

Project Title

Empowering ICU Nurses To Perform Delirium Assessment Using Confusion
Assessment Method For The Intensive Care Unit (CAM-ICU) Scoring

Project Lead and Members

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Organisation(s) Involved

Ng Teng Fong General Hospital

Healthcare Family Group Involved in this Project

Nursing

Applicable Specialty or Discipline

Intensive Care Unit, Psychiatry

Project Period

Start date: Nov-2017

Completed date: Mar-2018

Aims

- (1) To educate and equip all ICU nurses with the knowledge and skills to perform accurate CAM scoring by March 2018
- (2) To improve patients' outcome through early detection of delirium and reduction between time of disease onset and management by March 2018

Background

See poster appended / below

Methods

See poster appended / below

Results

See poster appended / below

Lessons Learnt

By working with ICM and nursing management, the team intends to formalise a protocol for the use of CAM in the future. The protocol includes non-pharmacological nursing management which could be adopted by general ward nurses as well.

Conclusion

See poster appended / below

Project Category

Training & Education, Learning Approach, Care & Process Redesign, Quality Improvement, Value Based Care, Safe Care

Keywords

Delirium Assessment, Confusion Assessment Method, Train The Trainer

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EMPOWERING ICU NURSES TO PERFORM DELIRIUM ASSESSMENT USING CONFUSION ASSESSMENT METHOD FOR THE INTENSIVE CARE UNIT (CAM-ICU) SCORING

