral judgment that must be undertaken when there is a conflict between values or professional principles and between these and legal

regulations, which can lead the nurse to make a decision against their professional duty in a concrete case.[27]

This phenomenon can be observed in different factors like patient advocacy representing the ethical principle beneficence applied to vulnerable patients, nurses' care provision being linked to applicable deontological codes (e.g. NMC Code) or staff safety being both an accountability factor and a legal requirement. Personal factors broke the regular order of professional duty indicated by Reamer (professional ethics before professional deontology and professional deontology before legal regulations)[27] in concrete cases several times, mainly when the nurse was forced to choose between protecting the patient and protecting themselves. Understanding the similarities between nursing accountability and professional duty can encourage a holistic analysis of accountability as more than legal responsibility, since recognising its variability within each context is key to judge someone's accountability fairly.

The relation between the two main categories (nurse and healthcare institution) has also been explored by Beardwood and Kainer.[28] They indicate that nurses are required to manage their accountability in hazardous circumstances without the systemic support of healthcare institutions or regulatory bodies, since the complexity of clinical decision-making was not considered. This statement links directly with the accountability models, where a bifocal model that covers decision-making and accountability is further supported by another model that displays every factor that could affect that decision before it happens, providing a realistic explanation of how nursing accountability is affected by different factors in different contexts.

Moreover, several accountability factors' interactions have also been covered by other authors. Cross, Considine and Currey discussed the importance of an appropriate handover between ED and ward nurses,[29] which is reflected in the staff social interactions factor and its relations; while Nibbelink and Brewer found that factors such as nursing experience, cultural influences, education, situations awareness and autonomy affected nursing decision making,[30] which were also indicated in the results of this research. This overlap between this research and others shows how common most of the factors mentioned and their relations are in different clinical contexts, statement that is further supported by Cummings et al. in their scope review.[31]

Limitations

There are limitations to the methodology that have been minimised by different means. We considered the possible influence of the researcher onto the participants, both during the observation period and interviews. Therefore, to minimise it we employed different measures such as non-coercive advertisements, passive recruitment and informal interviews. Additionally, there was unavoidable interaction during the participant observation period as part of multidisciplinary clinical practice, but teamwork interaction is a regular aspect of nursing practice and so it did not disturb the nurses' routine and it additionally provided key information that could not be obtained by non-participant observation (e.g. multidisciplinary professional relationships).

We also considered the possible researcher biases and how to minimise them. We maintained a reflective journal to identify any assumptions or preconceptions, so as to avoid those that could skew the data. To avoid "becoming a native" we maintained a cordial and neutral approach to the participants and avoided being included in any social groups or relationships outside the hospital. We also limited the length of the observation period to a year and triangulated it with data from other data collection techniques to ensure that we did not "become native" even with these measures in place.

Moreover, there are limitations to the applicability of the results. The most impactful one is that the clinical nursing accountability cycle works better on a bigger scale such as big departments, hospital complexes or national healthcare services. The nurse's personal background, which is difficult to predict or control, has a greater effect when these models are implemented into small services or to lone workers that are not connected to a big healthcare institution. Theoretically, this happens because the lack of influence from a strong healthcare institution and a diverse group of colleagues facilitates the implementation of personal values in practice, which can be positive or negative depending on the nurse's values.

Conclusion

In clinical practice, nursing accountability is a subjective concept influenced by two main entities, the nurse and the healthcare institution. Accountability is created just after the decision is made and is distributed between the nurse and the healthcare institution depending on how the decision was influenced by each of them. Furthermore, that decision-making process and the accountability linked to it are affected by several factors that represent the holistic nature of both entities, which are organised and interconnected in a complex grid.

This pragmatic interpretation of accountability in nursing practice allows the nurse to comprehend how their decisions are influenced and to make informed decisions considering the healthcare institution as part of their decision-making process. Moreover, the healthcare institution could use the same information to plan and act proactively to avoid any problems before they happen, ensuring consistent safe care that meets the ethical and quality standards of the public.

Additionally, if legal and deontological institutions such as legal courts or healthcare regulators considered interpreting nursing accountability as a subjective concept through the presented models they could evaluate situations and make judgements considering not only the specific moment when the decision was made but also all the factors that contributed to that decision retrospectively. This would enable a fairer judgement of clinical errors, since not only the specific decision that precipitated the error would be considered but also every major factor that influenced that decision or did not prevent it would affect the verdict, encouraging prudent practice from both the nurse and the healthcare institution.

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Declaration of conflicting interests

The authors declare that there is no conflict of interest.

