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Initiatives to Provide Better Care for the Elderly In-Patients with Dementia in An Acute Hospital- Experience from a Teaching Hospital in Singapore

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ABSTRACT

The elderly living with neurodegenerative diseases will increase as the population age. The acute hospital beds will mostly be occupied by the elderly, as they live with multiple comorbidities. Cognitively impaired elderly are even more likely to be admitted and hospital environment is harmful for them. Providing a comprehensive care package for the elderly with cognitive issues aim to reduce hospital associated complications, especially falls and delirium and ensuring no additional geriatric syndromes are added to the patients' lists of problems. Timely recognition and diagnosis of cognitive issues is still a challenge in most acute hospitals. Once the elderly patients with cognitive issues are identified, safety measures and personalized care plans can be initiated to reduce delirium, fall, restraint and nutrition risks. Hospital wide education initiatives on delirium and dementia related topics are vital to providing the best care for this group of vulnerable elderly.

Keywords: *Elderly, Dementia, Elopement, Restraint, Delirium.*

Introduction

Singapore is rapidly ageing due to increase in life expectancy and decreasing birth rate. By 2035, 1/3 of the population will be aged >65.[1] Currently, there are about 100 per 1000 persons living with dementia in Singapore. By 2050, the number would increase to 241 per 1000.[2,3]

The author's hospital is a teaching hospital located in the east of Singapore with >1200 beds, the elderly >65 occupy >60% of the beds at any one time. Among these elderly in-patients, about 40-50% have cognitive issues; and >50% of elderly living with chronic neurodegenerative diseases had not been previously diagnosed. The hospital is equipped to handle all specialties including various high dependency units and ICU wards for the respective disciplines.

June Andrews (2015) described the hospital as akin to a meat grinder for the elderly with dementia. Hospitalisation is common among the elderly with dementia. Once they are admitted, they tend to stay longer and are at higher risk of developing delirium, incontinence, falls, undernutrition, weight loss, functional decline and even death. Hospitalisations for the elderly with dementia may turn out to be a slippery slope of cognitive and functional decline culminating in institutionalization or death.[4]

A few years ago the author was asked by the senior management to improve care for the elderly patients with dementia, in terms of reducing in-patient falls, absconding from the hospital campus, reduce restraint use, reduce incident delirium and to improve the overall patient experience during their hospital stay. This long, yet worthwhile journey started a few years ago in an attempt to reduce harm and hopefully, improve overall outcome for the elderly admitted to a busy teaching hospital in Singapore.

Method

The whole project started with a request to putting in better care for the elderly with cognitive issues such that they do not abscond (elope) while they are receiving care in the hospital. The patients without cognitive issues are free to leave the hospital should they decide to do so.

For the rest of this paper, patients with cognitive issues imply the diagnosis of dementia (chronic major neurodegenerative diseases), with or without delirium. The elderly with primary psychiatric disorders were also included in this workflow, as they were also considered vulnerable, but they were under the care of old age psychiatrists.

The results for the various interventions discussed below were obtained through Quality Improvement projects and hospital wide audits which included reviewing various sentinel events reported before and after interventions. As the interventions were carried out in a step wise manner, starting in a few selected wards which progressed to hospital wide interventions in a time critical approach, there was no time to prove concepts before implementation of the ideas. Testing and prove of concepts therefore were done simultaneously while senior management and nursing monitor the outcome through the usual hospital audits.

The tale of the Purple Wrist Tag

The huge project started with an aim to stop cognitively impaired patients from elopement while they are receiving care in the hospital. Before the project begun, patients' autonomy was heavily taken into considerations. Ethical considerations for stigmatizing patients with cognitive issues and undermining patients' autonomy were argued, such that patients had their rights to leave the hospital should they want to. However, for the patients living with cognitive issues, it is the hospital's responsibility to ensure they are in a safe and secure environment, while they receive treatment for their acute medical or surgical problems. Patients living with cognitive issues should not be stigmatized, therefore a discreet tag is imperative. Since the patients in Singapore hospitals wear a different combination of colour wrist tags for reasons like drug allergies, fall risk and name tag, a purple tag discretely placed in the upper or lower limb would not be strikingly obvious. The public usually do not enquire about these limb tags.

The main challenge for the author at the start was to identify a screening tool for cognitive dysfunction which required minimal training, easy and quick to administer with relatively high specificity and sensitivity. The annual staff turnover was huge with an estimated >5000 staff members rotating in and out, therefore screening tools which require training like MMSE would be resource intensive. Hence the author chose orientation to time/place and person (Orientation x3) as the screening tool[5] to identify patients with cognitive issues. Assessment for "alert and orientated x3" is a basic skill taught in all nursing and medical schools, hence minimal training was necessary.

Once the patient scored wrongly for any of the orientation question at admission, they will be put on a purple wrist tag, as shown in figure 1. Admissions to the hospital would be through the Accident and Emergency (A&E) Department, specialist clinics or elective admissions for the surgical patients. The triage nurse at A&E was the first contact person to screen for orientation x3 while ward nurse assigned to the patients would be responsible for the orientation x3 screening. The purple wrist tag is not a diagnostic tag, to avoid stigmatizing the patients living with neurocognitive disorders. It simply works as an operational tag to improve visibility of the patients with cognitive issues for the hospital staff.

