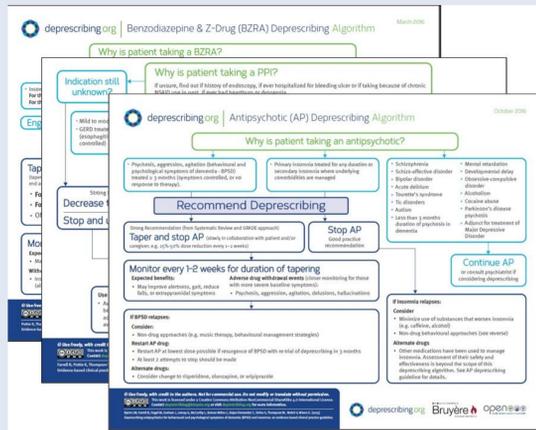


# Evaluating short and long term outcomes of hospital led deprescribing in the elderly

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## Background

Polypharmacy in the elderly patient with multimorbidity is well recognised to be associated with negative outcomes, including falls<sup>1</sup>. Certain classes of drugs have been identified to increase the risk of falls, such as benzodiazepines and anti-psychotic medications<sup>2</sup>. There has been much research into developing tools that can be used to aid clinicians and support the deprescribing process<sup>3</sup>. The Canadian deprescribing network have produced evidence based guidelines that can aid clinicians to apply a standardised structured process to deprescribe certain classes of drugs in frail, older adults<sup>4</sup>.

## Aims

To deprescribe proton pump inhibitors (PPI), benzodiazepines (BZD) and antipsychotics (AP) which are considered high risk medications in elderly inpatients over the age of 70. These medications have been previously identified by the Canadian Deprescribing Network (CADEN) as candidates for deprescribing.

## Method

Patients were identified by pharmacists during the medication history taking. Inclusion criteria was age  $\geq 70$ , admission to an inpatient ward and taking one of the study drugs for included indications. Indications for AP inclusion criteria were if the patient was treated for  $\geq 3$  months for behavioural and psychological symptoms of dementia (BPSD) (symptoms controlled or no response to therapy), primary insomnia treated for any duration or secondary insomnia where underlying comorbidities are managed. BZD inclusion criteria were - prescribed for insomnia on its own or insomnia where underlying condition managed. PPI criteria included mild to moderate oesophagitis, GORD treated for 4-8 weeks or indication not established. Exclusion criteria included indications for which the medication were appropriate. Identified patients were reviewed for appropriateness for inclusion with their treating medical officer. Patients or carers had to consent to the deprescribing process. Patients were provided with written information and goals of the deprescribing process and were deprescribed as per the CADEN algorithms.

## Results

Table 1 - Patient population

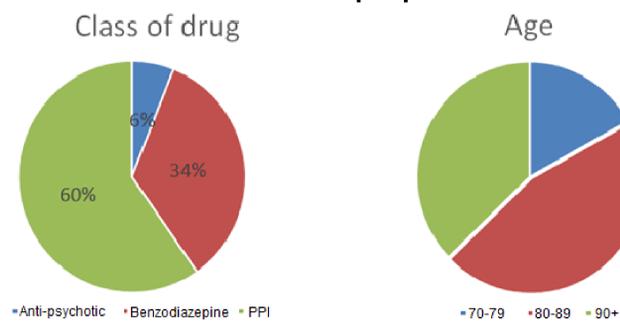


Table 2 - Overview of results

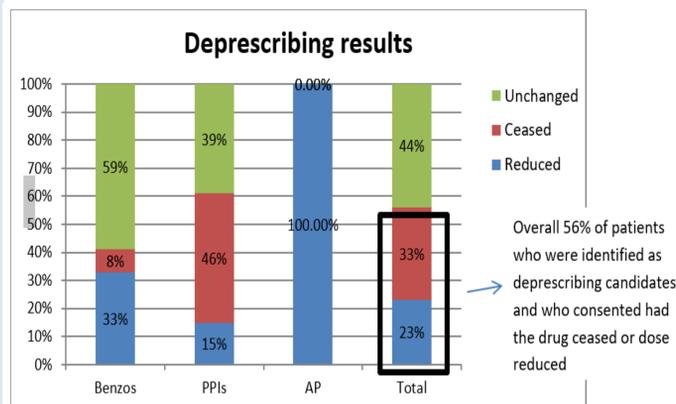


Table 3 - Indications for Proton Pump Inhibitors

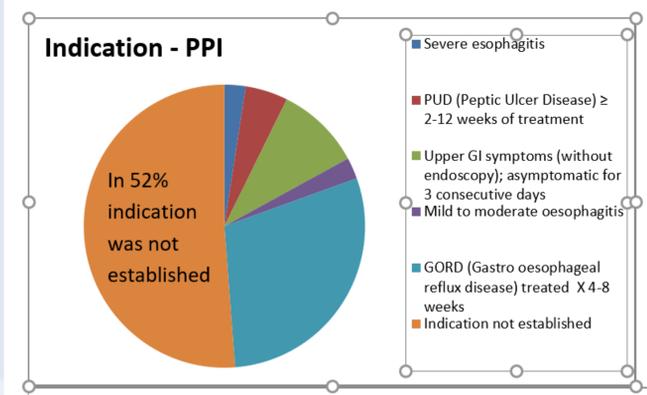


Table 4 - Potential Cost Savings

Example of cost savings extrapolated to esomeprazole	PBS quantities and cost	Projected cost if 46% of patients cease esomeprazole	Cost savings / reduction in patient numbers
Number of PBS scripts 2016-2017	6,282,640	2890014	3,392,626
Approx scripts per month	523553	240835	282719
Government cost	\$139,976,689	\$64,389,276	\$75,587,412
Patient contribution	\$31,739,585	\$14,600,209	\$17,139,375
Total cost	\$171,716,273	\$78,989,485	\$92,726,787

## Results

BZDs were the most difficult class to deprescribe with only 10/18 patients who were recommended for deprescribing consenting to the process. Low numbers of patients were identified on anti-psychotics which was positive and may reflect the education provided by the local geriatric team to the local community and hospital aged care health providers. Only 6 patients (15%) deprescribed one of the three agents reported an increase in symptoms after deprescribing at 7 days and 8 patients (20%) at 3 months. Unfortunately due to cognitive impairment or inability to contact the patient this information could not be collected in 12% of cases. 5 patients (15%) died during the follow up period which may reflect a frailer population and therefore an appropriate one for deprescribing. Assuming 12 patients (46%) ceased their PPI this roughly equates to a PBS saving of \$531.36 over 3 months and \$2125.44 over 12 months assuming they remained off the drug.

## Patient statements

"He has stopped his herbal sleeping tablet and we are planning on addressing the temaze again soon. Thanks for all the support"

Daughter

"Great project, thanks for the good work"

Local GP

"Very happy with the deprescribing process"

Patient

## Conclusion

Deprescribing of high risk medications in the elderly remains a challenge. It is often hard to see tangible benefits to stopping treatment which was noted at 3 months only 5% of patients could identify a benefit. However, the cost savings to the healthcare system can be huge, both in decreased pharmaceutical benefits scheme expenditure and decreased medical expenses due to adverse drug reactions such as falls.

## References

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