REDUCING INAPPROPRIATE POLYPHARMACY FOR OLDER HOSPITAL PATIENTS

PROJECT SUMMARY SEPTEMBER 2019

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ASSOCIATE INVESTIGATORS: A/Prof Melissa Baysari, Dr Alexandra (Sasha) Bennett, Prof Fiona Blyth, Dr Danijela Gnjidic, Prof David Le Couteur, Prof Andrew McLachlan, Prof Rosalie Viney

FUNDING: NSW Health Translational Research Grant 274, NSLHD, SLHD, Sydney Health Partners MRFF

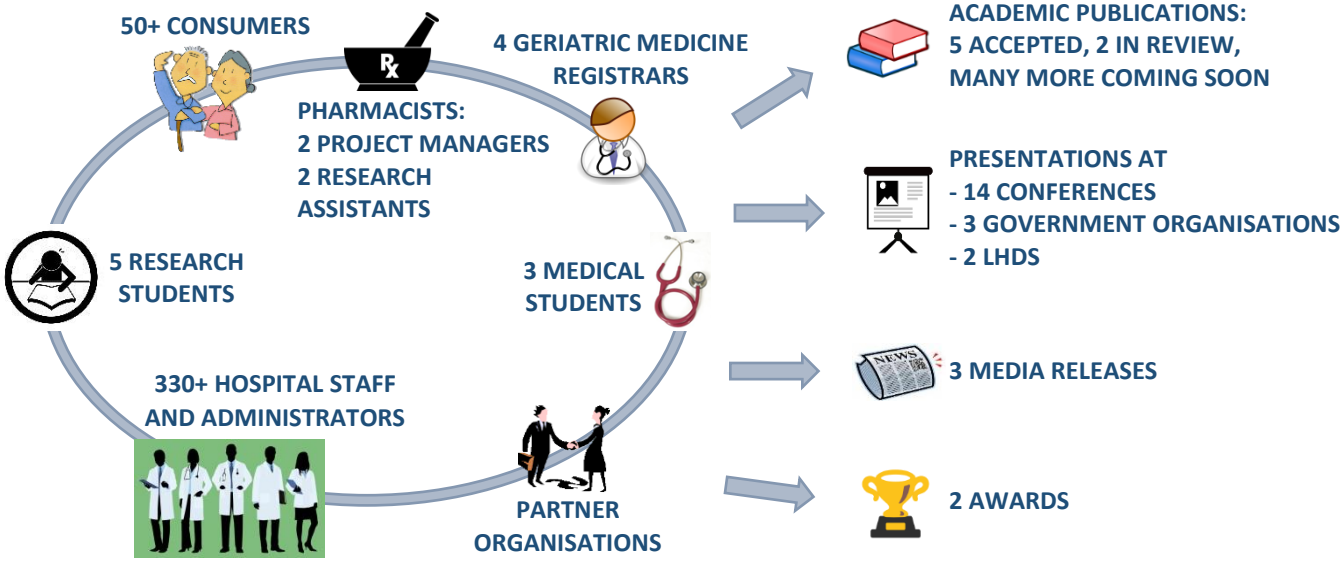
THE PROBLEM

- One in five medicines taken by older people is harmful or unnecessary (inappropriate).
- Inappropriate medications are a burden to older people and health systems and are low value healthcare.
- Supervised withdrawal of inappropriate medicines (deprescribing) is safe and may improve quality-of-life in older people.
- An acute hospital stay is a missed opportunity to review patients' medicines and reduce inappropriate medication use.
- Barriers to comprehensive medication review in hospital include limited clinician knowledge and skills, difficulty obtaining and communicating information, and prioritising review during a short admission.

PROJECT AIMS

1. Determine the extent and potential impact of inappropriate polypharmacy in older inpatients with and without dementia.
2. Develop tools to sustainably address inappropriate polypharmacy in routine care.

SUMMARY OF ACHIEVEMENTS (RESEARCH, CAPACITY, DISSEMINATION)



RESOURCES

Towards Optimising Hospitalised Older adults' MEdications (*TO HOME*) Database

- Detailed database of usual pharmaceutical care and outcomes in 2000 consecutive patients aged ≥75 years, admitted to Aged Care, General Medicine or Rehabilitation at Royal North Shore, Hornsby, Ryde, Concord, Balmain and Canterbury Hospitals
- Linked to data on readmissions and mortality over one year and PBS/RPBS data on dispensing six months before and one year after index admission
- Planned outputs include routine hospital pharmaceutical management, clinical outcomes in hospital and after discharge, patterns of polypharmacy and high risk prescribing before and after index hospitalisation, and associated costs
- Evaluate impact of frailty (index derived from routine data) and dementia on medication use and outcomes
- Opportunity for many other analyses in unique data set

