



## ***Original Article***

# **Continuing Medical Education in Eritrea: Need for a System**

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## **Abstract**

The policy of the Eritrean Ministry of Health is to provide continuing education (CE) to health workers at all levels. The main objective of this study is to investigate the current status of the CE activities, how they are run and to draw recommendations for better planning of a CE system for the country.

Data was collected from health workers in three out of the six health zones concerning their participation in CE courses, their views and suggestions. Moreover, the managers of the zonal health offices were interviewed regarding the CE system and its support mechanisms.

During the study, 232 health workers were interviewed of which 59% were female and 85% below 40 years of age. In total, more than 52% of the interviewed health workers attended CE courses in the two years prior to the study. However, 75% of the interviewed workers at the Central Zone (Capital City) attended CE courses during the same period. Most of the CE courses/workshops were sponsored by international organisations and were held in the capital city. The topics covered mostly the public health area and were selected by the sponsors and national programme managers.

The health managers identified shortages of resources and weak technical supervision and support mechanisms as constraints to CE. Only one of the visited hospital had a library.

The study shows that CE activities are taking place but not based upon identified needs. Most of them took place at the central level and were not co-ordinated with the zonal health managers. The study recommends formulating national CE policies and guidelines and involving the zonal managers in implementation. It also suggests to conduct a national CE needs assessment as a basis for the preparation of relevant national training packages.

**Key words:** continuing education; human resources; Eritrea

## **Introduction**

Eritrea became one of the newest sovereign states in 1993 after a long armed struggle. It has borders with Sudan Djibouti, Ethiopia and the Red Sea. It has a total surface area of 124,000 square kilometers, with an estimated population of 3,000,000. The growth rate is 2.8% per year and the fertility rate is 5.8%. About 65% of the population are settled agriculturists, 25% are nomadic or semi nomadic and 15% are urban dwellers. The country is presently divided into 6 zones, 57 sub-zones and 664 villages. Asmara,

with a population of about 450,000, is the capital of the country and the headquarters of the Central Zone.

Eritrea's health services delivery infrastructure, based on the principles of PHC, runs in line with the administrative structure down from the national, zonal, sub-zonal to the village levels. As such, there are 6 national referral hospitals, 7 zonal hospitals, 7 other hospitals, 48 health centres and 145 health stations. Because of the severe constraints presently facing the health and health-related sectors, health status



indicators are poor. The child mortality rate is estimated to be 72 per thousand live births and the infant mortality rate is approximately 136 per thousand live births. The most prevalent causes of child mortality are diarrhoeal diseases, malaria, acute respiratory tract infections and vaccine preventable diseases. The maternal mortality rate is estimated to be 710 per 100,000 live births<sup>(1)</sup>.

For the production of health personnel, the country has five health training schools under the Ministry of Health (MOH), all based in the capital city. They produce nurses, midwives, health assistants and other health technicians. A new College of Health Science was established five years ago in the University of Asmara. Currently, it provides degree courses in Public Health Nursing and Pharmacy, and diploma courses in laboratory technology. The country has 130 medical doctors, 5 dentists, 24 pharmacists, 517 nurses, 1315 Health Assistants, 123 midwives and other allied health professionals and barefoot doctors working in the public sector<sup>(2)</sup>.

The MOH, as in many other developing countries, covers all expenses on training of health workers. Moreover, it spends 60% of the recurrent budget on their salaries<sup>(3)</sup>. Therefore, keeping health workers in place and motivating them through continuing education (CE) is conceived an essential component of human resource management in Eritrea<sup>(4)</sup>.

CE of health workers is defined as all experiences, after an initial training, that help the health care personnel to maintain or improve competencies relevant to the provision of health care. Some principles and features of a working CE are as follows<sup>(5-7)</sup>:

- Available to all health workers on a regular basis
- Based on observed needs
- Objectives determined by health system managers
- Adult education methods used

- Evaluated in terms of changes of work performance

However, there are signs that many CE programmes in developing countries are not functioning well and there are several shortcomings in their implementation. Some of the reasons for this are<sup>(5,6,8)</sup>:

- No clear policies and guidelines for CE programmes;
- Poor co-ordination of CE activities at national and district levels;
- Inappropriate teaching methodologies used
- Poor selection of health workers attending CE programmes;
- Lack of, or inadequate, health literature for health workers at the district level.

The objectives of this study were to investigate the current status of CE activities with a view to determining whether they are based on the above mentioned principles and to provide operational recommendations on developing a more effective CE system for the country.

## Methods

In order to obtain information from the different stakeholders of a CE system, data was collected in 1998 from health workers, zonal medical officers and Directors of MOH departments and divisions using structured questionnaires and interviews.

To have a representation of all levels of facilities, and geographic and socio-economic situations of the country, health facilities from the central, zonal, sub-zonal and village level were included in the appraisal. Three zones, namely Central, Southern and Northern Red Sea were included in the study. From each zone a hospital, 2 health centres (HC) and 3-4 health stations (HS) were chosen.

