CALL FOR PROPOSALS: SYSTEMATIC REVIEWS

NONCOMMUNICABLE DISEASE-RELATED DISABILITY: IMPLICATIONS FOR POLICY AND PRACTICE

Deadline for submission of Proposals: Friday 29th March 2013

The World Health Organization Disability and Rehabilitation team is pleased to announce a call for proposals for systematic reviews to identify, synthesize and assess all available evidence, quantitative and qualitative, on:

A. The magnitude and scope of disability including impairments, activity limitations and participation restrictions - by the four main noncommunicable diseases (NCDs) being: cardiovascular diseases, cancers, diabetes and chronic lung diseases.

B. Risk factors or predictors (health, environment, personal) of disability onset (ie what are the factors the tip someone from having an NCD to developing an NCD related-impairment).

C. The most effective rehabilitation measures for NCD-related disability that have been applied across different contexts which can result in improved functioning (i.e. reduce impairments, improve activities and participation) or at least maintain or prevent loss of functioning.

This research is being undertaken with support from the Australian government through AusAID.

Rationale

The global impact of noncommunicable diseases constitute a major challenge for development in the twenty-first century, one that undermines social and economic development throughout the world and threatens the achievement of internationally agreed development goals in low-income and middle-income countries. The sheer magnitude of the burden of the four major non-communicable diseases – cardiovascular diseases, diabetes, cancers and chronic respiratory diseases – has galvanized global attention and action. However global action is currently firmly focused on prevention of people acquiring and dying from NCDs. What is less well-considered and addressed is the issue of NCD-related disability, which accounts for 66.5% of all years lived with disability (YLD) in low-income and middle-income countries (WHO, 2011).

NCD-related disability limits one or more of a person’s major life activities such as walking, eating, communicating or caring for oneself. Examples of common NCD-related disability include paralysis due to stroke and amputation as a result of diabetic neuropathy.

1 The ‘four main NCDs’ (cardiovascular diseases, cancers, diabetes and chronic lung diseases) are those targeted by the United Nations global NCD campaign that share risk factors (tobacco use, unhealthy diet, lack of physical activity, harmful alcohol use), cause around 36 million deaths annually (almost 80 per cent of deaths, from such diseases) and result in a high proportion of disability (66.5 per cent of all years lived with disability in low and middle income countries).

2 ‘Environment’ is used widely here to include policies and standards, negative attitudes and stigma, lack of services, problems with service delivery, inadequate funding, lack of accessibility in the built environment and to communication, lack of consultation and involvement, and lack of data and evidence.

3 ‘Different contexts’ refers to rehabilitation settings (hospital, institutional and community), diverse income/resource settings (low, middle, and high income) and across diverse geographical settings (urban, rural, remote).
**Purpose: strengthened evidence-informed policy and program decisions**
The project seeks to fill the evidence gap by providing an authoritative overview of the current evidence on the magnitude and scope of NCD-related disability, risk factors and most effective rehabilitation measures to assist individuals with NCD-related disability achieve and maintain their optimal functioning in interaction with their environment. It is hoped that this evidence base will lead to strengthened health policies and programs and greater investments in rehabilitation for people living with NCD-related disability.

**Outputs, outcomes and impact**
The major immediate outcome of this research for governments and development partners will be
- Improved understanding of the scale and scope of NCD-related disability, and
- Evidence on what rehabilitation measures can be employed to maintain or improve function for people with NCD-related disability.

Evidence suggests that difficulties in functioning related to many health conditions can be reduced and quality of life improved with rehabilitation. It is therefore hoped that a longer term impact of the research will be improvements in the health, functioning and quality of life for people with disability. Removing barriers to participation and unlocking the vast potential of people with disabilities is an important contributor to global poverty reduction and to realizing the substantial economic benefits that come with improvements in wellbeing of people with disability and their caregivers, such as reduced dependency on medical and welfare services and increased participation including in the labor market.

