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Cooperative Orthotic and Prosthetic Enterprise and National Regulatory Authority

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Sustainability
OF PROSTHETIC AND ORTHOTIC PROGRAMS

by Michael A. Boddington, POWER

This paper examines the overall incidence of disability, and specifically of motor-disability, in low-income countries of the world. It observes the attitude of society toward those suffering from disabilities, and argues that there is a need for long-term support for services to the motor-disabled by the international community. In order to generate this support, low-income countries must develop high-efficiency services that minimize the call on international resources. Such services are likely to be outside government. They will be within private nonprofit organizations: ring fenced, transparent, and capable of regular audit.

Motor-Disability in the Low-Income World

POWER was established to provide high-quality prosthetic and orthotic devices to the victims of landmines, especially to those who had lost limbs as a result of the plague of landmines. Over the years, we have come to realize our priorities. There is a huge global population of disabled people. Even Helander has reported on surveys carried out in 59 countries between 1976 and 1994, suggesting that the rate of disability can vary from 0.2 percent to 21 percent. Much of the variation comes from poor definition of disability. There are problems of definition and survey method, but broadly speaking the conclusions that can be inferred from the surveys are:

- Disability increases very significantly with age.
- Rates may be lower in low-income countries because of failure to identify disability and high mortality rates amongst the disabled.
- Overall rates of moderate or severe disability amount to something of the order of 5 percent.

Based on a global population of 6 billion people, the total number of moderately or severely disabled people in the world amounts to 312 million. Of these, just over 100 million live in the western world and the remainder, 210 million—and our constituency—in the low-income world. It is reasonable to expect that most of them are dependent on others to one degree or another. Helander estimates this figure to increase to 435 million by the year 2025—as much because of increasing age as the increasing size of the population of low-income countries.

Helander's estimates of the causes of disability are not broken down by the standard groupings employed by WHO. However, I have allocated some of his categories of disability to motor-disability and derived a percentage, which I have then applied to the figure of 210 million derived above. The result suggests a population of motor-disabled of about 125 million people in the low-income world.

Figures generally quoted for the number of landmine survivors suggest that there are about 250,000 to 300,000 surviving amputees. There are thought to be 25,000 new victims every year, of whom about half die and the remainder are left severely impaired. Given that a number of those who have previously afflicated will die from various causes during any one year, the total number of landmine survivor amputees is unlikely to increase by more than about 5,000 to 10,000 per annum.

Tensile as the landmine plague is, and the plight of landmine survivors, we cannot expect to treat them in isolation. We must treat amputee landmine victims within the overall context of motor-disability.

Disabled People in Society

This paper is concerned with the problem of disability in low-income countries. My observation of people with disability is that they are marginalized. If one comes from a Darwinian stable, then the reasons for this marginalization are understandable. Survival of the fittest requires that species reject less able-bodied specimens. We can note behavioral patterns amongst other species that support this thesis. Mankind, however, lives in a different social and cultural paradigm in which life is valued for its own sake and we are able to recognize the contribution of all human lives. We also recognize and defend the rights of people with disability. In my submission, the high-income countries have many limited resources and huge demands on those resources. The provision of services for motor-disabled people is not a priority. Even where overseas funding is received for the service, it can easily be diverted to other purposes.

The second reason is that staff salaries within government services are frequently very low: consequently, properly trained and competent staff, only to see that advantage whirled away as qualified personnel leave to join other industries or leave the country.

The solution to these problems is to create a body that can continue the service outside government. This body may be a local NGO, and it may be a partnership between public and private organizations. It will be a nonprofit establishment. This formula was devised by a group of international experts—many of them from the low-income world—at the 1997 Henley on Thames Technical Workshop.

The workshop came together to attempt to devise a model or models that will deliver high-quality services for the rehabilitation of disabled persons in low-income countries on a sustainable basis.

The Mozambique Experience

The International Committee for the Red Cross (ICRC) established or developed four ortho-prosthetic centers at Maputo, Beira, Quelimane, and Nampula during the 1980s. A part of the Maputo center is a manufacturing facility, making prosthetic and orthotic components, chiefly from polypropylene.
come within the POWER management, and this proved a considerable drawback. A requirement of the contract with USAID was that POWER would establish a local NGO and place the management of the four centers within this organization. In the event this did not prove possible.

Last year, POWER completely renegotiated its agreement with MISAU, withdrawing from direct involvement in the four centers. Mindful of the reasons for services failing, POWER has agreed with MISAU to continue providing materials for the manufacture of limbs, both to the four centers for which it had responsibility, as well as to those that HI established.

POWER is also undertaking considerable training activity to strengthen management and professional capacity in the centers. Two Category II prosthetists/orthotists will attend a four year course in Strathclyde University, Glasgow, Scotland, to upgrade to Category I. Meanwhile, HI has arranged for three staff members to attend a course in Lynn, Florida, to upgrade to Category I. Thus, of the Category II prosthetists/orthotists, five will be overseas training from September onward. In addition, one has been appointed to a promotional position, one has been fired, and one has moved occupation. Only 16 will be available in the upcoming year to service the requirements of the 10 centers.

