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# Improving care by simplifying medications and streamlining medication rounds in aged care services

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# Background

- Complex medication regimens are common among older people
  - multiple medications and administration times
  - tablets, patches, inhalers, injections
  - instructions e.g. take with food, crush

- This is concerning because increased complexity has been linked with poor health outcomes in older people in some studies

- Simplifying medications could benefit residents of aged care homes and staff

# Simplifying medicines: The MRS GRACE simplification tool

| | Mary |
|---|---|
| 6 AM |  |
| 8 AM |  |
| 12 PM |  |
| 4 PM |  |
| 6 PM |  |
| 8 PM |  |

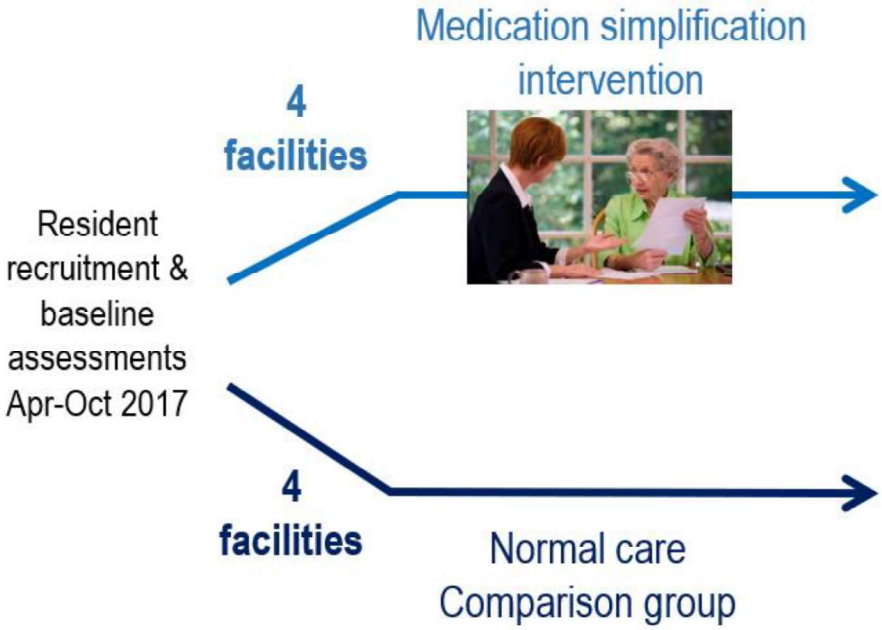
THE MEDICATION REGIMEN SIMPLIFICATION GUIDE FOR RESIDENTIAL AGED CARE (MRS GRACE)

Consideration can be given to administering all medications at the same time each day unless the following apply:

1. Is there a resident related factor that precludes simplification?
2. Is there a regulatory or safety imperative that precludes simplification?
3. Is simplification likely to result in any clinically significant drug-drug, drug-food, or drug-time interactions?
4. Is there no alternative formulation available that can support less complex dosing?
5. Is simplification likely to result in any unintended consequences?

Chen EYH, Sluggett JK, et al. Development and validation of the Medication Regimen Simplification Guide for Residential Aged CarE (MRS GRACE). Clinical Interventions in Aging: https://www.dovepress.com/articles.php?article_id=38394V

# The SIMPLER cluster randomised controlled trial




**Simplification possible for 65% of residents** → **Recommendations implemented for 74% (n=42 residents)**

Fewer medication administration times (-0.36, p=0.01)

⬆ nursing time to spend on other care activities: ~0.5FTE per 100 residents

No changes to resident satisfaction or quality of life

Sluggett JK, et al. J Am Med Dir Assoc 2020; 21(8): 1114-1120.e4. https://doi.org/10.1016/j.jamda.2020.02.003
Sluggett JK et al. Int J Environ Res Public Health 2021; 18(11): 5778. Free link: https://doi.org/10.3390/ijerph18115778

