AMERICAN UNIVERSITY OF BEIRUT

A PROTOTYPE CURRICULUM FOR MEDICAL-SURGICAL REGISTERED NURSES ON DELIRIUM CARE IN OLDER ADULT INPATIENTS

by
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ABSTRACT
OF THE PROJECT OF

Marie-Joe Walid Fahmi for Master of Science in Nursing
Major: Psychiatry and Mental Health Nursing

Title: A Prototype Curriculum for Medical-Surgical Registered Nurses on Delirium Care in Older Adult Inpatients

Delirium is a neuropsychiatric disorder that is highly prevalent in older adult population. This preventable disorder is often unrecognized which poses significant challenges in patient care. Registered nurses serve as an initial observer in alterations in mental status for which they play a vital role in detection and prevention of delirium. Providing an educational program for nurses is essential for optimum delirium care in older adult population.

The development process included a thorough literature review on the role of registered nurses in delirium care. In addition, it includes most common and specific assessment tools for nurses to utilize.

The project offers the development and implementation of a prototype curriculum designed to enhance the knowledge and skills of medical-surgical nurses in providing optimal care for older adult inpatients experiencing delirium. The curriculum focuses on evidence-based practices in delirium care, covering key aspects such as early recognition, comprehensive assessment, underlying etiologies, and a multidisciplinary approach to management. Interactive, case-based, and reflective learning methods are incorporated to facilitate active engagement and practical application of the acquired knowledge.

Conclusion: Delirium is a common yet often underdiagnosed condition in this population, and its proper management is crucial for improving patient outcomes. This prototype curriculum has the potential not only to improve the competence and confidence of medical-surgical nurses, but also to positively influence the standard of care provided to older adult inpatients experiencing delirium.

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CHAPTER I

INTRODUCTION

Delirium is highly prevalent among older adult patients admitted to hospitals. Approximately one-third of individuals aged 70 and above who are hospitalized for general medical reasons tend to experience delirium (Marcantonio, 2017). Delirium is evident in half of these patients upon admission, while the other half develop it during their hospital stay (Marcantonio, 2017). Among older adults, delirium is the most frequent postoperative complication, with an occurrence rate of 15% to 25% following major elective surgeries, and 50% following high-risk procedures, such as hip-fracture repair and cardiac surgery (Marcantonio, 2017). In the intensive care unit (ICU), when combined with states of stupor and coma, the cumulative incidence of delirium exceeds 75% among patients undergoing mechanical ventilation (Marcantonio, 2017). Additionally, delirium affects 10% to 15% of older adults in emergency department settings (Kennedy et al., 2014), and its prevalence reaches approximately 85% at the end of life in palliative care environments (Inouye et al., 2014).

A prospective multicentric benchmark study done in 2019 showed that delirium has a prevalence of 17% and an incidence of 8.7% in hospitalized older adult Lebanese patients (Zrour et al., 2019). A retrospective study done by the Consultation-Liaison at the American University of Beirut (CLAUB) revealed that out of the 533 consultations, delirium was diagnosed in 25.70% (137) of the cases (Bizri et al., 2023). Out of the cases initially diagnosed with delirium by the CLAUB team (118 out of 137), a significant majority, specifically 86.13%, were inaccurately identified by the medical team. Instead of diagnosing delirium in these patients, the medical team initially labeled

them as various other conditions, such as depression (29.93%), agitation (26.28%), and 11.68% as anxiety disorders (Bizri et al., 2023). Post-operative delirium (POD) in older adult patients can have significant consequences associated with adverse outcomes, such as prolonged hospital stays, increased risk of falls, and decreased quality of life (American Geriatrics Society, 2015) As a result, delirium represents a potentially catastrophic condition that places significant strain on both the individual's health and broader healthcare system (Janssen et al., 2019). In the light of the above, an accurate and timely diagnosis of delirium is essential for appropriate management and treatment, as well as for prevention of future episodes.

Healthcare providers, particularly nurses, frequently encounter the challenge of not identifying, misdiagnosing, and insufficiently addressing this issue in clinical settings. Physicians fail to recognize between 32% and 67% of cases, while nurses miss approximately 69%, leading to inadequate nursing care and management (Florou et al., 2017).

A. Significance

Lack of nurses' competence in delirium care is evident in the literature. Lee and Roh's (2021) study revealed that nurses' knowledge on delirium is not at an optimal level, with emotional burden touted as a primary barrier for delivering delirium care. Similarly, Papaioannou et al.'s (2023) cross-sectional study investigated the knowledge and attitudes of 835 nurses regarding delirium in the older people patients. Findings revealed a significant knowledge gap among nurses, such as predisposing factors, assessment tools, recognition, and management (Papaioannou et al., 2023). Recommendations emerging from both studies converged on the need to create

educational programs that advance nurses' knowledge and enhance their competence regarding delirium care (Lee & Roh, 2021; Papaioannou et al., 2023).

Given the importance of the topic in improving the outcomes and quality of care rendered to the older adult inpatients, it is deemed essential to develop a curriculum on delirium, targeting nurses located on general medical-surgical units. Preparing nurses on delirium care will make them better positioned to avert complications, enhance patient outcomes, and elevate the overall quality of care provided to this patient population. Accordingly, the aim of this prototype curriculum is advancing knowledge and competence of medical-surgical nurses regarding delirium care for the older adult inpatient population.

