Factors that influence the provision of home- based rehabilitation services for people needing rehabilitation: a qualitative evidence synthesis (Protocol)

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Abstract

Objectives

This is a protocol for a Cochrane Qualitative Evidence Synthesis. The objectives are as follows:

- To identify factors that influence the organisation and delivery of home-based and telerehabilitation for people needing rehabilitation.
- To identify factors that may influence the organisation and delivery of and home-based rehabilitation and telerehabilitation in pandemic contexts, such as COVID-19.

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Background

Description of the topic

It is estimated that there are more than one billion persons with disabilities, 15% of the world's population (World Health Organization, 2011), and that 2.4 billion need rehabilitation (Negrini et al., 2020b). This number is increasing globally due to population growth, ageing, chronic diseases, and medical advances that preserve life (Gimigliano and Negrini, 2017). These trends create increasing demands for health and rehabilitation services, which are very far from being met, particularly in low- and middle-income countries (Mlenzana et al., 2013).

Rehabilitation is a health strategy that aims to enable persons experiencing or likely to experience disabilities to achieve and maintain optimal functioning (Meyer et al., 2011). Rehabilitation services are offered to people experiencing a range of disabilities, including disabilities tied to mobility, vision, hearing or cognition (Meyer et al., 2011). Rehabilitation services are an essential component of healthcare systems since they contribute to the provision of comprehensive person-centred care and optimize well-being across the continuum of acute, subacute and long term care (European Physical and Rehabilitation Medicine Bodies Alliance, 2018; Gimigliano and Negrini, 2017; Meyer et al., 2014; van Egmond et al., 2018)

According to the International Classification of Functioning, Disability and Health (ICF) (World Health Organization, 2001), contextual factors, including the physical, social and attitudinal environment in which people live and conduct their lives, can act as facilitators or barriers for receiving rehabilitation services (Mlenzana et al., 2013). This includes factors tied to the rehabilitation services themselves, such as users' access to service providers and to information about services, providers' skills and other attributes, and people's confidence in these providers; as well as broader factors related to society's lack of awareness about disability and lack of economic resources.

During the 2020 COVID-19 pandemic, people attempting to access rehabilitation services are facing additional challenges. These services have in many settings been defined as 'non-essential', and many have been cancelled or limited, for instance by limiting care to outpatient settings (Negrini et al., 2020a). This affects the wellbeing and quality of life of disabled people and imposes more burdens on a population that is already vulnerable. Some medical conditions can be aggravated by the lack of access to rehabilitation services. For example, in spinal cord injury, post-acute rehabilitation is vital to prevent complications, maximizing independence in daily activities, and returning to the community (Boldrini et al., 2020; Dorjbal et al., 2019).

For these reasons, there is a need to explore how the delivery of rehabilitation services can be adapted, including through the use of home-based rehabilitation and telerehabilitation (Brennan et al., 2009). These strategies could help avoid the prolonged interruption of services when other modes of service delivery, such as traditional inpatient services, are limited or not possible.

How the intervention might work

Home-based rehabilitation refers to rehabilitation carried out in an individual's own home. It is just one component of the broader community-based rehabilitation process (Cobbing et al., 2016), and one of the supportive tools that allow the continuation of care in a familiar living environment.

The aim of home-based rehabilitation is to resume people's activity, improve their quality of life, reduce the burden on caregivers, and prevent the manifestation of new disabilities by assisting with what the subject desires to do (Hotta, 2015). Home-based rehabilitation also aims to enhance people's involvement in their own care, their ability to evaluate themselves and to set goals for their recovery. It involves learning strategies for solving problems tied to daily activities at home and in the community; receiving exercise coaching; exploring community services and facilities; having a dialogue with professionals; and engaging in activities aimed at returning to work (Steihaug et al., 2016). Home-based rehabilitation is considered a necessary tool for people with greater clinical vulnerability and no access to outpatient care, and provides them with the benefits of effective treatment (Stolee et al., 2012).

The types of services that home rehabilitation provides vary according to the person's needs but can include, for instance, assessment of the home and the environment with modification of architectural barriers that may exist as well as the provision of assistive devices; home nursing and education for the person and his or her caregiver on topics such as hygiene, bladder and bowel management and skin care; social and psychological support for the emotional demands of the person and his family; primary care by general practitioners and therapists with benefits necessary for the maintenance of health, well-being and the prevention of complications, as well as a transition therapy towards more complex rehabilitation interventions (Rezaei et al., 2019a).

A Cochrane Review for breast cancer survivors found that home-based rehabilitation could be better than usual care for quality of life and may lead to a reduction in fatigue and anxiety, at least in the short term (Cheng et al., 2017). Another Cochrane Review found low-certainty evidence that hospital at home for people recovering from stroke may lower the risk of living in institutional setting at six months and might slightly improve patient satisfaction when compared to in-hospital care (Gonçalves-Bradley et al., 2017). In addition, other Cochrane Reviews have found that home-based rehabilitation may be as effective as *centre-based care* (Anderson et al., 2017; Coupard et al., 2012).

Facilitating factors that influence the implementation of home-based rehabilitation have been reported, such as keeping people in a familiar environment, expanding access for people who would not otherwise receive care and align the rehabilitation process with each patient's daily activities at their homes (Cobbing et al., 2016; Housley et al., 2016; Steihaug et al., 2016). Also some barriers about the implementation have been documented, such as difficulties in adherence and requirements in logistics and human resources (Gelaw et al., 2020; Kuo et al., 2019; Widén Holmqvist et al., 1998).

Telerehabilitation has been defined as the delivery of rehabilitation services via information and communication technologies that provide distant support, assessment and intervention to improve accessibility and continuity of care for rehabilitation users who, due to recent or chronic injuries, are vulnerable to access barriers (Bittner et al., 2020; Kairy et al., 2009; Ricker et al., 2002). It can provide interventions such as physiotherapy, speech therapy, occupational therapy, telemonitoring and teleconsultation, thus providing assistance to homebound patients without the physical presence of a therapists or other health professionals (Agostini et al., 2015).

Cochrane Reviews assessing the effectiveness of telerehabilitation for a range of conditions show mixed results. Telerehabilitation may be better than traditional face-to-face interventions or standard care for a number of outcomes among people with multiple sclerosis (Khan et al., 2015). For stroke patients, on the other hand, there may be no significant differences between telerehabilitation and standard delivery of rehabilitation (Laver et al., 2020) while for people with chronic low back pain, the effects are largely uncertain due to very low certainty evidence (Saragiotto et al., 2016).

Telerehabilitation has several possible advantages. It can reduce the costs of both health care providers and patients compared with traditional inpatient or person-to-person rehabilitation (Kairy et al., 2009; Peretti et al., 2017). It can improve accessibility in remote places, where traditional rehabilitation services may not be easily accessible (Peretti et al., 2017; Tyagi et al., 2018), and thus increase the frequency and intensity of care provided to service users and consequently to motivate improvements in their own home environment (Agostini et al., 2015). Also, telerehabilitation programs can be adjusted to patients' daily lives since no restrictions on time or location are imposed, being able to attend to work (Knudsen et al., 2019).

However, certain disadvantages of telerehabilitation have been reported, including skepticism on the part of patients due to remote interaction with their physicians or rehabilitation professionals, equipment setup-related difficulties, limited scope of exercises, interface problems and connectivity barriers, and the need for proper training and education of people involved (Peretti et al., 2017; Tyagi et al., 2018). Telerehabilitation services requires reliable access to equipment, electricity and internet, which can pose serious challenges, particularly in low resource or remote settings (Odendaal et al., 2020).

Specific attention toward involvement of the rehabilitation service providers in the decision process combined with sufficient education and skill training has been highlighted as essential to support a successful implementation of telerehabilitation in clinical practice (Damhus et al., 2018).