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Figure 1: Coding and triangulation process

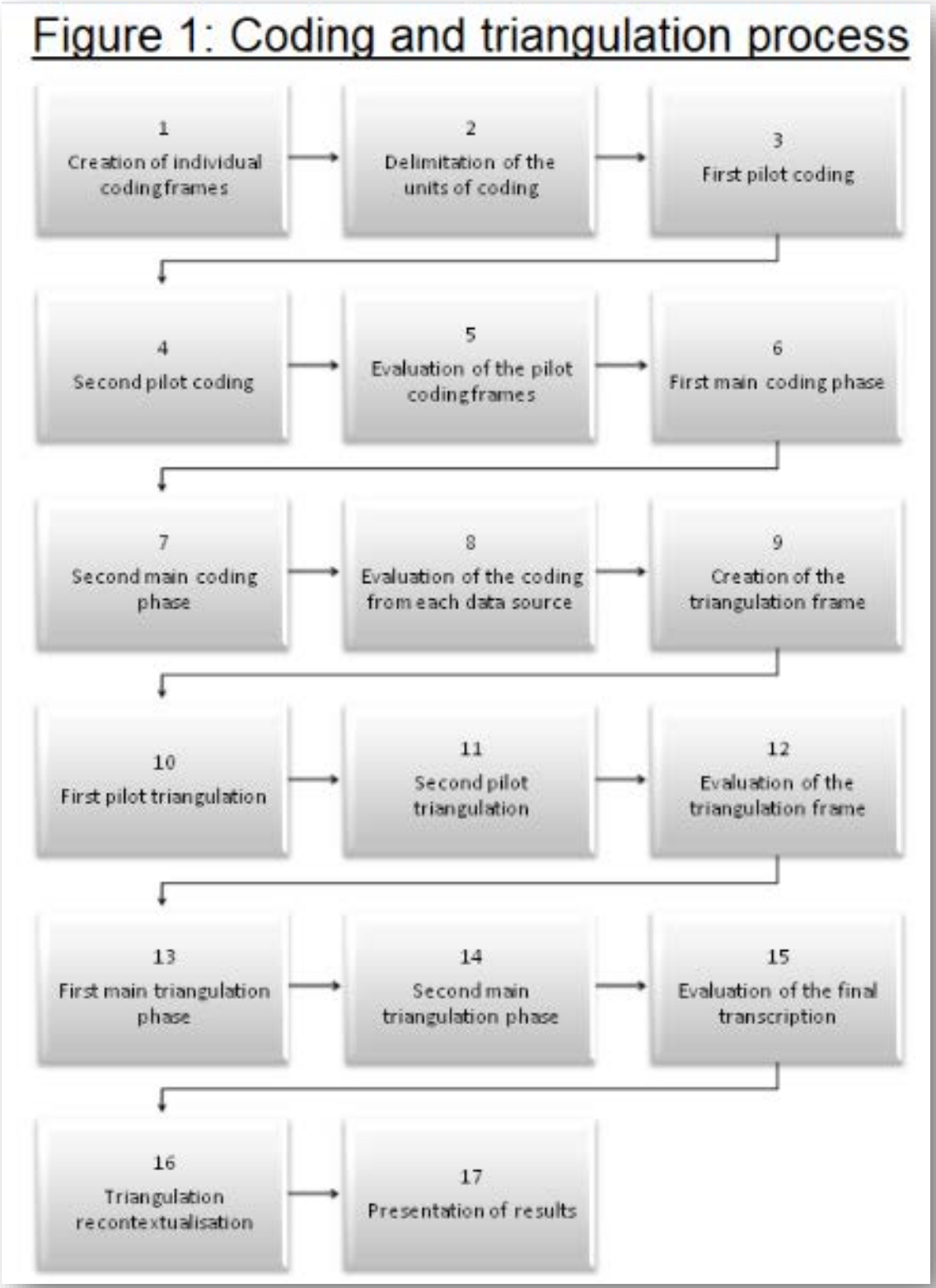

Figure 2:Clinical nursing accountability cycle

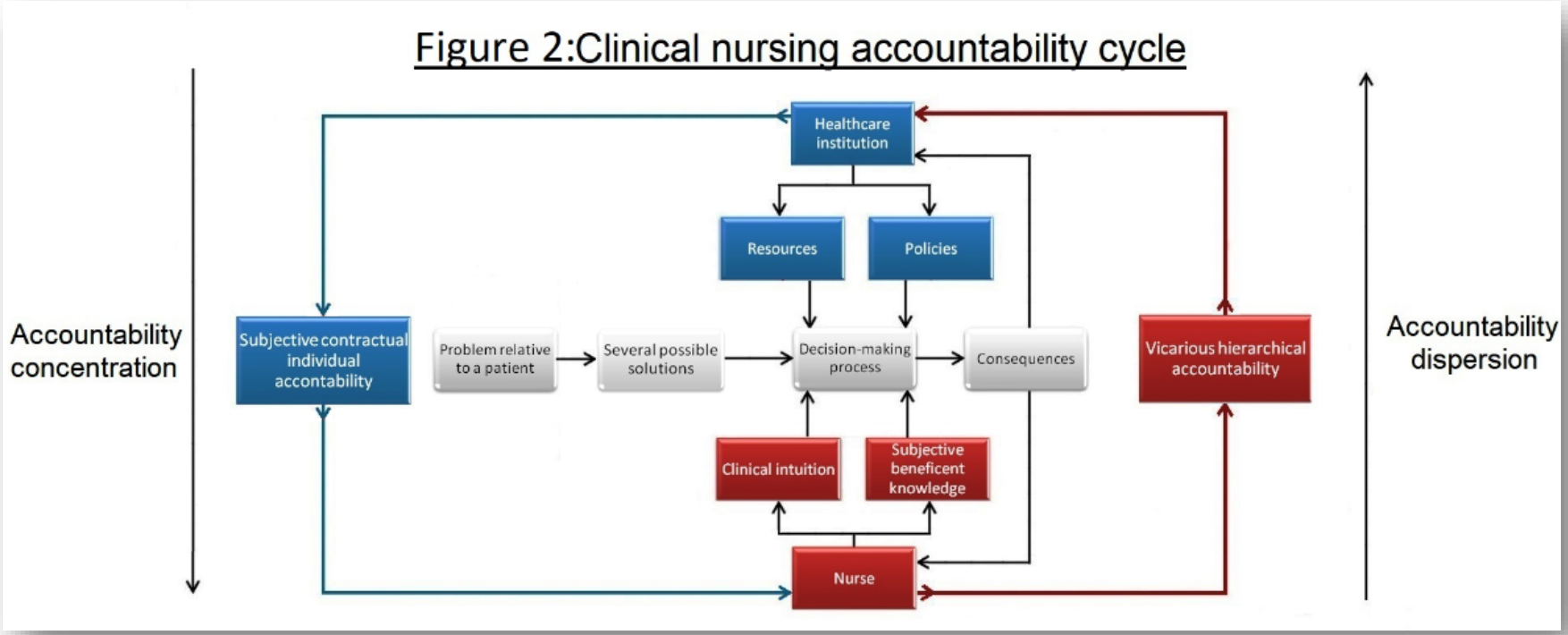

Figure 3:Relations amongst clinical nursing accountability factors

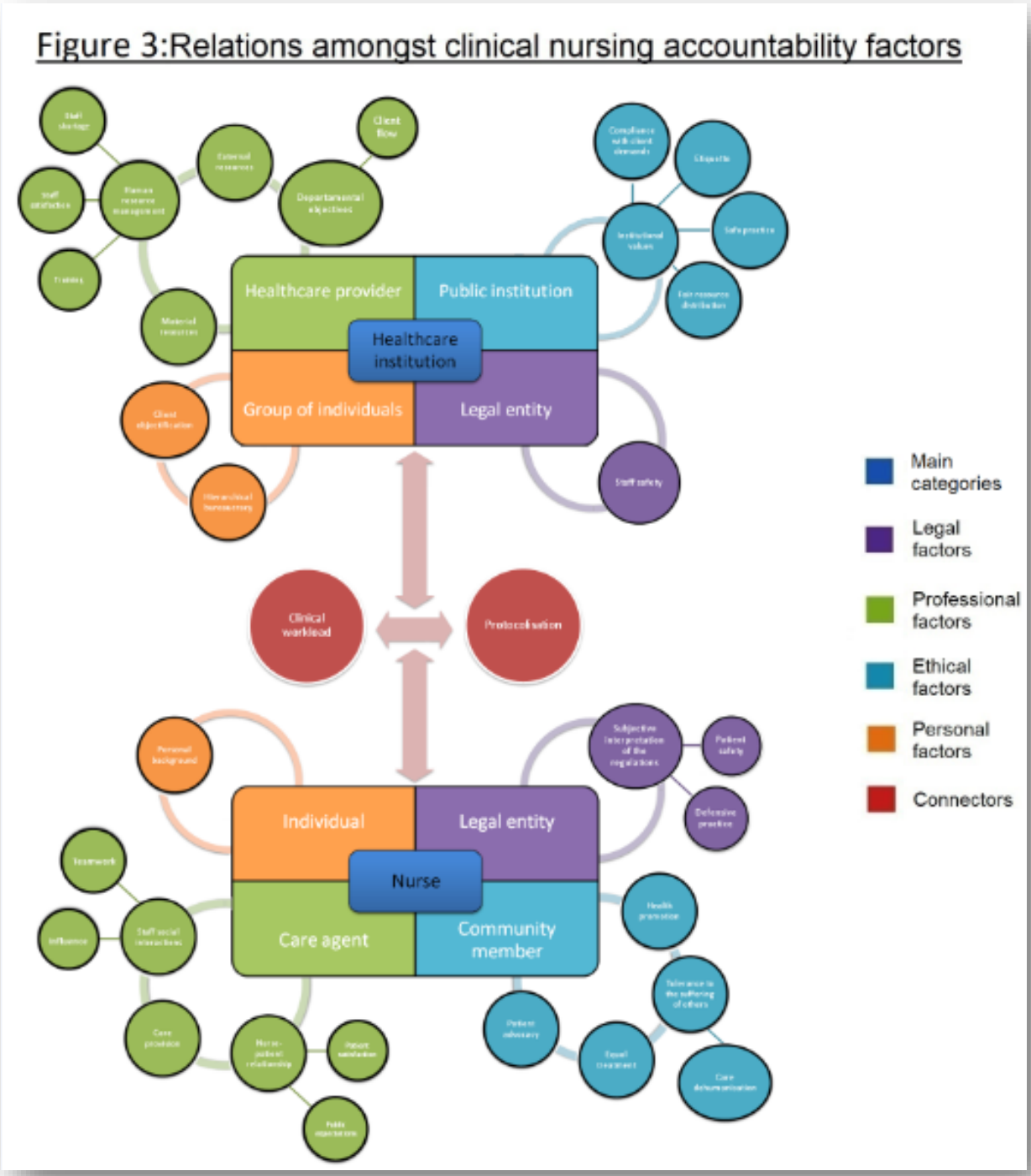

Figure 4 :Relations amongst clinical nursing accountability factors extended

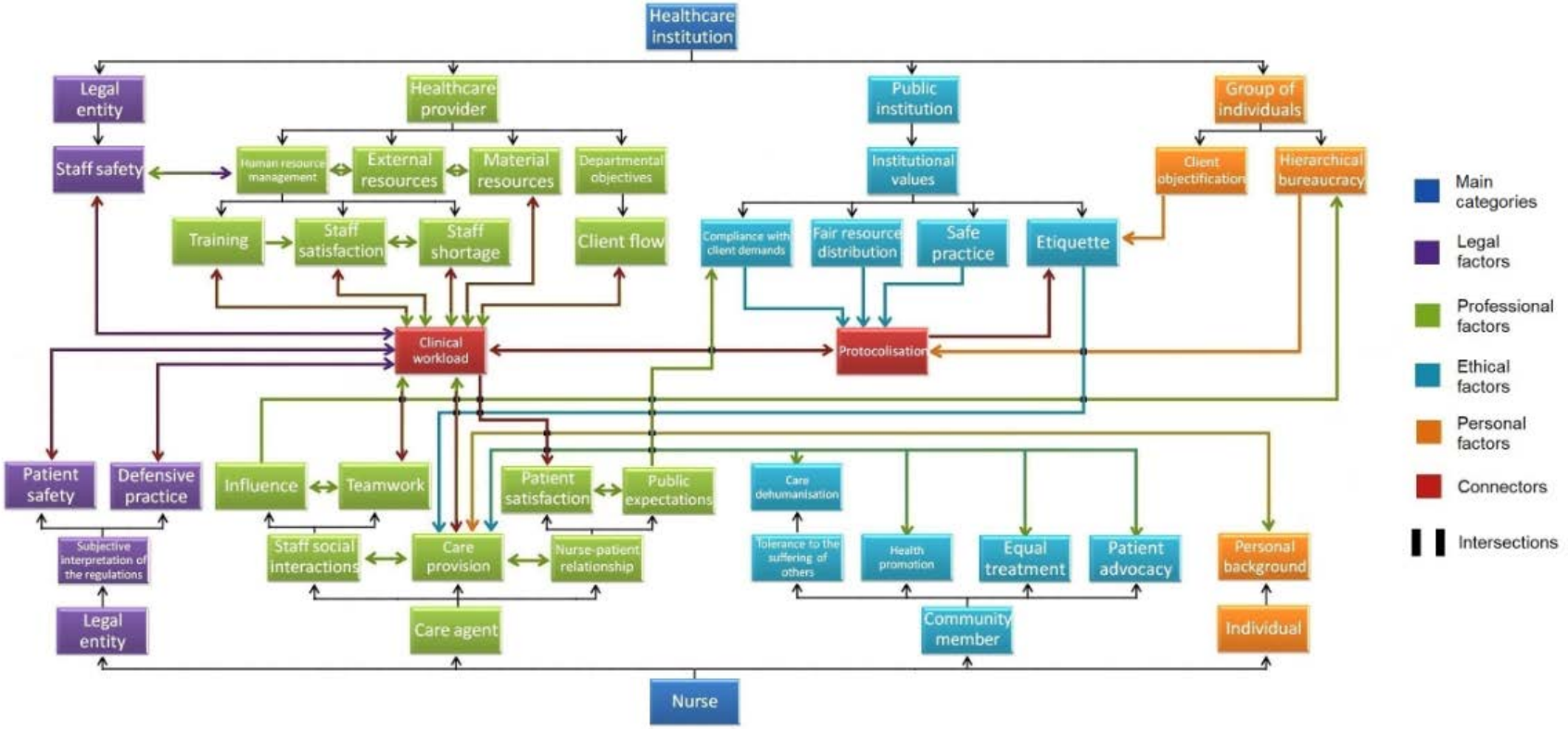

Table 1: Relations amongst clinical nursing accountability factors	
Direction of the relation and factors involved	**Type of relation**
Staff safety → Human resource management	Direct relation
Human resource management → Staff safety	Direct relation
Staff safety → Clinical workload	Direct relation short-term Inverse relation long-term
Clinical workload → Staff safety	Inverse relation
Human resource management → External resources	Inverse relation
External resources → Human resource management	Direct relation