CHAPTER II

LITERATURE REVIEW

Delirium, a neuropsychiatric disorder, manifests suddenly in cognitive changes and fluctuating awareness in individuals aged 65 or older. Classic symptoms include altered mental status with variations in attention, awareness, recognition, and an acute onset of cognitive disturbance (Bergjan et al., 2020). Unfortunately, medical-surgical units often overlook this preventable condition (Heinrich et al., 2019). Delirium presents in hyperactive, hypoactive, and mixed forms, with hypoactive delirium posing challenges in identification (Zastrow et al., 2021). Failure to recognize delirium onset in high-risk populations can lead to adverse outcomes during and after hospitalization (Rohatgi et al., 2019). A validated and reliable screening tool is crucial for early delirium detection (Hargrave et al., 2017).

The importance of utilizing validated and reliable screening tools to detect delirium is underscored, as it significantly impacts the quality of care provided in hospital settings (Hargrave et al., 2017). Screening for delirium using validated tools aids healthcare providers and nurses in the early recognition and implementation of preventive measures (Ferguson et al., 2018). Studies reveal a wide occurrence rate of delirium, ranging from 11% to 64% among hospitalized patients, with varying rates depending on the level of care received (Bergjan et al., 2020). Unfortunately, a significant portion of healthcare teams fail to acknowledge delirium (Heinrich et al., 2019), that becomes challenging when coexisting with other medical histories, notably among patients with dementia (Bergjan et al., 2020).

Unrecognized delirium poses numerous adverse outcomes during and after hospitalization, such as prolonged ICU and hospital stays, lessened home discharge,

increased reliance on skilled nursing facilities, higher fall rates, elevated benzodiazepine use, functional decline, and heightened morbidity and mortality (Bergjan et al., 2020; Ferguson et al., 2018). The annual financial burden attributed to delirium on the healthcare system amounts to $38 to $152 billion (Hargrave et al., 2017). This condition necessitates immediate attention of healthcare providers. Prolonged hospital stays and substantial healthcare expenditure are associated with delirium (Bergjan et al., 2020).

This disorder is preventable through proactive intervention (Rohatgi et al., 2019). Introducing delirium screening provides benefits to patients and families, while healthcare organizations enhance efficiency and quality care by adopting delirium prevention strategies (Rohatgi et al., 2019). Providing care to patients with delirium in a hospital setting presents considerable challenges. As a result, it is imperative that hospital personnel receive enhanced training to bolster their knowledge, confidence, and attitudes (Scerri et al., 2016).

A. Role of Nurses in Delirium Care

Delirium in geriatric populations presents a global concern. Nurses are pivotal in implementing and leading delirium prevention programs in clinical practice. These programs often include risk assessment, monitoring, and implementation of preventive measures tailored to individual patients. Research indicates that promptly recognizing delirium can diminish the intensity and duration of the episode (Inouye et al., 2014).

Nurses typically serve as the initial observers of alterations in patients' mental status and should receive adequate training concerning delirium symptoms and the management of assessment scales (Contreras et al., 2021). Regularly monitoring patients on a daily basis is the primary method for identifying alterations in the behavior

of patients. Numerous researchers stress the significance of prompt delirium identification and evaluation of existing screening tools for enhanced feasibility in delirium detection. For instance, in a cross-sectional observational study involving 300 patients, Babu et al. (2021) identified 16% occurrence rate of delirium among medical-surgical patients. Scholars have highlighted the advantages of delirium screening, contributing to enhanced quality care for geriatric populations. Prompt identification, involving assessment, intervention, and implementation of measures to mitigate delirium, such as consistent orientation, uninterrupted sleep, family involvement, discontinuation of high-risk medications, and pain management, can ensure superior care for elderly patients (Rohatgi et al., 2019). Accurate assessment and thorough documentation of delirium offer valuable insights for future quality initiatives (Jones et al., 2019).

B. Delirium Screening Tools

The availability of delirium screening tools such as the Nursing Delirium Screening Scale (Nu-DESC) and the Confusion Assessment Method (CAM) play a crucial role in enhancing the ability of nurses to identify and manage delirium in older adult patients. These tools provide a systematic and structured approaches to assess cognitive function in patients admitted.

1. Nursing Delirium Screening Scale (Nu-DESC)

The Nursing Delirium Screening Scale (Nu-DESC) serves as an assessment tool gauging the extent of delirium. It is an observational scale examined by researchers, specifically designed to detect subtle signs of agitation, including mild manifestations

(Heinrich et al., 2019). The Nu-DESC is characterized by substantial validity and reliability, enabling the identification of hypoactive, mixed, and hyperactive forms of delirium (Bergjan et al., 2020). Nurses can swiftly employ this tool with minimal training and time investment to observe patients and record their observations, facilitating subsequent review by healthcare providers (Zastrow et al., 2021).

2. The Confusion Assessment Method (CAM)

Recent studies affirm the CAM's efficacy in nurses' hands, demonstrating its reliability and feasibility in diverse clinical settings. For instance, research by Johnson et al. (2021) underscores the CAM's utility as a rapid and effective delirium screening tool in geriatric nursing practice, enabling early identification and subsequent intervention. Similarly, findings by Smith et al. (2020) corroborate the CAM's validity and reliability when administered by nurses, affirming its suitability for routine use in various healthcare settings. Moreover, advancements in technology have led to the development of modified versions of the CAM, such as electronic applications or mobile-based platforms, facilitating its integration into routine nursing assessments. Recent studies by Chen et al. (2021) highlighted the feasibility and accuracy of using digital platforms to implement the CAM, enabling nurses to conduct timely delirium assessments and enhance documentation accuracy.

