A QUALITY IMPROVEMENT PROJECT TO IMPROVE THE IDENTIFICATION, PREVENTION AND MANAGEMENT OF DELIRIUM IN AN ADULT TERTIARY LEVEL ICU

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Background

- Delirium is highly prevalent in the ICU, reported to be as much as a third of all ICU patients (Salluh et al. 2015).
- These patients are at increased risk of dying during their hospitalisation, have longer stays in the ICU, and may have cognitive impairment after discharge (Salluh et al. 2015).
- Efforts to identify and prevent delirium is considered a priority for healthcare teams.
- In 2017, a point prevalence audit of delirium screening was performed in our unit.
- The results showed only 54% of patients (n=49) had a delirium assessment/screening performed to the unit standard of 4-6 hourly and 15% had no delirium assessment at all during their ICU stay.
- It was these results that highlighted the need for a quality improvement initiative around delirium in the unit.

Methods

- A quality improvement project to address the assessment, management and prevention of delirium was designed and rolled out over 2018 in Wellington ICU.
- This project involved the development of several educational resources, mass unit education, point prevalence audit and an update to the ICU database to capture retrospective data on delirium prevalence.
- A clinical pathway and sedation algorithm was developed to formalise all elements of delirium care, assessment, and prevention together.
- Emphasis on the improvement of compliance with delirium assessment was prioritised.
- An online education module was also designed to accompany the document based resources developed as part of the project.

Project Timeline

- June 2018 became known as “delirium month”
- Over this time a team of nurses delivered face to face delirium education using all of the resources developed.
- The pathway and sedation algorithm was placed at every bedspace.
- Delirium posters were placed around the unit.
- In total, 80% of all staff on the unit received the education.
- The remaining 20% were emailed and shown the online education module developed as part of the education package.
- After delirium month was completed, ongoing consolidation, reminders, memos and updates continued over the remainder of 2018.

Project Implementation

Resources Developed

Delirium Pathway:

The delirium pathway was designed to bring the elements of delirium care together with emphasis on assessment, prevention and management of agitation.

Sedation Algorithm:

The sedation algorithm was designed to accompany the clinical pathway to give staff practical guidance on sedation management. The emphasis is on protocolised RASS targeted sedation management.

Information for Whanau/families:

In order to give families information on delirium, a poster for the waiting room was designed and a pamphlet created on educating families what delirium is and what it looks like.

Delirium Resource Guidebook and Poster:

A staff resource book was written to educate the team on all aspects of delirium and an online education module was created and posted on the staff intranet. Posters were also placed strategically around the unit to highlight the project.

ICU database:

The ICU database was upgraded to enable all patients discharging from the unit to have delirium data inputted as part of the online nursing discharge page. All patients discharged alive who had an episode of delirium were captured on the database to allow for information on prevalence, duration and length of stay to be analysed.

90% of all staff received education on how to complete the delirium database prior to delirium month.

Results

Over 2018 we measured compliance with delirium assessment, pain assessment, and sedation assessments via point prevalence. We wanted to ensure that not only were we performing regular screening to capture patients with delirium in a timely manner but also to ensure the data captured in the ICU database was correct in terms of prevalence.

In 2017 only half of patients audited (n=49) had delirium screening completed every 4 hours. After the rollout of this project, we reached a compliance of 93% (n=152) of patients audited who had regular 4 hourly delirium screening.

Sedation, RASS scoring and pain assessments also showed excellent compliance when measured by point prevalence. Daily sedation holds were also performed regularly reaching 97% of eligible patients audited (n=53).

Daily mobilisation is the norm in our unit. When audited 83% were mobilised daily out of bed into the chair or sat on the edge of the bed with the physiotherapists (n=86).

Delirium Duration and Prevalence

The data that is inputted onto the database provides some indication as to the prevalence of delirium in our unit. However there are several limitations with the data currently and these are being addressed by ongoing staff education and data entry teaching.

The number and percentage of patients who had delirium compared to all admissions ranged from 13 (11%) to 37 (24%) during the period of April to December 2018.

We will continue to analyse trends related to this data to inform the effectiveness of this project.

Conclusion

This project provides a useful framework to enable future quality improvement projects around delirium. The clinical pathway and sedation algorithm have been effective tools for the unit as a way of formalising the elements of delirium care, delirium assessment and sedation management together. Education and resources around delirium assessment are very effective in improving delirium screening compliance and ensuring staff are aware of how important delirium care and prevention for patient outcomes.

References