External resources → Material resources	Direct relation
Material resources → External resources	Inverse relation
Material resources → Clinical workload	Inverse relation
Clinical workload → Material resources	Inverse relation
Training → Staff satisfaction	Direct relation
Training → Clinical workload	Direct relation short-term Inverse relation long-term
Clinical workload → Training	Inverse relation
Staff satisfaction → Staff shortage	Inverse relation
Staff shortage → Staff satisfaction	Inverse relation
Staff satisfaction → Clinical workload	Inverse relation
Clinical workload → Staff satisfaction	Inverse relation
Staff shortage → Clinical workload	Direct relation
Clinical workload → Staff shortage	Direct relation

Client flow → Clinical workload	Inverse relation
Clinical workload → Client flow	Direct relation
Compliance with client demands → Protocolisation	Direct relation
Fair resource distribution → Protocolisation	Inverse relation short-term Direct relation long-term
Safe practice → Protocolisation	Direct relation
Etiquette → Care provision	Inverse relation
Client objectification → Etiquette	Direct relation
Hierarchical bureaucracy → Protocolisation	Direct relation
Clinical workload → Patient satisfaction	Inverse relation
Clinical workload → Protocolisation	Inverse relation
Protocolisation → Clinical workload	Direct relation
Protocolisation → Etiquette	Direct relation
Patient safety → Clinical workload	Direct relation
Clinical workload → Patient safety	Inverse relation
Defensive practice → Clinical workload	Direct relation
Clinical workload → Defensive practice	Direct relation
Influence → Hierarchical bureaucracy	Direct relation
Influence → Teamwork	Direct relation
Teamwork → Influence	Direct relation
Teamwork → Clinical workload	Inverse relation
Clinical workload → Teamwork	Inverse relation
Staff social interactions → Care provision	Direct relation

Care provision → Staff social interactions	Direct relation
Nurse-patient relationship → Care provision	Direct relation
Care provision → Nurse-patient relationship	Direct relation
Care provision → Clinical workload	Direct relation
Clinical workload → Care provision	Inverse relation
Care provision → Personal background	Different each time
Personal background → Care provision	Different each time
Care provision → Care dehumanisation	Direct relation
Care dehumanisation → Care provision	Inverse relation
Care provision → Health promotion	Inverse relation
Health promotion → Care provision	Inverse relation
Care provision → Equal treatment	Inverse relation
Equal treatment → Care provision	Direct relation
Care provision → Patient advocacy	Direct relation
Patient advocacy → Care provision	Direct relation
Patient satisfaction → Public expectation	Direct relation
Public expectations → Patient satisfaction	Inverse relation
Public expectations → Compliance with client demands	Direct relation

