Effects of Implementing an Innovative Education Initiative for Management of Delirium in Acute Hospitals

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Purpose: Evaluate the effects of an interactive delirium care education intervention on delirium care for older people in acute healthcare settings.

Methods: This study used a multi-method quasi-experimental design with pre- and post-intervention and observation to evaluate clinicians' skill, confidence and competence after education package and OSCEs. The effects of this initiative were evaluated using three surveys: pre-survey (T0), immediately after the OSCE (T1) and six weeks post-OSCE (T2). Pre- session 1 (T0) questionnaires consisted of four demographic questions, four questions related to self-perceived confidence and competence of delirium assessment and knowledge and after OSCEs Delirium Education on improving the competence and confidence to deliver delirium care and 16 multiple-choice questions (MCQ) about delirium knowledge and skills. In addition, qualitative data were collected from open ended items in the surveys. The OSCE scenarios were developed in collaboration with an expert panel of senior nursing staff (n=10), physiotherapists (n=1), senior occupational therapist (n=1) and Geriatric Medical Consultants (n=2), all of whom work in aged care wards. The scenarios were developed based on de-identified cases from their own clinical practice. A total of five OSCE scenarios were developed.

Sample and settings: A convenience sample of all registered nurses, enrolled nurses, medical interns, physiotherapists and occupational therapists working on the four aged care units in two hospitals in NSW, Australia (one regional and one urban). Approximately 150 clinical practitioners were invited to participate in the study.

Data analysis: All data will be entered into SurveyMonkey. Data will be downloaded into Excel for data cleaning and imported to SPSS for data analysis. Descriptive statistics (including Chi-Squared) will be undertaken to test the effects of implementing the education intervention. The transcripts of data from the open-end questions were analysed independently by two authors (R.C. & A.S.) using constant comparison method.

Results: There was a total two acute care hospitals and 128 partitioners (registered nurses, allied health, assistants in nursing and medical doctors) participated. A total of 113 attended a one-hour face-to face education session (88.2 % response rate) and completed a demographic survey, self-assessment survey and a short formative multiple-choice questionnaire (MCQ). A total of 97 completed Survey T1 (response rate of 75.7%) and a total of 84 staff completed Survey T2 (response rate of 65.6%). Throughout the study a total of 12 participants (n=12) withdrew due to sick leave, maternity leave and resignation. A total of 2 participants (n=2) identified themselves as being "too anxious" to complete the OSCE component (Session 2). The majority of participants were registered nurses and enrolled nurses (n=64, 56.6%), others were medical doctors (n=7, 6.1%), physiotherapists and occupational therapists (n=13, 11.5%), AIN (n=12, 10.6%) and clinical nurse specialist (n=3, 2.6%).

The most important findings were statistically significant improvements in the regional hospital perceived: (i) perceived knowledge about delirium (P≤ 0.000) and (ii) perceived confidence of practitioners in using the Confusion Assessment Method (P≤ 0.000). These improvements were sustained over six weeks after the implementation of the intervention. However, there was no increase in confidence and competence in

the assessment and management of delirium and in the use of CAM in the urban hospital. Since the participants from the urban hospital are all working in the age specific wards and have more experience in caring for delirium patients, it is not surprising that participants have higher confidence and competence at the baseline but this slightly decreased 6 weeks after post intervention. We might presume that after attending the education program, participants feel themselves lacking knowledge in the assessment, management of delirium and in the use of CAM so on the contrary, they feel that they need further education and training.

Although there was no increase in confidence and competence in the assessment and management of delirium and in the use of CAM in the urban hospital, the participants from both regional and urban hospitals expressed overall satisfaction from the OSCE component of the education initiative as evident by their scores on the high level of satisfaction (87.50%) in both confidence and competence to deliver evidence-based delirium care.

From qualitative results we found that all participants were highly satisfied regarding their experience of OSCEs session and video viewing of interaction, assessment and management of a delirious patient. They felt that the sense of the stimulated OSCE and videos providing clarification of points that they were unclear about after the face to face teaching session and they would be able to implement the techniques learnt into practice. They found education material interactive and easy to learn, the scenarios were realistic to normal practice and recommended to be a regular continue education and new staff program in the hospitals.

The result form facilitators evaluation survey (n= 6, response rate 85.7%) showed all of the facilitators reported that the overall contribution of the 'OSCE Delirium Education Project' was high on improving the confidence and competence of practitioners to deliver evidence-based delirium care. They found the participants express higher level of competence in using CAM assessment tool and more confidence in caring delirium patients after the project completed.

