

The School of Medicine of the Somali National University

ABDI A. FARAH*, M. STEFANINI**, A. SEBASTIANI**

* *Somali National University - Mogadishu*

** *Università di Roma «La Sapienza» - Roma*

In the early seventies the young and recently refounded Somalian Democratic Republic was faced with the necessity of providing an adequate number of physicians to take care of the health care needs of the populations.

The number of medical doctors was in fact very low, being approximately 150, with less than a hundred originally from Somalia, and only 15 of the 87 Health Care Districts had at least one physician in the staff (Fig. 1).

Fig. 1

1970: Health Assistance

Health districts: 87

physicians \approx (Somali <100)

56 health care centers (Dispensaires, Infirmaries, Hospitals)

≥ 1 physician in only 15 health districts

With such a limited number of medical doctors the Somalian Government could not certainly develop an adequate health care program particularly considering the heavy needs due to the nosologic characteristics of that country, which are barely represented in Fig. 2, where the major endemic and epidemic pathology is reported.

Fig. 2.

Nosological Prevalence in Somalia

Infections diarrheas of infancy

Gastro intestinal infestations

Measles

Tuberculosis

Acute and chronic hepatitis

Malary

Tetanus

Malnutrition

Anemias

In addition to that in the early seventies the living conditions in Somalia were very poor as you can realize by the few parameters that are reported in Fig. 3.

Fig. 3.

1970: Health's Markers

- Life expectancy ~ 40 years
- Infantile mortality < 200 ‰
- Mortality between 0 and 5 years of age 50% of total

The first problem to solve was to decide whether to educate doctors in Medicine abroad or to develop a Medical School in Somalia. The second possibility was finally preferred for several reasons. The necessity to develop an original and specific Somalian education model appeared evident to the Somalian Health Care managers. The choice was determined by the necessity to provide a medical education strongly related to the cultural, social and economical environment in which the physicians would eventually operate. In addition, the curricula of Western Universities, which emphasize the study of endogenous pathology, did not suit the nosologic characteristic of Somalia, where the predominant pathology is exogenous. Finally it was feared that a long training abroad could have encouraged the dangerous phenomenon of intellectual emigration.

The aims of the newly created Medical School were to promote the development and improvement of health assistance. This development had to be based on the formation of physicians conscious of the local socio-economic conditions and able to integrate modern and traditional Medicine in such a manner to recover valid concepts existing in local traditions, thus generating confidence and approval in the population. Somali physicians will have specific knowledge of the local health care needs as well as of the local health care structure in order to be able to select medical priorities (Fig. 4).

Fig. 4.

Aims of the School of medicine (SNU)

- Health care development
- Specific education of physicians relative to:
 - the Somali economic and social needs
 - the local culture and traditions
 - the specific health care needs
 - the selection of priorities in health care
 - the social health care structure

To meet these challenges, a specific organizational structure of the Medical School was chosen. This structure (Fig. 5) was based on rigid rules. A definite number of students is selected through competition. The students selected live in college and receive a stipend from the Somalian Government so that they have the possibility to study and work full time under the constant supervision of the teachers. Student failing to pass their examinations, within the prescribed time limits, are dropped out.

Social Sciences

Fig. 5.

Organization

Integrated teaching (block system)
Programmed admission (through competition)
«College» type structure
Students receive a stipend
Exclusion of students failing to pass the required exams
Full time education (minimum 800 hrs/semester)
Constant supervision of students

As for the educational model teaching integrated according to the «block system» model was preferred. The traditional European teaching of single disciplines was maintained only in the first semester for the basic sciences.

A restricted medical education designed to meet specific needs (*modello per obiettivi specifici*) as well as the «on the job» teaching were excluded. In fact the main disadvantage of these two systems is that they produce health professionals with limited cultural background, which makes them unfit for further development.

The educational model selected emphasizes (Fig. 6) a multidisciplinary approach per system in health (Basic Sciences) and disease (Clinical Formation), which is supported by coordinate teaching teams. The traditional compartmentalization of medical specialties is suppressed, eliminating duplications and repetitions, without impairing the coverage of relevant teaching areas.

Fig. 6

Educational model

Teaching integrated according to block systems
Suppression of specialty compartmentalization
Multidisciplinary approach per system in health (basic science education) and disease (clinical education)
Cohordinated teaching teams
Adequate coverage of relevant teaching areas. Elimination of duplications and contradictions in teaching

The purpose of this educational model is to provide the students with fundamental knowledge, attitudes and abilities, where «basic knowledge» (Fig. 7) is the body of information acquired during the course of studies; «attitudes» are

Fig. 7

Basic knowledge

- Statistic methods in epidemiologic research
- Identification of health needs through the sanitary, economic and social evaluation of living conditions
- Prevention, diagnosis and therapy of prevalent pathology, with emphasis on infectious disease, disease of infancy and childhood, obstetric and neonatal pathology, malnutrition
- Emergency medicine
- Techniques of health education
- Abilities in the organization and management of health assistance

the ability to interpret correctly the reality the physician has to interact with, coupled with an adequate methodology of intervention, and «abilities» are practical capacities of intervention (Fig. 8).

