DEVELOPING A HEALTH EDUCATION CURRICULUM FOR A MEDICAL SCHOOL IN NIGERIA (KADUNA STATE)

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To My Parents

whose constant support never ceases to encourage me

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INTRODUCTION

Nigeria, like many other developing countries, has a medical system committed to providing preventive and curative medicine for everyone in the country. These commitments have to be made within the constraints of the country's resources and inadequate data, thus making the health and disease situation in the country a difficult task to curtail by the doctors.

This is due to the vast differences between the rural population of over 80 per cent and the small proportion who live in the major urban cities; and also, for example, the settled nucleated villagers, small bush hamlets and the migratory herdsmen. In many rural communities, distance and travelling costs prevent the effective utilisation of the existing medical facilities (Ajaegbu et al, 1975) and poor environmental sanitation in both rural and urban communities (Obediji and Aboyade, 1967) increase the incidence of disease.

The medical facilities are inadequate in manpower in this rapidly developing country. Disease is an ever present threat to the working efficiency of the population in both rural and urban areas.

Westernised medicine is fastly creeping into the areas covered by traditional medicine. This can help or hinder the health progress. This is because every community has its own system of health values and beliefs. Traditional attitudes and practices exist in all walks

of life. It is not restricted to developing countries alone; for example, the idea of blood transfusion to save a life may be accepted or rejected, depending upon the prevalent attitude in the community.

Into this system of beliefs and values, the health education programme will bring in new concepts and approaches to the community. This should be to provide new information and skills, and change of attitudes. These health programmes should help the doctor to reduce the incidence of diseases, because this will improve the quality of life in any community and improve the welfare of the women and children and increase the physical and mental health of the families.

According to Tones (1980), health and education are 'Humpty Dumpty' words; this is because it is very difficult for anyone to agree on their definitions. This paper defines health education as a "means to develop knowledge, attitudes and behaviour which are conducive to the attainment of personal and community health. It seeks to ensure that the community accepts health as a valid asset and to equip individuals with knowledge and attitudes that will help them to protect their own health and solve their problems" (Bandaranayke, 1979). This definition is used because, as mentioned earlier, Nigeria has both traditional and westernised medicine. Both services are used by the population. The people will therefore have to understand new concepts that will make them participate actively in the community's health programme.

Therefore, the purpose of this paper is:

1) To develop a health education curriculum for any medical school in Nigeria, so that the products will use health education in the performance of their duties among the urban and rural community.

2) To promote, integrate and co-ordinate the development and application of relevant health education principles in pre-clinical and clinical years in a medical school, and therefore increase the amount of teaching hours.

The Ahmadu Bello University in Zaria, Kaduna State, will be mentioned and referred to in this paper. Hence, in the presentation, efforts are made to give meaningful information that will provide the planners in the medical schools, researchers and others with valid points of reference for further activities in health education.

Chapter One gives a brief description of Nigeria's general characteristics and demographic data which also includes the population pyramid. General assessment of health includes mortality and morbidity trends that are valuable indices for evaluation of health status of a population and guidelines for health education.

Chapter Two gives a brief description of the health administration systems and the Nigerian Health Service panel report with their recommendations about the existing health situation. There is also

a brief description of the programmes in the health centre, dispensaries, and the role that teaching hospitals could play in them.

Chapter Three deals with health manpower and development in Nigeria. The health models in Britain, China and Tanzania are presented.

Chapter Four presents the health education aims in Nigeria. The models used in health are also described. The implementation of behavioural sciences into the medical school is presented, followed by a brief and concise description of the key areas in behavioural sciences. The co-ordination of health education into the pre-clinical and clinical years is given favourable consideration.

Chapter Five presents the curriculum in the Faculty of Medicine, Ahmadu Bello University, the Department of Community Medicine, and the Institute of Health, all in Zaria, Kaduna State. These are presented to show the amount, or if any health education is included in their programmes. The next step is the outline of the health education curriculum which includes the philosophy, aims, objectives (examples only), weekly programmes, methods, assignments, resources, evaluation and reading list, for health education for the Part I, II, III and V, M.B.B.S. medical students.

Chapter Six tries to summarise and to bring out the importance of health education and includes recommendations.

It is hoped that the information in this paper will positively add some contribution to the field of medicine.

CHAPTER ONE

NIGERIAN BASIC CHARACTERISTICS

GENERAL CHARACTERISTICS

Nigeria is a large country (area approximately 923,773 square kilometres) situated on the West Coast of Africa (see Figure 1). It became independent on the 1st October, 1960, after 100 years of colonial rule.

Nigeria has a long coastline with sandy bays, lagoons and mangrove swamps. Tropical rain forests and swamps in the south are contrasted with woodland and savannah in the north. The Central Plateau reaches a height of 2,000 metres. There are numerous rivers, the principal ones being Niger and Benue (see Figure 2).

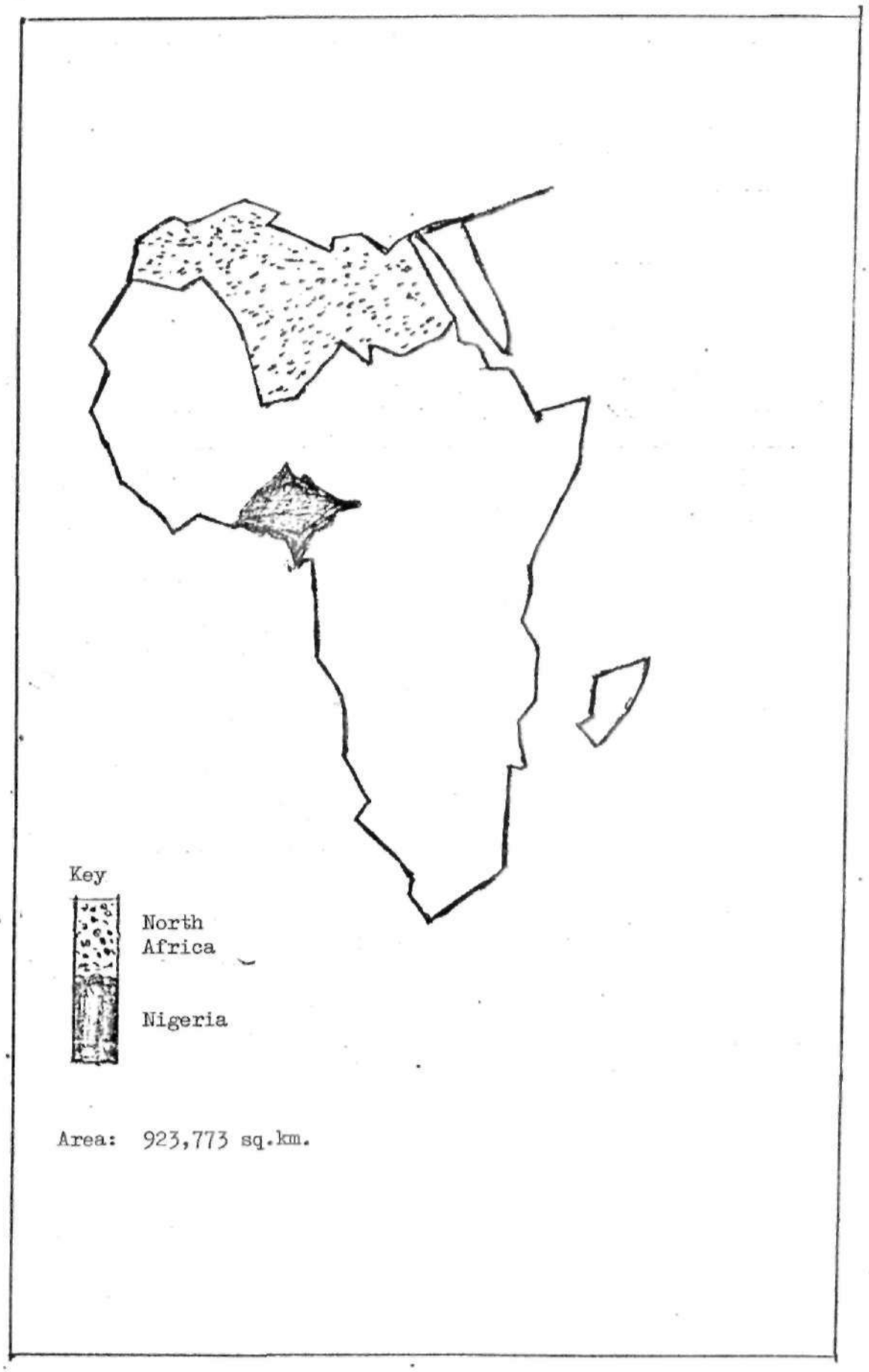
It is made up of 19 states and a proposed new Federal Capital Area. The present capital is Lagos and the principal towns are Kaduna, Kano, Maiduguri, Illorin, Enugu, Onitsha, Port Harcourt, Ibadan, Aba and Abeokuta (see Figure 3).

CLIMATE

There is climatic variation between the north and the south, the south being mostly tropical rain forests. Temperatures

