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"Delirium: An essential component in undergraduate training?"

ABSTRACT

Delirium is an acute medical emergency, the presenting features are significant disturbances in the person's cognition, both their attention and awareness. Delirium develops over a short period of time and predominantly relates to an underlying medical condition. It is significantly under-recognised in the older adults who present to acute medical services and in those living within a care home setting. Up to 30% of older adults who present via the Emergency Department may be experiencing signs and symptoms of delirium, with up to 33% of older adults within the care home setting also experiencing delirium. In both settings the delirium may go unrecognised and be incorrectly considered as a deterioration of an existing dementia.

Nurses and care staff in the care home setting, spend more time with older adults than any member of the multi-disciplinary team e.g. GP, physiotherapist, district nurse etc. and as such, their knowledge and skills in the recognition and early intervention when delirium is present can have a significant impact on the outcome for the older adult.

Using a Freedom of Information request (Freedom of Information (Scotland) Act, 2002), a legal process designed to elicit transparency and guarantee a response, the authors invited responses from Scottish universities, to enable a review of the current approach in the teaching of delirium to undergraduate nursing students.

At the outset, the authors were interested to establish the extent to which delirium featured in the nursing undergraduate programme in Scotland. Having established that the approach to teaching was highly variable, this paper poses the question whether more structured focus should be given to the topic within the undergraduate nursing curriculum.

1. Background

Delirium is a common, serious and acute medical condition with an incidence of 11–30% in older people in acute hospital care (Siddiqi et al., 2011, Siddiqi et al., 2016, Bearn et al., 2018). The older adult will experience significant fluctuating disturbances in their cognition, inattention, and their general physical and mental awareness will be impaired. Unlike dementia, delirium develops over a very short period of time, hours or days, and relates to an underlying medical condition. If detected early, treatment is likely to be more effective, with a reduction in longer term impact for the older adult, both physically and mentally. (Marcantonio et al., 2010; Boockvar et al., 2013; MacLullich et al., 2013; Siddiqi et al., 2016; Copeland et al., 2017).

Registered nursing staff and health-care assistants spend greater periods of time with hospitalised in-patients than other members of the multi-disciplinary team do, e.g. medical staff, AHPs, therefore their insight is frequently critical to delirium recognition (Irving and Foreman, 2006, Sockalingam et al., 2014; Fisher et al., 2015). This 'exposure' is magnified when the setting is the care home environment, where care is delivered on a day to day basis, predominantly by nursing and care staff (Heath, 2012; Siddiqi et al., 2009; Siddiqi et al., 2011). Siddiqi et al. (2009) suggests that the prevalence of delirium in the care home setting is between 15% and 33%, a finding supported in the earlier work of McCusker et al. (2004), with Boockvar et al. (2013) noting the prevalence between 16% and 33%.

Delirium can be categorised as hypo or hyperactive delirium. The hypoactive person may be withdrawn and sleepy with a reduced oral intake. They can often be mistaken for being depressed. In contrast the hyperactive delirious person is restless and agitated. They may also experience distressing visual hallucinations. Of the two subtypes, hypoactive delirium tends to be associated with poorer outcomes, including an increased mortality and higher rate of institutionalism (Hosker, 2017; Copeland et al., 2017).

In Scotland there have been national initiatives, led by Healthcare Improvement Scotland (HIS) to raise awareness in order to diagnose delirium (HIS, 2015), however despite this delirium is still frequently missed. In March of this year (2019), HIS published SIGN Guideline 157 (SIGN, 2019) on Risk reduction and management of delirium.

A review of the current Nursing and Midwifery Council (NMC) educational standards was also undertaken to ascertain the requirements/expectations of the nursing regulator related to delirium being included in the curriculum (NMC, 2004). There is no mention of delirium as a life threatening condition; the specific curriculum content is determined by each university with undergraduates needing to meet the essential skills clusters (NMC, 2007), however, these are not disease specific. The recent changes to the NMC educational standards does not address this either (NMC, 2018).