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- SAFETY
- PRODUCTIVITY
- PATIENT EXPERIENCE
- QUALITY
- VALUE

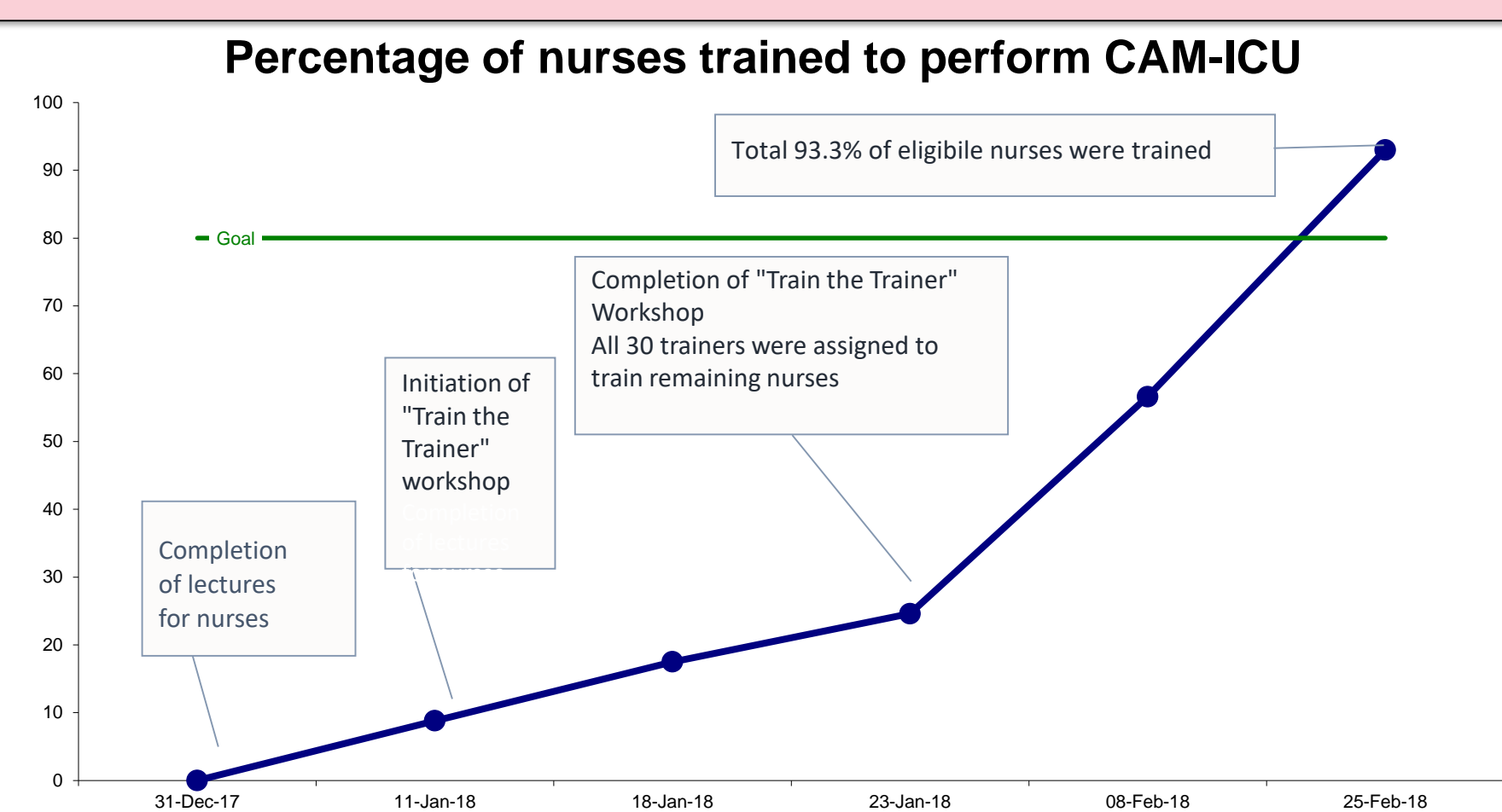
Define Problem, Set Aim

The incidence of delirium is reported in up to 80 percent of critically ill patients, making it the most frequent psychiatric diagnosis in ICU (Ouimet, Kavanagh, Gottfried, & Skrobik, 2007). Unrecognized delirium can lead to an extended length of stay in ICU, higher risk of mortality and long-term cognitive impairment in patients. (Ouimet, Kavanagh, Gottfried, & Skrobik, 2007).

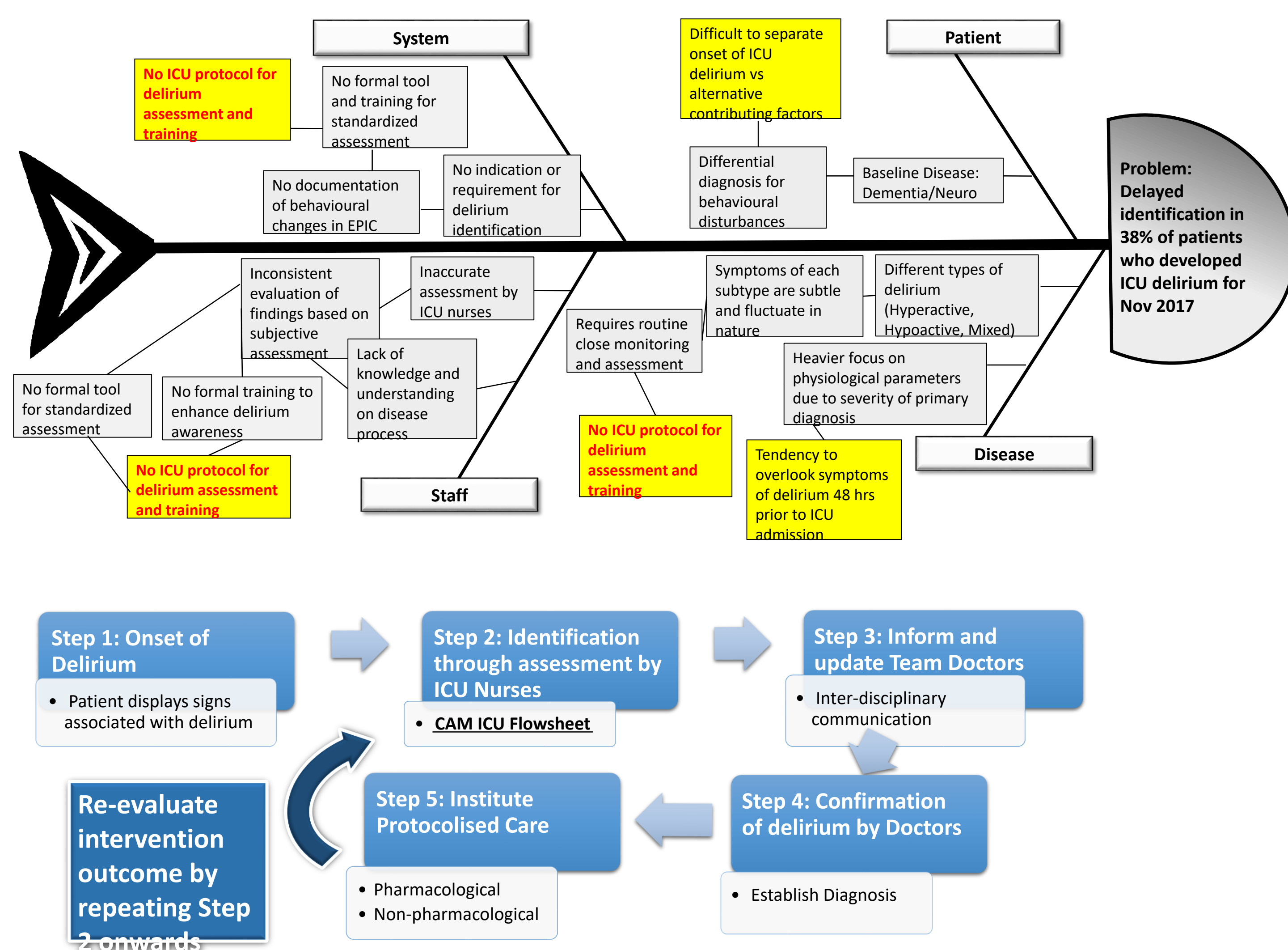
NTFGH ICU lacks a formalised protocol and tool for delirium assessment. Furthermore, a cross sectional perception survey conducted within the unit showed that 57 percent of ICU nurses were unaware of delirium assessment tools while only 18 percent were confident in their ability to identify delirium.

