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Is it my job? The role of RNs in the assessment and identification of delirium in hospitalized older adults: an exploratory qualitative study

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Abstract

Delirium is characterized by acute and fluctuating cognitive decline, which is often missed in older adults who are assumed to be experiencing age-related changes or dementia. Delirium affects up to 50% of hospitalized older adults. The aim of the current study was to (a) explore current practices of RNs in assessing and identifying delirium in hospitalized older adults and (b) inform new educational initiatives. Qualitative methods were adopted using eight semi-structured group interviews with 24 RNs. Thematic analysis revealed a dichotomy in practice where RNs described delirium assessment and identification as (a) *It's Not My Job*, (b) *It is My Job*, and (c) *It's Complex*. The imperative to improve delirium assessment and identification to create safer and more caring health care environments means the current findings provide important evidence to build into practice and education strategies. The current authors have developed engaging educational interventions and begun implementation at the study site to develop delirium assessment and identification capacity, which moves clinicians beyond awareness and aims at practice adherence or the consistent application of evidence-based delirium assessment.

Keywords

study, qualitative, older, delirium, role, exploratory, my, job?, identification, hospitalized, rns, adults:, assessment

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Abstract

Delirium is characterised by acute and fluctuating cognitive decline which is missed in older people who are assumed to be experiencing age related changes or dementia. Delirium affects up to 50% of older people admitted to hospital. The aim of this study was to explore current practices of registered nurses in assessing and identifying delirium in older people in hospital and inform new educational initiatives. Qualitative methods were adopted using semi-structured group interviews (n=8) with registered nurses (n=24) the thematic analysis revealed a dichotomy in practice where registered nurses described delirium assessment and identification as 1) It's not my job; 2) It is my job; and, 3) It's complex. The imperative to improve delirium recognition to create safer and more caring healthcare environments means the findings from this study provide important evidence to build into practice and education strategies. The authors have developed engaging educational interventions and have begun implementation at the site of this study, to develop delirium recognition capacity which moves clinicians beyond awareness and aims at practice adherence, that is the consistent application of evidence based delirium assessment.

Introduction

Delirium

Delirium affects up to 50% of older people admitted to hospital, it is frightening and associated with a range of adverse outcomes yet continues to be undetected in 32-66% of people (Maclullich et al. 2013; Schofield et al. 2011). Delirium is characterised by acute and fluctuating cognitive decline which is missed in older people who are assumed to be experiencing age related changes or dementia (Flaherty 2011; Grover & Shah 2011). The discomfort caused by delirium, while most keenly felt by the older person extends to their families and the healthcare team, likely affecting the care they provide (McDonnell & Timmins 2012). Delirium is preventable in at least one-third of

older people reflecting real opportunity for improvement (Maclullich et al. 2013). Clinical practice and research demonstrate that registered nurses are effective in identifying individuals in their care who are confused but they do not use assessment tools to determine the presence of delirium (Hare et al. 2008; Steis & Fick 2012). Registered nurses have a 24- hour bedside role placing them in a position to take the lead in delirium recognition and thereby reduce the poor outcomes older people experience in healthcare settings (Irving et al. 2006).

International and national context

Interest in delirium is growing with policy development, research, educational interventions and the launch of specialist professional groups (Maclullich et al. 2013). In Australia, the delirium clinical practice guideline and care pathways were published (DOHA 2006, 2011) and there is now an Australasian Delirium Association. To promote improved care for people with cognitive impairment in hospital the Australian Commission on Safety and Quality in Healthcare has launched a campaign seeking professional and community commitment, offering supportive resources and guidance through revised healthcare standards which reflect the importance of delirium care (ACSQHC 2014). Within New South Wales, Australia, the NSW Ministry of Health funded Dementia/Delirium Clinical Nurse Consultant (CNC) positions, clinical leaders across community and acute care settings (known as Local Health Districts). The first author (MC) is a district CNC in Delirium and Dementia and this study was designed to inform this role.

