

Research in-progress

Perceptions of safety information in nurses’ understanding of manual handling: Preliminary findings

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Abstract

Background: Nursing work is often fast-paced, where achieving safe practice requires applying judgement to minimise risks, while accomplishing work goals. Safety information is designed to guide safe practice, providing the foundation for decisions required quickly. Consequently, the work health and safety management system (WHSMS) is regarded as a key source of safety information for nurses. Nurses also use clinical information to determine safe practice. Yet, there has been little empirical research into how safety-related information is accessed and applied in the nursing environment.

Aims: This paper aims to describe how nurses use safety information to inform their manual handling practices.

Method: This qualitative research interviews twenty-seven nurses in two small private hospitals. We consider their interactions with safety information in relation to manual handling. Healthy and safe practice is mediated through interactions with colleagues, building on nursing experiences and in the context of caring for patients. **Results:** While newer nurses relied more on safety information to determine appropriate practice, experienced nurses drew on their own contextual experience, supplemented by that of their colleagues. Through the formal communication processes of the WHSMS and the informal communication channels inherent in small work teams, nurses integrated principles for safety into their frames of nursing practice. **Conclusions:** Nurses are more likely to access safety information when it is integrated into patient-related tasks and their associated protocols. In achieving safe practice, nurses most valued communication, experience, problem solving and highly effective teamwork as key factors.

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Background

Nurses face many risks at work while ensuring patient comfort, safety and security. Nurses must protect their own health and safety by making judgements that balance risks with attaining patient care goals. Maintaining workplace safety is a form of ‘organisational expertise’ [1]. Safety is sustained in organisations by meaningful interaction between members in a cognitive, social and technical environment [2]. Interacting with this environment influences perception about hazards, their origins and the ways available to minimise them. Workplace safety is a collective process of interpretation and practice involving people, technologies and symbolic forms within a connected system [2]. Thus, as nurses interact through their work, they incorporate meanings of workplace safety into their conception of nursing identity and practice. Therefore, comprehending nurses’ interactions with people and safety information is helpful in understanding their perceptions and practices towards their own safety when performing manual tasks. The terms ‘manual task’ and ‘manual handling’ are used interchangeably in this paper to include the full scope of nursing work, embracing patient handling and use of the equipment. Based on twenty-seven interviews with nurses in two private hospitals, this paper applies the concept of *frames* to understand nurses’ performance of manual handling. Frames are a collection of experiences and stereotypes that provide mental shortcuts to inform behaviour.

The role of safety information

To reduce risks, workplaces diligently develop documentation to guide safe practice. Examples of formal safety information include policies and procedures, training material and safety performance data, such as incident, hazard and audit reports. In the hospital setting, there are two principal sources of formal information with safety content: (1) the Work Health and Safety (WHS) management system and (2) clinical procedures (Figure 1). The WHS management system is concerned with formalising processes, structures and responsibilities to minimise risk to staff. Hence, implementing the Work Health and Safety Management System (WHSMS) integrates processes with social practices. In theory, the WHSMS should describe the way things are done. Though in practice, policies and procedures seldom capture the social and contextual subtleties of workplaces.

Nurses frequently draw on clinical information to facilitate the assessment and treatment of patients [3]. Clinical procedures provide instruction on administering patient care techniques. As such, clinical procedures play a central role in formalising safe nursing practices, particularly for the patient, but also for the nurse. Examples may include the use of additional precautions and manual handling techniques.

If policies and procedures are sufficiently context specific, they aid practitioners in optimising their decision-making in uncertainty. Using instructions guides the selection of options and facilitates problem solving. Additionally, nursing

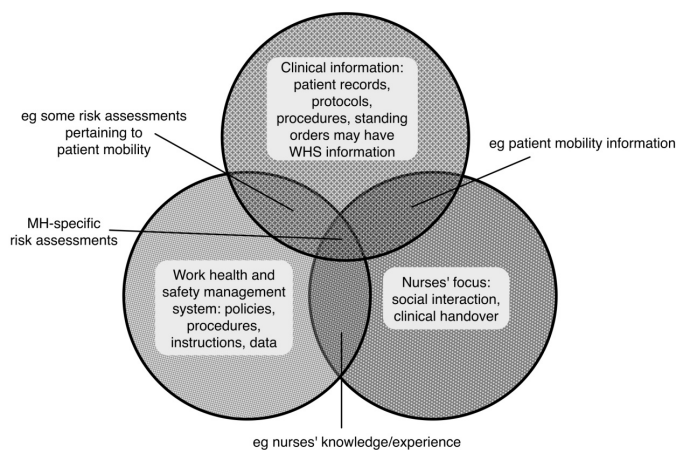


Figure 1. Nurses’ safety information is found in the WHSMS documentation, clinical documentation and in their communication and social interactions

documentation, such as case notes, capture information specific to the patient. Such information may be relevant to the health and safety of nurses, for example in describing the patient’s infectious or mobility status or behaviour. As WHS emerges from the close interaction between nurse and patient, it is not surprising that the WHSMS is not the sole province of worker safety information.

