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Exploring why some terminally ill people die in hospital when home was their preferred choice

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Disclaimer

One of the authors completed the study as part of her Masters program at Murdoch University, and was an employee of the Port Pirie Palliative Care Service, Country Health SA Local Health Network.

KEY WORDS

Palliative Care, home death, hospital death, preferred site of death, rural

ABSTRACT

Objective

This small study was designed to gain a better understanding of issues that led to hospital admission of palliative care clients who had a preference for home death, but died in hospital.

Design

A mixed method approach was chosen for the study using descriptive analysis of routinely collected client demographic and clinical data, and conventional content analysis of case note entries.

Setting

The study was undertaken in two community based palliative care services located in rural South Australia.

Subjects

The case notes of fourteen deceased adults registered with the Northern Yorke Peninsula and Port Pirie Palliative Care Services, with a recorded preferred site of death (PSD) of home and who died in hospital were studied.

Main outcome measure

Understanding of issues that may have led to hospital admission of palliative care clients who had a preference for home death but who died in hospital.

Results

The findings reported here focus only on the qualitative aspect of the study. Issues that may lead to hospital admission include: unstable symptoms, deteriorating condition, client/caregiver decision making, lack of services over twenty four hours and the caregiver's ability to manage client care.

Conclusion

Services can now consider these findings and develop local strategies to improve support for clients with a preference to die at home, and in particular, those that focus on improving caregiver training and information.

INTRODUCTION

It is well documented that many terminally ill people, given the choice, would prefer to die at home (Van den Block et al 2007; Beccare et al 2006; Foreman et al 2006), however many still continue to die in hospital (Bell et al 2010; Bruera et al 2002). The Northern Yorke Peninsula and Port Pirie Palliative Care Services (referred to below as the Palliative Care Services) are located in rural South Australia, as part of the state government Country Health SA Local Health Network (CHSALHN) hospital and health services system. The Palliative Care Services are coordinated by nurses working in partnership with local medical practitioners, generalist community nurses and allied health staff to support terminally ill people in the community. Palliative care medical specialist support is available from the city of Adelaide (over 150 kilometres away) via telemedicine facilities and occasional rural service visits, there are no hospices located in the service areas. The home death rate for people referred to the Port Pirie Palliative Care Service in 2012 was 12.5 %. This percentage is low when compared with what has been written in the literature regarding terminally ill people's preference to die at home. An understanding of what led people with a recorded preference for home death to be admitted to hospital where they then died was needed to enable palliative care services to develop strategies to support people with their choice.

LITERATURE REVIEW

A literature review was conducted to source information on previous studies that explored preferred site of death for palliative care clients and indicators for hospital admission. The review of research literature revealed a focus on quantitative methods of data collection and analysis (Howat et al 2007; Van den Block et al 2007; Beccare et al 2006; Chvetzoff et al 2005; Bruera et al 2002; Tang 2002). Studies conducted in Australia and specifically in a regional area were limited (King and Fischer 2010; Howat et al 2007; Foreman et al 2006). No papers were found that specifically described exploratory or descriptive patient experience study designs. The gaps identified in the literature relate firstly to studies conducted in the context of rural Australia and secondly to qualitative studies describing the study design as an exploration, description or reporting on themes within this particular area of care.

AIMS

The study had two aims, firstly to develop an understanding of issues that led to hospital admission of palliative care clients who had a preference for home death but who died in hospital. Secondly, identification of factors that could identify risk of hospital admission for clients with a preference for home death. The specific research questions were: (1) What factors can be identified that lead to hospital admission of people who die in hospital, with a recorded preference for home death? (2) Are there any other considerations which influence a decision to enter hospital for patients with a recorded preference for home death but die in hospital?

METHODOLOGY

A mixed method approach using both qualitative and quantitative retrospective data collection was chosen for the study. The analysis of quantitative data provides a method for examining some readily available variables from patient records; however an exploration of client and caregivers experience was also needed to understand the issues that could not be identified through quantitative data analysis alone. Descriptive analysis was conducted on demographic and clinical data, and conventional content analysis was used to explore deceased client case note entries which were more qualitative in nature. Ethics approval was obtained from the SA Health Human Research and Murdoch University ethics committees; this included one amendment following initial data collection. This paper reports on the qualitative research findings only. A copy of the report can be obtained by contacting the authors.

Sample Selection

Case notes of deceased adults registered with the Palliative Care Services with a recorded preferred site of death (PSD) of home and who died in a CHSALHN hospital were the focus of the study.

A report identifying the total number of client deaths (N=182) between the dates of 1 February 2011 to 1 June 2013 was extracted from the data management system used by both Palliative Care Services. The PSD code, located in the data systems' palliative care episode information, was used to identify client PSD which was recorded for 46 (25.27%) clients and not recorded for 136 clients (74.73 %). The case notes of deceased clients with a recorded PSD of home (N=14) were included in the study.

Qualitative Data Collection and Analysis

Photocopied case note entries in the four weeks prior to the hospital admission date that ended in death for the 14 deceased people in the study sample were de-identified, relabelled and provided to the researcher. The period of four weeks was chosen to enable exploration of the client and caregiver experience leading up to the hospital admission, without focussing solely on the immediate reason for which the person was admitted. The case note entries were written by allied health clinicians, specialist palliative care and generalist nursing staff, and captured the complexity of some individual cases, experiences and perceptions of clients and their caregivers in the home environment.

Conventional content analysis was chosen to explore the case notes (Hsieh and Shannon 2005). This method required the researcher to read the de-identified case notes several times, identifying keywords that could provide some understanding of what may have led to a person with a preference to die at home to be admitted to hospital where they died (Hsieh and Shannon 2005).

FINDINGS

Through the process of conventional content analysis 144 level 1 codes were identified. Examples of level 1 codes were 'client scared', 'hopes to die soon' and 'client fear of losing bodily functions' which were grouped to form the level 2 category of client psychological distress. The level 2 categories were then clustered together to create level 3 category clusters. The level 3 category clusters led to the development of the level 4 category themes. Four main study themes were generated describing the experiences of the study population as recorded in the case notes (see figure 1).

Theme 1: Services to support end of life care at home

Service issues identified included hospital attendance, out of hours support needed, delay in service provision and support not available. Of note was the advice of nurses to caregiver's to bring the client to hospital if symptoms were unmanaged or the caregiver was unable to cope. It is likely that if the client presents to hospital in an unstable condition, or if the caregiver has stated they are unable to cope, that the client will be admitted to hospital for terminal care.

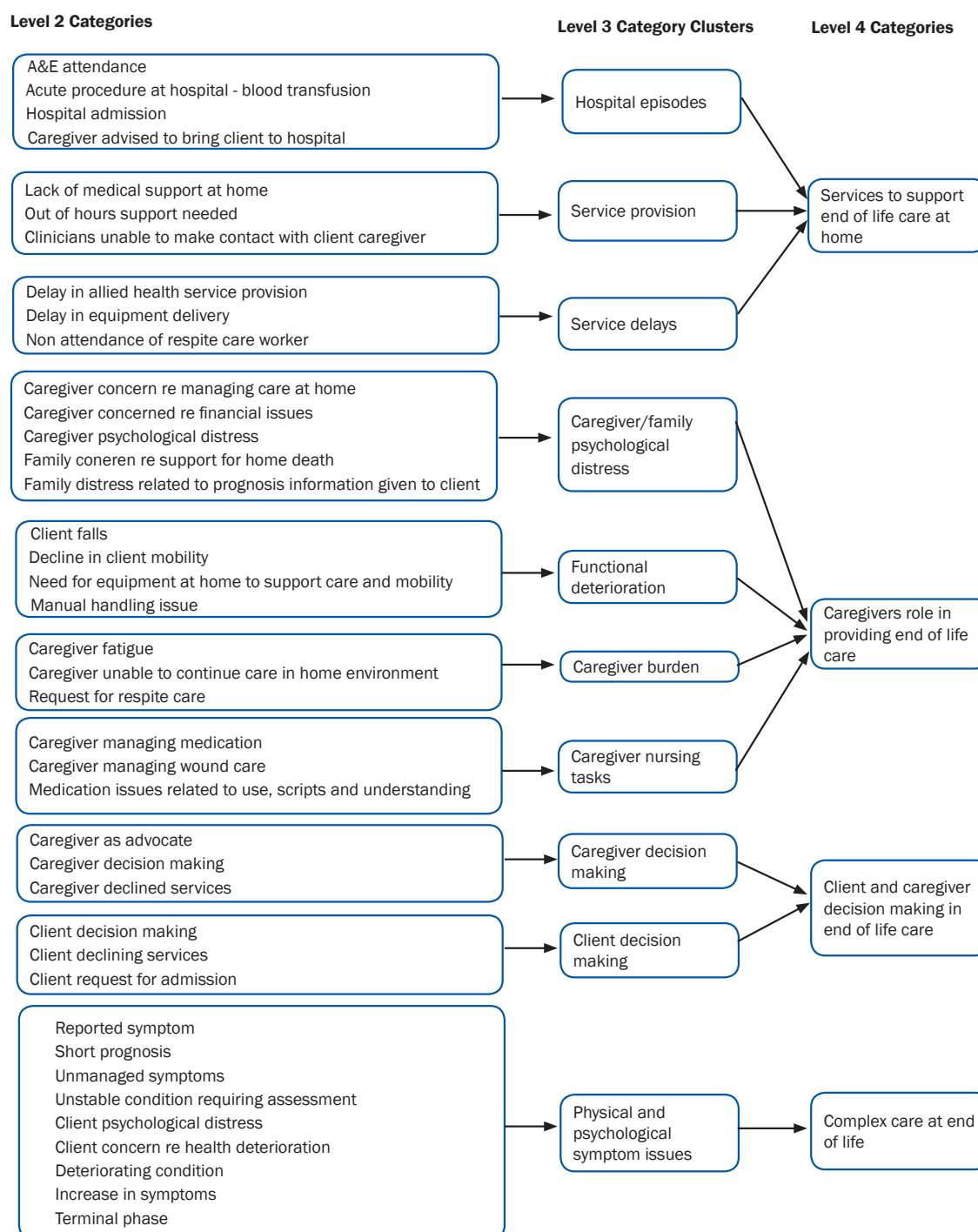
Theme 2: Caregivers' role in providing end of life care

Caregiver issues identified included practical nursing tasks, caregiver burden and psychological distress. Medication management and manual handling were identified as the most commonly occurring caregiver nursing tasks.