What happens in practice

The experience in clinical practice is reflected in literature. Nursing reports may include the fluctuating cognitive levels and confusion of an older person but without evidence from validated delirium assessment tools (Hussein & Hirst 2016; Hare et al. 2008; Steis & Fick 2012). Concerned with improving delirium recognition in clinical practice this research enquiry began with the aim to describe just how registered nurses who did recognise delirium in older people in their care did it.

Methods

A qualitative descriptive approach was used to generate understanding about the practices of registered nurses in recognising, assessing and identifying delirium (O'Leary 2010).

Setting and sample

The study was undertaken with staff from a Local Health District located in the state of New South Wales (NSW), Australia. The main hospital is a large regional emergency and trauma centre which includes specialist aged-care and general wards where older people are admitted for medical investigations, treatment and surgical procedures. A flyer promoting participation in the study was distributed to wards where registered nurses cared for older people. In addition, the flyer was emailed to the Director of Nursing, Nurse Unit Managers, and Clinical Nurse Educators working in the participating hospital. The flyer explicitly stated that volunteers with experience of recognising delirium were sought to participate in a group interview. Participant Information Sheets were issued and Consent Forms were completed prior to the commencement of each group interview.

This recruitment strategy resulted in a purposive sample of registered nurses with experience of recognising delirium. Registered nurses working solely in intensive care and drug and alcohol care settings were excluded from this study. All participants self-identified as having prior experience in recognising delirium in older people. The study was approved by the University and Local Health District's Health and Medical, Human Research Ethics Committee and access to the study site was approved by the Local Health District.

Data collection

Semi-structured interviews were undertaken by the principal investigator using a prompt guide developed by the research team, piloted in the clinical area and amended to include the findings from the pilot exercise. The group interviews lasting an average of one hour were undertaken over two months and recorded using an audio digital recorder. Prior to each interview demographic data were obtained by questionnaire; this included gender, years of nursing experience, aged-care

experience and education. A professional transcriber transcribed the interviews verbatim. All data were anonymised. Numerical codes were allocated to each participant and each group interview, for example, RN003:IV5:P3:L15 refers to Participant 003, Interview 5, page 3 and line 15.

Data analysis

Extraneous material was excluded from the data, leaving only material important to the research question for analysis (Hickson 2008). Data collection and analysis occurred concurrently. Thematic analysis was used to generate understanding about how registered nurses recognise, assess and identify delirium (Koch 2006). A template was adapted for reading and reviewing the data to guide analysis and demonstrated rigor in the process. The template enabled a systematic means for data analysis and formed part of an audit trail able to be verified by others (DePoy & Gitlin 2011; O'Leary 2010). A mind map was used to guide the generation of themes and to identify linkages. Adoption of these techniques built interconnectedness and meaning to the raw data (Burnard 1991; O'Leary 2010).

To ensure methodological rigour, thematic analysis was reviewed by three other researchers. Throughout the data analysis phase the research team met to ensure the finding was credible and generated from the transcripts of the interview data. Amendments to the themes occurred as the in-depth interrogation of the raw data was undertaken (Burnard 1991; O'Leary 2010).

Results

A total of eight group interviews were undertaken consisting of 3 to 7 registered nurses (n= 24). Most participants worked at the large hospital where the study was undertaken (83%). The participants came from a range of hospital units, including emergency, renal, aged-care and medical specialities. The majority of participants (67%) had more than 10 years' experience as registered nurses, over half (58%) had specialist aged-care roles, clinical nurse specialists (CNSs), clinical nurse educators (CNEs) and clinical nurse consultants (CNCs) and over one third (37%) had post-graduate qualifications. Thematic analysis of the interview transcripts generated three themes: 1. It's Not My Job, 2. It Is My Job, 3. It's Complex.

Theme 1: It's Not My Job

This theme explores how participants viewed their own role in delirium recognition compared with others in the healthcare team. These responses are organised into four sub-themes: 'It's not my role here'; 'It's their job'; 'Maybe if I had training?'; and 'lack of organisational supports,' reflecting the concern of overstepping specialist and discipline boundaries without organisational enablement or the confidence of having received specific education.

