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# Preventive and Management Strategies for Older Adults with Delirium

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# Preventive and Management Strategies for Older Adults with Delirium

The study aims to put emphasis on early detection of symptoms and causes that lead to delirium so that timely preventive and management strategies be designed and catered accordingly by the caregivers in order to treat patients with delirium. This paper review includes studies that are categorized as preventive, predisposing and precipitating, recognition, screening, differentiating and multi-component program. The nursing staff should choose those screening tools that carefully measures so that initiative can be taken to implement the caregiving strategies that target the main causes of the occurrence of delirium as and when possible. Staff should get familiar with the caregiving strategies as mentioned in this paper to identify the presence of delirium in older adults.

Keywords: Caregiving Staff, Delirium, Management Strategies, Nursing, Older Adults.

## Background

Delirium is an illness showing neuropsychiatric symptoms and characterized by disturbances in attentional functioning as well as other cognitive deficits (Meagher et al., 2007; Inouye et al., 2014) Some of the conditions that cause delirium include drug abuse, withdrawal from sedative and alcohol, imbalances in chemical and electrolytes in the body, surgery, poisons, and infections such as pneumonia and urinary tract infection. The most common symptom of delirium is rapid changes in mental status, for example, one may feel lethargic at one moment, and then feel agitated in the next moment and lethargic again (MedlinePlus, 2015). It has adverse effect over the functioning of the body and makes an association with high mortality and morbidity rate.

Delirium is a severe and intricate disorder that needs immediate attention in order to prevent the brain from permanent damage and other health risk involved. According to Inouye et al. (2000), due to delirium the mortality rates of 25-33% have been reported. The study also found too high health care cost which included a long hospital stay and the increased nursing care. According to Kakuma et al. (2003), the non-detection of delirium led to increase in

mortality rates in a span of 6 months after the discharge from an emergency. One more study identified similar incidence of older adults hospitalized because of delirium. Their hospital stay was long after the diagnosis (McCusker ey al., 2003). Therefore, it has become eminent to come up with early recognition, prevention and management of this condition which is reversible.

Delirium treatment can be drawn from clinical experience, review articles and case studies (American Psychiatric Association, 2000). Very inadequate quantitative research supports the effectiveness of care strategies that specifically fit delirium patients. However, some research-oriented care strategies are planned or designed into programs to deliver as well as include quite a number of interventions (Rapp & Iowa Veterans Affairs Nursing Research Consortium, 1998; Inouye et al., 1999; Inouye et al., 2000; Foreman et al., 2001; Milisen et al., 2001). It will become very difficult to put in care-giving strategies in a timely manner if the diagnosis of delirium goes late or not identified at all. Delirium can cause a medical emergency that is why it is necessary to have information about its prevention and management strategies as well as identify the underlying cause in order to provide supportive measures (Alexopoulos et al., 1993; Inouye et al., 1993; Inouye et al., 1990; American Psychiatric Association, 2000). As Conn (2003) stated that timely diagnosis and its treatment can prevent disability, mortality as well as decrease the burden of caregivers and led to the improvement of quality of life. Studies that have been conducted in order to find out the management and preventive measures for delirium showed the following results:

Some studies found that not all cases of delirium can be prevented. There are certain factors of risk that tend to intervene towards prevention of delirium in patients who are exposed to high risk. These strategies go hand in hand with screening and alongside should also address the factors that contribute as well as behaviours (Alexopoulos et al., 1998; Rapp & Iowa Veterans Affairs Nursing Research Consortium, 1998; Inouye et al., 1999; Inouye et

al., 2000; American Psychiatric Association, 2000; Conn & Lieff, 2001; Rapp et al., 2001). Many studies concluded that there are many factors that aim to contribute towards the possibility of delirium. Therefore, a number of strategies for caregiving are designed and carried out hence targeting particularly, predisposing and precipitating factors for that particular individual (Inouye & Charpentier, 1996). The diagnosis of delirium lacks consistency and definitions. Sufficient literature review and practicing guidelines concludes that delirium diagnosis should be done by physicians according to the DSM-IV-R criteria (Inouye et al., 1990; Alexopoulos et al., 1993; American Psychiatric Association, 2000; Milisen et al., 2001, Conn, 2003). The identification by nurses of delirium relies on its cardinal symptom's recognition.