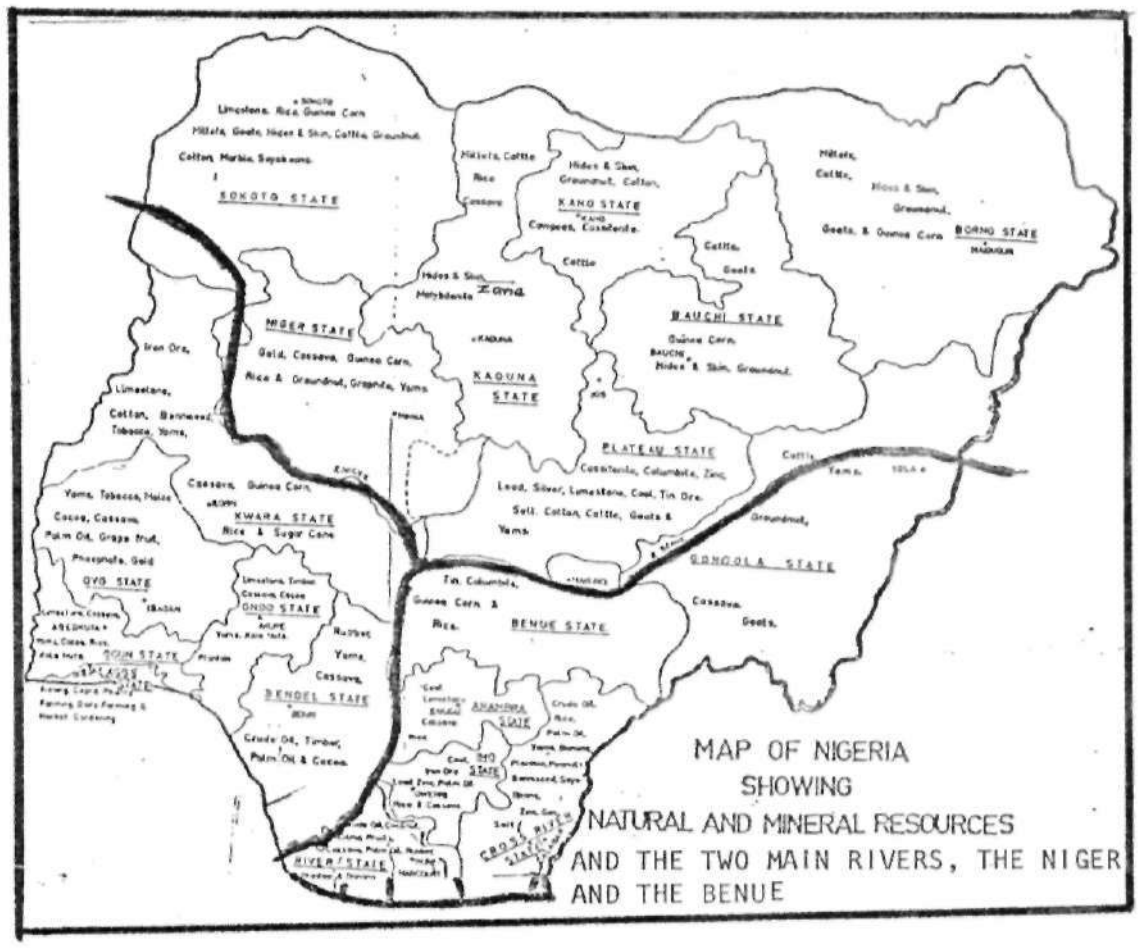
FIG. 1

MAP OF AFRICA SHOWING NIGERIA ON THE WEST COAST



NOT DRAWN TO SCALE

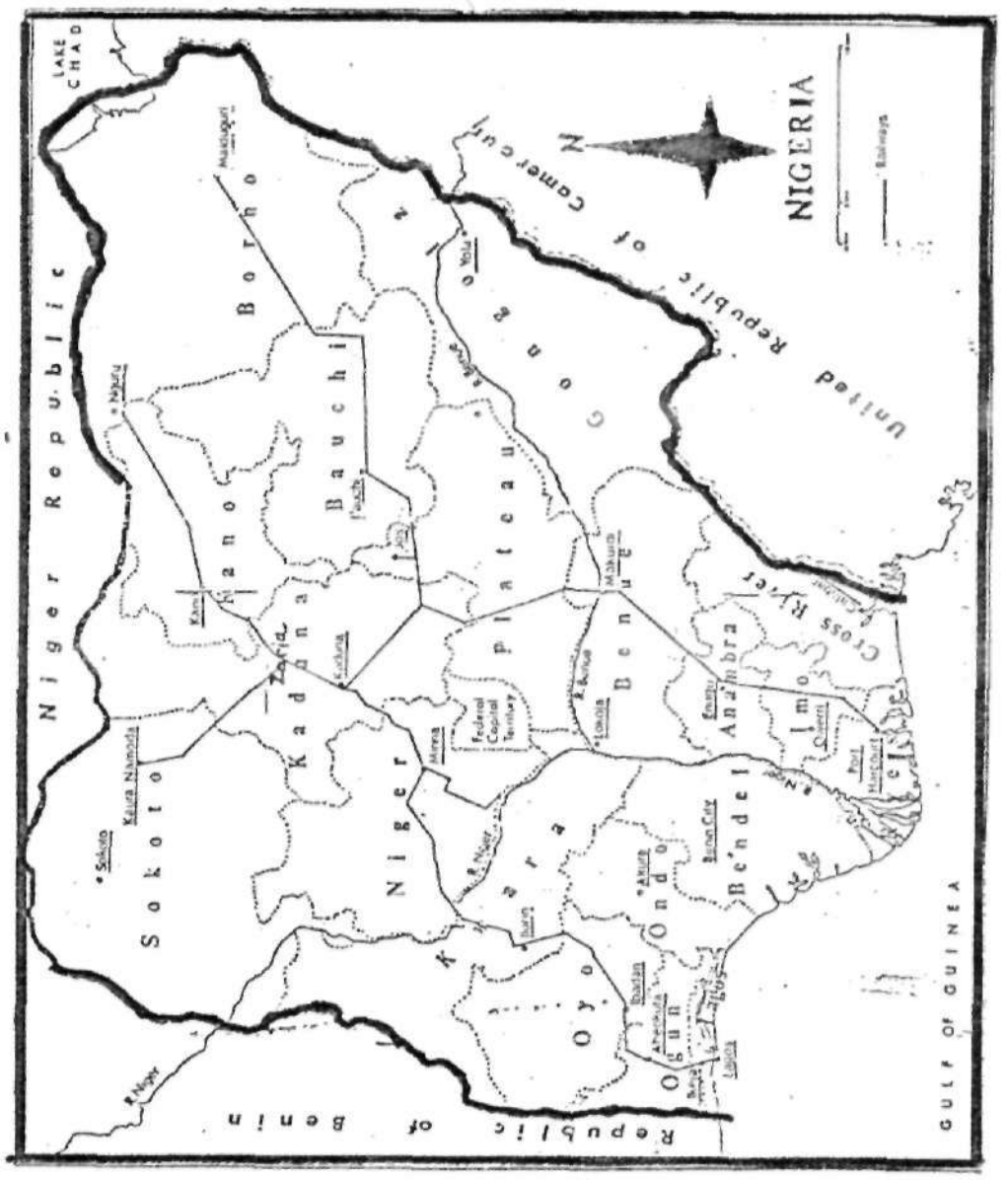
FIGURE 2



Source: Nigeria Year Book (1970)
Federal Ministry of Information, Lagos.

FIGURE 3

POLITICAL MAP OF NIGERIA SHOWING THE 19 STATES, MAJOR TOWNS, AND THE NEW FEDERAL CAPITAL TERRITORY OF ABUJA



Source: Nigeria Year Book (1970)
Federal Ministry of Information, Lagos.

are higher in the north which borders on the Sahara, where they rise to over 40°C much of the year. Humidity is higher in the south. A cooling Harmattan season in the north keeps the temperature and humidity down to 6°C between December and February. (Harmattan means cool, dry, and dusty season).

COMMUNICATION

Transport

Murtala Muhammed Airport, Ikeja, is located 25 kilometres from Central Lagos. The other international airport in the north is Kano. It has many internal airports and services to them are offered by the Nigerian Airways.

Roads are the key to inter-state commerce. The roads cover over 100,000 kilometres. Main routes are tarred and a motor way was opened in 1978 linking Lagos with Ibadan in the south.

Railways cover 3,500 kilometres and consist of two main routes, Lagos-Kano and Port Harcourt-Enugu-Kaduna. The main sea ports are Lagos-Apapa, Lagos-Tin Can Island, Port Harcourt, Warri and Calabar. The petroleum ports are Bonny and Burutu. The main Nigerian shipping fleet is the Nigerian National Shipping Line Limited.

MEDIA

Television and Radio

Both are government owned. The radio broadcasts in English and sixteen Nigerian languages. The twelve stations are all part of the Nigerian Broadcasting Corporation (N.B.C.). There are 18 television stations and they are managed by the Nigerian Television Authority (N.T.A.).

There are a score of daily and many Sunday papers. English periodicals are abundant. There are also business papers.

DEMOGRAPHIC AND VITAL STATISTICS

The last population census in 1963 revealed a total population of 55,700,000 with a growth rate of 2.5% per annum. This growth rate is attributed to the high infant and child mortality. The major towns are densely population; for example, the unofficial population estimate in Lagos is six million. In the north, Kano's population is 295,432 and Kaduna's is 149,910.

POPULATION STRUCTURE

It is estimated that more than 45% of the population is below the age of 15 years. There are very few old people and there is no significant difference between the number of males and females in the population. These facts are illustrated in the population pyramid (see Figure 4).

The population lives in small villages and hamlets ranging from one family settlements to some containing a few thousand people. These settlements are scattered and isolated, thus giving the rural areas a very low population density, probably below 15 persons per square kilometre. These rural populations display low spatial mobility, although the recent drought in the northern parts of the country has tended to change this pattern (Shehu, 1976). The urban areas are densely populated and some parts are slums, with poor environmental sanitation (Okediji and Aboyade, 1967). These people are derived from over 100 ethnic groups. The four largest of these are Hausa, Yourba, Ibo and Fulani and their languages are widely spoken. Each tribe or ethnic group has its own language. English is the official and commercial language and it is widely understood in the larger towns (New African Year Book, 1979).

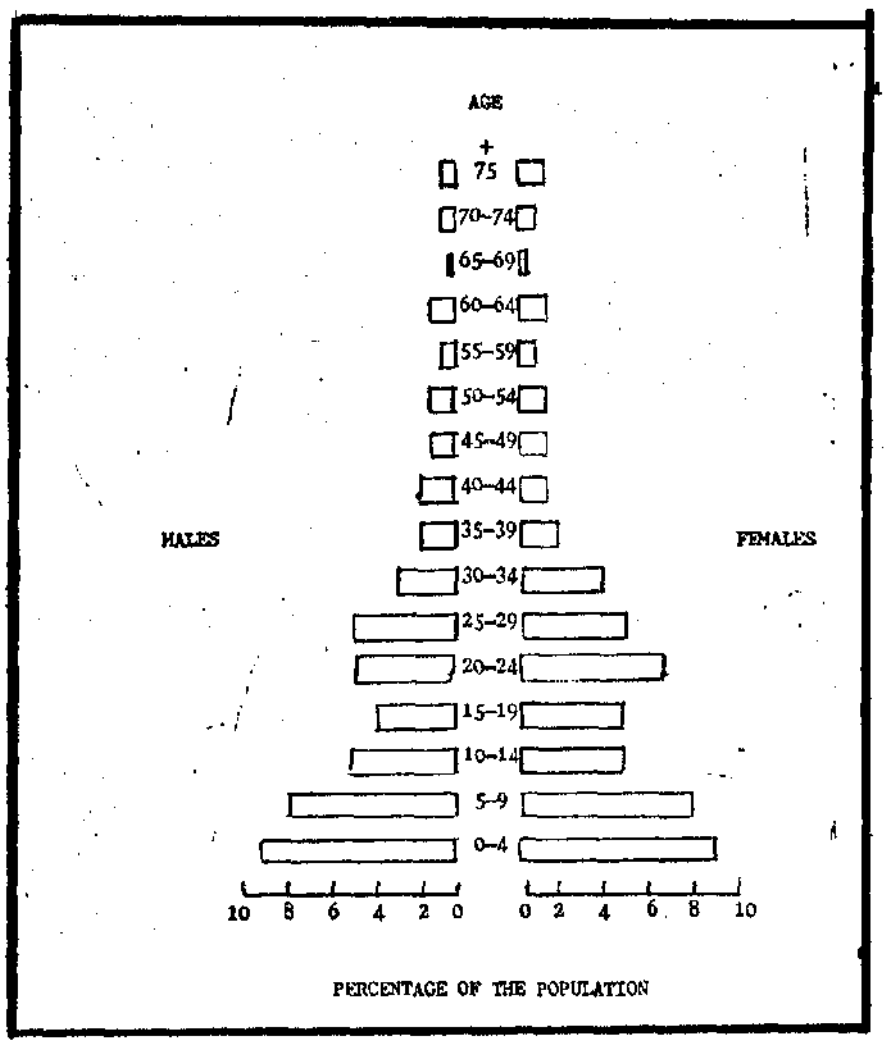


Fig. 4 Population Pyramid, 1963 census (Nigeria)

(Annual Abstract of Statistics 1970, Nigeria, p. 14)

Drawn by the author

GENERAL MORTALITY

This is extremely high and the main causes of death are communicable diseases, like Malaria, gastro-enteritis, meningitis, pneumonia and measles, as well as malnutrition (see Tables, I, II and III).