1.) PREVENT ELOPEMENT FROM THE HOSPITAL CAMPUS.

Generally, hospitals have no rights to retain patients against their will. However, unintentionally wandering off among the confused cognitively impaired patients while in an institution is not uncommon, and these incidents are considered as sentinel events. Once the patients with cognitive issues wander off the secure premises, they are at risks of serious harms and there must be measures in place to trigger an immediate search once an elopement happens. According to Rowe M, only 46% of those reported missing were found in the first five hours, 36% found between 5-12 hours later and 9% required 12-24 hours to be found. The remaining 9% took more than 24 to locate, and those who were discovered after >24 hours were more likely to be dead when found.[6]

In the author's hospital, elopement occurred at about 1-2 cases a year. These are classified as sentinel events and are considered unacceptable lapses in care. The author led a team of nurses and support staff to examine all the exits where elopement occurred and realized that the Accident & Emergency (A&E) department has the most dangerous exits where the doors opened directly into main streets which may be dark in the evenings. The doors at the A&E were wide for the ambulances and human traffic is always busy, it is hence a challenge for the staff to notice when patients leave the department. The other hospital exits are at the lift lobbies which are watched by security officers round the clock.

The purple tag is double barreled, with a RFID chip on the top. The RFID chip is the mechanism utilized to prevent elopement while they are in the hospital compound. RFID sensors are fitted at the lift lobbies and the A&E exits, Figure 2. Once the patient wearing purple wrist tag stands within 2 metres of the RFID sensors, alarm is triggered and a member of staff will immediately escort the patient back to their beds discretely. After implementation of the RFID chips and purple tags, no further elopement was reported.[7]

Figure 1- The Purple Wrist Tag

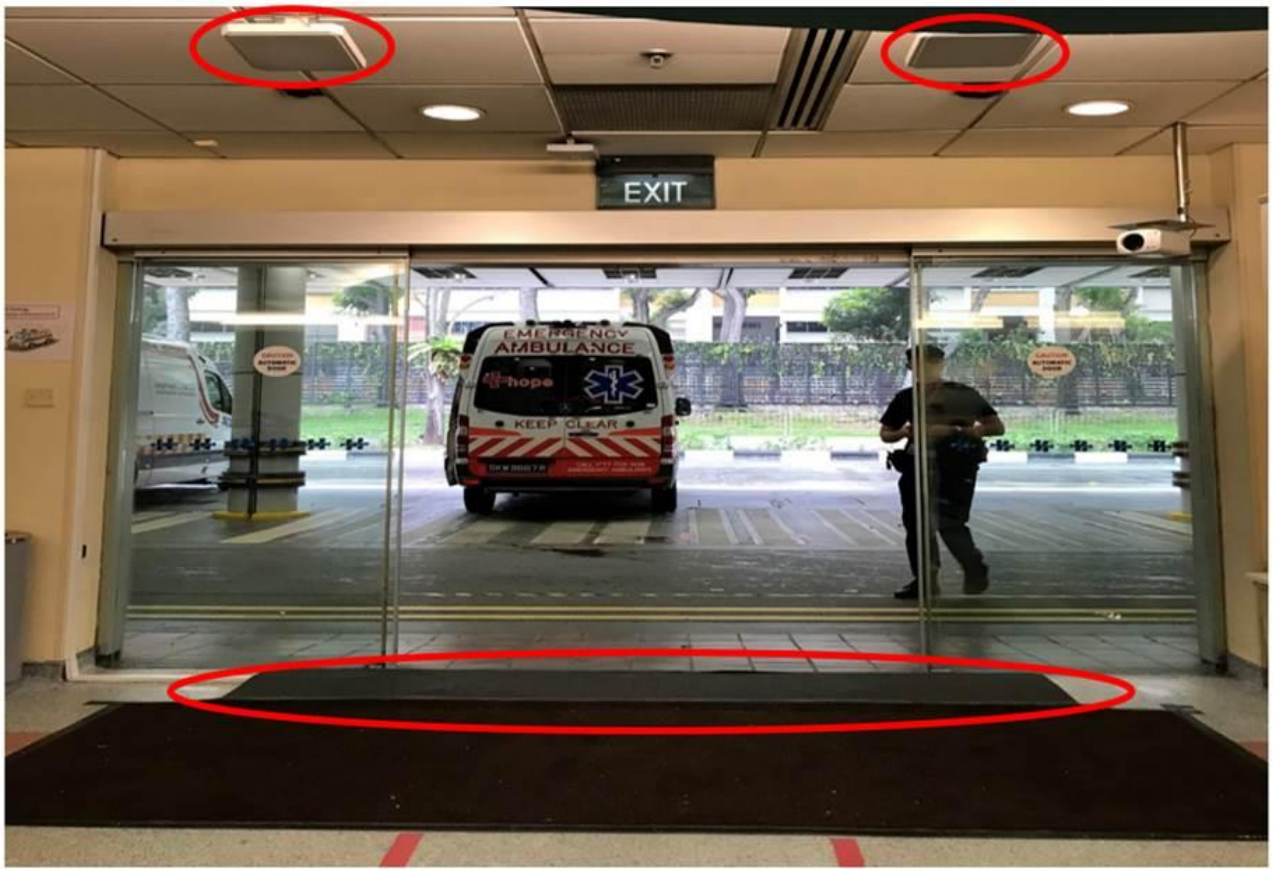

Figure 2- RFID sensors at Ambulance bay circled in red.

