

**LOCATION**

Moshi, Tanzania

**PARTNER**

MOTIVATION CHARITABLE TRUST, UK

Motivation is an international disability charity based in Bristol. Since its first project in 1991, it has successfully established 15 self-sustaining projects in 14 countries for wheelchair users, with the aim of improving their quality of life.

**SUMMARY**

The project aims to develop a wheelchair technologists' training course.

**PERIOD OF FUNDING**

February to June 2001

**GRANT**

£34,548

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# Wheelchair Technologists' Training Course

**BACKGROUND**

It is estimated that only 2% of the people in Africa who need a wheelchair actually have one, and that locally produced wheelchairs meet just 1% of the need. The few African producers manufacturing wheelchairs often use designs that are inappropriate for an African environment and so break easily and are difficult to repair.

In addition, the quality of life for wheelchair users in Africa is impeded by:

- poor economic status because of the difficulties of maintaining a livelihood
- lack of access to and finance for appropriate wheelchairs and repair services
- restricted mobility because of poor knowledge of wheelchair skills
- poor access to public transport.

After requests for advice from 70 organisations working with wheelchair users in 25 African countries, **Motivation** saw the need for all-round training to build up African capacity to design, produce and maintain wheelchairs locally. Improved access to low-cost, appropriate wheelchairs, health education and knowledge about disability rights will help wheelchair users to participate more fully in family, community and working life.



David Constantine/Motivation

## THE PROJECT

Since June 1999, **Motivation** has been working in Moshi, **Tanzania**, with the **Tanzania Training Centre for Orthopaedic Technologists (TATCOT)**. Between them, TATCOT and Motivation have developed the world's first-ever **Wheelchair Technologists' Training Course (WTTC)**, the first of which was held in 2000-2001.

Motivation and TATCOT taught specialist trainers to run the course, selected the first-year intake of students and adapted the location for the course to be suitable for wheelchair users.

Improved access to low-cost, appropriate wheelchairs, health education and knowledge about disability rights will help wheelchair users to take part more fully in family, community and working life.

The one-year course followed a specially designed curriculum, giving the five selected students the chance to learn how to run an efficient, self-financing workshop on wheelchair production. Textbooks, manuals, and learning and teaching packages were produced for the course, with the hope that they would form the basis for similar training courses in other parts of the world.

The first year's students came from **Tanzania, Uganda** and **Zimbabwe**, and were taught:

- workshop management, including finance, stock control and marketing
- basic wheelchair component design, using technical drawing (it is essential that students understand the principles of wheelchair design so that they can adapt what they learn to suit local conditions and availability of materials in their own countries)
- therapy (including general anatomy and physiology)
- materials and workshop technology (including safety, tools and specialist equipment)
- wheelchair maintenance and how to produce manuals for the user.

Each technician trained was encouraged to establish a workshop of their own with a staff of four and the capacity to produce 20-25 wheelchairs per month. Motivation and TATCOT have now done follow-up work with these technicians in their own workshops. Motivation therapists are working closely with the recent graduates to develop in-country wheelchair distribution systems, teaching them how to identify the most suitable wheelchair for each disabled person. Also, mobility training for new wheelchair users will be introduced so that people learn to make the best possible use of their wheelchair.

Motivation is aware that even the low-cost wheelchairs the graduates are now making may still be too expensive for many Africans. They are therefore working with local organisations to set up schemes to enable the poorest disabled people to obtain wheelchairs. This includes financing schemes so that

people can buy their wheelchairs over a period of time, and wheelchair funds to help the poorest disabled people to meet the cost.

To date, four of the five graduates from the first course are successfully producing wheelchairs and beginning to meet beneficiary needs. The fifth graduate is at the stage of producing a final prototype wheelchair. Beneficiary feedback has been positive, with users of the wheelchairs produced by the first graduates reporting greatly increased levels of mobility and independence.

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TATCOT, with its reputation for being the leading school in the field of prosthetics and orthotics in the developing world, has proved to be the ideal location for the first WTTC. This has helped to promote the course internationally and great interest has been generated among other prosthetic and orthotic training schools in developing countries.

#### LESSONS LEARNED

- Severe problems were experienced in establishing the course because disability remains a low priority with policy makers, particularly when compared with health issues such as malaria and HIV.
- The project revealed that lack of recognition for their profession is a major problem affecting the ability of wheelchair technologists to function effectively in parts of Africa. The project has raised the profile of wheelchair technologists.
- It is unrealistic to expect graduating trainees to establish a workshop from scratch after completing the course, without support from Motivation or another organisation. In some cases, trainees come from an existing orthotic/prosthetic workshop to which they return to implement their learning. In other cases, additional support will be needed to help graduates establish themselves – a process which can take up to one year. Motivation recommends that where trainees come from existing workshops, two should attend training so that they can support each other.
- The course is very practical, particularly in its focus on wheelchair design and construction. The course should be modified to allow a greater focus on how to run a wheelchair production workshop.



■ The success of the course has been assured by two organisations combining their expertise. Motivation brings expertise in wheelchair design and adaptation, and the establishment of wheelchair workshops. TATCOT brings experience of training in a related field – orthotics and prosthetics.

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#### **FUTURE PLANS**

The WTTC is fully sustainable, with course fees funding its ongoing operation. Future plans include:

- continued running of the WTTC, inviting past graduates back to TATCOT as guest lecturers and to provide students with interaction with experienced wheelchair technologists
- further design development work for specific wheelchair components
- development and expansion of wheelchair and hand-tricycle designs
- investigating the replication of the WTTC in Asia or Central America
- development of wheelchair distribution and financing systems
- participation in the **Third All Africa Wheelchair Congress in Zambia** in August 2003, where Motivation and TATCOT will present their experiences to representatives of more than 15 African countries and international donor organisations.