Polypharmacy, Severe Mental Illness And Impaired Mobility In Multiple Long-term Health Conditions: A Scoping Review

Lucas Mannion[1,2], Kate Best[3], Linda Birt[2], Firoza Davies[4], Helen Dawes[5], Emma L. Giles[6], Matthew Jones[7], Suzy Ker[8], Naomi Launders[9], Thomas Payne[10], Emma Proctor[11], Sion Scott[2], Thomas Woodcock[12], Bethan Hickey[1], Sian Jenkins[13], Jasmine Mankoo[14], Lucy Beishon[1]

1 University of Leicester, Department of Cardiovascular Sciences, 2 University of Leicester, School of Healthcare, 3 University of Leeds, Leeds Institute of Health Sciences, 4 Leicestershire Partnership NHS Trust, 5 University of Exeter, NIHR Exeter Biomedical Research Centre, 6Teesside University, School of Health and Life Sciences, 7 University of Bath, Department of Life Sciences, 8 Tees, Esk and Wear Valleys NHS Foundation Trust, 9 University College London, Division of Psychiatry, 10 University of Sheffield, Sheffield Institute for Translational Neuroscience, 11 Teesside University, Department of Psychology, 12 Imperial College London, School of Public Health, 13 University of Leicester, School of Psychology and Vision Sciences, 14 University of Bath, Department of Psychology

Background

- Multiple long-term conditions and multimorbidity (MLTC-M) are major public health issues
  - Poor quality of life
  - Reduced everyday functioning
  - Inappropriate prescribing
  - High mortality
- Associations between medication, mobility, and mental health and MLTC-M
  - Medication side effects worsen mental health
  - Increased fall risk from high medication burden

Aims

Summarise published evidence regarding the intersection of polypharmacy, severe mental illness (SMI) and impaired mobility in people with MLTC-M. This review is ongoing.

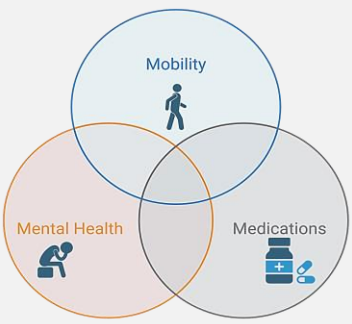

Figure 1. Intersection of concepts of interest

Methods

- A search strategy was implemented in MEDLINE, Embase, Scopus, PsycINFO and CINAHL
  - Key words (e.g prescription*, mobility) and MesH headings (e.g Multimorbidity, Polypharmacy) were used
- Inclusion criteria: older adults with 2≤ physical or mental health conditions, reporting data on at least two of three concepts:
  - Polypharmacy (5≤ medications)
  - Severe mental illness
  - Falls and fall risk (as a proxy for mobility problems)

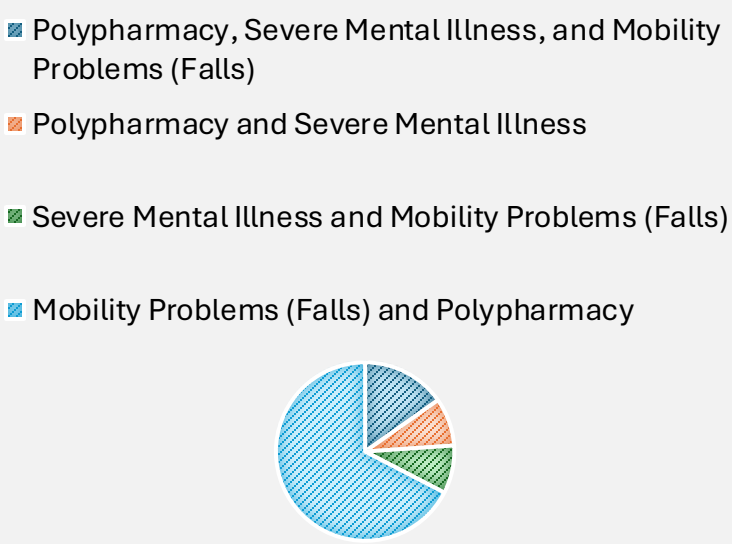

Figure 2. Number of papers reporting prevalence of selected concepts

Preliminary Results

The search strategy identified 5983 studies (minus duplicates)
873 articles proceeded to full text screening, 134 screened so far

- 46 articles reporting the prevalence of at least two concepts were included
- 28 different countries: Europe (26), Asia (20), North America (8), South America (2), Oceania (2)
- Study type: observational (41), randomised-controlled trial (2), other (3)
- Settings: primary care centres and hospitals (30); long-term care facilities (8); insurance claims (5), other (3)

Key findings

- Falls associated with number of drugs taken, and drug-drug interactions
- Polypharmacy and psychosis separately identified as risk factors for fractures and falls
- Pharmacotherapy optimisation interventions (4) used deprescribing to reduce occurrence of falls

A small number of previous studies have investigated the prevalence of all 3 concepts in their cohorts. However, no studies have formally analysed the association and interactions between all 3 concepts within the same model.

Discussion

- Relationship between polypharmacy and falls is well established, but their collective association with severe mental illness is unclear
- Primarily cross-sectional data, causal relationships have not been investigated
- Looking at interactions rather than issues in isolation will help to develop more holistic care to improve health outcomes
  - Reduce falls
  - Reduce medication side effects
  - Improve mental health
  - Reduce healthcare costs

This research is funded by the NIHR Team Science Award (NIHR303899). The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.