A similar undergraduate curriculum review to the one described in this article, carried out in medical schools, has shown that although delirium is frequently taught, there were inconsistencies in how it was taught as well as a failure to address attitudes (Fisher et al., 2015, Copeland et al., 2017). The authors considered the question 'would a review of the undergraduate nursing curriculum yield similar results?'

The paper took an exploratory approach, rather than a research based question, aiming to quantify not only what is taught to undergraduate nursing students, but how it is taught across the universities in Scotland who deliver an undergraduate nursing programme. As both authors live and work in care delivery services in Scotland, their focus was on the Scottish context of the undergraduate curriculum. It may be that a fuller, UK wide review is worth consideration, given the

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outcomes of this focused, limited review.

2. Methods

Copeland et al. (2017) took a Delphi approach to their enquiry with the medical curriculum, however no such 'specialist' nursing group exists. Therefore, in the absence of a specialist delirium nursing group, a freedom of information (FOI) request was emailed to every provider of undergraduate nursing courses in Scotland in November 2016. FOI was used as a pragmatic approach to eliciting information which would be relevant in establishing current practices. FOI gives enquirers the right to access recorded information, where this is held by a public sector organisation – anyone can request information, there are no restrictions on what you wish to use the information for, or who can request it. There are legal timescales set down for organisations to respond within. While other methods could have been adopted, they do not have the legal requirement of a response and may have been significantly more time consuming in trying to ensure a completeness of response from all providers; even using the FOI process two universities failed to respond. The request, rather than trying to answer a specific research type question, aimed to determine whether delirium was taught as a specific aspect of the programme or wrapped more generally into modules covering illnesses. Depending on the answers to the questions, the review may suggest development requirements in the undergraduate nursing curriculum.

2.1. Respondents

10 of the 12 of universities provided feedback to the FOI request. One university was incorrectly included in the request and responded noting they did not provide an undergraduate nursing curriculum. Two universities failed to respond. A total of nine universities therefore provided information in relation to their undergraduate programme.

The Open University (OU) were not included in the FOI request given the distance learning method they use to teach undergraduates. However on reflection, the authors acknowledge that for completeness, the OU should have been asked; this was a simple oversight in the initial enquiry.

2.2. Freedom of information questions

The FOI questions asked are noted on Box 1.

The responses are collated and summarised in the following section.

2.2.1. Does your educational programme teach on delirium at undergraduate level?

Eight out of the nine undergraduate nursing programmes teach on delirium as a specific element of the curriculum. Of the eight who deliver teaching, two specified that it was taught on both their adult and mental health courses, with one noting it was taught on their adult programme. The remaining five did not provide any further detail, with no-one noting if they taught about delirium on the learning disability programme.

2.2.2. What specifically is taught on delirium?

Three out of eight respondents provided detailed learning objectives specific related to delirium. Two of the eight universities noted that they taught delirium, using the 'Promoting Excellence in Dementia' framework (Scottish Government, 2011) as their foundation. Promoting Excellence is "A framework for all health and social services staff working with people with dementia, their families and carers". The framework was introduced in Scotland by the Scottish Government in 2011, following joint work between NHS Education for Scotland and the Scottish Social Services Council. Of note however, is that while delirium and dementia can be mistaken one for the other, they are significantly different in terms of aetiology and treatability; understanding dementia does not of itself ensure the identification and treatment of delirium.

While not providing a specific taught element on delirium in their curriculum, one respondent stated that they were planning to introduce a session on the assessment of people with delirium in acute and critical care in the following academic year.

One university listed two lecture sessions where delirium would be introduced as part of a broader discussion on post-operative and critical care nursing. A further one respondent did not have specific learning outcome for delirium, but rather taught it as part of a range of topics including alcohol and dementia.

2.2.3. What teaching methods are used to teach about delirium?

A variety of teaching methods were noted to be used, including classroom based lectures in five out of the eight replies, with four of them also incorporating exploration in small group case discussions. Three universities used simulation/role playing, whereas three included delirium as a self-directed learning topic. Other methods used included online learning (albeit they were unspecified in what this meant) from one area, and watching a video from another respondent. One stated they used 'face to face' teaching methods but did not specify what was meant by that.