Why is it important to do this review?

Many people in need of rehabilitation services struggle to access them. Recently, COVID-19 pandemic has worsened this situation by undermining the delivery of rehabilitation services in all settings, introducing new burdens on patients, families and healthcare workers (Bettger et al., 2020; Bittner et al., 2020; Maria G. Ceravolo et al., 2020; Negrini et al., 2020a). The restrictions imposed to contain the spread of infection are limiting access to many health services including rehabilitation. These problems could lead to long-lasting negative consequences to persons with disabilities or persons who experience some form of limitation in functioning, for instance by increasing their functional limitations and hindering recovery from acute and subacute events.

The WHO establishes the construction of models for the provision of rehabilitation services that guarantee equitable access to quality services, including assistance products for the entire population, especially those in rural and remote areas ("Universal health coverage (UHC)," 2019). In this way, the WHO and UN call for actions to strengthen the use and affordability of technology through assistive devices and tele-rehabilitation and increase access to information and communication technologies (ICT) for people with disabilities, as well as the establishment of research projects that increase quality and available evidence (Clark, 2013; World Health Organization, 2011).

The identification of factors influencing the organization and delivery of home-based rehabilitation and telerehabilitation for people in needs of rehabilitation in pandemic or non-pandemic contexts is a relevant issue to investigate. By identifying the factors that influencing the organization and delivery of home-based rehabilitation and telerehabilitation, we can more easily identify strategies that can improve the provision of rehabilitation services and that are likely to be experienced as acceptable, feasible and equitable by patients, health care providers and other stakeholders.

How this review might inform or supplement what is already known in this area

Several systematic reviews have assessed the efficacy and effectiveness of home – based and telerehabilitation services for different patient groups (Anderson et al., 2017; Cheng et al., 2017; Coupar F et al., 2012; Gonçalves-Bradley et al., 2017; Khan et al., 2015; Laver et al., 2020; Saragiotto et al., 2016) In addition, in response to the COVID-19 pandemic, a series of rapid systematic reviews of the latest scientific literature on rehabilitation have been prepared to keep the rehabilitation community up to date (Andrenelli et al., 2020; M G Ceravolo et al., 2020; Maria G. Ceravolo et al., 2020; de Sire et al., 2020). However, these reviews do not aim to explore factors that influence the organization and delivery of rehabilitation services.

Bettger et al. recently published a commentary to describe adjustments to the continuum of rehabilitation services across twelve low-income, middle-income and high-income countries in the context of national COVID-19 preparedness responses and provide recommendations for decision makers on the provision and payment of these essential services. To obtain this information 20 authors provided reports of rehabilitation practice in their own countries (Argentina, Belgium, Brazil, China, Germany, Guyana, India, Singapore, Spain, Tanzania, USA, UK) during the COVID-19 pandemic (Bettger et al., 2020). This commentary describes some of the adaptations and reorganization of the rehabilitation services carried out in these countries in response to COVID-19. However, it is not a systematic review and does not have a methodology that allows a formal investigation of the factors that influence the organization and delivery of rehabilitation services.

We are not aware of any systematic reviews of qualitative research exploring factors that influence the organization and delivery of home-based rehabilitation and telerehabilitation services, either in pandemic or 'non-pandemic' contexts. The current systematic review can provide important and useful information to help organize these services.

Discussions are currently ongoing regarding the preparation of a Cochrane intervention review to assess the effectiveness of telerehabilitation and home-based rehabilitation. If this intervention review takes place, we will explore how it can be integrated with the qualitative evidence synthesis. Depending on the timelines of the two reviews, this could include: using the QES findings to suggest how the intervention review is designed (for instance, how the intervention should be defined, which outcomes are important to stakeholders, and suggestions for sub-group analyses); using the QES findings to explain and understand the findings from the intervention review; and using the QES findings to suggest how the interventions that were assessed in the intervention review might be better designed or implemented in the future.

Objectives

- To identify factors that influence the organisation and delivery of home-based and telerehabilitation for people needing rehabilitation.
- To identify factors that may influence the organisation and delivery of and home-based rehabilitation and telerehabilitation in pandemic contexts, such as COVID-19.

Methods

Criteria for considering studies for this review

Types of studies

We will include primary studies that use qualitative study designs such as ethnography, phenomenology, case studies, grounded theory studies and qualitative process evaluations. We will include studies that use both qualitative methods for data collection (e.g., focus group discussions, individual interviews, observation, diaries, document analysis, open-ended survey questions) and qualitative methods for data analysis (e.g. thematic analysis, framework analysis, grounded theory). We will exclude studies that collect data using qualitative methods but do not analyse these data using qualitative analysis methods (e.g., open-ended survey questions where the response data are analysed using descriptive statistics only).

We will include both published and unpublished studies and studies published in any language (See also section on Language translation below).

We will include mixed methods studies where it is possible to extract the data that were collected and analysed using qualitative methods.

We will include studies regardless of whether they were conducted alongside studies of the effectiveness of home-based rehabilitation or telerehabilitation services or not.

We will not exclude studies based on our assessment of methodological limitations. We will use this information about methodological limitations to assess our confidence in the review findings.

Topic of interest

Types of participants

We will include studies that explore experiences, perceptions and behaviours about the provision of home-based rehabilitation services, including telerehabilitation among:

- a) Adults needing rehabilitation and their formal or informal caregivers. For this review, we define people needing rehabilitation as people with either a defined health condition, functioning problem, specific impairment, activity limitations, or participation restriction for which rehabilitation services are provided (Gutenbrunner et al., 2020).
- b) Rehabilitation service providers, including general and specialist doctors, nurses, occupational therapists, physiotherapists, respiratory therapists, psychologists, speech and language therapists, prosthetist & orthotist, community-based rehabilitation workers, social workers, special educators, and other key professionals and lay health workers who make use of telerehabilitation to support or provide care to service users and/or their informal/formal caregivers, or provide home-based rehabilitation interventions.

- c) Other stakeholders involved in the commissioning, evaluation, design and implementation of rehabilitation services. These stakeholders could include policymakers at the local, national, or supranational level; administrative staff; information technology staff; managerial and supervisory staff at the organizational level; and technical staff who develop and maintain the platforms to provide telerehabilitation services.

Topic of interest

We will include studies where the primary focus is experiences, perceptions and behaviours about the provision of home-based rehabilitation and telerehabilitation services responding to service users' needs in different phases of their health conditions (i.e., pre-habilitation, acute rehabilitation care, sub-acute rehabilitation care, post-acute rehabilitation care and long-term/chronic rehabilitation care) (Gutenbrunner et al., 2020).

Types of intervention

We will include studies of home-based rehabilitation, which we define as a form of service delivery where rehabilitation services are provided at the service users' home, where they learn and apply the functional skills in their home environment (Chi et al., 2020). This can involve a range of services, including therapy (e.g., nutritional support, dysphagia and swallowing, physical, cardio-respiratory, language, occupational therapy, respiratory therapy and rehabilitation nursing), social support, psychology, home-based primary care, home-based technologies (robotic devices, virtual reality devices, games and motion detection tools), home aids, home modifications, home nursing and family help, and other methods of healthcare delivery (Rezaei et al., 2019b).

As part of home-based rehabilitation services, we will include studies focused on the provision of telerehabilitation. In the context of this review, we define telerehabilitation as the delivery of rehabilitation services to service users at a remote location via information and communication technologies (Brennan et al., 2009). This can involve a range of services including continuous functioning assessment, prevention, diagnosis, therapy (e.g., nutritional support, dysphagia and swallowing, physical, cardio-respiratory, language, and occupational therapy), monitoring, supervision, education, consultation, counselling, prescription and provision of assistive technologies, family support, societal integration, home and workplace adaptations, mental support, and empowerment (Bittner et al., 2020; Laver et al., 2020).