2.) PROVISION OF PURPLE CARE BUNDLE

All the patients wearing purple tags are put on the purple care bundle where they receive more comprehensive care. The aim is to reduce incident delirium and worsening behavioural symptoms ultimately resulting in restraint usage. The purple care bundle is shown in table 1, which is similar to Sharon Inouye's Hospital Elder Life Program (HELP 1990).[8]

The elderly living with cognitive issues are at risk of developing delirium when they are unwell or had their medications changed recently. The emergence

of delirium suggests presence of reduced cognitive reserves, hence an increased vulnerability, as shown in figure 3.[9, 10] Since >50% of our elderly live with undiagnosed neurodegenerative diseases, they are at risk of delirium once they are unwell or hospitalized. The general medical/ surgical staff are not confident to diagnose major neurodegenerative diseases. The hospital does not have enough dementia specialists to provide consultations for all the elderly with cognitive issues (~300 at any one day). Hence the purple tags serve as an operational tag to put them on a better care pathway to prevent incident delirium and further harm. Therefore, identifying patients with cognitive issues early and putting them on the purple tag care bundle may potentially reduce delirium risks by 30-40%, like the HELP programme.

To implement the care bundle, all the nurses and doctors rotating through the hospital undergo mandatory training sessions on delirium. The doctors attend an online lecture followed by MCQs assessment. The nurses check mental status (Orientation x3) as the 6th vital sign every shift in the author's hospital. Once the mental status was deemed abnormal, the nurse would be prompted to screen for delirium using the 4AT. Once the patients screened positive for delirium, the medical team will be promptly informed to work up for cause(s) of delirium and initiate appropriate management for the cause(s) of delirium.

Table 1- Purple care bundle

Patient wearing a purple tag are at risk of delirium, falls, incontinence, restraint use or abscondment. Consider the following care bundle for better care:

Reality Orientation & Sensory Stimulation	• Reorientate to time, place and person. • Allow family / caregiver to be sitter with patient. Bring in familiar objects from home. • Bring in hearing aid / glasses from home.
Maintain Hydration & Nutrition	• Ensure daily intake is adequate • Refer dietician and serve supplements regularly.
Monitor Elimination Pattern	• Regular 4 hourly toilet round • Monitor PVRU if NPU > 8 hours (to inform doctor if PVRU > 200mls) • Check BO, if NBO for > 2/7 to inform Dr.
Encourage Early Mobilisation	• Sit patient out in Geri chair and encourage patient to mobilise, if appropriate. • Assist and encourage independence with ADLs.
Promote Comfort	• Monitor patient for pain • Ensure adequate pain control if there is pain
Practice Sleep Hygiene	• Discourage day time napping and optimise ward environment for sleep at night. • Open curtain / blind during day time. • Minimise light and noise at night • Involve in therapeutic activities if appropriate. • Consider nursing patient nearer to nurse station if agitated, noisy and restless.
Review Restraint Use	• If patient is on restraints, review the need of restraints and consider off restraints • Ensure care for patient if the physical restraints need to be continued.