Medication management

Medication codes were used when the case note entries described caregivers having responsibility for management or administration of medications. This was identified on eleven occasions for three clients.

Of note was the complexity of individual cases, with caregivers required to understand which medication to give

Figure 1: Level 2 categories, level 3 category clusters and level 4 categories (themes)

for which symptom, administer injectable drugs and on one occasion change the syringe in a syringe pump.

The following are examples of case note entries:

'...visited on weekend and inserted Intima T s/c line and showed caregiver how to administer s/c medications.'

'husband said he would give client "what she likes" and gave her Tramadol 50mg tablet.'

If medication use and administration are not fully understood by the client or caregiver there is potential for poor symptom control and errors leading to further problems. The responsibility of managing complex medication regimes can lead to significant burden for the caregiver (Tamayo et al 2010).

Manual handling

Manual handling issues included the need for equipment, caregiver and client statements of difficulty moving and mobility issues. If caregivers are unable to provide basic care due to difficulties in moving clients they may be inclined to request hospital admission where they know staff are trained to manage this. The following text was taken from individual client case notes:

'...he is a dead weight", and "I can't move him."

'client having difficulty getting out of bed and to toilet on time'

Theme 3: Client and caregiver decision making in end of life care

Decision making by both the caregiver and client was commonly identified throughout the case notes. Decision making related to; service provision, health professional advice, use of equipment, activities of daily living, medications and site of care. While client/caregiver choice is supported, decisions made influence the outcomes of care. A number of examples from the client case notes demonstrate how client/caregivers decisions could lead to hospital admission:

'GP reported client not taking prescribed tablets and did not want to follow his advice.'

'GP visiting later today but carer unsure if client could wait this long. Declined attending the GP surgery earlier if an appointment were available.'

'Discussed electric bed option and explained benefit of air mattress for pressure relief but clients husband saying they will have to think about it and didn't feel client needed'

Worsening or unstable client symptoms from non-compliance of medication regimes, development of pressure injuries and the decision not to access medical support early could all lead to hospital admission if the client becomes distressed or the caregiver feels that they are not able to provide adequate care (Topf et al 2013).

Theme 4: Complex care at end of life

Complex care issues were identified: these included client physical and psychological issues. The physical issues related to newly reported, unmanaged or increase in symptoms, deteriorating condition and terminal phase. Psychological distress related to client concern for themselves and their caregivers, anxiety, fear, desire to die statements and crying. The following are examples of care issues that could lead to a hospital admission if they remain unmanaged or increase in severity:

'Large necrotic area to both buttocks observed.'

'Carer reports client is "anxious and at times this exacerbates her breathlessness"'

DISCUSSION

Caregivers and clients are expected to make many decisions relating to their care at end of life. There are times when the decisions made can differ from the advice given by health professionals, with the outcome sometimes resulting in hospital admission. Caregivers and clients require accurate information so they are fully informed and understand the consequences of the decisions they make in relation to facilitating a home death. It is a reality that home death for some clients is not possible and this too should be discussed (Topf et al 2013).

Caregivers are fundamental in supporting people with end of life care in the home environment, undertaking many tasks day and night for which they may have had no previous experience or training (Tamayo et al 2010; Rabow et al 2004). This role may include, but not be limited to manual handling, medication management and care decision making. Assessment of caregiver capability, their expectations of the caring role and provision of training in areas needed to support them in their role is therefore needed (Topf et al 2013; Tamayo et al 2010; Bee et al 2009). There were few entries in the case notes that indicated this had occurred but it is also possible that health professionals do not record all relevant information in case notes and this too can be problematic.

Unstable symptoms and deteriorating condition were frequently identified in the case note entries. Symptom assessment and medication management are skills nurses obtain through formal training and experience. Carers are often expected to complete these tasks 24 hours a day and at times with limited access to services (Topf et al 2013; Tamayo et al 2010; Thomas et al 2010). The alternative is to bring the dying person to hospital for help with care. Many caregivers will attempt to honour the client's preference to die at home, and only when the unstable symptoms become too difficult for the caregiver to manage or the client to tolerate, will they transfer them to hospital (Topf et al 2013). Admission to hospital at end of life is likely to result in the client dying in hospital (Van den Block et al 2007). Lack of services in rural areas to support caregivers and clients to remain in the community when needed, and an automatic reliance on the hospital as the only alternative plan, will lead to more hospital deaths and less people dying at home.

LIMITATIONS

This was a small pilot study and could not be considered representative of the population. The study was reliant on the quality of the note makers and many busy staff will be less inclined to make detailed notes about weighing up the pros and cons of particular care options, personal reflections and decision-making. What they recorded will inevitably be an approximation of the clients' and caregivers' account and their own professional assessment of needs. In addition, the study used the recorded PSD however, details of when this had been recorded and if it was still the client's preference at end of life could not be determined.

CONCLUSION

Understanding reasons why people with a preference for home death are admitted to hospital where they then die is important if services are to support people with their choice. Issues that could have led to people being admitted to hospital when they had a preference to die at home include: deteriorating client condition and unstable symptoms, client/caregiver decision making, caregiver ability to manage care and lack of services over twenty four hours. Caregivers and the issues they encountered while caring for a terminally ill person in the last four weeks of life were identified in all four study themes. The development of strategies to support caregivers in their role would therefore seem paramount to improving the likelihood of people dying at home, and in particular, those that focus on improving caregiver training and information.

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Risk stratification for obstructive sleep apnoea and optimal post-operative monitoring in an overnight stay ward

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KEY WORDS

Obstructive sleep apnoea, elective surgical procedures, post-operative period, hypoxemia, CPAP, screening tool

ABSTRACT

Objectives

Prospective data is required to clarify the role of a one night stay ward (23-hour ward, 23HW) for the post-operative monitoring of surgical patients with obstructive sleep apnoea (OSA). The aim was to use a modified American Society of Anesthesiologists (ASA) screening tool to stratify the perioperative risk of OSA related complications and evaluate the role of a 23HW in the post-operative management of this patient group.

Design

Prospective cohort study.

Setting

Tertiary referral centre.

Subjects

Patients identified in pre-anaesthetic clinic as having a mild to moderate risk of complications from OSA were scheduled for post-operative monitoring in a 23HW.

Outcome measures

Primary end points were incidence of desaturation events (Continuous pulse oximetry measuring SpO₂ 90-94% mild, <90% severe) in the recovery unit and in the 23HW. Secondary endpoints included type of anaesthetic, utilisation of continuous positive airway pressure (CPAP) and oxygen therapy, and major adverse events.

Results

One hundred seventy three patients (median age 56) were identified. Of these, 61 had previous formal diagnosis of OSA by sleep study while the remaining 112 patients were provisionally diagnosed in pre-anaesthetic clinic by clinical parameters. Ninety-four patients received a general anaesthetic, 79 patients received regional anaesthesia with sedation. The incidence of desaturation events was 4.0% in the Recovery Unit and 22.0% in the 23HW.

Conclusion

The ASA screening tool can identify perioperative patients at risk of developing respiratory complications from OSA, enabling their safe monitoring in a 23HW, thus avoiding the need for limited High Dependency Unit resources.

INTRODUCTION

Obstructive sleep apnoea (OSA) is characterised by intermittent and recurrent episodes of partial or complete obstruction of the upper airway during sleep. The long-term health-related consequences of OSA have been previously documented, including increased rate of motor vehicle accidents, hypertension, diabetes mellitus, congestive heart failure, stroke, and all-cause mortality (Sharma et al 2010; Tregear et al 2009; Marshall et al 2008; Tasali et al 2008; Yaggi et al 2005; Peppard et al 2000).

The prevalence of OSA in the general population is between 2% and 25%, depending on how OSA is defined. Young et al (1993) demonstrated that the prevalence of OSA, defined as hypo-apnoea index (AHI) ≥ 5 /hour was 9% for women and 24% for men, however the prevalence in the elective surgery population may be higher. Its prevalence has been increasing in developed countries, linked to a rise in obesity (Australian Bureau of Statistics; WHO website).

Surgical patients with OSA are at increased risk of having perioperative complications, including difficult intubation, hypoxaemia, cardiac arrhythmias, prolonged hospital stay and unanticipated admission to an Intensive Care Unit (ICU) (Liao et al 2009; Monahan et al 2009; Siyam and Benhamou 2002; Gupta et al 2001; Hiremath et al 1998). The days following general anaesthesia are characterised by disturbances in the rapid eye movement (REM) phases of sleep (Dette et al 2013, Rosenberg et al 1994; Knill et al 1990), resulting in longer apnoeic episodes and more frequent oxyhaemoglobin desaturation (Findley et al 1985). Therefore, surgical patients require careful post-operative monitoring. Previously at the Queen Elizabeth Hospital patients with OSA were monitored post-operatively in the High Dependency Unit (HDU). However, this heavy burden on limited HDU beds was unlikely to be sustainable. Therefore a method to risk-stratify patients pre-operatively was introduced, thus monitoring lower-risk patients in a less resource-intensive surgical ward such as a 23-hour ward (23HW). The surgical 23HW provides short-term 23 hour or overnight nursing care requirements for lower risk surgical patients prior to their discharge. The idea of a 23HW (one night stay ward) is not new (Ryan et al 2005; Abenhaim et al 2000), but its role for patients with OSA had not previously been explored.

The risk of OSA-related post-operative respiratory complications was stratified by the pre-operative use of an OSA screening tool published by the American Society of Anesthesiologists (ASA) (Gross et al 2006). A modified version (table 1) was used to screen all patients going through the pre-anaesthetic clinic. With a significant proportion of OSA in the population remaining undiagnosed (Singh 2013; Chung, Yuan and Chung 2008), the OSA screening tool served a secondary purpose of identifying previously undiagnosed patients.

The objectives of this study were to define a model of perioperative care for OSA, incorporating pre-operative risk-stratification, assess the suitability of a 23HW, with clinical management guidelines and continuous oximetry, and record any OSA-related perioperative problems.

METHODS

Patient selection and pre-operative pathway

In 2008 the Queen Elizabeth Hospital undertook formal internal evaluation of perioperative procedures for patients with OSA, integrating many of the recommendations published in the contemporary ASA practice guidelines for perioperative management of OSA (Gross et al 2006). Following a period of medical and nursing staff education, a modified version of the pre-operative OSA screening tool was implemented for patients attending the pre-anaesthetic clinic. Ethics approval for publication of this research was granted by the Human Research Ethics Committee (TQEH/LMH/MH).