The mortality rates are:

i) Infant mortality rate - about 150 per 1,000 live births

ii) Crude death rate - about 25 per 1,000

(Shehu, 1976)

In 1976 and 1977, the maternal mortality rate in Zaria hospital in Kaduna State was 10 per 1,000. This is fifty times as high as in Western Europe (Harrison, 1978). The major causes of maternal death in developing countries are, for example, anaemia, prolonged labour, parity, age, health and reproductive history prior to each pregnancy. The other factor is environmental, for example, housing, sanitation, water supply, communication, cultural factors, religion, lack of health education, ignorance and superstition and socio-economic status (Oyakhire, 1980).

Maternal mortality rate is expressed above as the number of deaths occurring in pregnancy during childbirth and for six weeks post-partum per 1,000 of total live births (live and still). It is an index of the standard of the health services and the socio-economic status achieved by the society (Oyakhire, 1980).

GENERAL ASSESSMENT OF HEALTH

Major Health Problems

The major causes of morbidity and mortality in Nigeria, as in most developing countries, are infectious and parasitic diseases and malnutrition. Maternal morbidity and mortality are also included in this problem. Poverty linked diseases account for about three quarters of all deaths, while the diseases common in the developed countries, such as cancer and heart disease, are relatively unimportant.

Table I shows the leading causes of death in a hospital in Kaduna State. Diseases of the urinary system are the number one cause of death in this hospital. These are reflections of Kaduna State and the table is used as an example for the country.

Table II shows the distribution of death by age and sex in a hospital in Kaduna State.

Table III gives the major causes of death from notifiable diseases in Nigeria for the year 1978. Generally there is gross under-reporting of deaths from notifiable diseases in Nigeria.

Table IV shows the morbidity pattern in a hospital in Kaduna State. This shows that infective and parasitic cases hold the leading position among all other causes of diseases.

TABLE I

DISTRIBUTION OF DEATHS BY CAUSE IN MALUMFASHI GENERAL HOSPITAL, KADUNA STATE, 1976

Disease	Proportion in per cent
Nutrition Deficiency including Kwashiorkor and Avitaminosis	18.18
Diarrhoeal Diseases	9.96
Pneumonia	17.75
Typhoid Fever	6.06
Meningitis	5.63
Anaemia	2.16
Respiratory Tuberculosis	
Bronchitis, Emphysema and Asthma	.86
Malignant Enoplasms	0.43
Other diseases of the urinary system* (I.C.D. No. 591, 593, 595-599, 601-607, 612-929)	24.14
Other forms of heart disease* (I.C.D. No. 508, 510-512-514,519)	0.43
Other diseases of the nervous system* (I.C.D. No. 321-333, 341-344-346-358, 370-373, 376-380)	1.73
Ill-defined	2.60

n = 232

* Will be listed in the Appendix

(Source: Annual Report, 1976, Ministry of Health and Social Welfare, Kaduna State, Nigeria, p.57)

TABLE II

DISTRIBUTION OF DEATH BY AGE AND SEX, MALUMFASHI HOSPITAL, KADUNA STATE, 1976

Age in Years	Male n = 116	%	Female n = 116	%	Total	n = 323 %
- 1	27	23.23	19	16.38	46	19.83
1 - 4	18	15.52	35	30.17	53	22.84
5 - 14	11	49.48	13	11.21	24	10.34
15 - 44	48	1.38	38	32.75	86	37.07
45 +	12	10.34	11	9.48	23	9.91

(Source: Annual Report, 1976, Ministry of Health and Social Welfare, Kaduna State of Nigeria, p.57)

TABLE III

FEDERAL REPUBLIC OF NIGERIA, MAJOR CAUSES OF DEATHS FROM NOTIFIABLE DISEASES IN NIGERIA IN 1978

	Notifiable Diseases	Number of Deaths 1978
1	Measles	936
2	Meningitis Septic	2,151
3	Pneumonia	653
4	Tetanus	481
5	Malaria	444
6	Tuberculosis	287

Key: (Mid 1976 Estimated Population of Nigeria 76,610,500

Source: National Bureau, Lagos)

Prepared by: Medical Statistic Division, December 1979, Federal Ministry of Health

TABLE IV

DISTRIBUTION OF MORBIDITY, KADUNA, AHMADU BELLO UNIVERSITY GENERAL HOSPITAL BY SYSTEM 1976

System	Number of Cases	Percentage
Infective and Parasitic	3,772	33.44
Respiratory	1,751	15.52
Injuries	864	7.66
Ill-defined	798	7.08
Nervous	752	6.67
Perinatal Morbidity	678	6.01
Endocrine, Nutr. and Metabolic	563	4.99
Digestive	374	3.32
Skin and subcutaneous tissue	225	1.99
Blood and Blood Forming Organs	210	1.86
Musculo-Skeletal	155	1.37
Neoplasms	152	1.35
Cong. Anomalies	320	2.84
Circulatory	320	2.84
Mental	77	2.84
Total	11,279	100

(Source: Annual Report, 1976, Ministry of Health and Social Welfare, Kaduna State of Nigeria, p.27)

TABLE V

FEDERAL REPUBLIC OF NIGERIA, MAJOR CAUSES OF MORBIDITY FROM NOTIFIABLE DISEASES

	Notifiable Disease	Number of Cases 1978
1	Malaria	1,144,559
2	Dysentery (all types)	248,490
3	Measles	175,141
4	Pneumonia	93,135
5	Gonorrhoea	71,514
6	Whooping Cough	38,276
7	Chicken Pox	31,874
8	Filariasis	24,256
9	Schistosomiasis (all types)	24,256
10	Tuberculosis	16,518
11	Meningitis	13,169
12	Onchocerciasis	11,231
13	Infective Hepatitis	8,354
14	Trachoma	8,185
15	Viral Influenza	5,364
16	Leprosy	5,196
17	Syphillis	4,592
18	Ophthalmia Neonatonum	4,065
19	Tetanus	2,875
20	Food Poisoning	1,562

Key: Mid 1976 Estimated Population of Nigeria 76,610,500

Prepared by: Medical Statistics Division, December 1979
Federal Ministry of Health

As can be seen in Tables IV and V, very few people are lucky enough to enjoy good health for long periods of time because of the prevalence of numerous communicable diseases. In fact there is a tendency for them to suffer from multiple infections and infestations.

The following are incidences of some diseases which have been conducted in surveys in Nigeria.

1. Schistosomiasis: 45% to 80% of schoolchildren in the northern parts of Nigeria suffer from this disease.

2. Malnutrition: 50% of children attending clinics have evidence of this condition.

3. Malaria: 40% of children attending clinics.

4. Roundworms: 20% to 30% of all people in the rural areas have ova in their stools.

5. Anaemia: 20% of all the population have some degree of anaemia.

It can be seen that many of these infectious diseases can be prevented and eradicated by a health education campaign in the communities. The general purpose of health education should be:

- to make health a valued community asset
- to promote the development and proper utilisation of health services
- to help the people to achieve health by their own actions and efforts

(Shehu, 1976)

When dealing with the community, a Chinese aphorism should be remembered:

"If I hear I forget
If I see it I remember
If I do it I know"

Therefore, the more the community is involved in the prevention and eradication of infectious diseases, the more permanent the change would be in the rural and urban communities.

THE ENVIRONMENT

Housing conditions are very poor with most dwellings made of mud and grass in the rural areas. There is also overcrowding and often human beings live under the same roof with domestic animals.

Water supplies are inadequate in quantity and poor in quality. The usual sources of water consist mainly of rivers, streams, ponds and shallow wells and are usually heavily contaminated with human and animal waste. Considerable amount of effort goes into fetching water particularly during the dry season in the rural areas. There is pipe-borne water in the small towns and the main cities.

There is usually no organised system for the collection and disposal of wastes and indiscriminate defaecation in the bush is the order of the day in rural and some urban areas.

Because this part of the world is situated in the tropics, disease vectors thrive and yet there are hardly any vector control activities going on (Shehu, 1976 and Ajaegbu, 1975).

THE INTENTIONS OF THE GOVERNMENT IN RELATION TO HEALTH

As of October 1st, 1979, Nigeria returned to Civilian rule. Previously it was ruled by the Military Government. The present government consists of a democratic Presidential system of government, and is continuing the health plans that were laid down by the Military Government.

The broad objectives of the Federal Government are to:

> "reduce significantly the morbidity and mortality caused by whooping cough, tetanus, and diptheria which are common diseases of childhood, and to maintain the eradication of smallpox in Nigeria."
>
> (Akinremi, 1979)

The Federal Government has planned to integrate the basic health service of Nigeria by placing the family health activities, maternal and child health services and the primary health care into the general health services. A total of two million naira (£ = 1.25 kobo) has been set aside for immunisation. Adelokiki (1979) stated that by 1990 all children in the country would be immunised. Dr. Ogbang, Federal Commissioner of Health, said that the nation's primary health care was discerned to bring health to all by 1990, ten years before the World Health Organisation (W.H.O.) target. He said that a comprehensive health unit would cover 50,000 people and there would be 800 of these units.

In response to the W.H.O.'s resolution, Dr. Ogbang said that the Federal Military Government was determined to bring health to all the people at their door-steps. He said that they had embarked on this programme since 1975. The commissioner observed that in developing countries, of which Nigeria is one, between 60% and 80% of the infant fatalities occurred between the ages of one month and one year.

The New Nigerian (July 1979) stated that the Federal Military Government was to invest about 35 million naira into the promotion of basic health service in each local government area of the

federation that financial year. The government has also given training of staff for the Basic Health Service as a priority (this health scheme will be described in Chapter Three). The following has been in training, community health officers, supervisors, assistants and aids in various health institutions to bridge the gap in the health manpower.

Akinremi (1979) stated that the Federal Government was committed to the provision of adequate health care for all the citizens in Nigeria by the year 2000 A.D. He stated that in addition to the six medical schools, seven more would be established, together with 19 more Schools of Technology.

In continuing its support for proper health care, the government, between 1975 and 1977, contributed to the following extra budgetary research on Tropical Medicine.

i) Special Regional Account of Bio-Medical Research Centre in Ndola Zambia
and
ii) Malaria Eradicating Special Account of Africa Region World

In an address at a workshop in Ibadan, the Medical Director of the University of Ibadan (1979) stated that there had been little improvement in the general health status of the nation in the last decade. However, the Federal Government has been aware that

onchocerciasis has been in Nigeria for many years. The officials have now decided to organise a nationwide onchocerciasis control programme. The preliminary phase was to be started in early 1980.

Secondly, tuberculosis is still a disease of concern to the public health officials in Nigeria. This disease is one of those to be controlled by immunisation. The B.C.G. vaccination will be given to all children in schools and infants born in hospitals.

Thirdly, the neuro-psychiatric hospitals have been taken over by the government and they have established management boards. One of these centres has also been designated as an International Centre for Service and Training.