At the strategic level the research findings will inform global policies such as updates to the WHO NCD Global Action Plan and monitoring framework, and technical products such as the WHO Health-related rehabilitation guidelines currently under development (further information available here [http://www.who.int/disabilities/media/news/2012/12_12/en/index.html](http://www.who.int/disabilities/media/news/2012/12_12/en/index.html)). It will enable key bodies such as the NCD Alliance to refine their strategies and ensure that they are well targeted to address issues for all people with NCDs including those with NCD-related disability. It will also inform regional and country-level work on NCDs, including in the Pacific where NCDs are the leading cause of death, accounting for approximately 75% of deaths annually.

The research will be the basis for one or two articles for submission to peer review journals such as the BMJ or Lancet and a NCD-related disability fact sheet in the style and format used for health fact sheets on the WHO internet site ([http://www.who.int/mediacentre/factsheets/en/](http://www.who.int/mediacentre/factsheets/en/)). The technical papers and fact sheets will be used for seminars to build understanding of the issue.

**Scope: inclusion/exclusion**
This study is limited to the four main NCDs targeted in the global NCD campaign due to resource limitations and also as a primary purpose is to strengthen and expand the NCD campaign efforts through improved understanding of the situation of people experiencing NCD-related disability and what measures are known to maintain functioning, prevent loss of functioning or improve functioning. This focus is not intended to lessen the importance of or priority given to other common disability-related health conditions such as arthritis, back problems, mental illness, multiple sclerosis, hearing disorders, vision disorders, asthma, and dementia. It is expected that findings from this research will be applicable and relevant to other health conditions that can lead to similar limitations in body functions and structures, activity limitations and participation restrictions.
Background
The World report on disability, mandated by the World Health Assembly and jointly published by WHO and the World Bank in 2011, provides the first disability prevalence data in over 30 years and suggests that more than a billion people in the world today experience disability. This corresponds to about 15% of the population. Between 110 million people (2.2%) and 190 million (3.8%) have significant difficulties in functioning (2-3). Rates of disability are increasing, partly due to population ageing and the global increase in chronic health conditions, improved medical care and other factors such as the rise in road traffic crashes, climate change, natural disasters and conflict. The increase in NCDs will have a profound effect on disability.

Across the world, people with disabilities have poorer health, lower education achievements, less economic participation and higher rates of poverty than people without disabilities (1). Rates of disability are increasing due to population ageing and the global increase in chronic health conditions (1). Disability disproportionately affects vulnerable populations. Disability is more common among women, older people and households that are poor (1). Lower income countries have a higher prevalence of disability than higher income countries (1).

Noncommunicable diseases (NCDs) are estimated to account for 66.5% of all years lived with disability (YLD) in low-income and middle-income countries (1). NCDs, also known as chronic diseases, are not passed from person to person. They are of long duration and generally slow progression. The four main types of noncommunicable diseases are cardiovascular diseases, cancers, chronic respiratory diseases (such as chronic obstructed pulmonary disease and asthma) and diabetes. These four groups of diseases account for around 80% of all NCD deaths. They share four risk factors: tobacco use, physical inactivity, the harmful use of alcohol and unhealthy diets. An estimated 36 million deaths, or 63% of the 57 million deaths that occurred globally in 2008, were due to noncommunicable diseases, comprising mainly cardiovascular diseases (48%), cancers (21%), chronic respiratory diseases (12%) and diabetes (3.5%).

UN Member States are required to strengthen national rehabilitation services in line with the United Nations (UN) Standard Rules on the Equalization of Opportunities for Persons with Disabilities and the United Nations Convention on the Rights of Persons with Disabilities (CRPD).

UN Standard Rule 3 specifies, "States should ensure the provision of rehabilitation services to people with disabilities in order for them to reach and sustain their optimum level of independence and functioning" (UN, 1993). CRPD Article 25 requires States to "recognize that persons with disabilities have the right to the enjoyment of the highest attainable standard of health without discrimination of disability" and together with Article 26 (Habilitation and Rehabilitation) outlines measures States Parties should undertake to ensure people with disabilities are able to access health-related rehabilitation including:

... appropriate measures, including through peer support, to enable persons with disabilities to attain and maintain their maximum independence, full physical, mental, social and vocational ability, and full inclusion and participation in all aspects of life.