Clinical indicators of OSA (table 1) were used to identify the likelihood and severity of OSA based on a risk

score (table 2). Patients with mild to moderate risk (score up to 4) were recommended for post-operative monitoring in the 23HW, while those with high risk scores (4 or greater) were recommended for monitoring in HDU (or ICU if indicated for other anaesthetic and surgical reasons). A proforma (table 2) was added to the generic pre-anaesthetic assessment form to help clinicians assess the risk of OSA-related perioperative complications and therefore book the appropriate post-operative bed.

Only patients identified as suitable to be managed post-operatively in the 23HW for monitoring of their OSA were followed-up. Those undergoing surgery suitable for same-day discharge and those who required HDU/ICU post-operatively were excluded from the study.

Table 1: Modified ASA Clinical Assessment of OSA

OSA Symptoms & Signs	
History:	Frequent Snoring Loud snoring Observed pauses in breathing during sleep Awakens from sleep with choking sensation Frequent arousal from sleep Headache
Somnolence:	Frequent Somnolence or fatigue despite adequate sleep Falls asleep easily in non stimulating environment (eg. watching TV, reading, driving a car)
Examination:	BMI of 35kg/m ² Neck circumference 17 inches in men and 16 inches in women Craniofacial abnormalities affecting the airway Anatomical nasal obstruction Large tonsils nearly touching in midline
Clinical Signs and symptoms of two or more of above categories - diagnosed as OSA In absence of sleep study consider as Moderate OSA If more than one sign is markedly abnormal they may be considered as Severe OSA. Source: ASA Practice guidelines	

Table 2: OSA RISK SCORING SYSTEM

A. Severity based on Sleep study:	
None	0
Mild	1
Moderate	2
Severe	3
(If symptomatic but no sleep study, treat as moderate sleep apnoea)	
B. Invasiveness of surgery and anaesthesia	
Superficial surgery under local or Peripheral nerve block without sedation	0
Superficial surgery with moderate sedation or GA	1
Peripheral surgery with Spinal or Epidural with less than moderate sedation	1
Peripheral surgery with GA	2
Airway surgery with moderate sedation	2

Major surgery with GA	3
Airway surgery with GA	3
C. Requirement of post-operative opioids	
None	0
Low dose oral opioids	1
High dose opioids: oral, parenteral or neuraxial	3
Risk score = sum of A + B + C	

Recommended post-operative bed booking pathway:

Risk score < 4 : book OSA bed in 23 hour ward, Risk score $\geq$ 4 : book HDU

If HDU or OSA bed on 23 hour ward not available, book general ward bed with 1:1 nurse special.

Source: ASA Practice guidelines

23 HOUR WARD (23HW)

The 23HW is a protocol-driven model of post-operative care that is suitable for short-term, 'intermediate level' monitoring between that provided by an HDU and a regular ward. The 23HW has a 1:4 nurse-to-patient ratio. It also has a small geographical footprint, which allows staff to hear the pulse oximeter alarms more easily. All nurses employed in the 23HW underwent additional training in a variety of skill-sets, including the use of continuous pulse oximetry monitoring, use of a variety of home CPAP devices, and early recognition of adverse cardiorespiratory events. Protocols ensured consistent standards of care.

POST-OPERATIVE PATHWAY

Patients received standard monitoring of vital signs in the Recovery Unit, with routine initial oxygen therapy via a mask at 6L/min or flow rate required to maintain oxygen saturation level. On recovering from the effects of anaesthesia, and pain relief medication, patients were commenced routinely on their own home CPAP if the patient was already on home CPAP prior to surgery. Those not on home CPAP were placed on routine supplemental oxygen via nasal cannula or oxygen mask at a level sufficient to maintain their oxygen saturation above 94%. Once general and surgery-specific discharge criteria were met, patients were transferred to the 23HW where they continued the same oxygen supplementation that they received in recovery. Desaturation events were defined as pulse oximetry reading 90-94% (mild) or below 90% (severe). Patients were discharged home directly from the 23HW on the day after surgery, unless any cardiorespiratory events occurred and required referral to HDU or the general ward for further monitoring.

STATISTICAL METHODS

Continuous variables were analysed using the 2-tailed student t-test. Categorical variables were analysed using Fisher's exact test. Statistical significance was set at $p=0.05$. As this was a pilot study with no prior data to use for the calculation of required sample size, no such calculation was performed.

RESULTS

Between July 2008 and July 2009, 4,692 patients were screened in the pre-anaesthetic clinic using the modified ASA screening tool. One hundred seventy three patients, who were planned for multi-day stay, were identified as having a mild to moderate risk of developing OSA-related cardiorespiratory complications in the post-operative period. Surgical procedures were a typical case mix for a metropolitan tertiary referral centre

including the disciplines of general surgery, urology, ear-nose-throat, plastics, orthopaedics, gynaecology and vascular surgery. There were no cardiac or neurosurgical procedures.

Table 3: Demographic data

Age (mean, range)	53, 20-86
Gender	98 males, 75 females
General anaesthetic	94
Regional with sedation	79

Table 4: Respiratory complications in the 23-hour ward

CPAP: Pre-operative sleep study, on CPAP (continuous positive airway pressure).

Non-CPAP: no pre-operative sleep study and no CPAP

	CPAP n = 61	Non-CPAP n = 112	P value
Mean duration of continuous monitoring. Hours	9	9	1.00
Desaturation events in recovery. Number (%)	1 (1.6%)	6 (5.4%)	0.42
Desaturation events in 23HW. Number (%)	17 (28%)	21 (19%)	0.18
Major adverse events. Number	0	1	1.00

Desaturation events were detected in about one third of patients, with most events occurring in the 23HW. Due to a limited number of OSA beds in the 23HW, a high demand for HDU beds and a reluctance to cancel theatre lists, 12 patients were admitted to general ward beds with 1:1 nurse special, with routine post-procedure observations and continuous pulse oximetry monitoring. One of these 12 patients experienced frequent apnoeic episodes during the first post-operative night, with moderate desaturation, hypotension and reduced consciousness, resuscitated successfully with no obvious short or long-term sequelae. The patient had not been previously diagnosed with OSA, had elective hip arthroplasty surgery under subarachnoid block with propofol sedation and post-operative oxycodone patient-controlled intravenous analgesia.

DISCUSSION

OSA is associated with increased risk of a variety of perioperative complications, particularly within the first 24 hours after surgery. It is therefore necessary to provide a post-operative care environment that allows for careful patient assessment and early identification of complications. The rising prevalence of OSA amongst surgical patients may lead to an increasing burden to the health care system, warranting an alternative strategy that is both safe and economically more efficient. This study describes a perioperative pathway for patients with mild to moderate risk of perioperative complications related to OSA, involving formal pre-operative screening and the use of a 23HW that may improve the quality of care and reduce overall costs to the health care system.

In patients who were at mild-to-moderate risk of developing post-operative complications from OSA, the present study found that desaturation events were common, the majority occurring in the 23HW. Further, the incidence of desaturation events in the subset of patients previously not diagnosed with OSA (non-CPAP group, table 4) was comparable to those previously diagnosed with OSA (CPAP group). The researchers acknowledge this study was not necessarily statistically powered to find a difference, which may explain this result contradicting that of other studies that found CPAP to reduce post-operative respiratory complications and duration of hospital stay in patients with and without OSA (Liao et al 2009; Ferreyra et al 2008; Gupta et al 2001).

Importantly, despite the frequency of desaturation events, no major adverse respiratory or cardiac events occurred in the 23HW. Early detection of desaturation and corrective intervention may prevent major adverse respiratory or cardiac events. One major cardiorespiratory event did occur, in a patient who due to a lack of 23HW or HDU beds, was monitored in a general surgical ward (1:1 nursing), where the level of staff training was not guaranteed. This highlights the limitations of patient care within a framework of finite resources.

Observational studies and case reports indicate that post-operative monitoring with continuous pulse oximetry is effective in detecting hypoxaemic events (Olson et al 1999; Reeder et al 1992) and is associated with a lower incidence of rescue events and transfers to the ICU for a general surgery patient population (Taenzer et al 2010). When using continuous pulse oximetry, one major challenge in an institution with large sprawling wards is to ensure a timely response to audible alarms. Facilities without a 23HW may find providing appropriate post-operative monitoring of OSA patients can only be achieved in resource-intensive areas such as HDU, Coronary Care Unit or Intensive Care Unit. Universal implementation of continuous monitoring for all patients with OSA or suspected of OSA may place an unfeasible burden on health care resources. A stratified risk-screening model helps to rationalise the use of resources, thus hopefully allocating patients to a perioperative pathway best suited to their likelihood of complications. At the Queen Elizabeth Hospital a 23HW provides an alternative pathway at lower cost (about half) per patient compared to HDU. There is the added benefit that an OSA screening tool can identify risk factors in patients not previously diagnosed with OSA, thus presenting an opportunity for patient counselling and referral for further investigation.

At the time this study was implemented the only available OSA screening questionnaire was that published in the ASA guidelines (Gross et al 2006). A number of other screening questionnaires have since become popularised, amongst them are the Berlin questionnaire (BQ), and the “Snoring, Tiredness, Observed apnea, and high blood Pressure” (STOP) questionnaire. Chung et al (2008) applied the BQ, ASA checklist and STOP questionnaire to 2,467 patients, with 177 of these patients undergoing subsequent polysomnography. Sensitivity of these three screening questionnaires was 68.9–87.2, 72.1–87.2, and 65.6–79.5% respectively, at various apnea–hypopnea index cut-offs. There was no significant difference between the questionnaires in the predictive parameters.

The risk scoring system is not a substitute for a definitive diagnosis of OSA. It is possible that many patients who exhibited features of OSA on the modified ASA screening tool never went on to be diagnosed formally by polysomnography. Patients who experienced post-operative desaturation events were referred to a sleep physician but it was beyond the authors resources to follow up these patients. This important limitation is not dissimilar to the real-world anaesthetic encounters with patients undergoing elective surgery, in whom perioperative pathways must often be decided with no definitive diagnosis available to the anaesthetist and assessing risk scores and pathways may be similar for both the diagnosed and the suspected OSA patient.