It's not my role here

Although participants had some experience in using cognitive assessment tools it was perceived that there was not an expectation to expressly assess and identify delirium.

> *"….I probably have a few times in the past done a bit of a Mini Mental with somebody who was obviously really confused but …. it's never sort of been perceived as my role….."* (RN20:IV6:P9:L12)

It's their job

Participants explained that cognitive assessment was formally attended by allied health staff (Occupational Therapists) in this hospital and, on occasion, the medical staff or specialist aged care nurses, supporting their belief it was not their role.

> *"….so it's more something (Aged Services) do than what we do."* (RN23:IV7:P6:L7)

The aged care specialists were also viewed as having the time to appropriately assess the older person in hospital.

> *"They love that stuff and that's their niche… So they see it every day. Like we see it every day but ….., they have the time…."* (RN24:IV8:P5:L18)

Maybe if I had training?

Participants reported that they wanted more support from their employing organisation in the form of training and resources to implement evidence based recognition of delirium. The perception that

recognition of delirium was not part of their job was further verified by the lack of mandatory training or workplace education on delirium.

> *"... It's really only been...'cos of my own interest, that I've been able to increase my own knowledge on delirium."* (RN8:IV3:P18:L5)

Apart from specialist aged care nurses, there was little knowledge of evidence-based tools for delirium assessment and identification, such as the Confusion Assessment Method (CAM). The CAM was described as a tool which was useful for validating the participants concerns about the possible presence of delirium. Drawing on their previous experience of caring for older people with delirium was emphasised over the assessment outcomes of the CAM.

> *"It's (the CAM) an indicator. It's a good thing to take to the geriatrician…… it's more the whole picture when you're assessing.."* (RN1:IV1:P7-8:L14)

Lack of organisational supports

Linked with the perceived lack of opportunity for training within the organisation, participants introduced concerns about a lack of supportive processes and resources for recognising, assessing and identifying delirium. Validated delirium screening and assessment tools were not readily available, nor was there ready access to, or knowledge of the delirium care clinical pathways.

> *"The wards aren't using any sort of delirium assessment tool because they haven't got any ..."* (RN2:IV1:P7:L5)

> *".....you don't necessarily always have the chance to.....do everything that you would want to for the patient .....you're flat-out from the beginning of the shift to the end.."* (RN21:IV6:P19:L19)

Theme 2: It is My Job

This theme explored the perception of participants about their role in the recognition of delirium amongst older people in hospital. Participant responses were framed by an understanding of registered nurse responsibilities, generating three sub-themes: 'I do general observations'; 'I gather

information'; and 'We describe what we see'. This emphasised the nursing role in delirium recognition as monitoring vital signs and observing the physiological and behavioural changes older people display. A range of barriers in the recognition of delirium were discovered; predominately time and opportunity.

I do general observations

Apart from aged care specialists only one participant included reporting cognitive changes in their assessment for delirium. Participants understood their role to be pivotal in ensuring general observations were used to capture evidence of physical disease.

> *"…, checking the vital signs, temperatures, and we do things like urine dipstick …"* (RN11:IV3:P12:L10)

By focussing on pathophysiological laboratory results little attention was paid to the possibility of hypoactive delirium. Hypoactive delirium was not well understood by the participants.

> *"The hypoactive, …. I don't know that I would actually recognise that even now."* (RN21:IV6:P8:L6)

Participants who understood hypoactive delirium explained this type of delirium was more likely to be recognised retrospectively. Participants explain that hypoactive delirium is often missed because an older person with a hypoactive delirium does not attract attention in the same way that older people with hyperactive delirium do.

> *"I think maybe hypo-delirium needs to be pushed more. I think that it gets missed a lot because they're nice and quiet."* (RN5:IV2:P18:L5)

I gather information

The importance of gaining a full clinical picture was acknowledged by the participants and they described the necessity for collaboration to gain a clinical history, particularly to identify acute behavioural changes. Families were recognised as key informants. Aged care specialists described a more diverse range of collaborations in seeking information.

