

# Psychotropic Use in Patients with Dementia in the Geriatric Evaluation Medicine Inpatient Setting

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## Introduction

Cognitive impairment, encompassing both dementia and delirium, may be associated with distressing behavioural and psychological symptoms necessitating intervention. Guidelines emphasise the importance of using non-pharmacological options as initial management, with use of psychotropic medications, including antipsychotics and benzodiazepines, only to control symptoms if a patient is severely agitated and non-pharmacological options have failed or if patient is posing risk to themselves or others<sup>[1]</sup>. Evidence for psychotropic efficacy is modest and serious adverse effects are associated with their use<sup>[2]</sup>.

The National Safety and Quality Health Services Standards require health services to “manage the use of antipsychotics and other psychoactive medicines, in accordance with best practice and legislation [in patients who have cognitive impairment]”. This large metropolitan teaching hospital did not have data on psychotropic use in their Geriatric Evaluation Management (GEM) wards, nor is there robust published data on usage in GEM wards, necessitating a need to investigate.

## Aim

To describe the use of psychotropic medications (antipsychotics and benzodiazepines) in patients with dementia or cognitive impairment admitted to Geriatric Evaluation Management wards in a large metropolitan hospital and identify areas for improvement.

## Methods

This study was a retrospective inpatient medical record audit performed at The Royal Melbourne Hospital (RMH), Victoria. Data was collected by two auditors examining patients' electronic medical records. A third auditor then verified the data.

### Inclusion criteria

Patients discharged from RMH GEM wards between 1st January 2016 and 31st December 2016 with a coded diagnosis of dementia or cognitive impairment.

### Exclusion criteria

Patients with one or more of the following mental health disorders; schizophrenia, schizotypal disorder, persistent delusional disorder, acute and transient psychotic disorder, induced delusional disorder, schizoaffective disorder, other nonorganic psychotic disorders and unspecified nonorganic psychosis.

### Outcomes measured

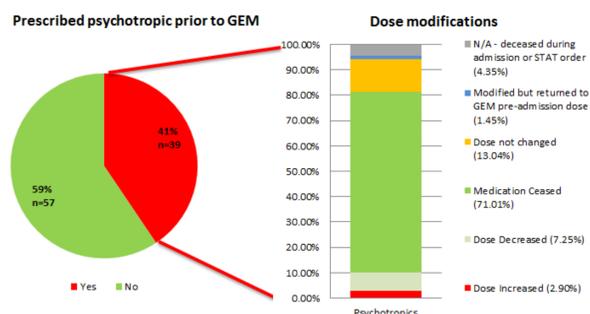
This audit evaluated the prescription, administration and documentation of psychotropics prior to GEM admission, throughout admission and on discharge. Adverse event data was compared between users and non-users of psychotropics. Number of doses of psychotropics administered per 100 bed days was calculated to allow for comparison with other or future audits.

## Results

A total of 101 patient files were reviewed, with 96 patients having a confirmed diagnosis of dementia or cognitive impairment included in the study. Fifty-one (53.1%) patients were female and the average age of patients was 85 years.

### Psychotropic(s) prior to GEM admission and dose modifications

On admission, 69 psychotropic orders across 39 patients (40.6%) were prescribed. The majority (71.0%) of these prescriptions were ceased during GEM admission (see graph 1).



Graph 1 Proportion of patients prescribed a psychotropic prior to their GEM admission and associated dose modifications

### Psychotropic(s) during GEM admission

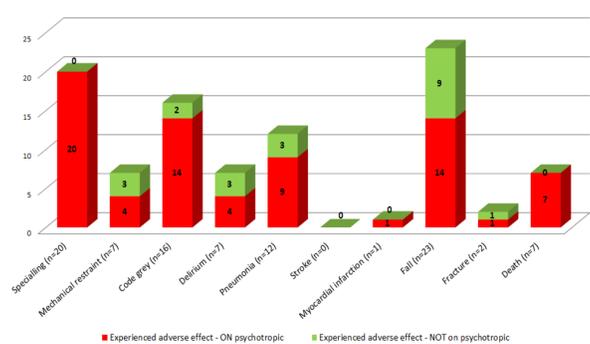
A total of 27 patients (28.1%) had a new psychotropic prescription during their admission with 16 prescriptions (59.3%) commencing at low doses according to guidelines.

