Home-based Geriatric Evaluation and Management (GEM@Home) model of care – evaluating a new pharmacy service model

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Background

The challenge of the COVID-19 pandemic and inpatient care costs, has driven health services to explore novel models of care.

Geriatric Evaluation and Management (GEM) care can be safely provided by a multidisciplinary team (MDT) within a patient's home.[1] Care provision in a home environment is a viable alternative to a hospital bed-based service, with higher levels of patient satisfaction and comparable clinical outcomes.[2]

Objective

To evaluate the clinical pharmacy services provided in a newly established GEM at home (GEM@Home) program.

Action

In 2020, in the context of rising costs of hospital-based care, bed pressures across the hospital network and the COVID-19 pandemic, establishment of a home-based inpatient GEM service was prioritised as a COVID response initiative.

An eight-bed GEM@Home inpatient program, aligned to the subacute program at Monash Health, commenced in December 2020. The multidisciplinary team included one full-time equivalent (FTE) geriatric medicine pharmacist.

Clinical pharmacy services were designed to meet the needs of patients (Figure 1). Care was provided via home visits and/or telehealth, determined by current COVID-19 restrictions.

HOME VISIT
One home visit or telehealth consultation per admission

MEDICINE REVIEW
One comprehensive medication management review (MMR@Home)

COUNSELLING
Patient and/or carer medication counselling and education

SAMP PROGRAM
Patient self-administration of medicines program (SAMP) assessment and oversight

TRANSITION OF CARE
Continuity of medication supply and clinical handover on transitions of care

Figure 1: Role and Expectations of GEM@Home Pharmacist

Evaluation

A retrospective audit of inpatient health records showed that, during the three-month study of the new GEM@Home program:

- 41 patients completed a GEM@Home admission

- Mean GEM@home length of stay (LOS) = 12.9 days

- Median number of regular and as required medicines prescribed per patient = 11 (range: 2-23)

- The GEM@Home pharmacist provided 113 consultations, resulting in 2.8 pharmacist consultations per patient. Of these, 39% (44/113) were home visits and 61% (69/113) were telehealth (Table 1).

Table 1: GEM@Home Pharmacist Clinical Activity

Pharmacist clinical activity	
Total pharmacist consultations	113
Home visits (face to face)	44 (39%)
Telehealth	69 (61%)
Mean pharmacist consultations per patient	2.8
Home visits (face to face) (mean)	1.1
Telehealth (mean)	1.7
MMR@Home completion rate	93% (38/41)
Mean pharmacist consultation time	55 mins
Proportion of patients requiring DAA for SAMP	49% (20/41)

- 93% (38/41) of patients received a comprehensive MMR@Home and 49% (20/41) required dose administration aids prepared by the GEM@Home pharmacist

- There were 71 pharmacist interventions recorded during the study period (mean = 1.4 per patient; range: 1-6). An intervention was defined as any action by a pharmacist that directly resulted in a change to patient management or therapy.[3]
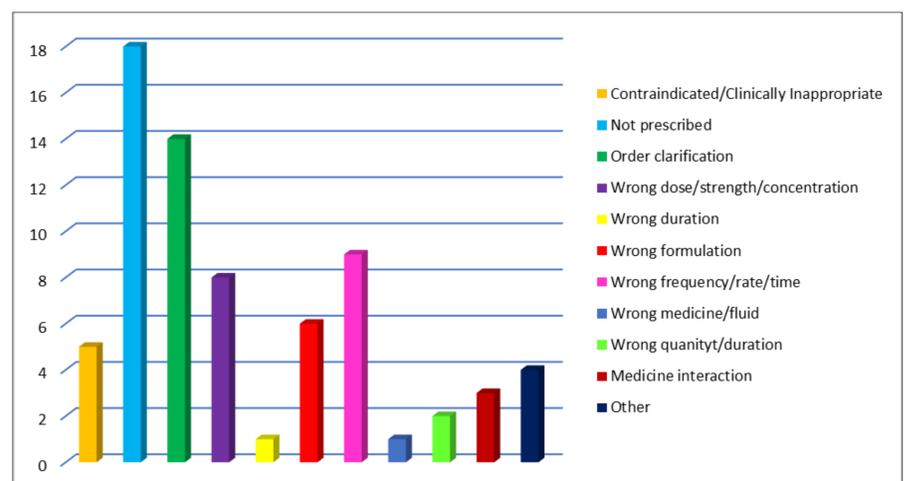

Legend:
- Contraindicated/Clinically Inappropriate
- Not prescribed
- Order clarification
- Wrong dose/strength/concentration
- Wrong duration
- Wrong formulation
- Wrong frequency/rate/time
- Wrong medicine/fluid
- Wrong quanityt/duration
- Medicine interaction
- Other

Figure 2 : Pharmacist Intervention Categories (N=71)

- Most common medicine-related issues were medicines not prescribed (25%), order clarification (18%) and wrong frequency/rate/time (13%) (Figure 2).

Discussion

This study demonstrated that a clinical pharmacist is an integral member of the GEM@Home MDT, undertaking MMR@Home, facilitating SAMPs, and identifying and managing medicine-related issues. The GEM@Home program has expanded beyond the pilot to 20 beds with further expansion to 32 beds planned.

References

1. Caplan G, Sulaiman N, Mangin D, Aimonino Ricauda N, Wilson A, Barclay L. A meta-analysis of 'hospital in the home'. Med J Aust 2012; 197: 512–19
2. Montalto M, The 500-bed hospital that isn't there: the Victorian Department of Health review of the Hospital in the Home program. MJA; V193 N10: 598-601
3. The Society of Hospital Pharmacists of Australia Committee of Speciality Practice in Clinical Pharmacy. Standards of Practice for Clinical Pharmacy services. JPPR 2013; V43 N2:S1-s69

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