"….if the family member is there…..you can say 'Is this how they would normally be…..?'" (RN20:IV6:P4:L9)

Having prior knowledge of the older person through previous admissions and handover information were identified enablers for participants in recognising delirium.

"…if we had looked after the patient the previous day, we would suddenly notice a change. If you had not then you would be inclined to ask the relatives…….'how is this patient at home?'" (RN17:IV5:P3:L15)

We describe what we see

Participants reported recording their observations and information gathered from older people and their carers to create a clinical picture. They did not acknowledge the presence of a delirium; or label the presenting symptoms of older people as a delirium. The term delirium was viewed as a medical diagnosis and the domain of medical officers.

"We document what we observe... We don't….I don't target it as delirium. The patient is having delirium - I don't write that". (RN18:IV5:P10:L3)

"….doctors are the only ones that can actually diagnose……you can say 'I suspect'.." (RN2:IV1:P11:L14)

Overwhelmingly participants preferred the term 'confused' to 'delirium' as this was viewed as describing rather than labelling. Delirium was seen to be a modern construct and poorly understood.

"Once…the patient's diagnosis would have been confusion…..not delirium…I think the words have changed but I'm not sure that the actual signs and symptoms have…" (RN23:IV7:P16:L19)

".. what's the actual definition of delirium? ….to me a patient with delirium…..is someone that's probably a bit confused, agitated that turns out to have a UTI or a chest infection…." (RN23:IV7:P15:L8)

This sub-theme inter-relates with the theme *'It's complex*' as registered nurses explained their concern with incorrectly labelling an older person with delirium through their professional responsibilities and out of concern for the older person who may be stigmatised.

Theme 3: It's Complex

Delirium recognition was found to be complex and participants experience, training and workplace setting varied, creating divergence in their practice. Four sub-themes further describe the findings; 'Knowledge gaps in differentiating dementia and delirium'; 'Working with families and carers'; 'Emotionally demanding'; and, 'Registered nurse and community attitudes'.

Knowledge gaps in differentiating dementia and delirium

A lack of understanding about dementia and the interrelationship with delirium was evident. There was awareness about the possibility of mistakes being made between the diagnoses of dementia or delirium. The participants were concerned about accurately differentiating between dementia and delirium. This overlaps with their concerns expressed in the 'We describe what we see' sub-theme about an incorrect label or diagnosis being given to older people.

> *"I wouldn't feel…. confident enough to.. say that this person has delirium..."*
>
> (RN4:IV2:P17:L8)

Once again, participants were reliant on their previous experiences, to understand differences between dementia and delirium.

> *"So I think it is your past experiences where you've seen the delirium from. So I haven't had formal training but…"* (RN20:IV6:P10:L7)

Behavioural and Psychological Symptoms of Dementia (BPSD) were raised by participants as a confounding factor when determining whether older people had a dementia or delirium. Participants found challenges in finding the time to monitor changes in behaviour and cognition and excluding medical causes of confusion, this reinforces the time barrier identified in Theme 1 'It's Not My Job'.

"And also trying to decipher.... (if) *this is more about BPSD rather than a delirium…"* (RN3:IV1:P10:L16)

Working with families and carers

Family members were valued for the special knowledge they could share in recognising acute changes in the older person, however, complexities emerged. Participants hinted at concerns around confidentiality and ensuring contact with the appropriate family member. A preference for contact initiated by family members was expressed, and time was always a factor for consideration.

'It's quite helpful sometimes when the family do come forward themselves …" (RN11:IV3:P7:L7)

Emotionally demanding

Participants acknowledged that delirium was distressing and sad for older people who experienced a delirium. The agitated behaviours which result from an untreated hyperactive delirium concerned and challenged the registered nurses and the older people with delirium and their family.

"The sad thing is that sometimes … they remember that they punched the nurse and that they were swearing their heads off and stuff like that…..it's sad, really sad for them. It's terrible." (RN2:IV1:P19:L5)

Along with the sadness expressed over caring from older people with a delirium, participants felt ill-prepared to provide effective support for the behavioural changes emanating from a delirium.