# Knowledge translation project: implementing simplification in community aged care services

Open access Protocol

BMJ Open

**Protocol for a non-randomised pilot and feasibility study evaluating a multicomponent intervention to simplify medication regimens for people receiving community-based home care services**

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**ABSTRACT**

**Introduction** Managing medication regimens is one of the most complex and burdensome tasks performed by older people, and can be prone to errors. People living with dementia may require medication administration assistance from formal and informal caregivers. Simplified medication regimens maintain the same therapeutic intent, but have less complex instructions and administration schedules. This protocol paper outlines a study to determine the feasibility of a multicomponent intervention to simplify medication regimens for people receiving community-based home care services.

**Methods and analysis** This is a non-randomised pilot and feasibility study. Research nurses will recruit 50 people receiving community-based home care services. All participants will receive the intervention from a clinical pharmacist, who will undertake medication reconciliation, assess each participant's capacity to self-manage their medication regimen and apply a structured tool to identify opportunities for medication simplification. The pharmacist will communicate recommendations regarding medication simplification to registered nurses at the community-based home care provider organisation. The primary outcome will be a description of study feasibility (recruitment and retention rates, protocol adherence and stakeholder acceptability). Secondary outcomes include the change in number of medication administration times per day, medication adherence, quality of life, participant satisfaction, medication incidents, falls and healthcare utilisation at 4 months.

**Ethics and dissemination** Ethical approval was obtained from the Monash University Human Research Ethics Committee and the community-based home care provider organisation's ethical review panel. Research findings will be disseminated to consumers and caregivers, health professionals, researchers and healthcare providers through the National Health and Medical Research Council Cognitive Decline Partnership Centre and through conference presentations, lay summaries and peer-reviewed publications. This study will enable an improved understanding of medication management and administration among people receiving community-based home care services. This study will inform the decision to proceed with a randomised controlled trial to assess the effect of this intervention.

**Trial registration number** ACTRN12618001130257; Pre-results.

**Strengths and limitations of this study**

- This study will provide new information regarding the burden of medication administration among older people receiving community-based home care services and inform future strategies to improve medication management.
- Quantitative and qualitative approaches will be used to comprehensively assess study outcomes.
- The outcomes to be assessed by this study are relevant to people receiving community-based home care services and their informal caregivers, community-based home care providers, clinicians and policy-makers.
- A potential limitation is that study participants will be recruited from one service provider which means findings may not be generalisable to all people receiving community-based home care services.

**INTRODUCTION**

Older people often have complex medication regimens to manage multiple chronic diseases. For example, two-thirds of Australians aged 75 years and older use five or more medications on a daily basis.[1] The overall prevalence of medication use in the community setting is increasing, as evidenced



Recruitment & baseline data collection

**Pharmacist-led intervention**

- Medication reconciliation
- Assess capacity to self manage medications using DRUGS
- Medication simplification using refined MRS GRACE
- Communication with GP/aged care
- Optional medicines list for participant

4 month follow-up*

+ interviews with participants

Study protocol paper: Sluggett JK, et al. BMJ Open 2019; 9: e025345. Free link: https://bmjopen.bmj.com/content/9/7/e025345
Final Results: Sluggett JK, et al. Clin Interv Aging 2020; 15:797-809. Free link: https://doi.org/10.2147/CIA.S248377

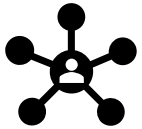
# Knowledge translation project: implementing simplification in community aged care services

25 participants
68% self-administering
Mean 13.8 ± 3.9 medicines

Using **MRS GRACE,** simplification was possible for 14 (56%) people
Median time: 5 mins (IQR 5-10)

**Medication reconciliation**
Median of 6 discrepancies (n=168 discrepancies in total)
Everyone wanted a medicines list

**DRUGS** showed most were able to self-manage their medicines
Median score: 100 (IQR 54-100)
Median time: 15 mins (IQR 10-15)



Of 75 discrepancies likely to result in an adverse outcome, 51% were resolved at follow-up

