

**GUIDELINES FOR TRAINING PERSONNEL
IN DEVELOPING COUNTRIES
FOR
PROSTHETICS AND ORTHOTICS SERVICES**



International Society
for Prosthetics and Orthotics



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INTRODUCTION

More than 600 million people in the world experience disabilities of various types and degrees. The global disabled population is increasing as a result of population growth, ageing, chronic conditions, malnutrition, war, landmines, violence, road traffic, domestic and occupational injuries and other causes often related to poverty. These trends are creating an overwhelming demand for health and rehabilitation services.

An estimated 80% of the world's disabled people live in developing countries. The majority of them are poor and find difficulty in accessing health and rehabilitation services which ultimately leads to their exclusion from society. With appropriate rehabilitation services, the majority of people with disabilities can become important contributors to society and allocating resources to their rehabilitation is an “Investment”.

Despite the incremental progress made in the past 25 years, today, the vast majority of people with disabilities cannot access even basic rehabilitation services. The majority also cannot exercise their Human Rights, which are defined as the “...right to a standard of living adequate for the health and well-being of individuals and their family, including food, housing and medical care and necessary social services...”

In response to this, the United Nations has issued Standard Rules on the Equalization of Opportunities for Persons with Disabilities* as guidelines in health, education, work and social participation (UN, 1993). The mandate of the WHO is to provide technical support to the Member States, in order to implement the following Standard Rules:

RULE 2. Medical Care:	RULE 3. Rehabilitation:	RULE 4. Support Services:
States should ensure the provision of effective medical care to persons with disabilities.	Rehabilitation is a fundamental concept in disability policy. States should ensure the provision of rehabilitation services to persons with disabilities in order for them to reach and sustain their optimum level of independence and functioning.	States should ensure the development and supply of support services, including assistive devices for persons with disabilities, to assist them to increase their level of independence in their daily living and to exercise their rights.

**Adopted by the United Nations General Assembly, forty-eighth session, resolution 48/96, annex, of 20 December 1993*

One of the most important components of rehabilitation and support services is assistive devices which often provide the first step to ensure that people with disabilities are equal members of society. Among assistive devices, prostheses and orthoses are required by the majority of people with physical disabilities.

Persons with physical disabilities, who have a need for prosthetics/orthotics and related rehabilitation services in developing countries, represent 0.5% of the population. In 2004 there are 5.1 billion people in Africa, Asia and Latin America so there will be 25.5 million people in need of prosthetic/orthotic devices. The vast majority of these persons can remain free of deformities or be re-established to function in society if provided with appropriate prosthetic/orthotic devices.

They can be at least partly removed from poverty and become active contributors to their families, communities and society welfare at large, if provided with rehabilitation services by an integrated multi-disciplinary health and social welfare team. Beneficiaries of prosthetics and orthotics services can contribute positively to the socio-economic condition of the country.

Mobility is the first step to access basic rights including access to food, shelter, education, job/income, equal opportunities and equal citizenship. The most important components in the restoration of mobility are assistive devices such as orthoses, prostheses and mobility aids. Prosthetics and orthotics services play a major role in enabling a person with a disability to change from being immobile to becoming mobile, a passive receiver to an active contributor, and isolation to inclusion. They also help to provide further means towards equality by helping a child with disability to go to school or an adult with disability to go for skills training or income generation activities.

To provide the necessary quality of prosthetics and orthotics services it is important that the personnel providing them should have an adequate level of education and training.

A World Health Organization Consultation on training of personnel for prosthetics and orthotics services in developing countries took place at the Eastern Mediterranean Regional Office, Alexandria, Egypt, in June 1990. The purpose of the Consultation was to prepare a general description of the work done by personnel who provide prosthetics/orthotics and related rehabilitation services, and a guide for training them based on the work they must perform. This resulted in the publication *Guidelines for Training Personnel in Developing Countries for Prosthetic and Orthotic Services* (WHO, 1990).

The International Society for Prosthetics and Orthotics (ISPO), at the request of the World Health Organization (WHO) coordinated a follow-up consultation at the WHO Collaborating

Centre, the National Centre for Training and Education in Prosthetics and Orthotics, University of Strathclyde, Glasgow, Scotland, United Kingdom in September 2003, in order to identify development and changes in the 13 years since the Alexandria meeting.

The Temporary Advisers who attended the Consultation were from schools in developing countries that educate and train personnel for prosthetics/orthotics services, and from organisations that have been involved in the development and support of such training programmes. (See Annex I for the list of participants in the Consultation).

This document presents the tasks for various types of personnel and the guidelines for their training. In addition, the document presents information on issues related to training, as well as the distribution of prosthetics and orthotics services and personnel, which could be used as an important tool in any kind of national planning of rehabilitation or prosthetics and orthotics services.

NEED FOR PERSONNEL FOR PROSTHETICS AND ORTHOTICS

By the year 2010 the combined population of Africa, Asia and Latin America will be approximately 6 billion. The estimated number of people in need of prosthetic and orthotic devices will be 30 million. The personnel estimated to provide services in prosthetics and orthotics would therefore be 180,000. Approximately, 40,000 trained Category I and II level personnel (as defined in Annexes A and C) are estimated to be needed.

There are approximately 24 schools of varying levels and standards in developing countries which train personnel qualified in some measure to fit, fabricate and assess the biomechanical function of orthopaedic appliances. They graduate no more than 400 personnel per year for all developing countries. It is clear that the existing training arrangements are totally inadequate in comparison to the need. More than 75% of developing countries have no prosthetics and orthotics training programmes which leads to a poor coverage of prosthetics and orthotics services. Urgent measures need to be taken to increase the numbers of personnel being trained in order to ensure all persons with disabilities or who need such kind of services could receive the same regardless of their socio-economic condition and where they live. Prosthetics and orthotics services also need to be decentralised to ensure they are in reach of all. Special emphasis needs to be given to ensure women and girls also get equal opportunities to access the service.

The prosthetics/orthotics professionals are usually part of a multi-disciplinary rehabilitation team. To ensure prosthetics and orthotics service users get a quality service, ISPO has taken several important steps to facilitate and enhance the education of all health care disciplines involved with prosthetics and orthotics throughout the world. The Society has detailed appropriate education and training programmes for the full professional prosthetist/orthotist (Category I), orthopaedic technologist (Category II) and orthopaedic technician/bench worker (Category III). The philosophy and curricula are widely accepted by most of the international governmental and non-governmental agencies in the field of rehabilitation and prosthetics/orthotics services. Category I and II personnel are responsible for direct service. Category III technicians/bench workers are also

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