"It's just…anxiety and stress for everyone involved…." (RN14:IV4:P24:L6)

The challenges of dealing with emotionally demanding scenarios added complexity to the workload. Participants expressed their lack of competence in managing the stresses associated with providing care for older people with a hyperactive delirium. Evidence based workplace strategies for managing these stresses were not reported.

Attitudes towards ageing and delirium

The attitude of registered nurses towards ageing added complexity to the recognition of delirium in older people in hospital. While ageism was rarely overt in the interviews; there was evidence that

delirium, which is most prevalent among older people, was not perceived as a priority. Other conditions and nursing responsibilities were seen as more important despite the significance of delirium recognition for older people.

> *"… if you gave me a presentation of someone in their early twenties… [who might seem to be] …delirious; I'm more likely to say it's acute psychosis…..you bring your prejudice to your assessment."* (RN16:IV5:P11:L17)

The need to recognise, assess and identify delirium was not perceived as the main concern when people may need attention for medical conditions such as a heart attack.

> *"….I don't initially think delirium…..I think heart attack…"* (RN:24:IV8:P7:L23)

Similarly, delirium was acknowledged by some participants as a drug and alcohol concern rather than an issue related to aged-care.

> *"..when someone says 'delirium',……I think alcohol withdrawal."* (RN16:IV5:P11:L15)

There were participants who expressed personal agency as an outcome of unintentional learning which prompted reflective practice and the development of professional competency in delirium recognition.

> *"…..now that I'm sort of learning…about delirium, it's like, 'Oh, we could have done something'..."* (RN7:IV6:P8:L8)
>
> *"..I'd just think 'Oh they're old and confused...'…..I didn't….. recognise that there was a medical cause…. So it's only through learning that I actually am now more aware.'* (RN5:IV2:P1:L12)

Participants identified attitudes as a barrier to delirium recognition by colleagues and family members as they described requirements on them to advocate with the healthcare team for the confused older person and educate family members about dementia.

Discussion

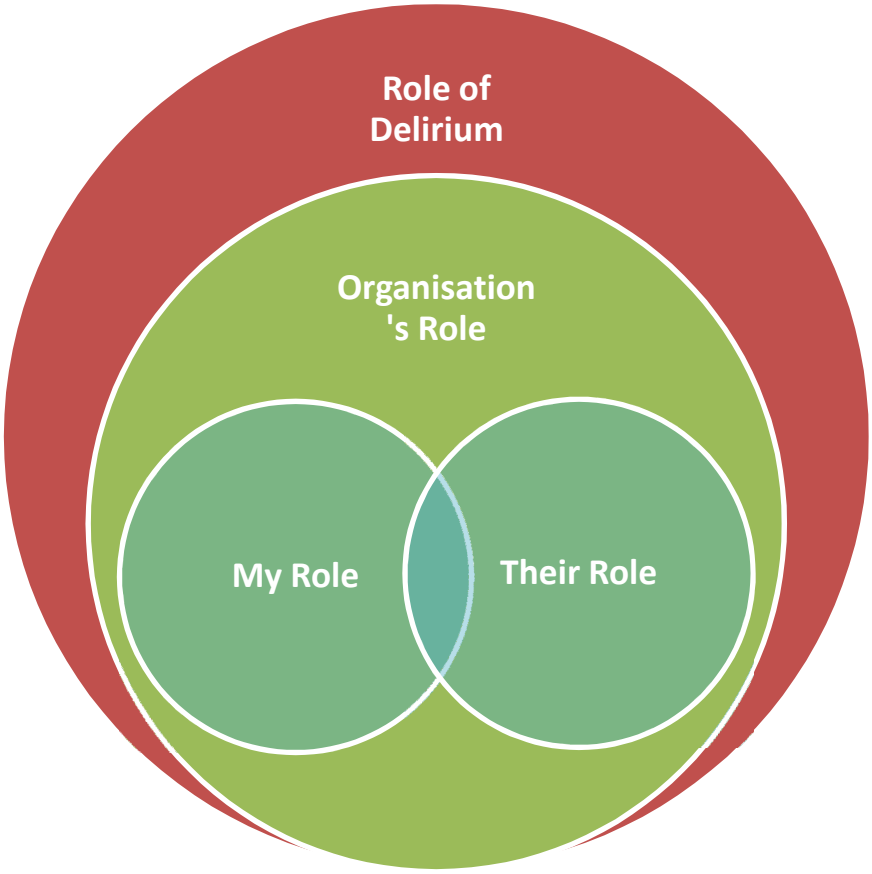
These findings, presented in the three themes 'It's Not My Job'; It Is My Job; and 'It's Complex,' provide an insight into current practices of registered nurses in recognising delirium in the older person in hospital. Registered nurses self-identified as experienced in recognising delirium. Similarities in the findings have been reported in recent research which described the discomfort registered nurses experience with delirium, noting they not only avoided using the word delirium but the more experienced nurses distanced themselves from the older patient who had a delirium (El Hussein & Hirst 2016). The findings demonstrated a lack of evidence based practice and acknowledgement by participants of the need for investment in training. Also evidenced is the interaction of four factors in the recognition of delirium amongst older people. These are: The perceived role of the registered nurse; the perceived role of other healthcare professionals; the role of the organisation and the meaning of delirium.

