Life after stroke – A systematic integrative systematic review of PROMs used in the rehabilitation of patients with stroke

Citation

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Review question

a) To identify which PROM tools exist and are currently in use to assist care provision in patients undergoing rehabilitation after stroke.

b) To identify the main domains and dimensions more commonly addressed in these PROMs.

Searches

An electronic bibliographic database search of the following databases will be done: PubMed (MEDLINE), Web-of-Science, CINAHL, Scopus, PsycINFO.

Also, a hand-searches will be performed in major general medicine, rehabilitation, stroke and healthcare outcomes journals:

a. In Physical and Rehabilitation Medicine area: Archives of Physical Medicine and Rehabilitation Medicine, American Journal of Physical Medicine & Rehabilitation, Journal of Rehabilitation Medicine.

b. In General Medicine area: British Medical Journal, New England Journal of Medicine, The Lancet.

c. In Stroke area: Stroke, Lancet Neurology, Journal of Stroke and cerebrovascular diseases.

d. In Healthcare Outcomes area: Health and Quality of Life Outcomes, Journal of Patient-reported Outcomes, Quality of Life Research.

Search period: Studies from database inception to the present day. The searches will be re-run just before the final analyses and, in case of new publications, further studies retrieved for inclusion.

Language filters: English, Portuguesa and Spanish languages.

Only empirical original articles published in peer-reviewed journals will be included; Case reports, non-peer-reviewed articles, personal expert reflection, philosophical and theoretical articles; grey literature will be excluded.

Types of study to be included

The review will consider empirical original articles published in peer-reviewed journals where a principal PROM is

being investigated, several PROMs concurrently or PROM included as an outcome as part of the study. All type of methodologies will be considered.

Condition or domain being studied

Patient group: adult patients with stroke sequels undergoing a rehabilitation program.

Healthcare domain: Patient Reported Outcomes (PROMs).

Participants/population

Inclusion criteria: patients with stroke sequels and over 18 years of old, who underwent or are undergoing a rehabilitation program.

Exclusion criteria: patients under 18 years of old; patients with stroke and other disabling associated conditions, such as traumatic brain injury, medullary lesion, limb amputation, other neurological and orthopedic disabling conditions, because of the bias introduced regarding stroke population typical demands.

Intervention(s), exposure(s)

Inclusion criteria: The review will include studies where patients or relatives/caregivers completed PROMs and the feedback from these instruments was used to guide clinical practice.

Comparator(s)/control

Only empirical studies focused on PROMs in patients with stroke sequels will be included. There will be no comparator group.

Context

All contexts where rehabilitation is provided to patients after a stroke will be considered (e.g., hospitals, outpatient clinics, private and public centres, long-term care facilities, home care services).

Main outcome(s)

a) Identification of PROMs used in patients with stroke sequels undergoing a rehabilitation treatment – general PROMs and PROMs specific to patients who suffered a stroke.

b) Identification of the main domains and dimensions of PROMs used in patients who suffered a stroke.

Measures of effect

Not applicable.

Additional outcome(s)

a) Quality assessment of the utilised PROMs using the COSMIN checklist.

b) Methodology of delivery / application of the PROMs in each study, including response to the survey, completion rates, duration of survey completion, and variation in the duration of the follow-up.

Measures of effect

Not applicable.

Data extraction (selection and coding)

Title and study abstracts will be retrieved using the search strategy. After removal of duplicate and irrelevant articles, titles and abstracts will be screened based on the inclusion criteria. Three authors (JTS, PHM, SMP) will independently screen all the titles and abstracts of retrieved studies. Discrepancies in screening inclusion and exclusion will be resolved thorough discussion to reach consensus.

After screening, full-text articles will be assessed independently for eligibility by three reviewers (JTS, PHM, SMP). Any disagreements will be discussed until reaching consensus.

Selected articles for inclusion will be analyzed and data will be extracted by one reviewer (JTS) using a piloted form that will be developed purposively for this systematic review and agreed among all four reviewers. This template will be pilot tested by three (JTS, PHM, SMP) reviewers on a sample of 5 articles. Disagreements will be discussed until reaching consensus.