At the hospital and health centre levels, all health personnel present in the day shift completed the questionnaire. In this way, more

than 80% of the health workers in those health facilities participated in the study. At health stations, all of the health workers filled in the questionnaire. The main aim of this questionnaire was to determine the current CE opportunities for health workers, as well as to obtain their opinion on the different teaching/learning strategies and methods applied.

The managers of the zonal health offices and facilities were also interviewed to provide information on available resources necessary for planning CE programmes. The existing supervision of CE activities at the health facilities was also examined.

## Results

### 1. Opportunities and perceived CE needs of health workers

During the appraisal, 232 health workers at hospital, health centre and health station levels were interviewed / filled in the questionnaires. This number represents more than 10% of the health professionals in Eritrea. Health assistants represented the highest number of respondents at all levels, while no pharmacist is present in the three visited zones. Among the interviewed health workers, 129 (59%) were female. More than 85% of them were below 40 years of age (Table 1).

Table 2 shows the opportunities given to the different health professionals participating in CE activities in the two years prior to the study. 121 (52.4%) of the respondents had the opportunity to attend one or more forms of a CE course. From a zonal perspective, however, more than 75.8% of respondents in the Central Zone had the chance to attend CE courses, while the opportunities for the respondents from North Red Sea and the Southern Zone were 51.6 and 34.2%, respectively. By profession, the laboratory technicians and nurses seem to have attended more training programmes, while midwives and physicians had the least chances.

Among the 121 course and workshop attendants, 66 (54.5%) participated in one course,

while 33 (27.4%) and 14 (11.6%) attended courses or workshops two and three times, respectively (Table 3) and Figure 1.

The MOH organises the CE courses and workshops in collaboration with a number of partners, among which WHO, USAID, UNICEF and Planned Parenthood Association of Eritrea were mentioned by the respondents. More than half of the CE courses and workshops were held in the capital city, Asmara. The duration of 65% of the CE courses/workshops was less than 7 days, while 15% of the activities were conducted for 2 to 4 weeks. Moreover, 75% of the training dealt with subjects in the area of promotive and preventive health. About 14% of the courses were on management and administration and only 10% on clinical and surgical topics.

**Table 1 Age groups of health workers**

Age groups	Frequency (%)
< 20	2 (0.9%)
21-30	84 (36.4%)
31-40	105 (45.4%)
41-50	31 (13.4%)
51-60	9 (3.9%)
Total	231 (100%)

**Table 2 Overall CE opportunities among Respondents**

Profession	Total number of respondents	Number of respondents who attended CE
Physicians	15	6 (40%)
Nurses	42	31 (63.3%)
Health assistants	91	47 (51.6%)
Laboratory technicians	18	12 (66.7%)
X-ray technicians	5	3 (60%)
Midwives	13	4 (33%)
Pharmacy technicians	5	3 (60%)
Anaesthetists	3	2 (66.7%)
Ophthalmic Assistant	1	1 (100%)
Administrative staff	36	11 (44%)
Others	3	1 (100%)
Total	232	121 (52.4%)

**Table 3** Frequency of attendance in CE courses by respondents in the three zones.

Number of attendance	Southern Zone	Central Zone	N. Red Sea Zone	Total	
1 time	25	24	17	66	(54.5%)
2 times	17	11	4	33	(27.4%)
3 times	3	8	3	14	(11.6%)
4 times	-	4	1	5	(4.1%)
5 times	-	-	1	1	(0.83%)
6 times	-	-	1	1	(0.83%)
7 times	1	-	-	1	(0.83%)
Total	47	57	26	121	(100%)

**Figure 1** Frequency of attendance in CE courses by respondents in the three zones.

54% of the respondents perceived the need for further training in clinical and surgical subjects and only 20% felt the need for more training in management and administration. Regarding the place of preference for holding the CE activities, 73% would like it to be away from their work places.

Table 4 shows the respondents' preferences to different teaching methods. As can be observed from the table the health workers are ready to make use of most of the available teaching methods. In fact, About 39% prefer courses/workshops where the participants meet during

the learning process, whereas 30% chose on-the-job-training carried by their supervisors. Moreover, 27% would like to pursue distance learning where the training takes place when the teacher and the student are separated by physical

**Table 4** Teaching method of choice of respondents

Teaching method	Number	(%)
Course/workshop	82	(38.9%)
On-the-job training	64	(30.3%)
Distance learning	57	(27.0%)
Others methods	8	(3.8%)

distances.

### **Interview with the Zonal Medical Officers and heads of health facilities**

Each zone has a Zonal Health Management Team (ZHMT), where heads of different units are members. In some zones, the director of the zonal referral hospital is also a member of the team. The organisation of these teams and the level of functioning differ from zone to zone.

