Medication for Responsive Behaviours in Dementia: An Audit of PRN Prescribing

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Introduction

When required "PRN" medications (antipsychotics and/or benzodiazepines) are commonly used for patients with dementia and responsive or changed behaviours (Behavioural and Psychological Symptoms of Dementia or BPSD).[1,2] These medications can carry significant risks and only modest benefits despite their common use.[1]

Their use should be reserved behaviours causing significant distress which[3]:

- **Do NOT respond to non-pharmacological strategies**
  AND/OR
- **The safety or wellbeing of the patient, staff or others is at risk**

A new guideline "Assessment and Medication Management of Changed Behaviours in Patients with Dementia" was implemented in 2019, containing a "PRN Rescue Protocol" to guide prescribing of PRN medication[3]. This audit reviewed prescribing consistency pre- and post- guideline implementation and post a subsequent service relocation to a purpose-built environment.

Aims

- To determine if PRN medication prescribing was more consistent post guideline implementation
- To monitor adherence to the guideline following implementation
- To identify areas for improvement

Methods
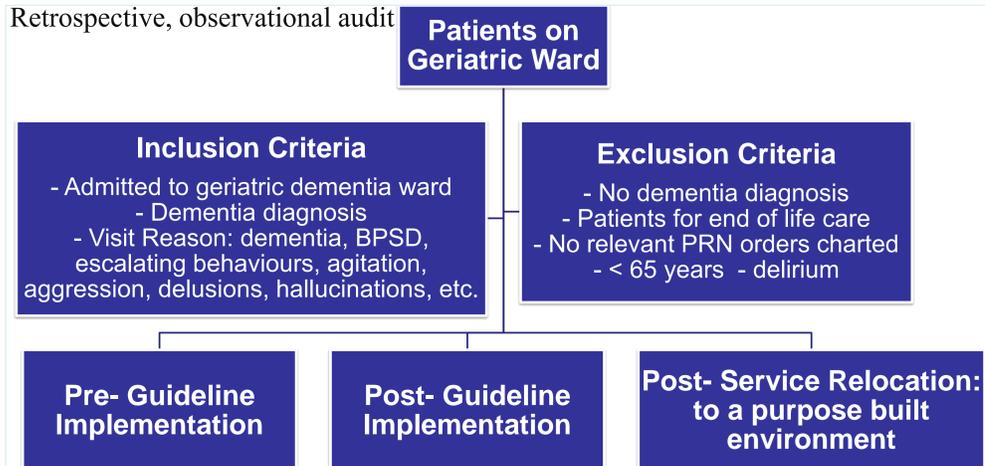
Retrospective, observational audit

FIGURE 1. Patient cohorts

25 patients were selected using a random number generator, from a list of all patients admitted on the geriatric ward(s), across the relevant time-frame for each patient cohort

Generated an electronic medication chart for the first 7 days of admission for each patient

Recorded the details of each relevant PRN medication order

- Relevant antipsychotics
  - Risperidone PO
  - Olanzapine PO/IM
  - Quetiapine PO
- Relevant benzodiazepines
  - Oxazepam PO
  - Clonazepam IM/Subcutaneous

Compared each order to the 'PRN Rescue Protocol' for the following characteristics

- Dose
- Frequency
- Indication
- Maximum dose in 24 hours
  - Including clear indication of what this figure means if the patient was also on regular order of the same medication
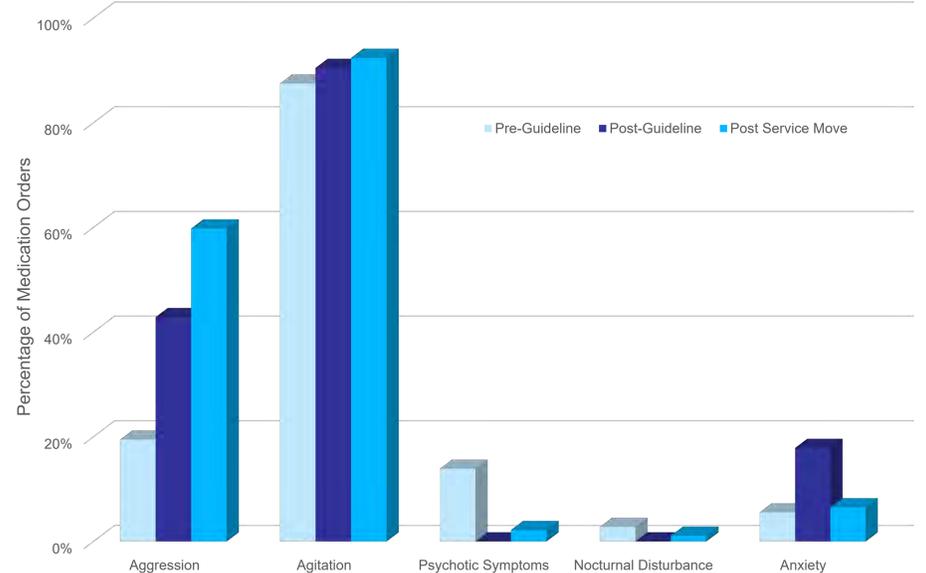
Results