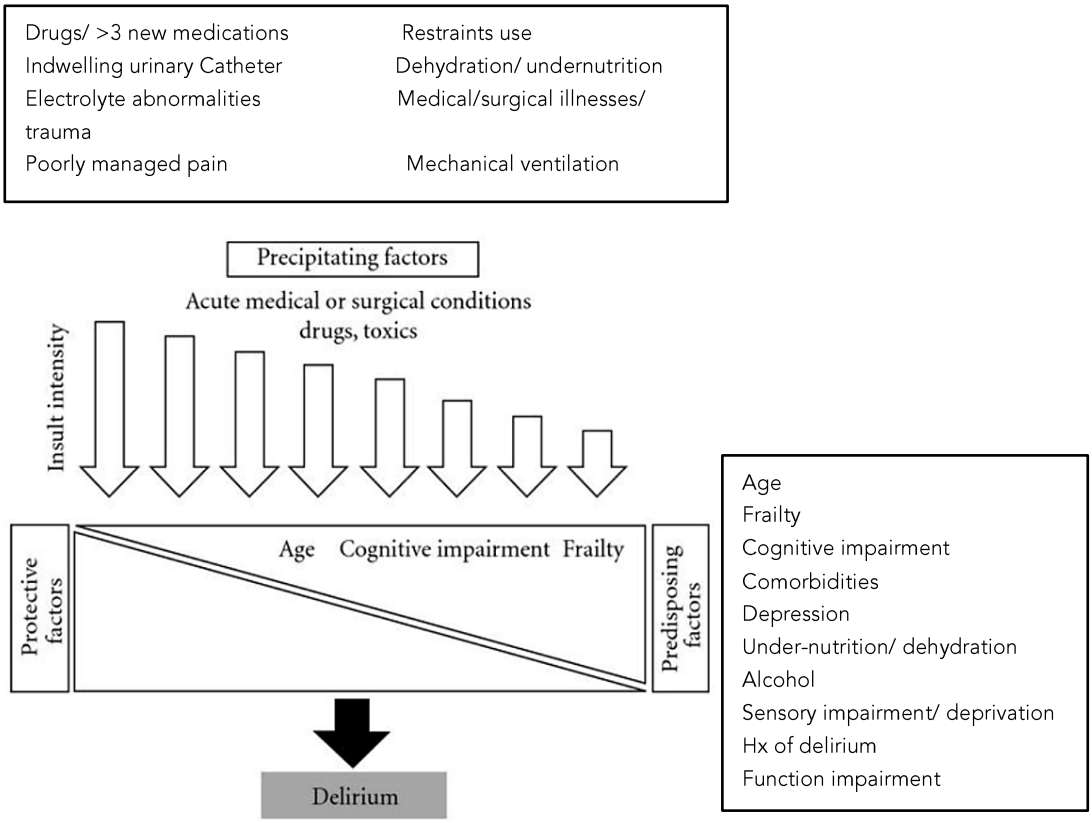

Figure 3- Predisposing and precipitating factors for delirium

3.) ASSESSMENT OF MENTAL STATUS AND SCREENING FOR DELIRIUM

Before implementing mental status as the 6th vital sign, all nurses in the hospital undergo compulsory training on dementia/ delirium at 3 competency levels. The most basic Tier 1 is attended by all the nurses, Tier 2 is a 2 full day workshop on delirium diagnosis, screening and management. In addition, overview of dementia types, symptoms, non-pharmacological management of neuropsychiatric symptoms, advanced and end of life care for dementia are also taught. Tier 2 trains the trainers so they can provide coaching for their colleagues in the general wards. Usually, the senior members of the ward nurses go through tier 2. Tier 3 trains the individual ward's delirium/dementia champions in the form of seminar and case studies. Each ward has its delirium/ dementia champions which meet regularly for in-service training, case based discussions and journal clubs.

Having gone through Tier 1, all the ward nurses can assess mental status using Orientation x3. Once mental status or behaviour changed from previous assessment, they will be prompted to screen for delirium using the 4AT. The ICU nurses assess delirium using the CAM-ICU since their patients are heavily sedated.

Once the patient screened positive for delirium, the nurses initiate purple tag care bundle, inform the physician to search for cause(s) of delirium, while the pharmacists assist the medical team to search for culprit medications.

Once the patients are on care bundle, the aim was to ensure they are comfortable and their basic needs are attended to. The care bundle can be delivered by all the nurses in the general wards regardless of the disciplines the patients were admitted under. The delirium care champions and wards' senior nurses generally follow up with educating the patients' families on delirium, with the aid of delirium brochures available in all the wards.

4.) PURPLE TAGS ARE SURROGATE FOR HIGH IN-HOSPITAL FALL RISK AND RESTRAINT USE

Following the success of the purple tag in reducing elopement and incident delirium, the author was

asked to reduce hospital falls. Hospital falls are unlike the community falls even though fall risks remain largely identical. The hospital environment, restraint use, medical/surgical issues especially delirium contribute significantly to hospital falls among the cognitively impaired elderly.

The patients wearing purple tags are put on high fall risk as precaution. The hospital uses Morse Fall scale for fall risk assessment. Fall risks are assessed once per shift plus when there had been a change in the patients' condition. Risk factors for in-hospital falls associated with dementia are as shown in figure 2.[11,12] Hospital falls are complex and difficult to control, in-patient falls will never drop to zero despite the best measures and intention.

While reviewing the fall cases, the author noted recurrent themes of "failure to use call bells," "inability to follow instructions," "trying to get out of bed/ chair without asking for nurse" and "restless/ non-compliant". The hospital has processes for high fall risk patients, like green wrist tag, bed alarms, etc. The old-fashion fall prevention strategy when the patients are unable to follow instructions would be to put them on restraints. To simplify and stratify fall risk assessment for the nurses, they were taught to tag patients wearing the purple tags as high fall risk.

Nurses usually remind patients to use call bell when they need to get out of bed but this instruction is frequently ignored. The patients with cognitive issues would not remember to use call bells, they might remember to call nurses if they needed assistance which led to frequent calling out for nurses. This may lead to frustrations on both parties since nurses are always busy with their work; while the patients became increasingly more frustrated because their needs were not attended to. The mounting frustration may eventually lead to agitation and aggression. In a busy acute ward where turnover is fast and manpower may be lean, the frequent calling and agitation make the ward a stressful environment for everyone. The patients' unmet needs would eventually escalate until they are restrained to stop them from trying to get out of their beds/ chairs to prevent a fall.

Restraint use has not been convincingly shown to reduce falls. Restraint use should be minimised especially for the frail elderly for risk of immobility associated problems and injuries.[13] To reduce restraint usage in the hospital, the author initiated bedside coaching for the nurses looking after patients with challenging behavioural symptoms. The emphasis was on searching for the unmet needs which triggered the behavioural symptoms. The bedside coaching was nurse led and were conducted at an ad hoc basis offered to all the general wards.

