DELIRIUM IN AGED-CARE FACILITIES: A MAJOR CHALLENGE FOR HEALTH PROFESSIONALS

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Delirium is characterised by a rapid onset, fluctuating course and disturbances in thought, memory, attention, behaviour, perception, orientation and consciousness (DSM-V, 2015) and an acute and potentially fatal condition (Inouye, Westendorp, & Saczynski, 2014).

Research on delirium in residential aged-care (ARC) shows prevalence of delirium to be greater than in acute care, due to higher degrees of baseline cognitive impairment and co-morbidities, resulting in unnecessary hospital admission (Buettel et al., 2017)
WHY THIS TOPIC?

It brought to light a topic that I was passionate about while working as community MH nurse.

Better understand Delirium, reduce / prevent unnecessary admission / referrals to secondary services, from ARCs.

Researching a ‘unique topic’ which is of huge significance for older people living in ARCs.

Raise awareness of nursing assessment & management, and support mechanism in place.

Reduce a gap in knowledge. Paucity of research in ARC.
Contribute to new knowledge on delirium in ARC.
SIGNIFICANCE & IMPACT OF DELIRIUM

Unnecessary Emergency Department (ED) admissions is costly and an extra cost for ARCs (Bail et al., 2018), particularly for managing challenging behaviours, physical health & emotional cost to residents.

Death rate due to delirium 14-37% higher than those discharged without delirium (Siddiqi et al., 2006, 2016)

It is an independent predictor of increased six-months mortality (Han et al., 2009); and 40% death one year after a delirium episode (Inouye, 2006)

Over 60% will have lasting effects on their cognition 6 to 12 months after discharge (Putzar-Davis, 2009)
PREVALENCE OF DELIRIUM IN AGED-RESIDENTIAL CARE

**UK:** Siddiqi et al. (2016): 14% diagnosed of delirium among ARC residents over a one year

**Australia:** Travers et al. (2013): Prevalence rates ranged from 10% to 31% on admission

**Canada:** Landreville et al. (2012): 70% had a diagnosis of dementia were found to be delirious.

**Australia:** Traynor et al. (2016): 15% of clients from ARCs presented with delirium

**NZ:** Hanger et al. (2011): found 12% of admission to ED from ARC had a delirium

**NZ:** Jauny, R., & Parsons, J. (2017): ED admission of 6.7% from ARCs of one hospital
**RESEARCH DESIGN**

**Research Question:** *What are the success and barriers in aged-care nurses assessing and managing of delirium cases?*

- A mixed method approach was utilised comprising of a survey over one year in one of Auckland’s emergency department (ED) and focus groups

- Subsequently 10 focus groups with ARC nurses from standardised presentations of the top 5 (highest rate) and the bottom 5 (lowest rate) admissions to EDs

**Ethics:**

- University of Auckland Ethics Committee (Ref: UAHPEC012704) & Locality agreement at Ko Awatea Research Office (Ref: 1847)
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<th>No of patients</th>
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OCCURRENCES OF DELIRIUM IN ARCs

[Bar chart showing occurrences of delirium in different ARC settings, with bars indicating the number of presentations and patients per ARC.]
### AUDIT FINDINGS

<table>
<thead>
<tr>
<th>AGE</th>
<th>No of ARC admissions</th>
<th>Other admissions</th>
<th>Total admission</th>
</tr>
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<tbody>
<tr>
<td>&lt; 65</td>
<td>245</td>
<td>84,555</td>
<td>84,800</td>
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<tr>
<td>65+</td>
<td>2,177</td>
<td>17,612</td>
<td>19,789</td>
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<tr>
<td></td>
<td>2,422</td>
<td>102,167</td>
<td>104,585</td>
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</table>

