

Background

- Polypharmacy is a key clinical challenge for primary care
- ‘Legacy Drugs’ are appropriate at initiation and when prescribed for an intermediate period, but assume **legacy status** when they are not appropriately discontinued.
- Commonly prescribed Legacy drugs include: **bisphosphonates, proton pump inhibitors (PPIs), SSRI antidepressants.**

Aim: to evaluate the proportion of continuous prescribing, beyond the potentially clinically useful time-frame, for these three drug classes, as well as any associations with patient or prescribing characteristics.

Methods

Study Design: population-based retrospective cohort study using data from the McMaster University Sentinel and Information Collaboration (MUSIC) Database.

Population: all adult (age ≥ 18 years) patients from 2010-2016 from the McMaster Family Health Team (FHT) in Hamilton, Ontario and surrounding communities (n=48,548 patients).

Legacy Indicators: potentially clinically inappropriate continuous prescribing periods were defined as: bisphosphonates >5 years, PPIs >12 months, and antidepressants >12 months.

Data Preparation: medication prescribing data were extracted from the MUSIC database for the drug classes of interest. Data were cleaned to remove outliers. Legacy status was determined by both the sum of all prescriptions AND the difference between first and last ever prescription, measured against legacy indicators.

Conclusion

Legacy prescribing beyond a clinically appropriate time-frame appears to be considerable and demonstrates the potential of this type of prescribing to contribute to polypharmacy. This research provides the grounding for future interventions focused on rational prescribing and deprescribing within the MUSIC PBRN.

Results

Among patients having been prescribed drugs within each class of interest, patients meeting legacy status were: 230/1601 (14%) for bisphosphonates, 2897/6520 (44%) for PPIs, and 3802/8271 (46%) for SSRI antidepressants. More than 80% of patients were legacy for only one drug class.

Patient Demographics for Currently Prescribed Legacy and Non-Legacy Patients of the McMaster FHT

	Bisphosphonate Legacy	Bisphosphonate Non-Legacy	PPI Legacy	PPI Non-Legacy	Antidepressant Legacy	Antidepressant Non-Legacy
Male	19 (12%)	51 (22%)	566 (37%)	128 (36%)	582 (29%)	184 (34%)
Female	144 (88%)	183 (78%)	965 (63%)	232 (64%)	1414 (71%)	347 (65%)
Non-binary	0 (0%)	0 (0%)	2 (0.1%)	0 (0%)	4 (0.2%)	3 (1%)
Mean Age	75	71	63	55	52	45
Total	163	234	1533	360	2000	534

McMaster University Sentinel Information Collaboration (MUSIC) is a Primary Care Practice-based Research Network (PBRN). MUSIC securely compiles de-identified data from the OSCAR Electronic Medical Record at the McMaster Family Health Team to support research projects.