

Evaluating the prevalence of potentially inappropriate medicines (PIMs) in older inpatients with or at risk of cognitive impairment

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Background

Some medications are considered 'potentially inappropriate medicines' (PIMs) in elderly patients because of the increased risk of adverse drug events.^{1,2} Specifically, antipsychotics and benzodiazepines may have serious adverse effects (e.g. falls) and can worsen delirium as outlined in the Delirium Clinical Care Standards (DCCS).³ Currently, there is limited data on the prevalence of potentially inappropriate medicines prescribed for older hospitalised inpatients with or at risk of cognitive impairment in Australia.

Aim & Methods

This study aimed to: 1) Evaluate the prevalence of potentially inappropriate medicines on the inpatient medication chart; and 2) Evaluate current prescribing practice for benzodiazepines and antipsychotics in older inpatients with or at risk of cognitive impairment, such as delirium or dementia. All admitted inpatients at the RBWH aged 65 and over on the audit day (excluding Emergency, ICU, maternity, mental health and day treatment areas) were eligible for inclusion in the study. The audit was conducted by trained volunteers who identified 108 patients (50%) with evidence of cognitive impairment as indicated by 4AT>0 on the audit day (n=92), or normal 4AT on audit day but 4AT>0 on admission or cognitive impairment on handover documents. These patients then underwent a detailed medication chart audit to: 1) Identify potentially inappropriate medicines, their indication, and if they were reviewed throughout the admission; and 2) Investigate any new antipsychotics or benzodiazepines prescribed for the patient.

Results

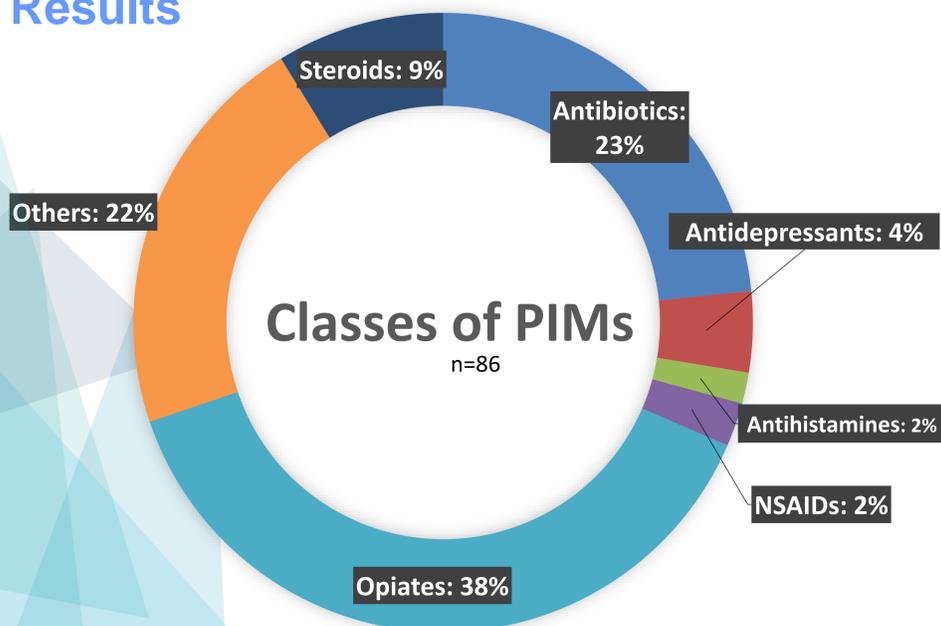


Figure 1: Classes of potentially inappropriate medicines prescribed for older hospitalised inpatients with or at risk of cognitive impairment