C. Management of Delirium

A comprehensive review revealed a notable decrease in delirium occurrence subsequent to the execution of multifaceted interventions (Martinez et al., 2014). León-Salas et al. (2020) did a meta-analysis which indicated the effectiveness of multifaceted

interventions in reducing the occurrence, duration, and severity of delirium, along with a decrease in pressure ulcer incidence among hospitalized older individuals. Hence, these interventions exhibit significant potential to positively influence prevalent and critical conditions among vulnerable older patients during hospital stays (León-Salas et al., 2020). Non-pharmacological interventions include reorientation and reassurance, hydration, mobilization, reduction of stimulation, and pain management (Smallheer, 2021).

Non-pharmacological protocols represent the preferred strategy for both treating and preventing delirium. These protocols encompass various interventions necessitating nursing or interdisciplinary coordination and decision-making for implementation. Key interventions include enhancing patient mobility, maintaining regular day-night schedules, reducing sleep disruptions, conducting spontaneous breathing trials for ventilated patients, optimizing nutrition and hydration, and minimizing the usage of catheters and restraints (Balas et al., 2014; Rivosecchi et al., 2015). These protocols demonstrate favorable outcomes by enhancing patient mobility, reducing days on ventilators, and mitigating delirium occurrences (Balas et al., 2014; Rivosecchi et al., 2015).

On the other hand, when non-pharmacological interventions fail to manage symptoms of delirium, pharmacological interventions are applied. The goal of pharmacologic therapy is utilized to control agitation and calm the patient while avoiding oversedation (Smallheer, 2021).

Medications used are first-generation antipsychotic medication (haloperidol), second-generation (olanzapine, risperidone, quetiapine), and alpha-2 agonist medications (managing anxiety and pain) (Smallheer, 2021).

D. Impact of an Educational Program

Educational programs seek to empower nurses by proving them comprehensive knowledge, evidence-based practices, and skills enabling them to provide high-quality care. A qualitative study was done on hospital nurses to explore their experiences of enablers and barriers on delirium guidelines. The study identified one of the barriers as lack of identification interrelated with lack of knowledge, meaningfulness, and priority (Emme, 2020). Aldawood et al. (2023) assessed nurses' knowledge of ICU delirium in a quasi-experimental single group pre-test-post-test design, revealing that ICU nurses' knowledge was low before the educational program (38.1%) which significantly increased after the program to 76.2% (Aldawood et al., 2023). Similarly, another quasi-experiment was done on ICU and ER nurses which showed that educational interventions significantly improved nurses' knowledge of delirium assessment, prevention, and treatment, and thus elevating the practice score (Baluku Murungi et al., 2023). This shows how refining nurse's knowledge on delirium have a direct impact on improving the quality of care of patients.

The aim of this project is to bring about positive changes in nurses' behaviors and practices, and ultimately contributing to improved patient outcomes. Research conducted by Brown et al. (2018) demonstrated that upon adopting a delirium care pathway, the duration of hospitalization reduced by over two days for patients experiencing delirium.

CHAPTER III

THE CURRICULUM

Developing a comprehensive curriculum on delirium for registered nurses requires a multifaceted approach that encompasses understanding the nuances of this condition, its impact on patients, and effective strategies for identification, management, and prevention. By integrating evidence-based practices, utilizing standardized assessment tools, and emphasizing interdisciplinary collaboration, this curriculum aims to empower nurses to optimize patient care and enhance outcomes for individuals affected by delirium.

A. Curriculum Description

This prototype curriculum is tailored for medical-surgical registered nurses in acute care centers to enhance their expertise in recognizing, assessing, managing, and preventing delirium in the older adult inpatient population. The curriculum's major concepts include evidence-based practices, interdisciplinary collaboration, and practical strategies to optimize patient care and quality outcomes. Case studies and article reflection are integrated in the curriculum to help participants contextualize theoretical knowledge, apply it to real-world scenarios, and enhance critical thinking skills. These learning experiences promote deeper understanding of delirium care in high-risk population and foster a more comprehensive and practical approach when attending to this patient population.

B. Purpose

The purpose of developing a curriculum to educate registered medical/surgical nurses on delirium in elderly patients within a hospital setting is multifaceted and critical. This curriculum aims to equip nurses with comprehensive knowledge and specialized skills necessary for the early recognition, assessment, and management of delirium in the older adult population. By providing targeted education on the intricacies of delirium, its risk factors, and evidence-based interventions, the curriculum strives to enhance the competence and confidence of registered nurses in delivering optimal care to patients susceptible to develop delirium. Additionally, the curriculum emphasizes the importance of a multidisciplinary approach, fostering collaboration among healthcare professionals to improve patient outcomes, reduce complications, and contribute to the overall well-being of older adults undergoing medical/surgical interventions in the hospital setting. Ultimately, this educational initiative aims to address a critical gap in delirium care, empowering nurses to play a pivotal role in improving the quality of care provided to elderly patients within the medical-surgical context.

C. Target Audience

This curriculum is designed for registered nurses working on medical-surgical units regardless of their years of experience.

D. Curriculum Outcomes

1. Differentiate between the various types of delirium and the clinical presentation of each.
2. Apply standardized assessment tools for delirium screening and diagnosis.

3. Implement evidence-based interventions and non-pharmacological approaches for delirium prevention and management.
4. Collaborate effectively with the interdisciplinary teams to optimize care for patients with delirium.
5. Evaluate the impact of nursing interventions on delirium outcomes.

E. Delivery Approach

This curriculum adopts an interactive and learner-centric methodology. Each module is designed to encompass diverse instructional strategies, including didactic lectures, case discussion, and reflective practice. The modular structure ensures a progressive and scaffolded learning experience, allowing nurses to build on their understanding as they advance through the curriculum. Continuous feedback and reflection sessions encourage self-assessment and the application of acquired knowledge to clinical situations. This approach promotes a dynamic and participatory learning experience, enabling registered nurses to confidently apply their acquired knowledge and skills in the complex context of delirium within medical/surgical settings.