Conclusion:

The results of this study showed a significant increase in the participants' knowledge in recognising delirium and increased confidence and competence in the use of CAM. The study indicates the use of an OSCE in the clinical setting with post-registration nurses and allied health staff may improve the rate of recognition for people at risk of delirium. Therefore future research into this project will include a review of in-patient records on the inclusion of the completed CAM in admission documentation.

Title:

Effects of Implementing an Innovative Education Initiative for Management of Delirium in Acute Hospitals

Keywords:

Delirium, Objective structured clinical examination and Stimulation education

References:

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Abstract Summary:

This project is an educational program which has been designed to enhance health care clinicians skills and confidence in recognising and managing delirium. Clinicians during the program are presented with "real life" patient scenarios played by "expert patients" to enhance the competence of clinicians.

Content Outline:

Introduction

There is much evidence about best practice delirium care but yet delirium remains undetected, mis-diagnosed and mis-managed. Delirium is an acute reversible condition which causes increased morbidity, including falls, long-term chronic health problems, relocation to nursing homes and mortality. Older people are more likely than other population groups to experience a delirium, in particular individuals living with a dementia. One way to prevent delirium and reduce its effects is for clinicians to develop their competence to recognise delirium and develop skills in preventing and managing delirium.

There is limited research investigating the use of OSCEs in assessing delirium management in post-registration healthcare professionals. This study developed an innovative multi-modal educational initiative to raise awareness and understanding about delirium care to improve the competence and skills of clinicians working with patients with or at risk of developing a delirium. Central to this initiative was designing and using a new delirium care Objective Structured Clinical Examination (OSCEs) alongside conventional face-to-face and online learning activities. An accompanying workbook provides resources for facilitators, learners and 'expert' patients to deliver this innovative multi-modal educational initiative to improve delirium care.

The aim of the initiative

Evaluate the effects of an interactive delirium care education intervention on delirium care for older people in acute healthcare settings.

Research Design

- This study used a multi-method quasi-experimental design with pre- and post- intervention and observation to evaluate clinicians' skill, confidence and competence after education package and OSCEs.
- The effects of this initiative were evaluated using three surveys: pre-survey (T0), immediately after the OSCE (T1) and six weeks post-OSCE (T2).
- Pre- session 1 (T0) questionnaires consisted of four demographic questions, four questions related to self-perceived confidence and competence of delirium assessment and knowledge and after OSCEs Delirium Education on improving the competence and confidence to deliver delirium care and 16 multiple-choice questions (MCQ) about delirium knowledge and skills.
- Qualitative data were collected from open ended items in the surveys.

Intervention

- The participants were required to complete two sessions (1.5 hours in total).
- Session 1 consisted of a one hour face-to-face teaching session on delirium and video viewing of interaction, assessment and management of a delirious patient. Participants received printed self-reflective delirium care booklets to reinforce their learning from the session.
- Session 2 was for 30 minutes and consisted of one OSCE scenario, verbal feedback by the assessor and, a personal reflective exercise.
- The OSCE scenarios were developed in collaboration with an expert panel of senior nursing staff (n=10), physiotherapists (n=1), senior occupational therapist (n=1) and Geriatric Medical Consultants (n=2), all of whom work in aged care wards. The scenarios were developed based on de-identified cases from their own clinical practice. A total of five OSCE scenarios were developed.

Sample and Setting

A convenience sample of all registered nurses, enrolled nurses, medical interns, physiotherapists and occupational therapists working on the four aged care units in two hospitals in NSW, Australia (one regional and one urban). Approximately 150 clinical practitioners were invited to participate in the study.

Data Analysis

- Data were analysed using SPSS Statistics 24 (Statistical Package for Social Sciences, IBM, Armonk, NY).
- Participant demographics were reported using summary statistics (means, standard deviations, percentages).
- Means and standard deviations (SD) for knowledge, confidence and competence scores were computed. Multiple regression and Chi-Squared analysis were used when including more than one predictor variable, as in this study.
- All tests for statistical significance were two-tailed with $p < 0.05$ being regarded as significant.
- The transcripts of data from the open-end questions were analysed independently by two authors (R.C. & A.S.) using constant comparison method.

Ethical Considerations:

The principles of consent were upheld when the surveys were distributed: the rationale for the project was explained to participants and their right to decline to participate or withdraw from the study was reinforced. Even though written consent was not obtained, the four elements of information consent- competence, voluntarism, full information and comprehension- were upheld. University institutional review board provided the ethical approval for this study.

