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Community-Based Rehabilitation for People with Disabilities in Low- and Middle-Income Countries

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PROTOCOL

THE CAMPBELL COLLABORATION

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1 Background

1.1 DESCRIPTION OF THE PROBLEM

Disability is an umbrella term for impairments, activity limitations, and participation restrictions, denoting the negative aspects of the interaction between an individual (with a health condition) and that individual's contextual factors (environmental and personal factors) (WHO 2011; WHO 2001). People with disabilities (PWD) therefore include those who have long-term physical, mental, intellectual or sensory impairments resulting from any physical or mental health conditions which, in
interaction with various barriers, may hinder their full and effective participation in society on an equal basis with others (UN 2008). This view of disability is therefore an expansion beyond the traditional view, which focused on impairments only.

The World Disability Report estimates that there are over one billion people with disabilities in the world, of who between 110-190 million experience very significant difficulties (WHO 2011). This corresponds to about 15% of the world's population, and is higher than previous World Health Organization's (WHO) estimates. These figures therefore suggest an increase in the prevalence of disability, potentially due to population ageing and the rise in chronic conditions. However, the data underlying these estimates is sparse making it difficult to gauge trends over time or their causes.

It is widely reported that PWD are excluded from education, health, and employment and other aspects of society and that this can potentially lead to or exacerbate poverty (WHO 2011). This exclusion is contrary to the essence of the United Nations (UN) Convention on the Rights of Persons with Disabilities, which is an international human rights instrument of the UN intended to protect the rights and dignities of PWD (UN 2008). This Convention calls upon all countries to respect and ensure the equal rights and participation of all PWD to education, health care, employment and inclusion in all aspects of society. The text was adopted by the UN General Assembly in 2006, and came into force in 2008. By April 2012, it had 153 signatories and 112 parties. Effective interventions therefore need to be identified that will enhance participation in society by PWD and thereby enforce the convention.

1.2 DESCRIPTION OF THE INTERVENTION

The UN Convention states that comprehensive rehabilitation services including health, employment, education and social services are needed 'to enable PWD to attain and maintain maximum independence, full physical, mental, social and vocational ability, and full inclusion and participation in all aspects of life' (UN 2008). A range of interventions can be made available to PWD, extending from purely medical (e.g. hospital treatments) to exclusively social (e.g. inclusion in family events). Comprehensive rehabilitation services may be preferred to isolated interventions, given the recommendation of the UN convention and the wide range of needs of PWD to enable participation.

Community-based rehabilitation (CBR) is the strategy endorsed by WHO (WHO 2010a) for general community development for the rehabilitation, poverty reduction, equalization of opportunities, and social inclusion of all PWD. The concept was firstly introduced in an unpublished WHO report in 1976 (WHO 1976; Finkenflugel 2004) as a promising strategy to provide rehabilitation for people with disability in developing countries and part of the broader goal of reach 'Health for All by the year 2000' (WHO 1978). Since the first training manual published in 1980 (Helander 1980) and updated in 1989 (Helander 1989), the concept has evolved to become a multi-sectoral strategy. CBR is implemented through the combined efforts of PWD themselves, their families and communities, and the relevant governmental and non-governmental health, educational, vocational, social and other services. CBR is delivered within the community using predominantly local resources.

The CBR matrix (WHO 2010a) provides a basic framework for CBR programmes. It highlights the need to target rehabilitation at different aspects of life including the five key components: health, education, livelihood, social, and empowerment. Each component consists in five elements where the different activities are classified. A CBR programme is formed by one or more activities in one or more of the five components. Thus, a CBR programme is not expected to implement every component of the CBR matrix, and not all PWD require assistance in each component of the matrix. However, a CBR programme should be developed in partnership with PWD to best meet local needs, priorities and resources.

The CBR guidelines were launched in October 2010 to provide further direction on how CBR programmes should be developed and implemented (WHO 2010a). Although CBR is currently implemented in over 90 countries, in reality only 2% of PWD are estimated to have access even to basic health and rehabilitation services (Meikle 2002). The scaling up of CBR is therefore urgently needed, but there is also a need for a stronger evidence base on the efficacy and effectiveness of CBR programs (Finkenflugel 2005; Hartley 2009; WHO 2011) to support the expansion in coverage of CBR.

1.3 HOW THE INTERVENTION MIGHT WORK

A health condition may lead to an impairment, which could restrict full participation in aspects of society, thus resulting in disability. Providing CBR may reduce some of the consequences of the impairment, by facilitating participation by PWD in the domains of health, education, livelihood, social activities, and empowerment. CBR could therefore range from providing assistive devices in the community to increase mobility, to coordinating with local schools to ensure inclusion of children with disability, offering vocational rehabilitation to increase wage employment, family counselling to improve relationships, and the establishment of self-help groups to improve political participation. The outcomes of CBR will therefore vary depending on the targets of specific programmes, but could include improving social participation, clinical outcome and quality of life among PWD.