Search methods for identification of studies

Electronic searches

The information specialist will develop the search strategies in consultation with the review authors, according to the search methods for qualitative synthesis (Booth, 2016).

We will develop search strategies for each database. We will not apply any limits on language or publication date. We will search all databases from June 16 until July 22nd 2020. We will include a methodological filter for qualitative studies. See [Appendix 1] for the MEDLINE search strategy, which we will adapt for other databases. We will provide appendices for all strategies used.

We will search in these sources:

- Evidence database: Cochrane Library, Embase, Bireme-Lilacs, Epistemonikos, McMaster
- Bibliographic database: Pubmed, Pedro, PsycINFO, Scopus, PAHO, WHOLIS, Global Health-Ovid,
- Preprints and regional repositories: medrxiv, scielo, Redalyc, La Referencia, AMED-The Allied and Complementary Medicine – British Library, AJOL-Africa.

Grey literature

We will conduct a grey literature search in the following sources to identify studies not indexed in the databases listed above:

- OpenGrey (www.opengrey.eu; to date of search)
- Grey Literature Report (New York Academy of Medicine; www.greylit.org; to date of search)
- Agency for Healthcare Research and Quality (AHRQ; www.ahrq.gov; to date of search)
- National Institute for Health and Clinical Excellence (NICE; www.nice.org.uk; to date of search).
- Eldis: <http://www.eldis.org>

Searching other resources

We will review rehabilitation associations and organizations' web portals to identify and retrieve relevant documents.

We will review the reference lists of all included studies and key references of systematic reviews. We will conduct a cited reference search for all included studies in Web of Science Core Collection, Clarivate Analytics and Google Scholar.

Where necessary, we will contact authors of included studies to clarify published information and to seek unpublished data.

We will contact researchers with expertise relevant to the review topic to request studies that might meet our inclusion criteria.

Selection of studies

Two review authors from a team of seven [LHL, AMP, DFP, MV, LFM, MAS, KMC] will independently assess the titles and abstracts of the identified records to evaluate eligibility. We will retrieve the full text of all the papers identified as potentially relevant by both review authors. Two review authors from a team of nine will then assess these papers independently [LHL, AMP, DFP, MV, CG, LFM, CA, ASR and IL]. We will resolve disagreements by discussion or, when required, by involving a third review author. Where appropriate, we will contact the study authors for further information.

We will include a table listing studies that we excluded from our review at full text stage and the main reasons for exclusion.

Where the same study, using the same sample and methods, has been presented in different reports, we will collate these reports so that each study (rather than each report) is the unit of interest in our review.

We will include a PRISMA flow diagram to show our search results and the process of screening and selecting studies for inclusion.

Language translation

For titles and abstracts that are published in a language that none of the review team are proficient in (i.e., languages other than English, Spanish, Norwegian, Italian, Portuguese, Swedish and Danish), we will carry out an initial translation through open source software (Google Translate). If this translation indicates inclusion, or if the translation is inadequate to make a decision, we will retrieve the full text of the paper. We will then ask members of Cochrane networks or other networks that are proficient in that language to assist us in assessing the full text of the article for inclusion. If this cannot be done for a paper in a particular language, the paper will be listed as 'studies awaiting classification,' to ensure transparency in the review process.

Sampling of studies

Qualitative evidence synthesis aims for variation in concepts rather than an exhaustive sample, and large amounts of study data can impair the quality of the analysis. Once we have identified all studies that are eligible for inclusion, we will assess whether their number or data richness is likely to represent a problem for the analysis and will consider selecting a sample of studies.

To extract the broadest possible variation within the eligible studies, we will use a purposive sampling approach and apply maximum variation sampling (Patton, 2002). This approach has been selected and successfully implemented in at least three other QES (Ames et al., 2019; Karimi-Shahanjarini et al., 2019; McCartan et al., 2020).

Sampling will aim to achieve variation with regard to the type of participants (service users and caregivers, service providers, and stakeholders), insights about home-based rehabilitation and telerehabilitation, phases of rehabilitation addressed, and richness of data (McCartan et al., 2020; Xyrichis et al., 2017). We will apply the GRADE-CERQual guidance to assess the factors and relevance of the evidence to inform the sampling of studies (Noyes et al., 2018).

We will take the following steps to decrease the number of studies:

1. Selecting studies that maximize the variation on geographical location (i.e., among high, middle, and low-income countries).
2. Selecting studies that maximize the variation on type of participants (service users and caregivers, service providers, and stakeholders)
3. Selecting studies that maximize the variation on the type of disability (mobility, vision, hearing, or cognition)
4. Selecting studies that maximize the variation on phases of rehabilitation addressed (pre-rehabilitation, acute rehabilitation care, sub-acute rehabilitation care, post-acute rehabilitation care and long-term/chronic rehabilitation care)

Data extraction

Two review authors from a team of five (AMP, LFM, KMC, MAS, JCV) will independently extract data on study characteristics in Covidence before comparing findings. We will extract key features of the included papers using a predetermined data extraction form to include:

- Author(s), year, country,
- Mode of rehabilitation delivery (e.g., home-based rehabilitation therapy, home aids, Home modifications, home nursing and family help, telerehabilitation),
- The participant (i.e., service user, caregiver, service provider, other stakeholders),
- Type of disability (i.e., mobility, vision, hearing, or cognition)
- Study design, approach for data collection and analysis.

We will resolve any differences of opinion about study characteristics and methodological limitations of the studies by consensus between the pair of authors that extract the data of the specific article. A pilot trial of the data extraction form will be conducted to check its adequacy, and changes will be made if necessary.

Additionally, two experienced review authors (DP, MV and CG) will use the CFIR framework to support the process of data extraction on experiences, perceptions, and behaviours about factors that create barriers or facilitate the implementation of home-based rehabilitation and telerehabilitation services on all studies included. The CFIR framework is composed of five major domains, each of which may affect an intervention's implementation (Damschroder et al., 2009):

- Intervention characteristics
- Inner setting (i.e., features of the implementing organization)
- Outer setting (i.e., features of the external context or environment)
- Characteristics of individuals involved in implementation.
- Implementation process (i.e., strategies or tactics that might influence implementation)

Four review authors (LHL, AMP, MV, DP, LFM) will extract data; CG, CA, ASR and IL will share the role of second review author for data extraction. We will include authors' interpretations as well as actual data in the form of quotes or field note extracts, which could be presented in either the results or discussion sections of the articles. We will resolve any differences of opinion about this data extraction by consensus between the pair of authors that extract the data of the specific article. A pilot trial of the data extraction form will be conducted to check its adequacy, and changes will be made if necessary.

We will contact study authors to address any gaps in our understanding of the reported study method and its implementation or data on study or participant characteristics.

Assessing the methodological limitations of included studies

Two review authors from a team of five [LHL, AMP, DP, MV, CG] will independently assess methodological limitations for each study using the Critical Appraisal Skills Programme (CASP) (Critical Appraisal Skills Programme (CASP), 2013). We will summarise the methodological limitations judgments across different studies for each of the domains listed below.

Where any of the review authors are also authors of included studies, they will not be involved in the assessment of the study's methodological limitations. We will resolve disagreements by discussion or, when required, by engaging a third review author [LHL,

AMP, DP, MV, CG]. We will assess methodological limitations using a modified version of the Critical Appraisal Skills Programme qualitative appraisal checklist (Atkins et al., 2008) to assess methodological limitations of each included study :

1. The clarity of the aims of the research.
2. The appropriateness of a qualitative method, research design, recruitment strategy, and data collection methods for the aims of the research.
3. Whether the relationship between the researchers and participants was adequately considered.
4. Whether ethics issues were appropriately considered and addressed.
5. The rigour of the analysis.
6. The clarity of the findings, including reporting on the credibility of the findings and relationship to the study aim.
7. The value of the research.

