

## Community based research by team in KMTC, Kenya

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### 1. What is KMTC?

Kenya Medical Training, College (KMTC) was established in 1927, namely KMTC has a history of seventy-five years. In its headquarters in Nairobi, there are five faculties composed of a total of sixteen departments and one unit. In addition, twenty-three constituent colleges are located throughout Kenya. 600 teaching staff are training a total of 6,000 students who will acquire, when graduated, qualification in one of the health and medical disciplines except that of a physician. Thus, more than 90% of co-medical and health workers in Kenya are the graduates of KMTC. They will be seen at the health facilities in any rural area. KMTC also brings up clinical officers. Although they are not physicians, they can be engaged in the almost same medical work as the physicians under the Clinical Officers Act. They will be found in the small hospitals or health centers in a remote area where the physicians are not available.

KMTC has a Board of Management appointed by the Minister of Health. The Board guides all policy matters. The Director is the Chief Executive of the College.

The functions of KMTC are based on the three pillars of training institutions, i.e. education, research and service to the community. Among other roles KMTC is mandated:

To train and develop students in various disciplines at different levels in accordance with health needs of the community and the sector; To develop trainers of health workers in various disciplines with the capacity to effectively teach, design and produce teaching materials and conduct research; To play a pivotal role in

strengthening of promotive and preventive health care services through educational outreach.

Nairobi college, the headquarter of KMTC, has 16 departments and 1 center. These 16 departments were classified into 5 faculties. Faculty of Clinical Sciences include 3 departments, namely Department of Nursing, Department of Clinical Medicine, and Department of Pharmacy. Faculty of Public Health Sciences include 4 departments, such as Department of Environmental Health Sciences, Department of Health Education, Department of Medical Engineering, and Department of Community Oral Health. Faculty of Research and Information include Department of Medical Education, Department of Health Records and Information, and Department of Information Technology. Faculty of Diagnostic Sciences include Department of Medical Imaging Sciences, and Department of Medical Laboratory Sciences. Faculty of Rehabilitative Sciences include Department of Dental Technology, Department of Physiotherapy, Department of Occupational Therapy, Department of Orthopedic Technology, and Counseling Unit.

### 2. Outline of KMTC/JICA Project

The Project aims to upgrade educational capability of KMTC teaching staff, which will eventually result in providing Kenya with competent co-medical and health workers.

Since KMTC as a whole is a mammoth college as explained above, the current Project focuses its activities on the teaching staff of six primary health care related departments (Departments of Nursing, Health Records and Information, Clinical Medicine, Medical Education, Environmental Health Sciences) at Nairobi Headquarters and of Department of Community Nutrition at Karen College. However the teaching staff of other departments in Nairobi as well as constituent colleges are invited to

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participate in the annual middle level manpower training seminar and the information technology (IT) training. The duration of the Project is five years from the 1<sup>st</sup> March 1998 to 28<sup>th</sup> February 2003. Major activities of this projects are follows;

*(1) Dispatch of Japanese experts on Project*

In total, the twelve long-term and nineteen short-term experts have been dispatched to the Project up to the end of the fiscal year 2001.

*(2) Overseas Training*

The categorized numbers of KMTC trainees who have received overseas training up to 2001 are as follows (see Tables 1).

Table 1 achievements Overseas trainings

Counterpart training in Japan	15
Group training in Japan	4
Long-term (2 years) training in Japan	2
Third country training in Thailand	3

*(3) Provision of Equipment*

JICA has provided teaching materials (e.g. audiovisual equipment, textbooks, personal computers, etc.) necessary for upgrading the educational capacity of teaching staff, which amounts to the total of 95,105,000 yen in the last three years.

*(4) Middle Level Manpower Training Seminar*

With the middle level manpower training budget of JICA, a training seminar has been organized annually for the middle level teaching staff on the specific topic for two to four months.