The nurses described frustration, feeling overwhelmed and frightened when they nurse patients with behavioural symptoms. These informal coaching and didactic lectures started as a pilot and went on for a few years for surgical wards and nurses were also educated on clinical features and early identification of postoperative delirium. This pilot project was part of the author's initiatives to reduce complications and improve outcome for the postoperative elderly patients. Awareness improved, falls and restraint usage dropped across the hospital over the years as the initiatives progressed to involve nurses hospital-wide.[14]

5.) RESTRAINT PROTOCOL, CHECK LIST AND CARE BUNDLE

Restraints are frequently utilised to keep the patients immobilised such that wandering and restless behaviour like trying to get out of bed can be reduced. Restraints forcibly immobilise the patients for unnaturally long periods which may cause immobility associated complications like DVT, PE, constipation, urinary retention, function decline, depression and delirium risk. In institutions like hospitals and nursing homes, restraints of various forms are frequently utilised especially when the manpower is lean. Where medical equipment like endotracheal tube (ET tube), venous / arterial lines or drains are at risks of being

dislodged restraints are considered acceptable. Among the vulnerable elderly with cognitive issues, restraint use should be utilised only as the last resort when all other non-pharmacological means of managing the behavioural symptoms failed and patients are at risks of endangering themselves. While they are being restrained, assurance should be in place for proper care, and they are not ignored.

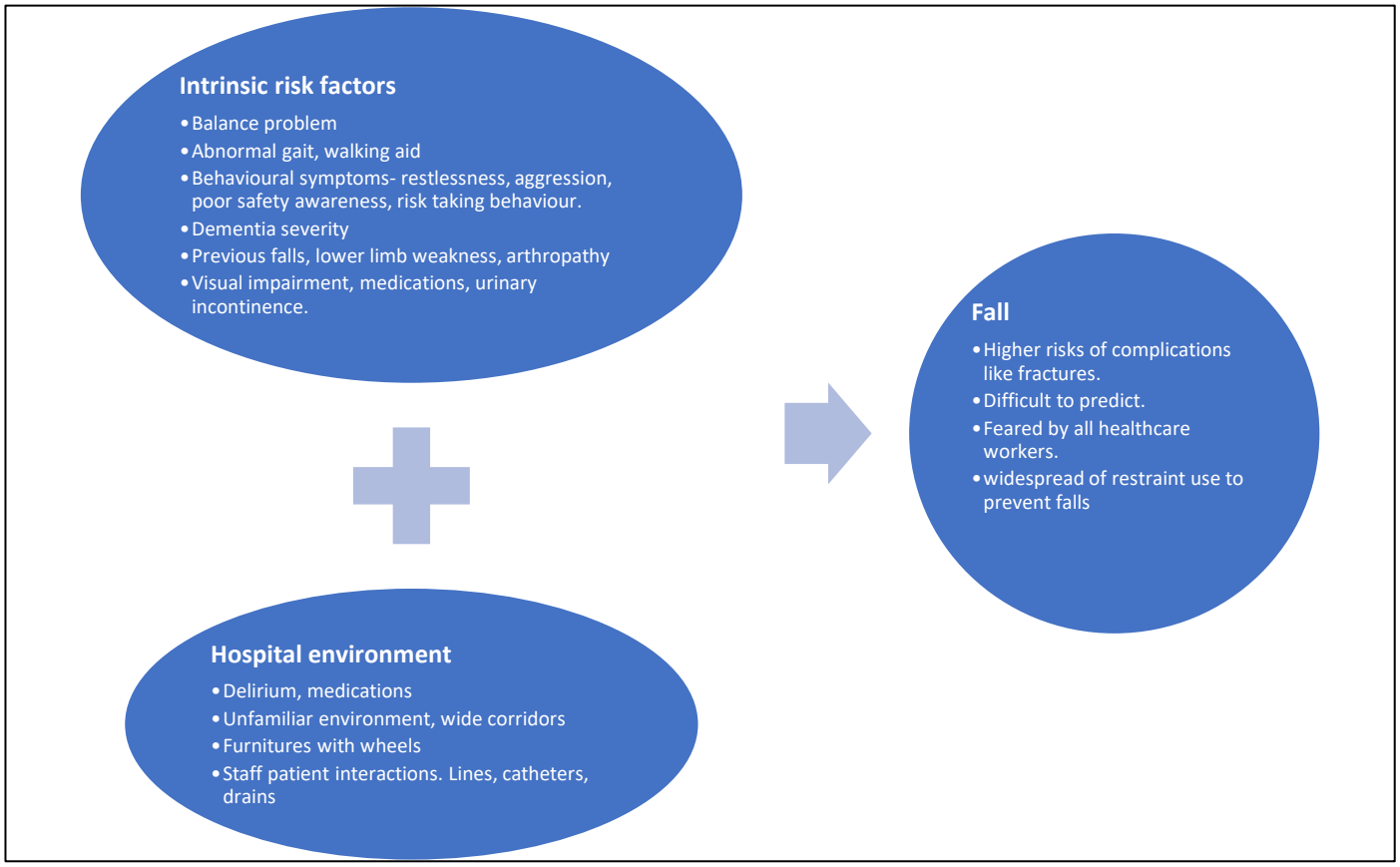

Figure 2- Risk factors associated with in-hospital falls among elderly with dementia.

