

Systematic review and categorisation of outcomes for the development of a core outcome set for intervention studies aiming to optimise the medication use of patients after hospital discharge

Fabienne Boeni, Hannah Michimura, Mare Claeys, Antonia Zuend, Jeremy Dehez, Joke Wuyts, Kurt E. Hersberger, Markus L. Lampert, Veerle Foulon.

Background Transitions of care entail an increased risk of reduced medication effectiveness and safety. Despite interventions have shown efficacy in reducing adverse outcomes, heterogeneity in outcome measures impede the comparison and combination of data for the identification of effective interventions. This is hindering their implementation in practice.

Purpose To perform a systematic review of outcomes reported in intervention studies aiming to optimise medication use of patients after hospital discharge, and to congregate the outcomes in a classification system, for the development of a core outcome set (COS).

Method The scope of the COS and systematic review were determined in previous PCNE workshops. The systematic review was conducted in Embase, PubMed, CINAHL, and the EU Clinical Trials Register. Studies were eligible if the target population consisted of patients older than 65 years, multimorbid patients or patients with poly-pharmacy. All articles published between 2010 and April 2020 studying interventions to improve medication use after hospital discharge were included. Systematic reviews were excluded from the analysis. No restrictions were made in terms of type of intervention, type of healthcare professional involved in the intervention or destination of the patient post-discharge (patient's own home, nursing home, rehabilitation center, etc.). Research students screened titles, abstracts, and full texts and results were collated. Data were extracted according to an extraction sheet. The identified outcomes were independently summarised into unique outcome terms by two researchers and discrepancies were discussed. A consensus meeting was performed with two senior clinical pharmacist researchers to confirm the wording and to arrange the terms into a classification system.

Findings Seventy-five articles were included in the systematic review, with interventions conducted pre-discharge (34.7%), post-discharge (33.3%), as a bridging intervention (2.7%), or combined (29.3%). A median of 5 and a range of 1-17 outcomes per study were reported. They were defined, measured and reported in a vast variety. The consensus meeting for classification of outcomes resulted in a total of 80 summarised outcomes. The top-5 most frequently measured outcomes were number of readmission (72% of studies), mortality (40%), number of emergency department visits (35%), number of outpatient physician visit (16%), and medication adherence (16%). As a classification system, the OMERACT filter 2.0 was adapted with the domains Resource use, Economical impact, Life Impact, Pathophysiological manifestations, Death and Medication.

Conclusion The systematic review showed the need for a core outcome set in the defined area and builds the groundwork for a consensus procedure to define a core outcome set.