

Measuring the impact of polypharmacy reviews within a 'hospital at home' service.

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Introduction

Inappropriate polypharmacy in complex, multimorbid, and frail older adults increases risks of adverse events, hospital admissions, and nonadherence^{1,2}. Polypharmacy review is an important part of Comprehensive Geriatric Assessment (CGA) with national guidance emphasising the goal being harm reduction rather than deprescribing². This audit evaluated the impact of polypharmacy review within the Dundee Enhanced Care at Home Team (DECAHT) geriatrician caseload.

Method

Design: Retrospective audit

Sample: 25 most recent discharges (July–August 2024) under DECAHT-geriatrician care

Data reviewed:

- Admission, inpatient, and discharge prescriptions
- Medication count
- Anticholinergic burden (ACB) score³
- High-risk medications

Analysis tool: Microsoft Excel



37 **stops** including antihypertensives (29.7%) and analgesics (21.6%)
16 **changes** – dose or frequency adjustments
32 **starts** including laxatives (28.1%) and analgesics (31.2%)

Figure 1

Results

- Mean age 79.6yrs (female 78.8; male 81.1), and 64% were female.
- Mean medication number on admission was 9.64 (range 4–21) versus 9.44 at discharge.
- In total 85 medication changes were made across 22 patients (88%), Figure 1.
- There was a significant reduction in high-risk prescriptions, Figure 2.
- Mean ACB score³ decreased from 2.76 (range 0–11) on admission to 2.16 (range 0–8) at discharge. 9 patients (36%) had a high-risk ACB score of ≥ 3 on admission, following polypharmacy review 3 (33%) dropped below the high-risk threshold.

Drug class	Patients prescribed on admission (%)	Patients prescribed on discharge (%)	Change (%)
Anticoagulation	10 (40%)	10	0%
Antihypertensive	20 (80%)	14	-30%
Diuretic	7 (28%)	7	0%
Antidepressant	9 (36%)	8	-11%
Antipsychotic	1 (4%)	1	0%
Opiates	4 (16%)	3	-25%
Benzodiazepine	3 (12%)	3	0%
Gabapentinoid	4 (16%)	2	-50%

Figure 2

Conclusion

Though 88% of patients had prescription changes made, and medications were stopped in 68%, there was minimal change in total medication count. Meaningful reductions were seen in anticholinergic burden and high-risk drug prescribing. These findings highlight the importance of targeted metrics—rather than medication number alone—to evaluate safe prescribing practices in frail, older populations.

Recommendations

- Incorporate ACB and high-risk drug tracking into routine CGA
- Focus on harm reduction rather than numerical deprescribing targets
- Use targeted audits to guide safer prescribing practices

1. Healthcare Improvement Scotland. What is polypharmacy and why is it important?, (no date). Accessed 11/9/2024. Available from <https://rightdecisions.scot.nhs.uk/polypharmacy-guidance/principles/what-is-polypharmacy-and-why-is-it-important/>.

2. Scottish Government Polypharmacy Model of Care Group. Polypharmacy Guidance, Realistic Prescribing 3rd Edition, 2018. Scottish Government. Available from <https://www.therapeutics.scot.nhs.uk/wp-content/uploads/2018/09/Polypharmacy-Guidance-2018.pdf>

3. King, R & Rabino, S. ACB calculator, (no date). Accessed August 2024. Available from <https://www.acbcalc.com/>