Lastly, the Environmental and Occupational Health Unit of the Federal Ministry of Health and Social Welfare is being revamped. The government is therefore trying its best to improve the health situation in Nigeria (Akinremi, 1979).

ECONOMIC DEVELOPMENT

The Gross National Product (G.N.P.) for 1976 was $29,320 million (World Bank, 1976). The G.N.P. per capita (1976) was $380:00. The national reserves (April, 1978) were $3.768 million (I.M.F.).

The currency used is called a naira and is divided into 100 kobo. £(British) is equal to 1.25; $1.00(U.S.A.) is equal to 0.64.

Nigeria exports the following:

Major agriculture (including forest) products are cocoa, cotton (raw), groundnuts, hides and skins, palm oil, palm kernels, rubber (natural), timber (logs and sawn) and coffee.

Mineral products - columbite, petroleum (crude)

Manufactured and semi-manufactured (both agricultural and tin metal) - their total export as of 1977 was 8,673.5 million naira (New African Year Book, 1979).

Inflation rate in 1977 was 21.4%. The total import for 1977 was 7,296.8 million naira. According to King (1970), it is impossible to provide basic health service "on any but the most minimal scale when the annual G.N.P. per capita income is less than about £25:00." This is not the case in Nigeria; their G.N.P. is £380:00 per capita. One can also look at the Intentions of the Government in Relation to Health Situation on paper and see the efforts the government is making to improve the basic health services in the country. If all the economic realities in the country were properly taken into consideration and the goals of the plans for 1990 are realised, that is, if all the staffs are trained and do not migrate to other lands, then the objectives will be realised.

EDUCATION POLICY

Nigeria's objectives for education as stated in the Third National Development Plan (1975-1980) and endorsed as the necessary foundation for the National Policy on Education, are the building of:

i) Free democratic society
ii) A just and egalitarian society
iii) A united strong and self-reliant nation
iv) A great and dynamic economy
v) A land of bright and full opportunities for all citizens.

Nigeria's philosophy of education, therefore, is based on the integration of the individual into a sound and effective citizen and equal educational opportunities for all citizens of the nation at the primary, secondary and tertiary levels, both inside and outside the formal school system.

In consequence, the quality instruction at all levels has to be orientated towards inculcating the following values:

i) respect for the worth and dignity of the individuals
ii) faith in man's ability to make national decisions

iii) moral and spiritual values interpersonal and human relations

iv) shared responsibility for the common good of society

v) respect for the dignity of labour, and psychological health of all children.

(Federal Republic of Nigeria Policy on Education, 1977).

Pre-Primary Education

Pre-Primary education is for children between two years and about five years of age. State Ministries must provide for the maintenance of standards in the Koranic School. Their status should be examined on pre-primary education and be amended to suit the recommendation of the Blueprint.

Primary Education

Primary education consists of six years of schooling from five to eleven years of age. The aim in the Blueprint is a "broad-based education with emphasis on permanent and functional literacy and effective communication". Health Education and Physical Training are included in the curriculum. Adapting the American system, the Blueprint comments that continuous assessment should be the system for evaluating the progress of a child.

Secondary Education

Secondary education is divided into Junior and Secondary Stage, which is both pre-vocational and academic and a Second Stage which will be comprehensive in its curriculum (West Africa, November 1979). The Nigerian School Health Association in a resolution adopted, called upon the Federal and State Governments to establish a Joint National School Health Council and State School Health Committee to see to the needs of the students. The Association also recommended the introduction of standardised and subsidised school meals. On child upbringing, the Association called for parents and teachers to influence the lives of their children through examples rather than precepts. It also called on government to reintroduce Health and Physical Education as compulsory subjects in Grade Teacher's Certificate Examination (West Africa, January 1980).

Higher Education

Higher education includes the professional education and this covers the post-secondary section which is made up of the following: 13 Universities and Polytechnics and the Colleges of Technology. Further to these are the Teacher Education Colleges and these include the following:

i) Grade II Teacher's Colleges

ii) Advanced Teacher's Colleges

iii) Colleges of Education

iv) Institutes of Education

v) National Teacher's Institutes

vi) Teacher's Centres

Health and Physical Education is included in the Teacher's Colleges (Federal Rep. of Nigeria National Policy on Education, 1977).

There is Diploma in Physical and Health Education in most Universities. The course at the University of Ibadan is run in conjunction with the W.H.O.

There are also education programmes for adults and vocational training for workers. The priority in these rests with mass literacy programmes in adult education. The vocational training would provide in-service, on-the-job training and professional training for different categories of workers and professionals in order to improve their skills. There is also special education for children and adults who have learning difficulties because of their different sorts of handicaps (Fed. Rep. of Nig. Policy on Ed., 1977).

THE ROLE OF HEALTH EDUCATION IN DIFFERENT GOVERNMENT AGENCIES IN NIGERIA

The planning and provision of medical and health care services are the responsibility of the government in Nigeria in both rural and

urban areas. They have stated their goals for 1990; these are to improve the medical and health care in the country and also the quality of life of the population.

Preventive medicine is vital to the life of the population. Therefore, the government has to have an efficient public health system.

The government should see that the Public Health Department deals properly with environmental sanitation, food inspection at all eating premises, inspection of houses, infant welfare and the proper control and reporting of all infectious diseases in both rural and urban areas. The causes of death and morbidity pattern can be improved by health education and through the efforts of the Federal Government, i.e. building of dispensaries, more schools, better roads in rural areas, dams for better water supply, public latrines, and protection of water supply.

At present, health education is provided at Federal and State levels in some schools, hospitals and health centres. But this is still not enough. Health education should be made compulsory by the Ministry of Education in all primary and secondary schools.

The Ministry of Agriculture should have its extension officers teach the proper methods of irrigation and storage of crops, so that the people will have more food to eat all the year round.

Health education is absolutely fundamental to all aspects of work

in this country. It would appear that health education is not only the responsibility of the Ministry of Health, but also needs the co-operation and dedication and a sense of commitment from the Ministries of Education, Economics, Social Welfare and Agriculture. It should be disseminated to all levels of people in this society by the above mentioned agencies.

CHAPTER TWO

AN OVERVIEW OF THE NIGERIAN HEALTH ADMINISTRATIVE SYSTEM

Each of the nineteen states is self-governing in matters of health, education, and social services. The Federal Ministry of Health is responsible for all matters relating to International Health which concern the country as a whole, including epidemiological reporting, sanitation control at ports and airports and the relationship with other International Agencies and co-ordination of the health activities through the National Council of Health, which comprised formerly all the Ministers of Health (but now consists of all the Permanent Secretaries and Controllers of Medical Services of the nineteen states).

The States' Ministries of Health are responsible for the health services in their states. These are the professional and administrative divisions of Hospital (Curative) Services and the preventive health services. Each State Ministry of Health has provincial and divisional units.

The health situation in Kaduna State is similar to the health situations in the rest of the country. There are 663 existing different health institutions besides hospitals which form the basis of health care delivery system in the rural areas of the State (Osuhor, 1971).

A panel was set up to review the health situation in Nigeria.

THE NIGERIAN HEALTH SERVICE PANEL (N.H.S.P.) - The Interim Report

The Nigerian Health Service Panel (N.H.S.P.) submitted an Interim Report to the Head of State on 4th March, 1977, containing three major parts which viewed the existing health situation in Nigeria (Chapter One), the principles of the present organisation, and the envisaged structure of the health services based upon those principles. These are presented.

Existing Health Situation

The country's major health problems were identified by the Panel as:

- infectious and parasitic diseases
- poverty (below subsistence level)
- uncontrolled population growth

The Panel went on to enumerate on the common diseases found in Nigeria (see Mortality and Morbidity Tables I, II, III and IV in Chapter One) and it can be seen that about 95 per cent of the ill health and deaths in the country are preventable.

As regards health facilities, the Panel revealed that over 70 per cent of the population have no access to modern medical care and

are dependent on the traditional native doctors. The Panel noted that there is a shortage of doctors, nurses and all other paramedicals in the health services. Hospital capacity is critically poor and what is available is inequitably distributed, resulting in acute shortage within and between states. Table VI shows the health establishments and bed distribution by states.

Principles on which restructuring was based

The Panel's major concern was to strike a balance between stifling centralisation and wasteful decentralisation. It quoted case studies by W.H.O. to show that impressive gains had been made in countries with strong central policies executed by decentralised organisations.

The Panel saw the need for community participation which increases awareness of the health needs of the population. The ideal system is the control and administration of health care delivery by the community it is designed to serve.

To appreciate the structure recommended by the Panel it is necessary to consider the aims of restructuring as the Panel understood them:

i) To provide a platform for achievement of a high standard of medical practice and delivery of allied health services

TABLE VI

HEALTH ESTABLISHMENTS AND BED DISTRIBUTION BY STATES

States	Population 1963 Census	Number of Health Establishment	Number of Beds	10% of Budget on Health
Anambra	3.6 million	240	4208	7.4
Bauchi	2.4 million	357	625	3.6
Bendel	2.5 million	452	4883	7.5
Benue	2.4 million	113	1220	6.8
Bornu	3.0 million	377	1109	8.2
Cross River	3.5 million	286	4624	8.7
Gongala	2.6 million	322	1402	7.5
Imo	3.7 million	518	6256	7.3
Kaduna	4.1 million	630	3053	5.9
Kano	5.8 million	437	2289	6.7
Kwara	1.7 million	312	2167	6.0
Lagos	1.4 million	234	4839	7.3
Niger	1.2 million	286	763	8.0
Ogun	1.3 million	408	3683	1.9
Ondo	2.7 million	311	3139	1.8
Oyo	5.2 million	353	5635	5.9
Plateau	2.0 million	354	1540	7.9
Rivers	1.0 million	179	1699	7.5
Sokoto	4.5 million	459	1040	6.0

Source: Extracted from Federal Ministry of Health (F.M.H.)
Statistical Document updated to 31st July, 1975, Lagos.

ii) To ensure that the health needs of the whole population are taken into account in providing health care

iii) To give new impetus to an attack on the high incidence of ill health throughout the Federation

iv) To ensure that the rampant dissatisfaction among health care professions is eliminated through the pursuit of policies which pay due regard to the dedication, hard work and crucial importance to the nation of all who work in the health sector

v) To produce ACTION in all health fields which are considered currently to be unsatisfactory.

(Nigerian Health Service Panel 1977)

The aims above encase the triology of curative therapy, preventive measures and high morale among health workers.

The Nigerian Health Service Panel Recommendations

The Panel's recommendations can be looked at under four headings:

1) Basic Structural Proposals

The Panel proposed the establishment of one Basic Health Unit (B.H.U.) which will consist of the following:

(i) A comprehensive health centre

(ii) Some health clinics

(iii) Some mobile health clinics

The B.H.U. will serve a target population of about 100,000 varying according to local conditions. It will be supported by about 20 health clinics which will provide first level of health care to the population, i.e. about 5,000 will have health clinics, so that about 15,000 such clinics would be required for a population of about 75 million. Then there will be provision for five mobile clinics with similar functions as the health clinics but designed to take health care to the remote corners. Another set of four health centres would be constructed within the B.H.U. system. Their function would include extended services, higher levels of treatment and together with the health clinics will offer primary health care to the community.