Article 26 further states that services must begin at the earliest possible stage, should be based on multidisciplinary assessment of individual needs and strengths and should include provision of assistive devices and technologies.

Evidence gaps and consequences
The Political Declaration (Annex) of the 2011 High Level Meeting of the United Nations General Assembly on the Prevention and Control of NCDs clearly recognizes that NCDs are among the leading causes of preventable morbidity and of related disability. In doing so Heads of States required WHO and Member States to increase the focus on comprehensive strengthening of health systems that support primary health care, deliver effective, sustainable and coordinated responses and evidence based, cost-
effective, equitable and integrated essential services for addressing NCD risk factors, and for the prevention, treatment and care of NCDs. The High Level Meeting acknowledged the importance of promoting patient empowerment, rehabilitation and palliative care for persons with NCDs, and a life course approach, given the often chronic nature of NCDs.

Current evidence about NCDs focuses on and demonstrates the impact of premature mortality caused by NCDs on health systems and the economy. There is little evidence regarding the impact of NCD-related disability on health systems and the economy due to the sub-optimal health of people living with NCD-related disability, their activity limitations, restrictions in participating in employment and social participation.

There are currently no disability-related indicators that meet the criteria for selection of indicators and targets for the WHO global monitoring framework for NCDs meaning that it is unlikely that data will be collected about the situation for people with NCD-related disability and the impact of the response. The lack of evidence about NCD-related disability also constrains work to update the Six Year Action plan on NCDs to address the needs of people living with NCD-related disability.

The task
Three distinct but linked systematic reviews are required to map the evidence base, assess the quality of the evidence and synthesize it to examine:

A. The magnitude and scope of disability including impairments, activity limitations and participation restrictions - by the four main noncommunicable diseases (NCDs) being: cardiovascular diseases, cancers, diabetes and chronic lung diseases.

B. Risk factors or predictors (health, environment, personal) of disability onset (ie what are the factors the tip someone from having an NCD to developing an NCD related-impairment).

C. The most effective rehabilitation measures for NCD-related disability that have been applied across different contexts that can result in improved functioning (i.e. reduce impairments, improve activities and participation) or at least maintain or prevent loss of functioning.

Protocols are expected to make use of, as appropriate, the following

- the International Classification of Functioning: Disability and health Core Sets (http://www.icf-research-branch.org/icf-core-sets-projects.html) and specifically body function and activities and participation that achieved 50% or more acceptance by experts.
- National surveys on NCD’s,
- Secondary analysis of longitudinal studies on ageing i.e. LSOA, ELSA KLSA, SAGE using either ADL/ IADL or a continuous metric.

Applicants are welcome to provide proposals on one, two, or all three of the issues for investigation.

4 The ‘four main NCD’s (cardiovascular diseases, cancers, diabetes and chronic lung diseases) are those targeted by the United Nations global NCD campaign that share risk factors (tobacco use, unhealthy diet, lack of physical activity, harmful alcohol use), cause around 36 million deaths annually (almost 80 per cent of deaths, from such diseases) and result in a high proportion of disability (66.5 per cent of all years lived with disability in low and middle income countries).

5 ‘Environment’ is used widely here to include policies and standards, negative attitudes and stigma, lack of services, problems with service delivery, inadequate funding, lack of accessibility in the built environment and to communication, lack of consultation and involvement, and lack of data and evidence.

6 ‘Different contexts’ refers to rehabilitation settings (hospital, institutional and community), diverse income/resource settings (low, middle, and high income) and across diverse geographical settings (urban, rural, remote)
**Background and Supporting Documentation**
The WHO/World Bank 2011 World report on disability is a primary reference for this work.