NSW Health HETI Module on Reviewing Polypharmacy in Hospital

- Case based, defines place of review of polypharmacy in routine multidisciplinary care and directs to resources (including DBI, STOPP and Beers Criteria), 11 minutes
- Evaluated in 99 clinicians and 35 medical students

NSW TAG Polypharmacy Indicator Set

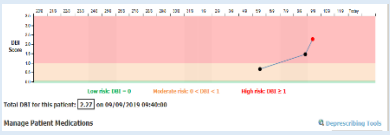
- 7 Process Indicators and 3 Patient Reported Evaluation Measures (PREMs)
- Piloted process indicators at 25 hospitals nationally and piloting PREMS at 2 hospitals in NSW
- Plan to include in National QUM indicators (first PREMs)
- Help hospitals meet updated ACSQHC hospital accreditation medication safety standards

Deprescribing Guides for Clinicians and Consumer Information Leaflets

www.nswtag.org.au/deprescribing-tools

- Support deprescribing decisions in hospital:
  - Whether to deprescribe
  - How to deprescribe
- Communication of deprescribing decisions:
  - Within hospital clinical team
  - With general practitioner in discharge summary
  - With consumers

Development of Interventions to Address Polypharmacy in the eMR



- Consulted with >300 multidisciplinary staff from NSLHD and SLHD to design to integrate with workflow
- Drug Burden Index (DBI) Calculator to assess patterns of drug use in hospital
- Clinician interface to communicate risk from DBI to clinical team to prioritise and facilitate medication review and deprescribing

FUNDING:	NSW Health Translational Research Grant 274
	Northern Sydney Local Health District
	Sydney Local Health District
	Sydney Health Partners Medical Research Future Fund
PUBLICATIONS:	Baysari MT, Duong M, Zhen WY, Nguyen AD, Lo S, Ng B, Ritchie A, Le Couteur DG, Bennett A, Hilmer SN. Delivering the right information to the right person at the right time to facilitate deprescribing in hospital: A mixed-methods multi-site study to inform decision support design [BMJ Open, In Press]
	Jokanovic N, Carter S, Duong M, Aslani P, Gnjidic D, Jansen J, Le Couteur DG, Hilmer SN. Deprescribing in Older Hospital Inpatients: Development of Consumer Information Leaflets [BMJ Open, Under Review]
	Ng B, Le Couteur DG, Hilmer SN. Deprescribing Benzodiazepines in Older Patients: Impact of Interventions Targeting Physicians, Pharmacists, and Patients. Drugs and Aging 2018; 35, (6): 493–521. DOI: 10.1007/s40266-018-0544-4
	Redston MR, Hilmer SN, McLachlan AJ, Clough AJ, Gnjidic D. Prevalence of Potentially Inappropriate Medication Use in Older Inpatients with and without Cognitive Impairment: A Systematic Review. J Alzheimers Dis. 2018;61 (4):1639-1652. DOI: 10.3233/JAD-170842
	Thillainadesan J, Gnjidic D, Green S, Hilmer SN. Impact of Deprescribing Interventions in Older Hospitalised Patients on Prescribing and Clinical Outcomes: A Systematic Review of Randomised Trials. Drugs Aging. 2018; 35 (4):303-319. DOI: 10.1007/s40266-018-0536-4 DRAA-D-17-00295.1
	Ng B, submitted online response to Foot et al, Med J Aust.2018;209(4):175-6 on Ethics Processes in a Multi-Site LNR Study.
	Sakiris MA, Sawan M, Hilmer SN, Awadalla R, Gnjidic D. Prevalence of Adverse Drug Events and Adverse Drug Reactions in Hospital among Older Patients with Dementia: A Systematic Review. 2019 [BJCP, Under Review]

"Side effects of unnecessary medicines are the most reversible cause of adverse outcomes in older people. We hope that the resources developed through this collaborative project will facilitate medication review and deprescribing in routine hospital care. This should improve the health and quality of life of older people."

Prof Sarah Hilmer, Chief Investigator, Head of Department of Clinical Pharmacology RNSH and Conjoint Professor of Geriatric Pharmacology University of Sydney.

NSW HEALTH TRANSLATIONAL RESEARCH GRANT PROJECT REDUCING INAPPROPRIATE POLYPHARMACY FOR OLDER HOSPITAL PATIENTS

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