Table 2: Clinical nursing accountability factors' descriptions	
Factor	**Summarised contextualised description**
Clinical workload	Clinical workload is defined as the movement of patients into and through the emergency department and can be measured by the patients per nurse ratio, the number of admissions or the patient flow coefficient; but as a concept it represents both the physical, mental and emotional stress that the nurse is subjected to during clinical practice and the hospital capability to meet the healthcare demand of its clients with the resources it manages.
Protocolisation	The protocolisation does not refer only to the creation and update of policies but also to their use to control the healthcare institution's employees based on its values and objectives.
Healthcare institution as legal entity	In addition to the legislation applicable to any member of the healthcare institution, there is legislation governing the activity of public healthcare institutions. This entails a higher level of scrutiny of their activities when dealing with vulnerable people. Moreover, as an employer it is accountable for the safety and welfare of its employees and clients.
Staff safety	The healthcare institution is also the employer of its healthcare professionals, so it must ensure that its employees are able to care for and be cared for safely. Legally, this happens because the healthcare institution has a Duty of Care with its clients and its employees that must meet to maintain its activity legally, but maintaining the safety of its employees is also essential so they can provide adequate care for the clients, regardless of the legal consequences.
Healthcare institution as healthcare provider	The public healthcare institution's main function is the provision of healthcare to clients that need it. For it, it has different resources that are managed to offer the best service based on pre-set targets.
Human resource management	The control of employees' distribution and their activities allow the adaption of the professionals allocated to each area according to the clients' needs in that area. This control can be performed passively through policies or actively through team coordination based on the hierarchical structure. Therefore, to manage healthcare professionals both their status as an employee and the tasks they are able to perform have to be

	considered, so the healthcare institution has to monitor their safety and their skills.
Training	Nurses, as registered professionals, must receive specific training before they can enter the NMC register and be considered nurses legally. However, that training is not enough to educate nurses as care agents. That is why it is established that the healthcare institution will provide further training to the nurse so they can care for their patients adequately.
Staff satisfaction	Nursing in England is a profession driven by vocation, since the high demand for nurses throughout the country and the different options for nonclinical career progression facilitates nurses who are not happy with their working environment to find another job, clinical or not. Therefore, nursing staff satisfaction is vital for managing human resources in any English hospital long-term.
Staff shortage	For the healthcare institution to manage human resources, it must first have enough employees from various professions to create functional multidisciplinary teams that allow efficient client treatment and care. Because of this, the lack of personnel is the most important factors in long-term human resource management.
External resources	The NHS is diversified into a network of services that are designed to cover the majority of the population's healthcare demands. Given the specialisation of such services, collaboration between different departments and healthcare institutions is not an isolated event, but its overuse can result in medium and long-term financial and efficiency problems.
Material resources	Human resources are essential for the provision of healthcare, but without adequate material resources it is impossible for these professionals to care for their patients following the minimum standards of a developed country. Material resources, both fungible and non-fungible, allow the healthcare institution to offer higher quality and aesthetically pleasing care.
Departmental objectives	As part of the NHS, all English public healthcare institutions must follow the objectives set by the British government. The objectives that the government demands are varied and depend on the type of healthcare institution and the services it offers.
Client flow	A hospital department will not be ready to receive the number of clients per hour expected if it does not discharge the same number of clients, since it has limited resources. However, the

	movement of clients through an ED must be faster than any other hospital department, since the available resources are calculated based on the argument that EDs are an emergency stop in which the client is stabilised and transferred to another place. In addition, EDs cannot turn away clients just because they are crowded, so their capacity is virtually infinite even if this results in more crowding.
Healthcare institution as public institution	The NHS is a reflection of British society values, so it is expected that a public healthcare institution meets the values preached by it. On the other hand, each NHS Trust publicises specific values that should be reflected in its decisions as an organisation and the decisions of its employees as part of the institution.
Institutional values	Each NHS Trust publicises the values that it adopts as a public healthcare institution and undertakes to abide by them through the actions of their employees and the institution per se. These values are often illustrated by abstract phrases that represent a statement of intent.
Compliance with client demands	As any service provider, the healthcare institution has to meet its clients' demands for its business to continue to receive clients and remain economically viable. However, client demands have to be compatible with its operation.
Fair resource distribution	The appropriate management of available resources is one of the most important roles of any healthcare institution, so how those resources are managed reveals the values that influence their decisions. In the case of EDs, they frequently emphasise fair resource distribution among their clients, but what is considered "fair" to the healthcare institution is relative.
Safe practice	As a healthcare provider for vulnerable clients, the healthcare institution should ensure that it protects them from the dangers of its employees' clinical practice, standardising a minimum safety and quality level to avoid malefic or negligent behaviour.
Etiquette	The employees' conduct in a healthcare institution can be as varied as the number of employees that institution contains. However, the healthcare institution's corporate image is transmitted through the behaviour of its employees, so it must control them to display a specific behaviour approved by the institution: etiquette.