2.2.4. How is the impact of delirium teaching evaluated?

There was no specific evaluation carried out in five of the eight teaching programmes, whereas three mentioned summative assessment, post module and lecture evaluation. One university mentioned that students would be asked to prepare a short presentation from a list of topics of which delirium featured; in effect delirium could be missed completely.

2.2.5. Who delivers the teaching on delirium?

Seven respondents have their own academic staff delivering the teaching, with no mention of the specific skills/knowledge of their staff related to delirium. However three universities noted they use specialist Dementia Nurse Consultants to teach their undergraduates. On one

Box 1

- ☐ Does your educational programme teach on delirium at undergraduate level?
- ☐ What specifically is taught on delirium?
- ☐ What teaching methods are used to teach about delirium?
- ☐ How is the impact of delirium teaching evaluated?
- ☐ Who delivers the teaching on delirium?
- ☐ Do you involve the public, third sector or patients in the teaching of delirium?
- ☐ Where do you deliver the teaching e.g. lecture theatre, simulation, ward level?
- ☐ Are there opportunities for students to gain experience in an environment where delirium is present?

programme they only use online resources for teaching.

2.2.6. Do you involve the public, third sector or patients in the teaching of delirium?

Six respondents stated they did not involve public, patients, or the third sector in delivering delirium training. Two failed to answer the question.

2.2.7. Where do you deliver the teaching e.g. lecture theatre, simulation, ward level?

A variety of settings are utilised in teaching, with the majority (six) using lecture theatres as the main learning environment. Four responses noted that teaching would occur in the student's clinical placements. In three areas they use the classroom setting for small group teaching, with two also using simulation. One only uses online resources.

2.2.8. Are there opportunities for students to gain experience in an environment where delirium is present?

Seven of the eight respondents said that given the shape of the curriculum, clinical placements would provide the opportunity to gain experience. One response did not answer the question.

3. Discussion

The use of FOI was a pragmatic approach to establish the information as it has the advantage of requiring a response from public bodies, in this case universities. An additional advantage is that responses must be sent within a legally determined timescale. One potential disadvantage of this approach is the anecdotal suggestion that it can generate anti-bodies from respondents who often have a dislike of being required to answer questions within a specific timescale, when they are already busy pursuing their own workload. Additionally, it is possible that respondents are reluctant to answer questions fully for fear of what the enquirer will do with the information.

The responses provided demonstrate a mixed approach to the teaching of delirium within the undergraduate nursing curriculum. For some there appears to be a lack of differentiation between dementia and delirium, given that a dementia framework is being cited as the basis of their teaching on delirium. This is disappointing and worrying; if the teacher doesn't understand the importance and the difference, it does not bode well for the foundation knowledge of future practitioners. As noted previously, delirium is an acute medical emergency and if those teaching about delirium do not differentiate between dementia and delirium, the students' learning will be impacted on (Davis and Wilcock, 2003).

Also of concern is the approach taken where delirium is either included as a self-research aspect of the curriculum or is expected to be taught in the clinical setting. Depending on the settings of a student's placement, this could mean a student never coming in to contact with someone experiencing delirium, or being based in a placement area already poor at delirium recognition ergo the student will learn little on this life threatening and life limiting acute illness. In addition to the skills/knowledge of individual placements, contemporary nursing students often spend a significant part of their training in community placements where the opportunities to be exposed to delirium, in an environment where it is well recognised can be limited e.g. even if a student's placement is within a care home where up to 33% of residents may have a delirium, there is no assurance that the staff or the student themselves will recognise the presence of delirium rather than changes being attributed to dementia. This becomes a circular problem in that 50% of a student's training happens in placement; if the nurse mentors don't recognise or don't have experience caring for people with a delirium, they aren't going to teach the student. This lack of experiential learning then means when a student qualifies they will have little or no experience related to delirium recognition and treatment; they won't have been taught in university and the cycle of 'unknowing' begins again.