This exploratory qualitative descriptive study was limited to a small sample of registered nurses and recruitment was challenging in the busy acute hospital, particularly amongst registered nurses from surgical wards. However, saturation was achieved and the views of participants are likely to be representative of registered nurses working in other areas. This study was undertaken by a CNC in Delirium and Dementia which allowed the findings to be integrated into the strategic plan for the hospital where the study was undertaken and used specifically to inform initiatives to improve delirium care for older people.

Where to from here

Contradictory clinical practices in the assessment and identification processes to recognise delirium among older people in hospital were reported by the registered nurses in this study. Participants described delirium care as complex and simultaneously it was perceived as their job and not their job. The findings from this study were used to develop a model called Roles and Responsibilities in the Recognition of Delirium (Figure):

Figure: Roles and Responsibilities in the Recognition of Delirium



The Roles and Responsibilities in the Recognition of Delirium model acknowledges that registered nurses work within teams and systems which can enhance the implementation of evidence based recognition of delirium. The model promotes the role of registered nurses in the recognition of delirium. It acknowledges that registered nurses work within organisations whose priorities are expressed through resources and policies. It is suggested that educational interventions remain key in promoting the role of registered nurses in the recognition of delirium, and would allow the implementation of evidence based clinical practice. While time in staff training can be costly, the cost savings from preventing delirium and putting in place processes which reduce the length of

delirium provide greater, ongoing cost savings to the organisation. Safety and care quality is a central concern driving support for improved practice in delirium care at organisational and clinician levels, guidelines direct the need for delirium assessment as part of admission procedures for all older people (ACSQHC 2014; NICE 2010).

This research has added to the CNC role as reflection on the roles and responsibilities model provides a strategic and relevant means to developing multiple approaches to a complex role. Strengthened by partnerships with academics, along with initiatives such as the Better Way to Care guidelines for clinicians, managers and patients (ACSQHC 2014), increased engagement with all levels of stakeholders within the organisation has occurred resulting in the introduction and implementation of a delirium screening tool across the hospital and wider district. Educational interventions to enhance the implementation have been developed to provide engaging educational presentations, supported by innovative methods such as the Delirium flipchart and OSCEs (UOW 2015), to not only raise awareness but develop competency and promote adherence.