1.4 WHY IT IS IMPORTANT TO DO THIS REVIEW

There are estimated to be at least 1 billion PWD in the world. Many of these PWD will require CBR to meet their basic needs, ensure inclusion and participation, and enhance the quality of life of PWD and their family, their caregivers or their community (WHO 2011). Unfortunately the coverage of CBR is currently very low (Meikle 2002), and the evidence has not been comprehensively assessed to identify whether CBR is effective and under which circumstances. Establishing an evidence base for the effectiveness of CBR is inherently difficult (Hartley 2009). Each individual programme is tailored to the specific needs and setting and therefore may include a different focus, different components and different client types. Furthermore, the impact of CBR can be measured in a variety of domains. The only available literature review on CBR in developing countries (Finkenflugel 2005) found that the impact evidence base is 'fragmented and incoherent' on almost all aspects of CBR and noted methodological concerns with many studies. However, the authors did not assess the overall impact of CBR in their review. Other literature reviews have reported more positively on the literature, but were more limited in scope, focusing on specific geographical location (Velema 2008) or types of disability (Robertson 2012; Wiley-Exley 2007; Evans 2008). Available systematic reviews are also limited in scope, covering either single community-based rehabilitation interventions or single aspects of disability. For instance a co-registered Cochrane/Campbell systematic review focuses on personal assistance in adults (Mayo-Wilson 2008a; Mayo-Wilson 2008b) and children (Mayo-Wilson 2008c; Mayo-Wilson 2008d; Mayo-Wilson 2008e) in both developed and developing countries.

There is therefore a need to assess the full evidence base, updating previous reviews comprehensively and providing an overview assessment, to address the question

‘What are the impacts of CBR for people with disabilities in low- and middle-income countries?’ This will be the first systematic review to our knowledge to address this question comprehensively.

2 Objective of the review

Primary objective: To assess the effectiveness and cost-effectiveness of community-based rehabilitation for people with disabilities in low- and middle-income countries.

3 Methods

3.1 CRITERIA FOR INCLUDING STUDIES IN THE REVIEW [PICOS]

3.1.1 **Participants**

People with disability, and/or their family, their caregivers, their community living in low- and middle-income countries.

Disability is defined as impairments, activity limitations, and participation restrictions denoting the negative aspects of the interaction between an individual (with a health condition) and that individual's contextual factors (environmental and personal factors) (WHO 2011; WHO 2001).

We will include participants from low- and middle –income countries only, as this was the original commitment of CBR (Helander 1989).

3.1.2 **Interventions**

After the definition provided within the CBR Guidelines (WHO 2010a) and its recent operationalisation (Lukersmith in press), we defined community-based rehabilitation as:

- program for people with disabilities;
- delivered at the community level;
- implemented through the combined efforts of at least two of the following: PWD, their family, their caregivers or their community, and the relevant governmental and nongovernmental health, education, vocational, social, and other services; and
- focusing on rehabilitation, equalization of opportunities, poverty reduction, and social inclusion of PWD within general community development.

Due to the lack of a recognised list of long-term physical or mental health conditions associated with disability, the advisory group and experts were consulted and such a list was created (Appendix 1).

A CBR programme is formed by one or more activities in one or more of the five components (health, education, livelihood, social, and empowerment). List of activities for each element of the five components are presented within the CBR Guidelines under the section 'Suggested activities' (WHO 2010a). The following activities are here given as examples:

- Health: training PWD in the use of assistive devices; providing information to PWD and their family or their caregivers about time and location of activities for screening health conditions and impairments associated with disabilities.
- Education: providing education and training for families or caregivers of PWD; installing ramps in schools to make them accessible to PWD using wheelchairs.
- Livelihood: linking the jobseeker with disability to existing support services; advocating before relevant public and private agencies to ensure accessible housing for PWD.
- Social: converting institutions for PWD in rehabilitation centres; providing information to PWD about the sports opportunities available within the community.
- Empowerment: helping PWD running meetings of new self-help group; involving disabled's people organizations in CBR planning, implementation, and monitoring.

CBR interventions will be compared with:

- facility-based interventions;
- other types of CBR interventions;
- other interventions;
- any mix of the above;
- no intervention.

Trials will be excluded if:

- the CBR intervention takes place only in health facilities or schools.