Sleep architecture is disturbed for the first week following an anaesthetic, when there is initial suppression followed by an increased proportion of sleep associated with rapid eye movement, a phenomenon referred to as “rebound REM” sleep (Dette et al 2013, Rosenberg et al 1994; Knill et al 1990). Compared to non-REM sleep, REM sleep is associated with longer apnoeic episodes and more frequent oxyhaemoglobin desaturation (Findley et al 1985). Therefore, there is potential for respiratory function to deteriorate after discharge from a surgical facility. However, current trends towards ambulatory surgery pathways place a limit on the duration of post-operative inpatient stay, therefore optimisation must occur within these limitations of current standards of care.

This small study was conducted for audit purposes to assess the feasibility of a pre-operative OSA screening tool and 23HW for OSA patients. It was not designed as a comparative study and there is no certainty that sample sizes were adequate to detect differences in the comparisons made.

Due to the heterogeneous group of patients and operations, the anaesthetic techniques were not standardised. The impact of this variability on perioperative respiratory function is unknown. There are many causes for desaturation events in the post-operative period and no data was collected to help define the aetiology of these events. It cannot be confidently stated that the desaturation events were all related to OSA.

Sedation increases upper airway collapsibility and increases the risk of post-operative cardiorespiratory complications (Bailey et al 1990). There is a lack of literature supporting the superiority of any anaesthetic technique over another with regard to avoidance of this phenomenon (Dette et al 2013; Knill et al 1990). Therefore, it is advised that even in regional anaesthesia with sedation the same degree of precautionary monitoring is necessary to avoid adverse respiratory events.

CONCLUSIONS

Obstructive Sleep Apnoea represents increased risk to patients undergoing anaesthesia and has important economic and patient safety implications for perioperative health care. We suggest that combining a sensitive risk-stratifying screening questionnaire with an overnight ward (23HW) for continuous monitoring of patients with known or suspected OSA may be an economical and safe strategy for managing patients with mild to moderate risk of OSA-related complications. Larger comparison trials are necessary to definitively establish safety and cost-benefit analysis.

PROTOCOL REVISION

On completion of the present study and review of our unpublished data of a cohort of OSA patients monitored in HDU, our perioperative OSA protocol has been revised such that OSA risk score of up to and including 6 can safely be monitored in the 23HW, further reducing the demand on HDU beds.

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Health literacy: how nurses can make a difference

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KEY WORDS

Health literacy; patient education; social determinants; patient communication; patient education; health literate organisation

ABSTRACT

Objective

To be a call to action to nurses and all health professionals to implement proven effective evidence based strategies that can decrease health literacy demands on health consumers, and improve health outcomes and the provision of safe person-centred health care.

Primary argument

Health professionals, specifically nurses, are important providers of health information to health consumers. They influence the health literacy demands placed on health consumers through the way they organise, present and communicate information (Australian Commission on Safety and Quality in Health Care, 2014). All health professionals need to be cognisant of the range of effective strategies they can implement to reduce the health literacy demands on health consumers through effective interpersonal communication, health materials in the written and visual formats and the creation of health literate environments to improve health outcomes and the provision of safe care.

Population measurements of functional health literacy levels (Australian Bureau of Statistics 2008) indicate that 59 per cent of the Australian population aged 15 to 74 years did not achieve an adequate health literacy skill level to meet the complex demands of everyday life and work in a knowledge-based economy.

Conclusion

An understanding by all health professionals of the concept of health literacy, and the evidence based strategies they can implement to decrease health literacy demands on health consumers is imperative to enhancing the involvement of health consumers in their care, improving health outcomes and in the provision of safe health care.

INTRODUCTION

A previous article by Johnson (2014a) in the Australian Journal of Advanced Nursing introduced the concept of health literacy by providing an overview of key literature about (1) understanding health literacy as a concept and (2) the importance of health literacy to health care. This current article will build on that previous article and introduce a range of evidence based strategies that all health professionals, including nurses, can implement to decrease the health literacy demands on health consumers through interpersonal communication, printed information and the creation of a health literate environment.

The Australian Commission on Safety and Quality on Health Care (ACSQHC 2014) has recently published a statement on health literacy and its importance to improving the safety and quality of health care and health outcomes for health consumers. They have defined health literacy into two components:

- **Individual health literacy** is the skills, knowledge, motivation and capacity of a person to access, understand, appraise and apply information to make effective decision about health and health care and take appropriate action.
- **The health literacy environment** is the infrastructure, policies, processes, material, people and relationships that make up the health system and have an impact on the way in which people access, understand, appraise and apply health-related information and services (p.2).

Health literacy is a complex phenomenon that has moved from a narrow conceptual focus on an individual consumers' health literacy skills and abilities to being more multi-faceted, where consumers' skills and abilities interact with cultural, family, media, community resources, health system, health care provider, environmental and structural influences (Squires et al 2012; Martin et al 2011; Berkman et al 2010; Jordon et al 2010; Paasche-Orlow and Wolf 2007).

Low individual health literacy has repeatedly been linked to health consumers having difficulties comprehending, recalling and acting on health information provided by health professionals (McCarthy et al 2012a; Jordan et al 2010). It has been estimated that health consumers with low individual health literacy are between one-and-a-half and three times more likely to experience an adverse health outcome (DeWalt et al 2004). Low health literacy is a significant problem in Australia. Population measurements of functional health literacy levels indicate that 59 per cent of the Australian population aged 15 to 74 years did not achieve an adequate health literacy skill level to meet the complex demands of everyday life and work in a knowledge-based economy (ABS 2008). Although low levels of health literacy is disproportionate in certain demographic groups, such as the elderly, people from non-English speaking backgrounds (in an English speaking society), and people with low general literacy; low levels of health literacy affects all segments of the population (Berkman et al 2010; DeWalt et al 2010). Health literacy levels are considered to be dynamic in individuals. Berkman et al (2010) argue that consumer's health literacy levels can change as they gain experience with the various health circumstances and choices that they face.

Research has identified that nurses overestimate a consumers' health literacy by six to one (Dickens et al 2013). A study by Kelly and Haidet (2007) identified that doctors incorrectly identified consumer's health literacy levels 40% of the time and overestimated consumer's health literacy levels. Even in non-stressful clinical encounters many consumers are reluctant to admit that they don't understand, and feel compelled to follow the recommendations as they understand them, rather than seek clarity (Dickens et al 2013; Martin et al 2011; Baker et al 1996; Parikh et al 1996). A study by Turner et al (2009) concluded that paediatricians were aware of health literacy-related problems when communicating with consumers, but reported underutilising enhanced techniques known to improve communication. This finding is also supported by Castro et al (2007)

who concluded in their study that doctors caring for patients with limited health literacy employ unclarified jargon during consultations. McCarthy et al (2012b) in their study found that health professionals did not utilise communication techniques to improve communication with consumers in emergency departments, even though they knew the techniques were effective and easy to implement. Schwartzberg et al (2007) reported that fewer than 40% of health professionals used the 'Teach-Back' technique when communicating with consumers, despite knowing it was a well-established way of assessing consumer comprehension of information and was endorsed by the National Quality Forum as one of 34 'safe practices'.

It is imperative that all health professionals adapt their practice to utilise proven strategies that respect the needs of consumers to be communicated with in a way that assists them to understand and use that information. The Australian College of Nursing (2013 p1) states "Supporting consumer health literacy is a central part of contemporary nursing practice....It is often nurses who provide education to and advocate for patients, and who deliver and clarify health information provided by other health care professionals". This article will introduce to a range of effective evidence based strategies that all health professionals, including nurses, can implement to decrease the health literacy demands on health consumers.

DISCUSSION

There are two focus areas where health professionals can make a difference to decrease the health literacy demands on consumers. These reflect the definition of the ACSQHC (2014) definition, where the focus is individual health literacy and the organisational context.

Individual Health Literacy

There are two intervention areas for health professionals to decrease the health literacy demands on individuals. These are (1) effective interpersonal communication and (2) health materials in the written and visual formats.

Ensuring Effective Interpersonal Communication

Effective interpersonal communication between health professionals and consumers is fundamental for safe and high quality care. Effective communication failure is one of the most commonly cited causes of adverse events and complaints about health care (ACSQHC 2014). The way health professionals organise, present information, and communicate with consumers can help to reduce health literacy demands and lead to improved health outcomes (Berkman et al 2011).

There are a range of evidence based interpersonal communication strategies that are effective for health professionals to use in clinical practice to improve interpersonal communication. Health professionals are urged to be aware of the concept of health literacy and to utilise a range of these communication strategies in clinical practice with all consumers (ACSQHC 2014; Dickens et al 2013). There is a strong argument for health professionals to assume that all consumers may have difficulty understanding information, and create an environment where consumers of all literacy levels can thrive. This is in preference to health professionals trying to assess if individual consumers have low health literacy or not (De Walt et al 2010). De Walt et al (2010) call this a Universal Precaution approach. This refers to taking specific actions to minimise risk for everyone when it is unclear which consumers may be affected.

Berkman et al (2011) and Sheridan et al (2011) conducted systematic reviews to examine interpersonal communication interventions that would mitigate the effects of low health literacy. This evidence has been summarised in Box 1.

Box 1. Summary of Evidence of Interpersonal Communication Interventions to Mitigate the Effects of Low Health Literacy

- Using plain language to communicate health information, instructions and choices.
- Using essential information first and by itself.
- Using consistent denominators for presenting risk and benefit information.
- Adding icon arrays to numerical information. Icon arrays ('pictographs') are more effective than bar or pie charts at communicating risk and reducing cognitive biases in risk perception.
- Adding video to verbal information.
- Presenting information so that the higher number is better.
- Presenting numerical information in tables rather than text.

Educative and recall interpersonal communication strategies such as Teach-Back, Show-Me, and Ask-tell-ask have all proven to be effective (ACSQHC 2014; Dickens et al 2013; Berkman et al 2011). Teach-Back and Show-Me are easy techniques for health professionals to learn and to use, and are effective strategies for engaging all consumers, including children and young people, in clarifying information and correcting misunderstandings. Teach-Back is a method where health professionals provide information in small segments of information to consumers and then they ask the consumer to state in their own words the key points of the discussion. The cycle continues until the health professional is certain that the key messages have been delivered and understood (Jager and Wynia 2012). Show-Me is where the health professional asks the consumer to show them how they do something important to their care. For example, show how and when they take their medication, how they do a dressing or how they give an injection. Ask-tell-ask is similar to Teach-Back in that the health professionals asks the consumer to describe their current issue, *tells* the consumer in simple language the information they need to know, and then asks the consumer what they have understood (ACSQHC 2014).