Healthcare institution as a group of individuals	The inclusion of a directive board in the hierarchical apex rather than one person limits the personal factor, since it encompasses the consensus of a group of people, not the values and desires of an individual. However, the influence among members of the directive board may end up leading its decisions in favour of the intentions of a particular individual or group of individuals.
Client objectification	The perception of a being or an event is directly related to the information that the subject can obtain from it and the past experiences to which that information can be related to. In the case of the healthcare institution, its directives only have access to processed and biased information that other individuals provide them with, which limits their perception of the client. The result of this lack of context is client objectification, which is to consider the client only as inert data, either financial or legal.
Hierarchical bureaucracy	Hierarchical bureaucracy is a technique that consists of introducing a specific decision within the complex bureaucracy of an institution to mask it like a routine change or justified it based on the presupposed influence of the deciding group's hierarchical position.
Nurse as legal entity	As a resident of a country, the nurse is governed by that country's laws. In addition, there is specific legislation that applies to nurses based on the representative knowledge and values of the nursing profession, being a classic example the Duty of Care extension applicable to healthcare professionals.
Subjective interpretation of the regulations	Both deontological codes and policies are implemented in nursing practice when the nurse considers it necessary, which is determined by their past experiences in relation to the current situation. Therefore, the nurse does not make decisions based on their theoretical legal accountability, but on the subjective interpretation of the relevant regulations in force, being this reflected in laws, policies or deontological codes.
Patient safety	Patient safety not only refers to protect the patient from external risks, being these caused by unsafe environments or third parties, but also to protect the patient from the disease they are suffering, promoting recovery and avoiding the deterioration of their health.
Defensive practice	Defensive practice does not have positive or negative connotations out of context, since it relates to nurse's protection against possible future problems using comprehensive

	documentation of their practice and strict adherence to applicable regulations.
Nurse as care agent	As part of a profession which purpose is caring, the nurse must have specific knowledge and skills that enable them to meet the needs of patients under their care, which are obtained during their training and clinical experience.
Staff social interactions	Humans are social beings, so social interactions are common in any group. An emergency department multidisciplinary team is no exception, since in order to meet all patient needs several professionals from different disciplines must communicate and work together.
Influence	Defined as the power and authority of someone to another or others. Influence allows the nurse to encourage another person to agree with their decision or to do the action commanded by them. The influence among different individuals is inevitable in groups long-term, but in a multidisciplinary team this influence focuses on decision-making.
Teamwork	The dynamics of working in a multidisciplinary team are vital to provide holistic care, so the understanding of teamwork as social interaction is necessary to understand the distribution of accountability through a multidisciplinary team.
Care provision	The main role of registered nurses in an emergency department is the provision of acute care, so it is indirectly linked to most factors related to clinical nursing accountability.
Nurse-patient relationship	Considering the patient as the central entity of care, the relation between the nurse and the patient is a crucial factor to provide holistic care. This entails that an appropriate connection between the nurse and the patient is a way to discern and meet patient needs, facilitating holistic care provision.
Patient satisfaction	Regarding the nurse-patient relationship, patient satisfaction is an indicator not only of the quality of the care offered but also of a positive relationship with the professionals who attended them. Being measured at local, regional and national levels, patient satisfaction is very important both in relation to a particular patient and in the quality assessment of a service provided by a healthcare institution.
Public expectations	The public, referring to the English population in general, go to EDs with preconceived ideas regarding its operation, efficiency and the services they offer. These expectations may come from

	different sources: official documents like the *NHS Constitution*, press, television, previous visits to the same or other EDs, friends and family, etc.
Nurse as community member	As any human being, the nurse tends to acquire behaviours and values from their immediate surroundings, including the hospital environment. Also, as a member of the nursing community, there are values and behaviours promoted by various associations (e.g. NMC) that specifically target the nursing profession and are reinforced during clinical practice.
Tolerance to the suffering of others	Humans are able to develop tolerance to most non-lethal stimuli if they are exposed to such stimuli on a number of occasions over a period of time. In the case of ED nurses, they are in contact with people with acute pathologies constantly, many of whom suffer physically, mentally and emotionally because of these diseases.
Care dehumanisation	Care dehumanisation implies that the patient is not considered a person with needs, but as a set of organs and tissues that do not work correctly and must be repaired. This leads to dehumanised care in which the nurse does not need to consider the opinion, feelings or suffering of the patient, since their sole purpose is to treat the physical pathology and fix irregularities that can be diagnosed through clinical tests.
Health promotion	In an emergency department, healthcare professionals observe daily their patients' apparent lack of health education, which leads them to make unwise decisions regarding their health. The characteristic environment of these departments hinders health promotion, but even with this handicap nurses understand its importance and try to advise their patients against present and future health problems, increasing their autonomy.
Equal treatment	The diversity of the English population promotes equality between different groups, whether through community values or their application in legislation. However, even though the concept of equality is theoretically present in English society, its application in personal relationships and in healthcare is poor due to social stigmas on some occasions.
Patient advocacy	When a person suffers a serious disease, they can be placed in a vulnerable position against other entities with conflicting interests. Given the privileged status of the nurse as the registered healthcare professional who interacts more often and for longer with the patient, they have a duty to ensure patients' welfare.