The attached Matrix on dimensions of rehabilitation and lexicon provides guidance on language, concepts and definitions to ensure that there is conceptual consistency across proposals. Applicants are requested to ensure that proposals reflect the language, concepts and definitions contained herein.

**Submission Process**
The deadline for submission of proposals is 29th March 2013. Proposals received after the deadline will not be considered. Full proposals must be submitted via email to Rachel Mcleod-Mackenzie at mackenzier@who.int. All proposals must be written in English and address all components contained in the proposal guideline below.

Enquiries should be directed in writing via email to Kristen Pratt at prattk@who.int. All responses will be issued in writing.

Final details of systematic review protocols will be negotiated between successful applicants and WHO secretariat.

**Selection and Award Process**
All proposals will be reviewed on a competitive basis by a committee of experts and will be evaluated according to merit based on the following criteria:

- Appropriateness and robustness of proposed methodological approach 30%
- Capacity of research team to implement proposal 30%
- Reasonable costs and value for money 25%
- Feasibility of approaches to achieve results within given time frame and precision and clarity of proposal 15%

**Eligibility Criteria and Requirements**
Previous experiencing of doing and publishing a systematic review is essential. Lead researchers must have been listed as either first or second author to the standard of lancet or Cochrane.

Disabled Peoples Organizations and individuals from organizations in low and middle income countries (LMIC) that are engaged in research are strongly encouraged to apply. Collaborations between LMIC organizations and individuals and organizations in high-income countries are also encouraged.

**Proposed Timeline for Call**

<table>
<thead>
<tr>
<th>Event</th>
<th>Dates</th>
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<tbody>
<tr>
<td>Call for proposals</td>
<td>Thursday 28th February 2013</td>
</tr>
<tr>
<td>Deadline for submission of proposals</td>
<td>Friday 29th March 2013</td>
</tr>
<tr>
<td>Assessment of proposals, advice to successful applicants and finalize terms of reference and contracts</td>
<td>April/May 2013</td>
</tr>
<tr>
<td>Research commences</td>
<td>May/June 2013</td>
</tr>
<tr>
<td>Research completed</td>
<td>February 2014</td>
</tr>
<tr>
<td>Expert Group meeting to review findings, reach consensus on conclusions and approaches to presenting findings</td>
<td>March 2014</td>
</tr>
</tbody>
</table>
Content of proposals

| Title page                                                                 | Title of Research Question (A. B. and or C)
|                                                                          | Name and contact details of organization, principal researcher and alternate contact (administrative contact). |
| Study design                                                             | All three research areas are to be investigated using a systematic review approach. A set of focused PICO\(^7\) questions should be worked up out of each research area and used as the basis of the systematic review strategy. PICO questions should be articulated in the proposals. |
| Research methods                                                         | **Search strategy** – detailed overview of the research strategy(s): populations, outcomes, interventions (related to questions 3), types and sources of information; proposed search terms (for example free text and MeSH) and inclusion/exclusion criteria, etc. The strategy should also include languages to be searched, time periods for evidence collection, and any limitations to the strategy.  
**Data analysis** – details of data collection, screening and analysis i.e. what techniques will be used, what tools will be used if any; and how the approaches selected will ensure the best result in answering the research questions. Details should also be provided of how the data and results will be presented. The GRADE approach should be used for all PICO questions and results should be presented in Summary of Findings Tables and GRADE Evidence Profiles. [http://www.gradeworkinggroup.org/index.htm](http://www.gradeworkinggroup.org/index.htm) |
| Timeline and deliverables                                                | Outline of key activities, milestones and outputs with related timeframes. Present in a tabular format. |
| Budget & justification for costs                                         | Details of resources and expenditure needed for each key activity. Amounts should be in USD. |
| Research team                                                            | Names, positions, qualifications and contact details for all principal investigators and investigators. CVs for key team members to be included in the appendices and should include recent relevant publications and referee contact details.  
For all team members responsible for leading systematic reviews please provide details of Systematic review and GRADE experience. |
| Reference list                                                           | References should be cited in the text using author/date. Reference lists at the end of the document should be formatted according to the *WHO style guide*. |
| Appendices                                                                | Include relevant appendices e.g. CVs, Declaration of conflict of interest form. |