Other effective strategies include, encouraging questions, follow up phone calls from health professionals with consumers to check the key messages they have understood from discharge communication, and encouraging a support person to accompany consumers during interactions with health professionals have been proven to be effective strategies (DeWalt et al 2010). Teach-to-Goal is effective with communicating complex health information with people with chronic health conditions and is based on mastery learning. It recognises that with repetition most consumers can achieve mastery (Baker et al 2011).

Dickens et al (2013 p.54) has synthesised the evidence for successful interpersonal communication with consumers and provided the following 'tips' in Box 2.

Box 2. Tips for Successful Interpersonal Communication

- Use the active voice, where the subject of the sentence is performing the action.
- Be interactive and avoid long monologues.
- Be considerate towards listeners and announce topics, call the consumer by name and provide information in little stories that the consumer can relate to.
- Give 'need to know' rather than 'nice to know' information. Provide information in three to five small segments in each session and reinforce important information.
- Focus on the consumer and use everyday language familiar to them and provide a context for the information that the consumer can relate to.
- Be mindful of language complexity. Speak in short sentences of fewer than 15 words, use words with fewer than three syllables and decrease medical jargon.

It should be appreciated that personal contextual issues such as culture, education, gender and language will have an effect on interpersonal communication (ACSQHC 2014).

HEALTH MATERIALS IN THE WRITTEN AND VISUAL FORMATS

Health material in the written and visual formats can include information such as consent forms, fact sheets, pamphlets, written instructions, diagrams, and medication information. Printed information tailored to consumers' needs, and developed with the involvement of consumers, can help to address health literacy needs by ensuring the information is relevant to consumers' needs, readable and understandable (Coulter et al 2006). Brothersone et al (2006) found printed information with pictorial aids increased consumer comprehension by 27% compared to those without pictorial aids. Printed information should use plain language and be written at a reading level of fifth grade or below. There are several formulas that can determine reading level of printed information. The most widely used and recommended is SMOG by McLaughlin (1969). However, the true test of readability is consumer feedback (Coulter et al 2006).

Other strategies that have proven to be effective include personalising written health information (Coulter et al 2008) and providing a combination of verbal and written information to reinforce key health messages (Johnson et al 2003). The Cochrane Systematic Review by Johnson et al (2003) concluded that printed discharge information, when combined with verbal information by health professionals, was more effective in improving consumer knowledge and satisfaction, than just the provision of printed information alone or verbal information alone.

The provision of timely, well written health information, which supports consumers to gain knowledge and participate in decision making, is one strategy to enable the sharing of information and power. Information and education developed specifically for people with low levels of health literacy can be effective as an aid to communicating health information and complex care needs (Coulter et al 2008).

ORGANISATIONAL CONTEXT

The concept of 'health literate organisation' was first identified and defined by Rudd and Anderson (2006). A health literate organisation is defined as an organisation that recognises miscommunications are common and can negatively affect a consumer's health care experience and outcomes. A health literate organisation makes it easier for people to access, navigate, understand and use health information and services (Rudd and Anderson 2006). The environment of a health service represents the health literacy expectations, preferences and skills of those providing information and services (Rudd 2010). Health professionals have a significant role in working with consumers to create a more health literate organisation.

Some of the health literacy demands on consumers are in the form of physical aspects of the health service, such as signage and design. At the same time, access to and navigation of a health service involves the use of a broader range of print materials which include, rights and responsibilities pamphlets, medical history forms, health information pamphlets/booklets, medication information, and consent forms. In addition, the interpersonal communication with health professionals is of critical importance, as is the health service's website and social media presence (Rudd and Anderson 2006).

In recognition that health services required guidance in their health literacy efforts the Institute of Medicine in the United States of America developed 10 Attributes of a Health Literate Organisation (Bach et al 2012). Bach et al (2012) determined that health services that embody these 10 Attributes create an environment that decreased health literacy demands on consumers, and enables consumers to access and benefit optimally from the range of health care services. Bach et al (2012) state the list of attributes is by no means

exhaustive, but rather represents an attempt to synthesise a body of knowledge and practice, supported by the state of the science in the young field of health literacy. The 10 Attributes are:

1. Has leadership that makes health literacy integral to the mission, structure and operations of the healthcare organisation.
2. Integrated health literacy into planning, evaluation measures, patient safety and quality improvement.
3. Prepared the workforce to be health literate, and monitors progress.
4. Included populations served by the organisation in the design, implementation and evaluation of health information and services.
5. Meets the needs of populations with a range of health literacy skills while avoiding stigmatisation.
6. Uses health literacy strategies in interpersonal communication, and confirms understanding at all points of contact.
7. Provides easy access to health information and services, and navigation assistance.
8. Designs and distributes print, audiovisual and social media content that is easy to understand and act on.
9. Addresses health literacy in high-risk situations, including care transitions and information about medicines.
10. Communicates clearly about what is covered by health plans and what individuals will have to pay for services (Bach et al 2012 p.3).

The purpose of the 10 Attributes is for health services to assess their organisational performance against each attribute. Where deficits are identified the health service can develop plans for action. For the Australian context, Thomacos and Zazryn (2013) have developed a self assessment tool for Australian health services based on the 10 Attributes of a Health Literate Organisation. This tool can be used by Australian health services to rate their performance against the 10 Attributes, which can then be used to guide organisational improvements.

In addition to the 10 Attributes to guide health services to understand the requirements to be a Health Literate Organisation, Rudd (2010) developed a 'Health Literacy Environment Activity Package: First Impressions and Walking Interview'. This Activity Package can assist health services to begin to understand some of the characteristics of their organisation that assist or hinder a consumer's ability to physically navigate their way to, and about, the health service. This Activity Package was adapted to an Australian context and trialled by Johnson (2014b). The First Impressions Activities consists of three tools that focus on first impressions shaped by a phone call to the health service, a visit to the health service's website, and a walk to the entrance and to predetermined destinations around the health service. The First Impression Activities are a consumer engagement strategy that can bring 'fresh eyes' to examining the health literacy environment of a health service to identify ways to decrease the health literacy demands on consumers (Johnson 2014b).

CONCLUSION

An understanding by health professionals of the concept of health literacy, and the evidence based strategies they can implement to decrease health literacy demands on health consumers is central to enhancing the involvement of health consumers in their care, and improving health outcomes and the provision of safe health care. This article is a call to action for health professionals, especially nurses, to respect the health literacy needs of all consumers and to implement proven effective evidence based health literacy strategies for individuals and the organisational context.

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Using clinical reasoning and simulation-based education to ‘flip’ the Enrolled Nurse curriculum

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KEY WORDS

Enrolled nurse, flipped classroom, simulation, clinical reasoning

ABSTRACT

Objective

This paper describes the development and implementation of an innovative Diploma of Nursing curriculum for preparing Enrolled Nursing students for acute care nursing practice.

Setting

Vocational Education and Training at the Health Education and Research Centre in Hobart, Tasmania.

Subjects

Vocational Education and Training students enrolled in the Diploma of Nursing (Enrolled-Division 2 Nursing) (HLT51612).

Primary Argument

The increasing complexity and acuity of contemporary practice environments requires a nursing workforce that is flexible and competent. In 2013 nurse educators developed an innovative approach to offering the national standardised Diploma of Nursing course that integrates three key pedagogical approaches: the ‘flipped classroom’, simulation-based learning and the Clinical Reasoning Cycle.

Conclusion

By ‘flipping the curriculum’ students are provided with opportunities to develop and extend their clinical reasoning skills as they respond to both routine and unpredictable ‘patient’ scenarios in the safety of a simulation environment. These simulated clinical learning experiences are designed to challenge students to ‘think like a nurse’ while actively engaging in the provision of safe and effective ‘patient’ care.

INTRODUCTION

As predicted in the National Health Workforce Innovation and Reform Strategic Framework for Action 2011-2015 (Health Workforce Australia 2011), the current health workforce is, in many respects, inadequately prepared for meeting the needs of the changing Australian patient population. The aging population, increased prevalence of chronic diseases, advances in technology and changes in public expectations, means demand for healthcare services continues to rise (Ramis et al 2013). Against this background, evidence points to changing nursing workforce trends due to ongoing nursing shortages and higher patient acuity (Commonwealth of Australia 2002). Throughout Australia, enrolled nurses are now considered integral to the nursing skill mix in acute, primary and residential aged care settings (Bull and Hickey 2011).

In Australia, there are two levels of nurse: Registered Nurses (RNs), and Enrolled Nurses (ENs). RNs are required to meet the minimum requirement of a three year Bachelor of Nursing degree whilst ENs are required to complete an eighteen month Diploma of Nursing qualification. The EN qualification was first introduced in Australia in the 1960s to improve the supply of nursing services and reduce the rising costs associated with staffing in health care (Russell 1990). Historically, the role of the EN was to support the work of RNs (Hutchinson et al 2011) and primarily involved a task-oriented approach whilst working under direct supervision (Jacob et al 2013). EN education therefore has tended to place emphasis on students acquiring 'skills' for performing 'nursing tasks'. This antiquated pedagogy that has been identified as "over prescriptive and reliant on individual certification of tasks and activities" is no longer appropriate in today's health care settings (Willis 2011). Contemporary nursing requires nurses who are skilled critical thinkers and able to care for people who often have multiple co-morbidities and complex psychosocial needs. Hence the need for EN training programs that meet the evolving needs of the wider health sector (Missilidine et al 2013).

Over the last 12-15 years the role of ENs has continued to evolve and expand. This began with a review of training programs undertaken by the National Aged Care Forum (Commonwealth of Australia 2002). The Review called for expansion of the EN role and recognised the need to extend their scope of practice to include the administration of medications (Commonwealth of Australia 2001). Following on from the Review there were frequent calls for a nationally consistent educational approach for ENs and in 2009 EN training was included in the National Health Training package. However, a national approach was not fully operationalised until 2010 when the National Registration and Accreditation Scheme replaced the state based accrediting bodies. The standardised curricula initially provided a qualification at the Certificate IV level of the Australian Qualifications Framework (AQF) (Hutchinson et al 2011) and placed primary emphasis on aged care and rehabilitation.