Frames

The concept of frames is useful for understanding how nurses relate to work systems and the structures that shape their performance. Spybey describes frames as the conceptual structures that organise the collections of values, beliefs, norms and techniques used by participants [4]. Frames are shared between members of a group [5] who are involved in the structuring of an organisation [4]. Frames guide the interpretation of reality, being unconsciously adopted to explain experience in the organisational context. Individuals develop their frames through interacting with their cognitive, social and technical environment. Through a history of interaction [5], members of a group form frames - a common understanding of the work context that guides action [6]. These frames arise from the interplay between artefacts (e.g. information, documentation and equipment) and action in a recursive process. A frame provides a way of organising experience, delineating boundaries and determining what is relevant for attention and action [7]. Thus, in the case of nurses, frames are a way of understanding manual handling practices in the broader context of safe and productive nursing work.

Method

This research was conducted in two small private Australian hospitals. Qualitative research methods were used to collect data in three stages. The first stage involved a review of WHS management system documentation for core elements. Key content included WHS policy and processes for hazard management, consultation and participation, training, WHS reporting and monitoring [8]; with an emphasis on manual handling. Stage two involved observing nurses undertaking

their normal work. The final stage involved semi-structured interviews with a convenience sample of nurses (n = 12 at ‘Hospital 1’ and n = 15 at ‘Hospital 2’) (Table 1). ‘Hospital 1’ with 46 beds, performs general surgery and day procedures, while ‘Hospital 2’ is a specialist surgical facility of 49 beds.

Table 1. Participant Profile

	Hospital 1	Hospital 2
Sample size	n = 12	n = 15
Sex	Female = 12 Male = 0	Female = 15 Male = 0
Mean age (years)	50.6 (SD = 8.0) Median = 55.0	37.5 (SD = 10.7) Median = 37.5
Time in current role (years)	4.9 (SD = 4.2) Median = 3.5	4.7 (SD = 5.2) Median = 1
Time in nursing profession (years)	27.1 (SD = 10.4) Median = 29.5	15.7 (SD = 12.7) Median = 14.0

(Note: no male nurses worked at H1 and 2 male nurses worked at H2).

Interviews were audio recorded, transcribed and analysed using NVivo 8 software to organise text into themes. Interviews were supplemented with text recorded from field observations. Themes were formed by coding and categorising interview text and observations into key concepts and phrases. Concepts were then refined into distinct frames describing nurses’ orientation towards manual handling. As the research was not hypothesis driven, text was coded without determining categories in advance [9].

The University Human Research and Ethics Committee approved the research (P287-08). Participation was voluntary and verbal consent was obtained prior to all work observations. Additionally, signed consent was obtained from all participants prior to interviews and audio taping. Fieldwork was conducted over four weeks at each site, producing 238 hours of observations. Only day shifts were observed at the request of the hospitals, despite the differing staffing arrangements that occur on night shifts and weekends. Shift arrangements may influence how tasks are completed and information is applied. There were high numbers of individual patient rooms in each hospital. Hence, observations were limited to activities that minimised intrusion for patients, for example, bed pushing and assisting ambulation.

Results

Three frames were identified that described nurses’ orientation towards manual handling:

1. communication builds our knowledge,
2. experience supports our problem solving and
3. teamwork promotes safe work.

These frames are significant in understanding nurses’ perceptions of manual handling and the contribution of safety information. They are the focus of this paper and each is now discussed in turn.

Communication builds our knowledge

Each hospital had well-established formal mechanisms for communicating safety-related information, both verbally

and through documentation. Examples included the WHS management system, the handover, noticeboards, in-service education sessions and monthly ward meetings. Many participants commented that the effectiveness of communication was facilitated by the small size of each hospital and the frequency of close contact this created between workers. The smallness of each hospital directly contributed to the effectiveness of the communication books used to augment formal communication channels. Though not mentioned in the formal management system, communication books were important communication mechanisms in both hospitals. Each communication book was in hard copy format and acted as a hub for collecting new information such as policies and procedures, meeting outcomes, events and day-to-day matters important for the smooth running of the ward.