3.1.3 **Outcomes**

3.1.3.1 **Primary Outcomes**

- Functional outcomes, including education, employment status, social participation, empowerment.
- Disability outcomes, such as extent of disability, measured using validated instruments (e.g. Disability Rating Scale (DRS); Expanded Disability Status Scale (EDSS); Global Mental Health Assessment Tool (GMHAT); Clinical Global Impressions Scale (CGIS)).

3.1.3.2 **Secondary Outcomes**

- Quality of life, measured using validated instruments (e.g. WHO Quality of Life-BREF (WHOQOL-BREF); Health-Related Quality of Life (HRQoL); Global Assessment of Functioning (GAF); Medical Outcome Study Short Form 36 (SF36)).
- Economic impact, including cost-effectiveness, cost-utility, cost-benefit.
- Adverse effects.

3.1.4 **Study Types**

Randomised controlled trials, non-randomised controlled trials, controlled before-after studies, controlled interrupted time series studies, economic studies (cost-effectiveness analysis, cost-utility analysis, cost-benefit analysis, economic modelling) of CBR for people with disabilities in low- and middle-income countries in which the outcome is measured before and after the intervention or an intervention is studied against another intervention with baseline.

3.2 SEARCH METHODS FOR IDENTIFICATION OF STUDIES

We will not restrict the search for studies by language or publication status. We aim to include studies regardless of whether they are published or unpublished. Searches will be limited to studies published after 1976 as this is the year when the concept of community-based rehabilitation was first introduced (WHO 1976; Finkenflugel 2004). Low- and middle-income countries were identified using the World Bank Atlas method (World Bank 2012) (Appendix 2).

3.2.1 **Electronic searches**

We will search the following electronic databases:

Biomedical databases

- AIM (African Index Medicus) (Global Health Library)
- CENTRAL (Cochrane Register of Controlled Trials) (The Cochrane Library)
- CINHAL Plus (Cumulative Index to Nursing and Allied Health Literature) (EBSCO)
- Cochrane Database of Systematic Reviews (The Cochrane Library)
- EMBASE (OvidSP)
- Global Health (OvidSP)
- IMEMR (Index Medicus for the Eastern Mediterranean Region) (Global Health Library)
- IMSEAR (Index Medicus for South East Asia Region) (Global Health Library)
- LILACS (Latin American and Caribbean Health Sciences Literature) (Global Health Library)
- MEDLINE (OvidSP)
- PsycINFO (OvidSP)
- WHOLIS (World Health Organisation Library Information System) (Global Health Library)
- WPRIM (Western Pacific Region Index Medicus) (Global Health Library)

Social sciences databases

- CAB Abstract (OvidSP)
- DARE (Database of Abstracts of Reviews of Effectiveness) (The Cochrane Library)
- EconLit (OvidSP)
- ERIC (ProQuest)
- HTA Database (The Cochrane Library)
- IBSS (International Bibliography of the Social Sciences) (ProQuest)

- NHSEED (NHS Economic Evaluation Database) (The Cochrane Library)
- PAIS International (Public Affairs Information Services) (ProQuest)
- The Campbell Collaboration Library of Systematic Reviews (The Campbell Library)
- Web of Science (Web of Knowledge)

We will base the electronic databases searches on the MEDLINE strategy in Appendix 3 which will be adapted as necessary, for use in each of the other databases.

3.2.2 **Other Searches**

We will search relevant websites from governmental and non-governmental organisations, academics, and users using Advanced Google Search (Appendix 4). Relevant embedded databases and libraries within the websites will be searched manually.

We will contact key authors and institutions to request details on recently published, in press, unpublished or ongoing studies on the topic.

We will search reference lists of included studies and literature reviews.
We will track citations of included studies using Google Scholar.

3.3 DATA COLLECTION AND ANALYSIS

3.3.1 **Selection of studies**

Title and abstract of studies stemmed from the electronic searches will be independently screened by couples of reviewers against the inclusion criteria. Whether unclear from the title and abstract, whether the study will meet the inclusion criteria, we will include this in the next screening. Disagreements will be solved through consultation with a third reviewer.

Full-text of studies meeting the inclusion criteria will be retrieved and then screened by couples of reviewers against the inclusion criteria. Disagreements will be solved through consultation with a third reviewer. Missing information necessary for screening will be obtained contacting the authors of the study. If the information cannot be obtained, the study will be listed under 'Studies awaiting classification'.

In order to avoid language bias, studies with full-text in a language different from the ones available (English, French, Spanish, German, Italian) will not be excluded but they will be also listed under 'Studies awaiting classification'. Excluded studies will be listed under 'Excluded studies' and the reason for their exclusion (methods, participants, interventions, publication date, language) will be recorded within the

table ‘Characteristics of excluded studies’. Reviewers will not be blind to any information of studies screened, as for the name of the authors and their affiliations. In order to avoid the outcomes reporting bias, studies will not be excluded on the basis of outcomes only. If the study meets all inclusion criteria but the outcome searched is not reported, the authors of the study will be contacted to obtain missing information.