Of the 2,422 presentations to ED, **6.7% (n= 163)** had a suspected delirium

<table>
<thead>
<tr>
<th>Total admission</th>
<th>Delirium</th>
<th>Confusion</th>
<th>Dementia with Physical health</th>
<th>Psychiatric &amp; Physical health</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>163</td>
<td>2 (1.2%)</td>
<td>92 (56.4%)</td>
<td>54 (33.1%)</td>
<td>12 (7.3%)</td>
<td>3 (1.8%)</td>
</tr>
</tbody>
</table>
FOCUS GROUPS FINDINGS

All ARC nurses employed within 10 ARCs: RNs, CMs, UCs & ENs
Six men and 25 women
Level of experience ranged from 1 to over 20 years

<table>
<thead>
<tr>
<th>Years of experience</th>
<th>&lt; 5 yrs.</th>
<th>6–20 yrs.</th>
<th>21+ yrs.</th>
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<tr>
<td>LP ARC</td>
<td>22% (7)</td>
<td>9.6% (3)</td>
<td>12.9% (4)</td>
</tr>
<tr>
<td>HP ARC</td>
<td>29% (9)</td>
<td>16.1 (5)</td>
<td>9.6% (3)</td>
</tr>
<tr>
<td>Total</td>
<td>51.6% (16)</td>
<td>25.8 (8)</td>
<td>22% (7)</td>
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</tbody>
</table>
NURSES EXPERIENCING CLIENTS WITH A DELIRIUM

93.5% (n = 29) (experienced nurses) had encountered delirium previously:

“... anything that has risen above to that level (UTI). After a couple of days of rest and antibiotics, they are back to normal again. If they have had deterioration with their dementia, we have also managed that. They have become quite comfortable and again having started on this plan, there is no drama. We readjusted their care plan and will have no issues” (CM1, LP)

6.4% (n = 2) had little or no experience of delirium in their respective ARC:

“Nearly nobody has been diagnosed here with delirium over one month, no delirium just UTI”, or “We haven’t had many, may be 5 or 6 this year, maybe a bit more” (RN, HP)
CONFIDENCE IN MANAGING DELIRIUM

Majority of nurses were fully confident. However, 19.3 % from HP & 6.4% from LP stated lack of confidence in identifying and managing delirium.

Mainly due to managing challenging behaviours of someone with a delirium:

“my only unconfident is if somebody that going to be abusive or aggressive and that’s going to affect other people, then it’s going to be hard to manage that, it’s more the environment, then I’m not confident with that

...If a patient is very hard and very uncooperative to manage, we would be looking at probably admitting them” (RN1, HP)
Forsberg (2017) contends that relatively little attention has been given to delirium education in ARC settings, and factual knowledge about delirium is necessary (Kristiansen et al., 2018). Findings from this study indicates that 64% regarded delirium education as crucial, but most ARCs did not cover delirium education in staff orientation:

“I’m pretty sure that our induction here does not cover delirium, but I must emphasise that when people start here, if they are not sure, they get another RN here or someone on-call. Hopefully they have the knowledge, but nothing specific in orientation” (EN2; HP)

“We always have other (senior nurses) to seek assistance from, so if we are unsure of something, we can always contact another team leader” (RN16; LP)

“...have no specific tools, [but] in the treatment room... ‘DELIRIUM’ acronym chart, is a good guide. We have a look at the chart and if they have mental illness, and inform the doctor, do blood test, etc.” (RN17; LP)

“[The] geriatric services of the DHB also offers training.” (EN2; HP) or “MHSOP come to train us on challenging behaviour” (CM4; LP)
70% nurses learn from past experiences in managing delirium successfully and utilised those skills again in managing future cases:

“We see more dramatic things happenings from people, may be with hallucinations for a person with Parkinson and had an acute delirium on top of the deteriorating health. This was very dramatic experience and that is something we could not quite get our head around it and we lost it, the patient was at the end stages of the disease, and all fell apart, so we did not see the delirium. If we catch it early, we see the big picture and that is education” (CM1; LP)

