Assessing the Scale of Polypharmacy and Medication Reviews in Hospitalized Elderly Patients:
A 2 Cycle Audit

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Introduction

Polypharmacy—commonly defined as the use of **five or more** medications—is highly prevalent among older adults and is associated with increased risks of adverse drug events, falls, cognitive impairment, hospital admissions, and reduced quality of life.

Inappropriate polypharmacy, where medications provide limited benefit or cause harm, represents a significant patient safety concern.

Structured medication reviews (SMRs), supported by validated deprescribing tools such as STOPP/START criteria [1], are essential for identifying and addressing potentially inappropriate prescribing.

Aim

This quality improvement project (QIP) aimed to assess and improve SMR practices in hospitalised older adults with polypharmacy.

Method

A **two-cycle prospective QIP** was conducted on a Health Care of the Older Person (HCOP) ward at Lincoln County Hospital.
Patients aged **≥65 years** and prescribed **≥5 regular medications** were included.
Data was collected during two two-week periods from the same ward (Cycle 1: February 2025; Cycle 2: May–June 2025), with 20 patients reviewed in each cycle.

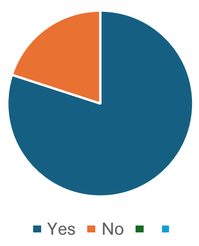
Outcome measures included:
- The prevalence of potentially inappropriate medications (PIMs)
- SMR completion
- Documentation of SMR in medical notes
- Communication of medication changes to general practitioners via electronic discharge documents (EDDs).

Interventions introduced between cycles included staff education sessions, e-mail reminders and visual reminders on the ward via posters.

Results

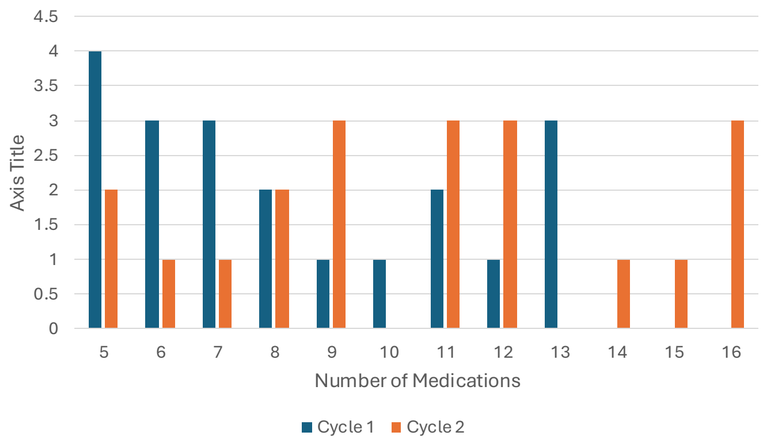
In Cycle 1, 40% of patients were prescribed PIMs (Fig.8). SMRs were conducted for 80% (Fig.1), with documentation also completed in 80% (Fig.3). In Cycle 2, 70% of patients were on PIMs (Fig.8); however, SMRs and documentation were both completed for 100% (Fig.2, Fig.4). Medication changes were communicated to GPs via EDDs for 100% of patients in both cycles (Fig.5, Fig.6). These results demonstrate improved consistency and quality in medication review processes.

Cycle 1-Have they had a medication review? (Fig.1)

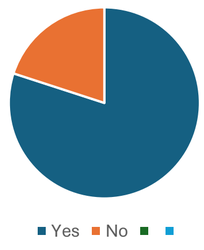


Cycle 2- Have they had a medication review? (Fig.2)

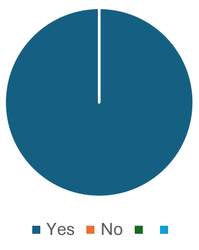
Comparison of number of medications (Fig.7)



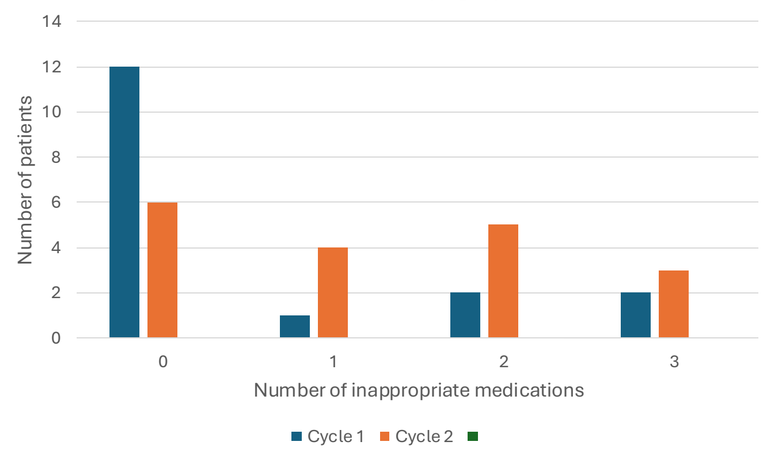
Cycle 1- Documentation of medication review in patient notes (Fig.3)



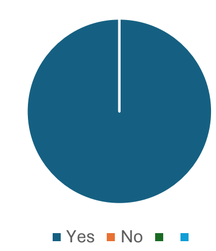
Cycle 2-Documentation of medication review in patient notes (Fig.4)



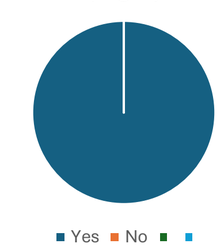
Comparison of number of inappropriate medications (Fig.8)



Cycle 1- Percentage of EDD's with medication changes (Fig.5)



Cycle 2- Percentage of EDD's with medication changes (Fig.6)



Discussion

- Patients are still admitted with polypharmacy and inappropriate medications with no previous medication reviews i.e. in the community
- Medication reviews and documentation has improved significantly between the 2 cycles after implementation of recommendations
- Medication changes after SMR has been appropriately conveyed to GP via EDD, in both cycles

Conclusion

- Medication reviews help to decrease polypharmacy and simplify regimens.
- Optimization of therapeutic outcomes and disease management is a key benefit of SMR's.
- In conclusion, medication reviews are crucial in addressing the challenges of polypharmacy in older adults.

References

1. O'Mahony, D. (2015) *Stopp-start - CGA toolkit plus*, *cgakit*. Available at: https://www.cgakit.com/m-2-stopp-start