Full-text of studies in languages other than English (French, Spanish, German, and Italian) will be screened by one reviewer only.

Relevant literature reviews will not be included but they will be identified and recorded in a separate library. Their full-text will be retrieved and reference lists searched.

3.3.2 **Data extraction and management**

Data extraction will be jointly performed by two reviewers: a first reviewer will extract data into a data extraction form and a second reviewer will verify the correctness of data extracted by the first reviewer. Disagreements will be solved through consultation with a third reviewer. Missing information will be obtained by contacting the authors of the study. Review Manager 5 will be used to organise extracted data that will be reported as tables under ‘Characteristics of included studies’ including the ‘Risk of bias table’ and ‘Data and analyses’.

The data extraction form will be developed a priori and it will include the following information:

- Methods: including study design and duration of the study.
- Participants: including type of disability, age, sex, country.
- Interventions: details on both intervention and comparison; including type(s) of CBR, intervention (or comparison) details (i.e. intensity, frequency), agent(s), setting(s).
- Outcomes: including type of outcome(s), measurement instrument(s) (i.e. scale, questionnaire), and time-points measured.
- Funding: including types of funder of the study.
- Publication: including publication type (i.e. article, report), publication language.
- Notes: including comments on the study not covered by the previous categories.

Data extraction from studies in languages other than English (French, Spanish, German, and Italian) will be done by one reviewer only.

3.3.3 Assessment of risk of bias in included studies

As for the data extraction, the assessment of the methodological quality of selected studies will be jointly performed by two reviewers: a first reviewer will assess risk of bias using the data extraction form and a second reviewer will verify the correctness of data extracted by the first reviewer. Disagreements will be solved through consultation with a third reviewer. Assessment the methodological quality of studies in other languages than English (French, Spanish, German, and Italian) will be done by one reviewer only.

We will use the 'Risk of Bias' tool from section 8.5 of the Cochrane Handbook for Systematic Reviews of Interventions (Higgins 2011) to assess the risk that a study over or under-estimates the true intervention effect. We will assess specific potential sources of bias, including: sequence generation, allocation sequence concealment, blinding of outcome assessment; incomplete outcome data; selective outcome reporting; intention-to-treat analyses and 'other' identified concerns about sources of bias such as baseline imbalance and protection against contamination (Lundh 2008). Review authors' judgments regarding risk of bias will be graded for each criterion as low, high, or unclear risk of bias. Risk of bias graph will be developed using Review Manager 5 to summarise methodological quality of the studies included. We will assess missing data and attrition rates for each of the included studies, and report the number of participants who were included in the final analysis as a proportion of all participants in the study. Reasons given for missing data will be provided in the narrative summary and we will ascertain the extent to which the results are altered by missing data in order to offer possible explanation for differences between studies when interpreting the results of the review (Schulz 1995).

We will assess the risk of bias in economic studies using the Drummond checklist (Drummond 1996) and the Evers checklist (Evers 2005) for economic evaluations, and the Philips checklist (Philips 2004) for economic modelling.

3.3.4 Measures of treatment effect

We will analyse dichotomous (binary) outcomes by calculating incidence rate ratios (IRR), cumulative incidence ratios (CIR) or odds ratios (OR) for each study with the uncertainty in each result being expressed using 95% confidence intervals (CI). Where multiple measures of effect are available for the study we will choose the CIR or IRR over the OR, because it is more accessible to understanding and interpretation by non-research/statistically trained stakeholders. When overall results are significant, we will determine the number needed to treat (NNT) or number needed to harm (NNH).

For continuous data, including measurements on scales, we will report the mean score and standard deviation for each outcome as determined by a standardised

tool. These outcome measures will be compared between the two groups to give a mean difference (MD), with a 95% confidence interval. Continuous data that are skewed will be reported separately. Skew will be identified when, for a scale or measure with positive values and a minimum value of zero, the mean is less than twice the standard deviation (Altman 1996).

Where scales measuring the same outcome have different directions of benefit, a minus sign will be added to that measuring a negative direction to ensure that all measurements can be read in the same direction.

3.3.5 **Unit of analysis issues**

Where a study presents results for several periods of follow-up for the same outcome we will only include endpoint data, to avoid double counting of the participants in studies. We will focus on endpoint data because it is more clinically relevant and if change data were to be presented along with endpoint data it would be given undeserved, equal prominence.

Where multiple treatment/control group types are presented in study reports, we will aim to present the data from each study as consistently as possible with the primary comparison of treatment compared with control group. We will conduct a separate sub-group analysis of studies comparing different types of interventions for different types of disabilities.