“for me you learn after a while...it’s about managing the episodes of delirium because it can come and go, so when things go well, I just get satisfaction, when it turns to custard I look at myself ask well where could I have done better and I’ll try that next time” (RN3; LP)
Over 60% believed good teamwork/peer support was important in managing delirious clients:

“...we work as a team here, in the end if feel unsure, we talk to the CM, talk to GP, HOP & MHSOP staffs” (RN2; LP)

“...like every morning, client A. would be fine but just ‘today’ he did not want that ‘horrible person’ looking after him. In that situation, I think I would just leave him with a glass of water in front of him and say take that medication and I am going away or I will ask someone else for help or go back later. I give him time or settle down with a new face” (RN4; LP).
Delirium is often confused with dementia or depression. Dementia is a chronic, slowly progressive condition characterised by confusion, and irreversible decline in mental abilities. Depression is a biologically based illness that affects a person's thoughts, mood, behaviour and physical health. Delirium has similar symptoms of confusion, mood swings, changes and impaired cognition (Buetell, 2017).

Participants demonstrated mixed levels of knowledge, own strength and weakness to distinguish the symptoms of delirium:

“We have got one resident here with bipolar and dementia and she gets delirium all the time” (RN4; LP)

“... I’m surprised that they don’t pick it up. They think it’s mental health issues that are coming up and I think why you don't know that. And this is from experienced nurses which I find it hard” (CM5; HP)
Communication was identified as an important issue in delirium management (Peacock et al., 2011). There were communication issues with family members in ARCs when someone has a delirium:

“...any new medication that might have been started before admission, therefore communication with the family helps...a lot have a better idea of how their relatives have been over a period of time, may have better approach than you, they may notice something a little bit different, they may describe things in different ways, eating or sleeping pattern or their behaviour towards others, or could be something different while in ARC” (RN7; HP)

“If someone is deaf, we need to have a good medium to communicate with them or their family. Or if they cannot speak English we need to get an interpreter or family, so that we can understand them or else patients get more agitated” (RN6; LP)
Participants felt that admission to ED was their last option, however they felt at times it was necessary, often its is because of family perception or insistence:

“...we have a family that are good at saying ‘send her to hospital’. If they cannot swallow and they are dying, and when they are aspirating, they must go the hospital. When they come back, they get them to go back again. Family often feels hospital is the answer, even though, sadly, it would be kinder and better to keep them here. We’ve had this going on for years, yet it still happens” (RN6; HP)
Prevention of delirium is more desirable for patients, families and health services and nursing care is crucial in the prevention and treatment of delirium (Siddiqi, et al., 2016). This study shows:

“Should someone you know to be confused, or their mood altered or anything, we up the fluids, dip-stick their urine and check that if they have an infection. We treat them straight away and don’t let them rage. We avoid people being delirious. We provide healthy food, get right medications, making sure they get out and have physical activities” (RN1; LP1)

Prevention and management of delirium in older people is vital (Traynor et al, 2016). In this study non-pharmacological interventions were mentioned by participants:

“...hydration, good care, nutrition, the elimination factors like constipation /urine, ... if they’ve got a familiar picture or an old belonging it makes them feel at home when they are in a new environment.” (RN7; HP3)

“if we send a patient to hospital or they are coming back with chronic urosepsis that’s really sad because that could have been avoided in the first stage. They don’t need going through much psychological trauma of being admitted and lying there for weeks. The whole environment make them strangers. We could have stopped that in the first place with early identification early intervention and I think that’s really negative”. (RN2; LP)
Subcutaneous & IV treatment

Subcut and IV treatment was seen as an effective way to treat dehydration or helping patients recover promptly. However, not all ARCs provide such treatments and relies heavily on secondary services for this. In Auckland’s region, the approximate cost of treating a someone in the community was $246.36 (BJP, 2011), compared to approximately $1,594 for one night at Middlemore hospital (CMDHB, 2016).