Year	TOPIC	Number of Participants
1998	Project cycle management and presentation skill	32
1999	Research methodology	30
2000	Curriculum review and development	31
2001	Primary health care through community mobilization & participation	30

*(5) Information Technology (IT) Training*

Up to September 2001, 18 courses were conducted in

basic office applications and 370 participants were trained as follows:

(Staff from KMTC and constitution colleges)

Instructor training: 34, User training: 122 (Health workers from other institutions), User training: 100.

The training courses are now conducted by the KMTC instructors who received the computer training earlier. 70% of the ex-participants in Nairobi campus are utilizing the acquired skills in their work. (Survey results in February 2001)

*(6) Improvement of Education Curriculum*

By September 2001, 19 existing curricula have been revised and updated and one curriculum has been newly developed. A bibliography for curriculum review and development was produced by the Department of Nursing.

*(7) Production of Teaching Materials*

Activities are started in Department of Clinical Medicine(CM) from April 2001.

Workshops for teaching materials production were conducted as follows:

1. 5-30 June 2001 for lecturers in CM, KMTC Nairobi.
2. 3-7 September 2001 for lecturers in CM from constitution colleges.
3. 7-9 November 2001 for lecturers in CM, KMTC Nairobi.

Up to November 2001, the lecturers have produced 3 teaching manuals, 2 posters, 100 transparency sheets, 1 brochure and several handouts in Department of Clinical Medicine.

*(8) Consolidation of Organizations and Facilities*

In order to strengthen IT system and training, the Department of Information Technology was created. To facilitate practical exercise in the environmental health, the Practical Demonstration Building was constructed and opened on 31 August 2001.

*(9) Other activities*

As one of the activities in connection with the 1999 course of the Middle Level Manpower Training(MLMT), a public toilet was constructed in Riruta, Nairobi, with the cooperation of the local community. Its opening ceremony took place on 22 May 2001.4.

**Community-Based Research by Team as a Program of MLMT**

MLMT (Mid-Level Manpower Training) is one of the

most important activities in the JICA/KMTC (Japan International Cooperation Agency/Kenya Medical Training College) project. This program has been prepared for teachers from faculties in the Nairobi headquarters without long-term experts from Japan and from branch schools of KMTC all over Kenya. This is an educational program of several months' duration. In order to encourage the independence of the Kenyan side, the Japanese side has requested Kenyan side bearing the money for management of this program, so that the burden proportion by KMTC has increased during these. The MLMT has been planned, managed, and conducted by JICA long-term experts, the faculties of the KMTC, Japanese short-term experts and Kenyan experts outside of KMTC (university teachers or NGO). For example, in fiscal year 1999, this program invited Dr Takagaki (Kitasato University medical school) and Dr Osaki (National Institute of Public Health) to teach research methodology.

The MLMT is carried out through the exchange of official documents (Exchange of note) between the Kenyan and Japanese governments, according to official records (Record of discussion) about this project. This document describes the purpose and contents of MLMT during this project, as follows:

1998	To improve the teaching skills of faculties in KMTC through fundamental training in a logical framework and by sharpening presentation.
1999	To improve teaching and research skills of faculties in KMTC by presenting a series of lectures about research methodology and by conducting field research.
2000	To emphasize teaching techniques of faculties through the production of teaching materials and management of information.
2001	To improve teaching skills of faculties through primary health care education and curriculum development.
2002	To improve teaching and research skills of faculties again by presenting a series of lectures about research methodology and by conducting field research.

In 1999, MLMT was carried out from August 9 to November 30. Thirty teachers participated in this program from the branch schools and the Nairobi school. During the first month of the program, short-term

experts gave lectures on research methodology, epidemiology, and statistics, and computer handling practices. The participants lived together in dormitories on the Nairobi campus and they learned about the significance, methods, and procedures of the Community-Based Research by team (Gourin) that was carried out at the National Institute of Public Health, Japan. Dr. Takagaki introduced even the most advanced research methodology of molecular biology.