In Hospital 1, staff were required to sign the communication book and compliance was audited by the Director of Nursing. In Hospital 2, the maintenance of competency was a requirement in nurses’ work contracts. Failure to maintain competency had ramifications, for example it could result in nurses losing shifts. Familiarity with policies and procedures was deemed part of the competency standard. Though no reports of shifts being withheld came to light, interviews exposed the motivating effect on nurses to complete competency modules. The communication book compensated for nurses’ limited access to email. Nurses believed the communication book enhanced the existing group consultation processes established in the WHS management system. The book made changes in the status of policies and procedures more salient, encouraging informal discussion. These interactions reinforced nurses’ recognition of verbal communication as vital in conveying safety-related information. Consequently, nurses valued the supplementary verbal communication for its contribution to reinforcing formal communication channels. Verbalising maintained the currency of nurses’ knowledge in a dynamic work environment.

Experience supports our problem solving

In addition to enhancing communication and reconfiguring knowledge, nurses framed their problem solving through their experience. Nurses recognised their experience guided them in knowing how to work safely and efficiently. Nurses reported infrequently accessing safety specific policies and procedures; preferring to work out a solution based on knowledge and experience. Although their know-how was often informed by formal policies and procedures, practical problem solving often entailed consulting an experienced colleague [10]. Nurses considered their tacit experience fundamental to identifying and solving manual handling problems, through ‘knowing’ what to do. Skilled practitioners were able to access a repertoire of solutions acquired through working with colleagues. Nurses applied what they had learned in training and generated new solutions guided by experience [11].

Nurses often experienced their safety issues in the context of caring for patients, so framed safety issues as patient-related issues. When sourcing information, nurses sought the most context-relevant information. They preferred patient-specific information to guide their decisions on manual handling.

Examples of information found in case notes included assessments of mobility from which risk ratings for falls and recommended handling techniques were decided. Nurses used this information directly to guide them in selecting techniques and accessing assistance for patient handling activities. Through using experience to solve problems, nurses maximised the dual goals of nurse and patient safety.

Teamwork promotes safe work

Building on the frames for applying knowledge and experience, nurses framed safe work as being more readily accomplished with teamwork. In both hospitals, teamwork was integral to promoting patient and staff safety while achieving work goals. In Hospital 2, nurses worked in small teams, referred to as the ‘buddy system’, pairing nurses to care for seven or eight patients, taking into account patient complexity. Nurses reported that the buddy system shared the workload more equitably and provided support. Many interviewed nurses described the ward as a helpful environment where teamwork is emphasised. Many participants commented on (and observations confirmed) staff frequently offering each other help. Nurses considered the teamwork promoted a responsible culture that respected health and safety. Although only Hospital 2 had the buddy system in place, nurses in both hospitals commented that effective teamwork was necessary for identifying and dealing with risks, making it crucial to working safely on the ward. As many tasks in nursing are now deemed two-person tasks for safety purposes, effective teamwork is regarded as important in providing safe and efficient care.

Teamwork enabled nurses to minimise their need to directly access policies and procedures by drawing on the collective knowledge and experience available in transient teams. When in doubt, nurses preferred to consult an experienced and respected colleague and devise a solution [10]. The variable nature of nurses’ workload was seen as both positive and negative. At times there were excessive tasks, with high demands that may surpass nurses’ capacity. Conversely, variation in patient complexity added interest and challenge to the work, creating multi-tasking in a fast-paced environment [12]. Teamwork was seen as critical in smoothing out the peaks in workload and job intensity. Therefore, nurses recognised that through teamwork they were able to access safety information and physical resources quickly from knowledgeable colleagues. In doing so, interruptions to patient care caused by checking procedures were minimised.

Discussion

This paper has described three frames through which nurses understand practices towards their own safety during manual handling: *communication builds our knowledge*; *experience supports our problem solving*; and *teamwork promotes safe work*. In achieving safe practice, nurses drew on frames to formulate, assess, prioritise and explain their actions [5]. Frames are shared conceptual structures that provide resources for achieving work and making that work meaningful [4]. The frame *communication builds our knowledge* enabled nurses to integrate information from a variety of communication media, into their patterns of daily practice. Communication

between staff meant that they added to their understanding of changing health and safety requirements and the impact of operational issues, such as staffing. Constantly updating information allowed nurses to continually reconcile their frames of manual handling with nursing practice. This facilitated intuitive and personally meaningful responses to changing conditions [13].

Consequently, this study found that more experienced nurses were less likely to refer directly to procedures when carrying out manual handling tasks. Nurses preferred to communicate with a colleague. Referring to procedures was largely restricted to performance of less familiar tasks, or by newer staff with less experience. Furthermore, to check procedures takes time, interrupting work flow and challenging nurses’ sense of competency [10]. Nurses asserted that they were very familiar with the content of procedures by virtue of training and communication [14]. In this study, both hospitals had well-developed communication structures within the WHS management system, with nurses participating in developing WHS procedures. Using participation and communication processes, nurses preferred to become informed by the procedure during its development and integrated it into their practice [5]. In both hospitals, communication relevant to nurses’ health and safety was primarily through verbal interaction, the communication book, meetings and in-service training. The frame *communication builds our knowledge* enabled nurses to consolidate the content of these communications, making them relevant and accessible for the safe performance of their tasks.