In 2014 the baseline qualification for an EN was changed to a Diploma of Nursing (Certificate V) with preparation for specialty areas of nursing practice through the Advanced Diploma of Nursing (DN) (Jacob et al 2013). The EN course is accredited by the Australian Nursing and Midwifery Accreditation Council (ANMAC) and primarily delivered by TAFE institutes and other private Registered Training Organisations (RTOs). The new DN course places greater emphasis on mental health, community health, maternal and child health and acute health care. While the degree of emphasis on these content threads varies between different providers, it is an ANMAC requirement that students undertake a minimum of 400 clinical practice hours and meet a specific number of teaching and learning hours across each of the four discipline areas (ANMAC 2009). These changes to EN training have enhanced career pathways and provide more employment options for ENs in specialty areas of nursing practice (Jacob et al 2013). Consequently, most states are now employing increasing numbers of ENs in both non-acute and acute care settings (Blay and Donoghue 2007).

It is anticipated that ENs will continue to become a larger proportion of the acute care nursing workforce over the coming decade (Bull and Hickey 2011). The demand for acute care beds continues to increase and tight

budgetary constraints limit the number of RNs employed necessitating consideration of new staffing models. The shifting skills and scope of practice means that ENs are in greater demand in more diverse areas of the health care sector than ever before. Health care, however, is dynamic and EN's scope of practice continues to evolve. Workforce trends in Australia mean there is a need to develop skills for consumer-directed care, enhanced leadership and management capability and stronger cross interdisciplinary collaboration (Community and Health Industry Services Skills Council 2014). These shifting workforce demands mean that ENs need to be flexible, person-centred and able to engage in new ways of working as a part of the health care team to advocate for and facilitate the involvement of individuals, their families and significant others in planning and evaluating care and progress toward health outcomes (Community and Health Industry Services Skills Council 2014, Gibson and Heartfield 2005).

ENs are now expected to care for higher acuity patients across a number of different health care contexts (Jacob et al 2013). Assuming these higher level responsibilities requires ENs to be prepared with more sophisticated skills and knowledge (Nankervis et al 2008; Heartfield and Gibson 2005). These factors now feature in the National Training Package for the Diploma of Nursing course as competency standards, which specify the requirements for effective workplace performance alongside many other discrete areas of work and nursing work activity. These competency standards are used as the basis for defining learning outcomes and assessment benchmarks within the Vocational Education and Training (VET) sector. They are a prescriptive way of classifying nursing work and often used as technical instruments for organising EN training by specifying the knowledge and skills to be applied in nursing practice. Nursing work, however, is not simply a technical practice: it is human work that relies on tacit understandings as much as formal ways for organising practice (Grealish 2012). Contemporary approaches to curriculum design, delivery and sequencing is therefore central to promoting coherent learning experiences for ENs (O'Neill et al 2014).

A critical examination of contemporary RN education suggests that there is a shift away from competency-based education and teaching of discrete areas of discipline specific knowledge. Instead, there is a refocussing on more holistic means of developing learners' professional attributes (Burford et al 2014). Similar changes are urgently required for EN training because of the increasing focus on patient safety and quality. This means ENs must be prepared to respond to emergent patient situations and recognise and manage patient deterioration. To prepare students for working in the dynamic and unpredictable contexts of acute care, most contemporary RN education incorporates problem based and enquiry based learning as a way of teaching students how to think about the complex clinical problems they deal with using a clinical reasoning framework (Levett-Jones et al 2010). These trends have been slow to appear in EN training. It is now imperative that a radical transformation in EN education delivery occurs (Benner et al 2010) to create a workforce that is prepared for the current and future health care needs. This paper now presents an overview of an innovative model being used to deliver the national Diploma of Nursing course that integrates three key pedagogical approaches: the 'flipped classroom', the Clinical Reasoning Cycle and simulation-based learning.

DISCUSSION

The Flipped Diploma of Nursing Curriculum model

The model used by the authors was born from the desire to create a comprehensive EN curriculum that has two key goals. Firstly, that it meets the requirements of the standardised Diploma of Nursing (Enrolled-Division 2 Nursing) (HLT51612) training package; and secondly, that it develops ENs that are adequately prepared for nursing work in diverse settings, with particular emphasis on preparation for the acute care setting. An innovative curriculum model was therefore developed to frame and deliver the Diploma of Nursing course. It centralises student learning activity and provides students with three main elements for completing the course:

- **Flipped Classroom** - This includes the curriculum content, spaces and tools necessary to carry out a blend of elearning, guided classroom activities and assessments (Bergmann and Sams 2014).
- **Clinical Reasoning** - This is understood as the process by which health care professionals 'collect cues, process the information, come to an understanding of a patients' problem or situation, plan and implement interventions, evaluate outcomes and reflect on and learn from the process' in order to solve problems and address patient's needs (Levett-Jones et al 2010, p.515).
- **Simulation Based Learning** - This is the group of teaching techniques carried out in environments that realistically simulate nursing practice settings with guided learning experiences that evoke aspects of the real world of nursing in a fully interactive fashion (Gaba 2007).

The flipped classroom

The flipped-classroom approach is an effective way of radically transforming education to produce ENs who are flexible and well-equipped to practice in dynamic health care environments (Missidline et al 2013). The 'flipped classroom' exposes learners to new theoretical content prior to them attending face-to-face classes (Bergman and Sams 2014). This new learning is then discussed, applied and processed in guided group learning sessions (Benitez 2014). The notion of a flipped classroom draws on constructivist learning theories and concepts such as active learning and student engagement (Bergmann and Sams 2014; Hawk 2014). Educators who use a flipped classroom approach devote much of the "face-to face" contact time to small group and class brainstorming, peer review and other epistemological processes such as wondering, critiquing, collaboration, visualisation and connection making (Ryan 2013). Students learn how to learn instead of relying on content heavy didactic approaches that encourage passive transference of knowledge (Allen 2013).

There is emerging evidence that the flipped classroom pedagogical approach has the potential to bring about a distinctive shift in priorities in nursing programs from merely covering material to working towards mastery (Hawk 2014). It is suggested that flipped classrooms promote student empowerment and create opportunities to develop the skills required for the 21st century such as critical thinking, creativity, and communication (Ryan 2013). The authors therefore adapted the flipped-classroom model to deliver the Diploma of Nursing course and didactic teaching components are shifted to an online repository for lectures and readings that are made available to students prior to their attendance at simulation based practice sessions.

Simulation based practice sessions

By familiarising students with the preparatory tools and resources to facilitate learning through the pre-recorded lectures, screencasts, videos, or reading material class is freed up for mastery exercises (Bergman and Sams 2014). The DN students then engage in authentic and engaging simulation-based practice sessions. Simulation scenarios create opportunities for students to apply and practice the knowledge gained from preparatory learning materials in a collaborative and supportive setting (Gaba 2007). Simulation sessions also have the capacity to enhance learner's psychomotor, communication, teamwork and critical thinking skills (Lapkin et al 2010). These practice based learning simulations are designed to emphasise a problem solving, critical thinking, evidence based and reflective approach to nursing practice (Allen 2013) by drawing upon a theoretical frame of clinical reasoning.

Clinical reasoning

In the authors DN course, clinical reasoning frames the entire curriculum. Clinical reasoning, as defined by Levett-Jones et al (2013) is a complex cognitive process that requires students to use various thinking strategies to gather and analyse patient information. It requires the students to move beyond simple knowledge acquisition because the process is reliant on the students using both intuition and knowledge to influence decision-making relevant to individual client circumstances. Clinical reasoning requires a critical thinking

'disposition' (Rubenfeld and Scheffer 2015) and is influenced by a person's assumptions, perspectives, attitudes and preconceptions (McCarthy 2003).

The flipped curriculum model allows students to learn about the steps of clinical reasoning in online lectures and readings. Simulation sessions are then used to expose students to the complexity of real life nursing situations. They work as a mechanism for students to apply their clinical reasoning knowledge to realistic practice situations and demonstrate their developing clinical decision making abilities. The simulated scenarios require student's active engagement in deliberate practice and the use of critical thinking, problem solving and guided reflection (Lapkin et al 2010).

Following the simulations students participate in facilitated group discussion activities where domain specific content related to the construction of knowledge is integrated into the clinically relevant scenarios. This flipped classroom three-step approach (online lectures and readings, simulations and class discussions) frames the entire Diploma of Nursing curriculum; and information provision occurs through a relevant, active and participatory approach. We anticipate that the application of this flipped approach will better prepare graduate ENs to 'hit the ground running' (Chernomas et al 2010) with beginning skills that will enable them to confidently and safely engage in patient care (Allen 2013).

Value of the model

The model is flexible because it supports the implementation of a diverse range of learning activities in accordance with the competencies worked, the area of knowledge or the specialisation level that the student is studying. This is an important feature because one of the most pressing and significant drivers influencing the changing scope of practice for ENs is the current review of the competency standards for the EN. The primary purpose of the review is to ensure the relevance and currency of the standards against the contemporary EN role. The new competency standards for ENs stipulate that although the EN works under the direction and supervision of the RN, as stipulated by NMBA (ANMC 2002), they now assume full responsibility for their actions in the health care team and are accountable for providing delegated nursing care (Heartfield and Gibson 2005). The proposed changes to the EN competency standards evidence how the role of the EN is moving away from being a support for RNs towards one where they are instead considered to be an associate. This requires a competent and confident health professional who has the critical and reflective thinking skills that underpin safe and effective decision making, and the provision of evidence-based care.

CONCLUSION

The use of simulation, clinical reasoning and a flipped classroom have emerged in response to the patient safety imperative and in an attempt to bridge the divide between industry need, educational drivers and EN preparedness for complex practice. The unique blended-learning structure of the flipped EN curriculum has been made possible through the creation of a stimulating learning environment where students are empowered to take ownership of their own learning, and over time transform into engaged active participants in the learning process (Ryan 2013).

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Can Generation Y nurses supply areas of shortage? New graduate challenges in today's job market

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KEY WORDS

Generation Y, workforce, nursing graduates, shortage, mental health, aged care

ABSTRACT

Objective

Workforce attitudes, such as intent to stay, leave temporarily, or exit permanently from nursing, develop at an early career stage. This paper explores the mismatch between the challenges faced by nursing graduates (of whom many belong to Generation Y) in obtaining a Registered Nurse (RN) position following graduation and the continuing shortages in nurse workforce in aged care and mental health areas.

Setting

Current Australian literature reveals the discontent of university graduates seeking positions in an industry that does not make arrangements to employ graduates, but concomitantly reports workforce undersupply. Areas of nursing shortages of concern discussed in this paper are aged care and mental health nursing.

