

Delirium screen and prevention audit

Background

Delirium can be defined as an acute disturbance of the consciousness and cognitive function, fluctuating in nature. ⁶Misunderstood pathophysiology: disease driven process promoted by intrinsic risk factors (unique to each patient) and **Intensive Care Unit (ICU) environment related factors** (modifiable factors). ^{4,7,9} Associated with longer mechanical ventilation, high morbidity and mortality, increased length of stay (LOS) and hospital costs. ⁴ ICDSC has moderate sensitivity and good specificity for delirium; Recommended by NICE along with CAM-ICU.

Aim

Audit delirium screening of critical care patients using Intensive Care Delirium Screening Checklist (ICDSC) within 24 hours of admission and practices of delirium prevention at 72 hours.

Standards

Guidelines for the Provision of Intensive Care Services (GPICS) 2015¹⁰ Standard and recommendations on section 4.1.3; NICE guidance NCGC 103 from 2010¹³; Pain, Agitation, Delirium³ (PAD) guidelines from 2013.

Methodology

Retrospective collection of data.

Inclusion criteria: patients ≥ 18 years old.

Exclusion criteria: <18 and/or discharged before 72 hours.

Time-frame: 1/6/2017 until 15/8/2017.

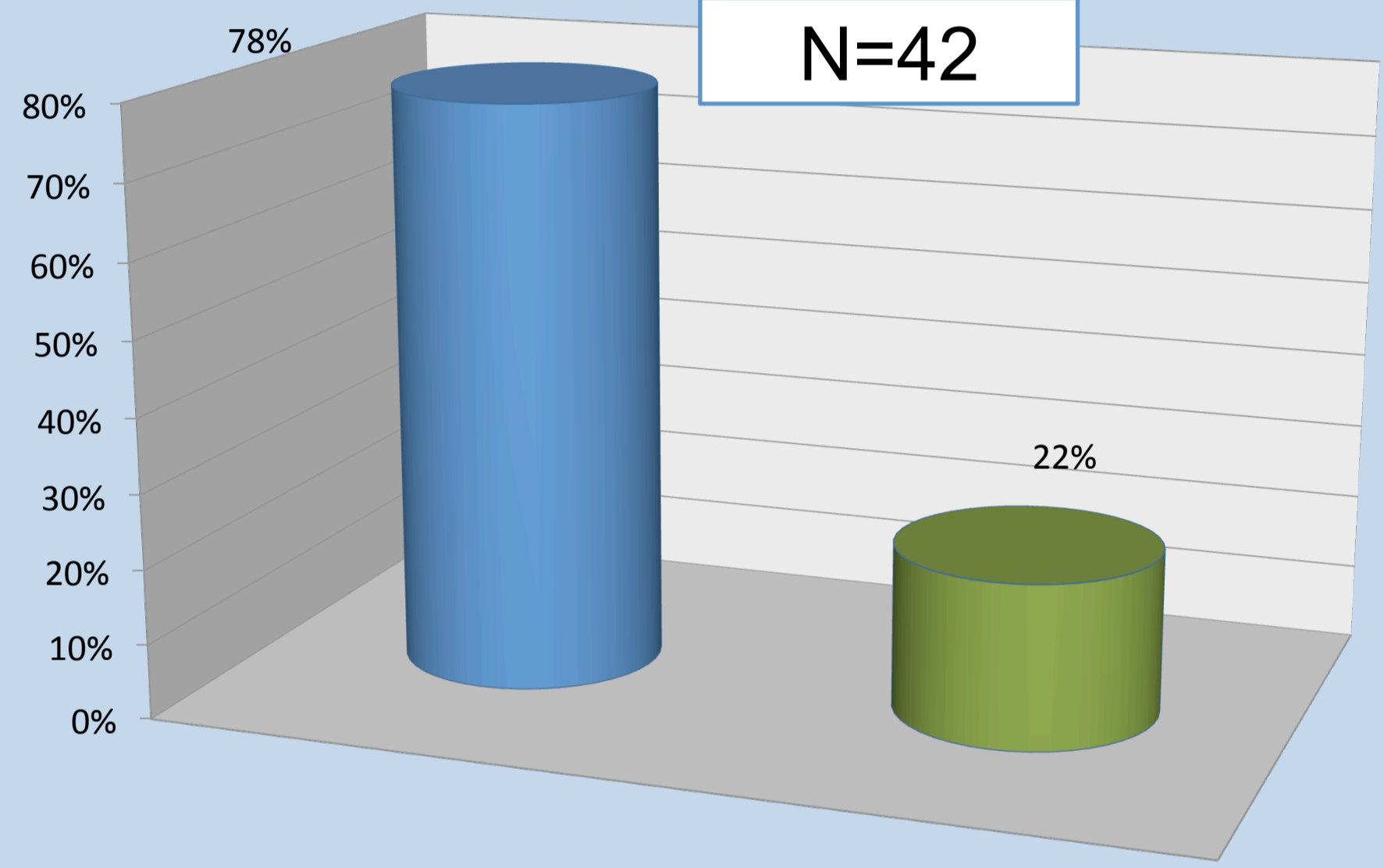
Where: Tunbridge Wells Hospital ICU.