This process can prove to be clinically useful. If the symptoms, causes and recognition of delirium can be done in early stages, the prevention and management strategies can prove to be effective. Screening for delirium supports the usage of assessment tools which are standardized and adoption of clinical practice is necessary for the identification of delirium (American Psychiatric Association, 1999; Registered Nurses Association of Ontario Screening for Delirium, Dementia and Depression in Older Adults, 2003). Besides this, Fann (2000) says to cautiously use these tools to investigate its relevancy as it can lead to low predictive positive value. Screening can start in emergency departments as it can effectively work on patients who have hip fractures or admitted to the hospital for surgery or medication (Rapp & Iowa Veterans Affairs Nursing Research Consortium, 1998; Inouye et al., 2000; Marcantonio et al., 2000; Kakuma et al., 2003; Registered Nurses Association of Ontario Screening for Delirium, Dementia and Depression in Older Adults, 2003).

Two types of delirium have been identified namely; the hypoactive and the hyperactive, the latter is more common. As per the studies conducted in this domain, they suggest that the recognition of delirium is very necessary in its initial stage so that the care

strategies can be implemented accordingly. The studies also suggest that the type of delirium can be identified on a rating scale as well as its severity. Its severity marks out poor outcomes in patients with hip fracture (Marcantonio et al., 2002). The supportive literature suggest that multi-components intervention programs were more beneficial. These interventions were able to provide care strategies targeting those individuals who showed factors of risk (Rapp & Iowa Veterans Affairs Nursing Research Consortium, 1998; Inouye et al., 1999; Foreman et al., 2001).

A lot of studies have been conducted which emphasis on the preventive and management strategies to prevent delirium or to decrease the rate of morbidity and mortality caused by it (Rapp & Iowa Veterans Affairs Nursing Research Consortium, 1998; Alexopoulos et al., 1998; Inouye et al., 1999; American Psychiatric Association, 2000; Inouye et al., 2000; Foreman et al., 2001; Milisen et al., 2001; Kakuma et al., 2003; McCusker et al., 2003; Meagher et al., 2007; MedlinePlus, 2015). What they lack is combination of the early diagnosis and designing of preventive and management strategies that can be further implemented and practiced by the nursing staff and caregivers to reduce the risk of contracting delirium in older adults. In short, early diagnosis and preventive and management strategies go hand in hand to reverse delirium.

### *Objective*

The study aims to put emphasis on early detection of symptoms and causes that lead to delirium so that timely preventive and management strategies be designed and catered accordingly by the caregivers in order to treat patients with delirium. The study can be significantly important in targeting those individuals who show root cause of delirium, the nursing staff of the hospitals can work along with other departmental disciples should inculcate multicomponent care strategies and then implement them at the same time in order to prevent delirium. The study focuses on directing nurses to practice caregiving strategies

with older adults having delirium. It also provides educational recommendations where these institutions and organizations having nursing staff, work towards its support and implementation. The study also brings into focus evaluation and monitoring indicators. This study hypothesizes that early detection of delirium can help in designing preventive and management strategies that can help to prevent delirium in older adults.

## Methods

A systematic review of the literature regarding the contribution towards the preventive and management strategies for older adults with delirium was performed and the most relevant findings were selected. The search strategy included searching the electronic database of Nursing Best Practice Guideline Shaping the future of Nursing, Caregiving Strategies for Older Adults with Delirium, Dementia and Depression as well as google scholar.



### *Search Strategy*

This paper review includes studies that are categorized as preventive, predisposing and precipitating, recognition, screening, differentiating and multi-component program. It focuses on studies that highlight the importance of early detection of delirium in older adults. The paper takes into consideration those studies which reflect that early diagnosis and caregiving strategies go hand in hand in order to treat delirium in older adults. Moreover, relevant studies were identified using the keywords such as preventive measures, management strategies, older adults and delirium. Over 150 publications were identified and this report cited the most pertinent and applicable 35 publications.

