A Retrospective Audit of Prescribing Patterns to Delirium Guidelines in a Major Metropolitan Hospital Emergency Department

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Introduction

Delirium is an acute, neurological condition that can develop abruptly due to a variety of contributing factors such as surgery, chronic illness and infection. Patients experiencing delirium generally undergo functional decline and have periods of extreme distress, paranoia and hallucinations.

Australian public hospitals experience over 22,700 causes of recognised episodes of delirium each year. This is a concerning number as delirium is a serious condition that leads to premature institutionalisation and increases mortality and morbidity. Delirium is one of the most common hospital-acquired complications (HACs) and is known to increase the duration of admission as it requires more complex care and services.

This project was proposed following anecdotal reports of inappropriate use of psychotropic medications when treating behavioural disturbances associated with delirium. Project results may provide insight into areas that can be targeted to improve management of behavioral disturbances associated with delirium.

Aim

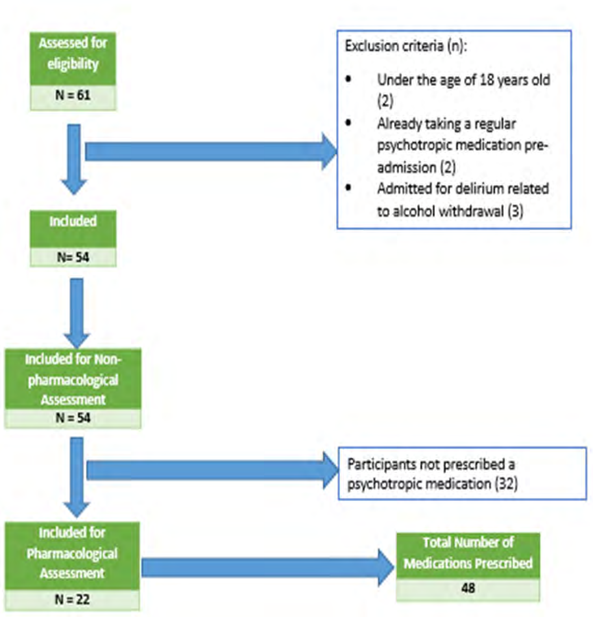
To evaluate psychotropic medication prescribing patterns used to manage behavioural disturbances associated with delirium, in line with Peninsula Health (PH) "Delirium Prevention and Management" clinical practice guidelines (CPG) for adult patients in the Emergency Department (ED) at Frankston Hospital (FH).

Methods

A retrospective audit of eligible adult patients presented to FH ED during a 12-month time frame (31/03/21-31/03/22). A report of patients coded with the ICD-10 code for delirium during the set time frame was obtained.

Inclusion criteria:
- >18 years of age
- Presented with-or developed delirium in ED
- Prescribed a new oral and/or parenteral antipsychotics or benzodiazepines (to manage behavioural complications associated with delirium) .

Electronic Health Records (EHR) Cerner® were reviewed and relevant data was collected. Primary and secondary outcomes were analysed using IBM SPSS and Microsoft Excel.



Results

Demographics	Total (n=54) Mean (SD)
Age	83 (8.8)
Number of risk factors *	2 (0.9)
	n (%)
Gender	
- **Male**	21 (38.8%)
- **Female**	33 (61.2%)
Admitted from	
- **Home**	26 (48.1%)
- **RCF/SRS**	27 (50%)
- **Retirement village**	1 (1.9%)
Past medical history	
- **Lewy body dementia**	9 (16.6%)
- **Parkinson's Disease**	4 (7.4%)