Data management, analysis and synthesis

We will use a 'best fit framework approach' to analyse and synthesise the evidence (Carroll et al., 2013, 2011), using the CFIR framework, a framework composed of five major domains, each of which may affect an intervention's implementation (Damschroder et al., 2009). The rationale to use the CFIR framework to guide the analysis is that it provides us with a comprehensive list of possible factors that could influence intervention implementation (see Figure 1 for a representation of using the CFIR framework on this review).

First, four review authors (LHL, AMP, DP, and MV) will code data from the included studies against the CFIR framework. The CFIR framework will inform but not restrict data synthesis, themes not accounted for by CFIR will be analysed through a thematic synthesis approach (Thomas and Harden, 2008).

Second, we will explore whether factors tied to the intervention and the context are associated with differences in the type of facilitators and barriers to a successful implementation that we identify (Damschroder et al., 2009). Specifically, we will explore whether there were geographical differences among high, middle, and low-income countries regarding the barriers and facilitators for implementing home-based rehabilitation.

The review team will develop 'nodes' in NVivo to organize studies based on common attributes (i.e., participants, modes of service delivery). We will provide a summary of our analytical themes in the form of charts that reflect the elements of the framework. This table will summarise the key findings, our confidence in the evidence for each result, and an explanation of how we arrived at our confidence in the evidence for each finding.

Once we have finished preparing the review findings, we will examine each finding, identify factors that could influence the implementation of the intervention/s, and develop prompts for future implementers. These prompts will be presented in the implications for the practice section. These prompts are not intended to be recommendations but will be phrased as questions to help implementers consider the implications of the review findings within their context. We will send this section to a selection of stakeholders from different countries and professional backgrounds to gather their feedback about the relevance of these prompts and how they are phrased and presented.

Assessing our confidence in the review findings

Five review authors [LHL, AMP, DP, CG, and MV] will use the GRADE-CERQual (Confidence in the Evidence from Reviews of Qualitative research) approach to assess our confidence in each finding (Lewin et al., 2018). GRADE-CERQual assesses confidence in the evidence, based on the following four key components.

1. Methodological limitations of included studies: the extent to which there are concerns about the design or conduct of the primary studies that contributed evidence to an individual review finding.
2. Coherence of the review finding: an assessment of how clear and cogent the fit is between the data from the primary studies and a review finding that synthesises those data. By cogent, we mean well supported or compelling.
3. Adequacy of the data contributing to a review finding: an overall determination of the degree of richness and quantity of data supporting a review finding.
4. Relevance of the included studies to the review question: the extent to which the body of evidence from the primary studies supporting a review finding is applicable to the context (perspective or population, phenomenon of interest, setting) specified in the review question.

After assessing each of the four components, we will develop a 'Summary of qualitative findings', we will make a judgment about the overall confidence in the evidence supporting the review finding. We will judge confidence as high, moderate, low, or very low. The final assessment will be based on consensus among the review authors. All findings start as high confidence and will then be graded down if there are important concerns regarding any of the GRADE-CERQual components.

Summary of Qualitative Findings table(s) and Evidence Profile(s)

We will present summaries of the findings and our assessments of confidence in these findings in the Summary of Qualitative Findings table(s). We will show detailed descriptions of our confidence assessment in an Evidence Profile(s).

Review author reflexivity

In keeping with quality standards for reflexivity within qualitative research, we will maintain a reflexive stance throughout all stages of the review process, from study selection to data synthesis. We will consider how our views and beliefs could influence the choices we make in terms of the scope of the review and our review methods, our interpretation of the data, and our interpretation of our findings.

As a review team, seven members have clinical backgrounds in medicine, including specialists in rehabilitation (LHL, AMP, LFM, KMC, MAS, CA, ASR and IL), four have training and experience in qualitative research (LHL, DP, MV, CG), three (CG, IL, ASR) are all researchers based at a rehabilitation hospital in Norway, and three are researchers based at a rehabilitation hospital in Colombia (AMP, LFM, KMC).

All members of the review author team believe that disabled people should have equitable access to healthcare without discrimination. Based on our collective and individual experiences as clinicians, academics and researchers, we consider that home based rehabilitation and telerehabilitation have the potential to help people access appropriate healthcare during the pandemic of COVID-19 and in other circumstances. However, some of the review authors have concerns about the use of digital health services because of

challenges in implementing these in an equitable, reliable and sustainable manner. We anticipate the findings of our review to reveal a combination of organizational, professional, and individual factors influencing the implementation of home-based rehabilitation and telerehabilitation.

We have proposed for all the qualitative research process (from study selection to data synthesis) teams of three or more members, who will discuss with each other how their background and position, may affect their analysis and the writing of the findings.

As the lead author, MV will keep a reflexive journal throughout the review process in which to document and reflect on progress and decisions made.

Figure 1. Relationship between CFIR Framework and this qualitative evidence synthesis

Acknowledgements

When preparing this protocol/review, we used EPOC's Protocol and Review Template for Qualitative Evidence Synthesis (Glenton C, Bohren MA, Downe S, Paulsen EJ, Lewin S, on behalf of Effective Practice and Organisation of Care (EPOC). EPOC Qualitative Evidence Synthesis: Protocol and review template. Version 1.1. EPOC Resources for review authors. Oslo: Norwegian Institute of Public Health; 2020. Available at: <http://epoc.cochrane.org/epoc-specific-resources-review-authors>)

The Norwegian Satellite of the Effective Practice and Organisation of Care (EPOC) Group receives funding from the Norwegian Agency for Development Co-operation (NORAD), via the Norwegian Institute of Public Health to support review authors in the production of their reviews.

Contributions of authors

All authors contributed to the protocol

PAR designed (with AB) and performed the electronic searches.

MV, LHL, DP, AMP, LFM, CG, ABR, IBL will conduct study selection

MV, LHL, DP, AMP, LFM, KMC, MAS, JCV will conduct data extraction.

MV, LHLA, DFPL, FMF, AP will conduct sampling, analysis, assessment of methodological limitations and the GRADE-CERQual assessment of confidence in the review findings, with input from CG.

MV, LHLA, DFPL, FMF, AP, CG will draft the manuscript

Declarations of interest

Velez, Marcela: none known

Lugo-Agudelo, Luz Helena: none known

Lewin, Simon: none known

Glenton, Claire: none known

Ramirez, Paola Andrea: none known

Patiño Lugo, Daniel F.: none known

Mesa Franco, Luisa Fernanda: none known

Velasquez, Juan Carlos: none known

Cruz Sarmiento, Kelly Mariana: none known

Posada, Ana: none known

Spir Brunal, Maria Alejandra: none known

Arienti, Chiara: none known

Lidal, Ingeborg B: none known

Roberg, Anne-Stine: none known

Negrini, Stefano: none known

Kiekens, Charlotte: none known

A number of non-financial issues, including personal, political and academic factors, could have influenced the review authors' input when conducting this review. The review authors have discussed this further in the sections on reflexivity in the Methods and Results sections."

