

POSTER ABSTRACT

Medication Reviews Bridging Healthcare (MedBridge): Study protocol for a pragmatic cluster-randomised crossover trial

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Introduction: Mismanaged prescribing and use of medication among elderly puts major pressure on current healthcare systems. Performing a medication review, a structured critical examination of a patient's medications, by a multidisciplinary team during hospital stay with active follow-up into primary care could optimise treatment benefit and minimise harm. However, a lack of high quality evidence inhibits widespread implementation. This poster will describe the rationale and design of a pragmatic cluster-randomised, crossover trial to fulfil this need for evidence. The aim is to study the effects of hospital-initiated multidisciplinary medication reviews, including active follow-up, on elderly patients' healthcare utilisation compared to 1) usual care and 2) solely hospital based reviews.

Methods:

Design: Multicentre, three-treatment, replicated, cluster-randomised, crossover trial.

Setting: 8 wards with a multidisciplinary team including clinical pharmacists within 4 hospitals in 3 Swedish counties.

Participants: Patients aged 65 years or older, admitted to one of the study wards. Exclusion criteria: Palliative stage; residing in other than the hospital's county; medication review within the last 30 days; one-day admission.

Interventions: 1, comprehensive medication review during hospital stay; 2, same as 1 with the addition of active follow-up into primary care; 3, usual care.

Primary outcome measure: Incidence of unplanned hospital visits during a 12-month follow-up period.

Data collection and analyses: Extraction from the counties' medical record system into an electronic data capture system. Intention-treat-analyses using general estimating equation techniques and frailty models.

Results: The study starts with patient inclusion in January 2017. In May 2017 we will present the preliminary results from the first inclusion period in terms of included patients, identified medication-related problems and treatment changes made by the multidisciplinary team.

Discussion: As healthcare resources are limited, it is important to ensure the resources available are used in an optimal way. We aim to contribute to this by performing this trial with two different interventions compared to each other and usual care. We expect to show valid results on a larger scale and a longer follow-up than previous similar studies.

Within a first pilot study with three parallel intervention arms, randomisation at patient level within the study wards was found to be very difficult due to practical reasons. This subsequently led to a high risk of contamination bias. To minimise this risk, the most recent Cochrane review within this field advises new clinical trials to randomise at a cluster level.

Conclusions and lessons learned: Conclusions will be based on the results from the first study period. This study, which investigates a new model of multidisciplinary medication reviews with clinical pharmacists integrated in hospital ward teams, eventually has a high potential to show a reduction in elderly patients' morbidity, contributing to more sustainable healthcare in the long run.

Limitations and suggestions for future research: Within the study design, there is a risk of within-cluster carryover effects in terms of usual care being affected after an active study period. As this study will only be performed in Sweden, it would be advisable to conduct similar studies in other countries as well.

Keywords: medication review; integrated healthcare service; polypharmacy; pragmatic clinical trial; cluster analysis; crossover design