“It would be nice if we can do IV antibiotics here, because sometimes patients don’t respond to the oral medications for infections, especially those with aspiration pneumonia. Some can’t swallow properly...we use sub cut a lot... we can’t get them to drink, they are like a ‘terrible child’, I’m not eating, I’m not drinking. Suddenly after the sub cut fluid they start eat / drink, it makes a huge difference” (RN9; HP)

“...We would like to treat them here but we can’t initiate IV ourselves. We get them with a pick line already. The nurses at the hospital doing the IV therapy, they support us. We don’t initiate it ourselves – if somebody needs IV, which is more than what we can give, then we have to send them to hospital” (CM5; HP5)
Delirium-screening tools show low sensitivities or take a longer time to administer (Hargrave et al., 2017). ‘Confusion Assessment Method’ (CAM) (Inouye, 2006), recommends a cognitive assessment tool to be routinely used first then use CAM to screen for delirium. Han et al. (2009) found that Mini Mental State Examination (MMSE) was no longer considered best practice because it does not accurately reflect a delirious patient’s premorbid cognitive status. Montreal Cognitive Assessment (MoCA) (Nasreddine et al., 2005), is also extensively used now.

Over 64% never heard of or utilised any delirium tools. Only 12.9% were aware of the CAM tool or found the it was unsuitable for implementation:

“no tools...we check for UTI, infection, constipation, dehydration and do all the basic bloods” (EN2; HP)

“...we found it was going to be too labour intensive. You have to use it in each and every shift.... So we just use urine, bloods and chest x-rays and our observations, of course, temperature, BP, and SATS” (CM5; HP)
McCrow et al.’s 2012 study found ARC nurses frequently rely on primary care for cases representing hyperactive and hypoactive delirium.

Boyd et al. (2011) study found 45% of ARC staff have a GP available or on call 24/7, but many also had limited GP availability. In this study, over 80% expressed high expectations of their GP:

“**It is fortunate for us; he is right there for us when we need it. It is comforting for us to know that we don’t have to chase the GP and it makes a huge difference. He can support and guide us, he is right there for us. If something goes wrong, he is at a phone call away and also trusts us on our clinical judgement**” (CM1; LP)

“**GP will be able to provide us in terms of guiding us on what assessment needs to be done, decision making on admitting to ED....It’s really that support that we would expect from our GP to be able to provide to us 24/7**” (RN11; HP)
SECONDARY SERVICES

Traynor et al. (2016), found 15% of ARC clients presented with delirium in ED. This study shows participant valuing the importance of the ED, as well as MHSOP / HOP, though many viewed MHSOP as their preferred first point of call, ? Hawthorn effect:

“...we access MHSOP if we get a real problem, which is maybe once a year or twice a year. We give them a ring and they are really good. They listen and they support us....It is great to have that support and you do not feel alone and do not feel that you have lost the plot... if you have a mental health problem with a delirium on top of it, it’s nothing the gerontology people can help with, I’m sorry. It’s the other with the expertise of this particular problem” (CM1; LP)

MHSOP clinicians were perceived as specialists in dealing with challenging behaviours, whereas HOP clinicians were specialist for physical health problems:

“if somebody is wandering suddenly and we have done everything, or if they are going to get run over on the road, or suddenly they want to kill somebody, I think they need to go to MHSOP rather than the geriatricians, is that right? I may be wrong. I think if we have done everything medically that GP have ordered, we need psychiatric support” (RN6; HP)
MESSAGE

• Participants were able to identify delirium in most ARCs, but were reluctant to call it a delirium & some nurses particularly HP need more education and support to assess and manage delirium which was noticeable from the higher rate of ED admissions.

• Challenging behaviours will continue to be a source of referral to MHSOP

• Understanding/coping with family dynamics remains a serious problem

• Having experienced nurses together with new grads was valuable combination to manage complex cases

• Non-pharmacological treatment, initiating IV treatment in ARC facilities, would be advantageous to reduce dependency on secondary services, costs and other resources

• Non-homogeneity of findings is not representative of whole of New Zealand
THANK YOU / QUESTIONS

See full article on the focus group: