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Specialist nurses' experiences of using 'The Viewer', a consolidated electronic medical records system: a pre-post implementation survey

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KEYWORDS

computerised medical records system; computerised patient medical records; electronic medical records; evaluation; nurses; pre-post tests

ABSTRACT

Objective

Evaluate changes in specialty areas nurses' knowledge and perceptions of a consolidated electronic medical record (EMR) system before and after implementation.

Design

A survey deployed pre- and six months post-implementation of 'The Viewer'.

Setting

Regional Hospital and Health Service, Queensland.

Subjects

Nurses working in specialist areas including community health, palliative care, discharge planning, wound and stoma care, diabetes education and renal dialysis satellite services (n=110) were invited to participate in the study. Response rate of the pre-implementation survey (n=42, 38%) was much higher than the post-implementation subset (n=10, 24%). A major health service restructure that included losses of nursing positions in specialist areas significantly affected post-implementation results.

Intervention

An EMR system called 'The Viewer' to access consolidated electronic medical records of patient information produced by different parts of the organisation.

Main Outcome Measures

Changes in participants' knowledge and perceptions of 'The Viewer', and their satisfaction with the quality, ease of use and access to patient information.

Results

Pre-implementation, specialist nurses reported dissatisfaction with most aspects of the current patient information system but high confidence and comfort in using electronic systems. Post implementation satisfaction scores either remained the same or increased. Satisfaction with ease of access to consolidated patient data ($U = 125.0$, $p = 0.038$, $r = 0.29$) and usefulness of electronic systems ($U = 115.0$, $p = 0.031$, $r = 0.30$) increased significantly post-implementation of 'The Viewer'.

Conclusion

Specialist nurses are positive about the possibilities EMRs offer to centralise, consolidate and improve access to patient data.

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INTRODUCTION AND LITERATURE REVIEW

The implementation of new information and communication systems into health services and hospitals is inevitable; millions of nurses will experience such technology changes in their workplace during their careers (Huryk 2010). EMRs are being used widely in hospitals and healthcare services throughout the world to improve communication, centralise and consolidate patient data, and improve efficiency (Lee et al 2013; Rothman et al 2013; Creswick et al 2011). Introducing a records and communication system is complex and can lead to a significant shift in the way a nurse works. This workplace shift can affect outlook and attitudes and might lead to changes in the very culture of the workplace (Westbrook et al 2009).

These technology-driven changes to the health workplace have led researchers and managers to focus more attention on nursing informatics (Mills et al 2013). Two topics dominate the research literature into nursing informatics: nurses' attitudes and/or perceptions of new information technology (Eley et al 2009; Edirippulige 2005; Axford and Carter 1995), and measurements of the impact of EMRs on workflow and healthcare service delivery (Perry et al 2013; Furukawa et al 2010; Wu et al 2006; Simpson 2005).

STUDY BACKGROUND

This study sought to address a gap in the literature about the experience of nurses employed in specialty areas, whose role requires them to work with multidisciplinary teams across different settings, and their adoption of a new EMR resource. The study was set in a regional hospital and health service that was introducing a new EMR technology called 'The Viewer' - a read-only web-based consolidated patient information system that allows clinicians to access summarised patient information in the form of a single electronic medical record (Queensland Health 2013) from six separate clinical information systems. 'The Viewer' enables clinicians to gain a comprehensive picture of a patient's clinical history and provides clinicians with more information essential to clinical decision making. It includes a view of patients' admissions, emergency presentations, pathology, radiology reports, medications, alerts and adverse reactions and procedure reports. Anecdotal evidence suggested specialist nurses working off-site from the regional hospital previously had variable access to patient information, constraining effective clinical decision-making. Therefore the aim of this study was to evaluate changes in specialty areas nurses' knowledge and perceptions of 'The Viewer', and their satisfaction with access to, use and quality of patient information before and after implementation.

METHOD

Setting

Before 2012 Queensland Health, which services the public health needs of the north-eastern Australian state of Queensland, utilised more than seven different EMR systems to manage patient data (e.g., pathology results, diagnostic imaging results, discharge summaries, and patient admissions). In 2011-2012, Queensland Health introduced 'The Viewer', which is a consolidated EMR system. The new information technology aimed to provide clinicians with faster, easier access to patient information and reduce time spent searching different electronic databases or locating paper records stored at various sites (Queensland Health 2013). This pre-post implementation survey took place in 2012 in one northern Queensland Health Hospital and Health Service with a catchment population of approximately 250,000 people (Internal Medicine Society of Australia and New Zealand 2013).

Participants

The population for this study was nurses working in specialist areas in the health service ($n=110$). Stage 1, pre-implementation participants were 42 registered nurses working in a specialty area, including community health, sexual health, the diabetes and the early years centres. The mean number of years since participant registration as a nurse was 26.25 years ($SD \pm 9.34$). Length of time since registration as a nurse ranged from five years to 42 years. Overall, 40% of participants held a Bachelor degree in nursing and 17% held Masters degrees. Fifty-two percent of participants had been employed in their current setting for more than six years. Stage 2, post-implementation participants were a subset of stage 1 participants ($n = 10$, rate of return = 24%). In this matched subsample, 50% of participants worked at the regional hospital and 30% worked at the diabetes centre. The remainder worked at various other sites. Mean number of years since registration as a nurse was 30.9 years ($SD \pm 8.9$). Length of time since registration as a nurse ranged from 12 years to 41 years. Thirty-seven percent of stage 2 participants held a nursing diploma and 37% held a Masters degree. Ninety percent of participants had been employed at their current setting for over six years.

Data collection

Data were collected in two stages. Stage 1 data collection occurred prior to training and implementation of 'The Viewer'. Stage 2 data collection occurred six months after implementation of 'The Viewer'. Stage 1 survey packages were mailed to nurses identified as working in a variety of specialist areas using a Queensland Health mailing list. Participants were excluded if the questionnaire was returned without a signed consent form, or respondents did not work in a nursing specialty area.

The survey instrument was adapted from the Queensland Health Information Division (nd) 'The Viewer Project – Clinician Survey'. The first section of the survey instrument included demographic questions about current role, first year of registration as an RN, highest tertiary nursing qualification, and current workplace. The second section asked about current access and use of patient information, and knowledge and perceptions of 'The Viewer' project. The third section asked participants to rate their level of satisfaction with current access, use and quality of patient information on a 5-point Likert scale ranging from 1 = very dissatisfied, 2 = dissatisfied, 3 = neutral, 4 = satisfied, to 5 = very satisfied. The questionnaire also included two open-ended questions asking how electronic systems helped participants perform their role better, and any additional comments. Stage 2 survey packages were mailed to all stage 1 participants, and included the same questionnaire as used in stage 1.

Data Analysis

SPSS version 20 software package (IBM SPSS Inc., Chicago IL, USA) was used for data entry and analysis. Descriptive statistics, means, medians, standard deviations, and ranges for the variables were calculated and presented. Mann Whitney U tests and Spearman's rank order correlations were used to compare demographic variables with satisfaction scores. Wilcoxon signed rank test was used to compare pre and post-implementation satisfaction scores. Alpha values of less than 0.05 were considered statistically significant.

Textual data from the two open-ended questions were analysed using content analysis, a systematic method of describing and quantifying phenomena (Elo and Kyngäs 2008). This method of text data analysis counts frequency of words and content and also includes latent content analysis or interpretation of the content (Hsieh and Shannon 2005). The aim is to create a condensed and broad description of the phenomena using concepts or categories (Elo and Kyngäs 2008).

Ethics Approval

The Hospital and Health Service District Human Research Ethics Committee (HREC) approved all materials and protocols used in this study.

RESULTS

Survey data

Use of patient information in work

A majority of specialist nurses (64%) were entirely dependent on access to patient information to fulfil their nursing role and 90 per cent of participants reported they would access patient records more frequently if access was easier. Ninety-five per cent of participants reported their position involved reporting patient information, and 54% reported accessing patient information on a daily basis.

Knowledge and perceptions of 'The Viewer'

Pre-implementation of 'The Viewer', a majority of participants (54%) reported moderate or good knowledge of Queensland Health information technology (IT) initiatives in general, but 81% reported poor or very poor knowledge of 'The Viewer'. Despite poor knowledge of the new resource, 71% of participants said they believed adopting 'The Viewer' would be beneficial or highly beneficial.

Post-implementation, 30% of participants reported moderate knowledge of 'The Viewer' project, and 50% of participants reported they had good or very good knowledge of 'The Viewer' project. Post-implementation median knowledge score ($Med = 3.5$, $IQR = 2.8, 4.0$) increased significantly compared with pre-implementation knowledge score ($Med = 2.0$, $IQR = 1.0, 2.0$, $p = 0.001$). $U = 77.0$, $p = 0.001$, $r = 0.45$.

Satisfaction with current electronic patient medical record databases

Pre-implementation, specialist nurses reported dissatisfaction with access to current patient information and ease of access to consolidated patient information (table 1), particularly with the need to rely on paper based charts, and the number of electronic systems they were required to access for patient information. Participants reported difficulty with identifying the appropriate electronic system, and low satisfaction with ease of logging into electronic patient databases. Participants reported they felt neutral about the ease of locating patient information but were dissatisfied with the ease of accessing outside patient information. Overall, participants were neutral about reliability of access to patient information and quality of data. Dissatisfaction was high with time spent transcribing and accessing patient data. On average, participants were neutral about the usefulness of electronic systems, however confidence and comfort using electronic systems was high. Satisfaction with the usefulness of electronic systems was positively correlated with confidence ($r = 0.33$, $p = 0.04$) and comfort ($r = 0.44$, $p = 0.005$) using electronic patient information systems (moderate effect size). Participant demographics were not associated with satisfaction scores.

Post-implementation, median satisfaction scores either remained the same or increased, indicating greater satisfaction. The areas in which satisfaction increased were: access to patient information, ease of access to consolidated patient information, ease of identifying appropriate electronic system, ease of locating patient information, quality of data, and usefulness of electronic systems. Satisfaction with ease of access to consolidated patient data ($p = 0.038$) ($U = 125.0$, $p = 0.038$, $r = 0.29$) and usefulness of electronic systems increased significantly ($p = 0.03$) ($U = 115.0$, $p = 0.031$, $r = 0.03$) post-implementation of 'The Viewer' (see table 1). However, due to the small number of participants post-implementation, this finding should be interpreted with caution.

Table 1: Satisfaction scores pre- and post-implementation of 'The Viewer'

Satisfaction scores	Pre-implementation Mdn (IQR)	Post-implementation Mdn (IQR)	P value
Access to patient information	2 (2, 3)	3.5 (2, 4)	0.072
Ease of access to consolidated patient information	2 (2, 3)	3.5 (2, 4)	0.038
Need to use paper-based charts	2 (2, 3)	2 (1, 3)	0.178
Number of electronic systems	2 (2, 3)	2 (2, 3)	0.890
Ease of identifying appropriate electronic system	2 (2, 3)	3.5 (2, 4)	0.157
Signing in to electronic systems	2 (2, 4)	2 (2, 4)	0.951
Ease of locating patient information	3 (2, 4)	3.5 (2, 4)	0.351
Ease of accessing outside patient information	2 (1, 2)	2 (1, 3)	0.645
Reliability of access to patient information	3 (2, 4)	3 (2, 4)	0.437
Quality of data	3 (2, 4)	3.5 (3, 4)	0.115
Time spent transcribing patient data	2 (2, 3)	2 (1, 2)	0.494
Time spent accessing patient data	2 (1, 3)	2 (2, 4)	0.223
Usefulness of electronic systems	3 (2, 4)	4 (4, 4)	0.031
Confidence using electronic patient information systems	4 (3, 4)	4 (4, 4)	0.484
Comfort using patient information systems	4 (2, 4)	4 (4, 4)	0.335

Note: *Mdn* = Median; *IQR* = Interquartile range

Stage 1 - textual data

Three main themes were identified from the open-ended question: *How do electronic systems help you perform your role better?* and from the *Additional comments* section. These themes were: time/speed, access and consolidated patient information. Some participant responses were relevant to more than one theme.

Time/speed

Seventeen participants commented on time and speed in relation to the use of EMRs. A majority of responses were positive ($n = 13$) and pertained to the use of EMRs saving time compared to the retrieval and use of paper files. Participants reported the time saved by having all information in one place could be used more efficiently to improve patient care, continuity of care and patient flow. Negative responses included the following: too few computers which slowed down ward rounds, duplication entering information, and lack of functionality in the current system that slowed retrieval of information.

Access

Twenty-one participants mentioned access of EMRs. Positive responses ($n = 13$) were that easier, immediate access to current information would help with decision making, referral time, enhance phone/telehealth consults, improve patient care and improve time management. Access to patient information from a central database was perceived as beneficial. Negative comments about the existing system included lack of access to electronic medical records, the need to travel to different sites to access patient information, and information not being current.

Consolidated patient information

Fifteen participants commented on consolidated patient information in relation to the use of electronic systems. It was perceived that linked information from all health providers would allow a holistic approach, enable comprehensive assessments of patients, and enhance patient management and referral. Two participants voiced concerns that databases they currently used would not be included in 'The Viewer', and one participant

expressed concern about patient confidentiality if all clinicians could access sensitive information such as HIV diagnosis.

Stage 2 - textual data

Participant comments post-implementation generally followed the same themes as pre-implementation comments. Responses outside of these themes included: participants would like to access 'The Viewer' via a wireless network using a tablet so they can access patient information when they are in a client's home or GP surgery, or during ward rounds to mitigate the limited availability of computers on wards. Participants also reported 'The Viewer' had not negated the need to access other information sources and criticised the slowness of data input and update, and poor display of pathology results.

DISCUSSION

Nurses in the present study, and elsewhere throughout the world, have been generally hopeful and positive about the potential of new information technology, even when they reported having little knowledge of the actual system proposed (O'Mahony et al 2014; Huryk 2010; Eley et al 2009). This positive attitude represents a shift away from a resistance to new technology noted by some researchers in the early 2000s (Ash and Bates 2005; Timmons 2003). This resistance was attributed, in part, to a lack of trust and limited collaboration between clinicians and administrators (Ash and Bates 2005). Collaboration appears to remain an area in which improvements can be made as evidenced by a lack of knowledge of proposed systems in some studies (Planitz et al 2012), including the present study.