- Aim**
- To educate and equip all ICU nurses with the knowledge and skills to perform accurate CAM scoring by March 2018
 - To improve patients' outcome through early detection of delirium and reduction between time of disease onset and management by March 2018

Establish Measures



Analyse Problem

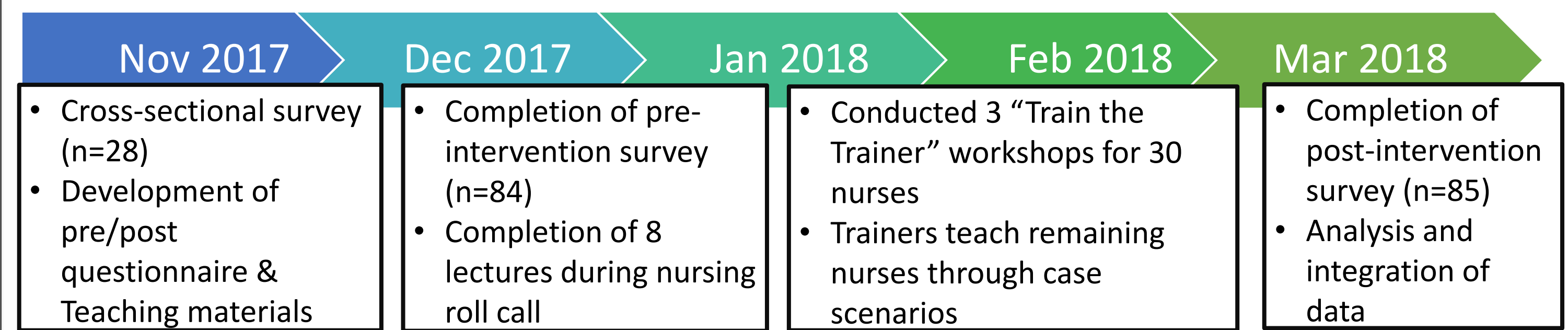


Through RCA, a lack of standardised ICU protocol was identified as the main cause of delayed identification of delirium. However the team identified formal training and introduction of a nursing assessment tool as the solution with higher impact and ease of implementation. In addition, Step 2 in the process map demonstrates that ICU nurses play a pivotal role in monitoring for behavioural changes, identifying potential delirium through assessment, introducing non-pharmacological management and evaluation of intervention outcomes.

Select Changes

Based on Bandura's notion of collective goal commitment, training interventions adopted by this project also aims to enhance nurses' levels of commitment and confidence with regard to delirium assessment. Organizing Trainer the Trainer (TTT) workshops to develop subject matter experts provides a platform for information sharing through social interaction and teaching. Training and coordinating action across multiple groups (ICU doctors, Delirium Team Members, Trainers, Remaining ICU nurses) serves to promote collective efficacy and readiness in implementing delirium assessment among nurses. However, limitations to shared readiness include variability in nursing experience, limited opportunities to interact and share information and individual willingness.

