Pharmacist Deprescribing to Reduce Anticholinergic Burden in Older Adults

Michael Lam, PharmD, Jonathan Pennacchio, PharmD, Khanh Nguyen, PharmD, APh, Jerel Mendoza, PharmD, Rebecca Kandilian, PharmD, BCPS, Louise Lu, PharmD, Suzanne Morreale PharmD, BCPS, Douglas Olken, MD

Kaiser Permanente San Diego Clinical Pharmacy Services, Kaiser Permanente Department of Family Medicine

Background

The prevalence of anticholinergic medication use has been steadily increasing, particularly in the aging population.[1-3] Several studies have shown an association between anticholinergic drugs and poorer cognitive and physical functions, as well as increased morbidity and hospitalization in the elderly population.[4] Many studies have demonstrated that withdrawal of these medications have little adverse clinical effects and deprescribing is a potential modifiable risk factor.[5] Reducing anticholinergic medication usage could can reduce the risk of falls, dementia, and hospitalizations for elderly patients.

Objectives

- **Primary objective**: Evaluate the effectiveness of a multimodal approach in deprescribing anticholinergic agents in elderly patients
- **Secondary objective**: Evaluate the impact of a physician education program on prescribing multiple anticholinergic agents

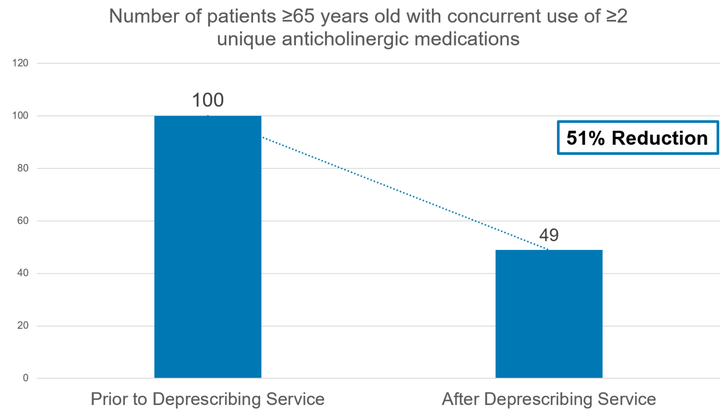
Methods

This was a retrospective, data-only study that assessed outcomes of an anticholinergic medication deprescribing program for the elderly patients. The inclusion criteria were adults ≥65 years old with concurrent use of ≥2 unique anticholinergic medications. Patients who met our inclusion criteria from July 1, 2019 – March 31, 2020 were evaluated.
In our multimodal deprescribing program, primary care physicians received a list of patients who met criteria to review and proactively deprescribe. Pharmacist also made recommendations to deprescribe after obtaining authorization from physicians.
In conjunction, a series of Performance Improvement Continuing Medical Education (PI-CME) were created for all primary care physicians of the Kaiser Permanente San Diego service area. The PI-CME consisted of information on geriatric health, strategies to taper and deprescribe, and pharmacy involvement in deprescribing, as well as assessment questions.
The reduction of new start anticholinergic medication was statically analyzed by a chi square test.

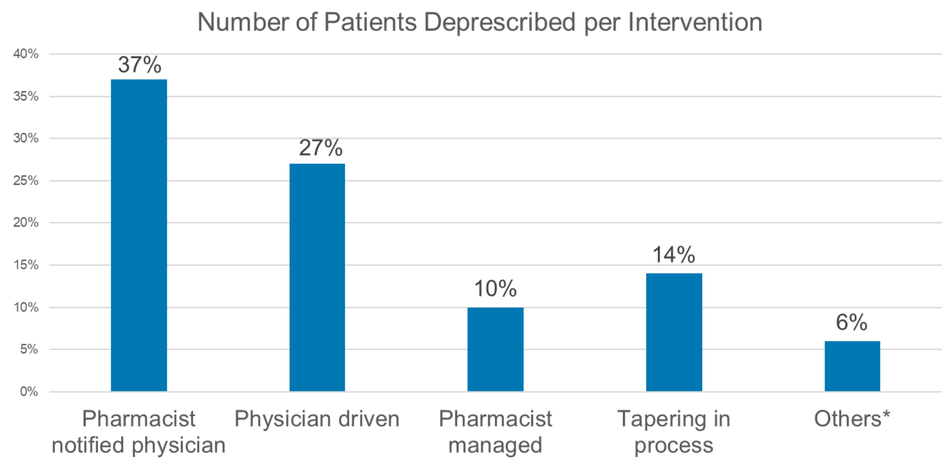
Results

	Deprescribed/Pending n = 66	Not Deprescribed n = 34	P-value
Average age ± SD	74.1 ± 6.5	73.4 ± 7.0	0.63
Top medications	Nortriptyline (23.8%)	Nortriptyline (25.0%)	0.84
	Trospium (16.2%)	Trospium (14.7%)	0.77
	Oxybutynin (14.6%)	Oxybutynin (13.2%)	0.78
	Paroxetine (9.2%)	Paroxetine (7.4%)	0.65
	Others (36.2%)	Others (39.7%)	0.61
Top departments	Primary Care (73.8%)	Primary Care (82.4%)	0.14
	Psychiatry (4.6%)	Psychiatry (5.9%)	0.68
	Neurology (4.6%)	Neurology (4.4%)	0.95

Table A (above): results of the 100 patients who met inclusion criteria. The most common anticholinergic medications prescribed are the nortriptyline, trospium, oxybutynin, and paroxetine. The top prescribing departments are primary care, psychiatry, and neurology.

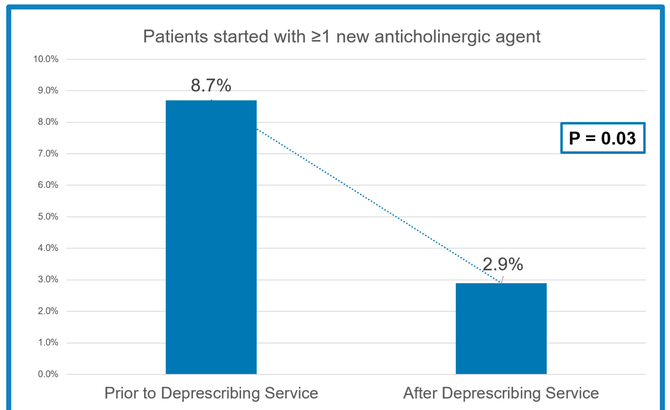


Graph A (left): a 51% reduction of the included patients after the implementation of a pharmacist-led deprescribing service.



Graph B (above): the percentage of the different interventions in the 51 patients who were successfully deprescribed.

Results



Graph C (above): the number of new adults ≥65 years old with concurrent use of ≥2 unique anticholinergic was significantly reduced from 8.7% to 2.9% [P=0.03] after the implementation of our deprescribing service.

Discussion

Since this project was launched, there has been a reduction in the number of elderly patients who are on two or more anticholinergic medications. Many of those patients were deprescribed after an initial assessment by the pharmacist, whose recommendation was forwarded to the physician. The significant reduction of new starts of anticholinergic medication was likely due to increased awareness from physician education. The result of this study indicates that the collaboration between physician and pharmacist deprescribing a long with physician education the reduce the number of elderly patients on anticholinergic medications as well as reduce anticholinergic new starts. Pharmacist provide valuable evaluation of medication efficacy and adverse drug events which can assist in physician to deprescribing.

References

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