## Results

In accordance to the reviewed literature, it is suggested that such programs and services should be developed that caters to the need of older adults. The strategies for caregiving

should focus on providing support and services to the older adults. These strategies can be implemented by adopting interdisciplinary approach as well as when a family member becomes a part of this process. The caregiving strategies and assessments should be carried out at individual level keeping in mind the changing needs of older adults. Keeping the pharmacological involvements related to dosage, interaction, the medication side effects while treating delirium is needed to get a positive outcome for older adults.

These outcomes are supposed to be monitored by the nursing staff and then these strategies over a period of time will be revised keeping in view the changing needs of older adults. A summary of this is given in Figure 1. The following diagram depicts the flow of information and recommendations for the care strategies in delirium (Bolton, 2005).

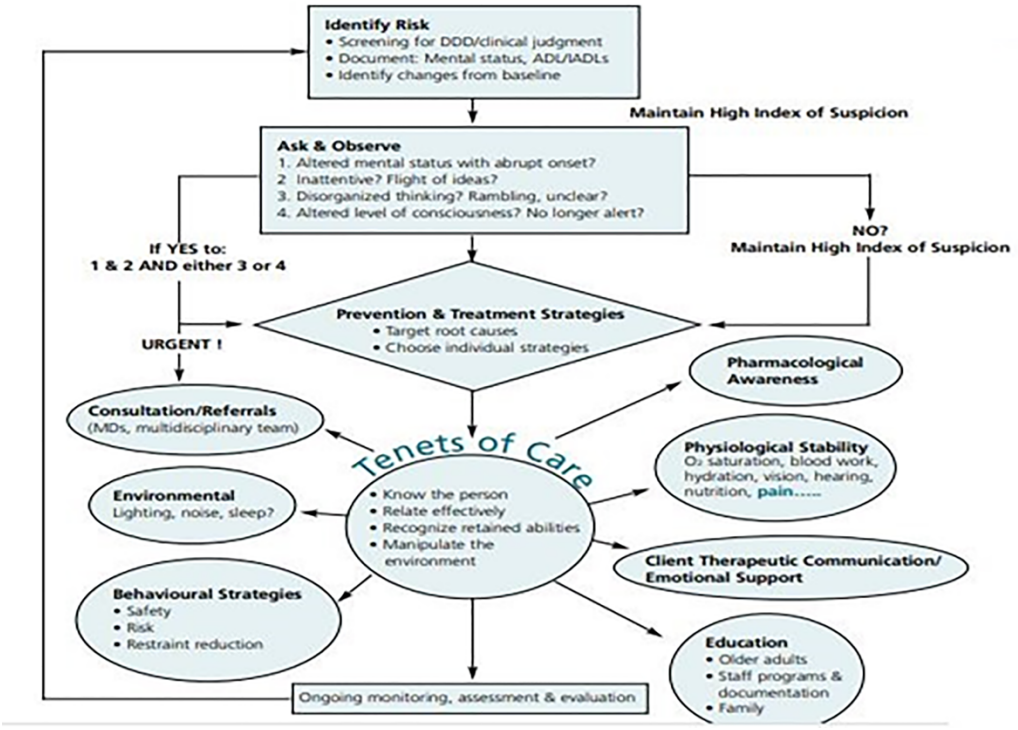


Figure 1. Flow Diagram on Caregiving Strategies for Delirium

Moreover, the nurses with the help of mnemonics which is a systematic way to memorize and recall the root causes which are affiliated with delirium in older adults (Figure 2) (Bolton, 2005).

| | Mnemonic: I Watch Death | Presenting Symptoms |
|---|---|---|
| I | Infections | Urinary Tract Infection (UTI), pneumonia, encephalitis |
| W | Withdrawal | Alcohol, benzodiazepines, sedatives-hypnotics |
| A | Acute metabolic | Electrolyte disturbance, dehydration, acidosis/alkalosis, hepatic/renal failure |
| T | Toxins, drugs | Opiates, salycilates, indomethacin, lidocaine, dilantin, steroids, other drugs like digoxin, cardiac medications, anticholinergics, psychotropics |
| C | CNS pathology | Stroke, tumor, seizures, hemorrhage, infection |
| H | Hypoxia | Anemia, pulmonary/cardiac failure, hypotension |
| D | Deficiencies | Thiamine (with ETOH abuse), B12 |
| E | Endocrine | Thyroid, hypo/hyperglycemia, adrenal insufficiency, hyperparathyroid |
| A | Acute vascular | Shock, hypertensive encephalopathy |
| T | Trauma | Head injury, post-operative, falls |
| H | Heavy Metals | Lead, mercury, magnesium poisoning |