Nurse as an individual	Like every person, nurses have their individual values, goals and desires, which can conflict with their Professional Ethics as nurses when they make a decision in a concrete case in clinical practice. Possible conflicts between values or principles and between them and legal issues could arise, being the personal factor the determinant of the decisions taken by the nurse and the accountability derived from them.
Personal background	The nurse's personal background affects different factors in different individuals. For example, if a nurse has had a negative experience with a specific group of patients within or outside their professional practice they might not be able to empathise with patients belonging to this group, while the nurse that has experienced a similar situation to that of their patient would be able to empathise with them easily.

Supplementary File 1:
Standards for Reporting Qualitative Research (SRQR)*

http://www.equator-network.org/reporting-guidelines/srqr/

	Page/line no(s).
Title and abstract	
Title - Concise description of the nature and topic of the study Identifying the study as qualitative or indicating the approach (e.g., ethnography, grounded theory) or data collection methods (e.g., interview, focus group) is recommended	Title page
Abstract - Summary of key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results, and conclusions	1
Introduction	
Problem formulation - Description and significance of the problem/phenomenon studied; review of relevant theory and empirical work; problem statement	2-3
Purpose or research question - Purpose of the study and specific objectives or questions	3
Methods	
Qualitative approach and research paradigm - Qualitative approach (e.g., ethnography, grounded theory, case study, phenomenology, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g., postpositivist, constructivist/ interpretivist) is also recommended; rationale**	3
Researcher characteristics and reflexivity - Researchers' characteristics that may influence the research, including personal attributes, qualifications/experience, relationship with participants, assumptions, and/or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results, and/or transferability	3-6
Context - Setting/site and salient contextual factors; rationale**	3-6
Sampling strategy - How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g., sampling saturation); rationale**	3-4
Ethical issues pertaining to human subjects - Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues	6

Data collection methods - Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources/methods, and modification of procedures in response to evolving study findings; rationale**	4-5
Data collection instruments and technologies - Description of instruments (e.g., interview guides, questionnaires) and devices (e.g., audio recorders) used for data collection; if/how the instrument(s) changed over the course of the study	4-5
Units of study - Number and relevant characteristics of participants, documents, or events included in the study; level of participation (could be reported in results)	4-5
Data processing - Methods for processing data prior to and during analysis, including transcription, data entry, data management and security, verification of data integrity, data coding, and anonymization/de-identification of excerpts	5-6
Data analysis - Process by which inferences, themes, etc., were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach; rationale**	5-6
Techniques to enhance trustworthiness - Techniques to enhance trustworthiness and credibility of data analysis (e.g., member checking, audit trail, triangulation); rationale**	7

Results/findings

Synthesis and interpretation - Main findings (e.g., interpretations, inferences, and themes); might include development of a theory or model, or integration with prior research or theory	7-10
Links to empirical data - Evidence (e.g., quotes, field notes, text excerpts, photographs) to substantiate analytic findings	7-10 + figures + tables + data on repositories

Discussion

Integration with prior work, implications, transferability, and contribution(s) to the field - Short summary of main findings; explanation of how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of application/generalizability; identification of unique contribution(s) to scholarship in a discipline or field	10-11
Limitations - Trustworthiness and limitations of findings	11

Other

Conflicts of interest - Potential sources of influence or perceived influence on study conduct and conclusions; how these were managed	12

Funding - Sources of funding and other support; role of funders in data collection, interpretation, and reporting	12

*The authors created the SRQR by searching the literature to identify guidelines, reporting standards, and critical appraisal criteria for qualitative research; reviewing the reference lists of retrieved sources; and contacting experts to gain feedback. The SRQR aims to improve the transparency of all aspects of qualitative research by providing clear standards for reporting qualitative research.

**The rationale should briefly discuss the justification for choosing that theory, approach, method, or technique rather than other options available, the assumptions and limitations implicit in those choices, and how those choices influence study conclusions and transferability. As appropriate, the rationale for several items might be discussed together.

Reference:
O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. **Standards for reporting qualitative research: a synthesis of recommendations.** *Academic Medicine*, Vol. 89, No. 9 / Sept 2014
DOI: 10.1097/ACM.0000000000000388