In the present study, nurses surveyed before the introduction of the Viewer perceived that one of the key benefits of EMRs was that they would spend less time on documentation and more time on patient care, thereby improving patient flow and continuity of care. Post-'The Viewer', time-saving was dependent largely upon access and availability of computers, a point highlighted by Poissant et al (2005), who found nurses who used bedside terminals and a central station cut the time they spent working on documentation by as much as a quarter. Qualitative data from the present study highlighted the use of tablets and wireless networks could improve efficiency of 'The Viewer' system. Nurses noted a continuing need to access multiple sources for patient data after the introduction of 'The Viewer' and criticised slow data input. The immediacy of access, however, and consolidation of most patient data was a positive feature of the post 'Viewer' workplace. Nurses said they could more efficiently make decisions and referrals, and more effectively manage their time, a finding reflected in an emergency department setting in Creswick et al (2011).

Technology transitions can be difficult to manage (O'Mahony et al 2014; Stevenson et al. 2010; Timmons 2003), and are rarely without glitches (Planitz et al 2012), particularly in the healthcare sector (Callen et al 2007). The successful implementation of EMRs is largely dependent on the people who use them and the organisational culture in which they work (Huryk 2010). Some researchers suggest using a socio-technical lens to better understand the way technology can change the way nurses work and to improve implementation processes (Casella et al 2014; Creswick et al 2011; Westbrook et al 2009). An inclusive, collaborative, constructive culture will better-facilitate the adoption of new technology-related work practices (Callen et al 2007), as can careful consideration of the principles of change management (Simpson 2005).

LIMITATIONS

The health service in which the study was carried out was restructured and nursing positions were cut, including those in specialist areas, during the research period. Post-implementation return rates reflect these cuts and make it difficult to compare pre and post results and to generalise the data.

RECOMMENDATIONS

Gains in efficiency through the use of an integrated EMR are affected by the extent of consolidation of patient data; health services and hospitals should carefully consider how they will achieve true consolidation of records for maximum effect.

Open communication, consultation with nurses and effective change management should be primary considerations when implementing EMRs to capitalise on nurses' positive attitudes towards new records technology.

CONCLUSION

Specialist nurses are positive about the possibilities a consolidated EMR system offers to centralise, consolidate and improve access to patient data. Nurses who work across sites, teams and disciplines also see time-saving potential in a consolidated EMR system. Effective implementation of new technology will capitalise on nurses' willingness to learn by employing effective communication, constructive workplace practices, and on-going consultation to iron out inevitable problems.

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Exploring values in nursing: generating new perspectives on clinical practice

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KEY WORDS

practice development, culture change, essentials of care, nursing, practice

ABSTRACT

Objective

The 'Essentials of Care' (EoC) program seeks to develop a shared vision amongst nurses within particular workplace teams. The purpose of this study was to describe the experiences of nurses during the process of exploring their values and developing these into a shared vision at both an individual level and as a team.

Design

A qualitative, focus group design was used to provide an accurate representation of the nurses experiences in reflecting on their values and developing these into individual ward/unit vision statements. Six focus groups were conducted by independent researchers. The focus group discussions were recorded and transcribed by an independent researcher. The transcription provided the data for thematic analysis.

Setting

This study was conducted in two tertiary hospitals from the same Local Health District in New South Wales, Australia.

Subjects

Forty-two nurses from fourteen hospital wards or units participated in the study. Seventeen were facilitators of the program and the remainder were nursing staff who had undertaken the program.

Main outcome measures

The authors independently interpreted the transcripts using inductive qualitative analysis, reaching consensus on emergent themes. Representative quotations were chosen for each theme.

Results

Six themes emerged which describe the experiences of nurses during the exploration of individual and team workplace values which were then developed into shared visions. The emergent themes were: shared values and commitment to patient care; empowerment and ownership for cultural change; real and observable outcomes; the meaning of the team; different active learning approaches equalling the same outcome; and culture change results in new perspectives.

Conclusion

This study supports the benefits of value-based programs. Exploring values led to new perspectives on clinical practice, both individually and collectively by the nursing teams.

INTRODUCTION

Practice Development (PD) programs are fast becoming a key instrument in engaging healthcare teams and changing practices. One example of this program within New South Wales (NSW), Australia is the Essentials of Care Program (EoC), which is built on Practice Development (PD) methodologies and approaches (NSW Health 2009). The aim of this program is to create a person-centred culture and overall improvement of patient care (NSW Health 2009). One of the key elements in the program is the development of a shared vision and exploration of individual values amongst the nurses within their teams (McCormack et al 2013).

This paper reports on a qualitative study undertaken to explore and uncover the experiences of nurses in reflecting on their values and developing these into individual ward/unit vision statements through the EoC program. Phase one of the program asks nurses to explore their values as individuals with their team members, later developing these into a shared vision for the ward/unit (NSW Health 2009). Two tertiary hospitals from the same Local Health District participated in the study.

The EoC program has been in effect since 2005 within NSW public hospitals and involves over 600 wards/units. The program has been running since 2008 in the local health district where this study was conducted. Anecdotal evidence suggested a change in behaviours and attitudes amongst nursing teams as they progressed through the program and in particular when they completed their vision statement. A number of studies suggest that changing workplace culture should start with the clarification of values, the impact of this being improved patient care and staff satisfaction (Mannion et al 2005; Wilson et al 2005).

LITERATURE REVIEW

The role that values play in nursing is expressed in the literature in various ways, including ways in which values are developed and viewed by nurses, and the influence of values on workplace satisfaction and culture (Manley 2004; Ingersoll et al 2005; Maben et al 2007; LeDUC and Kotzer 2009). Maben et al (2007) identified that nursing values are developed during nursing training, and can be attributed to the many ethics codes and requirements imposed on students early in training. The authors suggest that core values, such as being ethically responsible and accountable, are important for the profession. A study by LeDUC and Kotzer (2009) found that professional values were similar across three generations of nurses with a greater emphasis placed on professional values such as competence and collaboration compared to societal values such as patient safety and advocacy.

Whether there is a difference between personal values and professional values, and what impact this may have on nursing practice remains unclear. Watson (2002) offers some insight by suggesting that personal values play an important role in nurses' interactions within the workplace. If there is any conflict between personal values and organization values, nurses can be challenged and tend not to follow a directive or requirement with which they disagree.

Values are viewed as "what is important, worthwhile and worth striving for" (Horton et al 2007 p717). There is also an understanding that, on the one hand, values define who we are as individuals, while conversely the society, culture, morals and beliefs impact on how individual personal values are defined (Horton et al 2007). At the heart of understanding values and the meaning this has for nursing, is the acknowledgement by some authors, that personal values can influence professional behavior (Hammell and Whalley 2013; Ingersoll et al 2005). McNeese-Smith and Crook (2003) in a recent survey of 412 nurses recorded benefits from understanding values, including an increased sense of teamwork. Moreover, numerous studies have agreed that values, attitudes and beliefs of staff impact on a workplace culture (Tillott et al 2013; Scott-Findlay and Estabrooks 2006; Wilson et al 2005; Manley 2004).

Central to the exploration of values within healthcare organisations, is the understanding of culture and what defines it. Manley and co-workers identify two distinct types of culture; *corporate* culture which is designed by the values and vision established by the organisation, and *organisational* culture which is the individual values and experiences of staff and users of the service (Manley et al 2011; Manley 2004). It therefore makes sense that the impact individuals have on organisational culture is experienced at different levels.

Studies into workplace culture have identified subcultures or local cultures, that occur within an individual ward or unit, or existing within an organisation (Wilson et al 2005; Manley 2004). Therefore experiences of staff in a discrete setting such as a ward may be very different to the overall culture of the organisation. Taking the time to uncover values within teams is one approach in identifying whether the espoused values of the organisation are reflected in reality (Dewar et al 2013; Christie et al 2012).

The role of values in contributing to culture change is emerging as an important field of research. Nurses bring with them both professional and personal values to their working environments. It appears that identifying values is not difficult for nurses; however, the contribution or impact of their values on nursing practice remains to be fully elucidated.

METHOD

Aim

The aim of the study was to describe the experiences of nurses who used PD approaches in exploring both individual and team values.

Design

The qualitative design of the study was chosen to ensure the experience of the nurse was captured in a way which gave a true representation of how they viewed and felt about what had occurred during their experience of exploring values and developing a shared vision statement during phase one of the EoC program.

Research Ethics

Ethics approval from the Human Research Ethics Committee of the local health district (LHD) was obtained before any recruitment was undertaken or data collected. Each participant was provided with a participant information sheet and written consent form to complete.

Recruitment

Recruitment of nurses and EoC facilitators was undertaken separately. To recruit nursing staff for the focus groups, four medical or surgical wards/units from the largest hospital in the local health district were selected. The rationale was that the staff in these particular wards/units had all progressed through the values stage of the EoC program and provided a broad representation of the wards/units involved with the program. Snowball sampling was used to gain participants. The EoC facilitators provided verbal information sessions outlining the study to staff and written flyers were also provided.

To recruit for the EoC facilitator focus groups, facilitators from two of the hospitals in the local health district (one being the largest hospital mentioned above) were sent an individual invitation to participate in the study. These individual facilitators came from fourteen wards/units across the two hospitals, representing a variety of clinical specialties. A total of 40 invitations were sent.

The nursing teams were interviewed separately from the EoC facilitators to ensure they felt comfortable in sharing their experiences without the potential for bias or fear of the wrong answers in their facilitator's presence.

Focus Groups

Nursing teams and EoC facilitators were already familiar with group style conversations during their EoC sessions. Focus groups which inherently allow for flow of conversation and discourse were therefore chosen as the method to capture the staff members' experiences. Six focus groups were conducted: four groups of nurses each in their individual wards/units and two groups of EoC facilitators. There were 42 participants in total; 33 female and nine male. Enrolled and registered nurses were present in each of the nursing focus groups. The EoC facilitators were all registered nurses. The focus groups were conducted by an independent interviewer; they were recorded and transcribed by another independent transcriber. All interviews were de-identified. The transcribed notes formed the textual basis for analysis. The following questions were used as prompts for the focus groups: How did you begin to explore your values in your ward/unit? Can you describe your experiences of using a values clarification approach in developing your vision statement? Tell me about your individual experiences in exploring your values. Can you describe the experiences as a member of the team in using a PD approach to explore values?

Analysis

The data were analysed independently by both authors who each read and interpreted the transcripts. The analysis followed the same process whether the transcript was from a focus group of staff or EoC facilitators. Consensus was reached on the major emergent themes using a phenomenological tool developed by Palmer et al (2010) and inductive qualitative analysis.

RESULTS

The local health district comprises of six hospitals. The two hospitals where the focus groups were conducted are the largest in the LHD, with 466 beds and 112 beds. The staff taking part in the focus groups represented 20% of their ward/unit and 4% of the staff involved in the EoC program at that hospital. The EoC facilitators who took part represented 23% of all staff involved in the EoC program at the facilitator level.

The two researchers analysed the transcripts of all focus groups independently. Moreover, the transcripts of focus groups of nurses and facilitators were analysed separately. Consensus between the researchers was reached and it was noted by both researchers that the focus group transcripts revealed the same themes regardless of whether the participants were nurses or facilitators. Thus the themes and representative quotations were combined. Six themes emerged from analysis of all transcripts:

1. Shared values and commitment to patient care.
2. Empowerment and ownership for cultural change.
3. Real and observable outcomes.
4. Meaning of team.
5. Different active learning approaches equals same outcome.
6. Culture change results in new perspective.

The following discussion presents findings from these themes and representative quotations from the focus groups.

1. Shared values and commitment to patient care

The nurses agreed that exploring values identified a passion for nursing and a commonality of values amongst their colleagues. There was a consensus that even though each team member is an individual and has different values, fundamentally they all agreed on how they wanted patients to receive care. Integrated

into the discussion relating to values, was a realization that it is not only core values that individuals bring to work, but attitudes and behaviours as well. They felt the focus on nursing and exploring their values always came back to the patient.

"We all work individually and at the end of the day we all want the best for the ward and the patient".

"I think that most of our values were the same; they maybe differently worded but they all came back to the same common goal".

"We all wanted the same thing, the same goals. We all strived for the same sort of purpose for being here".

2. Empowerment and ownership of change

The transcripts revealed a general perception that changes had occurred as a result of the EoC process. A clear benefit of the EoC program was staff felt empowered to identify changes in practice that they would like to develop into quality projects. Moreover, innovations or ideas could be legitimised by placing them under the same EoC umbrella which became a platform for continued change.

"I think we've always had those skills but again EoC has given us that chance to work as a team".

"This has brought about change in the way we do things".

"EoC came along it gave us all a voice to say I'd like to see this happen".

"We're empowered to make those changes".

3. Real and observable outcomes

Nurses identified positive outcomes during the development of the shared vision statement. Perceptions of improvements in the quality of care provided and the potential for new quality projects were discussed. Interestingly, the positive outcomes were more obvious once the vision statement had been finalised and the process of engaging with a novel quality project had begun. Some nurses revealed renewed passion and energy in the workplace at this point in the process. However, this was not shared by all of the nurses; one focus group felt they had lost momentum with the program, although participants felt change was achievable.

"We did a project on Clinical Handover. Since that project we had a big change and people started to see the difference".

"Everyone has improved a lot from what their culture was before and now to improve everything. So EoC is definitely our care".

"It's quite inspiring and so I found that quite rewarding. I love my ward and doing EoC. We get a bit busy and sometimes we get burned out. I'm a bit like a chook without a head running around. I'm very inspired, I go home and think "oh I like this job" it's nice to feel that".

"But we are capable of change it's almost like we need a "tidbit" to say "look this is what we can achieve" and see it happen on the ward".

4. Meaning of the team

There was a real sense of camaraderie throughout the focus groups. It brought recognition of the contributions from team members, the qualities and values they shared.

"At the beginning, some of us did feel like we were personally being attacked but we had to think 'no that just people's reactions to different things'. But now its better I just think you've just got to work together, because you're all working together in a team".

"I guess just qualities that you might see within yourself or even another team. Just simple things like respect and even being a team player; patience, those common qualities".

"I think it has raised a lot of awareness that we wouldn't have really taken the time to think about before and I think people have adapted to that a bit".

5. Different approaches, same outcome

Different approaches in developing values statements and implementing the EoC program were described by the nurses. These approaches were a variety of different active learning activities taught during EoC workshops. The consensus however was that the outcomes were the same.

"We had really fun activities. We had sessions of claims concerns issues, circle of influence circle of concern we also had class sessions so it captured a lot of different people coming in".

"In the first workshop we did was full of this crazy activities like reflection, walking in the park, and we were like ok why are we doing this. It's not until the penny drops that I really believed 100% in the program that I was able to facilitate a better team".

"We first spoke about all the issues that we had and it was oh well its done now how do we move forward and what your goals and values were and at the end I think we achieved a lot in terms of we are working together now".