Figure 2. Review for Causes of Delirium

The nursing staff should choose those screening tools that carefully measures so that initiative can be taken to implement the caregiving strategies that target the main causes of the occurrence of delirium as and when possible. Apart from managing and supporting the behavioral patterns, the nursing staff should continuously monitor as well as revise or update the care plan as and when the need arises.



**Discussion**

The nursing or caregiving staff should always be on alert for delirium in older adults as it is recurring and can is under-recognition. Delirium symptoms can be fleeting and can be there for a longer period of time (Trzepacz et al., 1999; Registered Nurses Association of Ontario Screening for Delirium, Dementia and Depression in Older Adults, 2003). Moreover, there might not be complete recovery from delirium in older adults and therefore they might experience an episodic strain of delirium. Some prospective studies showed association of delirium with outcomes such as death, deterioration in daily activities and hiring home nurses (Marcantonio et al., 2000). Keeping in mind that delirium is considered to be a severe condition but with reversible components and can be contribute to increase in morbidity and mortality, it is therefore suggested that nurses should be careful and quick in assessing and

then intervening as there are certain conditions that swift away a chapter of delirium that are reversible if their early detection is made (Trzepacz et al., 1999; Fan, 2000; Conn & Lieff, 2001).

Looking into the screening studies, the DSM IV-R criteria can be helpful in early detection of delirium. The nurses should be trained on DSM IV-R so as to detect the symptoms of delirium such as lack of awareness, focus and attention. Also, other cognitive factors such as deficit memory, disorganized thinking, disorientation with no signs of dementia. These symptoms would be developed over a short span of time as evident from the history or laboratory results of all these contributing factors, fluctuation in course of delirium and a sudden onset. All these factors contribute to the assessment of the patient whose been detected with the above factors. Identification of the possibility of delirium can help to diagnose this illness early (Rapp & Iowa Veterans Affairs Nursing Research Consortium, 1998; American Psychiatric Association, 1999; Tune, 2001; Sullivan-Marx, 2001). For this, the nurses need to be on alert by making observations and assessing not just the occurrence but as well as the type of delirium. In order to do so, they need to do a thorough assessment by going through the patients' cognitive and functional baseline as well as any signs for dementia. Moreover, they should continuously be on a look out for hypoactive delirium as the chances are high that it may go unrecognized and due to it can become a hurdle in the taking early preventive measures.

Delirium often comes with multiple factors affecting older adults in a variety of ways (Rapp & Iowa Veterans Affairs Nursing Research Consortium, 1998; Inouye et al., 1998; Alexopoulos et al., 1998; American Psychiatric Association, 1999; Inouye, 2000; Fann, 2000; Foreman et al., 2001). Multiple studies suggest that there are certain very common risk factors that lead to delirium such as; chronological age, hear-vision impairment, loss of water, sleep deprivation, dementia, metabolic abnormalities, comorbidity and cognitive dysfunction. Many

tools of screening have been suggested by a number of studies and the most common, popular and validated one is the Confusion Assessment Method (CAM), this tool has the ability to detect delirium in older adults at the time of hospitalization (Inouye et al., 1990; Inouye, 1993; Inouye et al., 1996; Cole, 1999). There are certain guidelines in order to perform screening for delirium in older adults showing symptoms (Registered Nurses Association of Ontario Screening for Delirium, Dementia and Depression in Older Adults, 2003). The CAM suggests four questions which help in the identification of risk factors. It is suggested that nurses should ask these questions. Is there any major or severe change in the mental status which keeps on fluctuating? Is the thinking disorganized? Is there any changing level of consciousness? If the answer to any of these questions is imperative than the nurses should be suspicious about the presence of delirium and therefore should move to further assessment. The caregivers and nursing staff should make use of the screening tools and implement strategies of care by targeting the root cause of delirium where and when possible.

