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Identifying barriers and solutions concerning the recruitment and retention of elderly people in clinical research: Protocol for a Systematic Review

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ABSTRACT

Importance Elderly patients are underrepresented in clinical trials.

Objective To identify barriers and strategies concerning recruitment and retention of elderly patients in clinical trials.

Data Source MEDLINE (via PubMed), Cochrane Central Register of Controlled Trials (via Cochrane Library), Embase (via Ovid)

Eligibility Publications stemming from original research that report on barriers of or strategies for better recruitment or retention of elderly people.

Outcomes Barriers and strategies concerning recruitment and retention of elderly people in clinical trials.

Critical Appraisal This study is about identifying barriers and solutions concerning recruitment and retention of elderly patients in clinical trials. Typical endpoints requiring a risk of bias appraisal such as ones that concern efficacy or safety will not be assessed, consequently, there will be no risk of bias assessments. Furthermore, a very heterogeneous set of studies will be included for which there exists no single risk of bias-assessment tool.

GUIDELINES

PRISMA

Preferred Reporting Items for Systematic Reviews and Meta-Analyses

Liberati A, Altman DG, Tetzlaff J, et al. The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: explanation and elaboration. *Ann Intern Med* 2009;151(4):W65-94.

PRISMA-P

Preferred reporting items for systematic review and meta-analysis protocols

Shamseer L, Moher D, Clarke M, et al. Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015: elaboration and explanation. *BMJ* 2015;349:g7647. doi: 10.1136/bmj.g7647.

INTRODUCTION

1 Elderly patients (commonly defined as being ≥65 years old)[1] are underrepresented in clinical trials.[2, 3] This fact makes collecting evidence-based research data about this population difficult. Even studies that report no explicit exclusion based on age do not include enough elderly people.[4] This poses a problem as, for example, medication successfully tested in younger patients may induce unexpected effects in older adults.[5] Drug research should be conducted in elderly participants when the examined medication is

planned to be applied to aged populations.[6, 7] Also, until 2050 the WHO expects the proportion of old people to increase from 6% to 12%.

Underrepresentation of the elderly is probably the result of several factors: researchers setting arbitrary age limits, researchers being insecure about ethical considerations[8] because they were thought to be too frail or seemed to have an impaired ability to make decisions for themselves, and patients themselves being less willing to participate.

RATIONALE

2 While research has been conducted to identify both barriers and solutions concerning better recruitment and retention of elderly patients in clinical trials, to our knowledge synthesis of this research is lacking. We performed a scoping search to find already existing systematic reviews on this topic which yielded a study from 2014 limited to *frail* elderly, but no synthesizing studies on elderly patients of *any health status* were found.

METHODS

3 The protocol conforms to the Preferred Reporting Items for Systematic Review and Meta-analysis Protocols (PRISMA-P) guidelines for reporting a protocol for a systematic review and meta-analysis.[9]

Eligibility

We will include publications stemming from original research that report on barriers of or strategies for better recruitment or retention of elderly people. Corresponding to the language proficiency of the authors, the included articles will be limited to articles written in English, German, French or Spanish. If multiple publications are derived from one data set, we will include all the info from the different publications into one result.

Information sources

We will use the online biomedical and life science database MEDLINE (via PubMed), the comprehensive biomedical literature database Embase (via Ovid) and furthermore the Cochrane Central Register of Controlled Trials (via Cochrane Library).

Search strategy

The search strings were crafted with the PICOS method, the Population being elderly patients, the Intervention being any, the Comparator being any, the Outcome being recruitment or retention strategies, and the Study design being any. The search strings adapted to each database are attached (see below). Additionally, we will perform an extensive hand search in order not to miss relevant publications. We excluded the terms “urin*” and “child*” via boolean operator “NOT” in the main title of all results. Via integration of “NOT urin” in our seach strategy, we aimed to exclude abundant results referring to retention in the context of “urinary retention” instead of “retention to clinical studies”. Furthermore, we chose “NOT child” to exclude results using the word “old” in another context than “being elderly”, for example “patients being 1-3 years old”.

Medline (via Pubmed):

(elder[tiab] OR aged[Majr] OR old*[Majr] OR retire*[ti] OR senior[ti] OR geriatr*[ti])*

AND

(recruit[ti] OR underrepresent*[ti] OR attrition[ti] OR dropout[ti] OR "Patient Dropouts"[Mesh] OR refus*[ti] OR "Refusal to Participate"[Mesh] OR retention[ti] OR retain*[ti] OR enroll*[ti])*

NOT

(urin[ti]* OR child*[ti])

CENTRAL (via Cochrane Library)

("elder":ti OR "aged":ti OR "old":ti OR "retire":ti OR "senior?":ti OR "geriatr*":ti)*

AND

("recruitment":ti OR "underrepresent":ti OR "attrition":ti OR "dropout":ti OR "retention":ti OR "enroll*":ti)*

NOT

("urin":ti* OR "child*":ti)

Embase (via Ovid):

(((aged or aged hospital patient or frail elderly or institutionalized elderly or very elderly)

and

(recruitment or underrepresent or attrition or dropout or retention or enroll*))*

not

(urin or child*)).ti.*

Study selection

Retrieved articles will be imported into EndNote software. Two authors (NF and AP) will independently determine the eligibility of each publication and decide about inclusion or exclusion. They will eliminate duplicates with the help of EndNote software, screen the articles by title and abstract, and then assess the remaining articles in full text. Afterwards, consensus on study inclusion will be achieved between the two reviewers via discussion and if necessary, by consultation of a third reviewer (YP). We will provide a flow diagram as recommended in the PRISMA statement.

Data management, items and collection

We will use Microsoft Excel 2008 (Microsoft Corp., Redmond, WA, USA) software for data extraction, management and analysis. We will extract data using predefined Excel data extraction sheets which are derived from the Cochrane Collaboration's recommendations for data extraction and modified for our purposes, which include study characteristics as well as the outcomes defined below.

Risk of bias in individual studies

As we will analyze the trials only in terms of the recruitment procedure and retention, and not in terms of trial efficacy or safety endpoints, we will not perform a study quality assessment. This also enhances feasibility and allows for inclusion of all retrieved eligible studies. Furthermore, we will include a variety of study types, for which there exists no single risk of bias assessment-tool.

Outcomes

We will report on identified barriers and strategies/solutions concerning recruitment and retention of elderly patients in clinical research, where possible, in a quantitative manner.

Additional Analyses

We will also assess whether there are certain barriers and strategies concerning specific age groups within the elderly.

ETHICS AND DISSEMINATION

4 We do not collect any primary data. Thus, no additional formal ethics approval is necessary. Our systematic review will systematically analyze the barriers and solutions concerning the recruitment and retention of elderly people in clinical research. The results of this review will be published in a peer-reviewed journal according to the *Preferred Reporting Items for Systematic Reviews and Meta-Analyses* (PRISMA) guidelines.

COMPETING INTERESTS

5 All authors declare that they have no competing interests.

FUNDING

6 This project is part of the GLORIA project and trial (Glucocorticoid low-dose outcome in rheumatoid arthritis study; http://www.gloriatrial.org/; registered on https://clinicaltrials.gov/; identifier NCT02585258) and has received funding from the European

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