Research shows that the prevalence of delirium within an acute setting (e.g. acute medical ward/A&E) ranges from 18 to 30% (Siddiqi, House & Holmes 2006), which means that in a thirty bedded ward, between three and nine patients may have delirium. Within the care home environment, the best estimate of prevalence ranges from 15 to 33% of residents who may be experiencing an undiagnosed delirium (McCusker et al., 2004; Siddiqi et al., 2009; Boockvar, 2013), meaning in a thirty bedded care Home between four to nine residents may have delirium.

Delirium, unlike dementia, is characterised by an acute onset with a variety of not dissimilar symptoms including confusion, inattention, distress and, on occasions, visual hallucinations. Delirium impacts on the here and now health (acute symptoms) of the individual, but also affects and speeds up the longer term cognitive decline of the individual and leads to an increased mortality rate (Partridge et al., 2013; Witlox et al., 2010). Delirium is reversible if treated promptly.

SIGN guideline 157 (SIGN, 2019 p.1) notes that, despite the prevalence of delirium "*20% in adult acute general medical patients. The prevalence is higher in particular clinical groups, such as patients in intensive care units (ICU). It affects up to 50% who have hip fracture and up to 75% in intensive care"* it remains significantly undiagnosed in these clinical settings.

Of the nine institutions that provide undergraduate nursing programmes, all include some teaching on delirium, however the content is wide and varied, as is the expertise of those involved in delivering the training. As with any teaching, the expertise of the teacher will impact on, not only the content of the training but also on the clinical insights provided, e.g. by case examples (Davis and Wilcock, 2003). Only a third of institutions were able to provide detailed learning outcomes.

Fisher et al. (2015) noted detection rates are not significantly improved by increasing the knowledge and skills of practitioners alone. The attitude and underpinning beliefs of healthcare and care professionals to people presenting with symptoms has a significant impact on early recognition and treatment outcomes (Davis and MacLullich, 2009; Pulford, 2015). We would suggest that the absence of clear learning outcomes, both from a knowledge and skills perspective, and from an attitudinal approach, may impact on the undergraduates' beliefs not being challenged, or at least shaped, in the early part of their career. It could also be argued that student nurses in some placement areas spend more time taking observations than the registered staff who are often doing other activities. Having a well-educated and alert student related to delirium has the potential to improve detection rates and therefore earlier intervention.

4. Conclusion

Human cost, to the individual experiencing delirium, to their family and to those around the person witnessing the distress, is high. In addition, the higher mortality post delirium, strongly suggests that specific focused teaching on delirium should be a core component of all undergraduate nursing curriculum.

Universities that provide an undergraduate programme of study have multiple competing demands around the content of their curriculum and, as such, integrating learning and teaching on delirium will present some with difficult decisions. Given the prevalence of delirium and the significant time nurses spend with people in their care, this represents a missed opportunity.

This brief study suggests that specific, focused teaching on delirium within the undergraduate curriculum would provide a number of benefits, firstly to those who experience a delirium, in that they are more likely to receive an earlier intervention if their presenting symptoms are recognised as delirium. From a nursing perspective, an increased knowledge and understanding of a condition which has a high prevalence in both the acute setting and in care homes will equip those nurses with the skills to intervene promptly. Although not the

underlying reason for this article, it is likely that early recognition, intervention and treatment of delirium will deliver an overall cost saving to NHS Scotland in terms of reduced lengths of stay, and in the case of care homes, the potential avoidance of a hospital admission, with the accompanying reduction in costs.

5. Limitations

This study was limited in scope in that it covered only Scottish universities and was also designed as an exploratory overview rather than an in-depth focused review of the content and learning outcomes of each programme. The study used the FOI methodology in the absence of a specialist 'delirium' nursing group, which exists within the medical field. Using FOI meant there was no exploration of the answers from respondents and no clarification of issues raised.

The issues highlighted are a starting point which should be considered by those that design and input to the undergraduate nursing curriculum. Although the study only considered a Scottish perspective, it is likely that a similar picture will be present across the UK and may be worthy of further exploration.

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Declaration of competing interest

Nil.

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