INPLASY PROTOCOL

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Review Stage at time of this submission: Piloting of the study selection process.

Conflicts of interest: None declared.

Implementation of intervention programs specifically tailored for patients with CI in early rehabilitation during acute hospitalization: a scoping review protocol

Hauer, K[1]; Dutzi, I[2]; Werner, C[3]; Bauer, JM[4]; Ullrich, P[5].

Review question / Objective: What is the current status of implementation of interventional programs on early functional rehabilitation during acute, hospital-based medical care, specifically tailored for older patients with CI and what are the most appropriate programs or program components to support early rehab in this specific population?
This study combines a systematic umbrella review with a scoping review. While an umbrella review synthesizes knowledge by summarizing existing review papers, a scoping review aims to provide an overview of an emerging area, extracting concepts and identify the gaps in knowledge.
The study focuses on older hospitalized adults (>65 yrs.) receiving ward based early rehabilitation. The focus within this review is on study participants with cognitive impairment or dementia.
The study targets at controlled trials independent of their randomization procedure reporting on an early functional rehabilitation during hospitalization. Trials that were conducted in different or mixed settings (e.g. inpatient and aftercare intervention) without a clear focus on hospital based rehabilitation were excluded.
The study aim is to identify the presence of CI specific features for early rehabilitation including: CI/dementia assessment, sub-analysis of results according to cognitive status, sample description defined by cognitive impairment, program modules specific for geriatric patients CI.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 17 October 2022 and was last updated on 17 October 2022 (registration number INPLASY2022100067).

INTRODUCTION

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Background: No review on early, hospital based rehabilitation for persons with cognitive impairment (CI) has been published despite the high relevance of specific medical care in this vulnerable population.

Vulnerable persons such as patients with CI are often excluded from rehabilitation although they represent up to 50% of all admitted patients. CI patients present with even higher rates for comorbidity, risk for falling, and functional impairment compared to patients without CI. During hospital stay, CI patients more often develop a delirium and have a lower functional status at discharge, documenting the higher risk of functional and cognitive decline during hospitalization. Specific disease-related features may hamper the participation in rehabilitation therapies and the outcome achieved. CI-specific programs and interdisciplinary inpatient rehabilitation may offer benefits over conventional rehabilitation for people with CI, however best practice rehabilitation programs for persons with CI are lacking.

Rationale: Rationale

METHODS

Strategy of data synthesis: In a two step approach the first search represents an umbrella review to identify relevant already published reviews in the field of inpatient rehabilitation interventions for older persons using appropriate search terms (older/geriatric, rehabilitation/physical intervention/exercise/function and hospital/inpatient limited to reviews, systematic reviews or meta-analyses. This umbrella review will be conducted using the database Medline, CINAHL, PsycInfo, Web and Cochrane Library from inception to September 2022.

The search will include terms referring to the setting (e.g. hospital, inpatient), age of the patients (e.g. old, geriatric), intervention (e.g. rehabilitation, early physiotherapy), and the study type (e.g. randomized, controlled, as well as systematic review). Search terms will be adjusted for each database.

Additionally searches will be performed for reference lists of existing reviews and for studies conducted by experts in the field and relevant trial authors to identify appropriate unidentified reviews.

The second search step includes the identification of relevant single trials included in the identified reviews that considered the status or presence of cognitive impairment of the study population. Additionally, CI-specific interventions will be identified such as CI-specific training/ communication/ motivational or psychological components/ organization/ structure/ architecture, cognitive training/ rehabilitation as component, comprehensive geriatric assessment including assessment of cognitive status, delirium screening and intervention, CI-specific staff training

The study will be based on a narrative analysis of results without meta-analyses.

Comprehensive, structured programs tailored for patients with CI as reported in the description of the intervention in

methods and results will be described in detail including an analysis of efficacy of interventions.

The studies included will be rated. For single trials we will use the revised tool to assess risk of bias in randomized trials (RoB 2) by (https://sites.google.com/site/riskofbiastool/welcome/rob-2-0-tool?authuser=0; Sterne et al.2019).

Eligibility criteria: Systematic reviews will be included if they focus on
- older hospitalized persons (>65 years)
- acute hospitalization (trials that were conducted in different settings (e.g. rehabilitation clinic after acute hospitalization) or mixed settings (e.g. inpatient and aftercare intervention) without a clear focus on hospital based rehab, will be excluded).
- involve at least one controlled trial (independent of their randomization procedure)
- functional rehabilitation interventions with at least one outcome focusing on function or function related outcomes (e.g. motor / functional status, ADL, IADL, cognitive status, length of stay, readmission, discharge destination). Studies focusing on an exclusive cognitive rehabilitation will be excluded. Single studies will be included, if they fulfill the criteria as stated above and
- if the "early rehabilitation"/acute hospital intervention starts (randomization or start of intervention) maximal 7 days after hospitalization or maximal 7 days after medical event.
- if there is CI-specific intervention included such as CI-specific functional training/ communication/ motivational or psychological components/organization/ structure/architecture, cognitive training/ rehabilitation as component, comprehensive geriatric assessment including assessment of cognitive status, delirium screening and intervention, CI-specific staff training
- if the study has a control group, independent of randomization procedure (randomized or quasi-randomized). Case studies or pre/post studies will be excluded.
Studies will be excluded:

- Studies that were not published in the English language.

Source of evidence screening and selection: Two researchers will screen the reviews and another researcher will check decisions and decide in case of disagreement.
Two review authors will work independently to assess single studies for eligibility and to extract data using a standard data entry form, and discuss disagreements, another researcher will check decisions or decide in case of unsolved disagreement. The data extraction of outstanding, most comprehensive programs or identified appropriate single modules will be conducted with a standard data entry form. The data extracted for the single studies will include following information:
Title/Objective: Are persons with CI described as target population or is a focus on persons with CI as mentioned in title or objective?
Assessment: are cognitive assessment used, cognitive status documented?
Sample: Are persons with CI included in the population?
Results: Are there results specifically reported for persons with CI?
Intervention: Are there modules/ components/comprehensive programs specific or appropriate for CI?

Data management: Date will be recorded in an Excel sheet/standard data entry form.

Reporting results / Analysis of the evidence: A narrative analysis of results will be conducted.

Presentation of the results: Results will be presented using tables.

Language restriction: No language restrictions for the search. Articles will be included if available in English and German language.

Country(ies) involved: Germany.

Keywords: Systematic review, Dementia, Cognitive Impairment, early hospital-based rehabilitation.

Dissemination plans: A paper will be submitted to an international peer review journal in this field. Results will be presented at scientific conferences.

Contributions of each author:

Author 1 - Klaus Hauer - Author 1 conceived, designed and coordinated the review, participated in search term development, and will contribute to data analysis and interpretation, and write the paper.
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Author 2 - Ilona Dutzi - Author 2 participated in study development, piloting of the search, screening and selection of relevant reviews/studies, and will contribute to review/study selection, data analyses and interpretation, and drafting the final manuscript.
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Author 5 - Phoebe Ullrich - Author 5 participated study development, search term development, piloting of the search, screening and selection of relevant reviews/studies, and will contribute to review/study selection, data analysis and interpretation, and drafting the final manuscript.
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