The B.H.U. will have one comprehensive health centre which will provide a higher degree of sophistication and professional expertise.

2) Administrative Structure

The Administrative Structure of the restructured health services system is based on a two tier system consisting of

(i) State Health Management Board (S.H.M.B.)
and
(ii) District Management Team (D.M.T.)

The S.H.M.B. is easy to visualise as it corresponds with the political structure of the 19 states, thus reversing what had looked like a constitutional surgery. The apex of the system is now located in the states as shown in Table VI. This shows the varying population density from 5.8 million in Kano State to 12 million in Niger State. The D.M.T. will work with the S.H.M.B.s to get inspiration from the State Commissioner of Health.

3. Implementation

The Panel considered that the states would not carry the financial burdens of the new proposals and recommended that the funding should be borne by 60 per cent of the Federal Grant.

4. Membership of New Bodies

The Panel recommended the membership of new bodies (i.e. District Management Team and State Health Management Board)

For the D.M.T. there would be a twelve member team comprising of the following:

Doctors	4
Nurses and Paramedics	3
Administrators	2
Community Representatives	2
Voluntary Health Institutions	1

For the S.H.M.B. there would be a fourteen member board whose Chairmen -

> "should be mature, educated and dedicated men of proven honesty and integrity. They should be seen to have succeeded in life through hard work and honesty. They should hold office on part-time basis and should be ordinarily resident in the state concerned. They may or may nor be medical doctors."
>
> (Nigerian Health Service Panel 1977)

The rest will consist of five members representing the public including a woman and a trade unionist, three

doctors, two paramedicals, the Permanent Secretaries of Health and Finance in the State and the Board's Chief Executive who should be a professional or administrative officer with demonstrable managerial capability. No qualifications were stipulated for other members.

The Teaching Hospital

The role of the teaching hospital was clear. It was recommended that Management Boards should be set up for teaching hospitals (Agwumobi, 1979).

THE EXISTING SERVICES IN RURAL AND URBAN COMMUNITIES

The Health Centre

The health centre has a very important and permanent place in the system for the delivery of health care to the urban and rural areas especially. It is close to the people, and so it must not be organised rigidly, but should continually adapt its programmes in response to the physical, mental and social wants of the people. It should be staffed with both professional and auxiliaries.

This should be an institution where all three branches of the health

services - curative, preventive and promotive - are co-ordinated and should be radiated out into the houses and community through its own mobile teams (Shehu, 1976).

Table VII shows the number of health centres in Nigeria. The health centres would fill a large gap in the communities if more were built and properly manned.

Dispensary

The dispensary is the most elementary and peripheral health post in the system for the delivery of health care to the rural areas. It is, therefore, closest to the people and should offer adequate services to meet their basic needs. Some of the services which have to be made available are:

- health education at home and in the clinics
- immunisation
- maternal and child health
- diagnosis and standardised treatment of minor illness and of the most prevalent diseases in the area
- recognition of services and referral to rural health centre
- vector control

TABLE VII

HEALTH SERVICE FACILITIES IN 1977 IN NIGERIA

Number of Health Establishments	7,163
Number of Health Centres	398
Number of Health Clinics	2,109
Hospital Beds	57,944
Teaching Hospital Beds	3,724
Maternity Beds	12,560
Neuro-Psychiatric Beds	2,367
Orthopaedic Beds	927
Opthalmic Beds	420
Population per:	
Hospital Bed	1,350
Teaching Hospital Bed	2,000
Maternity Bed	6,200
Neuro-Psychiatric Bed	33,000
Orthopaedic Bed	84,000
Opthalmic Bed	186,000

Source: Prepared by the Medical Statistical Division, Federal Ministry of Health and Social Welfare (March, 1979) Lagos

- food hygiene and water purification
- disposal of refuse and other wastes including faeces
- collection of basic health data and their transmission to higher up

(Shehu, 1976)

The staff should be indigenous and should be male and female.

Distribution of Health Centres and Dispensaries

As in some other developing countries, not only have the basic health centres been generally inadequate to meet the needs of the people, but they are also concentrated in a few areas. There have also been considerable difficulties in annual per capita expenditure on health services and dispensaries in various districts.

The ratio of doctors or beds to population is often used to measure quantitative adequacy. The hospital/bed/population ratio in 1977 was 1:350, in teaching hospital 1:21,000, maternity bed 1:600 (Medical Stat. Fed. Min. 1979) (see Table VII). Owen (1967) summoned a total of 1912 dispensaries and dressing stations in Nigeria. The ratio of health centres to population varies from district to district.

Medical care in Nigeria is generally free at the point of delivery. Hospital charges do not constitute a barrier to access to health services. There can, however, be other barriers, for example, distance and the cost by bus to get to the clinics.

Figure IV looks at the integrated health care system. This integrated service should be operated on a team-work basis by division of labour so that the greatest possible use of professional skills could be made in any developing country.

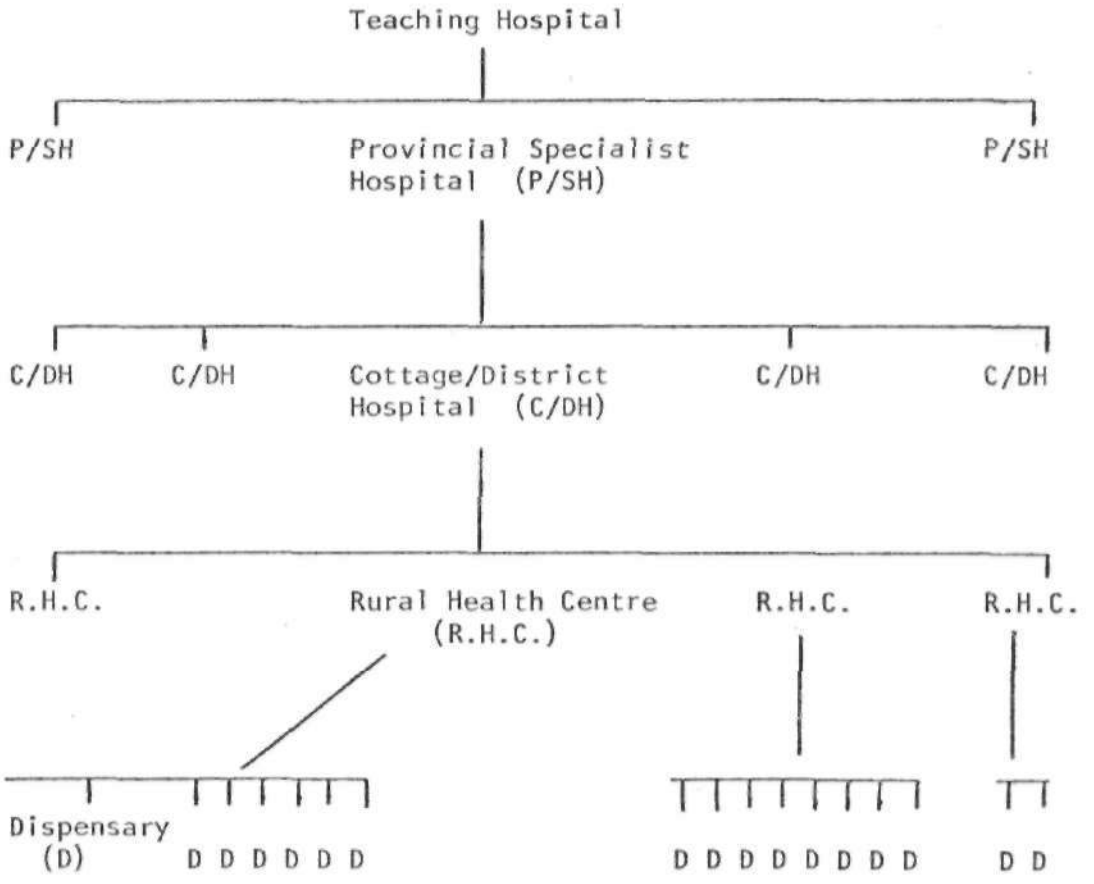
DISEASE PREVENTION

The prevention of disease is regarded by the Federal and State Government as vital to the efficient development of medical and health services in the country. Health education is provided at Federal and State levels in schools, hospitals and health centres.

Smallpox has been irradicated and measures are being taken for the control of Malaria. Birth registration is compulsory in Lagos and all babies born in hospitals receive B.C.G. vaccination. International regulations are required for all passengers in Nigeria to possess valid certificate of vaccination against smallpox.

FIGURE IV

A TECHNICAL INTEGRATED HEALTH CARE SYSTEM



Source: W.H.O. Regional Office of Africa (1970)
AFRO Technical Paper, Nos. 1 and 6

It appears, therefore, that the aim of the government is not only to provide services, but also to educate the people to make the maximum use of them.

It will take time for all the government's programme to show any progress, remembering that "Rome was not built in a day".

The important thing is that progress, though it appears to be slow, is being made in the prevention and control of diseases.

CHAPTER THREE

MANPOWER AND DEVELOPMENT

Rutmen (1968) stated that medical auxiliaries or primary health workers are easier to recruit and much cheaper to train and employ than physicians. They work more effectively in rural areas than those with university education. This is the problem that faces many developing countries. The "brain drain" on these countries affects both the economy and the health system.

According to Morley (1977)

> "during a recent visit to a developing country, a doctor expressed the view that all their 'best' doctors left for industrialised countries. Such a view measures 'doctors' values' by their clinical ability in diagnosing and managing unusual conditions and incidence of a failure to appreciate that universities and medical schools have a responsibility for moulding attitudes.
>
> Surely the 'best' doctors will appreciate that their skills are part of the capital investment and assets of their country achieved by a general and medical education supported directly or indirectly by their nation. When they leave through the 'brain-drain' syndrome these assets are being squandered, by selfish reasons."

Shehu (1976) stated that in Nigeria the fact that there is an acute shortage of all categories of health workers in the country, but more particularly in the professions like medical doctors, dentists and nurses (see Table VIII), means that for the foreseeable future Nigeria will have to put a lot of reliance on auxiliary personnel to provide the much needed health services

to the neglected rural communities.

In order that the positions in the rural areas may be improved, there should be re-deployment of existing staff who are mostly concentrated in the urban areas.

The long term solution lies in a number of measures being taken.

(i) More Training Institutions should be established in the country, some of which should be located in the Rural Areas.

(ii) Conditions of service of Health Workers in the Rural Areas should be improved by giving them certain incentives, for example, housing, prospects for advancement, continuing education, facilities for the education of their children.

(Shehu, 1976)

The University of Ife in Oyo State in Nigeria has been attempting to train doctors in smaller district hospitals. The Ahmadu Bello University, Kaduna State also has been training their Part V medical students in a rural area. They have to do a five week programme in a rural hospital.

TABLE VIII

HEALTH MANPOWER IN NIGERIA 1970 - 1978

Parameter	1970	1975	1976	1977	1978
Registered Medical Practitioners	2,683	4,248	4,876	5,657	7,552
Registered Nurses	13,046	17,904	19,129	20,852	22,501
Registered Midwives	13,232	19,179	20,035	21,984	23,433
Registered Community Nurses	227	575	650	726	795
Registered Public Health Nurses (Health Sisters)	119	188	208	247	279
Registered Pharmacists	870	1,482	2,162	2,379	2,540
Registered Medical Laboratory Technologists	113	413	404	586	913
Registered Dentists	95	168	182	213	277
Radiographers	70	168	174	200	250
Physiotherapists	57	80	89	102	117
Dental Therapists	37	68	78	92	102

Source: Prepared by the Medical Stat. Division Fed. Ministry of Health and Social Welfare, March, 1979, Lagos.