3.3.6 **Dealing with missing data and incomplete data**

We will contact the original investigators to request any missing data as well as information on whether or not it can be assumed to be missing at random. In addition, as mentioned above (see Assessment of risk of bias in included studies), proportions of missing participants will be reported in the risk of bias assessment, reasons given for missing data will be provided in the narrative summary and the extent to which the results are altered by missing data will be ascertain.

We will report separately all data from studies where more than 50% of participants in any group were lost to follow-up, and explore the impact of this on the review findings by means of sensitivity analysis.

3.4 DATA SYNTHESIS

3.4.1 **Data Synthesis**

Data analysis will be performed using Review Manager 5. If visual examination of

results and test statistics (e.g. Chi2 test and I2 statistic) suggest homogeneity, we will quantitatively combine results for each primary outcome for meta-analysis using a random effects model. The weight given to each study will be the inverse of the variance so that the more precise estimates (from larger studies with more events) are given more weight.

If results are too heterogeneous for meta-analysis or if insufficient data are available to meta-analyse, then the authors will write a narrative synthesis for the results and forest plots will be used to show each study's point estimates and error measurements for each primary outcome. Unless the reason for leaving the study early is clearly reported, we will assume that participants who dropped out had no change in level of baseline physical and psychosocial function. When information provided is insufficient to define the original group size prior to leaving the study, we will contact the authors of the study. We will test the sensitivity of results using the number of patients who completed each study and comparing trials using intention-to-treat analysis with those that did not.

3.4.1.1 **Assessment of heterogeneity**

We will assess heterogeneity in the results of the studies by visual inspection of the graphical presentations, by performing the Chi2 test of heterogeneity (where a significance level less than 0.10 will be interpreted as evidence of heterogeneity), and by examining the I2 statistic (Deeks 2008). We will consider I2 values less than 30% as indicating low levels of heterogeneity, values in the range of 31% to 69% as indicating moderate heterogeneity, and values greater than 70% as indicating high levels of heterogeneity. We will evaluate four possible reasons for heterogeneity for each study through comparing separate subgroups of studies: (i) different quality of the study; (ii) different types of community-based rehabilitation used; (iii) different types of disability; (iv) different baseline levels of symptoms and functioning of participants.

3.4.1.2 **Investigation of Heterogeneity**

If sufficient studies (more than five) are found, we will undertake subgroup analysis to examine the effect on primary outcomes of: (i) type of CBR; (ii) disability type (physical/mental); (iii) severity of disability; (iv) age (children/adults); (v) geographical location (low-/middle-income countries).

3.4.1.3 **Sensitivity Analysis**

If there are sufficient data, we will undertake sensitivity analyses to investigate the robustness of the overall findings in relation to aspects of methodological quality.

3.4.1.4 **Assessment of Reporting Biases**

If sufficient studies are identified (more than five) we will enter data from all selected studies into a funnel graph (study effect versus study size) in an attempt to investigate the likelihood of overt publication and related biases.

4 Acknowledgements

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8 Apendices

8.1 LIST OF LONG-TERM PHYSICAL OR MENTAL HEALH CONDITIONS, AND ASSOCIATED IMPAIRMENTS, THAT MAY RESULT IN DISABILITY

Due to the lack of a recognised list of long-term physical or mental health conditions associated with disability, authors and experts were consulted and such a list was created and reported here below. Where possible, impairments and conditions were classified after the International Classification of Disease 10th Revision (WHO 2010b).

Long-term physical conditions	There is a wide range of musculoskeletal and/or neurological conditions that may result in impairments associated with disability including: • cerebral palsy • epilepsy • spina bifida • muscular dystrophy • polio • arthritis • osteogenesis imperfecta • congenital malformation of the limbs • some acquired brain injuries • some orthopaedic conditions (including amputation)
Long-term sensory impairments	• Visual impairment including blindness (binocular or monocular) (H54)* • Conductive and sensorineural hearing loss (H90)*
Long-term mental health conditions	• Schizophrenia, schizotypal and delusional disorders (F20-29)* • Organic, including symptomatic, mental disorders (includes dementia) (F00-09)* • Alzheimer's disease (G30)*

Long-term intellectual impairments	• Mental retardation (F70-79)* • Disorders of psychological development (F80-89)* • Down's syndrome (Q90)*

Note: *Categories and codes from the International Classification of Disease 10th Revision (WHO 2010b).

8.2 LIST OF LOW- AND MIDDLE-INCOME COUNTRIES

Low- and middle-income countries will be defined using the World Bank Atlas method (World Bank 2012).