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\(^7\) PICO: Population, Intervention, Comparison, Outcome, Timing (if relevant) and Setting (if relevant):
Matrix on dimensions of rehabilitation

This matrix is intended to provide a common understanding of the different dimensions of rehabilitation. The definitions that follow have been sourced from a range of WHO documents and other internationally recognized sources. The matrix and associated lexicon are works in progress that will evolve over time.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Variables</th>
</tr>
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| Health condition                              | • Disorder  
|                                               | • Disease  
|                                               | • Injury  |
| Health condition/impairment by pattern of progression | • Temporary  
|                                               | • Intermittent  
|                                               | • Progressive  
|                                               | • Regressive  
|                                               | • Stable  
|                                               | • Deterioration (eg due to age, comorbidity etc)  |
| Types of impairment                           | • Sensory  
|                                               | • Physical  
|                                               | • Cognitive  
|                                               | • Mental  
|                                               | • Intellectual  
|                                               | • Behavioral  
|                                               | • Communication  
|                                               | • Cardio-respiratory  |
| Rehabilitation objectives                     | • Prevention of the loss of function  
|                                               | • Slowing the rate of loss of function  
|                                               | • Improvement or restoration of function  
|                                               | • Compensation for lost function  
|                                               | • Maintenance of current function  |
| Rehabilitation outcomes                       | • Decreased length of hospital stay  
|                                               | • Increased independence  
|                                               | • Decreased burden of care  
|                                               | • Return to role/occupation that is age, gender and context relevant (eg home care, school, work)  |
| Levels of health care                         | • Primary (local)  
|                                               | • Secondary (district/regional)  
|                                               | • Tertiary (national)  |
| Rehabilitation settings                       | • Hospital settings  
|                                               | • Other institutional settings  
|                                               | • Community settings  |
| Phases of health care                         | • Acute care  
|                                               | • Sub-acute  
|                                               | • Post-acute  
|                                               | • Long term  |
| Models of service delivery                    | • In-patient  
|                                               | • Out-patient (includes day rehabilitation)  
|                                               | • Outreach (includes in-reach, mobile and telerehabilitation )  
|                                               | • Home-based  |
| Rehabilitation measures          | • Rehabilitation medicine  
|                                 | • Therapy  
|                                 | • Assistive technology  
| Complexity of rehabilitation services | • Low cost / high volume services  
|                                 | • High cost / low volume services  
| Priority                        | • Essential  
|                                 | • Important  
|                                 | • Desirable  
|                                 | • Not required  
| Resources                        | • Human  
|                                 | • Infrastructure  
|                                 | • Non-durable equipment and supplies  
|                                 | • Durable rehabilitation equipment and technologies  
|                                 | • Financial  
| Rehabilitation workforce        | • Rehabilitation personnel  
|                                 | • Other clinical personnel  
|                                 | • Non-clinical personnel e.g. managerial and administrative personnel  
|                                 | • Users (including individuals/family members/care givers etc)  
| Income setting                  | • Low income countries  
|                                 | • Lower middle income countries  
|                                 | • Upper middle income countries  
|                                 | • High income countries  
| Geographical setting            | • Urban  
|                                 | • Rural  
|                                 | • Remote  
| Financing                       | • State-funded (public)  
|                                 | • Private for profit  
|                                 | • Private not for profit, including non-government organizations, charitable based organizations  
|                                 | • User-funded  
|                                 | • International assistance  
| Data                            | • Population-level  
|                                 | • System-level (eg service network)  
|                                 | • Service-level (eg individual provider)  
|                                 | • User-level  
| Stakeholders                    | • Policy-makers / planners (State and non-state actors)  
|                                 | • Administrators/ managers  
|                                 | • Clinicians  
|                                 | • Users (including individuals/family members/care givers etc)  
|                                 | • Community members  
|                                 | • Donors  

Health Systems Strengthening Terminology

**Health system**

A health system consists of all the organizations, institutions, resources and people whose primary purpose is to improve health. The key components of a well-functioning health system include:

- **Leadership and governance**: Leadership and governance involves ensuring strategic policy frameworks exist and are combined with effective oversight, coalition-building, regulation, attention to system-design and accountability.