TABLE IX

HEALTH MANPOWER PER POPULATION IN NIGERIA 1970 - 1978

Parameter	1970	1975	1976	1977	1978
Mid-Year Population Estimate (1,000s)	64,000	74,000	76,000	78,000	80,000
Population per Medical Practitioner	24,000	17,000	16,000	14,000	11,000
Nigerian	46,000	24,000	22,000	19,000	15,000
Dentist	674,000	440,000	418,000	366,000	289,000
Nigerian	422,000	679,000	589,000	523,000	44,000
Registered Nurse	4,900	4,100	4,000	3,700	3,600
Registered Midwife	4,800	3,900	3,800	3,500	3,400
Psychiatric Nurse	196,000	129,000	117,000	107,000	101,000
Public Health Nurse	538,000	394,000	365,000	316,000	288,000
Pharmacist	74,000	50,000	35,000	33,000	32,000
Medical Laboratory Technologist	566,000	179,000	188,000	133,000	88,000
Radiographer	914,000	440,000	437,000	390,000	320,000
Physiotherapist	1,123,000	871,000	844,000	661,000	526,000
Dental Technician	1,684,000	925,000	854,000	765,000	684,000
Dental Hygienist	1,730,000	1,088,000	974,000	848,000	784,000

Source: Prepared by Medical Statistical Division, Fed. Ministry of Health and Social Welfare, March, 1979, Lagos

One should not forget that Nigeria has a population of about 80 million people and less than 7,552 doctors of which 2,082 are non-Nigerian (Table VIII).

Both Tables VIII and IX show that there is an increase in the number of personnel annually and a decrease in the manpower population ratio, but the need is still great and trained auxiliaries are filling the gap in many of these areas (Osuhor and DeLeon, 1979).

In the Third National Development Plan, the Federal Ministry of Health has set for itself the task of promoting, protecting, restoring and improving the health of all the people of Nigeria. This is in recognition of the right of every citizen to a better health, through providing equal opportunity for all to obtain health care (Shehu, 1976).

The Ministry has itself set up a number of objectives.

(1) To promote health until all people are covered by appropriate health care services

(2) To provide personal health treatment to individual citizens and primary health care to the community

(3) To remove or ameliorate pains, sufferings, and deformities, as well as restore health

(4) To rehabilitate individual citizens to the level of health which will enable them to enjoy and maintain their living as well as their rightful place within the community

(5) To plan and research into ways of attaining good level of health of the nation.

(Shehu, 1976)

The strategy for achieving these objectives in the rural and urban areas is based on the establishment of a basic health service scheme, consisting of 450 Basic Health Units. Each Basic Health Unit will have one Comprehensive Health Centre, four Health Centres, five Mobile Clinics and twenty Health Clinics.

The total number of health establishments envisaged for the entire scheme is 94,500 and the estimated cost is well over two billion naira. There is no doubt that if the projects were achieved, we would see the provision of infrastructural facilities which would be second to none in any part of the 'so called' developing world. More trained Health Workers will therefore be needed to man these Basic Health Units, otherwise they would turn out to be empty shells which animals will make as their homes.

The basic health service programme therefore sets out the requirements for various categories of health workers, both professional and auxiliaries. This, in the author's view, is the crucial issue and the reasons are not difficult to assess.

(1) Insufficient number of suitable candidates to train

(2) Inadequacy of the existing training institutions

(3) Tightfistedness of the government such that adequate funds are almost invariably never made available even though many training institutions could expand their intakes

(4) Shortage of qualified teachers. There are, of course, constraints like unwillingness of the trained personnel to work in the Rural Area which will affect their even distribution.

(Shehu, 1976)

In order to compensate for the shortage of doctors, a programme has been developed by the government. It is called the Basic Health Services Scheme (B.H.S.S.).

PRIMARY HEALTH CARE, BASIC HEALTH SERVICES SCHEME (B.H.S.S.) AND THE TRAINING OF COMMUNITY HEALTH OFFICERS

Primary Health Care (i.e. B.H.S.S.) addresses the main health "problems in the community providing promotive, preventive, curative and rehabilitative services accordingly, and these will include: promotion of proper nutrition and an adequate supply of safe water; basic sanitation; maternal and child care, including family planning; immunisations against the major infectious diseases; prevention and control of locally endemic disease; education concerning prevailing health problems and the methods of preventing and controlling them; and appropriate treatment for common diseases and injuries" (The Federal Ministry of Health in Nigeria, 1979).

Areas of Personal Public Health Services

Basic Health Service (B.H.S.S.) appears new to many in Nigeria, yet the concept is not in any way new. For nearly two decades

or more, various community health staff, trained at the Schools of Hygiene, produced Public Health Assistants, and Health Auxiliaries Schools produced Rural Health Assistants. They have been used to provide Primary Health Care for years. There have been Health Sisters, Public Health Nurses and Community Midwives, who have been the principal Public Health Staff used in the provision of these personal public health services. The Dispensary Health Assistants (D.H.A.s), also trained at the School of Hygiene and Health Auxiliary Training School have also played a significant part, though they have been in the employment of the local government councils, manning the local government dispensaries.

Aims and Objectives of B.H.S.S.

At a meeting held on 25th September, 1979, at the Federal Ministry of Health, Lagos, between all the Chief Health Officials in all 19 States of the Federation and Dr. A. B. Sulaiman, Director of the National Health Planning Division (also now changed with the co-ordination of the B.H.S.S.) it was stated by Dr. Sulaiman that the aim of the B.H.S.S. is

> "To provide Primary Health Care to the generality of the Nigerian Community in the towns and villages where they live and work. Further, that the B.H.S.S. necessarily forms an integral part of the country's (i.e. each state) existing health system of which it is the nucleus, and each state was therefore to implement the B.H.S.S. in the form that best suits and accords with the state's present level of health care development."

To meet the ever increasing need to expand the health services, the B.H.S.S. was conceived by the Federal Military Government and is now being implemented in each state, with the following objectives:

- to provide adequate and effective health facilities and care for the entire population
- to correct present imbalance in the location and distribution of health institutions
- to correct present imbalance between preventive and curative health care
- to provide the infrastructure for all preventive health programmes, such as control of communicable diseases, family health, maternal and child care, environmental health, nutrition, health education and others
- to establish a health care system best adopted to the local conditions and to the level of health care development and health technology in each state.

These B.H.S.S. facilities, and health institutions, are to complement the existing hospital services and health institutions in each state, thus creating a health care pyramid with the broad

base formed by a network of Health Centres and Clinics, and the apex represented by teaching and specialised hospitals.

Staff Development for the B.H.S.S.

To provide the necessary staff to meet the expanded health services that the implementation of the B.H.S.S. will bring along in the country, both the existing staff presently engaged in the provision of personal public health care delivery, and new staff will be needed.

(i) Community Health Aides

(ii) Community Health Assistants

(iii) Community Health Supervisors

(iv) Community Health Officers

The Curriculum consists of three Units for the Community Health Officer/Supervisor.

Unit I General Health Care

1.1 Health Education

1.2 Environmental Health

1.3 Control of Communicable Diseases

1.4 Nutrition

1.5 Accidents and Emergency Medicine

1.6 Dental Care

1.7 Community Mental Health

1.8 Use of Standing Orders

1.9 Diagnostic Services

1.10 Health Statistics

Unit II Personal Health Care

2.1 Maternal and Child Health

2.1.1 Pre-School Child

2.1.2 The School Child

2.1.3 Maternal Health

2.2 Occupational Health

2.3 Care of the Aged

2.4 Care of the Handicapped

Unit III Organisation and Management of Basic Health Services

3.1 Supply of Drugs

3.2 Management of Basic Health Services

3.2.1 Management of Health Centres/ Clinics

3.2.2 Operation of Health Centres/ Clinics and Accounting System

3.3 Referral Services

3.4 Community Involvement in Health Care

3.5 Mobile Services

POSITION SUMMARY

Community Health Officer

This is a promotion post for some categories of senior health staff after undergoing one academic year training at the prescribed institution by the Federal Ministry of Health in management techniques, legistics, technical, education and supervisory activities.

The selection should be made from among the following categories:

- Public Health Nurse
- Community Health Supervisor
- Community Midwifery Sister
- Higher Rural Health Superintendent
- Nursing Sister/Superintendent

The Community Health Officer has the administrative and sometimes technical responsibility (using standard orders) of the B.H.S.S. Unit under his/her care.

In the unit where there is a Medical Officer, the Medical Officer has only the medical responsibility, whilst the Community Health Officer has administrative responsibility.

Personal Qualifications

1. Managerial ability to guide, supervise and lead others

2. Ability to foster team spirit and sustain individual and team morals

3. Initiative and ability to exercise independent and sound judgement

4. A high sense of responsibility, accountability and dedication towards his/her professional activities, the team and the community

5. Ability to interact with, and adjust to, the local working conditions, traditions and beliefs of the community

Technical Duties

1. Organise home-based referral programme

2. Interview, counsel and work with clients in the clinic and home in keeping the family healthy

3. Use standing orders

4. Give primary care and counsel according to standing orders

5. Carry out, refer to, and interpret appropriate laboratory procedures

6. Take full responsibility of the child spacing and labour room

7. Perform all functions (technical and administrative) of the Community Health Supervisor, Community Health Assistant and Community Health Aides.

Administrative Functions

1. In his/her role as the overall supervisor of the B.H.S.S. Unit, he/she co-ordinates and supervises the activities of the various members of the health team (Community Health Supervisor, Community Health Assistant and Community Health Aides)

2. Supervise the unit through the District/Village Health Committee meetings and informally through contact with opinion leaders

3. Co-ordinate activities of the B.H.S.S. Unit with the referral centres.

4. Manage resources, such as drugs, equipment supplies, manpower and keep appropriate and accurate records of all supplies and drugs.

5. Ensure efficient legistic support of drugs, equipment and supplies

6. Organise the routine maintenance of medical equipment, vehicles and make recommendation for change

7. Compile daily, monthly and yearly reports of the B.H.S.S. Unit activities

8. Periodically evaluate staff and legistic support of the B.H.S.S.

9. Motivate the health team and ensure work discipline

10. Organise structured patient flow

11. Obtain information and follow-up of referred cases

12. Prepare and manage the accounting system of B.H.S.S. Unit.

Education Functions

1. Identify teaching/learning needs for both clients and staff

2. Organise and participate in the in-service education of the staff

3. Carry out health education in the clinic and community

4. Teach other members of the health team to use standing orders

5. Work with the B.H.S.S. training institution in the training of B.H.S.S. health workers.

Community Functions

1. Maintain good information and working contacts with the community leaders, representatives of other agencies and other health personnel

2. Motivate and participate in community development activities in co-operation with the community leaders and representatives of other agencies.