Income group	Country
Low-income countries	Afghanistan Bangladesh Benin Burkina Faso Burundi Cambodia Central African Republic Chad Comoros Congo, Dem. Rep Eritrea Ethiopia Gambia, The Guinea Guinea-Bissau Haiti Kenya Korea, Dem Rep. Kyrgyz Republic Liberia Madagascar Malawi Mali Mozambique Myanmar Nepal Niger Rwanda Sierra Leone Somalia Tajikistan

	Tanzania Togo Uganda Zimbabwe
Lower middle-income countries	Angola Armenia Belize Bhutan Bolivia Cameroon Cape Verde Congo, Rep. Côte d'Ivoire Djibouti Egypt, Arab Rep. El Salvador Fiji Georgia Ghana Guatemala Guyana Honduras Indonesia India Iraq Kiribati Kosovo Lao PDR Lesotho Marshall Islands Mauritania Micronesia, Fed. Sts. Moldova Mongolia Morocco Nicaragua Nigeria Pakistan Papua New Guinea Paraguay Philippines Samoa São Tomé and Principe Senegal

	Solomon Islands Sri Lanka Sudan Swaziland Syrian Arab Republic Timor-Leste Tonga Turkmenistan Tuvalu Ukraine Uzbekistan Vanuatu Vietnam West Bank and Gaza Yemen, Rep. Zambia
Upper middle-income countries	Albania Algeria American Samoa Antigua and Barbuda Argentina Azerbaijan Belarus Bosnia and Herzegovina Botswana Brazil Bulgaria Chile China Colombia Costa Rica Cuba Dominica Dominican Republic Ecuador Gabon Grenada Iran, Islamic Rep. Jamaica Jordan Kazakhstan Latvia Lebanon Libya

	Lithuania Macedonia, FYR Malaysia Maldives Mauritius Mayotte Mexico Montenegro Namibia Palau Panama Peru Romania Russian Federation Serbia Seychelles South Africa St. Kitts and Nevis St. Lucia St. Vincent and the Grenadines Suriname Thailand Tunisia Turkey Uruguay Venezuela, RB

8.3 MEDLINE SEARCH STRATEGY

MEDLINE (OvidSP) 1946 to June Week 1 2012

1. (Community-based rehabilitation or Community based rehabilitation or CBR).sh,ti,ab.
2. (Communit* adj5 (rehabilitat* or health care or healthcare or health service* or health nursing* or health visitor* or health network* or care network* or counsel* or foster home* or foster care* or home care* or homecare or domiciliary care* or preventive health or health education or health promotion or self-help device* or assistive device*)).sh,ti,ab.
3. (Communit* adj5 inclusi* adj5 (education or school* or preschool* or high-school* or environment* or curricul*)).sh,ti,ab.
4. (Communit* adj5 (vocational training or apprenticeship* or employment placement service* or support network* or selfemploy* or social service* or social work*)).sh,ti,ab.
5. (Communit* adj5 (personal assistance or personal assistant* or individual support* or disabled people* organization* or disabled people*

organisation*)).sh,ti,ab.
6. (Communit* adj5 (empower* or awareness campaign* or self-advocacy or self-help group* or support group* or women group* or political group* or development group*)).sh,ti,ab.
7. (Communit* adj5 inclusi* adj5 (health or education or hous* or social or justice or empower*)).sh,ti,ab.
8. (rehabilitat* adj5 (home based or home-based)).sh,ti,ab.
9. (exp Rehabilitation/ or exp Rehabilitation Centers/ or ((exp Community Health Services/ or exp Social Work/ or exp Self-Help Groups/) and rehabilitat*.sh,ti,ab.)) and communit*.sh,ti,ab.
10. exp Home Care/ and rehabilitat*.sh,ti,ab.
11. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10
12. (Physical* adj5 (impair* or deficienc* or disable* or disabili* or handicap*)).sh,ti,ab.
13. (Cerebral pals* or Spina bifida or Muscular dystroph* or Arthriti* or Osteogenesis imperfecta or Musculoskeletal abnormalit* or Musculo-skeletal abnormalit* or Muscular abnormalit* or Skeletal abnormalit* or Limb abnormalit* or Brain injur* or Amputation* or Clubfoot or Poliomyeliti* or Paraplegi* or Paralys* or Paralyz* or Hemiplegi* or Stroke* or Cerebrovascular accident*).sh,ti,ab.
14. exp Cerebral palsy/ or exp Spina Bifida Cystica/ or exp Spina Bifida Occulta/ or exp Muscular dystrophies/ or exp Arthritis/ or exp Osteogenesis Imperfecta/ or exp Musculoskeletal Abnormalities/ or exp Brain Injuries/ or exp Amputation/ or exp Clubfoot/ or exp Poliomyelitis/ or exp Paraplegia/ or exp Hemiplegia/ or exp Stroke/
15. ((Hearing or Acoustic or Ear*) adj5 (loss* or impair* or deficienc* or disable* or disabili* or handicap*)).sh,ti,ab.
16. ((Visual* or Vision or Eye*) adj5 (loss* or impair* or deficienc* or disable* or disabili* or handicap*)).sh,ti,ab.
17. (Deaf* or Blind*).sh,ti,ab.
18. exp Hearing Loss/ or exp Vision, Low/ or exp Deafness/ or exp Blindness/
19. (Schizophreni* or Psychos* or Psychotic Disorder* or Schizoaffective Disorder* or Schizophreniform Disorder* or Dementia* or Alzheimer*).sh,ti,ab.
20. exp "schizophrenia and disorders with psychotic features"/ or exp Dementia/ or exp Alzheimer disease/
21. ((Intellectual* or Mental* or Psychological* or Developmental) adj5 (impair* or retard* or deficienc* or disable* or disabili* or handicap* or ill*)).sh,ti,ab.
22. ((communication or language or speech or learning) adj5 disorder*).sh,ti,ab.
23. (Autis* or Dyslexi* or Down* Syndrome or Mongolism or Trisomy 21).sh,ti,ab.
24. exp Intellectual disability/ or exp Developmental Disabilities/ or exp Child Development Disorders, Pervasive/ or exp Communication Disorders/
25. ((Disable* or Disabilit* or Handicapped) adj5 (person* or people)).sh,ti,ab.
26. exp Disabled persons/
27. 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26