- **Service delivery**: Service delivery can be defined as the way inputs are combined to allow the delivery of a series of interventions or health actions.

- **Human resources**: A health workforce works in ways that are responsive, fair and efficient to achieve the best health outcomes possible, given available resources and circumstances (i.e. there are sufficient staff; fairly distributed; they are competent, responsive and productive).

- **Essential medical products and technologies**: Equitable access to essential medical products, vaccines and technologies of assured quality, safety, efficacy and cost-effectiveness, and their scientifically sound and cost-effective use.

- **Health information systems**: Ensure the production, analysis, dissemination and use of reliable and timely information on health determinants, health system performance and health status.

- **Health financing**: Raises adequate funds for health, in ways that ensure people can use needed services, and are protected from financial catastrophe or impoverishment associated with having to pay for them. It provides incentives for providers and users to be efficient.

**Right to health**

The right to health contains four elements:

- **Availability**: Functioning public health and health care facilities, goods and services, as well as programmes in sufficient quantity.

- **Accessibility**: Health facilities, goods and services accessible to everyone, within the jurisdiction of the State party. Accessibility has four overlapping dimensions: non-discrimination; physical accessibility; economical accessibility (affordability); and information accessibility.

- **Acceptability**: All health facilities, goods and services must be respectful of medical ethics and culturally appropriate as well as sensitive to gender and life-cycle requirements.

- **Quality**: Health facilities, goods and services must be scientifically and medically appropriate and of good quality.

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### International Classification of Functioning, Disability and Health

<table>
<thead>
<tr>
<th>ICF</th>
<th>The classification that provides a unified and standard language and framework for the description of health and health-related states. The ICF is part of the “family” of classifications developed by WHO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heath condition</td>
<td>An umbrella term for disease (acute or chronic), disorder, injury or trauma. A health condition may also include other circumstances such as pregnancy, ageing, stress, congenital anomaly or genetic predisposition.</td>
</tr>
<tr>
<td>Functioning</td>
<td>An umbrella term for body functions, body structures, activities and participation. It denotes the positive aspects of the interaction between an individual (with a health condition) and that individual’s contextual factors (environmental and personal factors).</td>
</tr>
<tr>
<td>Impairment</td>
<td>Loss of abnormality in body structure or physiological function (including mental functions), where abnormality means significant variation from established statistical norms.</td>
</tr>
<tr>
<td>Activity limitations</td>
<td>Difficulties an individual may have in executing activities (tasks or actions).</td>
</tr>
<tr>
<td>Participation restrictions</td>
<td>Problems a person may experience in involvement in life situations.</td>
</tr>
<tr>
<td>Disability</td>
<td>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).</td>
</tr>
<tr>
<td>Environmental factors</td>
<td>Refers to the physical, social, and attitudinal environment in which people live and conduct their lives. For example products and technology; the natural environment; support and relationships; attitudes; and services, systems and policies.</td>
</tr>
<tr>
<td>Personal factors</td>
<td>Factors that relate to the individual - for example age, gender, social status, and life experiences.</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th><strong>Rehabilitation Terminology</strong>(^{11})</th>
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<tbody>
<tr>
<td><strong>Rehabilitation</strong></td>
</tr>
<tr>
<td><strong>Health-related rehabilitation</strong></td>
</tr>
<tr>
<td><strong>The rehabilitation process</strong></td>
</tr>
</tbody>
</table>
| **Rehabilitation objectives** | Rehabilitation objectives include:  
- Prevention of the loss of function.  
- Slowing the rate of loss of function.  
- Improvement or restoration of function.  
- Compensation for loss of function.  
- Maintenance of current function. |
| **Rehabilitation outcomes** | Rehabilitation outcomes are the benefits and changes in the functioning of an individual over time that are attributable to a single measure or set of measures. They may include:  
- Fewer hospital admissions.  
- Increased independence.  
- Decreased burden of care.  
- Return to role/occupation that is age, gender and context relevant (eg home care, school, work).  
- Improved quality of life. |