6. New perspective, culture change

There was a real lived experience of a change in culture, and for some individual nurses a complete transformation and new outlook on their roles as nurses.

"I was one of the hostile ones to begin with because I thought "Oh something else we need to do"! But seeing the girls involvement, how much time and effort they've put into it has made me think, because I'm an old jaded nurse and I just think "Oh yeah another change of government another change something else, here we go again". You do get jaded but it's given me a new perspective and making me sit back and think "Oh if other people can come up with these ideas perhaps I should too it does make you re-think".

"In my mind now I'm thinking this is personal development so I think it's good because we develop ourselves and from thereon we can encourage the people to develop themselves too, to be able to give a quality of care to our clients. So it's not just practice and development. For me it's also personal development because you're developing yourself and from that you're also encourage people to visit the values, to know again what their value is as a nurse".

DISCUSSION

Values play an important role not only defining an organisation, but also in shaping its future direction (Davies et al 2000). It is clear from the focus groups that exploring values helped nurses to understand each other and acknowledge the similarities and differences amongst their peers. These findings support the importance of developing a shared vision in the first step of working towards creating an effective workplace culture

(Manley et al 2014). Nurses were able to recognise they all have similar values and share the same goal of improving patient care.

Our findings support other studies of the benefits from engaging teams in PD approaches to achieve a change in culture (Kirkley et al 2011; Wilson et al 2005; Manley 2004). Nurses that had experienced the PD approaches through the EoC program described being more engaged in the workplace and creating projects to improve patient care. One of the issues emerging from this study is that not all nursing teams felt the same positivity towards the program. It is suggested in some of the literature that some teams require different approaches before commencing in PD work (Ford et al 2013; Shaw 2012; McCance et al 2011). This was shared by nurses in one focus group; they had identified they felt a change when the program first started but had since lost momentum and returned to old ways of working. This is similar to other participants involved in PD programs (Shaw 2012).

Despite different active learning activities used, the outcomes were the same; engagement and a sense of enhanced teamwork. Ford et al (2013) evaluation of a program which used PD approaches reported a positive influence on the learning culture of the organization. Active learning in the workplace helps staff to make sense of what is occurring in their practice and the influence they have on making change (Manley et al 2008).

This study has limitations. It was confined to two settings and not all of the wards/units involved with the program participated in the study. It also did not include any members from the multidisciplinary team, even though the impact of values and creating vision extends to all members of the healthcare team, the EoC program has only been implemented with nursing teams. However the work provides insights into experiences of nurses engaged with the program and provides an opportunity for other researchers to consider the benefits for their own setting. Further study with a focus on how values evolve and impact on nursing practice with teams engaged in a PD program over time is suggested.

Personal values influence the way in which individuals interact, behave and deliver patient care. One of the greatest impacts on individual values is each person's cultural background. Fundamentally, culture shapes a person's belief and values systems. With global multicultural societies it is expected that this influences and contributes to the culture of organisations, which are ultimately reflected in the workplace (Horton et al 2007). In 2011 the Australian Bureau Statistics (ABS) (2013) reported that 33% of Australian nurses were born overseas in comparison to 25% in 2001. Useful information may have been obtained if the researchers investigated whether nurses from different cultural backgrounds shared different experiences and values in the focus groups; however this direction was outside the scope of the present study. It was important the collective experience from either the individual nursing teams or facilitator groups were explored and themed.

The inclusion of experiences of those nurses who were also facilitators could be a potential bias in this study as it may be considered they had additional knowledge of expected outcomes for the program. However it is important to note that there were no program objectives listed or identified during this process and these nurses facilitated the development of a shared vision amongst colleagues. The emergent themes represent issues and topics that were identified as important during the thematic analysis of these experiences. The transformation of both individual and team perspectives provides insight into the potential for a program which is values driven. It was interesting to observe that while the themes were consistent across the different wards/teams, the actual vision statements varied. For instance, in two different surgical unit's one vision statement valued: *"provide a welcoming and supportive environment for our patients and their families..."* while the other surgical unit valued *"providing a professional, holistic, supportive and compassionate environment"*. This supports the methodologies of PD in that real meaning comes from individual teams developing their own vision statements as opposed to a vision statement developed by an organisation with an expectation

that employees will embrace it (Dewar et al 2013; Christie et al 2012;). With a focus on organisations being built on values, programs such as EoC provide a framework and principles for teams to follow in developing a shared vision.

CONCLUSION

Providing opportunities for nurses to explore their values is important in the development of a person-centred culture. The most significant realisation amongst the nurses was the most shared and strongest value about being a nurse was about caring for patients. Reflecting and discussing values amongst the teams led to experiences of personal growth, empowerment and enhanced self-awareness. There was a noticeable change in culture felt by some nurses and a greater engagement in team projects. This body of evidence provides an opportunity for further research that explores the experiences and impacts from working with value based programs.

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The clinical environment – do student nurses belong? A review of Australian literature

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KEY WORDS

student nurses, clinical environments, sense of belonging

ABSTRACT

Objective – broad aim

This paper aims to identify some of the issues related to the nursing students' experience of belonging on clinical placements from the current Australian literature. Anecdotal and empirical evidence suggests that nursing students on clinical placements often experience problems that can adversely affect their feeling of belonging in the clinical setting and ultimately their career decisions. As nursing shortages increase, retention of student nurses in their chosen profession is often affected by their clinical experiences, both positively and negatively (HWA, 2012).

Setting and Subjects

Health professionals' attitudes towards nursing students may affect their feelings of belonging to the environment and the health care team. These health professionals include Registered Nurses and a range of other health professionals including medical staff, physiotherapists and dietitians. The clinical settings in which student nurses' practice vary greatly and may also make a difference to the student experience and their feelings of belonging.

Primary Argument

Student expectations should include feeling welcomed to the clinical area and respected as part of the nursing culture. Clinical placements provide the 'real world' experience to complement classroom and laboratory education. These expectations are clearly not met in some clinical environments. Complimentary research reinforces the benefit of partnering students with experienced registered nurses who have an interest in teaching nursing students.

Conclusion

The literature has identified some examples of where students have felt a sense of belonging to the clinical environment and others where the situation has been less than encouraging. Provision of support, guidance and ensuring appropriate clinical education remain ongoing challenges for Australian universities and the health care system (Henderson et al 2011).

INTRODUCTION – RELEVANCE AND SETTING THE SCENE

The chronic national nursing workforce shortage has been compounded by the decrease in numbers of students completing their degree and entering the workforce (Courtney-Pratt et al 2011; Beadnell 2006). It is therefore imperative that student nurses are not discouraged from continuing in their chosen profession by feeling they do not belong in the clinical environment.

Belongingness is intrinsic in humans with the need to belong and be accepted by their social group, a fundamental element in social interactions. It involves feelings of security, feeling connected to the clinical nurse group and that their professional and personal values are in sync with the larger clinical group (Levett-Jones and Lathlean 2009). This view is reinforced by research findings where self-esteem and belongingness are linked, and acceptance into a cultural group signifies that the individual is meeting the important social domains (Beadnell 2006). Research into the link between nursing students' clinical experience and learning has been limited, and further research is required to examine belongingness and the influence this has on the students' clinical placement experience (Mallik and Aylott 2005).

When the way in which nursing students were educated changed in the late 1980's from hospital trained to university education, one of the key issues for the registration authorities and universities was the maximisation of clinical skill development on clinical placement (Nolan 1998). Anecdotal and empirical evidence suggests nursing students on clinical placements experience problems that can have far reaching effects on their progress through their degree. Many of these problems are directly related to the feelings of belonging to the profession, the clinical environment and to the health care team.

Australian undergraduate nursing students currently complete their degree within accredited universities usually over three years. One essential component of the degree involves clinical placements where students are allocated to various health facilities for a set period of time. During this time, students aim to integrate knowledge from the classroom into skill development, form part of the clinical workforce and are supported by a university or facility clinical facilitator/mentor. Not all students experience support by the clinical staff in the environment during this time, which can lead to superficial learning, student feelings of not belonging and increased student attrition. Students who experience anxiety during clinical placement may experience decreased learning opportunities, also resulting in student attrition (Melincavage 2011).

An examination of Australian and British nursing student stories of clinical placements (Levett-Jones et al 2007) found the clinical managers and nurses who were supportive and welcoming, who valued and included nursing students into the workplace were conducive to their feelings of belongingness. Taylor et al (2014) also found student satisfaction with a clinical placement had an impact on their decision to graduate and register. Although part of these decisions was related to the students' preparation for placement, qualitative data suggests their feeling of belonging in the clinical setting also had an influence on the decision to complete their undergraduate nursing degree and become a registered nurse.

DISCUSSION

Clinical placement can occur in a variety of hospital based or community settings including mental health, aged care and acute care areas, covering all shifts including night duty (Zielinski and Beardmore 2012). The majority of universities provide block placement for student nurses during the designated university semesters. Block placement involves nursing students being allocated to designated 'blocks' of time and then to facilities who have agreed to host the nursing students during this time.

The nursing students on clinical placement are supported and supervised by a clinical specialist called a

facilitator, usually paid for by the university, in addition to the clinical registered nurse (Courtney-Pratt et al 2011). Clinical practice is vital for nursing students to integrate knowledge from the classroom with their development of practical nursing skills. Clinical skills are more than successfully performing tasks; they incorporate client assessment, identification of deficits and problems and the ability to critically think to provide solutions (Walker et al 2014). A usual clinical placement day consists of approximately 6-8 hours of patient contact and/or up to one hour of post clinical reflection and discussion to identify and discuss learning experiences with other students.

During one study (McKenna et al 2009), students attended placement weekly to facilitate learning and assimilation into the clinical setting. Some students found the experience of learning about a procedure at university and performing that procedure the next day on placement to be helpful in linking theory and practice. Findings from this research indicated that students attending placement in one clinical facility felt included and accepted by staff, facilitating the development of trust and optimum learning experiences. Students were able to continually engage with theory and practice, consolidating one skill at a time, extending learning and boosting confidence (McKenna et al 2009). Alternatively, students who experienced block placements reported having to re-orientate on each placement and experienced difficulty in establishing relationships with the clinical staff. This information suggests that to encourage professional socialisation, clinical placements should be conducted in the same clinical facility over an extended period of time. Limitations of this research include data that was obtained from a larger study with only student midwives experiences discussed in this paper. Findings cannot therefore be generalised to other student groups in other institutions, but does form the basis for further research.

Levett-Jones et al (2009) sought to measure whether the duration of clinical placement impacted on the student nurses' perception of belonging in the clinical workplace and found students required a 'settling in' period as well as the establishment of relationships with staff in order to feel a sense of belonging. This research utilised information gathered from 362 third year undergraduate nursing students from two Australian and one British university through anonymous online surveys. Findings from this research indicated that all participants identified that feelings of belongingness impacted on their confidence, resilience, capacity and motivation to learn. Many students identified that they felt uncertain, lost and unsure as they struggled to learn about the staff, clients, culture and practices of the clinical area. Students also identified that they felt their ability to learn was impacted by this assimilation process, and only when they were considered to be a team member, did they learn new skills or consolidate learned skills, leading to feelings that they belonged in the clinical setting.

Clinical placements afford students the opportunity to not only link theory to practice but also to begin socialisation into the nursing culture. Early research (Nolan 1998), discussed how students striving to fit into the nursing culture norm would do whatever was needed to be accepted. The sense of 'belonging' along with knowledge and affirmation from staff and patients were of particular importance to student nurses. Clinical placements are integral to completion of the nursing degree, and entry of the nursing student into this nursing 'atmosphere' where they can learn and socialise with clinical nurses is vital (Kern et al 2014). Nursing students, who fail to gain entry into this elite environment and gain belongingness, experience their clinical placement as outsiders, often with detrimental results (Courtney-Pratt et al 2014; Kern et al 2014).

The impact of mature aged nursing students (so called 'Baby Boomers'), on health workforce retention once they graduate, is important, as many employers consider them to be more likely to stay in the workforce (Walker et al 2014). One concern is that these students are considered to be at 'high risk' of academic failure and withdrawal from undergraduate nursing degrees (Walker et al 2014). These students in particular, may

struggle with engagement in the profession of nursing during clinical placement due to bias and decreased feelings of belonging. One Australian study utilised open ended questions as part of an online survey to discover both supports and obstacles to learning opportunities on placement, and how these factors impact on the feelings of belonging experienced by the mature aged graduate registered nurse (Walker et al 2014). As the ratio of mature aged students are anticipated to increase within future undergraduate nursing programs, additional research into methods to both attract and retain these students is advised.

One of the key elements of student learning then is for nursing students to fit into the clinical setting, be accepted by staff and clients and have a sense of belonging. 'Fitting in' has been documented by Malouf and West (2011) as being vital for new graduate nurses. This need to belong was a significant component of their clinical performance and there is no reason to suspect it is any different for the student nurse. Sedgwick et al (2014) focused on the experiences of nursing students from minority groups and their feelings of belonging in the clinical setting. Findings from this study identified the additional barriers faced by this group of nursing students, often resulting in a higher attrition rate than other nursing student groups. Sedgwick et al (2014) also found that every interaction the minority students had with the nurses who they came into contact with, had an impact on their sense of belonging in the environment.

The impact of clinical placement on student retention across the undergraduate nursing degree has been a focus for many universities, leading to research into why undergraduate student nurses terminate their nursing degree. Students undertaking an accelerated university nursing degree program have experienced significantly lower level connectedness to the clinical setting and associated feelings of belonging, due to reduced confidence (Sedgwick 2013). Accelerated nursing degrees are common throughout the world and, as there appears to be little research evident in this area, the suggestion is made that further research is required.

Researchers have postulated that the first clinical placement for second year undergraduate nursing students can influence their decision to continue (James and Chapman 2010). In this research study, six second year undergraduate nursing students enrolled in a Bachelor of Nursing degree in an Australian university, completed a compulsory three week clinical placement for their acute medical surgical course. Their only prior clinical placement comprised a two week aged care facility placement in their first year. Findings from this study included reports that almost all of the students felt overwhelmed and disorientated by sights, noises and smells associated with the busy clinical environment, the patients and their clinical conditions, leading to them feeling that they did not belong in the clinical area. Some students also identified the pain and suffering experienced by the patients were triggers for feelings of helplessness experienced by the students. Three major themes were identified as a result of this research: feelings of confrontation and being overwhelmed, the concept of patients as people and the students' perception of their preceptors (James and Chapman 2010). Many participants felt that familiarity with the preceptor facilitated building of confidence and the use of initiative in the clinical setting. Some participants reported feeling intimidated and unwelcome by their preceptors, leading to them feeling overwhelmed, disorientated and disconnected from the clinical setting (James and Chapman 2010). Limitations relating to this study include the very small participant group of six students, drawn from one clinical context (nursing) which limits the usefulness of this information in the broader context of all nursing students.