Interviews with 12 stakeholders found the intervention was well received, and wider implementation is feasible

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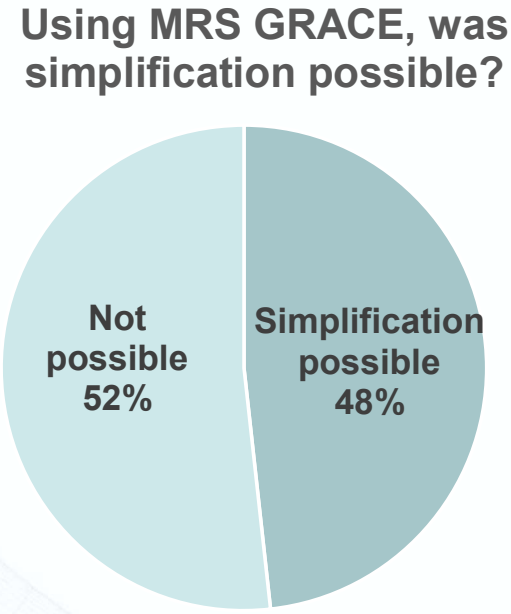
UniSA Allied Health & Human Performance

# Knowledge translation project: simplifying medicines for hospital inpatients who are discharged to aged care homes

Aim: To implement medicine simplification using a validated tool for hospital in-patients planned for discharge to aged care homes.

Pharmacists from 3 South Australian hospitals participated.

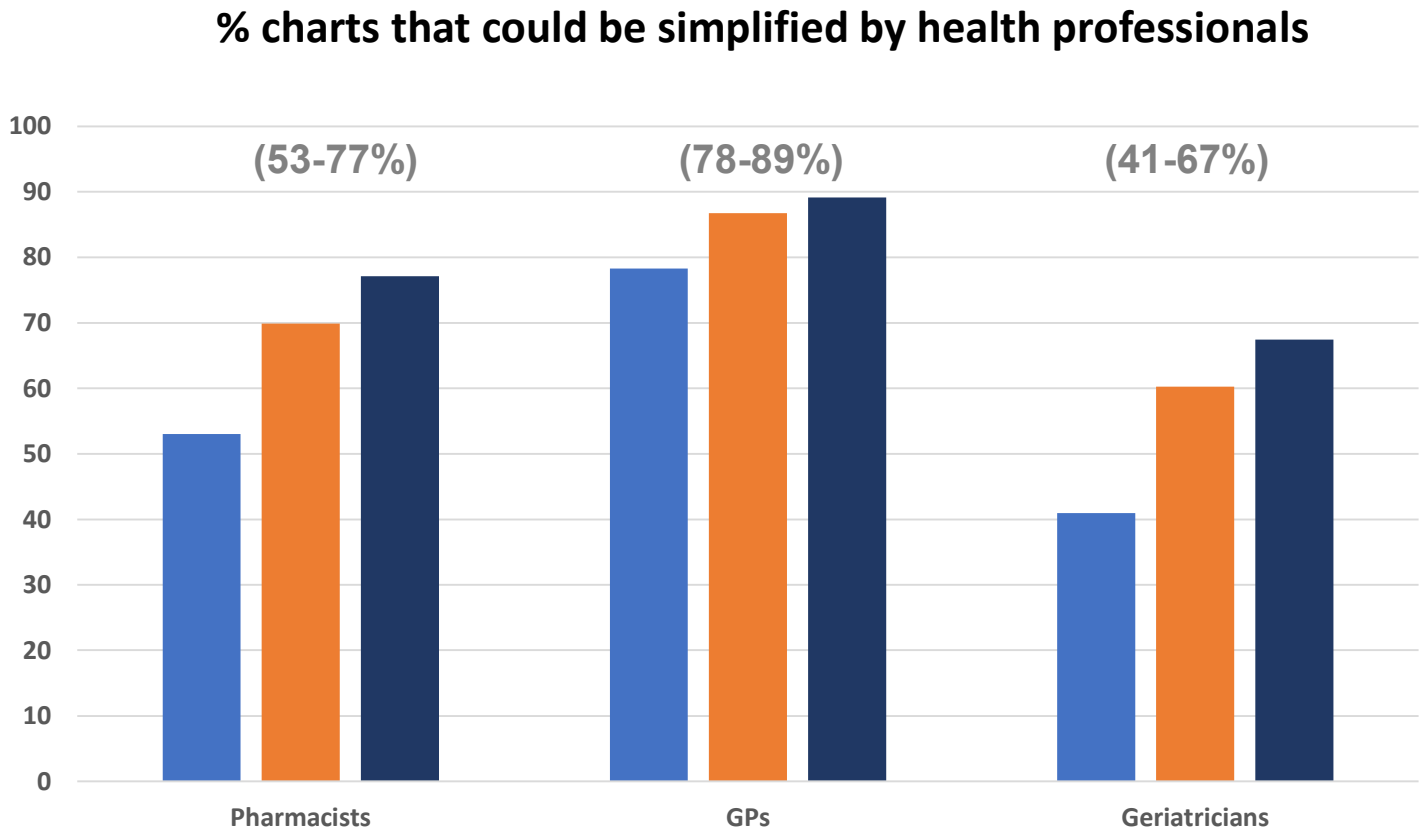
114 hospital inpatients were included.