To ensure patients on restraints are receiving appropriate care, the author put in 3 compulsory restraint workflows in the electronic medical record system. Prior to restraining a patient, restraint protocol will be triggered where nurses are mandated to obtain consent from patient's family and the physician-in-charge. The restraint protocol consists of a checklist to screen for discomfort causing the behavioural symptoms like pain, toilet needs, hunger, thirst and attempts must be made to reverse the cause(s) of discomfort. Once the patient is restrained, mandatory 2 hourly monitoring is triggered to ensure patients do not sustain injuries like bruising etc. Incorporated in 2 hourly monitor, mandatory trial off restraints at least once a day helps to ensure patients are not continuously restrained during their hospital stay.

When patients in the hospital need to be restrained, the nurses must inform and obtain consent from the physicians and patient's family daily. The author hoped these extra and laborious workflows discourage prolonged continual restraints and wanted to ensure patient is well looked after with their needs attended to with periods off restraints every day such that restraints can be discontinued as soon as the patient is calmer.

The dementia ward

Caring for a patient living with dementia is challenging for the hospital staff, especially for those exhibiting neuropsychiatric symptoms. Providing person centred care has been recognised as the ideal model of care for the persons with dementia. However, this care model is time consuming and requires training and education. Provision of good care in the hospital for the older persons with dementia include avoidance of chemical/ physical restraints, in-hospital fall reduction, minimising risk of cognitive and functional

decline, eventually discharged home to their families and loved ones.

In busy hospitals with rapid turnover, the nursing staff work on a tight schedule where care is delivered in a task-oriented manner, rather than person centred. Task oriented model of care focus mainly on attending to the patients' physical needs, while neglecting their psycho-social needs until there is imminent danger. A NHS survey showed that 60% of the persons with dementia (PWD) were not treated with dignity or respect, with >90% of the patients being frightened by the hospital environment. This finding was not surprising since only 2% of the NHS staff received formal training in mental health.[15] In an acute hospital, the elderly with dementia are likely to be restrained if they exhibit challenging behaviour, for their safety. Widespread use of restraints is probably due to lack of formal training in mental health and geriatric care, hence the staff are poorly equipped to cope with behavioural symptoms.[16]

The hospital has a dementia ward with 24 beds which opened in 2015. The ward is meant to be restraint free. Bed allocation is prioritised for the elderly with difficult to manage behavioural symptoms. The patients are either admitted from the emergency department or take over from inter-departmental referral.

The dementia ward adopts person centred model of care, avoiding restraint (chemical and physical) use unless the behavioural symptoms are of danger to self or others.[17] Person centred care (PCC) focuses on treating everyone with deep respect, humanity, dignity in a morally ethical way. Good dementia care focuses on fostering a genuine and warm relationship between the persons with dementia (PWD) and their caregivers. To implement PCC as the model of care, the person is placed in the centre of his/her own care where the person is supported, enabled and facilitated in shared decision making for their care. A large part of successfully implementing PCC involve providing a positive social environment to maintain a state of well-being. PCC has shown positive outcome in long term care setting but is not a routine practice in an acute hospital.[18] The positive social environment involves training our staff to treat and handle the PWD with dignity and respect, with strong emphasis on personal enhancers (PE) and strict avoidance of personal detractors (PD) as practiced by dementia care mapping (DCM). The staff have regular in-service training on the differences between PE and PD, with case discussion and emphasis to avoid and un-learn personal detractors which may have passed down from their seniors.

Success of PCC incorporate multidisciplinary team input, like management of medical/ surgical problems, attending to their physical/emotional needs, ensuring their oral intake is adequate, cognitive and sensory stimulating activities, providing a home-like environment are all key factors for good dementia care. The PWD's world is confusing and ever changing therefore, to avoid disorientating them further, the care plan is individualised based on their routines and activities are created according to the individual's previous occupation, hobbies and taking into considerations their current cognitive abilities so that behavioural symptoms can be minimised.[19,20]

To understand behavioural symptoms so management strategies can align with PCC, the caregivers are taught to look at the world from the PWD's perspectives. Behavioural symptoms are interpreted as communication breakdown between the caregivers and the PWD resulting in unmet needs. A local study among the elderly inpatients aged >65 showed use of physical restraints among 8% of patients in the general wards. The major reasons for restraint included challenging behaviour/confusion/being violent in 65% of the cases while attempts to prevent falls was quoted by 62%. The strongest predictor for restraint use was memory disturbances. The study also showed that patients nursed on restraints were at the highest fall risk.[21]

In the dementia ward, PCC has showed to reduce restraint use (6.6%) and yet, fall occurred in 3 instances for one whole year which was lower than the other acute wards in the hospital. In fact, there were no falls for 1.5 years in a stretch. The patients

in the dementia ward are encouraged to mobilise with supervision to reduce risk of functional decline. The low fall rate, coupled with minimal usage of restraints for this group of patients with challenging neuropsychiatric symptoms was achieved through multidisciplinary interventions like diligent handover, early assessment of fall risk, medication review, early screening and intervention for postural hypotension and early referrals to the allied health professionals for mobility and function assessment.[22]