References

References to studies included in this review

References to studies excluded from this review

References to studies awaiting assessment

Additional references

- Agostini, M., Moja, L., Banzi, R., Pistotti, V., Tonin, P., Venneri, A., Turolla, A., 2015. Telerehabilitation and recovery of motor function: a systematic review and meta-analysis. *J. Telemed. Telecare* 21, 202–213. <https://doi.org/10.1177/1357633X15572201>
- Ames, H., Glenton, C., Lewin, S., Tamrat, T., Akama, E., Leon, N., 2019. Clients' perceptions and experiences of targeted digital communication accessible via mobile devices for reproductive, maternal, newborn, child, and adolescent health: a qualitative evidence synthesis (Review). *Cochrane Database Syst. Rev.* 1–116. <https://doi.org/10.1002/14651858.CD013447>. www.cochranelibrary.com
- Anderson, L., Sharp, G.A., Norton, R.J., Dalal, H., Dean, S.G., Jolly, K., Cowie, A., Zawada, A., Taylor, R.S., 2017. Home-based versus centre-based cardiac rehabilitation. *Cochrane Database Syst. Rev.* <https://doi.org/10.1002/14651858.CD007130>.pub4
- Andrenelli, E., Negrini, F., Sire, A. DE, Arienti, C., Patrini, M., Negrini, S., Gabriella CERAVOLO, M., 2020. European Journal of Physical and Rehabilitation Medicine Systematic rapid living review on rehabilitation needs due to Covid-19: update to May 31st 2020. *Eur. J. Phys. Rehabil. Med.* 1–18. <https://doi.org/10.23736/S1973-9087.20.06435-7>
- Atkins, S., Lewin, S., Smith, H., Engel, M., Fretheim, A., Volmink, J., 2008. Conducting a meta-ethnography of qualitative literature: lessons learnt. *BMC Med. Res. Methodol.* 8, 21.
- Bettger, J.P., Thoumi, A., Markevich, V., De Groote, W., Rizzo Battistella, L., Imamura, M., Delgado Ramos, V., Wang, N., Dreinhofer, K.E., Mangar, A., Ghandi, D.B.C., Ng, Y.S., Lee, K.H., Tan Wei Ming, J., Pua, Y.H., Inzitari, M., Mmbaga, B.T., Shayo, M.J., Brown, D.A., Carvalho, M., Oh-Park, M., Stein, J., 2020. COVID-19: Maintaining essential rehabilitation services across the care continuum. *BMJ Glob. Heal.* 5, 1–7. <https://doi.org/10.1136/bmjgh-2020-002670>
- Bittner, A.K., Yoshinaga, P.D., Wykstra, S.L., Li, T., 2020. Telerehabilitation for people with low vision. *Cochrane database Syst. Rev.* <https://doi.org/10.1002/14651858.CD011019>.pub3
- Boldrini, P., Garcea, M., Brichetto, G., Reale, N., Tonolo, S., Falabella, V., Fedeli, F., Cnops, A.A., Kiekens, C., 2020. Living with a disability during the pandemic. "Instant paper from the field" on rehabilitation answers to the COVID-19 emergency. *Eur. J. Phys. Rehabil. Med.* <https://doi.org/10.23736/S1973-9087.20.06373-X>
- Booth, A., 2016. Searching for qualitative research for inclusion in systematic reviews: a structured methodological review. *Syst Rev* 5.
- Brennan, D.M., Mawson, S., Brownsell, S., 2009. Telerehabilitation: Enabling the remote delivery of healthcare, rehabilitation, and self management, in: *Studies in Health Technology and Informatics*. IOS Press, pp. 231–248. <https://doi.org/10.3233/978-1-60750-018-6-231>
- Carroll, C., Booth, A., Cooper, K., 2011. A worked example of "best fit" framework synthesis: A systematic review of views concerning the taking of some potential chemopreventive agents. *BMC Med. Res. Methodol.* 11, 29. <https://doi.org/10.1186/1471-2288-11-29>
- Carroll, C., Booth, A., Leaviss, J., Rick, J., 2013. "best fit" framework synthesis: Refining the method. *BMC Med. Res. Methodol.* 13, 37. <https://doi.org/10.1186/1471-2288-13-37>
- Ceravolo, M G, Arienti, C., De Sire, A., Andrenelli, E., Negrini, F., Lazzarini, S., Patrini, M.,

- Negrini, S., 2020. Rehabilitation and Covid-19: the Cochrane Rehabilitation 2020 rapid living systematic review. *Eur J Phys Rehabil Med.* <https://doi.org/10.23736/s1973-9087.20.06501-6>
- Ceravolo, Maria G., De Sire, A., Andrenelli, E., Negrini, F., Negrini, S., 2020. Systematic rapid “living” review on rehabilitation needs due to covid-19: update to march 31st 2020. *Eur. J. Phys. Rehabil. Med.* 56, 347–353. <https://doi.org/10.23736/S1973-9087.20.06329-7>
- Cheng, K.K.F., Lim, Y.T.E., Koh, Z.M., Tam, W.W.S., 2017. Home-based multidimensional survivorship programmes for breast cancer survivors. *Cochrane Database Syst. Rev.* <https://doi.org/10.1002/14651858.CD011152.pub2>
- Chi, N.F., Huang, Y.C., Chiu, H.Y., Chang, H.J., Huang, H.C., 2020. Systematic Review and Meta-Analysis of Home-Based Rehabilitation on Improving Physical Function Among Home-Dwelling Patients With a Stroke. *Arch. Phys. Med. Rehabil.* 101, 359–373. <https://doi.org/10.1016/j.apmr.2019.10.181>
- Clark, D., 2013. Disability and Development, *The Elgar Companion to Development Studies.* <https://doi.org/10.4337/9781847202864.00035>
- Cobbing, S., Hanass-Hancock, J., Myezwa, H., 2016. Home-based rehabilitation interventions for adults living with HIV: A scoping review. *African J. AIDS Res.* 15, 77–88. <https://doi.org/10.2989/16085906.2016.1159968>
- Coupar F, PollockA, LeggLA, SackleyC, vanVliet P, 2012. Cochrane Database of Systematic Reviews Home-based therapy programmes for upper limb functional recovery following stroke (Review). <https://doi.org/10.1002/14651858.CD006755.pub2>
- Critical Appraisal Skills Programme (CASP), 2013. Qualitative Appraisal Checklist for Qualitative Research. https://doi.org/10.1007/978-81-322-2743-4_32
- Damhus, C.S., Emme, C., Hansen, H., 2018. Barriers and enablers of COPD telerehabilitation – A frontline staff perspective. *Int. J. COPD* 13, 2473–2482. <https://doi.org/10.2147/COPD.S167501>
- Damschroder, L.J., Aron, D.C., Keith, R.E., Kirsh, S.R., Alexander, J.A., Lowery, J.C., 2009. Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. *Implement. Sci.* 4, 50. <https://doi.org/10.1186/1748-5908-4-50>
- de Sire, A., Andrenelli, E., Negrini, F., Negrini, S., Ceravolo, M.G., 2020. Systematic rapid living review on rehabilitation needs due to Covid-19: update to April 30th 2020. *Eur. J. Phys. Rehabil. Med.* <https://doi.org/10.23736/S1973-9087.20.06378-9>
- Dorjbal, D., Zanini, C., Tsegmid, N., Stucki, G., Rubinelli, S., 2019. Toward an optimization of rehabilitation services for persons with spinal cord injury in Mongolia: the perspective of medical doctors. *Disabil. Rehabil.* 0, 1–13. <https://doi.org/10.1080/09638288.2019.1696415>
- European Physical and Rehabilitation Medicine Bodies Alliance, 2018. White book on physical and rehabilitation medicine (PRM) in Europe. Chapter 8. The PRM specialty in the healthcare system and society. *Eur. J. Phys. Rehabil. Med.* 54, 261–278. <https://doi.org/10.23736/S1973-9087.18.05152-3>
- Gelaw, A.Y., Janakiraman, B., Gebremeskel, B.F., Ravichandran, H., 2020. Effectiveness of Home-based rehabilitation in improving physical function of persons with Stroke and other physical disability: A systematic review of randomized controlled trials. *J. Stroke Cerebrovasc. Dis.* 29. <https://doi.org/10.1016/j.jstrokecerebrovasdis.2020.104800>