Results:

Demographics:

- There was a total two acute care hospitals and 128 practitioners (registered nurses, allied health, assistants in nursing and medical doctors) participated.
- A total of 113 attended a one-hour face-to face education session (2 % response rate) and completed a demographic survey, self-assessment survey and a short formative multiple-choice questionnaire (MCQ). A total of 97 completed Survey T1 (response rate of 75.7%) and a total of 84 staff completed Survey T2 (response rate of 65.6%).
- Throughout the study a total of 12 participants (n=12) withdrew due to sick leave, maternity leave and resignation. A total of 2 participants (n=2) identified themselves as being "too anxious" to complete the OSCE component (Session 2).

- The majority of participants were registered nurses and enrolled nurses (n=64, 56.6%), others were medical doctors (n=7, 6.1%), physiotherapists and occupational therapists (n=13, 11.5%), AIN (n=12, 10.6%) and clinical nurse specialist (n=3, 2.6%).

Confidence and competence:

- The most important findings were statistically significant improvements in the regional hospital perceived: (i) perceived knowledge about delirium (P≤ 0.000) and (ii) perceived confidence of practitioners in using the Confusion Assessment Method (P≤ 0.000). These improvements were sustained over six weeks after the implementation of the intervention.
- There was no increase in confidence and competence in the assessment and management of delirium and in the use of CAM in the urban hospital. Since the participants from the urban hospital are all working in the age specific wards and have more experience in caring for delirium patients, it is not surprising that participants have higher confidence and competence at the baseline but this slightly decreased 6 weeks after post intervention. We might presume that after attending the education program, participants feel themselves lacking knowledge in the assessment, management of delirium and in the use of CAM so on the contrary, they feel that they need further education and training.
- The participants from both regional and urban hospitals expressed overall satisfaction from the OSCE component of the education initiative as evident by their scores on the high level of satisfaction (87.50%) in both confidence and competence to deliver evidence-based delirium care.

Qualitative findings

- We found that all participants were highly satisfied regarding their experience of OSCEs session and video viewing of interaction, assessment and management of a delirious patient.
- They felt that the sense of the stimulated OSCE and videos providing clarification of points that they were unclear about after the face to face teaching session and they would be able to implement the techniques learnt into practice.
- They found education material interactive and easy to learn, the scenarios were realistic to normal practice and recommended to be a regular continue education and new staff program in the hospitals.

Survey results from Facilitators

- The result form facilitators evaluation survey (n= 6, response rate 85.7%) showed all of the facilitators reported that the overall contribution of the 'OSCE Delirium Education Project' was high on improving the confidence and competence of practitioners to deliver evidence-based delirium care.
- They found the participants express higher level of competence in using CAM assessment tool and more confidence in caring delirium patients after the project completed.

Conclusion

- The results of this study showed a significant increase in the participants' knowledge in recognising delirium and increased confidence and competence in the use of CAM.

The study indicates the use of an OSCE in the clinical setting with post-registration nurses and allied health staff may improve the rate of recognition for people at risk of delirium. Therefore future research into this project will include a review of in-patient record

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Professional Experience: Rita Chang is assistant Professor of Nursing and course coordinator of the Postgraduate Graduate Certificates and Masters of Science in 'Gerontology and Rehabilitation Studies' and 'Dementia Care at Wollongong University Australia. She gained a PhD at the University of Sydney in 2008. The focus of her research is on improving dementia care services including reminiscence therapy, aged friendly environment, evidence-based nursing implementation and dementia education training.
Author Summary: Dr. Hui Chen (Rita) Chang is an assistant professor at Wollongong University Australia. She had acted as accreditation advisor and appraiser of residential aged care facility, member of committee of dementia and age-friendly City Promotion, members of Committee of long-term care development panel, by government invitation, to the Department of Social Affairs and Department of Health and Aging.

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Professional Experience: Amy Saunders is an Aged Care Transitional Nurse Practitioner and has worked for many years in an acute aged care setting. Amy is currently study Master of Nursing (Nurse Practitioner) degree at the University of Sydney and is the Project Manager of the Delirium OSCE Research at St. George Hospital. Amy has previously completed the Master of Science (Dementia Care) degree at the University of Wollongong. Amy has a strong passion of delirium research.
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Professional Experience: Pamela McAllan worked for many years' in Emergency Departments in both urban and rural environments. She has also worked in Intensive Care and Coronary Care units. After working clinically Pam decided on a shift in her career and is now a lecturer in the School of Nursing at the University of Wollongong. Besides lecturing, Pam is also a Higher Degree Student at the University, researching the personal experience of Delirium.

Author Summary: Pamela Mcallan works in the School of Nursing at the University of Wollongong as a lecturer. She was the Project Manager of the Delirium OSCE Research at Illawarra and Shoalhaven Local Health District. Pamela is also a Higher Degree Student at the University, researching the personal experience of Delirium.