Primary argument

A number of reasons may explain why these areas are depleted of nurses: an ageing workforce, unattractive market positions for new graduate nurses and negative perceptions of the aged care and mental health sectors. Also, numerous generational negative opinions expressed in academic literature and popular media serve to discourage newly graduating nurses from working in these areas.

Conclusion

The paper offers potential solutions to address three main issues raised in the discussion. Firstly, addressing the shortage of new graduate positions is an effort to retain qualified but inexperienced nurses. Secondly, drawing on the pool of new graduates to supply aged care and mental health rejuvenates these specialty areas and ensures these nursing fields are well catered for. Finally, directing efforts to retain new graduate nurses is an opportunity to address the 2025 projected Australian nurse workforce shortfall.

INTRODUCTION

Graduates wishing to register as a nurse in Australia will have completed a nursing course offered at a tertiary institution accredited by the Nursing and Midwifery Board of Australia (NMBA) (Australian Health Ministers' Advisory Council, 2006). On account of the predicted significant shortfall of nurses by the year 2025, the premise has been that these graduates will enter a job market eager to offer them a place in health care on successful completion of their course (Health Workforce Australia, 2012). However, currently these new graduates are reported to be experiencing difficulties obtaining employment in the Australian public health sector on graduation (Anderson 2013; Peters and Jackson 2013a; Uncut.com.au 2013).

To understand the new graduate employment experience is to acknowledge that generally today's job market is a difficult one for new graduate nurses to obtain positions. The literature and the media attribute several reasons for nursing graduates finding difficulties in sourcing employment. The 2007-2009 Global Financial Crisis delayed the predicted retirements of older experienced nurses who have been forced to work longer and thus retain potentially available positions (Peters and Jackson 2013b; O'Loughlin et al 2010). Perceptions by prospective employers that graduate nurses are unprepared for clinical roles, thus making them unsuitable applicants, is a subject of Internet blogging locally and internationally and is discussed in the academic literature (CINHC January 2014; Peters and Jackson 2013a; Uncut.com.au 2013; Cardillo 2011). As a result, applicants compete with each other for fewer positions; selecting areas that they feel prepared for, such as acute care nursing. However, acute care nursing is a specialised area of workforce that is currently experiencing lower demands for nurses (HWA, 2014).

Considering that new graduates experience multiple issues associated with their transition from education to work practice, a vulnerability already exists (El Haddad et al 2013; Boychuk 2008). New graduate nurses' preparedness for practice is extensively researched and well documented (El Haddad et al 2013). Transition shock and thought provoking situations during the early course of their nursing work are both documented causes of why some new graduates leave nursing after their first year of practice (Missen et al 2014; Drury et al 2009; Halfer and Graf 2006). Aware of potential future role hardship, final year students often elect to apply for a Graduate Transition Program (GTP) in general, acute and surgical nursing areas in large metropolitan hospitals.

An ideal solution both to address the inability of these new graduates to obtain positions and to address the specialty shortages would be to encourage new graduates to consider aged care and mental health nursing as career options. Universities and health care employers have attempted to foster favourable and positive attitudes to these specialties, but to date outcomes of innovative GTPs in aged care and mental health have not been overly successful. In this paper, we explore the following questions: Are we making aged care and mental health nursing unattractive as a result of unsubstantiated negative perceptions? Have nursing students and new graduates actually absorbed and experienced negative impressions from their clinical experience? Were these harmful and damaging exposures transmitted from experienced nurses and/or from educators?

There are complex reasons that may explain the difficulties in attracting new graduate nurses to specific areas of practice, particularly aged care and mental health nursing; areas at particular risk of shortages by 2025 (HWA, 2012). The aged care sector deals with a particular set of negative occupational stereotypes, such as a reputation for being boring and monotonous work, workplace violence and a wage disparity of 12% compared to other specialist nursing work (Currie and Carr Hill 2012; Palmer and Eveline 2012; Jackson et al 2003).

Similarly, mental health nursing appears to be an unattractive option for first year graduate nurses. Negative perceptions are propagated in professional literature and the media with both mental health and aged care nursing being described as 'the dark side' (Hazelton et al 2011, p.182), 'dirty' (Stannard 1973, p.329), 'basic'

(Abbey et al 2006, p.14), 'repetitive' (Fussell et al 2009, p.220) and 'less exciting' (Happell and Cutcliffe 2011, p.223).

Difficulties in recruiting new nurses to a career in mental health nursing have been highlighted. Problems in curriculum development in preparing undergraduate nurses to work in this field have meant that a 'diluted' content (McCloughen and O'Brien 2005, p.225) of mental health education is delivered in generic nursing programs. Additionally, limited exposure to mental health subjects and inadequate numbers of supervised mental health placements have led to a lack of motivation in choosing mental health as a nursing career. An Australian study evaluating a new graduate program in mental health (Cleary and Happell 2005) confirmed earlier findings: a combination of limited opportunities extended to the graduate nurse to practise their clinical mental health nursing skills and the absence of a supportive work environment do little to promote recruitment and retention in mental health. These factors were supported in an Australian literature review on promoting mental health positions for new graduates (Cleary et al 2012).

Following on from the five year Australian reform in mental health under the 1993 and 1998 National Mental Health Strategy, which saw a greater expansion of community based mental health services, little seems to have changed in perceptions of mental health nursing (Whiteford et al 2002). In an Australian scoping study by Hazelton et al (2011) of mental health education and new graduate preparation for practice, participants characterised mental health nursing as "arduous" (p.1), "uncaring" (pp.1,11,12), "mistreating" (pp.1,8) and "neglectful" (p.6).

DISCUSSION

Shortage of positions for new graduate nurses and oversupply of workforce in the acute care sector

Generation Y comprises a group of individuals who share the birth range from 1984 to 2002. This cohort is known to be technologically literate (LeDuc and Kotzer 2009) growing up in an era of information, social media, interconnectedness and globalisation. Generation Y nurses entered the workforce in times of industrial change: reduction in organised labour, shrinking unions and competition from international labour markets (Chung and Fitzsimmons 2013). International literature refers to this generation as globally vastly diverse - economically, ethnically and academically - from previous and subsequent generations (Bell 2013; Chung and Fitzsimmons 2013). Karl Mannheim's generational theory (1923) provides an insight into behaviours for this particular cohort. Mannheim posits that younger generations are "imperfectly socialised between ideals learned from older generations and the realities of the world they experience" (Codrington 2008, p3). Such a theoretical position might help to explain the generational differences between the four generations currently working side by side in nursing: The Matures (born before 1945), the largest cohort -the Baby Boomers (1946-1964), the smallest - Generation X (1965-1980) and Generation Y (1981- 1999). The youngest cohort, Generation Z (born 2000 to the present day), will enter the workforce in their numbers by the end of the decade.

The inability to obtain a first preference in an acute care generalist GTP has become a common experience for Generation Y graduating nurses. This is an area of concern for industry and workforce, employers and Generation Y nurses (Peters and Jackson 2013b; McCloughen and O'Brien 2005). Nursing graduates require a supportive, well-structured, learning environment to enable them to practise newly acquired skills safely and with confidence (Missen et al 2014).

The shortage of aged care and mental health nurses, due in part to an ageing workforce, is a matter of recorded concern. In 2012, 27% of the aged care workforce was aged 55 years or over, placing this cohort in the Baby Boomer generation (King et al 2012). The median age of a mental health nurse is 47 years and 46% are aged 50 years and over (Australian Institute of Health and Welfare 2012a, 2012b). Concerns over

the Baby Boomers' departure from the workforce are expressed from a variety of industries (Australian Human Resources Institute 2012; Roberts 2012; Benson and Brown 2011; Long Dilworth and Kingsbury, 2005;). There is also awareness of the loss of expert knowledge and skills on the departure of Baby Boomer nurses. This departure of nursing knowledge is defined as the 'expertise gap' (Spector and Echternacht 2009; Orsolini-Hain and Malone 2007). This 'gap' is exacerbated by declining numbers of experienced nurses in the clinical setting, meaning that new and less experienced nurses miss out on learning skills from experienced peers in areas such as conflict resolution, prioritisation of care and initiative (Chenoweth et al 2010).

A survey of health employers conducted in 2012 by the Department of Education, Employment and Workplace Relations (DEEWR) revealed public and private health providers in metropolitan Sydney also find positions in mental health and aged care the most difficult to fill (Department of Education Employment and Workplace Relations 2012). Major Sydney hospitals do not experience the same recruitment difficulties in other areas of nursing, such as intensive care, emergency, acute care, surgical and ophthalmology, due to a pool of strong candidates. These areas generally attract younger, experienced nurses and Generation X nurses currently fill positions in leadership roles (Drury et al 2009). New graduates are eager to commence their career in high acuity areas of nursing where the pace is fast (Lavoie-Tremblay et al 2010). These new graduate nurses perceive that contemporary clinical education opportunities are available and there is greater scope to learn and grow in acute care environments (McCalla-Graham and De Gagne 2015).

However, even in the acute sector, new graduates are reported to experience some difficulties in transitioning their practice from student to registered nurse. Negative reactions towards new graduates in acute care may also be attributed to generational differences. As much as new nurses from the Net Generation enjoy 'high tech' areas of nursing (Happell and Cutcliffe 2011, p.332), older experienced nurses may be sending the message to new graduates that "we are so specialised, you can't fit in here". Older nurses were found to be critical of their younger colleagues and considered what they perceived as younger nurses' lack of commitment and arrogance as a negative attitude to the work environment (Blythe et al 2008). Unfavourable work relationships in critical care and emergency care areas between novice and experienced nurses is reported in the nursing literature (Baumberger-Henry 2012). These attitudes and practices are reported as "tensions" (Nelsey and Brownie 2012, p.2) and "clash[es]" (Feng and Tsai 2012, p.2069) between nurses at different career stages.

Nursing education and workforce research reveal several influences impacting on future career and specialty choice for new nurses. Student nurses' are sensitive to educational experiences as well as the clinical contact offered, the ward milieu, and possess personal and generational motivational drivers. Based on positive work experiences, new graduate nurses will develop an intent to remain in nursing and follow a formalised post graduate area of practice, course of study and clinical ladder for a period of years (Zeller et al 2011). These combine to influence career paths. The figure below shows new graduate influences of career path as identified in the literature (Cleary et al 2013a; Haron et al 2013; Prentice 2012).