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## Service Delivery Terminology

### Levels of care
- **Primary care** is usually the first point of contact for patients within the health care system, and provides a link to more specialized care. Primary care is usually based at the local level, and provided in a range of settings – typically community based settings.
- **Secondary care** is health care services provided by medical specialists and other health professionals. Secondary care is usually based at the district/regional level, and provided in a range of settings – typically hospital and institutional settings.
- **Tertiary care**: Specialized consultative health care. Tertiary care is usually based at the national level, and provided in hospital settings generally on an inpatient basis.

### Settings
Settings refer to the places/facilities where rehabilitation services are delivered. Rehabilitation settings include:
- **Hospital / Centers settings**: For example, general hospitals, rehabilitation wards within general hospitals, specialized rehabilitation hospitals and centers.
- **Other Institutional settings**: For example, nursing homes, respite care centres, hospices, and military residential settings.
- **Community based settings**: For example single or multiprofessional practices (office or clinic), homes, schools, and workplaces.

### Phases of care
Phases of care indicate the stage of the health condition:
- **Acute**: short-term treatment for a health condition.
- **Sub-acute**: comprehensive inpatient care following an acute health condition or exacerbation of a health conditions. It is of moderate duration.
- **Post-acute**: care designed to improve the transition from hospital to the community.
- **Long term**: care which is provided over a long duration to meet both the medical and non-medical needs of people with a chronic health condition or disability.

### Rehabilitation services
Health services are the most visible functions of any health system, both to users and the general public. Rehabilitation services (a subset of health services) include all those measures that relate to preventing the loss of function; slowing the rate of loss of function; improving or restoring function; compensating for lost function; and maintaining current function.

### Rehabilitation personnel competencies
Competencies are the skills, knowledge, behaviors and attitudes that are instrumental in the delivery of desired results, and consequently, of job performance.\(^{12}\)

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### Rehabilitation measures

An activity or set of activities that can be broadly divided into three categories: i) rehabilitation medicine; ii) therapy; and iii) assistive technology. For example, therapy measures may include: training, education; exercises; support and counseling; modifications to the environment; and provision of resources and assistive technology.

### Models of service delivery

Models of service delivery are the ways in which rehabilitation services/measures can be delivered and include:

- **Inpatient**
- **Outpatient**: includes day rehabilitation.
- **Outreach**: includes in-reach, mobile and telerehabilitation
- **Home-based**

### Other Relevant Terminology

#### Priority levels

- **Essential**: Indicates items\(^3\) should always be available at the stated level. These items represent the ‘lowest common denominator’ that should be provided in all settings.
- **Important**: Indicates items that increase the probability of successful rehabilitation outcomes, but require greater investment and thus may not be affordable in low-resource settings. Such items may, however, be designated essential in settings with adequate resource capacity.
- **Desirable**: Indicates items that are potentially needed, and thus will be dependent upon priorities and available resources.
- **Not required**: Indicates items that are not considered to be necessary to provide rehabilitation services at the given level of the health care system.

#### Income setting\(^4\)

Countries can be grouped according to Gross National Income (GNI) per capita. According to the World Bank the groups are: low income, $1,025 or less; lower middle income, $1,026 - $4,035; upper middle income, $4,036 - $12,475; and high income, $12,476 or more.

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\(^3\) Items include: services, measures, resources etc.

\(^4\) World Bank [http://data.worldbank.org/about/country-classifications](http://data.worldbank.org/about/country-classifications)