They should continuously monitor as well as update the plan to care as and when appropriate. Many experts, studies and randomized controlled trial give suggestions that the outcomes can be improved by adopting preventive strategies. The occurrence of delirium slows down the interventions which become less effective and efficient (Inouye et al., 2000; Cole et al., 2002; McCusker et al., 2003). Most of the studies reflected that a pivotal role is played by the nursing and caregiving staff in order to assess, manage and prevent delirium. Many non-randomized trials say that when the nurses paid attention to factors such as environmental factor, vision impairment, pain and unstable condition, this led to decrease in the incidence of delirium thus leading to short length of stay at the hospital (McCusker et al., 2003). The multi-component delirium programs act as a framework in providing care strategies to cure delirium. There are studies which support this program by stating that once this program is implemented it works well with patients who are at high risk or groups of

people accompanied with high risk of delirium for example patients undergoing post-surgery and other medical complexities. A program was suggested in Inouye et al. (2000), study named as the hospital elder life program which suggested a model to care and prevent decline in cognitive and function in the older patients admitted to the hospital. Moreover, the program worked on six targeted factors of risk such as; cognitive dysfunction, sleep disturbances, immobility, sight and hearing impairment as well as loss of water. The program was very effective as it reduced delirium by 25% in older adults experiencing medical complexities while hospitalized. An ongoing assessment of symptoms associated with cognition with the passage of time is recommended as they might be able to bring about the effectiveness of intervention programs or the change in the medical conditions (Rapp & Iowa Veterans Affairs Nursing Research Consortium, 1998; American Psychiatric Association, 2000).

Other scales that are able to detect the severity of delirium such as the Memorial Delirium Assessment Scale (MDAS) or the Confusion Rating Scale, might prove be useful in monitoring the effectiveness of intervention programs over the entire course of delirium (American Psychiatric Association, 1999). There are prospective studies that support these rating scales for patients who underwent hip fracture surgery (Marcantonio et al., 2000). Another prospective cohort study which was conducted by Trzepacz et al. (1999) supports the screening and monitoring of delirium severity. The above study used Confusion Rating Scale (CRS) in order to perform screening, monitor the symptoms and find out delirium's frequency as well as the outcome in patients suffering from cancer and have been in continuous care. At the time of admission, out of 89 patients the occurrence symptoms pertaining to delirium was 20.2% and the confirmed level of delirium was 13%. The study further found that the symptoms of delirium which were detected through screening at the follow up time was 52.1% whereas the confirmed was 32.8% Now looking into the confirmed number of cases half of them experienced symptomatic improvement which is considered to be clinically

significant but symptomatic improvement was noticed less in patients who already had delirium at the time of admission to the hospital as compared to those who were not having it at the time of admission. The study concluded that the preventive measure, treatment as well as monitoring of delirium are to be taken into consideration in order to reduce the problem which are associated with advanced level of cancer thus able to provide quality living.

**Conclusion**

In conclusion, the nursing staff should get familiar with the caregiving strategies as mentioned in this review paper to identify the presence of delirium in older adults. The nurses play an eminent role in assessing delirium in older adults. For an accurate and right assessing of delirium they should look out for 3 conditions which are; they should know the person, they should be able to effectively relate to them, recognize the abilities retained as well as use the environment excellently during caregiving so that the practice assessment can be performed accurately such as; screening as well a continuous over time assessment, use of standard tools and instruments and to measure the outcomes of care. This care of older adults having delirium can be very challenging and daunting because of already existing chronic and severe illnesses that the patients have and therefore can have an impact on the condition of delirium. The nurses having expertise practicing background can be beneficial for full implementation.

## References

Alexopoulos, G. S., Silver, J. M., Kahn, D. A., Frances, A., & Carpenter, D. (1998). Treatment of agitation in older persons with dementia. *Postgrad Med*, *148*.

American Psychiatric Association (APA). (1999). Practice guideline for the treatment of patients with delirium. American Psychiatric Association [On-line]. Available: www.psych.org/clin_re/pg_delirium.cfm

American Psychiatric Association (APA). (2000). *Diagnostic and Statistical Manual of Mental Disorders*. (4th ed). Washington, D. C.: American Psychiatric Association.