Professional Qualifications

1. Registration with the Federal Ministry of Health

2. Maintain code of ethics of the Health Professions.

THEORETICAL PROGRAMME

General Objectives

1.1 Promote individual and community self-reliance in health matters

1.2 Environmental Health

Identify environmental health hazards in the community and take appropriate action

1.3 Control of Communicable Diseases

Manage and control communicable diseases

1.4 Nutrition

Assess the nutritional status of the individual community and establish preventive and curative services

1.5 Accident and Emergency Medicine

Recognise emergency condition, initiate treatment and refer as appropriate

1.6 Dental Care

Screen for dental problems, perform preventive and first aid services

1.7 Community Mental Health

Recognise psychiatric emergencies, take appropriate action and supervise the management of patient under specialist care

1.8 Use of Standing Orders

Use standing orders to manage the common and emergency conditions, and refer the more complicated and those needing further attention to a doctor or Senior Community Health Officer

1.9 Diagnostic Services

Supervise a clinic laboratory and ensure the proper running of laboratory services

1.10 Health Statistics

Prepare a plan for keeping records, registers and reports for clinic administration and evaluation.

HEALTH EDUCATION PROGRAMME

Unit 1 General Objective

Promote individual and community self-reliance in health matters.

Instructional Objectives

Objective 1.1.1 *Demonstrate Proficiency in the Following* Techniques of Communication:

(a) Non-verbal communication, especially by gestures and expression, e.g. sympathetic listening, welcome, concentrate attention

(b) Verbal communication, especially voice techniques *and structure of message for:*

- face to face discussion
- small group informal discussion
- panel discussion
- address to an assembly of elders

(c) Audio-visual techniques, especially song and dance, integrated verbal, non-verbal message for small groups:

- use of facial expression and body movement
- role play
- flannel graphs
- blackboard or posters
- slides
- puppets
- audio-tapes, radio and redifusion services
- story telling

Objective 1.1.2 Demonstrate Knowledge of 'Facilitators' and 'Barriers' to Communication

1.1.2.1 Identify at least five facilitators and five barriers to effective communication that may occur among health members in the clinic/community setting.

1.1.2.2 Identify at least five facilitators and five barriers between health team members and patients/common members.

1.1.2.3 Identify in the clinic or community situation, a specific barrier to effective communication and make a plan of action to overcome or eliminate that barrier.

1.1.2.4 Identify at least three examples of cultural background.

Objective 1.1.3 Demonstrate Knowledge of Basic Learning Principles

1.1.3.1 Identify techniques by which a teacher can help the learner to acquire

(a) new health knowledge

(b) new health behaviours

1.1.3.2 Identify the following factors as influencing the learning and its translation into behaviour, using an observed teaching session

(a) Use of repetition and reinforcement

(b) Active participation of the learner in the development of ideas

(c) Reinforcement of the learner by peers

(d) Simplicity of the message

(e) Use of role-models (patients who have changed behaviours)

(f) Demonstration of new behaviours

(g) Money and time needed to practise.

Objective 1.1.4 Demonstrate the Community Health Officer's/ Supervisor's Teaching Role in Helping Others Learn

Instructional Objectives

At the completion of this unit, the Community Health Officer/ Supervisor will be able to:

1.1.4.1 Describe the basic learning principles, e.g.

(a) adult learning differs from learning in children

(b) cultural and social conditions that affect learning

1.1.4.2 Demonstrate the use of objectives in teaching, learning and evaluation

Objective 1.1.5 Maintain a clear and courteous communication with patients as manifested by:

(a) Welcoming

(b) Helpfulness

(c) Explaining treatments, procedures, the nature of disease, etc. to the patient in language easily understood by him/her

(d) Checking the patient's understanding (by some other way than asking "do you understand")

Objective 1.1.6 Demonstrate the application of Communication and Teaching Techniques to Planning and Presentation of a Learning Session for a Selected Skill or Topic

(a) Identifying target groups (specific learner group)

(b) Defining objectives

(c) Selecting relevant content

(d) Selecting appropriate method of presentation (demonstration, discussion, lecture, etc.)

(e) Organising and presenting sessions

(f) Selecting and applying evaluation tools.

Objective 1.1.7 Identify the Teaching Opportunities in Contacts with Patients, Staff Members, Trainees and the Community

Instructional Objectives

At the completion of this unit, the Community Health Officer/ Supervisor will be able to:

1.1.7.1 Identify and utilise the past experience which learners bring to the learning situation, for their own learning benefit and for the benefit of the total group

1.1.7.2 Share responsibility for teaching with other staff. Evidence of this sharing can be recognised by how the trainee:

(a) Recognises and makes use of particular staff and patients as role-models and persons from whom new behaviours may be learned

(b) Communicates, during training programmes, to the clinic staff what learners are involved in learning

(c) Delegates teaching activities appropriately to other members of the health team, such as the driver of the mobile team, the Village Health Worker, the Traditional Birth Attendant, etc.

Objective 1.1.8 Identify the Learning Needs in Students, Patients, Staff Members and the Community

Instructional Objectives

At the completion of this unit, the Community Health Officer will be able to:

1.1.8.1 Identify the initial level of knowledge and skill which the learner brings to the learning process, in both formal and informal situations, with students, staff, patients and community.

1.1.8.2 Identify the areas in which the learner must gain competence whenever a new service need is recognised in the Basic Health Services Scheme.

Objective 1.1.9 Help Staff Members Plan their Health Education and Community Outreach Activities and Supervise them in these efforts

Instructional Objectives

At the completion of this unit, the Community Health Officer/ Supervisor will be able to:

1.1.9.1 List and define the different stages in the planning of health education activities, including:

(a) Identifying the problem, educational need and target groups

(b) Defining learning objectives

(c) Determining plan of action, including the *content, methods, time schedule, implementation* and evaluation procedures

1.1.9.2 Schedule/supervise the scheduling of routine and special health education activities, such as health talks, demonstrations, group learning, activities and home visiting. Scheduling includes choosing topics, times and places and assigning educational responsibilities of various staff members.

(Fed. Min. of Health Net. Health Planning Directorate, 1979).

MODELS OF HEALTH CARE

Health Care in Britain

The National Health Service (N.H.S.) in the United Kingdom was introduced in 1948 and was completely reorganised in 1974. It is an essential part of a much wider system of social security in which the whole state makes compulsory provision for various

inevitable happenings in life, including the prevention of disease and the treatment of illness. The N.H.S. is a comprehensive health service covering the whole country and its benefits and services are available to everyone.

There is no contracting out of the service and it is financed centrally from both the Exchequer general taxation and specific levies paid within National Insurance contributions.

The Health Services are now provided as one integrated service and the original division into hospitals, preventive and general practitioner services has been changed. In its place, the local services are provided on a geographical basis with all major services being organised by ten Area Health Authorities in England, fourteen single Health Boards in Scotland and eight Area Health Authorities in Wales.

Doctors that are trained in developing countries today may be better equipped on completion of their training to work in the British National Health Service hospitals than in primary health centres in rural areas. This may be due to the teaching of the present professionals having stemmed directly from hospital services which developed in parallel with English hospitals and were not indigenous to their country. Those responsible for developing of services, perhaps need to look at the services in China, Cuba polyclinics in urban and semi-urban population, Vietnam, Kenya and Tanzania decentralised health services (Morley, 1977).

The Model of Health Care in China

In China the crude death rate and birth rate have fallen tremendously since 1948. These changes in health status are certainly not of changes in health care alone, but improvements in nutrition, sanitation, and living standards are at least as important. The principle used included:

(1) A fundamental redistribution of health care resources from the services of those who formerly had most to those who had least

(2) A commitment to encouraging the people's own self-reliance and mutual help in meeting health problems, for example, through mass education

(3) The training of a large number of full-time professional health workers

(4) The training, more recently, of large numbers of part-time health workers who continue at the same time to be peasants, workers or housewives

(5) An emphasis on preventive rather than therapeutic medicine

(6) Attempts to preserve and strengthen that which was most valuable in traditional Chinese medicine and using it and its practitioners as a vehicle for the wider distribution of modern medicine

(7) Motivation through fostering a desire to service others rather than for individual self-aggrandiziment.

(Sidel and Sidel, 1975)

Good et al (1979) mentioned that Nigeria is making every effort by the following:

(1) Significant new efforts include the varied, innovative, community-centred approaches to preventive and curative care promoted by the Institute of Child Health of the University of Lagos, Nigeria.

(2) The Nigerian experimental use of traditional healers in psychiatry is well-known, although procedures and results have never been adequately reported.

(3) Research on traditional medical systems have

recently been conducted in Nigeria.

(4) The training of traditional midwives.

The task is great, but the need of trained health workers is important and with B.H.S.S. in Nigeria, staff are being trained at present for the scheme.

The Model of Health Care in Tanzania

In Tanzania, the Anusha Declaration by TANU directed that rural areas should receive priority in development programmes. Poverty, ignorance, and disease, were declared priority.

At the 1971 TANU Biennial Conference the need for increased rural development was re-emphasised. TANU directed, in particular, that health services, adequate and wholesome water, and education for the people, particularly in the rural areas, should receive priority in all the country's future annual development plans.

The government placed emphasis on disease prevention and community development; for example, in Ujama Village nearly three million Tanzanians are now living and working communally.

All the men and women are trained the course aims in widening the horizon and understanding of the rural development in various

aspects of development which is pregnant with economic, political, social and psychological implications.

Mass health education was launched in 1973, a total population of two million people taking part.

Both China and Tanzania approach interpreted against the background of a well-defined socio-political system.

However, some of these innovative characteristics can be found in other developing countries with different political systems. This approach appears to minimise the cost of delivery of health services and therefore does not require great health resources. Culturally adapted local and regional solutions are also recommended in developing countries.

Nigeria has endorsed the view that permanent improvement in the Nation's health cannot be acquired by clinical medicine alone. There must be steady advance in all factors which contribute towards healthy life - good water supplies, housing, sanitation, nutrition and conditions of work (Government of Nigeria 1st Dev. Nat. Plan, 1968). However, the allocation of capital outlays in the 1970-1974 plan period indicated, in fact, a minimal interest in preventive medicine (see Table XI).

Seventy two per cent of the capital outlay for health programmes was allocated to curative services as against 15 per cent for preventive services and training programmes respectively.

Looking at, and comparing Tanzanian socialist philosophy with Nigerian egalitarian philosophy, Tanzanian emphasis is on preventive medicine, but the government has continued to stress the provision of curative medical services. The curative budget received 75 to 80 per cent of the funds in operating health budget, while preventive services received about five per cent (Segall, 1972-1973). Nigeria is emphasising prevention through their B.H.S.S. programme.

Table X shows that Nigeria's capital health expenditure is projected to increase from $0.90 to $1.70 in 2000 A.D. The figures for Thailand and the United Kingdom are increased at a similar ratio, but Thailand does not reach $6.00 and the United Kingdom reaches $400.00. The implication of these projections is very important.

The amount of money available for health care is an important determinant of the quality and quantity of the health services. Health Planners will therefore have an acute responsibility to use the health service money to the maximum effectiveness. This is where health education becomes important to health planners, in that the cost of preventive medicine, in the long run, is less expensive than curative medicine.