The elderly generally lose weight during hospitalisation, resulting in functional decline, increased cost, poor wound healing, and delirium.[23] Assessment of nutrition is often neglected by the medical professionals, and it is well known that PWD develop eating and swallowing disorders with progression of dementia.[24] The patients in the dementia ward have their meals from the hospital's kitchen. To ensure adequate oral intake, the dementia ward engages a multidisciplinary approach involving the nursing staff, dietician, speech therapists and occupational therapists to assess the problems causing poor oral intake for the PWD. The nursing staff take the trouble to ask the patients or their family their preferred choices for meals. Since the hospital diet tend to be on the lean side, staff go the extra mile to season the food prior to serving patients their meals. Mealtimes were in the communal dining areas unless the patients were not fit to be sat out of bed. There are trained staff during mealtimes to assist with feeding. The patients' meals are individualised according to their nutritional and caloric requirement and the patients' weight and intake charting are reviewed on a regular basis to prevent weight loss. On admission to the dementia ward, the author noted that >70% of the patients ate <50% of their meals, and with PCC model of dietary interventions which include doing away with therapeutic diets, fortifying their food and oral nutritional supplements, 52% of the patients were able to eat >50% of their meals (unpublished data, ongoing project).

The cognitively impaired elderly in isolation rooms/ ward

The COVID 19 pandemic has caused disruptions in people's lives and presents an unprecedented challenge on the health care systems. At the beginning of the pandemic, due to the high mortality and lack of understanding of the disease, the elderly with COVID infection were nursed in single isolation rooms. The cognitively impaired elderly did not fare well in the isolation wards. Social isolation is associated with cognitive decline,[25] worsening function and cognitive symptoms, exacerbation of agitation, apathy, and depression along with deterioration of health status.[26] Locally, the author was asked to reduce falls in the isolation rooms, after a couple of falls in the isolation ward were complicated by fractures. Since the isolation rooms have negative pressure set up to reduce infection risks, there is a mandatory time lapse before the nurses can attend to the patients. For this reason, the elderly patients wearing purple tags were restrained when they were warded in isolation room for their safety until they were fit to be de-isolated to open wards.

As the pandemic de-escalated to endemic status, the cognitively impaired elderly were cohorted in a COVID ward, which was converted from an acute Geriatric ward, where they were better taken care of with multidisciplinary team input, nutritional support, purple care bundle and reduced restraint use. Delirium among the COVID positive elderly was 18% in the hospital cohort. Compared to the single isolation room, they were less confused when nursed in a designated Geriatric medicine isolation ward.

The institutionalized elderly are at higher risk of harbouring multi-resistant organisms (MRO) like MRSA, VRE and Carbapenamse producing Carbapenam resistant Enterobaterae (CPCRE). The contributing factors to this include multiple antibiotic use, frequent hospitalisations and horizontal transmission. Infections with these organisms are 2-5 times more likely to cause mortality among the elderly.[27,28] In the author's hospital, aggressive

screening and isolation of patients harbouring these organisms is the routine to optimize antibiotics and contain spread to other patients. The patients with MRO are often the last to be seen and in the hot and humid tropical weather, the team must don PPE, in addition to stringent handwashing prior to touching patients. There is a tendency to minimize time spent with these patients and activities/ group therapies are discouraged for the fear of spreading the highly contagious MRO. As a result, the patients are often left to lie in bed, with detrimental consequences. The author was seconded to a designated CPCRE ward and took the opportunity to improve patients' and staff well-being. The author and her team persuaded infection control team to allow activities and therapies to be allowed as a norm with proper cleaning for the equipment at the end of therapy sessions. Patients were also sat out of bed for meals and regular scheduled activities like colouring, art and craft. A garden was shiftly designed and set up for the patients to be sat out for their meals and activities, in addition to multisensory stimulation and therapy in the green spaces. Solving puzzles, group "sports" like bowling were initiated. Feedback were encouraging from the patients, families and staff. Similar to the data shown while in isolation, the patients' and staff' mood improved with activities provided and group dining improved their oral intake.[17,29,30]

Data collected before implementing changes showed only 4% of the patients were in a state of well-being. After implementation of various games and therapies, >50% were observed to be happy. Similarly, 30% were agitated before therapy which reduced to 11% after therapies. (unpublished data, ongoing data collection)

Conclusion

The elderly living with cognitive issues will occupy a large proportion of the hospital beds as the world grow older. This group of vulnerable elderly are challenging to look after due to their complex care needs, behaviour symptoms and concomitant presence of various geriatric syndromes. A comprehensive care package which aim to reduce delirium, fall, function decline, nutrition and incontinence risks, while improving patients' outcome and caregiver satisfaction are essential to maintain their well-being and reduce caregiver burden. Good dementia care while hospitalized should adopt the person centred model plus enjoyable activities planned to keep the patients meaningfully occupied.

Conflict of Interest:

The author declares no conflict of interest.

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References:

1.) R. Hirschmann Dec 21, 2023.

2.) Statista Research Department, Nov 7, 2014.