Bolton, C. (2005). Nursing best practice guideline: shaping the future of nurs-ing. *Toronto, Canada: Registered Nurses Association of Ontario*, *23*.

Cole, M. G. (1999). Delirium: effectiveness of systematic interventions. *Dementia and geriatric cognitive disorders*, *10*(5), 406-411. https://doi.org/10.1159/000017179

Cole, M. G., McCusker, J., Bellavance, F., Primeau, F. J., Bailey, R. F., Bonnycastle, M. J., & Laplante, J. (2002). Systematic detection and multidisciplinary care of delirium in older medical inpatients: a randomized trial. *Cmaj*, *167*(7), 753-759.

Conn, D. (2003). Mental health and mental illness seniors roundtable. Paper submission to the Standing Committee on Social Affairs, Science and Technology, Toronto, Ontario.

Conn, D. K., & Lieff, S. (2001). Diagnosing and managing delirium in the elderly. *Canadian Family Physician*, *47*(1), 101-108.

Fann, J. R. (2000, April). The epidemiology of delirium: a review of studies and methodological issues. In *Seminars in clinical neuropsychiatry* (Vol. 5, No. 2, pp. 64-74). https://doi.org/10.153/SCNP00500064

Foreman, M. D., Wakefield, B., Culp, K., & Milisen, K. (2001). Delirium in elderly patients: an overview of the state of the science. *Journal of Gerontological Nursing*, *27*(4), 12-20. https://doi.org/10.3928/0098-9134-20010401-06

Gagnon, P., Allard, P., Mâsse, B., & DeSerres, M. (2000). Delirium in terminal cancer: a prospective study using daily screening, early diagnosis, and continuous monitoring. *Journal of pain and symptom management*, *19*(6), 412-426. https://doi.org/10.1016/S0885-3924(00)00143-3

Inouye, S. K. (1993). Delirium in hospitalized elderly patients: recognition, evaluation, and management. *Connecticut medicine*, *57*(5), 309-315.

Inouye, S. K. (1998). Delirium in hospitalized older patients: recognition and risk factors. *Journal of geriatric psychiatry and neurology*, *11*(3), 118-125. https://doi.org/10.1177/089198879801100302

Inouye, S. K., & Charpentier, P. A. (1996). Precipitating factors for delirium in hospitalized elderly persons: predictive model and interrelationship with baseline vulnerability. *Jama*, *275*(11), 852-857. https://doi.org/10.1176/foc.7.1.foc53

Inouye, S. K., Bogardus Jr, S. T., Baker, D. I., Leo-Summers, L., & Cooney Jr, L. M. (2000). The Hospital Elder Life Program: a model of care to prevent cognitive and functional decline in older hospitalized patients. Hospital Elder Life Program. *Journal of the American Geriatrics Society*, *48*(12), 1697-1706. https://doi.org/10.1111/j.1532-5415.2000.tb03885.x P

Inouye, S. K., Bogardus Jr, S. T., Charpentier, P. A., Leo-Summers, L., Acampora, D., Holford, T. R., & Cooney Jr, L. M. (1999). A multicomponent intervention to prevent delirium in hospitalized older patients. *New England journal of medicine*, *340*(9), 669-676. https://doi.org/10.1056/NEJM199903043400901

Inouye, S. K., van Dyck, C. H., Alessi, C. A., Balkin, S., Siegal, A. P., & Horwitz, R. I. (1990). Clarifying confusion: the confusion assessment method: a new method for detection of delirium. *Annals of internal medicine*, *113*(12), 941-948. https://doi.org/10.7326/0003-4819-113-12-941

Inouye, S. K., Westendorp, R. G., & Saczynski, J. S. (2014). Delirium in elderly people. *The Lancet*, *383*(9920), 911-922. https://doi.org/10.1016/S0140-6736(13)60688-1