Absolutely central and critical to POWER’s new program is an agreement with the Associação dos Deficientes Moçambicanos (ADEMO), to strengthen its management and financial capacity, and to jointly initiate the Council for Action on Disability (CAD) which, it is hoped, will eventually take over POWER’s program in Mozambique. CAD is open to any organization working for the benefit of the disabled in Mozambique to join, and five or six organizations currently attend board meetings as observers. Also central and critical is the development of a new ortho-prosthetic center in Chimoso in Manica province. This will be within the private, nonprofit sector and will be managed by CAD. It is intended that this center will lead the way in demonstrating that high levels of productivity and quality can be achieved when staff are properly and fully incentivized.

In 1999, the Mozambique Red Cross Society (MRCs) is opening a center in Manicaca in Gaza Province, with support from the Jaipur Limb Campaign and the Diana Princess of Wales Memorial Fund. The center is in the private, nonprofit sector and will fit Jaipur Limbs, using staff trained in the technique in India.

It is now MISAU’s policy to maintain one ortho-prosthetic center in each of the 10 provinces. The center at Vilanculos in Inhambane province is to be closed down. With the opening of the POWER center in Chimoso, Manica province, and the MRCs center in Manicaca, Gaza province, this policy will be fulfilled.

It is the responsibility of the Ministry for Coordination of Social Action (MICAS) to make patients aware of the availability of prosthetic and orthotic services and to assist their journeys to the centers. MICAS has available a number of transit centers, where patients can stay free of charge while they are receiving treatment at the centers. Currently, this system is not working well, largely as a result of an inability of MICAS to resource its responsibilities. MICAS also undertakes a means test of all patients and makes charges appropriate to their circumstances for the services that they receive.

I believe that the service in Mozambique is now moving slowly towards the optimum. The establishment of CAD and the collaboration of organizations working for the service of disabled people are huge steps in the right direction. The development of centers in the private, nonprofit sector will give excellent opportunity to make comparisons between services delivered through the public sector and those available within the private sector.

Conclusions

• There is a huge number of motor-disabled throughout the low-income world.

• Landmine survivors represent a small proportion of this number, and their treatment must be subsampled within the broader need.

• Disabled people in general are marginalized and their needs are rarely met, either in whole or in part, by state provision.

• If the needs of the motor-disabled in the low-income world are to be met, it will tend to be as a result of financial support from the international community.

• Such financial support is likely to be required for the very long term.

• In order to minimize the demand on international financial resources, it is necessary to set up effective and competent services within the low-income world.

• Such services are not likely to be within government. The best model will be in the private, nonprofit sector wherever possible in partnership with government.

• Mozambique can provide a model for the rest of the world.

by Dr. Ernest Burgess
Founder, Prosthetics Outreach Foundation

Teaching Them to Fish


While political controversy may reign over involvement in foreign conflicts, it should have no bearing on whether to address the human suffering that accompanies it. The world must act to stem the misery of its refugees and injured, no matter the origin of hostilities. It is not enough for foreign governments and charitable organizations simply to give money to impoverished countries. If they are to make a meaningful, substantive contribution, they must offer aid that empowers those who receive it and leads them toward self-reliance. Once the immediate threat of death is past, the daunting task of rebuilding lives presents itself. This may be a less dramatic need, but one that is just as acute.

Current events in Kosovo bring to mind another American peace-keeping effort that deeply affected the people of a foreign country. Twenty-five years after the end of the Vietnam War, approximately 20 percent of the Vietnamese population is disabled as a result of the war and its aftermath. Residual landmines continue to maim and kill the native population, many of whom are children. Political tension between the United States and Vietnam delayed foreign humanitarian efforts for 15 years, leaving a nation of amputees to cope as best they could, with little ability to make a living and survive in their ruined land.

In 1991, in partnership with the Vietnamese government, the Prosthetics Outreach Foundation (POF) of Seattle opened a medical clinic for amputees in Hanoi. Two years ago, a factory for artificial feet and legs was also created in Ba Vi, making use of POF’s advanced prosthetics technology for treating injuries specific to landmines. The Vietnamese staff was trained to fabricate and fit artificial limbs, using local materials and distribution systems, thereby enabling the people to help themselves and contribute to their own economy. Nearly 10,000 lower limbs have been furnished by the POF Hanoi clinic to amputees in the region, allowing them to resume normal lives that include work, marriage, family, and most importantly, survival. It took money to make this move, but it was the training and technology imparted that made it a successful model of independence and recovery.

The ongoing genocide in the Balkans and Africa requires an urgent response to its survivors. As Americans enjoy an unprecedented era of prosperity, we must stretch the parameters of our own comfort to include those who have lost everything but their lives. The principle of self-reliance, of establishing stability in war-torn nations and confidence to the people. Let us look forward to peace and stand ready to share our skills and knowledge, recognizing that there is no greater humanitarian act than helping people save their own lives.