- Jimigliano, F., Negrini, S., 2017. The World Health Organization “Rehabilitation 2030: A call for action.” *Eur. J. Phys. Rehabil. Med.* 53, 155–168. <https://doi.org/10.23736/S1973-9087.17.04746-3>
- Gonçalves-Bradley, D., Iliffe, S., Doll, H., Broad, J., Gladman, J., Langhorne, P., Richards, S., Sheppard, S., 2017. Early discharge hospital at home (Review) SUMMARY OF FINDINGS FOR THE MAIN COMPARISON. *Cochrane Collab.* 1–134. <https://doi.org/10.1002/14651858.CD000356.pub4>. www.cochranelibrary.com
- Gutenbrunner, C., Nugraha, B., Jimigliano, F., Meyer, T., Kiekens, C., 2020. International Classification of Service Organization in Rehabilitation: An updated set of categories (ICSO-R 2.0). *J. Rehabil. Med.* 52, jrm00004. <https://doi.org/10.2340/16501977-2627>
- Hotta, F., 2015. Home Rehabilitation. *Japan Med. Assoc. J. JMAJ* 58, 40–3.
- Housley, S.N., Garlow, A.R., Ducote, K., Howard, A., Thomas, T., Wu, D., Richards, K., Butler, A.J., 2016. Increasing Access to Cost Effective Home-Based Rehabilitation for Rural Veteran Stroke Survivors. *Austin J. Cerebrovasc. Dis. stroke* 3, 1–11.
- Kairy, D., Lehoux, P., Vincent, C., Visintin, M., 2009. A systematic review of clinical outcomes, clinical process, healthcare utilization and costs associated with telerehabilitation. *Disabil. Rehabil.* 31, 427–447. <https://doi.org/10.1080/09638280802062553>
- Karimi-Shahanjarini, A., Shakibazadeh, E., Rashidian, A., Hajimiri, K., Glenton, C., Noyes, J., Lewin, S., Laurant, M., Colvin, C.J., 2019. Barriers and facilitators to the implementation of doctor-nurse substitution strategies in primary care: A qualitative evidence synthesis. *Cochrane Database Syst. Rev.* 2019. <https://doi.org/10.1002/14651858.CD010412.pub2>
- Khan, F., Amatya, B., Kesselring, J., Galea, M.P.G., 2015. Telerehabilitation for persons with multiple sclerosis. A Cochrane review. *Eur. J. Phys. Rehabil. Med.* 51, 311–325. <https://doi.org/10.1002/14651858.CD010508.pub2>
- Knudsen, M.V., Laustsen, S., Petersen, A.K., Hjortdal, V.E., Angel, S., 2019. Experience of cardiac tele-rehabilitation: analysis of patient narratives. *Disabil. Rehabil.* 0, 1–8. <https://doi.org/10.1080/09638288.2019.1625450>
- Kuo, W.Y., Shyu, Y.I.L., Wang, J.S., Chen, M.C., Wu, C.C., Chen, M.L., 2019. Adherence to Home-Based Rehabilitation in Older Adults with Diabetes after Hip Fracture. *Nurs. Res.* 68, 383–389. <https://doi.org/10.1097/NNR.0000000000000371>
- Laver, K.E., Adey-Wakeling, Z., Crotty, M., Lannin, N.A., George, S., Sherrington, C., 2020. Telerehabilitation services for stroke. *Cochrane Database Syst. Rev.* 2020. <https://doi.org/10.1002/14651858.CD010255.pub3>
- Lewin, S., Booth, A., Glenton, C., Munthe-Kaas, H., Rashidian, A., Wainwright, M., Bohren, M.A., Tunçalp, Ö., Colvin, C.J., Garside, R., Carlsen, B., Langlois, E. V., Noyes, J., 2018. Applying GRADE-CERQual to qualitative evidence synthesis findings: Introduction to the series. *Implement. Sci.* 13, 1–10. <https://doi.org/10.1186/s13012-017-0688-3>
- McCartan, C., Yap, J., Firth, J., Stubbs, B., Tully, M., Best, P., Webb, P., White, C., Gilbody, S., Churchill, R., Breedvelt, J., Davidson, G., 2020. Factors that influence participation in physical activity for people with bipolar disorder: a synthesis of qualitative evidence (Protocol). *Cochrane Database Syst. Rev.* 1–24. <https://doi.org/10.1002/14651858.CD013547>. www.cochranelibrary.com
- Meyer, T., Gutenbrunner, C., Bickenbach, J., Cieza, A., Melvin, J., Stucki, G., 2011. Towards a conceptual description of rehabilitation as a health strategy. *J. Rehabil. Med.* 43, 765–769. <https://doi.org/10.2340/16501977-0865>

- Meyer, T., Gutenbrunner, C., Kiekens, C., Skempes, D., Melvin, J.L., Schedler, K., Imamura, M., Stucki, G., 2014. ISPRM discussion paper: Proposing a conceptual description of health-related rehabilitation services. *J. Rehabil. Med.* 46, 1–6. <https://doi.org/10.2340/16501977-1251>
- Mlenzana, N.B., Frantz, J.M., Rhoda, A.J., Eide, A.H., 2013. Barriers to and facilitators of rehabilitation services for people with physical disabilities: A systematic review. *African J. Disabil.* 2, 1–6. <https://doi.org/10.4102/ajod.v2i1.22>
- Negrini, S., Kiekens, C., Bernetti, A., Capecci, M., Ceravolo, M.G., Lavezzi, S., Zampolini, M., Boldrini, P., 2020a. Telemedicine from research to practice during the pandemic. “Instant paper from the field” on rehabilitation answers to the Covid-19 emergency. *Eur. J. Phys. Rehabil. Med.* <https://doi.org/10.23736/S1973-9087.20.06331-5>
- Negrini, S., Kiekens, C., Heinemann, A.W., Özçakar, L., Frontera, W.R., 2020b. Prioritising people with disabilities implies furthering rehabilitation. *Lancet* 395, 111. [https://doi.org/10.1016/S0140-6736\(19\)32623-6](https://doi.org/10.1016/S0140-6736(19)32623-6)
- Noyes, J., Booth, A., Lewin, S., Carlsen, B., Glenton, C., Colvin, C.J., Garside, R., Bohren, M.A., Rashidian, A., Wainwright, M., Tunalp, Ö., Chandler, J., Flottorp, S., Pantoja, T., Tucker, J.D., Munthe-Kaas, H., 2018. Applying GRADE-CERQual to qualitative evidence synthesis findings-paper 6: How to assess relevance of the data. *Implement. Sci.* 13. <https://doi.org/10.1186/s13012-017-0693-6>
- Odendaal, W.A., Anstey Watkins, J., Leon, N., Goudge, J., Griffiths, F., Tomlinson, M., Daniels, K., 2020. Health workers’ perceptions and experiences of using mHealth technologies to deliver primary healthcare services: a qualitative evidence synthesis (Review). *Cochrane Database Syst. Rev.* 1–121. <https://doi.org/10.1002/14651858.CD011942.pub2>. www.cochranelibrary.com
- Patton, M., 2002. *Qualitative Research & Evaluation Methods*, Third Edit. ed. Thousand Oaks, CA: Sage.
- Peretti, A., Amenta, F., Tayebati, S.K., Nittari, G., Mahdi, S.S., 2017. Telerehabilitation: Review of the State-of-the-Art and Areas of Application. *JMIR Rehabil. Assist. Technol.* 4, e7. <https://doi.org/10.2196/rehab.7511>
- Rezaei, M., Sharifi, A., Vaccaro, A., Rahimi-Movaghar, V., 2019a. Home-based rehabilitation programs: Promising field to maximize function of patients with traumatic spinal cord injury. *Asian J. Neurosurg.* 14, 634. https://doi.org/10.4103/ajns.ajns_86_17
- Rezaei, M., Sharifi, A., Vaccaro, A., Rahimi-Movaghar, V., 2019b. Home-based rehabilitation programs: Promising field to maximize function of patients with traumatic spinal cord injury. *Asian J. Neurosurg.* 14, 634. https://doi.org/10.4103/ajns.ajns_86_17
- Ricker, J.H., Rosenthal, M., Garay, E., Deluca, J., Germain, A., Abraham-Fuchs, K., Schmidt, K.-U., 2002. Telerehabilitation Needs: A Survey of Persons with Acquired Brain Injury.
- Saragiotto, B.T., Maher, C.G., Yamato, T.P., Costa, L.O.P., Menezes Costa, L.C., Ostelo, R.W.J.G., Macedo, L.G., 2016. Motor control exercise for chronic non-specific low-back pain. *Cochrane Database Syst. Rev.* <https://doi.org/10.1002/14651858.CD012004>
- Steihaug, S., Lippestad, J.W., Werner, A., 2016. Between ideals and reality in home-based rehabilitation. *Scand. J. Prim. Health Care* 34, 46–54. <https://doi.org/10.3109/02813432.2015.1132888>
- Stolee, P., Lim, S.N., Wilson, L., Glenny, C., 2012. Inpatient versus home-based rehabilitation for older adults with musculoskeletal disorders: A systematic review. *Clin. Rehabil.* <https://doi.org/10.1177/0269215511423279>