F. Curriculum Outline

This is a 4-module curriculum that intends to improve nurse's knowledge of delirium care for older adult patients. The curriculum will be offered on an assigned date with a total duration of 8 hours. Each module will be delivered around 1 to 2-hour duration and a break of 15-30 minutes will be given between each module.

Table 1 Module 1 Introduction to Delirium

Module		Introduction to Delirium
Outline	1.	Definition, types, and prevalence.
	2.	Etiology, risk factors, and contributing factors.
	3.	Impact on patient outcomes and healthcare system.
Duration		1 hour
Teaching Method		Lecture format
Learning Outcomes	1.	Differentiate delirium from other cognitive disorders.
	2.	Recognize common risk factors associated with the development of delirium in older adults.
	3.	Identify the key clinical features and symptoms of delirium.
	4.	Differentiate between hyperactive, hypoactive, and mixed subtypes of delirium.
	5.	Identify the underlying pathophysiological mechanisms contributing to delirium.
	6.	Explore the consequences of delirium on patient outcomes and healthcare system.
Content		DSM-5 criteria for delirium (see Appendix A)

Module 1 Description

It is fundamental for nurses working in medical and surgical settings to understand delirium. This module sets the stage by defining delirium, exploring its types and prevalence, and delving into the contributing factors. Nurses learn about the importance of delirium, its various forms, and how it affects not just the outcomes of individual patients but also the healthcare system.

Table 2 Module 2 Clinical Assessment of Delirium

Module 2	Clinical Assessment of Delirium
Outline	• Recognizing signs and symptoms of delirium • Utilizing standardized assessment tools (CAM, Nu-DESC)
Duration	2 hours
Teaching Method	Lecture format Case Discussion
Learning Outcomes	1. Enhance nurse's knowledge and skills regarding most commonly used clinical assessment tools of delirium. 2. Demonstrate the step-by-step process of using NU-DESC for delirium screening. 3. Provide a comprehensive overview of the CAM tool and its components.
Content	Case study (see Appendix B)

Module 2 Description

For prompt intervention, being able to evaluate delirium clinically is essential. This module focuses on recognizing signs and symptoms through assessment tools application. By employing standardized evaluation instruments such as CAM and Nu-DESC, nurses would effectively diagnose patients and accurately identify incidents of delirium. This knowledge is fundamental for providing targeted care and improving patient outcomes.

Table 3 Module 3 Multidisciplinary Management Strategies

Module 3	Multidisciplinary Management Strategies
Outline	• Non-pharmacological interventions (e.g. environmental modifications, sleep hygiene, mobilization) • Role of nutrition, hydration, and pain management • Pharmacological approaches and their side effects.
Duration	2 hours
Teaching Method	• Lecture format • Reflection • Case discussion
Learning Outcomes	1. Describe the non-pharmacological interventions for delirium management. 2. Understand the importance of creating a supportive environment through sleep hygiene, nutrition, and pain management. 3. Identify commonly used pharmacological interventions for delirium management in older adult patients. 4. Identify specific medications, their mechanisms of action, and potential side effects. 5. Apply theoretical knowledge through case discussion.
Content	• Case studies (see Appendix B) • Article reflection (see Appendix C).

Module 3 Description

Delirium management extends beyond nursing tasks. This module presents a comprehensive strategy that incorporates non-pharmacological treatments including mobilization, environmental adjustments, and good sleep hygiene. The limits of pharmaceutical approaches are explored. Understanding the role of various factors equips nurses to contribute to comprehensive patient care.

Table 4 Module 4 Interdisciplinary Collaboration and Communication

Module	Interdisciplinary Collaboration and Communication
Outline	• Effective communication within healthcare teams • Collaboration with physicians, pharmacists, and other healthcare professionals • Education and support for patients and caregivers
Duration	1 hour
Teaching Method	Lecture format
Learning Outcomes	1. Recognize the significance of clear and efficient communication among healthcare professionals in rendering care to the delirium patients. 2. Explore strategies to enhance interdisciplinary collaboration 3. Recognize the impact of delirium on caregivers and provide education on delirium care for older adults.

Description: This module highlights the impact of creating a clear and effective communication within healthcare members on patient outcomes. This module aid nurses in applying interdisciplinary strategies and enhance their ability to navigate complex situations collaboratively.

G. Assessment Approaches

The participants will be evaluated based on class attendance and participation in case discussion, reflection, and a final exam. The grades will be distributed according to the following:

1. Class attendance 10%
2. Class participation 10%
3. Reflection 20%

4. Final exam 60%

A grade of 80% is required to have a certificate for program completion. If participants get a grade less than 80%, they will have the chance to repeat the final exam. They will be issued a certificate once they complete all curriculum requirements with an overall score of 80% and above.

Class participation will be designed to be interactive and dynamic with a primary focus on case studies that mirror real-world scenarios encountered by medical-surgical nurses. Case studies will be presented to participants prompting discussion and analysis about situations encountered during their practice. This will allow nurses to apply theoretical knowledge to practice. Participants will be evaluated according to a case study rubric (see Appendix D).

For reflective articles, participants will be given articles to read ahead of time before the session. Reflections will be done during the session where a set of questions will be offered to guide them. Reflections will be graded according to a specific rubric (see Appendix E).

CHAPTER IV

CURRICULUM IMPLEMENTATION AND EVALUATION

This curriculum provides a structured framework to equip registered nurses with the necessary expertise to effectively manage delirium, catering to the specific needs and challenges faced within clinical settings. This curriculum will be offered to nurses working on medical-surgical units. The curriculum has been meticulously developed to provide nurses with the knowledge and skills needed to handle the complexities of delirium in older adults.