***Nearly half of all inpatients discharged to aged care homes can take their medicines in a simpler way***

# Knowledge translation project: Comparing opportunities identified by geriatricians, GPs & pharmacists to simplify medication regimens

- Nine health professionals were provided medication chart data for n=83 residents of LTCFs
- 79 residents (93%) could have their medication regimen simplified by ≥1 health professional



# Key outcomes for patients and services

- Two thirds of residents of aged care homes can take their medicines in a simpler way
- Simplification releases staff for other care activities for a meaningful period of time
- Simplification is an low-risk, evidence-based process that is suitable for wider implementation.

# Possible policy implications resulting from this work

## Aged care homes

Simplification could be provided by onsite pharmacists or as part of an expanded RMMR service.

Education to increase simplification uptake when prescribing medicines

## Primary care

Simplification could be provided as part of an expanded HMR service.

The bundled service* could be provided by pharmacists in community pharmacies, GP practices or during home visits.

## Hospital inpatients

Medication simplification could be provided by hospital clinical pharmacists on admission and/or discharge.

* i.e., Medication reconciliation + adherence assessment + self-administration assessment + simplification

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# Where to find more information


Clinical Interventions in Aging

Dovepress

ORIGINAL RESEARCH

Development and validation of the Medication Regimen Simplification Guide for Residential Aged CarE (MRS GRACE)

https://doi.org/10.2147%2FCIA.S158417


Strategies to simplify complex medication regimens

https://doi.org/10.31128/AJGP-04-20-5322


JAMDA

journal homepage: www.jamda.com

Original Study

Reducing the Burden of Complex Medication Regimens: SImplification of Medications Prescribed to Long-tErm care Residents (SIMPLER) Cluster Randomized Controlled Trial

https://doi.org/10.1016/j.jamda.2020.02.003


International Journal of Environmental Research and Public Health

MDPI

Article

Process Evaluation of the SImplification of Medications Prescribed to Long-tErm Care Residents (SIMPLER) Cluster Randomized Controlled Trial: A Mixed Methods Study

https://doi.org/10.3390/ijerph18115778


Research in Social and Administrative Pharmacy

Available online 9 April 2024

In Press, Journal Pre-proof

Simplifying medication regimens for residents of aged care facilities: pharmacist and physician use of a structured five-step medication simplification tool

https://doi.org/10.1016/j.sapharm.2024.04.008


Clinical Interventions in Aging

Dovepress

ORIGINAL RESEARCH

Simplifying Medication Regimens for People Receiving Community-Based Home Care Services: Outcomes of a Non-Randomized Pilot and Feasibility Study

https://doi.org/10.2147/cia.s248377