A positive learning experience can occur when encouragement and constructive feedback are given to students through the support of a role model. Donaldson and Carter (2005) found students like to have access to a nurse role model, adding to their sense of belonging in the environment, their confidence and feelings of competence. Many of the students in a study by Suresh et al (2012), had difficulty feeling supported in the

clinical environment with low staffing levels, which caused a decrease in the quality of nursing care and decreased feelings of belonging in the clinical environment.

Further research reinforced the benefit of partnering students with registered nurses with expertise and an interest in teaching nursing students, thereby bridging the gap between theory and practice (Donaldson and Carter 2005). Opportunities for clinical placement in non-hospital settings, including general practice settings, offer student nurses clinical practice in primary care (Peters et al 2013). Whilst these placements offer high quality placement interactions with practice nurses and patients, their success is dependent on support being provided to the practice nurses who act as facilitators, mentors and educators (Peters et al 2013).

Other Australian research has focused on the undergraduate nursing student experience during clinical placements in rural and remote areas (Webster et al 2010), reinforcing the issue of belonging as an important aspect of clinical placements. This qualitative study involved a cohort of eight (8) second year nursing students from Australian Catholic University on a four week rural placement in northern New South Wales. A pre and post placement questionnaire captured their experiences and knowledge development in rural communities and rural health clinical placements. Findings from this study confirmed student clinical experience in rural areas influenced the student's perception, attitudes, preparedness for practice, engagement and feelings of belonging within their clinical facility.

Discussion regarding the impact of the length of clinical placements on student belongingness has been extensive. Some researchers (Levett-Jones et al 2007; Mallik and Aylott 2005; Nolan 1998) suggest a short clinical placement across a variety of clinical settings decreases the sense of belonging in student nurses due to the period of 'settling in' which is required. Other researchers (Edmond 2001), believe it is not the length of the clinical placement that is important but the guidance and support that is given, suggesting a well-supported placement, regardless of the length, has the potential to provide the students with a feeling of belonging. This contradiction should be of particular interest to academics managing clinical placements as part of the undergraduate nursing degree.

CONCLUSION

Limited research has been conducted on the structure of clinical placements. Historically, undergraduate student nurses attend placements in blocks where they attend a clinical facility for five days a week for a set number of weeks. Short placements can result in a decreased sense of belonging and limited learning opportunities for student nurses due to the time required for "settling in". The conflict between funding and the number of clinical placement hours has been identified as a negative factor in students achieving sufficient clinical experience. Frequent changes in clinical settings has also been identified by students as opportunities for varied experiences, but these experiences lacked depth of learning and they required more registered nurse time for orientation and support.

Little research has explored student perceptions of their clinical experiences and the impact of placements on their career choices. Experiences, acceptance and a sense of belonging can have implications not only for the students, but for the area of nursing they choose once they graduate.

In order to facilitate student learning on clinical placement there is support for sending students to a small number of facilities where they are well supported and increasing the length of placement time to maximise the learning and practice of clinical skills.

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Prevention of postnatal mental health problems: a survey of Victorian Maternal and Child Health Nurses

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KEY WORDS

prevention, postnatal depression, risk factors, primary care

ABSTRACT

Objectives

To investigate Maternal and Child Health (MCH) nurses' views on what contributes to mental health problems among new mothers, and their current practices regarding risk factors for maternal mental health problems that are potentially modifiable in primary care.

Design

Cross-sectional, online survey.

Setting

Universal MCH service offered free to all new parents in Victoria, Australia.

Subjects

All MCH nurses employed in full or part-time clinical practice were invited to participate.

Main outcome measures

MCH nurses' views on risk factors for maternal mental health problems and for unsettled infant behaviour; and their current practice regarding addressing unsettled infant behaviour and inclusion of fathers in services.

Results

Surveys were completed by 343/1051 eligible MCH nurses (32.6%). Respondents identified social factors as major determinants of postnatal mental health problems among women, including: parents having limited knowledge about infant sleep needs and skills to manage unsettled infant behaviour; and lack of support, including from intimate partners. Respondents offered widely divergent advice to mothers about management of unsettled infant behaviour. They regarded the inclusion of fathers in routine services as valuable, but acknowledged practical barriers, including difficulties in offering services and programs outside conventional office hours.

Conclusions

MCH nurses identified risks to maternal mental health that are potentially modifiable in primary care, but face barriers in addressing these. To facilitate more consistent advice to new parents about management of unsettled infant behaviours, evidence-based guidelines and training programs should be developed. Inclusion of men in routine services would require practical barriers to be overcome.

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INTRODUCTION

In Australia perinatal depression is associated with significant health and social care costs as well as productivity loss among women and men (Deloitte Access Economics 2012). Less is known about the burden of other mental health problems such as anxiety or adjustment disorders which may be even more common than depression in the perinatal period (Wynter et al 2013).

The National Perinatal Depression Initiative (NPDI) (Australian Government Department of Health and Ageing 2008) was launched in 2009, to “improve prevention and early detection of antenatal and postnatal depression and provide better support and treatment for expectant and new mothers experiencing depression” (Austin et al 2011). In the Australian state of Victoria, there is a universal Maternal and Child Health (MCH) service, whose mandate is to monitor child health and development, but since the launch of the NPDI, has been expected also to screen women who have recently given birth for symptoms of depression and refer those who meet screening criteria, for care. While training in detection has been implemented, there have not yet been systematic approaches to primary prevention. Prevention requires identifying potentially modifiable risk factors, plausible causal pathways and strategies to address these directly (Mrazek and Haggerty 1994).

There is consistent international evidence for four risk factors for postnatal mental health problems: having a history of mental health problems, lack of social support, poor partner relationship and recent adverse life events (Scottish Intercollegiate Guidelines Network (SIGN) 2012). Of these, lack of social support and poor partner relationship are potentially modifiable. Data gathered from women admitted with their infants to residential early parenting services (REPS) in Australia, which offer brief psychoeducational programs to mothers with their infants for assistance with difficulties in caretaking or unsettled infant behaviour (Fisher et al 2011), are consistent with the international evidence that poor quality intimate partner relationships play a central role in maternal mental health problems (Fisher et al 2002a; Barnett et al 1993). Many of the women admitted to these services, amongst whom depression and anxiety are common (Fisher et al 2011; Rowe and Fisher 2010; Rowe et al 2008; Phillips et al 2007; McMahon et al 2001), report that they feel unable to confide in their partners (Rowe and Fisher 2010), that they experience their partners as critical and lacking in empathy (Fisher et al 2002b) or that paternal participation in infant care and household work is low. Including partners in ante- or postnatal education classes has been found to contribute to prevention of postnatal mental health problems (Midmer et al 1995; Gordon and Gordon 1960).

Another potentially modifiable risk factor for maternal postnatal mental health problems which has emerged from the data gathered from women admitted with their infants to REPS in Australia is unsettled infant behaviour (Fisher et al 2002b; McMahon et al 2001; Armstrong et al 1998). Unsettled infant behaviour includes prolonged and inconsolable infant crying, resistance to soothing, frequent overnight waking and waking after short sleeps (Fisher et al 2011), and is a common reason for mothers of infants to seek help (McCallum et al 2011). Prospective cohort studies assessing the effects of Australian REPS, in which sustainable settling strategies and solution-focused responses to infant crying are taught (Fisher et al 2011), have shown not only significant improvements in infant sleep but also reductions in depression and anxiety symptoms, sustained up to six months post discharge (Rowe and Fisher 2010; Matthey and Speyer 2008; Fisher et al 2004a; Fisher

et al 2004b; Don et al 2002; Leeson et al 1994).

Primary care practitioners are well positioned to promote maternal mental health, including by addressing potentially modifiable risks. However, little is known about their views about factors associated with mental health problems among women who have recently given birth, and this extension to their role and responsibilities.

The aims of this study were to investigate MCH nurses’:

- views about risk factors for postnatal mental health problems;
- views about risk factors for unsettled infant behaviour;
- current practice in responding to mothers with unsettled infants; and
- current practice regarding inclusion of fathers in their services.

METHODS

Setting

In Victoria, a universal primary care health service is available to families with children from birth to preschool age (Department of Education and Early Childhood Development Maternal and Child Health Office for Children and Portfolio Coordination 2011). The MCH service is funded by local and state governments, and is offered free to all new parents to support and monitor child health and development from birth until school age. The service includes a home visit, at least 10 consultations at the local MCH centre, and access to the MCH Line, a state-wide 24-hour telephone information service. MCH nurses are registered nurses with midwifery qualifications and postgraduate training in maternal and child health nursing (Kruske and Grant 2012).

The focus of MCH care is predominantly the health and development of the child. However, the schedule of visits as documented in the state of Victoria’s Key Ages and Stages (KAS) Framework (Department of Education and Early Childhood Development Maternal and Child Health Office for Children and Portfolio Coordination 2011) includes a longer consultation at four weeks postpartum, for the ‘Maternal Health Check’. Australian guidelines recommend that the Edinburgh Postnatal Depression Scale (EPDS) (Cox et al 1987) be used 6-12 weeks after birth, to assess symptoms of depression and anxiety (Austin et al 2011). Translated versions of the EPDS in some languages other than English are available to MCH nurses. Many MCH centres also offer First-Time Parent (FTP) groups, which emphasise parenting skills and social support in order to increase confidence and skills in parenting (Hanna et al 2002).

Participants

Inclusion criteria were: MCH nurses practicing in MCH centres or staffing the MCH Line anywhere in Victoria during June 2012.

Data source

A survey instrument including both open-ended and fixed choice questions was developed in collaboration with key stakeholders from local and state government.

The survey content was informed first by existing international evidence about potentially modifiable risk factors for postnatal mental health problems, and second by themes emerging from semi-structured interviews and small group discussions with 21 MCH nurses, about current practice and training needs in this field (Wynter et al 2013). The survey was piloted by research staff to ensure face validity.

The survey had five sections. First, characteristics of the respondents and their services, including FTP groups, were assessed in fixed choice questions. Second, views about risk factors for mental health problems in new mothers were assessed using an open-ended question: “In your experience, what are the three main contributing factors that contribute to mental health problems in parents of infants in your area?”. Third, as

unsettled infant behaviour is a potentially modifiable risk factor for postnatal mental health problems, two open-ended questions assessed nurses' views about risk factors for, and current practices and responses relevant to, unsettled infant behaviour: "We know that parents often seek help with a baby who is unsettled (for example, sleeps poorly, cries inconsolably, is difficult to feed, is difficult to manage). In your experience, what contributes to unsettled infant behaviour?" and "Please imagine that a mother/ caregiver presents with a concern regarding her six month old infant, of age-appropriate weight, who wakes every few hours overnight and/or is difficult to settle. She is distressed about this. What advice would you give her?". Fourth, as poor quality intimate partner relationship is also a risk factor for postnatal mental health problems and could potentially be addressed in MCH services if opportunities existed to engage with both parents, nurses' practices and experiences regarding inclusion of fathers in usual care were assessed using fixed choice questions: "What do you offer in your service that is relevant to fathers?" and "In your opinion, what are the main barriers that prevent fathers from becoming more involved in activities at your MCH service?". Finally, nurses were asked to indicate how willing they would be to make changes to FTP groups in the future to address evidence about potentially modifiable risk factors.

Procedure

The survey was hosted online by an independent online survey company, from 4 - 22 June 2012. Local government representatives e-mailed MCH co-ordinators an invitation to participate with the online survey link and co-ordinators forwarded this email to MCH nurses.

Ethics approvals

Approval to conduct the study was obtained from the Human Research Ethics Committee of Monash University (CF12/0989 – 2012000455, 18 April 2012) and the Research and Evaluation Branch, Department of Education and Early Childhood Development (2012_001508, 24 April 2012).

Data analysis

Data from fixed-choice questions were analysed using descriptive statistics. Responses to open-ended questions were read by two researchers and sorted into themes, which were summarised. Concept maps were generated using Mindjet Mind Manager software (Mindjet 2011) to illustrate the relative frequencies of responses within themes: the size of the 'bubble' and font reflects the number of responses which represent each theme relative to the number of responses in other themes.

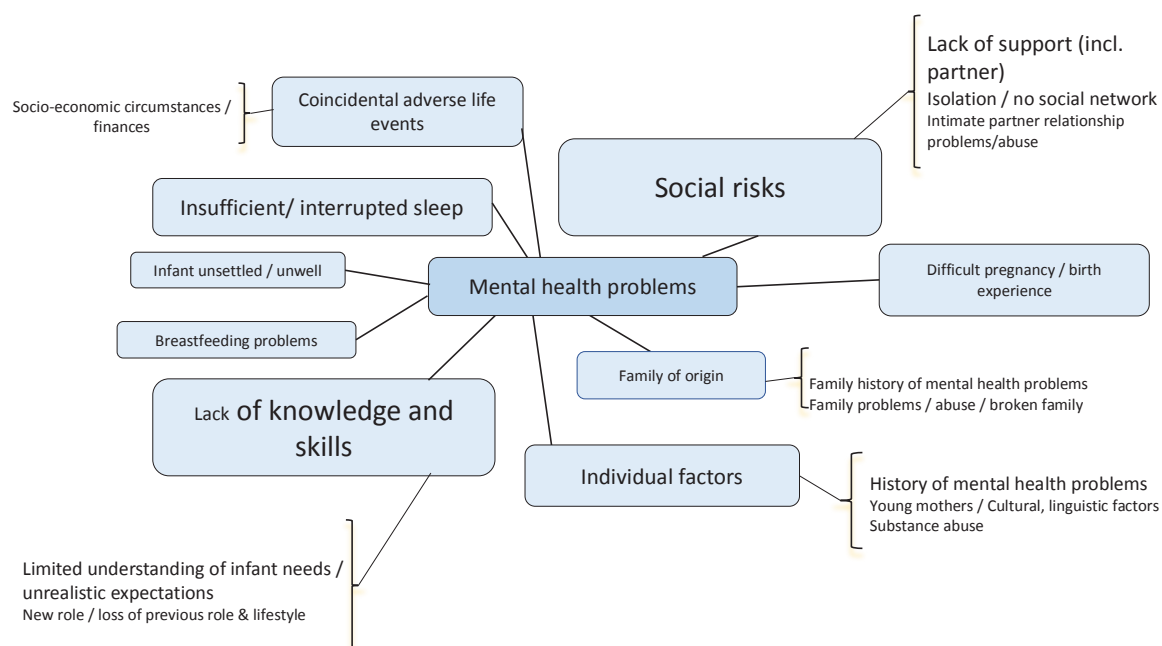
Findings

At the time of the survey, 1,051 nurses were employed (203 full time), 992 only in the universal service, 39 on the MCH Line, and 20 in both services. Online surveys were completed by 343 MCH nurses, 11 of whom worked only at the MCH Line and not in universal service. The overall response was 343/1,051 (32.6%). Survey responses were received from Greater Melbourne as well as all five additional regions of Victoria. More than half (51.0%) of the respondents had been practising as a MCH nurse for at least 11 years.