A. Implementation Phase

To ensure alignment with the institution's mission and vision, such as the American University of Beirut Medical Center (AUBMC), the curriculum will be presented and discussed with the Clinical and Professional Development Center (CPDC) or the nursing service department of a hospital, focusing on the aim of this prototype curriculum, content, delivery, and evaluation process. However, any modifications required will be acted upon. The implementation logistics will follow as soon as approval for delivering the curriculum is secured.

The curriculum will be fully deliberated with the nurse managers and agreed upon, and delivery of the sessions will be scheduled. A poster will be posted at the nurses' stations on the targeted units to inform nurses about the curriculum offering date (see Appendix F). Nurses who express readiness and interest to attend will register their names with the unit manager.

B. Evaluation Process

Evaluation of this curriculum is bifold: (a) assessing achievement of learning outcomes and (b) evaluating the content and offering of the curriculum. Assessing learners' acquisition of knowledge and skills pertains to early detection and management of delirium in the older adult inpatients. As for curriculum evaluation, the process will focus on determining areas of strengths and weaknesses in both the delivery approach and implementation. Eventually, this sets the groundwork for future improvement in the overall structure, organization, and offering, especially that the curriculum, being a prototype, may be shared with the Order of Nurses officials to explore the potential of adopting and implementing it at a larger scale in different hospitals in Lebanon.

C. Assessment of Participants' Achievement

Upon completion of the curriculum, a thorough evaluation of learning outcomes will be conducted. Nurses' knowledge will be assessed by completing an exam to ensure effectiveness. The exam is carefully designed to gauge the proficiency of nurses in understanding and managing delirium within the older adult population (see Appendix G). The exam will include multiple-choice questions (MCQ) and essay questions related to a clinical situation. MCQs will assess the theoretical knowledge, ensuring a thorough understanding of the main concepts, risk factors, and preventative measures associated with delirium. Clinical situations are also included in order to assess how effectively this knowledge is used in everyday scenarios, with an emphasis on critical thinking and decision-making abilities.

Article reflection is another strategy that will be used to assess ability of participants to think critically about content, analyze the discussed situation, and evaluate application to practice. Apart from advancing participants' knowledge, reflection will enrich nurses' practice through evidence.

D. Instructor and Curriculum Evaluation

Gathering feedback from participants after the completion of the curriculum is the best way to measure instructors' teaching skills. Participants will be asked to complete a survey by the end of the curriculum. The data collected may be used to improve the instructor's performance and overall offering (Agaoglu, 2016). An essential tool for students to offer feedback on the layout of a course, the efficacy of the teacher, and the knowledge outcome constitutes the evaluation components of the curriculum (Yu et al., 2019). Curriculum evaluation will commence immediately after the last session when participating nurses will give their feedback regarding material presentation and clarity of the information, delivery approach, adequacy of content, accessibility. A qualitative section will be included in the evaluation tool for comments and suggestions (see Appendix H).

Another potential means to evaluate effectiveness of the curriculum will be through retrieving the electronic health system, if available at the institution. The nurses' use of the delirium assessment tool could be easily retrieved from the system. Eventually, through this process, the collected data can help to evaluate attainment of curriculum aims, mainly the early identification of patients with delirium and subsequent interventions used. For example, at AUBMC, the Epic system used can

provide data that will help monitor the nurses' use of the delirium assessment tool and any executed management on patients.

E. Future Recommendations

It is recommended that nurses should consider incorporating continuing professional development opportunities in future versions of the delirium curriculum for older adults. In view of the dynamic nature of healthcare, continuing updates and progress in understanding delirium should be integrated within the curriculum. In order to keep nurses informed of the latest research findings, evidence-based practice, and emerging interventions in the field of delirium care, webinars and online modules could serve as effective tools. It is also important to improve the holistic approach to delirium management, efforts should also be made to foster a culture of interdisciplinary cooperation and communication within health care. Nurses could remain at the forefront of care and ensure optimum delirium care for an ageing population by becoming committed to continuous learning and inter professional collaboration. For this reason, it is essential to integrate delirium care in hospital's orientation for novice medical-surgical nurses and to propose the curriculum for adoption in other hospitals by collaborating with the Lebanese Order of Nurses (LON).

CHAPTER V

CONCLUSION

The curriculum highlights the ongoing commitment to enhancing nurses' knowledge and skills in dealing with delirium in the older adult inpatient population. This is done by rigorous evaluation processes including a pre and posttest, application, and use of evidence in practice, and curriculum evaluation. Integrating further recommendations fortifies the curriculum's ability to support nurses and provide updated information to provide optimal care. The literature has shown the importance of nurse's knowledge on delirium care in older adult inpatients and its impact on patient's outcome. It is accomplished by utilizing specific tools, such as the NU-DESC and CAM, for assessing and providing proper interventions accordingly. Optimum care is delivered when nurses collaborate with other healthcare professionals to achieve a holistic care and proper management of delirium.

APPENDIX A

DSM-5 DIAGNOSTIC CRITERIA FOR DELIRIUM

Table 1. DSM-5 Diagnostic Criteria for Delirium

A. A disturbance in attention (i.e., reduced ability to direct, focus, sustain, and shift attention) and awareness (reduced orientation to the environment).

B. The disturbance develops over a short period of time (usually hours to a few days), represents a change from baseline attention and awareness, and tends to fluctuate in severity during the course of a day.

C. An additional disturbance in cognition (e.g., memory deficit, disorientation, language, visuospatial ability, or perception).