Consistent with the frame *experience supports our problem solving*, these nurses considered problem solving as integral to their sense of identity. Nurses’ ability to problem solve is predicated on their experience in detecting and responding to constantly changing cues. Using safety information to creatively develop their own solutions enhanced their feelings of competence in caring for their patients and themselves. Nonetheless, all participants had a working understanding of the content and application of their hospital’s manual handling policies and procedures. These findings are consistent with other studies of nurses using documentation to guide their practice [14, 15] and the use of WHS procedures in high risk industries [16, 17]. In a busy hospital, nurses use their experience and intuition to select safe and effective work practices [13], based on their expertise and refinement of frames. Expertise is achieved through the often-unconscious recognition of patterns in events made possible by applying skill gained through experience [13, 18, 19]. When problem solving, nurses often sought advice from a colleague, enabling frames to be shared, enlarged and improved as new information is assimilated and given meaning. This suggests that learning may alter existing frames and increase their effectiveness for nurses responding to daily challenges [6].

Competency was inherent in the frame *experience supports our problem solving*. Over recent years, advances in patient care have seen nursing increasingly professionalise, bringing greater demands for evidence-based practice and more rigorous competencies [15]. Patient care has also benefited from technological advances, with associated cost pressures. These factors act to intensify nursing work and lead to occasions where nurses place their patients’ needs before their own [20-

22]. In negotiating this conflict, nurses evaluate their work informed by the frames *experience supports problem solving* and *teamwork promotes safe work*. These strategies enable nurses to devise optimal solutions, including shedding and prioritising tasks in the face of work pressures [12]. The value in judicious use of policies and procedures is that they support workers to anticipate challenges and to develop the flexibility to respond effectively [16].

The frame *teamwork promotes safe work* recognises the value of teamwork in providing physical, cognitive and emotional resources. Teamwork creates the means for streamlining work so that there is spare capacity for responding to challenges. Skilful communication facilitates effective teamwork through encouraging interaction and co-ordination. Nurses believed that a responsible culture promoted teamwork, encouraging them to ‘lookout’ for each other with greater awareness of hazards and risks, enhancing their willingness and ability to respond.

Overall, nurses in this study shared frames that placed less emphasis on the use of policies and procedures to assess situations and guide their decision-making. They saw strict compliance with procedures as limiting, asserting that safe and practical solutions must be tailored to the circumstances. Procedures cannot cover all situations, so nurses used their experience in adapting the procedures to address different scenarios. In practice, this typically occurred where nurses perceived that there were insufficient staff or equipment and time pressures were the motivating factor. Nurses’ use of frames helped them economise on time and mental and physical effort; maximising their efficiency, goal achievement and sense of competency [5].

Conclusions

WHS professionals and legislators place much importance on policies and procedures. In contrast, this research suggests that nurses infrequently draw on such safety information to guide safe practice. In reality, a range of clinical documentation and verbal information is accessed. It is not surprising that a discrepancy exists between centralised guidance and local practice because of the situated context in which safety exists. Nurses use the WHS management system, particularly its participation processes, to broaden their knowledge of safety resources, including information in their hospitals.

The variety of information sources used emphasises the need to embed critical health and safety information into clinical and task-based procedures as much as is practical. Integrating documentation will enhance its validity and relevance to users. A parsimonious approach to documentation that reflects ‘good’ practice is more likely to support the development of safety experience and expertise in professional practice. Experience fosters the use of judgement, particularly in novel situations [16].

Nurses’ use of frames highlights the need for health and safety competencies, particularly manual handling, to be developed as an integrated part of training. Such training should include task-based as well as job-based training and education. Many challenges confronted by nurses arise from the structure of their jobs. Casualised shiftwork and the organisational and cultural context in which nurses’ jobs exist multiply risk. In

this study, communication was crucial to disseminating real-time safety information to nurses within wards and across shifts. Communication is fundamental to forming and sharing nurses’ frames towards their safety because health and safety is socially constructed. The use and support of multiple modes of communication is essential for disseminating safety information. Processes that support active staff participation in developing procedures and practices promote learning that encourages health and safety knowledge to be embedded into practice. Therefore, understanding and supporting the shared practices for communication, problem solving using experience and teamwork are essential for creating a healthy and safe work environment for nurses.

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