Factors identified as contributing to mental health problems

Respondents described mental health problems among new parents as having multifactorial causes. The most commonly identified risk factors related to social circumstances and experiences rather than biological vulnerability. The two most commonly cited factors were parents having insufficient understanding, knowledge and skills about infant caregiving and lack of support from intimate partners and others (see figure 1).

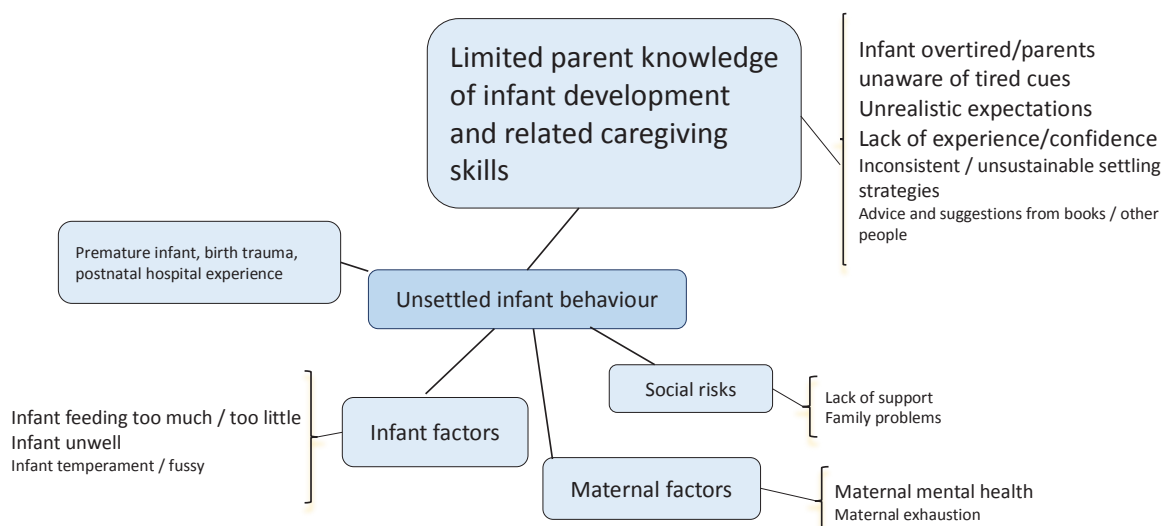
Figure 1: Themes emerging from responses to ‘What contributes to mental health problems in parents of infants in your area?’



Factors contributing to unsettled infant behaviour and advice regarding overnight waking

The main factors which respondents believed contributed to unsettled infant behaviour were grouped into themes. The most commonly mentioned risk factor was parents' lack of knowledge about infant development and related caregiving skills (see figure 2).

Figure 2: Themes emerging from responses to ‘What contributes to unsettled infant behaviour?’



There were four broad categories of responses to the question about advice to a mother of a six month old infant who wakes frequently and is difficult to settle (see figure 3). Many responses were included in more than one category of response.

General assessment (n=280)

Many respondents saw it as central to their role to assess the mother's wellbeing and gain insight into her current circumstances, assess the infant's physical wellbeing, and gather information on current sleeping and feeding habits.

Education (n=220)

Some respondents indicated they would discuss or explain to parents about infant sleep needs, infant development, sleep environment and routines.

Specific advice (n=247)

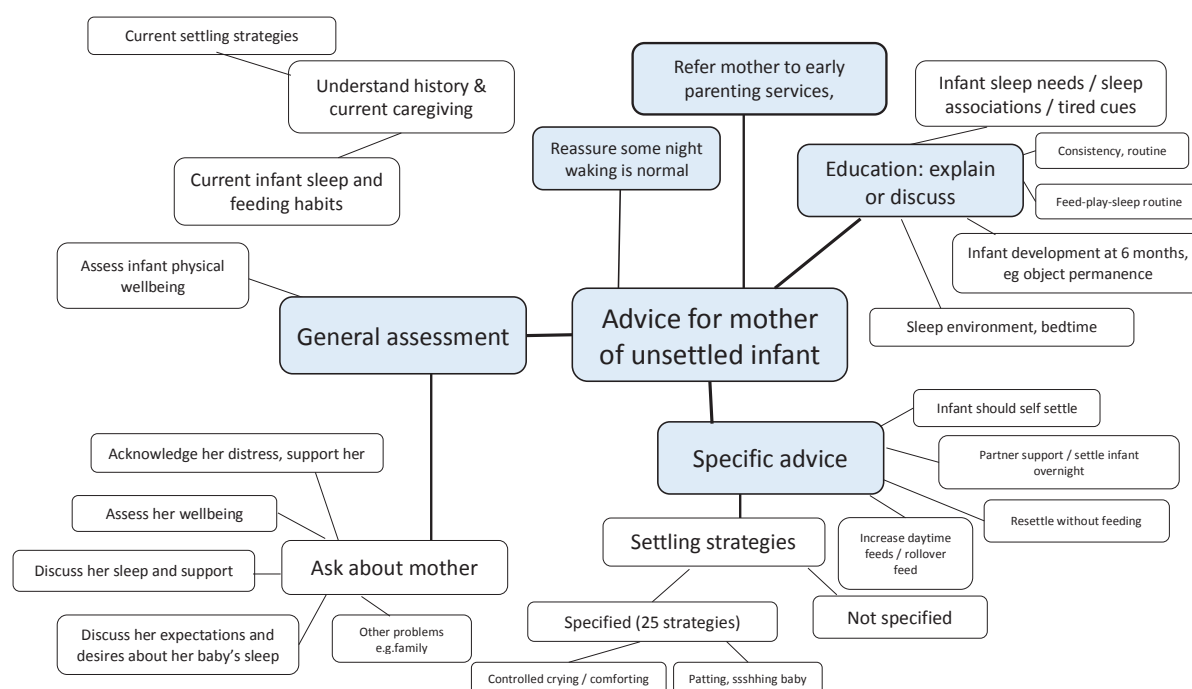
Some respondents indicated specific advice, including feeding advice (n=60) and settling strategies (n=221). In many cases (n=125), settling strategies were not specified. Amongst the responses which mentioned a specific settling strategy (n=96), at least 25 different settling strategies were mentioned.

Some respondents indicated that they would 'normalise' the infant's overnight waking, or emphasise that it is common at this age (n=55).

Referral (n=147)

Some respondents said they would refer parents to various resources or services, such as early parenting centres.

Figure 3: Themes emerging from “Advice for a mother of a six month old infant who wakes frequently overnight or is difficult to settle”



Inclusion of fathers in routine practice and First Time Parent groups

More than three quarters of respondents (76.7%) indicated that FTP groups are offered at their centres.

Most respondents indicated that fathers are welcome to attend MCH routine visits (93.7%) and FTP programs (80.3%). However, few indicated that they extend a specific invitation to fathers to attend MCH routine visits (18.7%) or FTP programs (12.3%). Almost half (45.0%) of respondents indicated that they 'cover' partner relationships in the FTP program.

Table 1 shows the frequency of responses for each of the specified barriers that may prevent fathers from becoming more involved in activities at MCH services.

The most common response was that programs and services are not offered after hours. Of the 263 respondents who reported that FTP groups are offered at their MCH centres, only 2 (0.8%) indicated that they are offered on Saturday mornings and 11 (4.2%) on weekday evenings.

Table 1: Barriers preventing fathers from becoming more involved in activities at MCH centres

Programs and services are not offered after hours	220	73.3%
They're too busy	193	64.3%
There are few other fathers who attend	151	50.3%
They consider these activities to be "the mother's job"	137	45.7%
Cultural factors e.g. they don't want to gather in mixed sex groups	109	36.3%
They don't feel confident	72	24.0%
They don't feel included or involved	62	20.7%
They're not interested	61	20.3%
They are embarrassed by women breastfeeding in front of them	56	18.7%
We (the MCH nurses) don't invite them	43	14.3%
We (the MCH nurses) don't feel as comfortable with them as with mothers	15	5.0%

*As respondents could select more than one option, these do not sum to 100%

Willingness to incorporate changes to FTP programs

More than two thirds of respondents indicated that they would be willing to include sessions about adjustments to relationships, roles and responsibilities after the birth of an infant (67%) and about infant soothing and settling techniques (72%) in their FTP programs. An additional 22% and 18% indicated that they felt neutral (neither unwilling nor willing) about including these sessions, respectively. However, only 38% of respondents indicated that they would be willing to include at least one Saturday session. An additional 31% indicated that they felt neutral about doing this.

DISCUSSION

This study provides unique evidence about MCH nurses' views about risk factors for maternal mental health problems and unsettled infant behaviour, and current practices in addressing these in primary care in Victoria. The respondents' emphasis on the social determinants of postnatal mental health, and their commitment to their own role in facilitating mothers' wellbeing and helping them find ways to overcome risks to their mental health, provides support for the implementation of a prevention focus in universal MCH service. The main risk factors named by the respondents in this study were potentially modifiable, although addressing these would involve some changes in *what* MCH nurses are offering, *to whom* they are offering it and *when* it is offered.

To address parents' lack of knowledge and skills in caring for (unsettled) infants, consistent, evidence-based advice about managing unsettled infant behaviour should be given to parents by primary care providers. Our data suggest that advice from nurses on this matter is currently diverse. In a recent national study of Australian paediatricians, a similar lack of uniform responses to persistent infant crying was reported and further training supported by evidence-based guidelines was recommended (Rimer and Hiscock 2014).

To optimise the intimate partner relationship, an opportunity for nurses to engage with both partners is necessary. Having the father present at individual consultations or FTP group sessions, and explicitly addressing adjustment in the intimate partner relationship following the birth of a baby in the FTP group, would be an ideal opportunity to address this. However, respondents indicated that currently fathers are rarely specifically invited to FTP groups, and MCH services and FTP groups are almost always available only

during conventional office hours. Respondents acknowledge this as the major barrier which prevents fathers from attending, but only 38% of respondents indicated willingness to offer a Saturday session which would facilitate fathers' attendance.

We acknowledge some limitations in this study. For privacy reasons researchers did not have access to e-mail addresses for individual MCH nurses, centres or co-ordinators. All respondents used the same survey link, targeted reminders could not be sent and it was not possible for respondents to save a draft of their surveys and return to their draft at a later stage, which is likely to have reduced participation rates.

CONCLUSIONS

This study represents an important step in building evidence for broadening the focus of primary care of new mothers to include prevention of, as well as screening for and treatment of mental health problems. Primary care nurses are ideally positioned not only for case detection and referral for treatment but also for addressing risk factors in order to reduce the risk of mental health problems in the postnatal period.

RECOMMENDATIONS

The results from this study indicate there are opportunities in primary care to address two potentially modifiable risk factors for postnatal mental health problems: poor adjustment in the intimate partner relationship and unsettled infant behaviour. It is recommended that evidence-based guidelines for infant sleep needs, and relevant training, be made available to nurses to facilitate consistent advice to new parents about managing unsettled infant behaviour. In addition, increasing involvement of fathers in services may help new mothers feel supported and help couples to negotiate changes in roles and responsibilities after the birth of the infant.

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Literature review: “Are you ok there?” The socialisation of student and graduate nurses: do we have it right?

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KEY WORDS

socialisation, nurses, student nurse, undergraduates, graduate nurse, literature review

ABSTRACT

Objective

To determine the effectiveness of the current socialisation processes for student and graduate nurses, into the clinical practice setting.

Setting

The clinical nursing environment, with underlying links and reference to the academic setting of nurse education.

Subjects

The sole focal subjects of this literature review are student/undergraduate and graduate/new nurses.

Primary argument

Internationally, attrition rates of new graduate nurses in their first year of practice ranges between 30-60%. Undergraduate and new nurses enter the nursing profession with a beginning skill set, reflective of their education, coupled with preceded values and ideas about the profession itself. Recognition of an adjustment period undergraduate and new nurses require, is paramount to meeting the anticipated socialisation of these new professionals. Socialisation in the profession of nursing is an ongoing and complex interactive process by which the professional role, incorporating skills, knowledge, and behaviours, is learned and the individual consciously and subconsciously seeks their sense of occupational identity, and perfecting this process is crucial.

Conclusion

Newcomers to the nursing profession have expressed that learning how to behave appropriately in the workplace is more difficult than bridging the gap between theory and practice. Intentional measures implemented by organisations, is paramount in enabling newcomers to adjust to the workplace, and it is unsafe to assume the process of socialisation is good, and underestimation of this socialisation process, would be negligent.

INTRODUCTION

The Australian Nursing Federation states that the nursing and midwifery workforce, is, a workforce under immense pressure, and over the next seven years, 40% of the workforce will be due to retire (Health Workforce Australia, 2014). Health Workforce Australia (HWA) (2014) identifies the increase in mean age of nurses from 43.8 in 2007, to 44.3 in 2012, with a 4.4% increase of nurses over the age of 50, in this same period. Awareness of such statements highlights the need for the implementation of strategies, aimed at retaining and recruiting nurses at the bedside (Brown et al 2011). Australian nurse education has been solely provided through the tertiary sector for the past 20 years. However, the professional identity, of which nurses are striving for, has become blurred. Cohen (1981, cited in Brown et al 2011) posed the questions: What is missing? What went wrong? Why are graduate nurses not more comfortable with their roles? Why do large numbers of nursing students drop out? and, Why do so many new graduates drop out in their first year? Cohen's (1981, cited in Brown et al 2011) posing of these questions, must encourage members of the industry to attempt identification of causative features, as to why nurses entering and having just entered the profession have limited careers. This hasty exodus from the nursing workforce, will/is having a damaging impact on patient safety in the clinical setting.

DISCUSSION

The socialisation of an individual into a profession and/or professional group has been documented in nursing since the 1950's. Becker and Geer (1958, cited in MacKintosh 2006) express that socialisation in the profession of nursing is an ongoing and complex interactive process by which the professional role, incorporating skills, knowledge, and behaviours, is learned and the individual consciously and subconsciously seeks their sense of occupational identity. There is an abundance of literature which has a heavy focus on the negative effects of overload stress and unsupportive relationships within the workplace, which can be directly related to the failure of well-being, self-efficacy, self-esteem, learning, persistence and success. On the contrary, understanding negative aspects of the socialisation process on student and graduate nurses, is not seen as adequate, resulting in posing the question of: "Are you ok there?" The socialisation of student and graduate nurses: do we have it right? (Del Prato et al 2011).

