Mozambique

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After independence Mozambique was faced with a difficult situation concerning its health services, because a lot of qualified people left the country. Therefore, there was a need to restart the whole medical equipment strategy in the health services and consequently its clinical engineering support.

Clinical engineering still has a long way to go in terms of implantation and impact in Mozambique, and we need to propose directions for the future development of the field in the country. After independence, in the period between 1975 and 1978 there was no organisation in the maintenance sectors in Mozambique, and only in 1978 the National Maintenance Centre of MISAU was created, with Mario Almeida as the Director of Maintenance. Several training programs for Electromedicine Polivalent Technicians took place with 2 being placed in each province until 1986, reaching a total of 22 technicians. At the Central Hospital of Maputo two engineers (João Nhambessa and Gabriel Consolo) were trained and later benefited from extra training outside the country, in Italy. To fill in the gaps in the training of electromedicine technicians, they benefited from continual training in Electromedicine at WHO training schools in Lome, Togo, and in France, with 12 technicians having taken this opportunity. And one engineer (Manuel Borges de Carvalho) benefited from training in a British University. Two people (Momade Sumalgy and Abubacar Sumalgy) benefited from training in Healthcare Technology Management at University of Cape Town in South Africa. Apart from these trainings there were also several continual training of maintenance personnel, in particular with X-ray, anaesthesia, sterilisation and ventilator equipments, among others. Through agreements with JICA, some technicians of the Ministry of Health benefited from training in maintenance of medical equipment in Japan. In 2009, in an agreement with Fiocruz, a class at the Escola Politécnica de Saúde Joaquim Venâncio in Brasil was initiated for the training in medical equipment aimed at recently admitted engineers for a period of 6 months.

The initial training of the maintenance technicians was of intermediate level, that is, they came with a diploma from Industrial Institutes in the areas of electronics and mechanics without any extra training in medical equipment. After getting into the National Service of Health they benefited from training within the country and abroad which allowed the specific knowledge of the functioning, maintenance and repair of medical equipment. The existing equipments at the time of the creation of the maintenance services were not as sophisticated and demanding as they are today.

With the advancement in the technology of medical equipment and its introduction in the National Service of Health, the difficulties of the maintenance technicians in making the diagnostics of breakdowns, maintaining and repairing equipments were gradually increased. Parallel to this fact, with the discovery of natural resources in Mozambique and the creation of several mega projects, there was a big exodus of the few technicians that were part of the maintenance teams of the Ministry of Health. Better salaries and life
conditions were paramount in the decision to abandon the state apparatus in favour of the private sector. Another conditioning was the appearance of many companies supplying medical equipment without the creation of adequate conditions for technical assistance resorting to the alluring of maintenance technicians for the Ministry of Health.

With all this scenario, the Ministry of Health, through the Department of Infrastructures, was forced to elaborate a curriculum for the training of intermediate level maintenance technicians ministered at Centro de Desenvolvimento Regional Sanitário (CRDS) as a way out to maintain functional the maintenance services in the country. Intermediate level maintenance technicians were trained and at present, together with that stayed in the system, assure the maintenance services.

The CRDS is a public institution of training and research in health, created more than 30 years ago in an agreement between the Government of the Republic of Mozambique and the Africa Region World Health Organisation to which the Portuguese speaking African countries and Equatorial Guinea belong.

Clinical Engineers in Mozambique include higher qualified people, working mainly at the Ministry and the Central Hospital of Maputo and involved in the selection and acquisition of equipment, and lower qualified people working on equipment maintenance in Hospitals or the National Maintenance Centre.

Clinical engineering still has a long way to go in terms of implantation and impact in Mozambique. The increase in numbers of clinical engineers in the country is paramount. From the history of clinical engineering, understanding of the choice, acquisition management and maintenance of medical equipment in the health services, and a study of how the present professionals were trained, we can get a better view of our field and make proposals for the future training of professionals and clinical engineering involvement in the medical equipment chain of use and hopefully help policy makers to shape a better future for us.

A poster will be presented at the III ICEHTMC in Rome and a full paper is prepared to present the present status of Clinical Engineering in Mozambique, including the current situation of clinical engineers working in health facilities and how they were trained, and a description of the processes of acquisition, management and maintenance of medical equipment in the health services. A short history of the development of Clinical Engineering in the country will also be included.

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