Limitations
LOS ≥72 hours;
Paper-based documentation;
ICDSC limitations on sedated patients:
All sedated patients were classed negative for delirium;

Results

Delirium positive patients: 22%

Non-screened patients: 2% .	Sedated and ventilated: 28%
Pain score ≤ 3 (Verbalizing patients only): 50%	Antipsychotics use to treat delirium: 44%
	Access to an analogue clock: 100%
	Mobilized patients: 100% .
	Bowel protocol followed: 48%



Discussion

Sedation levels and sedation holidays were not included in this audit however multiple studies have demonstrated the consequences of exposure to prolonged, deep sedation³

Moderate to severe pain are possibly still undertreated; pain levels were not audited on sedated patients. No tool for pain assessment for non-verbal patients was implemented at the time of the audit

Sleep quality was not audited: ICU patients are prone to reduced sleep and sleep fragmentation. Sleep deprivation may cause cognitive dysfunction. ^{8,11}

Almost half of delirium cases were treated pharmacologically. Pharmacological interventions are costly and have shown no significant benefit for delirium prevention; ^{2,12,16} Non-pharmacological interventions may decrease the use of antipsychotics ¹⁵

Bowel management has an important role on the prevention of Delirium– unit’s bowel management protocol was not followed in half of the patients’ population.

Nevertheless, early rehabilitation and mobilization, reorientation strategies recommended are being achieved.

Recommendations

Continue to follow PAD and NICE guidelines:

- Target sedation and use of Richmond Agitation-Sedation Scale^{3,5}
- Adequate assessment with validated scoring systems and management of pain ^{1,3}
- Early mobilization and rehabilitation, physical and occupational therapy; reorientation and cognitive stimulation ^{1,2,3,13,14}
- Management of illness related risk factors¹³
- Pharmacological management should be reserved for high-risk patients¹³.

Quality improvement projects may arise to improve current practices.

- Sedation and sedation holiday audit;
- Quality of sleep audit;
- Multicomponent strategies for the management of Delirium reflecting its multidimensional nature-Delirium: care bundle – to incorporate care interventions known to minimize delirium.
- Implementation of screening tools is an on-going process – training of new staff and update of senior members: ⁵