The findings from this study are supported by previous research which acknowledges the crucial role registered nurses contribute to the recognition of delirium (Brown et al. 2007; Cole et al. 2009; Irving, Fick & Foreman 2006; Rice et al. 2011). Web-based education interventions are growing in popularity due to accessibility, and they achieve high levels of satisfaction with the learning experience (McCrow et al. 2014). What is missing from web-based education is the challenge of engagement in an authentic work environment and the benefits of immediate feedback from mentors and colleagues, provided by interactive learning interventions, such as simulation methods (Wand 2011). Simulation methods foster confidence and competence in participants as they engage in learning guided by adult learning principles and undertake assessments by interventions such as Objective Structured Clinical Examination (OSCE) to develop mastery (Mitchell et al. 2015). The

research which followed on this study acknowledged the benefits of both approaches to education and developed an educational programme which combined different educational strategies.

The research team used the findings from this study to implement a new education programme for delirium care which focuses on skill development of registered nurses to recognise delirium. This education consists of four learning activities:

- Preparation activity: 15 minute online delirium care module;
- Face-to-face education session: 15 minutes using Delirium Care Flip Chart resource;
- Reflective practice activity: Half hour guided critical review of patient documentation of an older person who had a delirium; and
- Objective Structured Clinical Examination (OSCE): Two OSCEs assessing delirium recognition with two patient role play activities: (1) Using the Abbreviated Mental Test (AMT) and Confusion Assessment Method (CAM) and (2) Using the Delirium Risk Assessment Tool DRAT).

To date, 65 practitioners have participated as facilitators, role playing an older person with a delirium, OSCE assessor or a learner in this programme. What was crucial about this programme of education is that the content includes guidance for training the facilitators, role play participants and assessors which mean the programme can be sustained and has capacity building activities as a central tenet. Thus the findings from this study demonstrate how qualitative research can achieve knowledge translation at the adherence end and not simply staying at the beginning level of awareness (Grimshaw et al. 2012; Mickan et al. 2011).

Conclusions

The recognition, assessment, identification and diagnosis of delirium can be difficult for many registered nurses, due to the interplay of factors identified in the Roles and Responsibilities in the Recognition of Delirium Model. Interventions to improve the recognition, assessment, identification

and diagnosis of delirium by registered nurses needs to target each of the four domains described in the model .

References

ACSQHC 2014, *A better way to care: Safe and high-quality care for patients with cognitive impairment (dementia and delirium) in hospital*, Australian Commission on Safety and Quality in Health Care, Sydney, <http://www.safetyandquality.gov.au/our-work/cognitive-impairment/better-way-to-care/>.

Brown, S, Fitzgerald, M & Walsh, K 2007, 'Delirium dichotomy: A review of recent literature', *Contemporary Nurse : a Journal for the Australian Nursing Profession*, vol. 26, no. 2, pp. 238-47.

Burnard, P 1991, 'A method of analysing interview transcripts in qualitative research', *Nurse Education Today*, vol. 11, no. 6, pp. 461-6.

Cole, M, Ciampi, A, Belzile, E & Zhong, L 2009, 'Persistent delirium in older hospital patients: a systematic review of frequency and prognosis', *Age and Ageing*, vol. 38, no. 1, pp. 555-77.

DePoy, E & Gitlin, L 2011, *Introduction to Research: Understanding and Applying Multiple Strategies*, 4th edn, Elsevier Mosby, St Louis, USA.

DOHA 2006, *Clinical practice guidelines for the management of delirium in older people*, Department of Health and Ageing, Melbourne, Victoria, viewed 2 August 2014, <http://docs.health.vic.gov.au/docs/doc/Clinical-Practice-Guidelines-for-the-Management-of-Delirium-in-Older-People---October-2006>.

DOHA 2011, *Delirium Care Pathways*, 6770, Australian Government Department of Health and Ageing on behalf of Australian Health Ministers' Advisory Council., Canberra, viewed 24 March 2013, <http://www.health.gov.au/internet/main/publishing.nsf/Content/Delirium-Care-Pathways>.

Flaherty, J 2011, 'The evaluation and management of delirium among older persons', *Medical Clinics of North America*, vol. 95, no. 3, pp. 555-77.

Grimshaw, J, Eccles, M, Lavis, J, Hill, S & Squires, J 2012, 'Knowledge translation of research findings', *Implementation Science*, vol. 7, no. 1, p. 50.

