



**Physical Disability and Rehabilitation**  
(Physical Therapy, Orthopaedic Workshops, Orthopaedic and  
Reconstructive Surgery)

**Policy Paper**

**Physical Disability and Rehabilitation Advisory working group, Dec 2007**

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## **Physical Disability and Rehabilitation**

### **Background**

CBM's purpose is to improve the quality of life of the world's poorest persons with disabilities and those at risk of disability who live in the most disadvantaged societies. This document addresses the issue of the medical and rehabilitative care of persons with physical disabilities. It is understood that this policy is to be integrated with the policy documents of other advisory working groups. It should also be emphasised that the physical disability work of CBM occurs within the context of CBM's Disability and Development Policy, with a human rights perspective and working toward full inclusion of people with disabilities within their society.

### **1. The scope of the problem**

#### **1.1 How many people in the world have physical impairments?**

The World Health Organisation (WHO) estimates that 7-10% of human beings have some degree of impairment or disability. About 80% of these live in developing countries and of these it is estimated that less than 5% have access to rehabilitation services.

An epidemiologic survey by CBM in Rwanda has shown that for every million people there are 17,000 children with mobility impairment.

A significant number of people with physical disabilities will require medical and rehabilitative services. CBM's work in the fields of physical therapy, orthopaedic and reconstructive surgery, and orthopaedic workshops addresses this issue.

#### **1.2 What Specific Diagnoses are involved?**

The following twelve conditions account for the majority of the workload in CBM's physical disability programmes (not in order of priority):

- 1.2.1 Cerebral Palsy
- 1.2.2 Neurologic & neuromuscular conditions
- 1.2.3 Osteomyelitis and septic arthritis
- 1.2.4 Clubfoot
- 1.2.5 Congenital limb deformity
- 1.2.6 Angular limb deformity
- 1.2.7 Burn contractures
- 1.2.8 Tuberculosis of the spine
- 1.2.9 Hydrocephalus and Spina bifida
- 1.2.10 Cleft lip and palate
- 1.2.11 Developmental Dislocation of the Hip
- 1.2.12 Vesico-vaginal fistula

## 1.3 Effects of physical impairment

### 1.3.1 The individual

People with physical impairments are often significantly disabled, often stigmatised, often have a reduced quality of life, and in some cases also a reduced life span if treatment is not available. They are also socially and economically disadvantaged at all ages of life. Educational opportunities are reduced through selection bias and because of transport difficulties. Employment opportunities in most countries are also reduced for similar reasons.

### 1.3.2 Mothers

Mothers of children with physical disabilities have to spend more time looking after them and less time with their other children or on domestic, agricultural or economic activities. Such mothers may become socially and economically disadvantaged and may share with their child the stigma of physical disability.

### 1.3.3 Families / Community

People with physical disabilities are less able than others to grow their own food or contribute to subsistence living for the family. They can be seen as a burden to the rest of the family, the local community, the social services of the country, and the budget of the ministry of health.

## 1.4 Lack of trained personnel and resources

Health resources and resources for physical rehabilitation are severely limited in most developing countries. It is recognised that there are many other organisations working in the field of physical impairment. These include governmental, non governmental and international agencies. There is however a lack of trained personnel active in the field in all disciplines and there is also often a lack of co-ordination between agencies.

## 1.5 The impact of HIV/AIDS

It is recognized that HIV/AIDS is a significant cause of physical impairment and adversely affects the treatment and rehabilitation of persons with physical impairments as well as their family members.

## **2. CBM's current work in physical disability**

### **2.1 Activities**

CBM is involved in programmes serving the needs of physically disabled children and adults in many resource-poor countries. This work includes support of schools, vocational and training programmes, rehabilitation centres, programmes involved in the production and fitting of orthoses such as splints, callipers and wheelchairs, physiotherapy and surgery. CBM also supports training programmes for physical and occupational therapists, physiotherapy assistants, workshop technicians, orthopaedic clinical officers, undergraduate medical students and postgraduate surgeons.

### **2.2 Community Based Rehabilitation**

CBM's physical disability work should collaborate and integrate with Community Based Rehabilitation (CBR) programmes and networks. This will promote proper follow-up and full inclusion in society.

### **2.3 Professional Groups involved**

There are three main professional groups involved in the treatment of physical disability in CBM's projects. These are:

#### **2.3.1 Therapists**

This group includes both professionally trained physiotherapists, occupational therapists, speech and language therapists and others, as well as staff trained locally to various levels.

#### **2.3.2 Orthopaedic workshop technologists and technicians**

Prosthetists and Orthotists, including orthopaedic workshop technologists and technicians, are involved in running workshops and fitting patients with assistive devices, positioning devices and mobility devices which includes crutches, orthotic braces, callipers, wheelchairs, tricycles and prosthetic limbs.

The workshops attached to CBM's projects can be categorized on three distinct levels:

Level one is a workshop in a rural area where there may be no electricity. This type of workshop makes use of wood, metal and leather to make simple appliances.