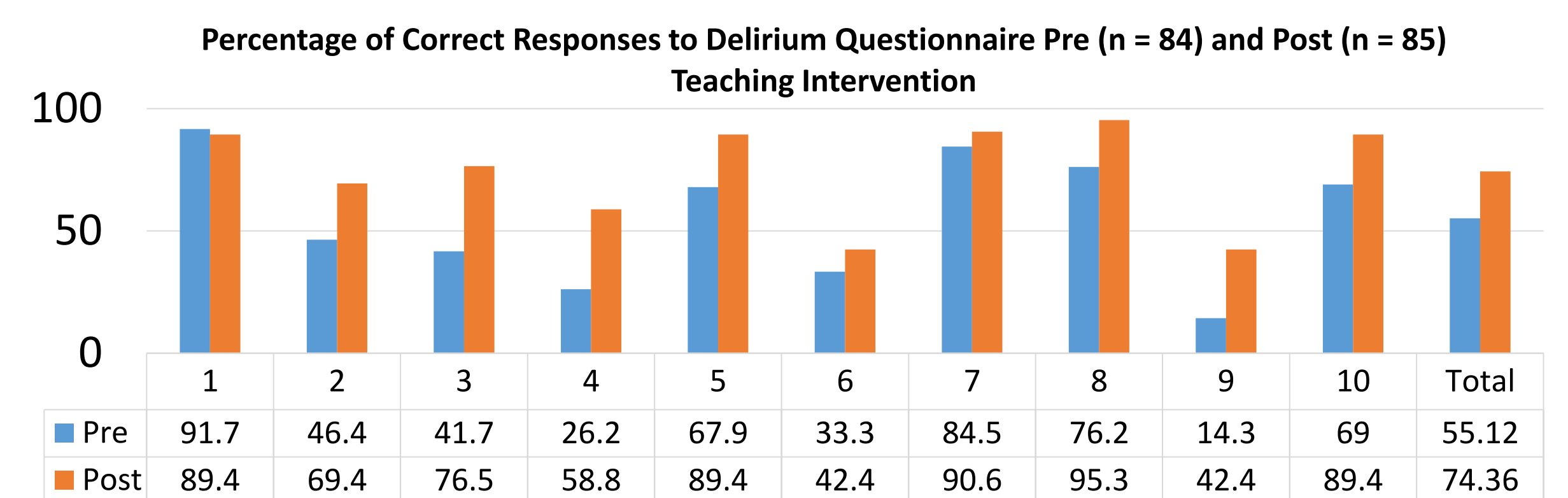
Test & Implement Changes



The intervention was conducted over 5 months (Nov 2017 – March 2018) within NTFGH ICU. A pre-intervention questionnaire survey was administered to understand baseline knowledge about delirium and CAM scoring among ICU nurses.

Eight Interactive lectures were organized over the course of two months. Content of lectures included: (1) Richmond-Agitation Sedation Score (RASS), (2) Defining Delirium, (3) Features of CAM-ICU, (4) Training videos of CAM-ICU simulated practice. Thereafter, three "Train the Trainer" workshops were arranged for 30 selected nurses to reinforce understanding, simulate practice and accredit the remaining 90 nurses in the application of CAM-ICU. Post-intervention questionnaire survey was repeated to assess adequacy and effectiveness of the intervention after all nurses have been trained. Results from both questionnaires were collated on an online survey platform and anonymity of participants was maintained. Participants were provided with the CAM-ICU and RASS worksheets for reference.

Hospital and ICU discharge summaries of all patients admitted to ICU / HD during the months of November 2017 (Pre-intervention, n = 129) and March 2018 (Post-intervention, n = 100) were reviewed retrospectively to identify the patients with delirium. The time from onset of delirium and its subsequent management was recorded from a review of daily progress notes including nursing assessment.



Questions 1 to 4 were knowledge-based questions. Questions 5 to 10 were scenario-based questions assessing ability to perform CAM scoring. Average scores improved from 5.5 to 7.4 (p = 0.0006). Response rate for both questionnaires was 70%. Significant score improvements were mainly seen in knowledge-based questions (2, 3, 4) in comparison to scenario-based questions.

The time from onset of delirium to ordering workup or pharmacotherapy (time to management) was recorded for 14 cases diagnosed with delirium. This improved from 0 – 17.5 hours pre-intervention (n = 8) to 0 – 8 hours post-intervention (n = 6). Compliance to CAM ICU scoring was poor where only 1 out of 6 patients had CAM ICU score documentation during post intervention phase. This highlighted the need to look for additional barriers to CAM scoring. The enhanced level of knowledge and training as reflected in the improvement in responses to post-intervention questionnaire did not translate to increased compliance to CAM scoring.

During the pre-intervention phase, despite nursing assessment suggesting the possibility of delirium, 3 out of 8 patients were diagnosed with delirium only after transfer to general ward which delayed their management. This was not seen during the post intervention period where, despite the paucity of CAM ICU scoring, all 6 patients with delirium were diagnosed and managed earlier within the ICU as reflected in the improvement in time from onset to management of delirium.

Spread Changes, Learning Points

The upcoming goal will be to conduct a 6 monthly audit to identify potential barriers to CAM compliance and ensure sustainability of knowledge and skills. Furthermore, by working with ICM and nursing management, the team intends to formalize a protocol for the use of CAM in future. This includes non pharmacological nursing management which general ward nurses can adopt as well. This ensures continuity of care for delirious patients throughout their hospital stay

Reference

Ouimet, S., Kavanagh, B. P., Gottfried, S. B., & Skrobik, Y. (2007). Incidence, risk factors and consequences of ICU delirium. *Intensive care medicine*, 33(1), 66-73.

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