Fig. 8

Attitudes required

Efficient interaction with the population
Effective contribution to the diffusion of health education
Stable interaction with the health care structure
Ability to define and select health care priorities

Abilities required

Diagnosis and therapy of common medical diseases
Treatment of medical emergencies
Reduction and immobilization of fractures
Assistance during normal delivery, ability to control common problems in delivery
Collection and evaluation of epidemiologic and social data necessary to define health needs

The curriculum of the studies is articulated in 10 semesters. The first semester (Fig. 9) is mainly devoted to the basic sciences, which are taught according to a more traditional approach. The «block system» model is adopted starting from the second semester. Anatomy, physiology and biochemistry are taught in an inte-

Fig. 9

1st semester (basic sciences)

Physics
Chemistry
Biology and genetics
Biostatistics

2nd-4th semester (basic sciences and introduction to clinical sciences)

— Gross and microscopic anatomy, biochemistry and physiology
— Study of anatomical systems in health (anatomy - physiology)
— Parasitology - microbiology - virology
— Immunology
— General pathology
— Pharmacology
— Medical semeiotics
— Basic radiology

grated fashion for each anatomical apparatus. Anatomical systems in disease (Fig. 10) (physiopathology, medicine and surgery, surgical pathology, medical therapy, diagnostic procedures and techniques) are studied starting from the 5th to the 8th semester. The 9th and the 10th semesters are entirely devoted to medical and surgical instructions «on the job».

Social Sciences

Fig. 10.

5th-8th semester (Clinical Sciences)

Study of anatomical systems in disease (physiopathology - medicine and surgery - surgical pathology - medical therapy - diagnostic procedures and techniques)

Pediatrics

Obstetrics

Infections diseases

Psichiatry

Forensic medicine

Elements of anaesthesiology

9th-10th semester (Medical practice)

Internship and pregraduation exams of:
internal medicine, surgery, pediatrics, obstetrics and gynecology, emergency medicine and surgery,
preparation of a graduation dissertation

It should be pointed out that the emphasis on practice rather than theory is present throughout the curriculum, starting from the preclinical semesters (when students are involved in laboratory practice), to the clinical semesters (outpatient clinics, emergency medicine, community medicine) the philosophy of Community Medicine permeates the entire course of studies, which is designed to integrate modern medical culture with the predominant needs and real possibilities of the Somalian population. The purpose of Community Medicine is that of promoting environmental hygiene, and to control disease through a diffusion of health education and medical prophylaxis. A substantial amount of time, from the second to the eighth semester, is devoted to the acquisition of basic and targeted knowledge and abilities of Community Medicine. The teaching is articulated in integrated courses and field instructions (Fig. 11).

Fig. 11.

Community medicine

2nd semester - 8th semester

Sanitary demography, ecology, medical anthropology, nutrition, hygiene, epidemiology and preventive medicine, traditional medicine, organization and programming of health care

9th semester - 10th semester

Field instruction during «vacations»

In conclusion more than 400 medical students have graduated from the School of Medicine of the Somali National University since 1973. In our opinion (Fig. 12), these physicians are not only able to cope with individual medical problems,

Fig. 12.

Primary health care physicians

Individual patient assistance

Improvement of health knowledge in the population

Improvement of the hygienic conditions of the environment

Systematic intervention in prophylaxis

but also to interact with the population and with the local environments promoting the improvement of sanitary education and the diffusion of environmental hygiene and medical prophylaxis.

References

- Khalif Bile e A. Cappelli 1981, «Le premesse di ordine sanitario e sociale per l'istituzione della Facoltà di Medicina di Mogadiscio» in *Esperienze della Facoltà di Medicina di Mogadiscio*, Roma, Istituto Italiano Medicina Sociale.
- Cappelli A. e A. Sebastiani 1985, «La Medicina di Comunità» in «La formazione del Medico di Comunità», *I Quaderni di Cooperazione*, n. 5, Roma, MAE.
- Sebastiani A. e Khalif Bile 1985, «La Medicina di Comunità nel quadro del nuovo piano di studio della Facoltà di Medicina della UNS», in «La formazione del Medico di Comunità», *I Quaderni di Cooperazione*, n. 5, Roma, MAE.
- Sebastiani A. e M. Stefanini 1983, «Training of Medical Officers in the National Somali University» in Symp. «La Medicina Tropicale nella Cooperazione Sviluppo», Roma, (17-19 novembre 1983).