Lack of nurses in mental health and aged care

Ideally, there needs to be a focus on underserved areas to try to attract the surplus of new graduates into these positions. Mental health and aged care nursing specialties share characteristics that affect nurses' future career paths. In an effort to ameliorate the lack of nurses in these areas, research has focused on the role of universities in preparing new graduate nurses for work in aged care and mental health. Since educational experiences during course work or clinical placement are known to influence career paths (Pfaff et al 2014; McKenna et al 2010; Australian Health Ministers' Advisory Council, 2006; Waite 2006), some universities have attempted to expose students positively to these specialties by weaving mental health and aged care content throughout the pre-registration curriculum (Moxham et al

2011; Abbey et al 2006). The delivery of aged care and mental health subjects as electives is also proposed by others, with flexible content through the use of problem based programs (Haron et al 2013; Curtis, 2007).

Manipulating the learning environment by way of arousing interest and passion in the student is another way that universities have attempted to increase awareness of mental health and aged care nursing. Educators, clinical instructors and clinicians can act as mentors and role models displaying an enthusiastic and knowledgeable attitude when delivering nursing care (Cleary et al 2013b; Baumberger-Henry, 2012). There needs to be an awareness that the first contact with these specialties, whether in the classroom or in the clinical area, has a pivotal impact on the student. It is at this point that students start to develop ideas about a future career pathway (Browne et al 2013; Prentice 2012). This is a point of crucial knowledge to employers interested in addressing shortages. In addition, universities should inform new graduates throughout their course of study and upon graduation that there are shortages in aged care and mental health and this is where they should be applying. This proposition will have long term benefits to nurses in the development of a career and for nursing in addressing the predicted nursing shortfall by 2025. Plenty of post graduate education opportunities to encourage work engagement in mental health and aged care exist as well (King et al 2012). Aged care nurses respond positively to career progression and education opportunities but perceptions, shaped by ageist and paternalistic attitudes as student nurses, inhibit them to pursue a career in long term aged care once registered (Koh 2012; Chenoweth et al 2010; Fussell et al 2009).

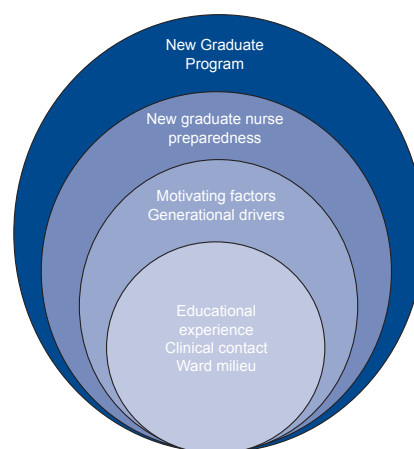
Generation Y motivating factors

Individual characteristics also motivate the nurse to pursue a career in aged care or mental health. Positive attitudes take shape from past contact with elderly persons and personal experiences. An Israeli study surveying 486 final year nursing students found that promoting encouraging attitudes towards older people increased recruitment in aged care (Haron et al 2013). Encouraging nurses to make aged care or mental health a career choice can commence at a number of stages: in the formative school years, as pre registration undergraduate students and through post graduate education for registered nurses (Chenoweth et al 2013; Knight et al 2011; Stevens 2011; Drury et al 2009).

Generation Y possess numerous professional motivational drivers. As the new and largest nursing workforce, Generation Y undergraduate and new graduate nurses have identified that they are committed to the philosophy of nursing and the ideals of the caring profession (Jirwe and Rudman 2012; Mooney et al 2008). Care giving is considered an important component of their work ethic and this is shared by generations of nurses before them. Price (2009) conducted a meta study of career choices in nursing and identified influencing factors, many of which are also shared by older nurses: caring ideals, the role of significant others and the caring paradox. Identifying factors of attraction and retention for Generation Y nurses in order to integrate them into retention practices have also been the subject of recent research (Clendon and Walker 2012; Hutchinson et al 2012; Tourangeau et al 2012; Cubit, 2011; Lavoie-Tremblay et al 2010).

Flexibility in the work place is a major factor in attaining work satisfaction for Generation Y (Carver and Candela 2008). A work schedule that enables life and work balance is a professional driver for Generation Y; thus

Figure 1: Factors that influence choices new graduate nurses make for their career path.



workplaces that are shrouded by out-dated policies, practices and lack of access to technology do not make for an attractive career choice. Generation Y undergraduates also express their wish to choose what they study and where they work (Cleary et al 2013b). Lack of choice results in frustration and may precipitate their intention to leave nursing. Other professional motivators and drivers for Generation Y include acknowledgement of a job well done by supportive and nurturing leaders (McCalla-Graham and De Gagne 2015).

Creating work opportunities for new graduates should take into account their work requirements. Generation Y like to be stimulated at work and work towards consolidating newly learned professional skills (Hutchinson et al 2012; Lower 2008). Provision of education, working with technology and career progression may improve their organisational commitment to their employer. Mostly, Generation Y graduates are usually free from financial and other responsibilities such as family, child minding or caring for elderly relatives due to their time of life (Ng et al 2010). They want to work to afford the lifestyle they most enjoy and this is potentially a motivator to employers to recruit these new nurses and focus on keeping them.

Generation Y distracting factors

This new generation of nurses is also a vulnerable workforce (Hutchinson et al 2012). Generation Y has expressed concern over workplace issues such as less pay for work and work conditions. A dominant theme in new graduate aged care nursing research is the effort/reward imbalance (Lavoie-Tremblay et al 2010). There is current dialogue between industry and government over the lack of monetary incentives provided to aged care nurses. Concern stems from nursing positions being replaced by less qualified, cheaper auxiliary staff (Happell and Gough 2007). The attrition of Generation Y nurses due to job dissatisfaction, negative work environment and lack of job motivation is foreshadowed. Disillusioned, unemployed new graduate nurses have the choice to consider leaving nursing, study further at postgraduate levels or retrain with a view to “side step” from nursing. These choices impact on national turnover and retention rates, already weakened by an ageing workforce, health budget cuts and the GFC. Health related areas, such as pathology, pharmaceutical sales and research, become innovative work fields where Generation Y are made welcome, supported and offered greater possibilities for career advancement. These are substantial distractions to the long term Gen Y engagement that is required for the nursing workforce. Another aspect of fragility for this new workforce is the possibility of applying for jobs that leave them open to exploitation such as working as Registered Nurses for lower rates of pay or performing non-nursing duties such as cleaning (Stevens 2011; Duffield et al 2008; Holmes 2006).

PREDICTED NURSING SHORTFALL TO 2025

The findings of HWA 2025 through its retention modelling scenario, outlined the urgency to retain the nursing workforce by at least 20% in “meeting the demand for nurses” (HWA 2012, p.49). In the case of a ‘do nothing’ comparison scenario, where currently nursing loses up to one in five of its nurses, the estimated shortfall signifies it will be necessary to increase supply by 27% (or 109,000 nurses) by 2025 (HWA, 2012, p120). Focus should be placed “on the retention of the current nursing workforce” (Mason, 2013, p. 259) to which new graduates belong. Frustration is evidenced by protests, campaigns and research about the lack of jobs for new nursing graduates (Parker et al 2012; Thomas 2012). With an ageing population of consumers and health workers, new graduate nurses are part of the solution to a growing workforce problem.

CONCLUSION

A range of local and international nursing specialty and workforce literature has been reviewed to highlight the sentiments expressed by new graduate nurses unable to source employment opportunities. This paper also identifies the responsibilities of universities and employers in the recruitment and eventual retention of Generation Y nurses.

The message that universities and employers are not preparing new graduate nurses to work where they are most wanted is not new. The idea that nursing graduates should supply areas of need is not enough to motivate and attract nurses to these areas. Generational theory alone does not answer why there are gaps unable to be filled in aged care and mental health. However, the theory is useful to guide and alert workforce planners to certain behaviours, especially in terms of work commitment and engagement with work environments. Unfortunately, generational stereotypes are often used to negatively categorise Generation Y as disloyal, unmotivated and interested only in work flexibility (Department of Education Employment and Workplace Relations, 2013; Baumberger-Henry 2012).

RECOMMENDATIONS

The discussion presented aims to alert those concerned about the challenges faced by graduating nurses and suggests that their impending employment should be addressed at the time of entry as students at university. Coupled with workforce and employers' needs, new nurses will play an important role in addressing the predicted shortfall of nurses by 2025. As a young, vibrant and knowledgeable workforce, there need to be processes in place at regular stages of Generation Y's early careers. This generation needs to be informed of workforce needs as students and again as graduate nurses when they begin their nursing career. Developing an awareness of 'where nurses are needed' in the early stages of their career has the potential to inform future career choice and fill workforce gaps where education and health might cooperate to find solutions.

Creative ways to educate nurses and provide a career pathway are suggested. Proposing electives in aged care and mental health nursing in pre-registration programs is one way to develop early interest and passion in these fields, provided they are positive and nurturing experiences. Generation Y nurses want to choose where they would like to work and initial contact with the clinical arena can have a major impact in their chosen field. Workforce and education providers should make new graduates aware through their course of study and on graduation that there are shortages in aged care and mental health care and suggest that this is where they should be applying. Some specialist aged care and mental health GTPs are offered to successful applicants in private and public health facilities, but retention of new graduate nurses remains low (Rush et al 2013). It is recommended that strategies targeting under graduate students in the classroom and clinical areas would be of benefit to nurses and employers. Presenting the state of nursing recruitment needs early, in a transparent and coordinated manner to 'new' nurses, would facilitate their preparation into the industry.

Industry representatives such as the Australian Nursing and Midwifery Federation (ANMF) have done much to raise public awareness of the employment plight of new graduates. Campaigns such as "stop passing the buck: Australia's nursing grads need jobs", mobilise the nurses concerned, employers, health care consumers and education providers in a united and solid front (Thomas 2012). The aim of the ANMF and its factions is to motivate governments to introduce commitment and economic investment in recruiting and retaining new graduates. Participating in public dialogue such as the Aged Care Workforce Strategy (Aged Care Insite 2014) place the needs of the aged care workforce high on the health workforce agenda.

Generational theories such as Mannheim's 1923 Theory of Generations (Parry and Unwin 2011; Codrington 2008) may be applied to redress the imbalance experienced in these three areas of nursing workforce: the shortage of suitable positions for new graduates; the predicted nursing shortfall; and the lack of specialist nurses in mental health and aged care. Applying a sociological approach provides the foundation for shared action facilitating the transition from the Baby Boomer to the Generation Y workforce.

Bringing these issues together may form a potential solution: graduate nurses filling attractive positions in mental health and aged care would in return increase prospective retention.

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