- Thomas, J., Harden, A., 2008. Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Med. Res. Methodol.* 8, 1–10. <https://doi.org/10.1186/1471-2288-8-45>
- Tyagi, S., Lim, D.S.Y., Ho, W.H.H., Koh, Y.Q., Cai, V., Koh, G.C.H., Legido-Quigley, H., 2018. Acceptance of Tele-Rehabilitation by Stroke Patients: Perceived Barriers and Facilitators. *Arch. Phys. Med. Rehabil.* 99, 2472-2477.e2. <https://doi.org/10.1016/j.apmr.2018.04.033>
- Universal health coverage (UHC) [WWW Document], 2019. . 24 January 2019.
- van Egmond, M.A., van der Schaaf, M., Vredevelde, T., Vollenbroek-Hutten, M.M.R., van Berge Henegouwen, M.I., Klinkenbijn, J.H.G., Engelbert, R.H.H., 2018. Effectiveness of physiotherapy with telerehabilitation in surgical patients: a systematic review and meta-analysis. *Physiother. (United Kingdom)* 104, 277–298. <https://doi.org/10.1016/j.physio.2018.04.004>
- Widén Holmqvist, L., Von Koch, L., Kostulas, V., Holm, M., Widsell, G., Tegler, H., Johansson, K., Almazán, J., De Pedro-Cuesta, J., 1998. A randomized controlled trial of rehabilitation at home after stroke in southwest Stockholm. *Stroke* 29, 591–597. <https://doi.org/10.1161/01.str.29.3.591>
- World Health Organization, 2011. Summary World Report On Disability. *World Health* 1–24. <https://doi.org/10.1136/ip.2007.018143>
- World Health Organization, 2001. International classification of functioning, disability and health. *World Rep. Child Inj. Prev.*
- Xyrichis, A., Mackintosh, N.J., Terblanche, M., Bench, S., Philippou, J., Sandall, J., 2017. Healthcare stakeholders' perceptions and experiences of factors affecting the implementation of critical care telemedicine (CCT): Qualitative evidence synthesis. *Cochrane Database Syst. Rev.* 2017. <https://doi.org/10.1002/14651858.CD012876>

Sources of support

We haven't received funds for this QES

Internal sources

External sources

Appendices

1 Search strategy

Pubmed/Medline - Strategies
Home Rehabilitation + Qualitative studies
("rehabilitation"[Title/Abstract] AND (((("home"[Title/Abstract] OR "Outpatient"[Title/Abstract]) OR "ambulatory care"[Title/Abstract]) OR "out-patient"[Title/Abstract])) AND (((((((("qualitative"[Title/Abstract] OR "Grounded Theory"[Title/Abstract]) OR "mixed methods"[Title/Abstract]) OR "interview"[Title/Abstract]) OR "ethnography"[Title/Abstract]) OR "case stud*"[Title/Abstract]) OR "content analysis"[Title/Abstract]) OR "participant observation"[Title/Abstract]) OR "interpretat*"[Title/Abstract]) OR "participatory action"[Title/Abstract]) OR "thematic analysis"[Title/Abstract])
Telerehabilitation + Qualitative studies
((((((((((((((((("telemedicine"[MeSH Terms] OR "telemedicine"[Title/Abstract]) OR "telehealth"[Title/Abstract]) OR "ehealth"[Title/Abstract]) OR "e-health"[Title/Abstract]) OR "Mobile Health"[Title/Abstract]) OR "mhealth"[Title/Abstract]) OR "m-health"[Title/Abstract]) OR "telecare"[Title/Abstract]) OR "telenursing"[Title/Abstract]) OR "tele-nursing"[Title/Abstract]) OR "telemonitor*"[Title/Abstract]) OR "tele monitor*"[Title/Abstract]) OR "teleconsult*"[Title/Abstract]) OR "tele consult*"[Title/Abstract]) OR "telecounsel*"[Title/Abstract]) OR "telecoach*"[Title/Abstract]) OR "tele coach*"[Title/Abstract]) OR "internet"[Title/Abstract]) OR "web"[Title/Abstract]) AND "rehabilitation"[Title/Abstract]) OR (((("telerehabilitation"[MeSH Terms] OR "telerehabilitation"[Title/Abstract]) OR "Tele-rehabilitation"[Title/Abstract]) OR "virtual rehabilitation"[Title/Abstract]) OR "remote rehabilitation"[Title/Abstract])) AND (((((((((((("Qualitative Research"[MeSH Terms] OR "qualitative"[Title/Abstract]) OR "Grounded Theory"[MeSH Terms]) OR "Grounded Theory"[Title/Abstract]) OR "mixed methods"[Title/Abstract]) OR "interview"[Title/Abstract]) OR "ethnography"[Title/Abstract]) OR "case stud*"[Title/Abstract]) OR "content analysis"[Title/Abstract]) OR "participant observation"[Title/Abstract]) OR "participatory action"[Title/Abstract]) OR "focus group"[Title/Abstract]) OR "interpretat*"[Title/Abstract]) OR "thematic analysis"[Title/Abstract])
Cochrane, DARE, HTA, HHS. EBM x OVID
EBM Reviews - Cochrane Database of Systematic Reviews <2005 to July 24, 2020> EBM Reviews – ACP Journal Club <1991 to July 2020> EBM Reviews - Database of Abstracts of Reviews of Effects <1st Quarter 2016> EBM Reviews - Cochrane Central Register of Controlled Trials <June 2020> EBM Reviews - Cochrane Methodology Register <3rd Quarter 2012> EBM Reviews - Health Technology Assessment <4th Quarter 2016> EBM Reviews - NHS Economic Evaluation Database <1st Quarter 2016> Global Health <1973 to 2020 Week 29>
Strategy
1 rehabilitation.de. Or rehabilitation.ab. Or rehabilitation.ti. (42931)
2 home.ab. Or home.ti. Or outpatient.ti. Or outpatient.ab. Or ambulatory care.de. Or "ambulatory care".ab. Or "ambulatory care".ti. (135062)
3 1 and 2 (6647)
4 qualitative.ab. or qualitative.ti. or "grounded theory".ti. or "grounded theory".ab. or Grounded Theory.de. or "mixed methods".ab. or "mixed methods".ti. or interview.ab. or interview.ti. or ethnography.ab. or ethnography.ti. or "case study".ab. or "case study".ti. or "content analysis".ab. or "content analysis".ti. or "participant observation".ab. or "participant observation".ti. or interpretat*.ab. or interpretat*.ti. or "participatory action".ab. or "participatory action".ti. or "thematic analysis".ab. or "thematic analysis".ti. or Qualitative Research.de. (170708)
5 3 and 4 (517)
6 telemedicine.ab. or telemedicine.ti. or telehealth.ti. or telehealth.ab. or telemedicine.de. or ehealth.ab. or ehealth.ti. or "Mobile Health".ab. or "Mobile Health".ti. or mhealth.ab. or mhealth.ti. or telecare.ab. or telecare.ti. or telenursing.ab. or telenursing.ti. or telemonitor*.ab. or telemonitor*.ti. or teleconsult*.ab. or teleconsult*.ti. or telecounsel*.ab. or telecounsel*.ti. or telecoach*.ab. or telecoach*.ti. or internet.ab. or internet.ti. or web.ab. or web.ti. (52824)
7 1 and 6 (1086)
8 4 and 7 (124)
9 5 or 8 (586)

