



A Multi-Modal, Interprofessional Educational Programme For Expedited Implementation Of Delirium Screening Across Two PICU Units.



Introduction

Delirium in critically ill children is recognised as a common and serious complication of PICU care. A position statement from ESPNIC (1) acknowledged that it can be difficult to discriminate between pain and non-pain related distress as the behavioral cues often overlap. ESPNIC (1) recommended that screening is essential to ensure that delirium is detected and managed. In Leicester there are two Paediatric Intensive Care Units (PICU), one is a cardiac PICU that provides ECMO and the other is a general PICU. There was no provision for screening for delirium on either unit. A quality improvement initiative to implement delirium screening and a care bundle commenced across both units. In order to expedite the launch of the delirium screening and care bundle an interprofessional, easily accessible teaching package was required.



Background

Delirium in Paediatric Critical Care (PCC) is characterised as an acute and fluctuating change in attention or awareness, accompanied by disturbances to cognition, that develops over a short period of time and cannot be otherwise explained (2). Delirium is estimated to be affect approximately 30% of critically ill children (3). It is associated with increased morbidity and longer PICU stay (1). Recent guidance (3) has strongly recommended the use of validated screening tools to assess for the presence of delirium. Targeted interprofessional education has been shown to be a key driver in the successful launch of paediatric delirium screening (4).



Aim

To design a multi-modal interprofessional teaching, package that would support a quality improvement initiative to implement delirium screening within two PICU units to empower nurses, clinicians, allied health professionals and families to consider delirium.

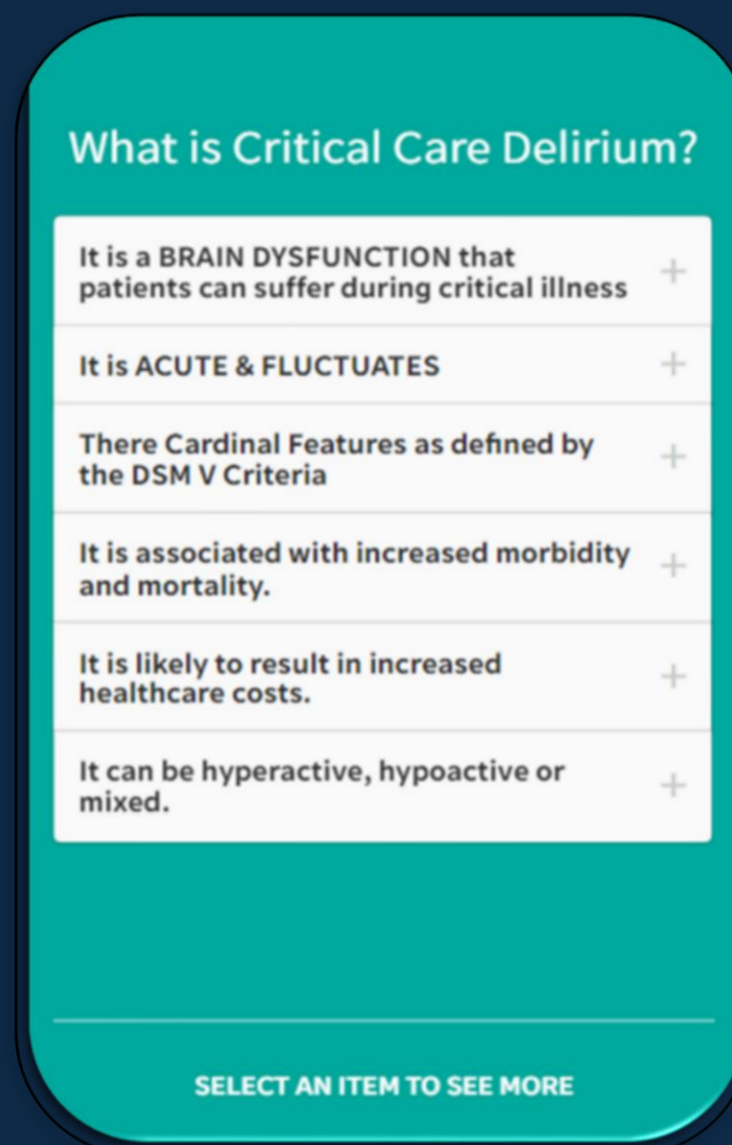


Method

The multi-modal approach was developed and consisted of:

1. An interactive, online resource (see picture 1.0) was developed that utilised videos, narration, patient stories and quizzes. Access was simplified through the use of QR codes and shared across nursing, medical and allied health professional teams. The Learning outcomes were constructively aligned and mapped against Blooms taxonomy of learning. Knowledge was formatively assessed within the on-line resource. The online resource was designed with stimulating and interactive content. The delirium module was designed to align with a sedation scoring module
2. Educational posters describing the impact of delirium, the importance of screening, an introduction to the screening tool and explanation of the care bundle. The posters also provided QR codes and instructions for accessing the on line learning.
3. Face to face teaching sessions delivered by a PICU consultant or PICU nurse Educator.
4. Bedside demonstration of the screening tool

The launch of the package coincided with international delirium awareness day. Both units celebrated world delirium day with a number of activities and promotional materials including delirium themed cupcakes. Rewards for completion of the training included a certificate, a pen and flash card which also served as an aide-memoir to daily practice.



picture 1.0



Results

PICU staff across both units were given access to the online resource with over 50% fully completing the e-learning by the end of August 2022 (see figure 2.0) Approximately 70% of PICU nursing staff received face to face education from either a consultant or a nurse educator .

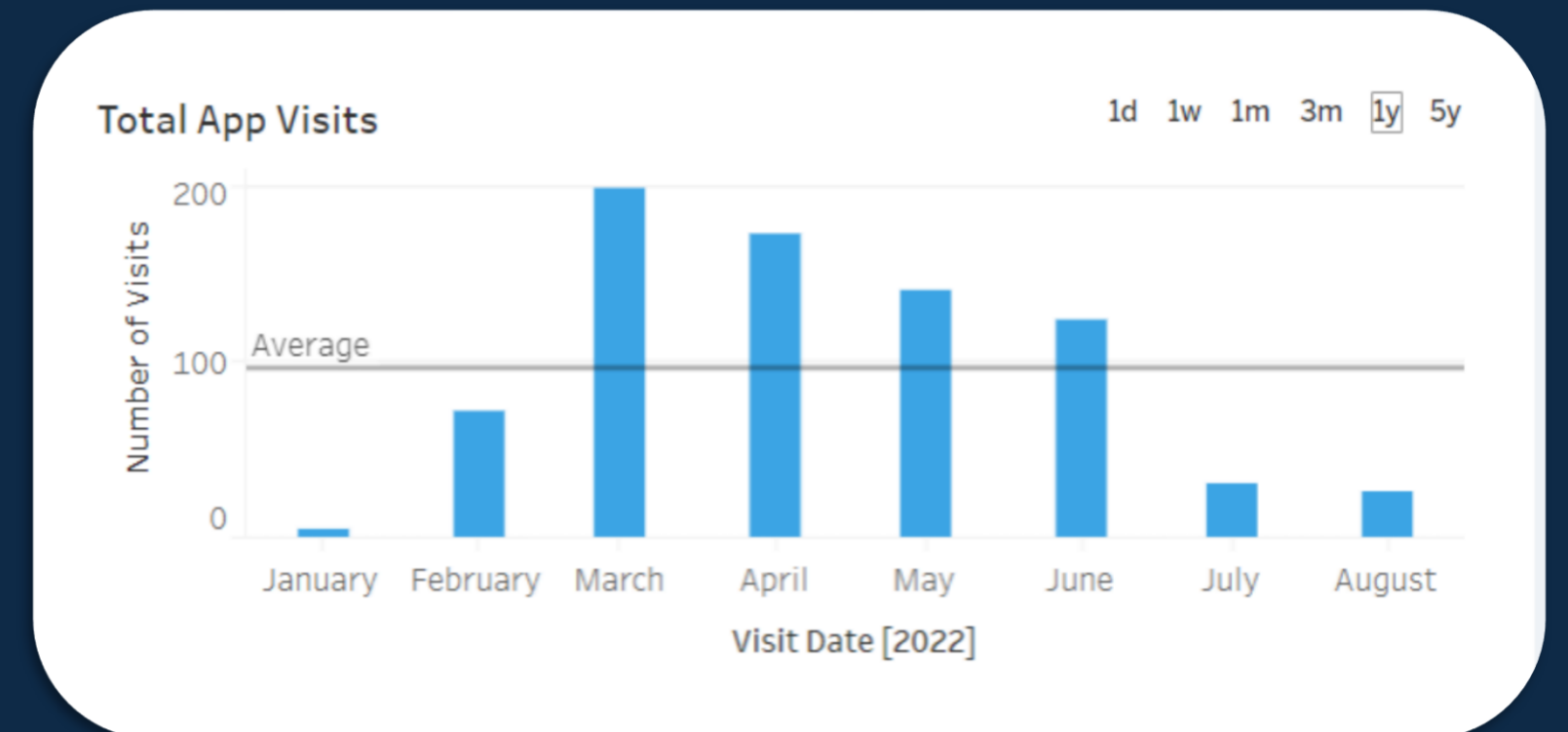


Figure 2.0 total number of visits to the online learning resource

Audit data has demonstrated an increase in delirium screening since the implementation of the multi-modal educational programme across both PICU units.

Staff have expressed that they are more aware of delirium and feel more confident to utilise the screening tool and implement non-pharmacological management and prevention strategies.



Discussion

The uptake for the on-line learning was initially high in March but has declined over the summer months (see figure 2.0). Some staff have accessed the online resource but have yet to complete the formative assessment. Time was given during essential to job role training to complete the training. A logical next step would be to understand the barriers that affected accessing the electronic resource. However having a multi-modal approach increased the availability of delirium training for those that could not attend the face to face sessions. Application of knowledge to the clinical setting was supported through bedside teaching and demonstration.