In order to undertake this literature review, a search of three electronic databases took place: CINAHL (Cumulative Index for Nursing and Allied Health Literature), The Cochrane Library and PubMed. Keywords and phrases utilised when searching each of the three databases were, "socialisation", "nursing socialisation", "socialisation" AND "nursing", and "socialisation" AND "new nurses". CINAHL originally yielded 141 full text articles, from the keyword "socialisation" this was then further defined with the use of keywords "nursing" and "new nurses", which resulted in 51 full text articles, with a time frame between 2004-2014 selected. A secondary search of CINAHL was completed with alterations to key words, consequently relying on "Socialization" and "Social Adjustment" (S1), then "New Graduate/Novice Nurses" (S2). The combination of S1 and S2, resulted in the yielding of 108 articles. Cochrane was only able to yield 2 articles from the use of all of the aforementioned keywords, with PubMed originally yielding 720 articles, of which was narrowed to 163, with the addition of the keywords "socialisation" AND "new nurses". Finding confidence in the amount of literature available, the number of articles which were utilised for this literature review was finalised at 26.

Qualitative data was desired data, for this literature review as gathering of an in-depth understanding of human behaviour and reasons that govern this, were the central focus of the posed question. Knowledge of 'why' and 'how', was required to understand individual's feelings and perceptions. However, quantitative data was not entirely eliminated, as some method of statistical data would be relevant in determining the success of socialisation in this setting. Surveys and Grounded Theories were seen as beneficial, due to their innate

focus on social sciences, discovering a theoretical explanation of actions that resolve the main concerns of participants.

Internationally, attrition rates of new graduate nurses in their first year of practice ranges between 35% and 60%, with 57% of these new professionals leaving their first place of employment by their second year of practice (Odland et al 2014). Undergraduate and new nurses enter the nursing profession with a beginning skill set, reflective of their education, coupled with preceded values and ideas about the profession itself. Recognition of an adjustment period undergraduate and new nurses require, is paramount to meeting the anticipated socialisation of these new professionals (Phillips et al 2015; Brown et al 2012; Brown et al 2011). The practice setting component of nurse education is seen as critical and plays a key part in the ideal world versus the real world clash that many undergraduate and new nurses face (Maxwell et al 2015; Phillips et al 2015; Brown et al 2012; Houghton et al 2012). Professional socialisation in nursing extends beyond skills and business activities. Socialisation in nursing is the development of a professional identity, necessary for involving students and graduates in professional practices (Zarshenas et al 2014). Nurses who are newly qualified and newly exposed to the clinical environment have indicated their intention to remain within the nursing profession is linked to their satisfaction with transition into the clinical environment. Both Australian and international studies show that if new nurses are supported and valued in the beginning of their practice, this will result in positive transitional experiences, optimising retention rates within the industry (Phillips et al 2015).

Nursing students of post-modern society have differing motives for choosing nursing as their profession. Common motives of the undergraduate nurse, of today, are to “help others”, “do something useful”, and have a “safe job” (Rongstad et al 2004). Research on the socialisation of student nurses has shown that these individuals experience two versions of nursing, in the classroom and in practice. Socialisations’ processes have been suggested to begin in the undergraduate phase, within this classroom setting (Brown et al 2012) however, it has also been asserted that nursing students don’t initially encounter the socialisation process until they first step in to the clinical setting (Houghton 2014). Student and new nurses are exposed to influences from different social worlds: personal, university and practice, entering the practice environment with a commitment to being kind, respectful and compassionate, yet find the enactment of these characteristics fraught with contests (Curtis et al 2012). Socialisation is a significant issue for newly graduated nurses, and acquisition of knowledge of the socialisation process is pertinent to assist in successful role transition. Research has indicated that professional socialisation is significant in shaping these new nurses, again, influencing retention within the industry. New graduates, who are not appropriately supported in their socialisation process are found to be less satisfied, perform poorly and are not committed to remaining in the profession (Kelly and Ahern 2009).

Socialisation is at its most vulnerable during a nurses’ inception into the profession. In a qualitative study conducted by Zarshenas et al (2014), it was determined that there are two categories in which new nurses hold in high regard when entering the nursing workforce: (1) a sense of belonging and (2) forming of a professional identity. Through the performance of semi-structured interviews, Zarshenas et al (2014) was able to determine a sense of belonging resulted in acceptance of the profession. When a sense of belonging exists, it is indicative of one accepting their profession, leading to respect for the profession and cementing a complete commitment. Furthermore, a sense of belonging evolves from contributing factors such as: theory-practice incongruence, educational experiences and tacit knowledge (Zarshenas et al 2014). Participants in this study highlighted inconsistency with the demands presented in academic, as opposed to demands in the practice setting. Consistent management of two differing methods of learning causes stress and

students often find themselves in situations where they were not able to show themselves as a nurse, leading to feelings of uselessness, consequently leading to a reduction in devotion to the industry (Zarshenas et al 2014). Many students express a preference for learning skills in the clinical environment, rather than a laboratory setting. However, the 'reality of practice' can stir feelings of uncertainty and anxiety, due to the pace of the environment, and being exposed to conflicting ways of practising clinical skills, which in turn forces students and new nurses to replicate these skills seen in practice, aimed at enhancing their probability of being 'accepted' (Houghton et al 2012).

Student and graduate nurses hold great value in their educational experiences, which can influence the formation and development of sense of being a nurse (Zarshenas et al 2014). Student nurses have reported feeling abandoned by their higher education institution, due to the reality shock of the practice environment, and a reported 95% of students perceive themselves as anxious, depressed, and unhappy at the end of their three-year course due to inappropriate socialisation and acceptance into the clinical workforce (Jackson et al 2011). Sources of students' stress can be categorised as academic, clinical and personal/external, although numerous studies show the clinical learning environment to be a primary source of stress in these novice nurses. Apart from the expectation to provide competent patient care in complex and often unpredictable clinical practice settings, juggling shift work fatigue and heavy workloads, student and graduate nurses need to learn the clinical unit's formal and informal norms and locate supportive nursing staff members, at each clinical placement and/or rotation (Zarshenas et al 2014; Del Prato et al 2011; Samaha et al 2007). Stemming from this often unexpected learning objective arises the need for appropriate supervision and support in clinical practice.

Supervision and support are pivotal to a new nurses' experience, a fact supported by a multitude of senior nurses currently in practice. The use of appropriate Preceptors and Clinical Facilitators, promotes a sense of belonging, enabling these novice professionals to identify with a colleague in the clinical environment. Preceptored learning experiences are found to be instrumental in the socialisation of student and graduate nurses in the real world of clinical practice, aiding in dealing with the inevitable shifted perceptions experienced of what the life of a nurse is (Beattie et al 2014; Houghton et al 2012; Crawford et al 2000).

Obtaining a professional identity in nursing has been described as difficult, with nurses historically struggling to define their role (Willets and Clarke 2012). A positive professional identity is critical for nurses to function at an appropriate level, and benefits not only the individual, but patients and other members of the interdisciplinary team. How nurses think and feel about themselves promotes a positive patient care environment, whilst enhancing job satisfaction and retention rates. Nurses' judgements of their own competence and professional self is crucial in achieving an effective standard of performance (Johnson et al 2012; Willets and Clarke 2012). Student and graduate nurses inevitably seek the meaning of being a nurse. Professional identities of nurses are acquired through socialisation, which can begin prior to the commencement of education in nursing (Johnson et al 2012). Exposure to the practice environment faces new nurses with the discovery of nursing cultures that include 'cliques' and common 'languages' associated with the profession. Prior to completion of the undergraduate and new graduate phases, it has been suggested that there was a total absence of awareness of this professional social trend (Zarshenas et al 2014; Kelly and Ahern 2009). Student and graduate nurses have expressed they do not feel they have a purpose until the final stages of their undergraduate journey, eliminating any sense of purpose, up until this point. Social connectedness and cooperation with and amongst nursing staff promotes self-confidence and a sense of being valued, aiding new nurses in forming their identity as a nurse. These novice professionals are not being appropriately socialised until completion of their graduate year, resulting in extended periods of not belonging and absence of a professional identity (Zarshenas et al 2014; McKenna and Newton 2007).

CONCLUSION

The most significant time of stress for student and graduate nurses is when in the clinical practice environment. Newcomers to the nursing profession have expressed that learning how to behave appropriately in the workplace is more difficult than bridging the gap between theory and practice (Feng and Tsai 2012; Del Prato et al 2011). The recruitment and retention of freshly graduated nurses, in the profession, over the next few years will play an essential role in underpinning the long term sustainability of the nursing workforce (Health Workforce Australia 2014). Intentional measures and support implemented by organisations is needed to enable newcomers to adjust to the workplace. It is unsafe to assume the process of socialisation is good, and the value of the socialisation process should not be underestimated (Health Workforce Australia 2014; MacKintosh 2000). MacKintosh (2000) resumes by stating, “care is nursing and nursing is caring” and in order to support nurses’ socialisation into the workforce, those who facilitate clinically based student-learning, need to understand the discord between effective care and the socialisation process, and well planned graduate programs are fundamental in assisting the evolution of these novice professionals (Health Workforce Australia 2014). Success of this will enable realignment with practice reality and professional ideals, development of resilience and enable the next generation of nurses to enact their professional ideals (Curtis et al 2012; Del Prato 2012).

RECOMMENDATIONS

The following recommendations have arisen from this literature review:

More intense and intimate relationships between academic and clinical facilitates, promoting and facilitating consistency of practice. Involvement of clinical staff, who are still practising, in the teaching processes held within the academic setting. Enabling student nurses to meet actual nurses, from an actual hospital, prior to entering the practice setting, will enable them to obtain a first-hand view of what to expect when learning in the real environment of nursing;

A more detailed focus on education of those who facilitate nursing education, in both academic and clinical arenas. Incorporation of Preceptor and Facilitator education for nursing staff will equip staff with optimal preparedness, ensuring optimal advantage is taken when learning in the clinical practice environment;

Production and execution of extensive orientation programs, with a direct focus on the professional environment. Socialisation into the clinical setting should begin in the academic arena, allowing the largest timeframe of preparation possible. Again, incorporation of nurses’ currently practising, in these orientation activities, in the academic setting, will allow new nurses to relate to a component of the clinical environment prior to entering it;

Individual focus at each level of learning should take place, as the needs of novice nurses differ in each phase of learning. Student and graduate nurses’ needs differ at different stages of their learning. It is vital that catering for each of these stages of learning take place, as to avoid overwhelming these newcomers, and to ensure their learning occurs at an appropriately gradual pace; and

More regular updating of educational institution curriculums. The nursing profession is one that changes constantly, with new knowledge and innovations ever-present. It is important for academic institutions to keep up with the ever-changing clinical environment, further ensuring currency of knowledge and practices, and preparing newcomers to become change-agents, an often, unknown requirement of a nurse.

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Delirium in the intensive care unit and long-term cognitive and psychosocial functioning: literature review

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KEY WORDS

intensive care, delirium, sedation, cognitive function, outcomes

ABSTRACT

Objective

This paper reviews existing literature on delirium that arises during mechanical ventilation in the Intensive Care Unit (ICU). It looks at the physiology of delirium, its subtypes and risk factors. It further considers the impact of delirium on cognitive and psychosocial function of patients after their discharge from acute care. The aim of this paper was to increase awareness of ICU delirium, accentuate the potential link between different sedation agents and the development of delirium, and inform practitioners, especially nurses, about this common neurocognitive disorder that appears in the Intensive Care Unit (ICU).

Setting

Intensive Care Unit (of any acute hospital) where is ICU located.

Subjects

Mechanically ventilated patients.

Primary argument

This paper argues for the awareness of delirium in the Intensive Care Unit and examines sedation during mechanical ventilation with its potential role in promoting this disorder.

Conclusion

Delirium is the most common neurobehavioral disorder in patients who are critically ill and mechanically ventilated in ICU. It frequently generates psychiatric and psychological outcomes such as depressed mood, anxiety and/or Post Traumatic Stress Disorder (PTSD). Cognitive and psychological dysfunction following delirium seems to be overlooked, under recognised, and misdiagnosed in the ICU. These impairments are often incorrectly attributed to other processes, such as concurrent psychoactive medication use, substance use, or psychiatric disorders, in particular depression, rather than delirium. Although it is generally accepted that providing sedation for a patient's comfort is an essential part of bedside care for nearly every patient in ICU, an increasing number of researchers hypothesise there is a strong link between sedation practice and long-term patient centred outcomes, such as quality of life (Dimopoulou et al 2004) and cognitive and psychosocial functioning. Increasing nurses' awareness of this potential link is exceptionally important, as they are instrumental in administration and observing subsequent side effects of any medication, including sedatives.

INTRODUCTION

Delirium is a disturbance of consciousness developing over a short period of time, where inattention is accompanied by a change in cognition and/or perceptual disturbance (American Psychiatric Association 2013). It is characterised by an acute confusional state defined by fluctuating mental status, inattention and either disorganised thinking or an altered level of consciousness (Girard et al 2008; Maldonado 2008; Pun and Ely 2007; Stevens and Nyquist 2007). Delirium is one of the most common psychiatric disorders encountered among the medically unwell, yet it very rarely has a psychiatric origin (Gunther et al 2008; Maldonado et al 2009; Jacobson and Schreiber 1997 as cited in Justic 2000; Nicholas and Lindsay 1995 as cited in Justic 2000). It occurs across different health care settings (Levkoff et al 1992 as cited in Jackson et al 2004). Research confirms that delirium affects between 15 to 20% of general hospital patients (Lipowski 1989 as cited in Jackson et al 2004); between 20 to 50% of lower severity ICU patients, and as many as 80% of critically ill ICU patients receiving mechanical ventilation (Girard et al 2008; Pun and Ely 2007; Ely et al 2001a,b,c). In the ICU, delirium is associated with critical illness itself (particularly with multiple co-morbidities and multi-organ failure), as well as management related factors such as mechanical ventilation, sedation, and lack of sleep. It is associated with adverse outcomes including death and long-term cognitive impairments (Cox et al 2009; Pandharipande et al 2008; Quimet et al 2007; Pandharipande et al 2006; Combes et al 2003). Several studies show that ICU delirium risks are cumulative and potentially count towards increased possibilities of cognitive dysfunction and poorer functional status and quality of life (Oeyen et al 2010; Maldonado 2008; Girard et al 2008; Stevens and Nyquist 2007; Pun and Ely 2007; Hopkins and Jackson 2006; Marcantonio et al 2003; McCusker et al 2001). Despite this recognition, cognitive impairments associated with delirium following mechanical ventilation in ICU are not well described and deserve further study. The literature suggests a reduced quality of life for survivors of critical illness and delirium, and this reinforces the relationships between post-ICU cognitive impairment and cognitive morbidity and decreased social interaction (Hopkins and Jackson 2009; Stevens and Nyquist 2007; Jackson et al 2003 as cited in Ely et al 2004a; Hopkins et al 1999). Nonetheless, data to support these relationships are still limited (MacLulich et al 2009; Girard et al 2008; Gunther et al 2008; Stevens and Nyquist 2007).