Table 1. Patient Demographics

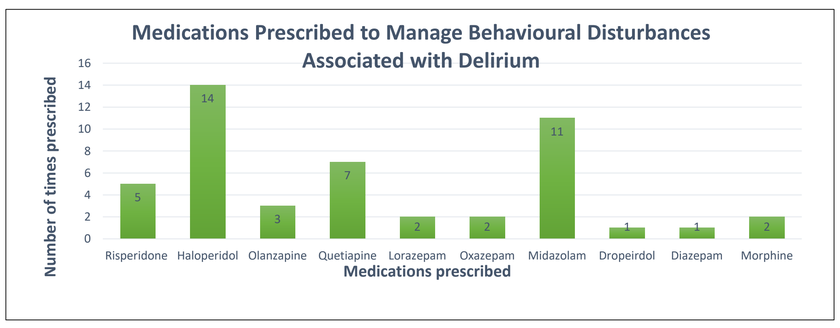


Figure 2. Medications Prescribed

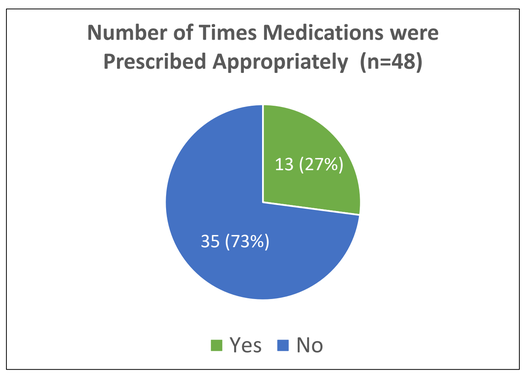


Figure 3. Appropriateness of Prescribed Medications

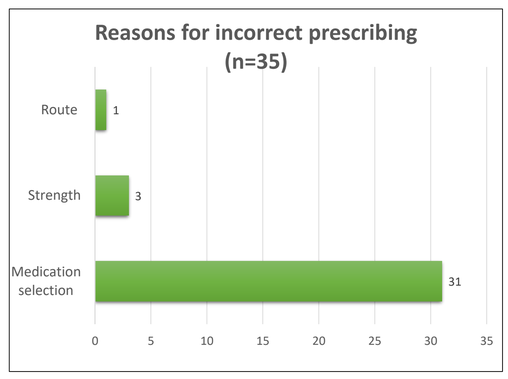


Figure 4. Reasons for Inappropriate Prescribing

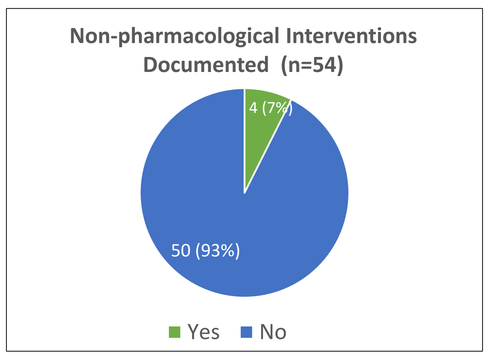


Figure 5. Non-pharmacological Management Documentation

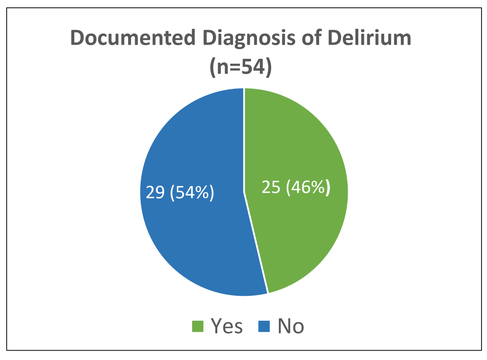


Figure 6. Documentation of Delirium

Discussion

Overall, the results show low compliance rates to PH guidelines when prescribing psychotropic medications for behavioural disturbances associated with delirium (Fig 3). The most common cause of inappropriate prescribing was incorrect selection of medications as shown in figure 4. Midazolam was the most common medication prescribed outside of the PH guidelines, followed by morphine, diazepam, and droperidol (Fig 2). In accordance with the PH CPG, haloperidol was the most prescribed medication. Despite haloperidol being appropriately selected, errors were made regarding selecting the right dose and route of administration. This could be due to the inability to standardise clinician's rationale on determining if a patient was frail as the PH CPG makes dosage recommendations based on the frailty status of each patient. The low documentation rates of non-pharmacological interventions (Fig 5) presents the possibility that prescribers may opt to implement pharmacological intervention over trialling non-pharmacological management as first line therapy. However, the retrospective nature of this audit relies on accurate documentation by ED medical and nursing staff of non-pharmacological interventions used. Low documentation may not equate to lack of utilisation of non-pharmacological practices.

Limitations:

- Small sample size
  - Difficult to generalise results
- Retrospective nature
  - Relies on complete/accurate documentation from nursing and medical staff
- Audit timeframe includes peak COVID-19 infections
  - Increased admissions and staff shortages may result in a lower threshold to use pharmacological management

Implications:

Targeted interventions can be implemented to address specific gaps in knowledge that have been made evident from this study.

Conclusion

The audit highlights the need for improvement in the management of behavioural disturbances associated with delirium as there was minimal documentation of non-pharmacological management and frequent inappropriate prescribing of psychotropic medications. This shows the need for education surrounding non-pharmacological management and a targeted multifaceted approach to educate prescribers on appropriate medication, strength and route selection of psychotropic medications.

Peninsula Health