

LOCATION

South Africa and Mozambique

PARTNER

AFRICAN FEDERATION FOR TECHNOLOGY IN HEALTHCARE
The African Federation for Technology in Healthcare promotes, develops and facilitates professional co-operation and integration between organisations and individuals active in healthcare technology-related fields. It encourages the exchange of experiences, ideas and technical/scientific information amongst its members.

SUMMARY

The project aims to integrate two tools that facilitate healthcare technology-related decision making, planning and management to form the *Simulation/Healthcare Technology Management Information System*. These tools are the Essential Healthcare Technology Package and a management system from Mozambique's Ministry of Health.

PERIOD OF FUNDING

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GRANT

£55,000

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Developing the Essential Healthcare Technology Package

BACKGROUND

Problems with healthcare technologies abound in developing countries. In many cases, essential technology is simply not available. However, in other cases, technology may be available but cannot be used for a range of reasons, including problems with the power supply, the absence of other essential resources that are needed to use the equipment and lack of staff skills.

In 2001, an extensive audit of healthcare technology management in more than 100 health facilities showed that these problems are widespread in South Africa.

Technologies are divided into four main categories: medical devices, pharmaceuticals, human resources and facilities.

In many cases, these associated factors are not considered when plans are made to introduce a particular technology. This is partly due to the fact that current planning is 'vertical' – that is, it considers needs for facilities, medical devices, drugs and human resources separately.

THE PROJECT

In response to this situation, the **World Health Organization (WHO)** and the **Medical Research Council of South Africa** have been developing the **Essential Healthcare Technology Package (EHTP)** since 1995. This is a planning method that seeks to ensure that all technologies needed for any particular medical intervention are available before it is carried out. It is both a process and a computer programme that offers planners a tool to plan health services in a logical and integrated manner.

A powerful software package has been developed to facilitate the use of the EHTP planning method. This software constructs a matrix that shows procedures or interventions on one axis and the technologies needed to conduct them on the other. Technologies are divided into four main categories: medical devices, pharmaceuticals, human resources and facilities.

The software produces generic solutions that need to be adapted and modified to specific country settings. With an audit of current healthcare technology management, and using EHTP to assess what is needed, a country can identify the gap between what technologies it has and what it needs.

The KaR programme has contributed towards the funding of two parts of the EHTP project: a **simulation tool** and the **use of EHTP in Mozambique**.

The simulation tool will allow either a generic EHTP database or one modified for a particular country to simulate the technologies needed to deal with a range of clinical scenarios, for example, malaria in primary healthcare settings in Mozambique. It will also be able to cost the technologies and predict the consequences of the lack of any component part.

The responsibility for healthcare technology management in Mozambique currently falls within the Maintenance Department. There are considerable problems with healthcare technology management in Mozambique. These include:

- maintenance staff have very basic skills and over half are above retirement age; for many there is no clear career path
- planning and prioritisation of activities is inconsistent
- difficulties in getting spare parts for equipment
- a lack of clarity over who is responsible for basic maintenance of equipment, for example, cleaning
- limited accountability among staff within the Ministry of Health
- limited capacity of Ministry of Health to use available money for healthcare technology management
- difficulties in establishing an effective stock management system.

The EHTP project is involved in three activities in response to these problems in Mozambique: integrating two software systems, linking the two systems to EHTP and piloting the use of EHTP.

1. Integrating two software programmes into one healthcare technology management system. The first of these programmes is the **Maintenance Information System (MIS)**, which was developed in Mozambique in 1997-1998, based on experience gained in other developing countries. MIS provides an inventory of all equipment within the ministry and tracks all maintenance work being done.

The second programme is the **Healthcare Technology Management Information System (HTM-IS)** – a database which focuses on infrastructure management. It includes data for the health unit as a whole as well as individual buildings and rooms.

2. Linking these two systems to EHTP. The main constraint is that the Mozambican systems and EHTP use different terminology. The Maintenance Department is restructuring the MIS programme to make it compatible with EHTP.

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3. Piloting the use of EHTP in a planning process for a national health programme. The KaR-funded parts of the EHTP project will come together when the simulation tool is tested to simulate the health technology needs of a particular programme operating within Mozambique.

LESSONS LEARNED

- Working with WHO is extremely useful, particularly in overcoming political obstacles, but verifying various stages of the project through WHO's systems was time consuming and has resulted in delays.
 - It is useful to work in partnership, particularly where one partner is 'stronger' than the other. This allows valuable information to be shared, and allows a 'bottom-up' aspect to what otherwise could be seen as a 'top-down' design process.
 - When working in partnership, the importance of face-to-face meetings cannot be overemphasised. Such meetings are even more important where language barriers constrain other means of communication.
 - The generic version of EHTP can be adapted for specific country environments. For example, in Mozambique the Ministry of Health has been adapting the human resources part of EHTP to fit the Mozambican setting.
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FUTURE PLANS

EHTP is currently being piloted in several countries – China, Kyrgyzstan, South Africa, Namibia, Mozambique and Ukraine. Several other collaborative activities are being developed, including mapping WHO's mother and child and adolescent health resources into EHTP. Agreements are also being finalised with organisations in Germany, Switzerland, the UK and the Netherlands for the implementation, validation and assessment of the EHTP concept and methodology.

During 2003-2004, the development of the EHTP will focus on finalising the EHTP simulation tools, data collection and procedure linking, information validation and improving accessibility to the package. This will include developing extensive training materials, help-files and organising several 'training of trainers' workshops.

In South Africa, the Ministry of Health will introduce EHTP to all provinces as part of a strategic resource-planning initiative.