Conclusion

Implementation of this interprofessional multi-modal educational programme expedited the implementation of delirium screening and a delirium care bundle. It was well received by PICU staff. Delirium screening and the care bundle are part of daily PICU care. Delirium training is now embedded within PICU nurse training programme and continues to be championed and audited by the interprofessional team. The use of a multimodal approach to interprofessional education can be an effective way to expedite the implementation of quality improvement projects.

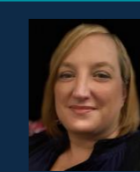


Aknowledgements

University Hospitals Of Leicester Paediatric Critical care delirium working group



Authors



Ruth Joyce, PICU Nurse Educator
University Hospitals of Leicester



Eldilla Rizal, PICU & COMET Consultant
University Hospitals of Leicester



References

1. Harris J, Ramelet AS, van Dijk M, Pokorna P, Wielenga J, Tume L, Tibboel D, Ista E. Clinical recommendations for pain, sedation, withdrawal and delirium assessment in critically ill infants and children: an ESPNIC position statement for healthcare professionals. *Intensive Care Med.* 2016 Jun;42(6):972-86. doi: 10.1007/s00134-016-4344-1.
2. American Psychiatric Association (2013) Diagnostic and statistical manual of mental disorders, fifth edition (DSM-5). American Psychiatric Association, Washington, DC
3. Smith HAB, Besunder JB, Batters KA, Johnson PN, Srinivasan V, Stormorken A, Farrington E, Golianu B, Godshall AJ, Acinelli L, Almgren C, Bailey CH, Boyd JM, Cisco MJ, Damian M, deAlmeida ML, Fehr J, Fenton KE, Gilliland F, Grant MJC, Howell J, Ruggles CA, Simone S, Su F, Sullivan JE, Tegtmeyer K, Traube C, Williams S, Berkenbosch JW. 2022 Society of Critical Care Medicine Clinical Practice Guidelines on Prevention and Management of Pain, Agitation, Neuromuscular Blockade, and Delirium in Critically Ill Pediatric Patients With Consideration of the ICU Environment and Early Mobility. *Pediatr Crit Care Med.* 2022 Feb 1;23(2):e74-e110. doi: 10.1097/PCC.0000000000002873.
4. Flaigle MC, Ascenzi J, Kudchadkar SR. Identifying Barriers to Delirium Screening and Prevention in the Pediatric ICU: Evaluation of PICU Staff Knowledge. *J Pediatr Nurs.* 2016 Jan-Feb;31(1):81-4. doi: 10.1016/j.pedn.2015.07.009.