Kakuma, R., Du Fort, G. G., Arsenault, L., Perrault, A., Platt, R. W., Monette, J., ... & Wolfson, C. (2003). Delirium in older emergency department patients discharged home: effect on survival. *Journal of the American Geriatrics Society*, *51*(4), 443-450. https://doi.org/10.1046/j.1532-5415.2003.51151.x

Marcantonio, E. R., Flacker, J. M., Michaels, M., & Resnick, N. M. (2000). Delirium is independently associated with poor functional recovery after hip fracture. *Journal of the American Geriatrics Society*, *48*(6), 618-624. https://doi.org/10.1111/j.1532-5415.2000.tb04718.x

Marcantonio, E., Ta, T., Duthie, E., & Resnick, N. M. (2002). Delirium severity and psychomotor types: their relationship with outcomes after hip fracture repair. *Journal of the American Geriatrics Society*, *50*(5), 850-857. https://doi.org/10.1046/j.1532-5415.2002.50210.x

McCusker, J., Cole, M. G., Dendukuri, N., & Belzile, E. (2003). Does delirium increase hospital stay?. *Journal of the American Geriatrics Society*, *51*(11), 1539-1546. https://doi.org/10.1046/j.1532-5415.2003.51509.x

McCusker, J., Cole, M. G., Dendukuri, N., & Belzile, E. (2003). Does delirium increase hospital stay?. *Journal of the American Geriatrics Society*, *51*(11), 1539-1546. https://doi.org/10.1046/j.1532-5415.2003.51509.x

Meagher, D. J., Moran, M., Raju, B., Gibbons, D., Donnelly, S., Saunders, J., & Trzepacz, P. T. (2007). Phenomenology of delirium: assessment of 100 adult cases using standardised measures. *The British Journal of Psychiatry*, *190*(2), 135-141. https://doi.org/10.1192/bjp.bp.106.023911

MedlinePlus. (2015). Delirium. Retrieved November 22, 2015, from https://www.nlm.nih.gov/medlineplus/ency/article/000740.html

Milisen, K., Foreman, M. D., Abraham, I. L., De Geest, S., Godderis, J., Vandermeulen, E., ... & Broos, P. L. (2001). A nurse-led interdisciplinary intervention program for delirium in

elderly hip-fracture patients. *Journal of the American Geriatrics Society*, *49*(5), 523-532. https://doi.org/10.1046/j.1532-5415.2001.49109.x

Rapp, C. G., & Iowa Veterans Affairs Nursing Research Consortium. (1998). Research-based protocol: Acute confusion/delirium. *Iowa City, IA: The University of Iowa Gerontological Nursing Interventions Research Center*. https://doi.org/10.3928/0098-9134-20010401-07

Rapp, C. G., Onega, L. L., Tripp-Reimer, T., Mobily, P., Wakefield, B., Kundrat, M., ... & Waterman, J. (2001). Training of acute confusion resource nurses. Knowledge, perceived confidence, and role. *Journal of Gerontological Nursing*, *27*(4), 34-40. https://doi.org/10.3928/0098-9134-20010401-08

Rapp, C. G., Onega, L. L., Tripp-Reimer, T., Mobily, P., Wakefield, B., Kundrat, M., ... & Morrow-Howell, N. (1998). Unit-based acute confusion resource nurse: an educational program to train staff nurses. *The Gerontologist*, *38*(5), 628-632.

Registered Nurses Association of Ontario Screening for Delirium, Dementia and Depression in Older Adults. (2003). Toronto, Canada: Registered Nurses Association of Ontario [On-line]. Available: www.rnao.org/bestpractices

Sullivan-Marx, E. M. (2001). RESTRAINT-FREE CARE. https://doi.org/10.3928/0098-9134-20010401-11

Trzepacz, P., Breitbart, W., Franklin, J., Levenson, J., Martini, D. R., & Wang, P. (1999). Practice guideline for the treatment of patients with delirium. *American Journal of Psychiatry*, *156*.

Tune, L. (2001). Assessing psychiatric illness in geriatric patients. *Clinical cornerstone*, *3*(3), 23-33.

Figure 1. Flow Diagram on Caregiving Strategies for Delirium

Figure 2. Review for Causes of Delirium

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Data Availability Statement

The data will be available for review from the corresponding author, on request.