Expanding investigations on long-term psychosocial functioning following mechanical ventilation-related delirium will facilitate better understanding of this neurocognitive sequelae and its impact on cognitive outcomes. These outcomes seem to be significant markers of a decline in cognitive function, basic daily functioning, quality of life and ability to return to work (de Miranda et al 2011; Oeyen et al 2010).

This article reviews the literature in this area of investigation, with a particular focus on the depressed mood, anxiety, and Post Traumatic Stress Disorder (PTSD) subsequent to mechanical ventilation and ICU delirium. Improving knowledge and awareness in this area of the evidence-based practice in intensive care, will open up insights into this common neurocognitive disorder, its development, consequences and management.

METHODS

Articles were identified through a computerised search of the Medline (1996-2011) and Google Scholar (2000-2011). This was done by combining subject headings and keywords, and the terms were merged with search filters for retrieving articles.

RESULTS

The literature search produced 128 references published between 1996 and 2011. Out of these, 72 articles were excluded based on abstracts or titles, leaving 56 articles for the full text review. The articles were then

tabulated into subgroups such as ICU delirium, post-operative delirium, pathophysiology of delirium, mental health and delirium, and cognition and delirium. During this review, 56 articles were evaluated and included in this review.

DISCUSSION

Delirium was until recently considered to be a relatively benign medical problem in ICU (McGuire et al 2000), and of no importance to survival or long-term quality of life (Girard et al 2008; Ely et al 2004a, b). The prevalence of delirium reported in both medical and surgical ICU cohort studies has varied from 20% to 80%, depending upon severity of illness observed and diagnostic methods used (Thomason 2005 as cited in Patharipande 2008; Bergeron et al 2001 as cited in Pun and Ely 2007; Ely et al 2004b). Nevertheless, despite high prevalence rates in the ICU, delirium often goes unrecognised by clinicians, with symptoms incorrectly attributed to dementia, depression, or 'ICU syndrome', which was considered an expected, inconsequential complication of critical illness (Girard et al 2008; Ely et al 2004b; Justic 2000). For that reason, ICU physicians mostly overlooked delirium, as their main focus was to successfully assess, prevent and reverse multi-organ dysfunction (Pae et al 2008). The above approach resulted in a lack of attention to delirium and obstructed correct diagnosis and subsequent treatment of this condition (Pae et al 2008; Armstrong et al 1997). Ely et al (2004, as cited in Pae 2008) in their exploratory study of the current opinions and perceptions of health care professionals reported that although 92% considered delirium to be a significant or very serious problem, 78% of them reported delirium to be under diagnosed.

Delirium Subtypes

Delirium has been described as a multifactorial syndrome with different mechanisms interacting to produce the typical clinical manifestations. Most of these mechanisms are related to imbalances in the neurotransmitters that modulate cognition, behaviour and mood, thus generating different subcategories of delirium according to the psychomotor symptoms experienced, such as 'hyperactive', 'hypoactive' and 'mixed' delirium (Miller and Ely 2006 as cited in Girard et al 2010; Girard et al 2008; Maldonado 2008; Pun and Ely 2007; Ely et al 2001a,b; Justic 2000).

Hyperactive delirium is reportedly associated with extreme levels of agitation, emotional lability and disruptive behaviours such as shouting, hitting, biting and pulling out indwelling catheters and lines (Pun and Ely 2007; Justic 2000). This delirium subtype was in the past referred to as 'ICU psychosis' and is rare in its pure form. Peterson et al (2006) examined 614 consecutive medical ICU patients for delirium over one year, and reported that hyperactive-only delirium was present in less than 2% of all cases. Kabayashi et al (1992 as cited in Meagher et al 2000) reported that patients with hyperactive delirium had a higher rate of full recovery in comparison to patients with either hypoactive or mixed subtypes. Several studies pointed out that patients with hyperactive phenomenology had shorter hospital stays and better outcomes than either those with mixed or hypoactive subtypes of delirium (Girard et al 2008; Pae 2008; Pun and Ely 2007; Meagher and Trezepacz, 2000 as cited in Pun and Ely 2007; Stevens and Nyquist 2007; Ely et al 2004a,b;

Meagher et al 2000; Olofsson et al 1996 as cited in Meagher et al 2000; Liptzin and Levkoff 1992 as cited in Meagher et al 2000).

Hypoactive delirium alone is also relatively rare and is characterised by withdrawal, lethargy, apathy and a lack of responsiveness (Pun and Ely 2007; Justic 2000). Hypoactive delirium is associated with a worse prognosis than hyperactive delirium.

Most patients demonstrate a mixed hyperactive and hypoactive delirium after mechanical ventilation in ICU, and this subtype is associated with the worst outcomes and the highest mortality of the three subtypes

(Girard et al 2008; Pun and Ely 2007; Miller and Ely 2006; Ely et al 2004a; Misra and Ganzini 2003; Ely et al 2001a,b; Justic 2000; Meagher et al 2000).

Pathophysiology

Delirium is thought to be a neurobehavioral manifestation of imbalances in the synthesis, release, and inactivation of neurotransmitters that normally control cognitive function, behaviour, and mood (Trzepacz 1999 as cited in Girard et al 2008; Maldonado 2008). Maldonado (2008) argues that derangements of these multiple neurotransmitter systems have been implicated in the pathophysiology of delirium. Trzepacz (1999 as cited in Girard et al 2008) reported that these neurotransmitters work in opposition, with dopamine increasing and acetylcholine decreasing neuronal excitability. Any such imbalance results in neuronal instability, unpredictable neurotransmission and delirium. Similarly, research shows that other neurotransmitters may equally play a role in the pathogenesis of delirium, including aminobutyric acid (GABA) serotonin, endorphins, and glutamate (Girard et al 2008; Maldonado 2008; Marcantoni et al 2003).

ICU Delirium Risks

Risk factors for delirium can be divided into predisposing factors (host factors), and precipitating factors (Girard et al 2008; Pun and Ely 2007; Inoye and Charpentier 1996). Predisposing factors are present before ICU admission and are difficult to alter, while precipitating factors occur during the course of critical illness and may be alterable. More recently Miller and Ely (2006) proposed three categories of risk factors for the development of delirium: a) predisposing or baseline vulnerability; b) intrinsic risk factors such as the features of the acute illness and c) hospital related or iatrogenic factors (table 1).

Table 1. Risk factors for delirium

Baseline characteristics	Intrinsic / Disease factors	Iatrogenic / environmental factors
Cognitive Impairment	Sepsis	Sedative medications
Comorbidities	Hypoxemia	Analgesic medications
Age	Metabolic derangements	Use of bladder catheter
	Severity of illness score	Anticholinergic medications
		Sleep quality / quantity

Miller et al 2006, p56.

There is an ongoing debate on the relative contribution of intrinsic versus iatrogenic risk factors in the development of delirium (Meyer and Hall 2006). Pandharipande et al (2006) reported that although delirium may result from patients' specific underlying illness, it was often an outcome of different iatrogenic and thus preventable sources.

Gunther et al (2008) argued that sedatives and analgesics represent the leading modifiable iatrogenic risk factor for transiting to delirium. Similarly, an increasing number of researchers suggest the use of ICU sedative, analgesic and anticholinergic medication may be contributing to the development of delirium (Shehabi 2010; Riker et al 2009; Maldonado 2008; Shehabi et al 2008; Pandharipande et al 2006; Pandharipande and Ely 2006). Several studies (Riker et al 2009 Maldonado et al 2009; Gunther et al 2008; Maldonado 2008; Gaudreau et al 2005) imply that there is a link between the use of pharmacologic agents with known psychoactive activity, such as opiates, corticosteroids, benzodiazepines, non-steroidal anti-inflammatory agents and chemotherapeutic agents, and the increasing occurrence of ICU delirium.

Esteban et al (2002 as cited in Maldonado 2008) suggest about 90% of ventilated patients in ICU who develop delirium receive benzodiazepines, opioids, or both, to facilitate management and ease the discomfort

associated with intubation. Maldonado (2008) argues there is a strong body of evidence, gathered through past experimental studies and clinical observations, which clearly demonstrates the link between the use of drugs with anti-cholinergic properties and a physical and mental impairment (Tune 2000 as cited in Maldonado 2008; Tune and Egeli 1999 as cited in Maldonado 2008; Flacker et al 1998 as cited in Maldonado 2008; Tune et al 1993 as cited in Maldonado 2008; Golinger et al 1987 as cited in Hopkins et al 1999; Innoye and Charpentier 1996 as cited in Innoye et al 1998). Similarly, Maldonado (2008) reports an exposure to anticholinergic agents alone is an independent risk factor for the development of delirium and an increase in delirium symptom severity. This research is in line with previous studies (Plaschke et al 2007 as cited in Pandharipande et al 2008; Marcantonio et al 1994 as cited in Pandharipande et al 2006; Pandharipande and Ely 2006), which have already suggested the possible association between the use of sedation, such as γ -aminobutyric acid (GABA) receptor agonists (including propofol and benzodiazepines) and the increased occurrence of delirium.

At the same time, little is known about the relationship between the duration of sedative administration and the risk of delirium following operative procedures and both general and regional anaesthesia. The majority of studies suggest short periods of exposure to these agents are not associated with similar risks to those of longer term administration in the ICU setting (Bryson and Wood 2006).

ICU Delirium and Cognitive Functioning

Evidence is also emerging in support of an association between the experience of delirium and either a poor functional and cognitive recovery, or long term cognitive impairment following hospital discharge (Girard et al 2010; Jackson et al 2010; Pun and Ely 2007; Stevens and Nyquist 2007; Hopkins et al 2006; Hopkins and Jackson 2006, Jackson et al 2004; Ely et al 2004b; McCusker et al 2001; O'Keeffe and Lavan 1997). Several longitudinal studies report approximately one third of ICU patients receiving mechanical ventilation have long term neurocognitive impairments, and this is documented up to six years after hospital discharge (Girard et al 2010; Pun and Ely 2007; Jackson et al 2007; Hopkins and Jackson 2006; Hopkins et al 2006; Ely et al 2001a,b).

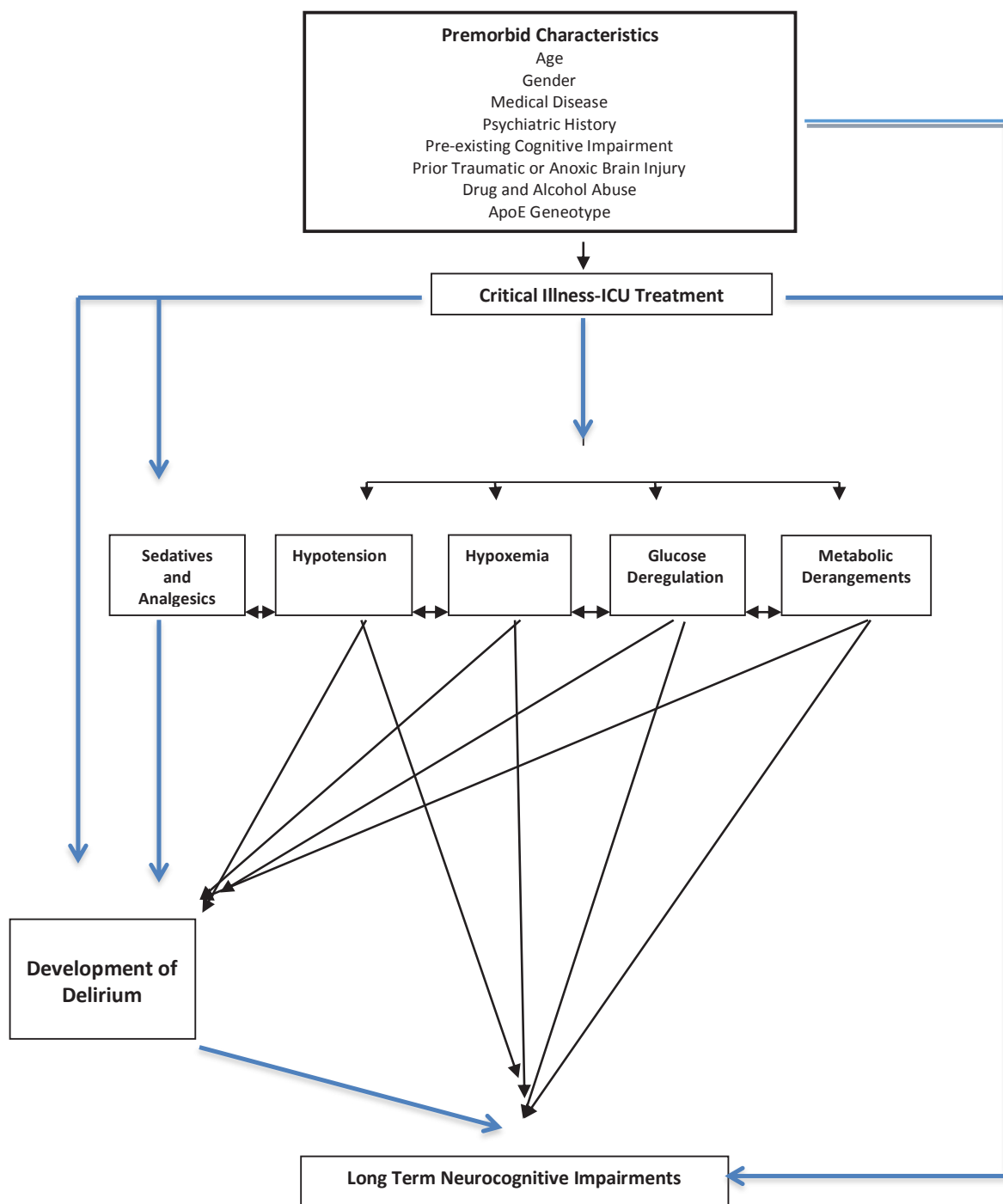
Although the relationship between the management of critical illness in the ICU (including mechanical ventilation, sedation and multiple medications) and illness-factors such as metabolic derangements, underlying infections, multiple organ failure, and the development of delirium is under ongoing investigation (Hopkins and Jackson 2009), evidence is emerging that this has the potential to promote delirium, exacerbate existing and/or introduce new cognitive impairments (figure 1).