28. (Afghanistan or Albania or Algeria or American Samoa or Angola or Antigua or Barbuda or Argentina or Armenia or Azerbaijan or Bangladesh or Belarus or Byelarus or Byelorussia or Belorussia or Belize or Benin or Bhutan or Bolivia or Bosnia or Herzegovina or Hercegovina or Bosnia-Herzegovina or Bosnia-Hercegovina or Botswana or Brazil or Brasil or Bulgaria or Burkina or Upper Volta or Burundi or Urundi or Cambodia or Republic of Kampuchea or Cameroon or Cameroons
or Cape Verde or Central African Republic or Chad or Chile or China or Colombia or Comoros or Comoro Islands or Comores or Congo or DRC or Zaire or Costa Rica or Cote d'Ivoire or Ivory Coast or Cuba or Djibouti or Obock or French Somaliland or Dominica or Dominican Republic or Ecuador or Egypt or United Arab Republic or El Salvador or Eritrea or Ethiopia or Fiji or Gabon or Gabonese Republic or Gambia or Georgia or Ghana or Gold Coast or Grenada or Guatemala or Guinea or Guinea-Bisau or Guiana or Guyana or Haiti or Honduras or India or Indonesia or Iran or Iraq or Jamaica or Jordan or Kazakhstan or Kenya or Kiribati or Republic of Korea or North Korea or DPRK or Kosovo or Kyrgyzstan or Kirghizstan or Kirgizstan or Kirghizia or Kirgizia or Kyrgyz or Kirghiz or Kyrgyz Republic or Lao or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or Malagasy Republic or Malawi or Nyasaland or Malaysia or Malaya or Malay or Maldives or Mali or Marshall Islands or Mauritania or Mauritius or Mayotte or Mexico or Micronesia or Moldova or Moldovia or Mongolia or Montenegro or Morocco or Mozambique or Myanmar or Burma or Namibia or Nepal or Nicaragua or Niger or Nigeria or Pakistan or Palau or Palestine or Panama or Papua New Guinea or Paraguay or Peru or Philippines or Romania or Rumania or Roumania or Russia or Russian Federation or USSR or Soviet Union or Union of Soviet Socialist Republics or Rwanda or Ruanda-Urundi or Samoa or Samoan Islands or Sao Tome or Principe or Senegal or Serbia or Montenegro or Yugoslavia or Seychelles or Sierra Leone or Solomon Islands or Somalia or South Africa or Sri Lanka or Ceylon or Saint Kitts or St Kitts or Saint Christopher Island or Nevis or Saint Lucia or St Lucia or Saint Vincent or St Vincent or Grenadines or Sudan or Suriname or Surinam or Swaziland or Syria or Syrian Arab Republic or Tajikistan or Tadzhikistan or Tadjikistan or Tanzania or Thailand or Timor-Leste or East Timor or Togo or Togolese Republic or Tonga or Tunisia or Turkey or Turkmenistan or Turkmenia or Tuvalu or Uganda or Ukraine or Uruguay or Uzbekistan or Vanuatu or New Hebrides or Venezuela or Vietnam or Viet Nam or West Bank or Gaza or Yemen or Zambia or Zimbabwe or Rhodesia).sh,ti,ab,cp.
29. (Africa or Asia or Caribbean or West Indies or Latin America or Central America or South America).sh,ti,ab.
30. exp Africa South of the Sahara/ or exp Asia, Central/ or exp Asia, Southeastern/ or exp Asia, Western/ or exp Latin America/ or exp Caribbean Region/ or exp Central America/ or exp South America/
31. ((Developing or Low-income or low income or Middle-income or Middle income or (Low and middle income) or (Low- and middle-income) or Less-Developed or Less Developed or Least Developed or Under Developed or underdeveloped or

