**Additional file 1. Development of the search strategy and full electronic search**

***Development of the search strategy***

As various terms are used for medication review in published articles (like medication review, medication management, drug review, pharmacist intervention etc.), terms used to describe a medication review were identified as much as possible by first selecting references based on mesh-terms and published systematic reviews. The descriptions of medication review in these references were subsequently used as text words in a text-based search strategy. Therefore, the MEDLINE selection of eligible references consisted of a three-step approach: 1) MeSH-based selection 2) Selection of references included in published systematic reviews, 3) Text-based selection (based on text words of included references from step 1 and 2).

*1) MeSH-based selection of references*

First, studies were identified in MEDLINE by using the MeSH headings "Drug Utilization Review" or "Pharmaceutical Services" to search for interventions. These were combined with both a MeSH heading and text words to search for randomized controlled trials ("Randomized Controlled Trial" [Publication Type] OR randomized controlled trial[tw] OR randomised controlled trial[tw]).

*2) Selection of references based on published systematic reviews*

The same MeSH headings to search for interventions ("Drug Utilization Review" or "Pharmaceutical Services") were combined in a second search with the MeSH headings “Review" or "Meta-Analysis" as publication type to identify systematic reviews and meta-analyses on this subject (from January 2007 through September 2015). References from these systematic reviews were independently screened by two reviewers for studies to be included in this review.

*3) Text-based selection of references*

Finally, the abstracts of the included references from step 1 and 2 of the literature search were independently screened by two reviewers for text words to develop a third search consisting of a broad range of text words to search for “interventions” and “drug use”. These text words were also combined with the MeSH heading and text words for the publication type randomized controlled trial.

In order to perform the same search in EMBASE, the MeSH headings used for the MEDLINE search were converted to subject headings and the text words were converted to the category “multi-purpose”. Subsequently, the references of all articles included were screened for eligible references. Finally, in Web of Science, the citations of all included trials were checked to identify eligible references.

***Full electronic search (MEDLINE)***

**((((((((("Drug Utilization Review"[Mesh]) OR "Pharmaceutical Services"[Mesh])) AND ((((("Randomized Controlled Trial"[Publication Type]) OR "randomized controlled trial"[tw]) OR "randomised controlled trial"[tw]) OR "randomised controlled study"[tw]) OR "randomized controlled study"[tw])))) OR ((("pharmacist review"[TW] OR "pharmacist intervention"[TW] OR "pharmacist program"[TW] OR "pharmacist assessment"[TW] OR "pharmacist management"[TW] OR "pharmacist care"[TW] OR "pharmacist consult"[TW] OR "pharmacist counselling"[TW] OR "pharmacist evaluation"[TW] OR "pharmacist reviews"[TW] OR "pharmacist interventions"[TW] OR "pharmacist programs"[TW] OR "pharmacist assessments"[TW] OR "pharmacist consults"[TW] OR "pharmacist evaluations"[TW] OR "pharmacologist review"[TW] OR "pharmacologist intervention"[TW] OR "pharmacologist program"[TW] OR "pharmacologist assessment"[TW] OR "pharmacologist management"[TW] OR "pharmacologist care"[TW] OR "pharmacologist consult"[TW] OR "pharmacologist 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