Grover, S & Shah, R 2011, 'Distress due to delirium experience', *General Hospital Psychiatry*, vol. 33, no. 6, pp. 637-9.

Hare, M, McGowan, S, Wynaden, D, Speed, G & Landsborough, I 2008, 'Nurses' descriptions of changes in cognitive function in the acute care setting', *Australian Journal of Advanced Nursing*, vol. 26, no. 1, pp. 21-5.

Hickson, M 2008, *Research handbook for health care professionals*, Wiley-Blackwell, Oxford.

Hussein, M.E. & Hirst, S. 2015, "Institutionalizing Clinical Reasoning: A Grounded Theory of the Clinical Reasoning Processes RNs Use to Recognize Delirium", *Journal of gerontological nursing*, vol. 41, no. 10, pp. 38-44.

Irving, K, Fick, D & Foreman, M 2006, 'Delirium: a new appraisal of an old problem', *International Journal of Older People Nursing*, vol. 1, no. 2, pp. 106-12.

Koch, T 2006, 'Establishing rigour in qualitative research: the decision trail', *Journal of Advanced Nursing*, vol. 53, no. 1, pp. 91-100.

Maclullich, A, Anand, A, Davis, D, Jackson, T, Barugh, A, Hall, R, Ferguson, K, Meagher, D & Cunningham, C 2013, 'New horizons in the pathogenesis, assessment and management of delirium', *Age and Ageing*, vol. 42, no. 6, pp. 667-74.

McCrow, J, Sullivan, K & Beattie, E 2014, 'Delirium knowledge and recognition: A randomized controlled trial of a web-based educational intervention for acute care nurses', *Nurse Education Today*, vol. 34, pp. 912-7.

McDonnell, S & Timmins, F 2012, 'A quantitative exploration of the subjective burden experienced by nurses when caring for patients with delirium', *Journal of Clinical Nursing*, vol. 21, no. 17-18, pp. 2488-98.

Mickan, S, Burls, A & Glasziou, P 2011, 'Patterns of 'leakage' in the utilisation of clinical guidelines: a systematic review', *Postgraduate Medical Journal*, vol. 87, no. 1032, pp. 670-9.

Mitchell, ML, Henderson, A, Jeffrey, C, Nulty, D, Groves, M, Kelly, M, Knight, S & Glover, P 2015, 'Application of best practice guidelines for OSCEs—An Australian evaluation of their feasibility and value', *Nurse Education Today*, vol. 35, no. 5, pp. 700-5.

NICE 2010, *NICE clinical guideline 103 Delirium: diagnosis prevention and management* National Institute for Health and Clinical Excellence, UK, viewed April 2012, <http://www.nice.org.uk/nicemedia/live/13060/49909/49909.pdf>.

O'Leary, Z 2010, *The Essential Guide to Doing Your Research Project*, 3rd edn, Sage Publications, London.

Rice, K, Bennett, M, Gomez, M, Theall, K, Knight, M & Foreman, M 2011, 'Nurses' recognition of delirium in the hospitalized older adult', *Clinical Nurse Specialist November/December*, vol. 25, no. 6, pp. 299-311.

Schofield, I, Tolson, D & Fleming, V 2011, 'How nurses understand and care for older people with delirium in the acute hospital: a critical discourse analysis', *Nursing Inquiry*, vol. 19, no. 2, pp. 165-76.

Steis, M & Fick, D 2012, 'Delirium superimposed on dementia: Accuracy of nurse documentation', *Journal of Gerontological Nursing*, vol. 38, no. 1, pp. 32-42.

UOW 2015, *Aged Dementia Health Education and Research (ADHERe)*, viewed 27/04/2016, <http://smah.uow.edu.au/nursing/adhere/index.html>.

Wand, A 2011, 'Evaluating the effectiveness of educational interventions to prevent delirium', *Australasian Journal on Ageing*, vol. 30, no. 4, pp. 175-85.