### Received at least one dose of psychotropic during GEM admission

During their admission, 38 patients received at least one dose of a psychotropic. Of these patients, 12 (31.6%) received more than one psychotropic concurrently within 24 hours, seven patients (18.4%) received greater than the maximum 24-hour dose according to guidelines, six patients (15.8%) received one psychotropic within one hour of preceding dose of a different psychotropic and three patients (7.9%) received the same psychotropic within one hour.

### Adverse events

Patients that received at least one dose of a psychotropic experienced more adverse events and greater physical interventions compared to those who did not receive any psychotropics (see graph 2).



Graph 2 Proportion of patients who experienced an adverse event or physical restraint

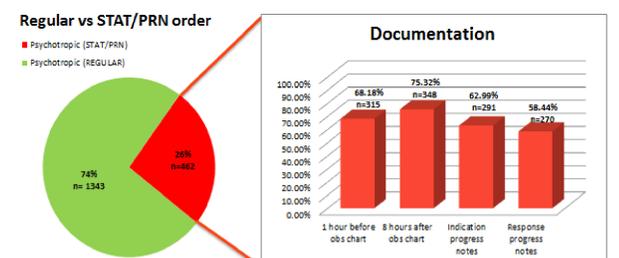
### Discharged on a psychotropic

Eighteen patients (18.8%) were discharged on a psychotropic, but only five patients (27.8%) had a documented plan for review in their discharge summary.

## Psychotropic administration and documentation

Overall 1805 psychotropic doses were administered across 96 patients. The majority of doses were given as a regular order (74.4%) while the remainder were STAT or PRN doses (25.6%) (graph 3).

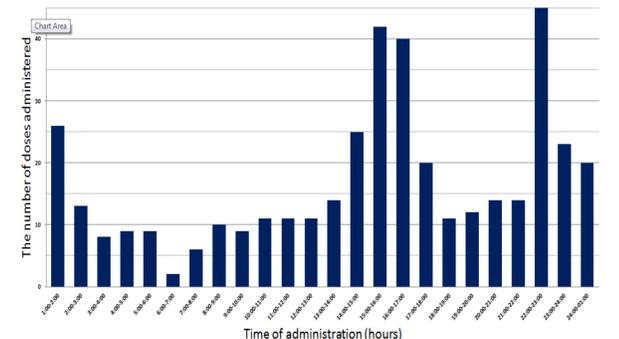
Documentation of response on behavioural observation charts and progress notes before and after administration of a STAT or PRN can be seen in graph 3.



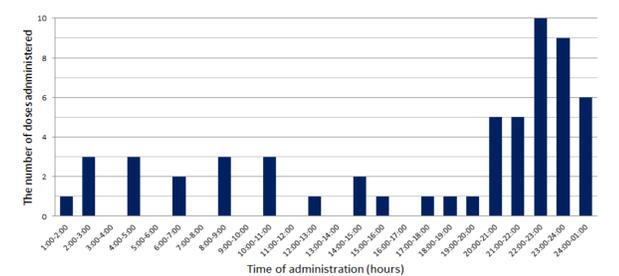
Graph 3 Administration of regular and STAT/PRN doses and nursing documentation

## Administration time of STAT and PRN doses

Time of the day altered use of STAT and PRN doses of antipsychotics (graph 4) and benzodiazepines (graph 5).



Graph 4 Administration times of STAT/PRN antipsychotics



Graph 5 Administration times of STAT/PRN benzodiazepines

## Number of doses per 100 bed days

For every 100 bed days, there were approximately 59 doses of psychotropics administered.

## Conclusion

Prescriptions for psychotropics in patients with dementia or cognitive impairment are being deprescribed in the majority of cases in the GEM setting. Key opportunities for improvement include initial and repeat dosing, documentation of indication and response to administered psychotropics, and improved communication of the review plan for a patient's psychotropic(s) upon discharge.

## References

- [1] Carson S et al. A Systematic Review of the Efficacy and Safety of Atypical Antipsychotics in Patients with Psychological and Behavioral Symptoms of Dementia. J Am Geriatr Soc. 2006;54(2):354-61.
- [2] Schneider L et al. Efficacy and adverse effects of atypical antipsychotics for dementia: meta-analysis of randomized, placebo-controlled trials. Am J Geriatr Psychiatry. 2006;14(3):191-210.