Data extraction will be performed following and adapting PICOD's framework. Extracted information will include article identification (author, year of publication); participants (study population, demographics, time since stroke, time since rehabilitation treatment), diagnosis of study group, details of interventions, PROM tools characteristics (identification and content, statistical analysis method assessment, data collection method, response and completion rates) whenever available. PICOD framework will be adapted as follows: P = Participants/Population (patients who underwent or are undergoing rehabilitation after a stroke), I = Intervention / Phenomenon of interest (use of PROMs), C = Comparator or Context (no comparators; when adequate, comparisons will be made among identified PROMs), O = Outcomes/Results (results from included studies that answer our research questions), D = Design (design of included studies).

Risk of bias (quality) assessment

Each study will undergo a bias assessment by two authors (JTS, PHM), with discordance between these two authors discussed via in-person meetings and with a third reviewer (SMP). The risk of bias and quality assessment of included studies will be based on the Joanna Brigs checklist and performed according to the appropriate checklist for each type of study design included in the analysis. Quality assessment will be undertaken alongside data extraction from each manuscript.

Strategy for data synthesis

Narrative synthesis of the data collected is intended, following J. Poppay et al. guidelines, that is (1) preliminary analysis, (2) exploration of relationships and (3) assessment of the robustness of the synthesis. This will be performed by JTS and reviewed by the other reviewers. All findings will be described narratively and tabulated. Data will be divided into generic PROMs and stroke specific PROMs identified through the analysis. Domains included in each tool will be reported. We will also report on reliability, validity and responsiveness of the PROM tool, as well as operational characteristics including feasibility. Data from the studies will be extracted into a table and thematically analyzed by JTS and discussed with the other reviewers. Identification of themes will arrive after deliberation and discussion among all the reviewers.

Analysis of subgroups or subsets

The following analysis of subgroups or subsets will be performed: Generic-PROMs and specific PROMs used in patients with stroke.

Contact details for further information

Joana Teles Sarmento

teles.joana@gmail.com

Organisational affiliation of the review

Centro Hospitalar do Medio Ave

joana.sarmento@chma.min-saude.pt

Review team members and their organisational affiliations

Dr Joana Teles Sarmento. Centro Hospitalar do Medio Ave, Vila Nova de Famalicão; Instituto de Bioética, Universidade Católica Portuguesa, Porto.

Assistant/Associate Professor Pablo Hernández-Marrero. Instituto de Bioética, Universidade Católica Portuguesa; CEGE: Research Center in Management and Economics, Universidade Católica Portuguesa.

Assistant/Associate Professor Joan Bertran Muñoz. Institut Borja de Bioètica, Universitat Ramón Llull, Barcelona. Hospital Sant Rafael – Germanes Hospitalàries, Barcelona.

Assistant/Associate Professor Sandra Martins Pereira. Instituto de Bioética, Universidade Católica Portuguesa; CEGE: Research Center in Management and Economics, Universidade Católica Portuguesa.

Type and method of review

Narrative synthesis, Systematic review

Anticipated or actual start date

01 October 2021

Anticipated completion date

01 February 2022

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None

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State the funder, grant or award number and the date of award

None

Conflicts of interest

Language

English

Country

Portugal, Spain

Stage of review

Review Ongoing

Subject index terms status

Subject indexing assigned by CRD

Subject index terms

Humans; Patient Reported Outcome Measures; Stroke; Stroke Rehabilitation

Date of registration in PROSPERO

08 October 2021

Date of first submission

07 September 2021

Stage of review at time of this submission

Stage	Started	Completed
Preliminary searches	Yes	No
Piloting of the study selection process	No	No
Formal screening of search results against eligibility criteria	No	No
Data extraction	No	No
Risk of bias (quality) assessment	No	No
Data analysis	No	No

The record owner confirms that the information they have supplied for this submission is accurate and complete and they understand that deliberate provision of inaccurate information or omission of data may be construed as scientific misconduct.

The record owner confirms that they will update the status of the review when it is completed and will add publication details in due course.

Versions

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