D. The disturbances in Criteria A and C are not explained by another preexisting, established, or evolving neurocognitive disorder and do not occur in the context of a severely reduced level of arousal, such as coma.

E. There is evidence from the history, physical examination, or laboratory findings that the disturbance is a direct physiological consequence of another medical condition, substance intoxication or withdrawal (i.e., due to a drug of abuse or to a medication), or exposure to a toxin, or is due to multiple etiologies.

DSM-5 = Diagnostic and Statistical Manual of Mental Disorders, *5th ed.*

DSM-5 diagnostic criteria retrieved from
https://www.aafp.org/pubs/afp/issues/2014/0801/p150.html

APPENDIX B

CASE STUDIES ON DELIRIUM

Case study 1 - Delirium Assessment (Module 2)

Patient Profile

Mr. Johnson, a 72-year-old male, was admitted for pneumonia. His condition deteriorated, requiring oxygen therapy and IV antibiotics. He has a history of multiple comorbidities such as diabetes mellitus, hypertension, chronic kidney disease etc. On day 4 of admission, the nursing team observed changes in Mr. Johnson's behavior. He became agitated, screaming at the door “get out of my house”. The nurse tried to reorient the patient that he is in a hospital, but the patient was insisting he is at home and that the nurse is a robber.

Questions

1. Identify and describe key observations that indicate Mr. Johnson might be experiencing.
2. Explain the purpose and components of the Nu-DESC scale for assessing delirium in hospitalized patients.
3. How would you use the Nu-DESC scale to assess Mr. Johnson's delirium symptoms?
4. After calculating the Nu-DESC score, what will you do next?

Case study 2: Delirium Management (Module 3)

Patient Profile

Mr. Smith is an 80-year-old male patient admitted to the medical-surgical unit following surgery for a hip fracture after a fall. He has a history of hypertension and mild cognitive impairment. Mr. Smith is experiencing postoperative pain and is frequently confused and disoriented since admission. His family is concerned about his mental state, noticing significant changes in his behavior.

Questions

1. What are the risk factors for delirium in Mr. Smith's case?
2. Using the Nu-DESC tool, Mr. Smith scored 4, what will be the next step?
3. What non-pharmacological interventions can be implemented to prevent delirium in Mr. Smith?
4. How can the nursing team collaborate with other healthcare professionals to address Mr. Smith's delirium?
5. What strategies can be employed to educate Mr. Smith's family about delirium prevention and management?

APPENDIX C

REFLECTION QUESTIONS

Caprio, T. V., Morrison, E. J., & Poduri, K. R. (2019). Delirium: Evaluation and management. Current Physical Medicine and Rehabilitation Reports, 7(2), 134–140. https://doi.org/10.1007/s40141-019-00223-wv

After reading the assigned article, please answer the following questions:

1. How are you familiar in the assessment and management of delirium ideas/methods proposed in this article.
2. Describe the pharmacologic and nonpharmacological interventions for delirium management.
3. What do you think you can use in this article to implement in practice.
4. Reflect on a patient you have encountered in your practice with delirium. How were the patients diagnosed, what was the management, who was involved on the care, what was your role, what do you think can be done to improve.

https://www.kumc.edu/information-technology/services/teaching-and-learning-technologies/online-learning/instructional-design/blackboard-rubrics.html

APPENDIX D

CASE STUDY PARTICIPATION RUBRIC

Case Study Rubric	Poor 0 pts	Fair 5 pts	Good 10 pts	Excellent 15 pts	Superior 20 pts
Completeness of assignment	Poor More than half of the components not incorporated	Fair Up to half of the components not incorporated	Good Two or more assignment components not incorporated	Excellent 1 assignment component not incorporated	Superior All assignment components incorporated into submission
Thoroughness	Poor Each topic is treated only weakly in the submission	Fair Some topics are treated somewhat weakly in the submission	Good Only some topics are treated somewhat thoroughly in the submission	Excellent Each topic is treated somewhat thoroughly in the submission	Superior Each topic is treated very thoroughly in the submission
Readings Application of readings (case study materials	Poor No evidence that readings were incorporated into submission	Fair Submission has questionable relationship to reading material	Good Somewhat unclear that readings were understood through incorporation into submission	Excellent Somewhat clear that readings were understood and incorporated well into submission	Superior Very clear that readings were understood and incorporated well into submission
Accuracy and/or quality of ideas	Poor Submission contains only unoriginal ideas and/or inaccurate information	Fair Submission contains few original ideas or some accurate information	Good Submission contains at least some original ideas and/or some accurate information	Excellent Entire content of submission contains original ideas and/or accurate information	Superior Entire content of submission contains well-developed original ideas and/or precisely-worded, accurate information