A level two workshop has everything that a level one workshop has, with the addition of moulded plastic technology. This allows the production of lighter and more functional plastic orthoses.

Level three has all the technology of level two with the addition of a capability of making artificial limbs.

#### 2.3.4 Orthopaedic and Reconstructive Surgeons

This group includes co-worker expatriate surgeons as well as national surgeons in countries that have their own surgical training. This expertise is mainly in the fields of reconstructive orthopaedic and plastic surgery.

Within CBM supported projects the three professional groups work together as a team in the management of many of the patients.

### 3. **Aims of CBM's work in physical disability**

CBM's primary aim in its physical disability work is to provide physical rehabilitation services for people with disabilities in communities served by community based rehabilitation (CBR) projects, both CBM supported and otherwise.

Prevention and treatment of physical impairments can be divided into four main concept areas:

#### 3.1 Prevention of primary physical impairment

To prevent physical impairments arising from avoidable diseases, e.g. by health education, nutrition and immunisation. To prevent physical disabilities resulting from trauma, e.g. by seeking ways to prevent accidents.

#### 3.2 Prevention of secondary physical impairment

To prevent or at least limit the development of physical impairment by early referral and by prompt appropriate treatment, e.g. by family, CBR worker, physical therapist, orthopaedic technician or surgeon. Curable impairments, such as clubfoot and cleft lip take priority.

#### 3.3 Treatment of physical impairment

To treat established physical impairment by physical therapy, appliances and surgery in order to minimize its impact.

### 3.4 Rehabilitation of Physical impairment

In cases where established physical impairment cannot be treated, to limit its effects, and to improve quality of life, by rehabilitation, education and training.

Fulfilment of all three areas outlined above involves a collaboration between government and non governmental organizations, and cannot be fully carried out by one organisation. CBM recognizes this and its aim in the countries where it is working is therefore focused in the following areas:

## 4. Strategy

### 4.1 Priorities

#### 4.1.1 The Poor a Priority

CBM's physical disability programmes should concentrate on the economically disadvantaged whose access to other sources of health care is restricted. Care should be taken that sustainability of an institution is not used as a reason for concentration on richer patients and reducing services to the poor.

#### 4.1.2 Children a priority

Children already comprise the major part of CBM's physical disability work. This is formally encouraged because of the numerical need in the developing world and because of the longer potential life ahead of them. Treatment performed early in a child's life is also often more effective. The ultimate aim in assisting children with impairments is to facilitate their inclusion in education.

This priority does not exclude treatment of some adults.

### 4.2 Project strategies

Because the field of physical disability is enormous, certain strategic areas have been selected, in order to maximise the impact of the work.

#### 4.2.1 Comprehensive Service Delivery

Wherever possible CBM should only support physical disability programmes where there is an integrated and comprehensive service delivery to physically impaired people, including a CBR or outreach/follow-up programme, a physical therapy service, a facility for orthopaedic and reconstructive surgery and the services of an orthopaedic workshop.

#### 4.2.3 Capacity Building

All CBM programmes for physical disability should involve some degree of human resource capacity building at all levels. This should be under constant review to ensure that it is appropriate and effective. Where possible capacity building should be coordinated with existing national programmes.

#### 4.2.4 Monitoring and evaluation

All CBM's programmes for physical disability should be designed so that they can be regularly reviewed in terms of cost and effectiveness. They should all keep a data base and appropriate statistics. Standardised outcome measures to assess improvement in quality of life will need to be selected and applied objectively. Support to projects that remain ineffective should be discontinued.

#### 4.2.5 Networking with other organisations

CBM's physical disability programmes should try to cooperate with other organizations that have similar aims. This is to avoid duplication of services as well as to improve the overall service to people with impairments, to build strategic links, and to avoid an attitude of competition.

#### 4.2.6 The future and sustainability

All CBM physical disability projects should be run with the aim of becoming sustainable in the host country and run by nationals even if this seems far in the future. The sustainability should be considered in terms of the progressive reduction of dependency in terms of:

- i. procurement of materials
- ii. professional and technical expertise
- iii. administrative expertise
- iv. budgeting and finances

#### 4.3 Standardised protocols

CBM aims to produce standard protocols in treatment of commonly seen conditions where they may be of benefit. These protocols are not meant to stifle individual freedom of clinical choice, but to outline well



established treatment methods that CBM projects have demonstrated to be effective.

A copy of existing protocols is kept at the Policy and Consultancy desk at CBM International Office in Bensheim, and is available to all co-workers in the field of physical disability.

#### 4.4 Global Programmes

It is recognised that CBM occupies a strategic position among major organisations dealing with physical disability in that it has expertise in all the disciplines of CBR, physiotherapy, orthopaedic technology and orthopaedic and reconstructive surgery. CBM should therefore be alert to the possibility of taking the initiative in cooperation at a global level in programmes dealing with physical disability.

Physical Disability Advisory Working Group  
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