3.) Mythily Subramaniam, et al. Prevalence of dementia in people aged 60 years and above: results from the WiSE study. Journal of Alzheimer's Disease 45(2015) 1127-1138.

4.) Jim George at al. How can we keep patients with dementia safe in our acute hospitals? A review of challenges and solutions. J of the Royal Society of Medicine; 106(9):355-361.

5.) Stig Berg, Torbjorn Svensson. An Orientation scale for geriatric patients. Age and Ageing, Volume 9, Issue 4, Nov 1980, pages 215-219.

6.) Rowe Meridith. Wandering in hospitalized older adults: Identifying risk is the first step in this approach to preventing wandering in patients with dementia. American Journal of Nursing. Oct 2008. Vol 108, Issue 10 p. 62.

7.) SC Lim et al. Project to reduce elopement of vulnerable patients from the A&E. Acta Science Neurology, Volume 2 Issue 7 July 2019.

8.) SK Inouye et al. The HELP: a model of care to prevent cognitive and function decline in older hospitalised patients. Hospital Elder Life Program. J Am Geriatr Soc.2000 Dec;48(12):1697-706.

9.) Inouye, S. K et al. Precipitating factors for delirium in hospitalized elderly persons. Predictive model and interrelationship with baseline vulnerability. *JAMA* 275, 852–857.
doi: 10.1001/jama.1996.03530350034031.

10.) S. K. Inouye, et al. "A predictive model for delirium in hospitalized elderly medical patients based on admission characteristics," *Annals of Internal Medicine*, vol. 119, no. 6, pp. 474–481, 1993.

11.) Eresha Fernando et al. Risk factors associated with falls in older adults with dementia: A systematic review. Physiother Can Spring 2017; 69(2):161-170.

12.) SC Lim. Falls among the persons with dementia and interventions to reduce falls in a dementia ward. Journal of Brain and Neurology 2020 Volume 3 issue 2.

13.) Lim SC. Restraint use in the management of elderly with dementia in hospital. Internal Medicine Research Open Journal. Volume 1(2):1-4, 2016.

14.) SC Lim et al. Improving outcome for the elderly surgical patients in a Singapore teaching hospital. Surg Med Open Acc J. 2(3). SMOAJ.000 537.2019.

15.) Dementia statistics | Alzheimer's Disease International (ADI) (alzint.org)

16.) Lim SC, Chiam WM, Goh CH, Zhang D, Png GK and Li FY., Initiatives to Improve Awareness of Delirium in a Teaching Hospital in Singapore: for Better Patient Care.

17.) SC Lim. The role of dementia ward in an acute hospital. J Geontol Geriatr Res. 2017.6.6.10 00453.

18.) Sloane, Philip & Hoeffer, et al. (2004). Effect of Person-Centered Showering and the Towel Bath on Bathing-Associated Aggression, Agitation, and Discomfort in Nursing Home Residents with Dementia: A Randomized, Controlled Trial. Journal of the American Geriatrics Society.

19.) Kitwood T, Bredin K,.,Towards a theory of dementia care: personhood and well-being. Ageing Soc. 1992; 12():269-87.

20.) Steenbergen E et al (2013) Perspectives of person-centred care. *Nursing Standard*. 27, 48, 35-41.

21.) Lim Sc, Kaysar Mamun, Jim K H Lim Comparison between elderly inpatient falls with and without dementia, Singapore Med J, 2014 Feb;55(2):67-71. doi: 10.11622/smedj.2014017.

22.) Lim SC. Falls among the persons with dementia and interventions to reduce falls in a dementia ward. Journal of Brain and Neurology. 2020;Volume 3, issue 2.

23.) Si Ching LIM. Nutrition and the Role of Tube Feeding in the Elderly. J J Geronto. 2016, 2(1): 017.

24.) SC Lim and Peter CL Chow. Managing eating disorders in elderly with dementia and the ethical considerations for tube feeding. Int J of Psych 2018. Vol 3 Issue 1. ISSN:2475-5435

25.) Robert S Wilson et al. Loneliness and risk of Alzheimer disease, Arch Gen Psychiatry, 2007 Feb;64(2):234-40.

26.) Aida Suárez-González et al. Detrimental effects of confinement and isolation on the cognitive and psychological health of people living with dementia during COVID-19: emerging evidence. Dementia Research Centre, UCL Institute of Neurology at Queen Square, University College London, Last updated 1st July 2020, available at website ltccovid.org

27.) M Melzer et al. Mortality following bacteremic infection caused by extended spectrum beta lactamase producing E.Coli compared to non-ESBL producing E. Coli. J of Infection. Volume 55, issue 3, Sept 2007;254-259.

28.) E.D'Agata et al. Patterns of antimicrobial use among nursing home residents with advanced dementia. Archives of Medicine 2008.

29.) SC Lim et al. Role of a therapeutic garden in a teaching hospital in Singapore. Nov Res Sci. 13(2), NRS.000806.2023.

30.) Espeleta Wrenzie del Valle, SC Lim*. Outcome Of Outdoor Activities as Part of Person-Centered Care in The Dementia Ward of An Acute Hospital. 13(3): 2022. ANN.MS.ID.000815.