Most commonly prescribed antipsychotics & benzodiazepines

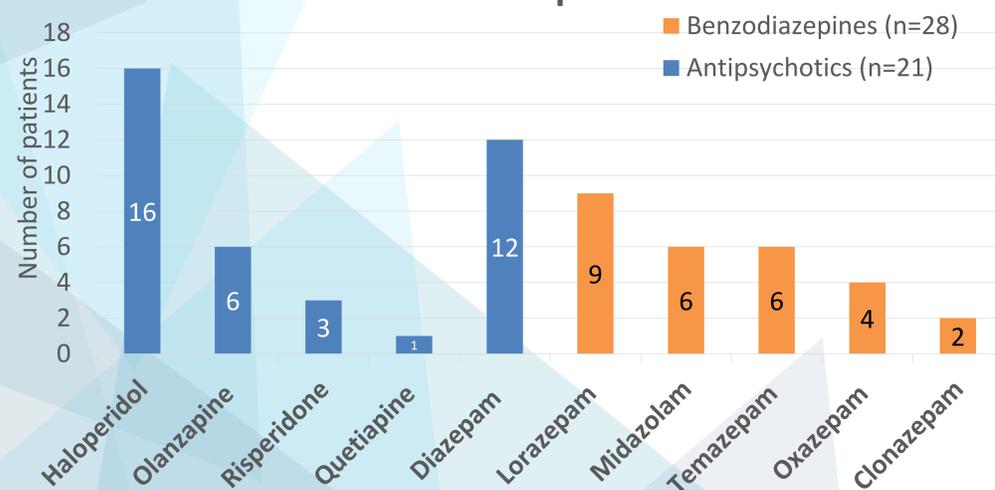


Figure 2: Number of patients whom received specific types of antipsychotics and benzodiazepines as inpatients at RBWH

Results Cont.

A total of 216 patients over the age of 65 were screened for evidence of cognitive impairment on the audit day. Of these, 108 (50%) had some level of evidence of cognitive impairment. One patient was excluded due to incomplete data collection. Of these 107 patients, 86 were prescribed a PIM. Amongst those, a total of 310 PIMs were prescribed. The average number of PIMs per patient was 2.9 (median=2, range: 0-12).

Benzodiazepines		N	%
Was the patient prescribed a new benzodiazepine?			
Yes	28	33%	
No	58	67%	
Total	86	100%	
How many new benzodiazepines were prescribed per patient?			
1 benzodiazepine	19	67.9%	
2 benzodiazepines	6	21.4%	
≥ 3 benzodiazepines	3	10.7%	
Total	28	100%	
Was the patient continued on a new benzodiazepine on discharge?			
Yes	5	18%	
No	23	82%	
Total	28	100%	
Antipsychotics		N	%
Was the patient prescribed a new antipsychotic?			
Yes	21	24.4%	
No	65	75.6%	
Total	86	100%	
How many new antipsychotics were prescribed per patient?			
1 antipsychotic	16	76.2%	
2 antipsychotics	5	23.8%	
≥ 3 antipsychotics	0	0%	
Total	21	100%	
Was the patient continued on a new antipsychotic on discharge?			
Yes	6	29%	
No	15	71%	
Total	21	100%	

Table 1: Summary of characteristics of benzodiazepines and antipsychotics prescribed in hospital for patients with or at risk of cognitive impairment

Discussion

These findings suggest that the use of potentially inappropriate medicines in older adults with cognitive impairment may be more appropriate and adherent to the guidelines than originally hypothesised. The majority of patients in this study were conservatively managed when prescribed PIMs through several means: using the lowest dose possible, reviewing therapy during admission and ceasing as able, and discontinuing use on discharge. While there are several individual cases which may highlight concerning use of benzodiazepines and antipsychotics in this patient group, these cases were often highly complex and typically involved palliation, psychiatry or pain service consultations over an extended length of stay.

References

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- Corsonello A, Pranno L, Garasto S, Fabietti P, Bustacchini S, Lattanzio F. Potentially inappropriate medication in elderly hospitalized patients. *Drugs Aging*. 2009;26(Suppl1):31-39. doi:10.2165/11534640-000000000-00000
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