LILACS – BIREME

tw:((tw:(rehabilitation))
AND (tw:(home)) OR (tw:(outpatient)) OR (tw:("ambulatory care"))
AND (tw:(qualitative)) OR (tw:("Grounded Theory")) OR (tw:("mixed methods")) OR (tw:(interview)) OR
(tw:(ethnography)) OR (tw:("case study")) OR (tw:("content analysis")) OR (tw:("participant observation")) OR
(tw:(interpretative)) OR (tw:("participatory action")) OR (tw:("thematic analysis")))
AND (db:("LILACS" OR "IBECs" OR "BDENF" OR "CUMED" OR "MedCarib" OR "BINACIS" OR "LIS" OR
"PAHOIRIS" OR "SES-SP"))
(tw:(rehabilitation)) AND (tw:(home)) OR (tw:(outpatient)) OR (tw:("ambulatory care")) AND (tw:(qualitative))
OR (tw:("Grounded Theory")) OR (tw:("mixed methods")) OR (tw:(interview)) OR (tw:(ethnography)) OR
(tw:("case study")) OR (tw:("content analysis")) OR (tw:("participant observation")) OR (tw:(interpretative)) OR
(tw:("participatory action")) OR (tw:("thematic analysis"))

tw:((tw:(telerehabilitation)) AND (tw:(qualitative)) OR (tw:("Grounded Theory")) OR (tw:("mixed methods")) OR
(tw:(interview)) OR (tw:(ethnography)) OR (tw:("case study")) OR (tw:("content analysis")) OR (tw:("participant
observation")) OR (tw:(interpretative)) OR (tw:("participatory action")) OR (tw:("thematic analysis")) AND (db:("IBECs" OR "LILACS" OR "CUMED"))

tw:(((ti:(rehabilitation)) AND (tw:(telemedicine)) OR (tw:(telehealth)) OR (tw:(telecare)) OR (tw:(ehealth)) OR
(tw:(mhealth)) OR (tw:(telenursing)) OR (tw:(internet)) OR (tw:(web)) AND (tw:(rehabilitation)) AND
(tw:(qualitative)) OR (tw:("Grounded Theory")) OR (tw:("mixed methods")) OR (tw:(interview)) OR
(tw:(ethnography)) OR (tw:("case study")) OR (tw:("content analysis")) OR (tw:("participant observation")) OR
(tw:(interpretative)) OR (tw:("participatory action")) OR (tw:("thematic analysis")) AND (db:("IBECs" OR
"LILACS" OR "CUMED" OR "INDEXPSI"))

EPISTEMONIKOS

((Title :(**rehabilitation**)) AND (title:("ambulatory care") OR abstract:("ambulatory care")) AND
(title:(qualitative) OR abstract:(qualitative)) OR (title:("Grounded Theory") OR abstract:("Grounded Theory"))
OR (title:("mixed methods") OR abstract:("mixed methods")) OR (title:(interview) OR abstract:(interview)) OR
(title:(ethnography) OR abstract:(ethnography)) OR (title:("case study") OR abstract:("case study")) OR
(title:("content analysis") OR abstract:("content analysis")) OR (title:("participant observation") OR
abstract:("participant observation")) OR (title:(interpretative) OR abstract:(interpretative)) OR
(title:("participatory action") OR abstract:("participatory action")) OR (title:("thematic analysis") OR
abstract:("thematic analysis")) OR ((title:(**rehabilitation**)) AND (title:("home care") OR abstract:("home
care")) AND (title:(qualitative) OR abstract:(qualitative)) OR (title:("Grounded Theory") OR
abstract:("Grounded Theory")) OR (title:("mixed methods") OR abstract:("mixed methods")) OR
(title:(interview) OR abstract:(interview)) OR (title:(ethnography) OR abstract:(ethnography)) OR (title:("case
study") OR abstract:("case study")) OR (title:("content analysis") OR abstract:("content analysis")) OR
(title:("participant observation") OR abstract:("participant observation")) OR (title:(interpretative) OR
abstract:(interpretative)) OR (title:("participatory action") OR abstract:("participatory action")) OR
(title:("thematic analysis") OR abstract:("thematic analysis")) OR ((title:(**rehabilitation**)) AND
(title:(**outpatient**) OR abstract:(**outpatient**)) AND (title:(qualitative) OR abstract:(qualitative)) OR
(title:("Grounded Theory") OR abstract:("Grounded Theory")) OR (title:("mixed methods") OR abstract:("mixed
methods")) OR (title:(interview) OR abstract:(interview)) OR (title:(ethnography) OR abstract:(ethnography))
OR (title:("case study") OR abstract:("case study")) OR (title:("content analysis") OR abstract:("content
analysis")) OR (title:("participant observation") OR abstract:("participant observation")) OR
(title:(interpretative) OR abstract:(interpretative)) OR (title:("participatory action") OR abstract:("participatory
action")) OR (title:("thematic analysis") OR abstract:("thematic analysis"))

OR ((Title :(**rehabilitation**)) AND (title:(telemedicine) OR abstract:(telemedicine)) OR (title:(ehealth) OR
abstract:(ehealth)) OR (title:(mhealth) OR abstract:(mhealth)) OR (title:(internet) OR abstract:(internet)) OR
(title:(web) OR abstract:(web)) AND (title:(qualitative) OR abstract:(qualitative)) OR (title:("Grounded Theory")
OR abstract:("Grounded Theory")) OR (title:("mixed methods") OR abstract:("mixed methods")) OR
(title:(interview) OR abstract:(interview)) OR (title:(ethnography) OR abstract:(ethnography)) OR (title:("case
study") OR abstract:("case study")) OR (title:("content analysis") OR abstract:("content analysis")) OR
(title:("participant observation") OR abstract:("participant observation")) OR (title:(interpretative) OR
abstract:(interpretative)) OR (title:("participatory action") OR abstract:("participatory action")) OR
(title:("thematic analysis") OR abstract:("thematic analysis"))

OR ((Title :(**telerehabilitation**) OR abstract :(**telerehabilitation**)) AND (title:(qualitative) OR
abstract:(qualitative)) OR (title:("Grounded Theory") OR abstract:("Grounded Theory")) OR (title:("mixed
methods") OR abstract:("mixed methods")) OR (title:(interview) OR abstract:(interview)) OR
(title:(ethnography) OR abstract:(ethnography)) OR (title:("case study") OR abstract:("case study")) OR

(title:"content analysis") OR abstract:"content analysis")) OR (title:"participant observation" OR abstract:"participant observation")) OR (title:(interpretative) OR abstract:(interpretative)) OR (title:"participatory action") OR abstract:"participatory action")) OR (title:"thematic analysis") OR abstract:"thematic analysis"))