The ZHMTs said that they supervise the sub-zones on a quarterly basis. The zones have neither national guidelines nor tools for supervision and have developed their own checklists. The zonal teams have access to vehicles for conducting their supervisory visits. On the other hand, half of the health centres visited complain of shortage of transport for supervision activities.

With reference to the CE activities, the health centres do not generally organise any training activities. The zonal offices however said they organise CE courses and workshops with the assistance of the central MOH offices and other partners. According to their plans of action, they also organise their own courses from time to time.

The teaching methods recommended by the zonal teams are lectures, workshops and in-service training. The health managers support the idea of preparing most of the teaching learning materials in English and giving verbal explanations in the local languages for lower level cadres whose English fluency is limited.

At the zonal and sub-zonal levels, the availability of resources and support mechanisms for CE varies. In the three visited zones, all health workers responded that they have no job descriptions. More than 66% of the interviewed said that they had not received external supervision for the last six months.

Of the health facilities visited, only Massawa Hospital of the Northern Red Sea Zone has a library whose reading materials are mostly

received through donations and personal contributions. However, the library has not subscribed to any journal due to lack of mechanisms for easy transfer of hard currency. Sixty-four of the 65 health workers interviewed at Massawa Hospital said that they use the library and 80% of them rated it as adequate for their needs.

The ZHMTs in each zone develop their annual health action plans, where training is a major component. However, some zones suffer from shortages of qualified staff to implement the training programmes. Since 1997, the MOH has been allocating a regular annual budget to the zones for training. Moreover, the zones receive other funds from partners for their training programmes. With reference to teaching/learning aids and materials, the North Red Sea Zone has enough resources for conducting courses.

### **Discussion and recommendations**

The health workers in Eritrea are relatively young. In fact, more than 85% of them are below 40 years which means that they will be in the system at least for the next twenty years. This makes it mandatory for the MOH to supplement their training and formulate solid CE programmes for remedial action and continuous updating of skills.

It was observed that health workers in the Central Zone had the highest opportunities force. Nevertheless, more than 54% of the medical doctors and 51% of nurses and midwives are concentrated in the Zone, where about 18% of the total population lives. It is also necessary to keep in mind that all the national referral hospitals are located here<sup>(2)</sup>.

Various CE activities are currently taking place in the country and more than half of the respondents attended courses during the two years prior to the study. But when the activities were analysed, it was observed that:

- most of them were not based on identified needs by the local managers;

- the chances were not distributed equitably, and in fact about half attended courses
- twice or more, while the other half did not attend at all.
- the zonal managers do not follow or supervise the CE activities and no evaluation was carried out.

From the appraisal it was clear that the MOH is committed to improving the health care delivery through CE. Thus, the following courses of action were recommended in order to organise more effective CE activities.

1. Formulation of a National Policy and Guidelines on CE: The State of Eritrea recognises the role of CE in enhancing the competence of workers. In fact, the Government macro-policy document points out to provide CE through formal and informal channels. However, at the MOH level, clear policies and guidelines for the CE of health workers are not yet finalised. Different MOH officers have clear converging views on CE and upgrading of the health workers. But these ideas need to be consolidated to develop national policies and guidelines for CE.

2. It is recommended to establish a national centre for training and CE with the objectives to ensure that the most efficient learning processes are being used in each training activity and that the trained health personnel deliver quality services through supervision and CE measures.

3. In order to provide CE and the required support to health workers, the zonal offices need to be empowered and strengthened. They need training for themselves and other resource persons in the zones. Moreover, a set of teaching/learning aids and materials (including libraries) should be provided to all zones and sub-zones.

4. In order to make the CE relevant to the health service needs is suggested to conduct a

national CE needs assessment from which national training packages are prepared. The assessment should consider the following areas:

- the main causes of morbidity and mortality in the country;
- strengthening the zonal and sub-zonal staff in management and planning health services;
- concurrent introduction of the national health policies and guidelines to all levels.

5. The Research and HRD Division of the MOH, in co-ordination with the National and Zonal CE Committees, should prepare national CE packages. The Division should also support the zones in preparing their own packages. Two considerations should be taken into account when preparing national CE packages. Firstly, most of the interviewed health managers acknowledged that some health workers have problems in understanding the English language. However, they insisted that it is still better to prepare materials in English and allow explanations and discussion in local languages. This is felt important because those health workers who wish to join further training programmes to upgrade themselves will improve their language skills since the medium of instruction of all the health training schools is English. Secondly, according to the target groups, sometimes the content and level of depth of some packages may differ. However, it is advisable to have the same packages for materials dealing with managerial and other public health problems. This will encourage multi-professional training and group learning.

In conclusion, on the basis of the MOH policies and the findings of this appraisal, CE system should be established where all partners are represented. In that way the resources can be efficiently utilised and the CE will be based on the national health systems needs<sup>(7,9)</sup>.

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