Case Study participation rubric retrieved from

https://www.rcampus.com/rubricshowc.cfm?code=V2735X&sp=yes&

APPENDIX E

ARTICLE REFLECTION RUBRIC

	Levels of Achievement				
Criteria	Failing	Emerging	Below Standard	Meets Standard	Exceeds Standard
Effectively uses a variety of information-gathering techniques and information resources Weight 30.00%	0 % Fails to meet the minimum standard.	40 % Demonstrates little familiarity with basic information or demonstrates a command of only a few basic information-gathering techniques.	60 % Demonstrates knowledge of some basic information resources but is not aware of all necessary resources, or has command of a limited set of information-gathering techniques.	80 % Demonstrates knowledge of basic information resources and commands a useful range of information-gathering techniques.	100 % Demonstrates an extensive knowledge of basic information resources and commands a wide range of information-gathering techniques. Demonstrates creativity and resourcefulness in collecting data and creating original data.
Effectively interprets and synthesizes information Weight 30.00%	0 % Fails to meet the minimum standard.	40 % Rarely, if ever, interprets information gathered for tasks accurately or synthesizes the information concisely.	60 % Sporadically interprets the information gathered for tasks accurately and synthesizes the information concisely.	80 % Consistently interprets the information gathered for tasks accurately and synthesizes the information concisely.	100 % Consistently, interprets the information gathered for tasks in accurate and highly insightful way and provides highly creative and unique syntheses of that information.
Depth and breadth of understanding Weight 30.00%	0 % Fails to meet the minimum standard.	40 % Demonstrates severe misconceptions abut the concepts and generalizations.	60 % Displays an incomplete understanding of the important concepts and generalizations and has some notable misconceptions.	80 % Displays a complete and accurate understanding of the important concepts or generalizations.	100 % Demonstrates a thorough understanding of the important concepts or generalizations and provides analysis and new insights into some aspect of that information.
Conventions and Punctuality Weight 10.00%	0 % Fails to meet the minimum standard. Not Punctual.	40 % Rarely uses proper sentence structure, grammar, punctuation, citation style, and spelling.	60 % Some correct use of, but also problems in, sentence structure, grammar, punctuation, citation style, and spelling.	80 % Sentence structure and grammar, generally strong, with only occasional lapses in punctuation, citation style, and spelling.	100 % Sentence structure and grammar excellent; correct use of punctuation and citation style, no spelling errors.

Article reflection rubric retrieved from https://www.kumc.edu/information-technology/services/teaching-and-learning-technologies/online-learning/instructional-design/blackboard-rubrics.html

APPENDIX F

POSTER

APPENDIX G

FINAL EXAM

The exam includes both multiple-choice and short essay questions. Total grade is out of 20.

Choose one best answer for each or the following MCQs.

1. A characteristic feature in the development of delirium includes:
   1. Delirium has a short development course, hours to days
   2. Delirium course is characterized by a steady phase
   3. Delirium tends to have a progressive nature
   4. Delirium has a long development course, months to years

2. The most common type of delirium is:
   1. Hyperactive delirium
   2. Hypoactive delirium
   3. Mixed delirium

3. Hyperactive delirium is characterized by:
   1. Agitation
   2. Withdrawal
   3. Flat affect
   4. Inability to focus

4. Hypoactive delirium is characterized by:

1. Withdrawal
2. Restlessness
3. Apathy
4. Negative response to caregivers

5. Which of the following is an unmodifiable risk factor for delirium development?
   1. Lack of daylight or clocks items
   2. A noisy environment
   3. Uncontrolled pain
   4. Chronic pulmonary disease

6. Which of the following is not a risk factor for the development of delirium?
   1. Disruptive family/visitors
   2. Use of physical restraints
   3. Use of tubes and catheters
   4. Fluid overload with hydration

7. After hospitalization, delirium tends to be associated with which of the following:
   1. Development of dementia
   2. Increase risk for infection
   3. Development of cognitive impairment
   4. Delirium is reversible

8. Which of the following medication is highly associated with delirium?

1. Benzodiazepines
2. Antipsychotics
3. Ketamine
4. NSAIDs

Answer the following statements on delirium with True or False.

9. Patients outside the intensive care unit setting are not at risk for developing delirium.
   1. True
   2. False
10. The primary treatment of delirium is identifying and managing the underlying medical etiology.
    1. True
    2. False
11. Anti-psychotics are the first line of treatment in managing delirium.
    1. True
    2. False
12. A patient with a score of 3 on the Nursing Delirium Screening Scale (Nu-DESC) doesn't need any intervention.
    1. True
    2. False
13. What is one measure that a nurse can implement to prevent delirium from developing?
    1. Keep patient safe in bed at all times
    2. Give benzodiazepine and sedatives

3. Decrease visitation hours

4. Pain management

14. What feature is included in the Confusion Assessment Method (CAM)?

1. Inattention

2. Memory impairment

3. Psychomotor retardation

4. Altered sleep-wake cycle

15. Mrs. M is a 78-year-old patient admitted for pneumonia. On Day 2 of admission, Mrs. M becomes agitated and aggressive when the nurse approaches her to do her morning care. The most appropriate intervention the nurse should do in this situation would be able to:

1. Obtain an order to restrain the patient.

2. Tell the patient firmly that it is time to have a bath.

3. Call the physician and request an order for sedation.

4. Stay calm and talk quietly to the patient.

16. Which goal is a priority for a patient with acute confusion and mild agitation post total hip replacement?

1. The patient will complete activities of daily living independently.

2. The patient will maintain safety.

3. The patient will remain oriented.

4. The patient will be started on sedatives.

17. Which of the following is appropriate when communicating with patients having delirium?

1. Excessive and detailed explanations.
2. Gestures and pictures instead of words.
3. Simple sentences and short words.
4. Stimulating phrases to capture the attention of patients.