Jackson et al (2007) followed 98 patients who were mechanically ventilated for acute respiratory failure in medical ICUs and found prolonged periods of ICU delirium were associated with an increased risk for long-term cognitive impairment at three months post-discharge. Girard et al (2010) in their study of mechanically ventilated medical ICU patients reported the duration of delirium was independently associated with long-term cognitive impairment, such as memory issues and the decline in basic life skills and functioning. This, in some patients, promotes development of mental health problems, such as post-traumatic stress disorder (PTSD), anxiety and depression.

PTSD is characterised by the development and persistence of intrusive recollections, avoidance symptoms, and hyper-vigilance. In addition to the strain the disorder itself places upon psychosocial functioning and psychological health, PTSD is implicated in increased rates of depression, substance abuse, and suicide attempts (Strauss et al 2006). Anxiety demonstrates itself as a diffuse sensation of fear, which is not related to an actual external danger (Sareen et al 2005). This sensation could be due to the numerous stressful situations that take place in the critical care setting such as pain, noise and loss of body control. Although a

certain degree of anxiety seems to be 'normal' in the ICU environment, a literature describes a 'pathological' anxiety when this sensation appears to be disproportionately high considering its cause, and when it is associated with other severe signs, such as severe dysautonomia, and loss of self-control which cannot be appropriately treated due to a complete lack of patient cooperation (Chevrolet and Joliet 2007).

Figure 1: A possible explanatory model of neurocognitive impairments among ICU survivors (Hopkins and Jackson 2006; p876). ApoE = apolipoprotein E



CONCLUSION

While most of the literature supports an association between delirium following mechanical ventilation in ICU and subsequent cognitive dysfunction in the short and long term, the functional correlates of cognitive impairments seem to be under-studied (Pae et al 2008). These functional correlates reflect patients' ability to return to work or to work at previously established levels, as well as function effectively in emotional and interpersonal domains (Oeyen et al 2010; Hopkins and Jackson 2009; Schweickert et al 2009). In addition, more research is needed in observing the development of depression, anxiety and PTSD following ICU delirium, as they are the markers of a psychological function that significantly shapes one's quality of life.

The ability of nursing staff to observe and report delirium has not received the attention it deserves. The presence and attention given to each patient in ICU as a consequence of one-to-one nursing gives an opportunity for nurses to identify early signs of delirium, and work with the rest of the medical team to implement strategies designed to reduce the incidence and severity of delirium occurrence. Therefore, educating nurses to understand delirium, its subtypes, risks and pathophysiology, is an important step in dealing with this neurobehavioral disorder. Using this knowledge, nursing staff will be empowered to act to increase the patients' cognitive status by enhancing their sense of security, safety, and comfort.

RECOMMENDATIONS

An increasing number of researchers call for an individualised, balanced approach to analgesia and sedation in order to minimise side effects and iatrogenic risks of ICU delirium and consequent poor cognitive and psychosocial outcomes (Shehabi et al 2010; Riker and Fraser 2005). Recognising and treating delirium in the ICU should become an avenue more thoroughly explored if we are to offer good, all-inclusive care in the ICU. In doing so, we need to recognise nurses' presence with the ICU patient and their ability to identify delirium. Therefore, equipping nurses with the best practice strategies to manage patients who are experiencing delirium in the ICU is of the utmost importance (Justic 2000; Webb et al 2000).

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The role of specialist nurses in cardiac genetics - the Victorian experience: supporting partnerships in care

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KEY WORDS

partnerships; cardiac genetics; sudden unexplained death; screening; specialist nurse

ABSTRACT

Objective

In Victoria, Australia, a unique referral process exists for families who require investigation for possible inherited cardiac disease. This is spearheaded by a team of specialist nurses located at the Royal Children's Hospital Melbourne (RCH), the Royal Melbourne Hospital (RMH) and the Victorian Institute of Forensic Medicine (VIFM), who ensure that all potentially at-risk families are offered the opportunity for clinical assessment and consultation.

Setting

In Victoria, approximately 5,500 deaths are reported to the Coroner each year. Where there is a suspicion of a causative heritable cardiac condition, the surviving relatives are offered referral to a tertiary centre for assessment and screening.

Subjects

A specialist nurse employed by the VIFM is the focal point for forensic pathologists to flag families requiring referral. Concurrently, specialist nurses within the cardiac genetic services of RMH and RCH accept, review, triage and action these referrals. All three services work closely to create a seamless model of care, which is age appropriate and provides ease and equity of access to consistent care.

Primary argument

The nurse specialists are a critical part of the multidisciplinary team, providing the first entry point into the hospital system. Their background experience encompasses intensive care and cardiology nursing. This is essential to the provision of professional and empathetic care in which families can approach the difficult issues surrounding post mortem consideration of a diagnosis.

Conclusion

The Victorian nurse led system is an effective model, which could be trialled in other jurisdictions, and other disorders, where multidisciplinary care is required.

INTRODUCTION

In 2004, a nurse-initiated referral process for families requiring cardiology screening began between The Royal Children's Hospital (RCH) and the Victorian Institute of Forensic Medicine (VIFM). This service to the Victorian public arose from a perceived need for specialised care and a systematic approach for at risk families, and was expanded in 2007 with the establishment of the Cardiac Genetics Clinic at The Royal Melbourne Hospital (RMH).

Prior to establishing the current service, at-risk families were referred to General Practitioners (GP) with a recommendation for follow-up and screening. It became evident that it was difficult to determine whether this approach was effective and whether at-risk relatives were being adequately managed. Therefore, the Victorian Institute of Forensic Medicine ran a pilot program with 15 families who were referred to a specific medical specialty (Morgan 2005). After trialling a targeted referral process, participants were asked to complete a survey. As a consequence of the positive feedback from families, pathologists and other staff, the pilot evolved into the formalised referral service it is today.

The aim of this service is to identify and manage cases of potentially preventable cardiac deaths by a process of early referral, consistency of information collation and provision, and coordinated care between adult and children's services.

When there is suspicion of a causative heritable cardiac condition, the surviving relatives are offered referral to a tertiary centre for assessment and screening. These cases include, but are not limited to, deaths where the cause is unascertained, hypertrophic cardiomyopathy (HCM), dilated cardiomyopathy (DCM), aortic dissection, arrhythmogenic right ventricular dysplasia (ARVD), sudden unexpected death in epilepsy (SUDEP), connective tissue disorders and cardiomegaly.

In Victoria, a unique team of nurses lead this system to ensure that all potentially at-risk families are offered the opportunity for clinical assessment and consultation. These specialist nurses have appropriate clinical expertise and knowledge, with cross-disciplinary knowledge of both genetic medicine and clinical cardiology.

A specialist nurse employed by the Victorian Institute of Forensic Medicine (VIFM) provides the focal point for forensic pathologists to flag families requiring referral. This position is pivotal in contacting families, using established clinical skills to ascertain important information and relevant history of both the deceased individual and their family members in a socially sensitive manner. This expertise is critical in identifying cases where genetic testing may be accessible and relevant at a later date; thereby ensuring appropriate samples for DNA extraction are obtained and stored.

Family members who accept referral to the Cardiac Genetic Clinics receive a seamless, specialised and integrated model of care, which is age appropriate, and delivered at either, or both the Royal Melbourne Hospital (RMH) and Royal Children's Hospital (RCH). The Victorian model promotes and provides ease and equity of access to consistent care, with clinicians able to discuss and share information (with consent) across both campuses.

A number of conditions are referred post mortem by VIFM. Figure 1 details the post mortem diagnosis in all the cases where adults were referred to the RMH from mid 2007 to mid 2014. The largest proportion is sudden cardiac death, without further diagnosis as to the cause at autopsy, a condition where the death certificate is issued with the cause of death being 'unascertained'.

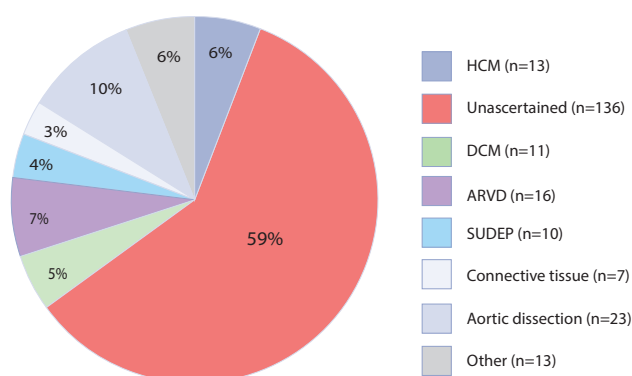
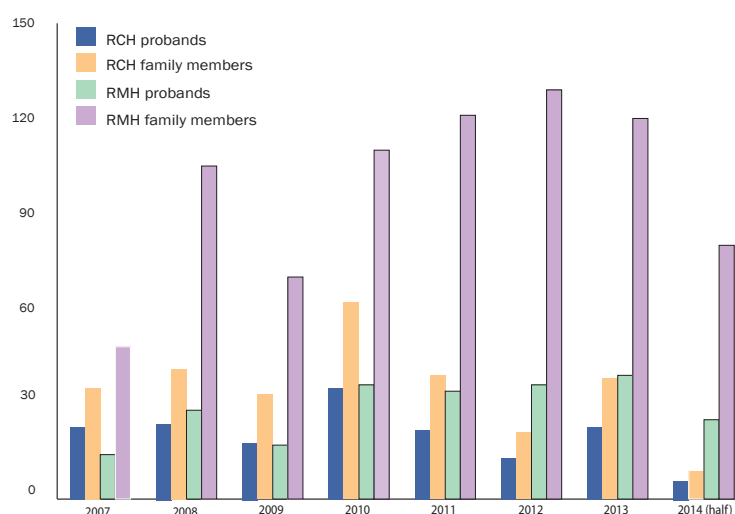


Figure 1: Diagnoses at VIFM where referral made to a Cardiac Genetics Service at RMH

In terms of referral numbers, the diagnosis for referral fluctuates from year to year. After an initial rise in referral numbers and as the Victorian model matured, figures have remained constant over the last few years (figure 2). The number of family members referred for screening after a sudden cardiac death (SCD) is dependent on family size, structure, age of the proband (the index case) and how many first-degree relatives accept referral.

On average, a referral to RCH results in 1.7 family members being screened and to RMH results in 3.4 family members screened per proband (figure 2). This reflects the overall smaller number of relatives aged less than 18 in comparison to those that are adult. To date, 758 individuals in 229 have been referred via this route for diagnosis, risk assessment and risk management to RMH alone. At RCH, 164 families including 278 children have had the opportunity for screening for heritable cardiac conditions.

Figure 2: Comparison of the number of individuals (probands/index case) and family members referred from VIFM to RCH & RMH each year (2007 – July 2014)



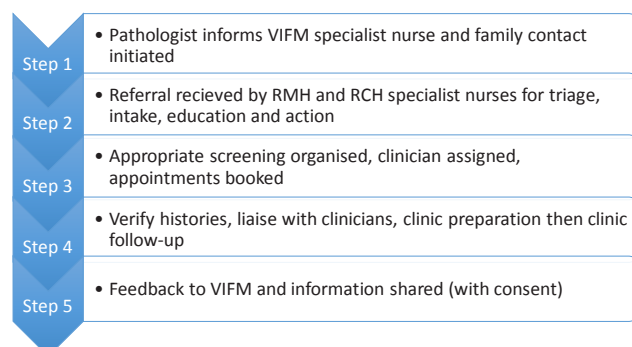
DISCUSSION

The referral process that has been established and run by the specialist nurses is simple and effective. The specialist nurses review, triage and action the referrals. They document and verify family histories, organise appropriate pre-assessment clinical screening and manage clinic bookings to ensure optimal use of the clinician and patient time. Clinical liaison is a central role for all specialist nurses.

Throughout the referral, screening and feedback process all three clinical services work closely and cohesively. Communication amongst the groups is critical – especially with shared families. Regular clinical meetings between all centres provide an opportunity for open and honest feedback and an opportunity to seek further clinical information.

Record keeping, consent, storage of appropriate biological samples and the content of post mortem reports are just a few things that have become streamlined as the result of this approach to feedback.

The main pre attendance steps and clinical pathway are detailed in figure 3.

Figure 3: The referral steps and clinical pathway

The nurse specialists provide the initial contact with families and facilitate entry into a multidisciplinary clinical care setting. The nurses involved have clinical expertise in cardiology nursing (n=3), coronary care/ICU nursing (n=3) and worked at VIFM (n=2). The cross-disciplinary knowledge and experience allows them to fulfil many essential roles within the clinical services and enables effective communication (figure 4) with the inter-professional team.

In addition to clinical service, the nurse relationship between VIFM, RMH, and RCH has provided an effective platform for research studies and the translation of research findings into clinical practice. Recruitment of patients to The National Genetic Heart Disease Registry (Ingles et al 2008) and the Investigation of Sudden Cardiac Death in the Young study are just two examples of this.

CONCLUSION

Having a single point of contact identified in each service has provided a consistent level of service provision, and fosters expertise and accountability. The specialist nurses have multiple functions and responsibilities within their respective organisations, but together form part of a larger team that aids in the clinical care of Victorian families who have suffered a recent, and sometimes unexplained, bereavement in a sensitive and effective manner.

Collaboration between specialist nurses in the individual services has created streamlined access to medical specialists, providing the basis of multi disciplinary care and managing identification and transfer of samples suitable for DNA extraction. The relationship between VIFM, RMH, and RCH has aimed to provide equitable, easily accessible and age appropriate care to the potentially at-risk people of Victoria, in the area of cardiac genetics.

Audits of parts of the Victorian service have been published elsewhere (Kumar et al 2013). Further auditing of the services is now underway to assess adherence to screening recommendations and recall of advice given as a marker of the effectiveness of the clinic.

RECOMMENDATIONS

The authors believe that the Victorian nurse led system is an effective model. It is proposed that the model could be adopted in other Coronial jurisdictions and could be applicable to other disorders requiring multidisciplinary care.

Figure 4: The many roles of the specialist nurse

In the future, these specialist nurses being recognised as part of advanced practice nursing, is a real possibility. As the framework for advanced nursing practice is formalised, ways of assessing the practice of specialist nurses is essential in the dynamic, unpredictable and ever-changing world of healthcare and service provision.

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