REFERENCES: 1.Balas, M., Vasilevskis, E., Olsen, K., Schmid, K., Shostrom, V., Cohen, M., Peitz, G., Gannon, D., Sisson, J., Sullivan, J., Stothert, J., Lazure, J., Nuss, S., Jawa, R., Freihaut, F., Ely, E. and Burke, W. (2014). Effectiveness and Safety of the Awakening and Breathing Coordination, Delirium Monitoring/Management, and Early Exercise/Mobility Bundle*. *Critical Care Medicine*, 42(5), pp.1024-1036. 2. Bannan, L., McGaughey, J., Clarke, M., McAuley, D. and Blackwood, B. (2016). Impact of non-pharmacological interventions on prevention and treatment of delirium in critically ill patients: protocol for a systematic review of quantitative and qualitative research. *Systematic Reviews*, 5(1). 3. Barr, J., Fraser, G.L., Puntillo, K., Ely, W.E., Gélinas, C., Dasta, J.F., Davidson, J.E., Devlin, J.W., Kress, J.P., Joffe, A.M., Coursin, D.B., Herr, D.L., Tung, A., Robinson, B.R.H., Fontaine, D.K., Ramsay, M.A., Riker, R.R., Sessler, C.N., Pun, B., Skrobik, Y. and Jaeschke, R. (2013) 'Clinical practice guidelines for the management of pain, agitation, and delirium in adult patients in the intensive care unit', *Critical Care Medicine*, 41(1), pp. 263–306. doi: 10.1097/ccm.0b013e3182783b72. 4. Boot, R. (2012). Delirium: A review of the nurses role in the intensive care unit. *Intensive Care Nursing*, 28(3), pp.185-189. 5. Brummel, N., Vasilevskis, E., Han, J., Boehm, L., Pun, B. and Ely, E. (2013). Implementing Delirium Screening in the ICU. *Critical Care Medicine*, 41(9), pp.2196-2208. 6. Cavallazzi, R., Saad, M. and Marik, P. (2012). Delirium in the ICU: an overview. *Annals of Intensive Care*, 2(1), p.49.7. Hsieh, S., Ely, E. and Gong, M. (2013). Can Intensive Care Unit Delirium Be Prevented and Reduced?. *Lessons Learned and Future Directions. Annals of the American Thoracic Society*, 10(6), pp.648-656. 8. Hu, R., Jiang, X., Chen, J., Zeng, Z., Chen, X., Li, Y., Huining, X. and Evans, D. (2017). Non-pharmacological interventions for sleep promotion in the intensive care unit. 9. Huai, J. and Ye, X. (2014). A meta-analysis of critically ill patients reveals several potential risk factors for delirium. *General Hospital Psychiatry*, 36(5), pp.488-496. 10. Intensive Care Society, G. (2015). [online] Available at: https://www.ficm.ac.uk/sites/default/files/gpics_-_ed.1_2015_v2.pdf [Accessed 15 Jun. 2017]. 11. Kamdar, B., King, L., Collop, N., Sakamuri, S., Colantuoni, E., Neufeld, K., Benvenuto, O., Rowden, A., Touradji, P., Brower, R. and Needham, D. (2013). The Effect of a Quality Improvement Intervention on Perceived Sleep Quality and Cognition in a Medical ICU*. *Critical Care Medicine*, 41(3), pp.800-809. 12. Neufeld, K., Yue, J., Robinson, T., Inouye, S. and Needham, D. (2017). *Antipsychotic Medication for Prevention and Treatment of Delirium in Hospitalized Adults: A Systematic Review and Meta-Analysis*. 13. NICE.org.uk. (2017). Delirium: prevention, diagnosis and management | Guidance and guidelines | NICE. [online] Available at: <https://www.nice.org.uk/guidance/cg103> [Accessed 28 Jun. 2017]. 14. Otusanya, O., Hsieh, J., Fein D. G., Asad R. I., Gong M.N., Gershengorn H. (2017) Impact of Awakening and Breathing Coordination, Delirium Monitoring/Management and Early Mobilization (ABCDE) Bundle Implementation in the ICU on Specific Patient Costs. *American Journal of Respiratory and Critical Care Medicine* 2017;195:A1081. 15. Rivosecchi, R., Smithburger, P., Svec, S., Campbell, S. and Kane-Gill, S. (2015). Nonpharmacological Interventions to Prevent Delirium: An Evidence-Based Systematic Review. *Critical Care Nurse*, 35(1), pp.39-49. 16. Schweickert, W., Pohlman, M., Pohlman, A., Nigos, C., Pawlik, A., Esbrook, C., Spears, L., Miller, M., Franczyk, M., Deprijo, D., Schmidt, G., Bowman, A., Barr, R., McCallister, K., Hall, J. and Kress, J. (2009). Early physical and occupational therapy in mechanically ventilated, critically ill patients: a randomised controlled trial. *The Lancet*, 373(9678), pp.1874-1882.