Third-World) adj5 (countr* or nation* or world or econom*)).sh,ti,ab.
32. (LIC or LICs or MIC or MICs or LMIC or LMICs or LAMIC or LAMICs or LAMI countr* or third world).sh,ti,ab.
33. (Transitional countr* or Transitional econom* or Transition countr* or Transition econom*).sh,ti,ab.
34. exp Developing countries/
35. 28 or 29 or 30 or 31 or 32 or 33 or 34
36. 11 and 27 and 35
37. limit 36 to yr="1976 -Current"

8.4 LIST OF RELEVANT WEBSITES

Websites
3ie (International Initiative for Impact Evaluation)*
AbleData*
ADB (Asian Development Bank)
AFD (Agence Française de Développement)
AfDB (African Development Bank)
AIFO (Italian Association Amici di Raoul Follereau)
APHRC (African Population and Health Research Center)
AusAID (Australian Government Overseas Aid Program)
BasicNeeds
CBM
CDB (Caribbean Development Bank)
CIDA (Canadian International Development Agency)
CIRRIE (Centre for International Rehabilitation Research Information & Exchange)*
COOPITA (Cooperazione Italiana allo Sviluppo)
DFID (UK Department for International Development)
DPI (Disabled Peoples' International)
EADI (European Association of Development Research and Training Institutes)
EBRD (European Bank for Reconstruction and Development)
EDF (European Disability Forum)
ELDIS
EPPI-Centre*
EuropeAid (European Commission Cooperation Office)
FIRAH (Foundation of Applied Disability Research)
GPDD (Global Partnership on Disability and Development)
GTZ (Deutsche Gesellschaftfür Technische Zusammenarbeit - German Technical Cooperation)
Handicap international
Hellen Keller International
IDA (International Disability Alliance)

IDB (Inter-American Development Bank)
IDDC (International Disability and Development Consortium)
Irish Aid
Japan International Cooperation Agency (JICA)
Leonard Chesire Disability*
Motivation
NORAD (Norwegian Agency for Development Cooperation)
PAHO (Pan American Health Organisation)
REHABDATADatabase (National Rehabilitation Information Center)*
Sangath
SDC (Swiss Agency for Development and Cooperation)
SIDA (Swedish International Development Cooperation Agency)
Sightsavers
Source (International Online Resource Centre on Disability and Inclusion)*
UCL Centre for International Health & Development
UNDP (United Nations Development Programme)
UNFPA (United Nations Population Fund)
UNHCR (United Nations High Commissioner for Refugees)
UNICEF (United Nations Children's Fund)
USAID (United States Agency for International Development)
WB (World Bank)
WHO (World Health Organization)

Note: *Websites with embedded databases and libraries that will be searched manually.

9 Contribution of Authors

Valentina Iemmi: coordinating the review; designing the review; writing the protocol.
Suresh Kumar: designing the review; writing the protocol.
Karl Blanchet: conceiving the review; designing the review; securing funding for the review.
Sally Hartley: providing advice on the review.
Gudlavaletti Murthy: providing advice on the review.
Vikram Patel: providing advice on the review.
Joerg Weber: providing advice on the review.
Richard Wormald: providing advice on the review.
Hannah Kuper: conceiving the review; designing the review; writing the protocol; securing funding for the review.

10 Declarations of Interest

Professor Patel has a Wellcome Trust grant for a randomised controlled trial for a CBR intervention for schizophrenia in India.

Several members of the group have previously undertaken systematic reviews on related subjects but not on this particular topic.

There are no further conflicts of interest.

11 Published Notes

This review is part of a joint systematic review between Cochrane (Injuries Group) and Campbell Collaboration (International Development Coordinating Group), funded by the International Initiative for Impact Evaluation (3ie). A version of this review will be published in the Cochrane Collaboration Library of Systematic Reviews (http://www.thecochranelibrary.com/view/0/index.html). Another version will be published in the 3ie database of systematic reviews (http://www.3ieimpact.org/en/evidence/systematic-reviews/).