FIGURE 2. Medication Breakdown by Indication
Note it is possible for one medication to be charted for multiple indications e.g. for agitation/aggression
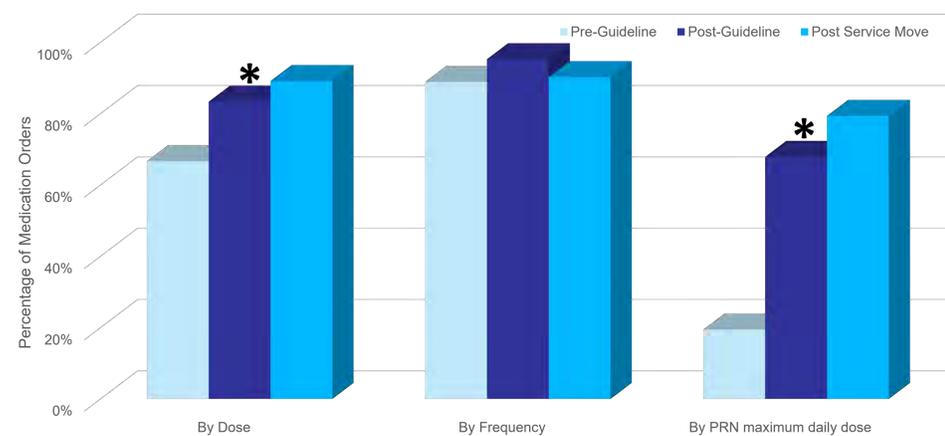

FIGURE 3. Medication Order Adherent to the Guideline
As an indication of prescribing consistency

* Statistically significant P<0.05

Post-Service Relocation 74%* of patients were also prescribed regular doses of the same antipsychotic or benzodiazepine as was being used PRN. Therefore a clear description of what the maximum daily dose encompassed was identified necessary to avoid confusion and potential for accidental overdose. This was then audited:

4%	35%*	50%*
Pre-Guideline	Post-Guideline	Post-Service Relocation

FIGURE 4. Percentage of orders with a clear description of what the maximum daily dose entailed

Statistical analysis compared Post-Guideline to Pre-Guideline Implementation, and Post-Service Relocation to Post-Guideline Implementation.

Discussion

Implementation of the guideline appears to have led to improved consistency of PRN prescribing. However, this audit also identified areas (i.e. maximum daily dose) with room for further improvement. This evidence is currently guiding further education sessions for prescribers, nursing staff and pharmacists with the aim of further improving prescribing consistency.

References

1. Martin, K, Arora, V, Fischler, I & Tremblay, R 2017, 'Descriptive analysis of pro re nata medication use at a Canadian psychiatric hospital. International Journal of Mental Health Nursing, vol. 26, no.4, 7 pages, viewed December 9 2018, https://onlinelibrary.wiley.com/doi/pdf/10.1111/inm.12265
2. Neumann, R, Faris, P & Klassen, R 2015,' Examining trends in the administration of "as needed" medications to inpatients with behavioral and psychological symptoms of dementia', American Journal of Alzheimer's Disease & other Dementias, vol. 30, no. 3, pp. 247 – 256.
3. Assessment and Medication Management of Changed Behaviours in Patients with Dementia, V1.2, September 2019