1. You are required to answer the following questions (each question is over one point).

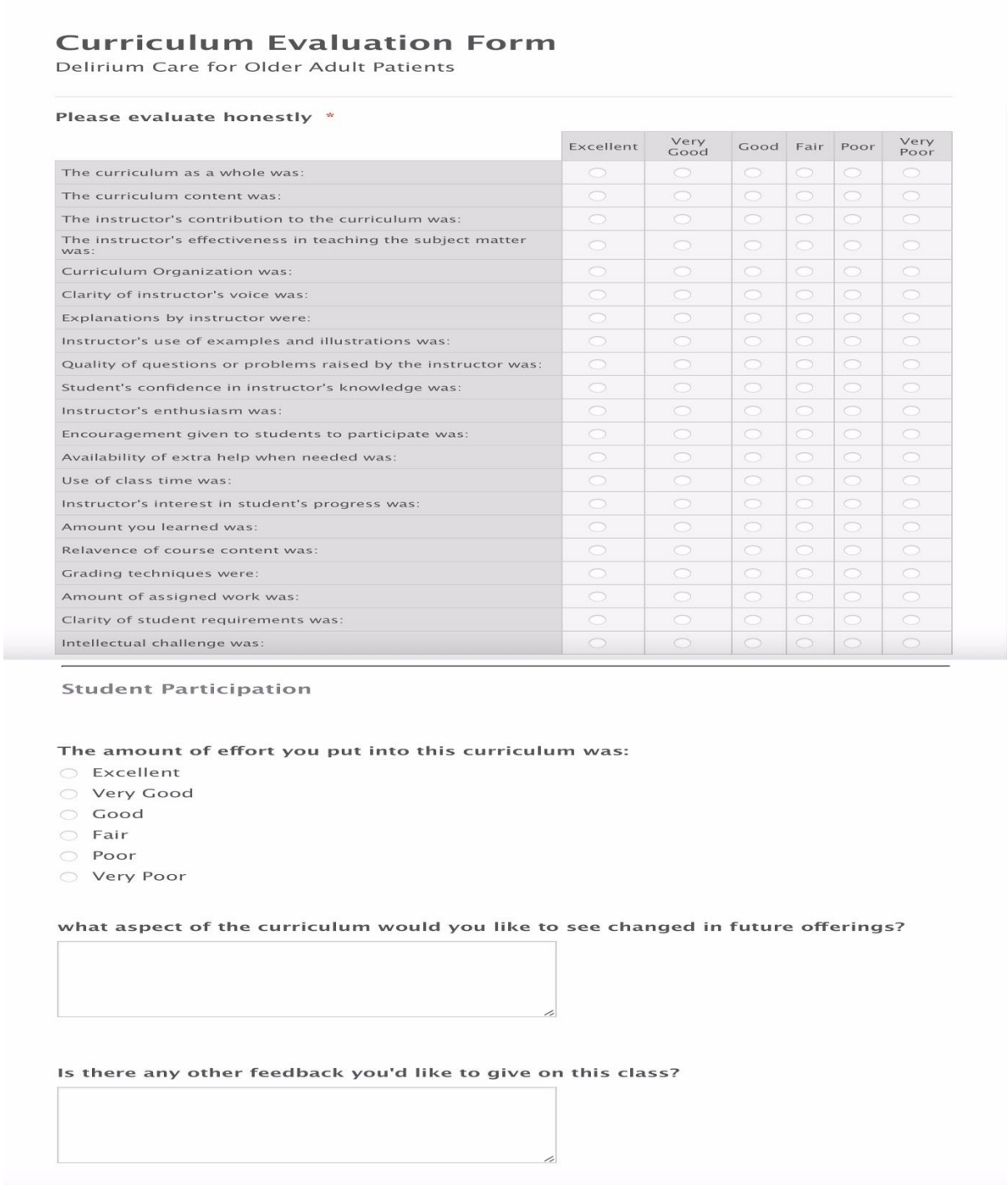
2. List 2 conditions provided by the DSM-5 for delirium diagnosis. (This question is over one point; each correct answer will be granted 0.5 point)

3. List 4 subsequent outcomes of delirium on patient/hospital/caregiver/staff. (This question is over one point; each correct answer will be granted 0.25 point)

4. List 4 non-pharmacological nursing interventions to prevent/manage delirium. (This question is over one point; each correct answer will be granted 0.25 point)

APPENDIX H

INTSRUCTOR AND CURRICULUM EVALUATION FORM



Curriculum Evaluation Form

Delirium Care for Older Adult Patients

Please evaluate honestly *

	Excellent	Very Good	Good	Fair	Poor	Very Poor
The curriculum as a whole was:	○	○	○	○	○	○
The curriculum content was:	○	○	○	○	○	○
The instructor's contribution to the curriculum was:	○	○	○	○	○	○
The instructor's effectiveness in teaching the subject matter was:	○	○	○	○	○	○
Curriculum Organization was:	○	○	○	○	○	○
Clarity of instructor's voice was:	○	○	○	○	○	○
Explanations by instructor were:	○	○	○	○	○	○
Instructor's use of examples and illustrations was:	○	○	○	○	○	○
Quality of questions or problems raised by the instructor was:	○	○	○	○	○	○
Student's confidence in instructor's knowledge was:	○	○	○	○	○	○
Instructor's enthusiasm was:	○	○	○	○	○	○
Encouragement given to students to participate was:	○	○	○	○	○	○
Availability of extra help when needed was:	○	○	○	○	○	○
Use of class time was:	○	○	○	○	○	○
Instructor's interest in student's progress was:	○	○	○	○	○	○
Amount you learned was:	○	○	○	○	○	○
Relavence of course content was:	○	○	○	○	○	○
Grading techniques were:	○	○	○	○	○	○
Amount of assigned work was:	○	○	○	○	○	○
Clarity of student requirements was:	○	○	○	○	○	○
Intellectual challenge was:	○	○	○	○	○	○

Student Participation

The amount of effort you put into this curriculum was:

- ○ Excellent
- ○ Very Good
- ○ Good
- ○ Fair
- ○ Poor
- ○ Very Poor

what aspect of the curriculum would you like to see changed in future offerings?

Is there any other feedback you'd like to give on this class?

Curriculum Evaluation Form. (n.d.). Retrieved from

https://www.jotform.com/build/211361218303442

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