The participants were divided into 6 teams. Each team focused on malaria, HIV/AIDS, diarrhea, acute respiratory infections (ARI), malnutrition, or poor sanitation. First, they used the Internet to search for related articles. Then they discussed research methodology, including the purpose of the research, subjects, sampling methods, and the contents of the questionnaire, and they wrote a research proposal. Researchers from the Kenya Medical Research Institute (KMRI, another JICA project in Kenya) sometimes helped the participants. The team members used the Internet to collect related articles and information, and visited research areas and contacted local professionals to create research questions. They discussed and developed research methodology, target population, sampling procedure, sampling size, checkpoints during home visit interview, and the contents of the questionnaire. After that, they conducted a field survey on each topic. They visited the research area to perform the interview survey and to observe sanitation status, and so on. They brought information back to KMTC, input data on a worksheet using the computer, and calculated and analyzed the data. They summarized the results of the survey and wrote a research report. Furthermore, they brought the summarized results of the survey to the people in surveyed slums and presented it to the residences and local public health personnel in easy-to-understand explanation. For example, the Malaria team visited a public open space in the surveyed slum, asked walking people to get together to hear their presentation and conducted an open-air meeting to report their research results. They also conducted an on-campus meeting to report research results to the faculties at the Nairobi school. Some of the better teams had a chance to present their results in the closing ceremony inviting leading officials from the Ministry of Health in Kenya and from the Japanese embassy and Kenya JICA office.

This was the first time that most of the participants had conducted a field research, summarized the results, written reports, and presented the results. Moreover, for many of them, they had not previously visited a slum.

They revealed the real health status of the slum in Nairobi, and it was important for the participants to be confident as a researcher. Moreover, they had a lot of valuable experiences with their colleagues; both in their team activities and during the time they spent in the campus dormitory. Recently, we observed some improvements on the Kenyan side. The graduates of MLMT in the Nairobi school supported the operation of MLMT, and KMTC established an organization to operate MLMT. This is nothing but a feasible human resources development. This is a very important success and evaluation point for the project.

The summary of presented information explaining Japanese Community-Based Research by Team is shown in appendix

Appendix.

### **Community-Based Research by Team in Japan**

Educational program for community-based research by team and its steps

#### **1. Purpose**

The goal of community-based research by team is that students who specialize in different disciplines form a team and experience team activities to help them manage public health problems at the field level. This program is regarded to be an increasingly important part of the curricula of both the Master and Diploma courses in the National Institute of Public Health.

#### **Characteristics of Community-Based Research by Team (Gourin)**

Team approach by students with different backgrounds, specialities, and experiences.

On-site training: students visit field and discuss with responsible personnel from the field or people or patients living in the field.

This program respects team discussions and decisions.

Since students learn all processes of the research, they are not evaluated by the final research report alone.

#### **Objectives**

To learn not only wide-ranging research methods, but

also how to approach the local community in order to identify solutions.

To realize interdisciplinary collaboration.

To learn how to write reports and present research results.

To learn the research process, including planing, implementation, collaboration with personnel in the field, data analysis, evaluation, report writing, presentation, public health intervention, production of educational materials for the public, etc.

For personnel in the field and teachers to learn from the process and to find the key to improvement of services, etc.

#### **2. Community-based research**

Can cover any field of public health.

Is conducted with quantitative and/or qualitative research methods and is undertaken by a team.

The team is formed by students from different departments.

#### **3. Research field**

Prior to the survey, there needs to be a thorough discussion with those in the field regarding the general thematic topic. The views of problems at the local level should be the primary consideration. The topics of the research are therefore embedded in the local context in the field. The goals and the nature of the research should be discussed in detail with the personnel in the field to ensure that they clearly understand the process.

#### **4. Setting the topics for each team**

Visiting the field, discussing health problems with personnel in the field

Reading major important documents about the fields, and some scientific books or papers.

Discussing with team members

Ironing out differences of opinion according to public health importance and feasibility.

#### **Reference**

1. KMTC/JICA project Homepage, <http://www.jicakenya.org/kmtc/index.htm>

Example of outline of community-based research