TABLE X

GOVERNMENT EXPENDITURE ON HEALTH PER CAPITA AND PROJECTIONS, SELECTED NATIONS

Country	G.N.P. per Capita 1972 U.S. Dollars		Government Expenditure on Health per Capita 1972 U.S. Dollars	
	1972	2000	1972	2000
Indonesia	80	123	.20	.31
Nigeria	140	270	.90	1.70
Thailand	210	530	2.45	5.90
Columbia	370	490	2.04	2.76
United Kingdom	2,345	8,489	105.16	380.69

Source: Copied from Sorkin, A. (1977) Health Economics in Developing Countries, D.C. Health and Company, Lexington, Toronto.

TABLE XI

ALLOCATION OF CAPITAL EXPENDITURE ON HEALTH PROGRAMMES, NIGERIA 1970 - 1974

Type	Federal Government (in millions)	State Government (in millions)	Total (in millions)	Percentage (in millions)
Curative Services	28.37	58.33	86.70	72.0
Preventive Services	1.88	17.65	19.53	16.7
Training Programmes	1.83	8.56	10.39	8.6
Others	0.20	3.59	3.79	3.2
Total	32.28	88.14	120.42	100

Source: Government of Nigeria, Second National Development Plan (1970-1974) Lagos, Government Press Tables 1 and 2, Chapter 24.

CHAPTER FOUR

THE AIM OF HEALTH EDUCATION AND ITS ROLE IN MEDICAL EDUCATION IN NIGERIA

Health education is a major tool used in preventive medicine. It is used in bringing about change in people's knowledge, attitudes, and practice.

Therefore, the general purposes of health education in Nigeria are:

(1) To make health a valued community asset
(2) To promote the development and proper utilisation of health services
(3) To help the people to achieve health by their own actions and efforts

(Shehu, 1976)

The concern of medicine with health education is to improve the individual, and the community's health by promoting better health behaviours.

Hachbaum (1971) stated that

> "the task of health education is to equip people intellectually and emotionally to make sound decisions on matters affecting their health, safety and welfare..... it tries not only to equip people with the means of making such decisions, it also tries to influence the outcome of such decisions and ultimately it is this that determines whether we have been really effective or not..... its specific goal is to improve people's health behaviour."

Health education, therefore, gives people information which results in new learning and insight. These, in turn, lead the individual to more positive attitude to health.

THE MODELS USED IN HEALTH

The precise role of behavioural sciences in medical training has been fully recognised by teachers in medicine. Many medical students and their trusted advisors are suspicious that the traditional medical syllabus does not completely satisfy the contemporary needs of either patients or their doctors. One has therefore to look at the 'medical' model and the 'social' model to see if they are the opposite of each other (see Table XII).

According to Clarke and Cohen (1979) the 'medical' model represents the medical profession as being too much occupied with individual disease and the 'high technology' of hospitals, whereas the 'social' model places the chief emphasis of medicine on measure for preventing malaise in the population as a whole, and on the relief of chronic illness. This does not mean that they are bound to be in opposition to each other.

The 'medical' model of disease accounts very well for many illnesses especially where specific agents can be identified and a counter-attack launched. It serves to integrate preventive and therapeutic

TABLE XII

ATTRIBUTES OF MEDICAL AND SOCIAL MODELS

Medical	Social
Individual	Population
Treatment	Prevention
Cure	Care
High Technology	Simple measures
Hospital	Community
Specialised Care	Primary Care
Acute Illness	Chronic Illness
Concepts of disease	Perception of Illness
Patients	Client Group

Source: Cohen and Clarke (1979)
"Medicine, Mind and Man: an Introduction to Psychology for Students of Medicine and Allied Professions"

measures, by focussing both on pathological changes caused by the agents and on signs and symptoms which yield to treatment. However, it is less applicable to multi-factorial assessment of diseases, for which no specific and clearly defined agents can be identified, as for example, in coronary thrombosis. However, for the diabetic and other forms of replacement treatment, the doctor endeavours to enable the patient to live a reasonably healthy life in spite of his illness, which cannot, as yet, be 'cured'. The doctor seeks the root cause of illness while alleviating his patient's symptoms.

Doctors have always recognised the importance of a sick person's mental and emotional state. Nowadays, nearly all members of a health care team take note of the socio-psychological and economic factors in illness.

Sir D. Black (1977) gave a penetrating analysis of a controversial topic:

> "the 'medical' model versus the 'social' model"

In medical theory and practice he mentions that the 'medical' model is ascribed to doctors, not invented by them.

Bloor and Horrabin (1975) in context argued that there tends to be a basic conflict in the doctor-patient relation. The doctor appears to assume that the patient should use his own judgement about when he should seek medical advice, while, on the other hand,

the patient is expected to accept, with reservations, the doctor's recommendations on treatment. Clarke and Cohen (1979) stated that this relationship is far from being mutual, as has been supposed by some sociologists.

IMPLEMENTATION OF BEHAVIOURAL SCIENCES INTO A MEDICAL SCHOOL

The differences in the models, however subtle, are reflected in the teaching of the behavioural sciences. The teaching in a Nigerian medical school should focus on the health problems of the population or community. This would equip the students to meet purposes or aims of health education in Nigeria.

Secondly, the behavioural sciences course should be structured to meet the second purpose of health education in Nigeria, that is,

> "Issues that relate to proper utilisation of health services"

In order to do this, the political, economic and psycho-social aspects of class structure, beliefs, values, and culture should be studied. These should be looked at in a medical context.

The third aim is to help the people to achieve health by their own actions and efforts. The students will have to study behavioural sciences in both theoretical and applied forms. These should be studied in the first year, second year, third year and a praticum or fieldwork in the fifth year of their

medical training. This would help the student to meet the needs of the community. (The curriculum in Chapter Five is planned to meet the population needs).

Coe (1975) tried to identify the different types of curriculi models that are used in medical schools.

(1) The traditional model:

This includes the basic biological science and clinical courses taught in a rigid sequence.

(2) The expanded model:

This includes courses on the principles of the behavioural sciences. These sciences are taught as 'basic' science and then applied to clinical situations, but the sequential nature of the curriculum is maintained.

(3) The integrated model:

Here the behavioural sciences' principle and practices are introduced in the context of a multi-disciplinary perspective on health issues. The sequential nature of this curriculum is much more relaxed.

Figure VI tries to show an integrated curriculum that Coe mentions. This could be done in medical schools in Nigeria. The Department of Community Medicine could draw upon skills from other faculties and staff in other departments, for example, paediatrics, obstetric - gynaecology. In the pre-clinical year, the problem of malnutrition could be presented to students from a biochemical and physiological perspective along with behavioural sciences. The health educator could co-ordinate the programme.

In an experimental programme in the University of Saõ Paula (there is also a traditional curriculum in this school) the first five semesters were focussed on human biology (including behavioural science aspects) and the last three semesters included the use of the 'systems approach' (this will be explained later). For example, materials on the cardiovascular system were presented from the perspectives of anatomy, physiology and other biological sciences, along with some epidemiological and behavioural science aspects. The sixth semester emphasised preventive medicine, including microbiology and parasitology, but also the demographic and epidemiological dimensions. Practical experiences in clinical training occupies the balance of the curriculum (Coe, 1975).

Byrne (1972) mentions that in the undergraduate programme, health education can be taught without any additional time. It could be emphasised as it occurs in the clinical situations. This would expose the student to the use of health education. They would later use this method in their general practice.

FIGURE VI

CO-ORDINATING THE HEALTH EDUCATION CURRICULUM IN A MEDICAL SCHOOL

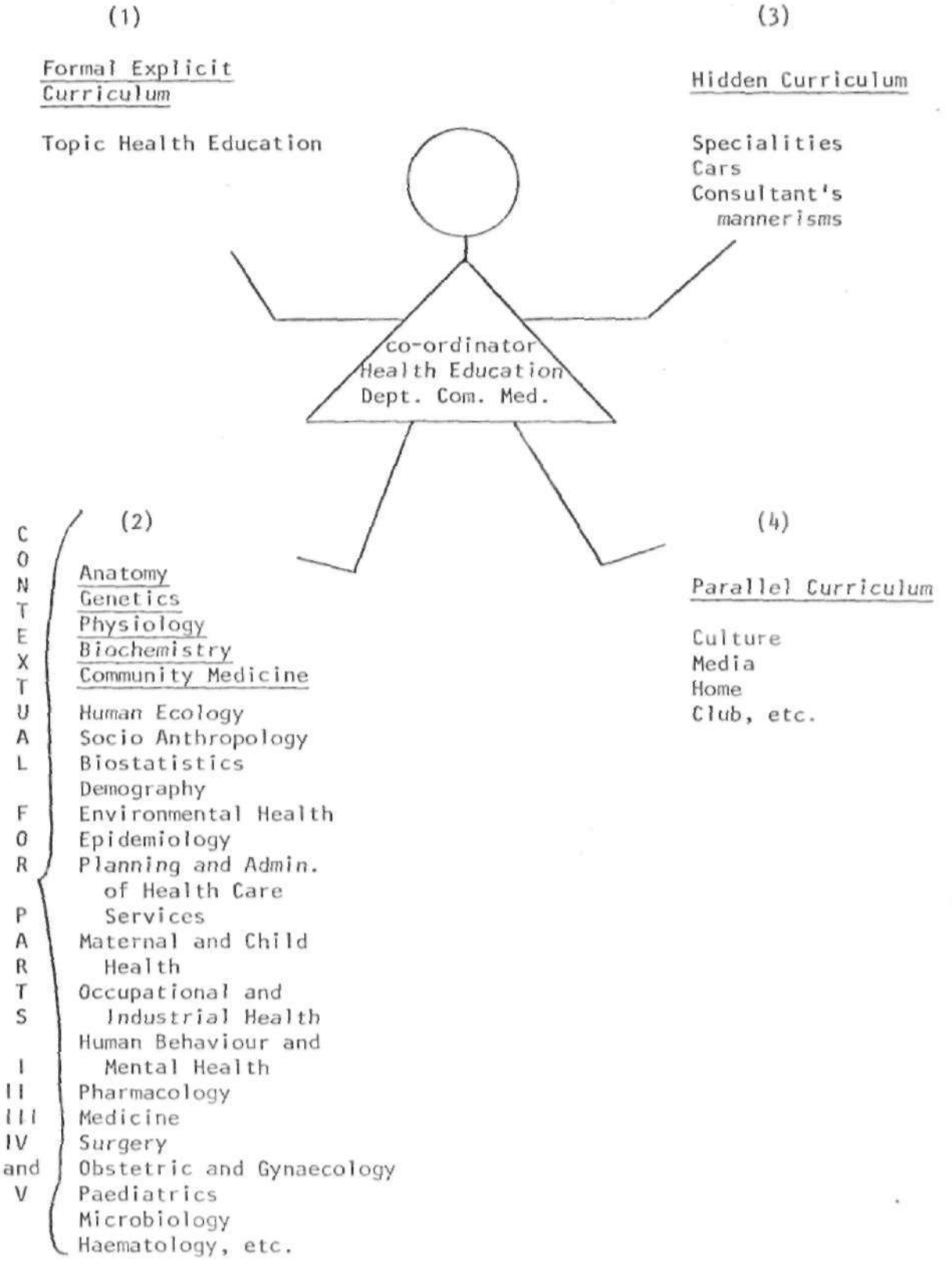


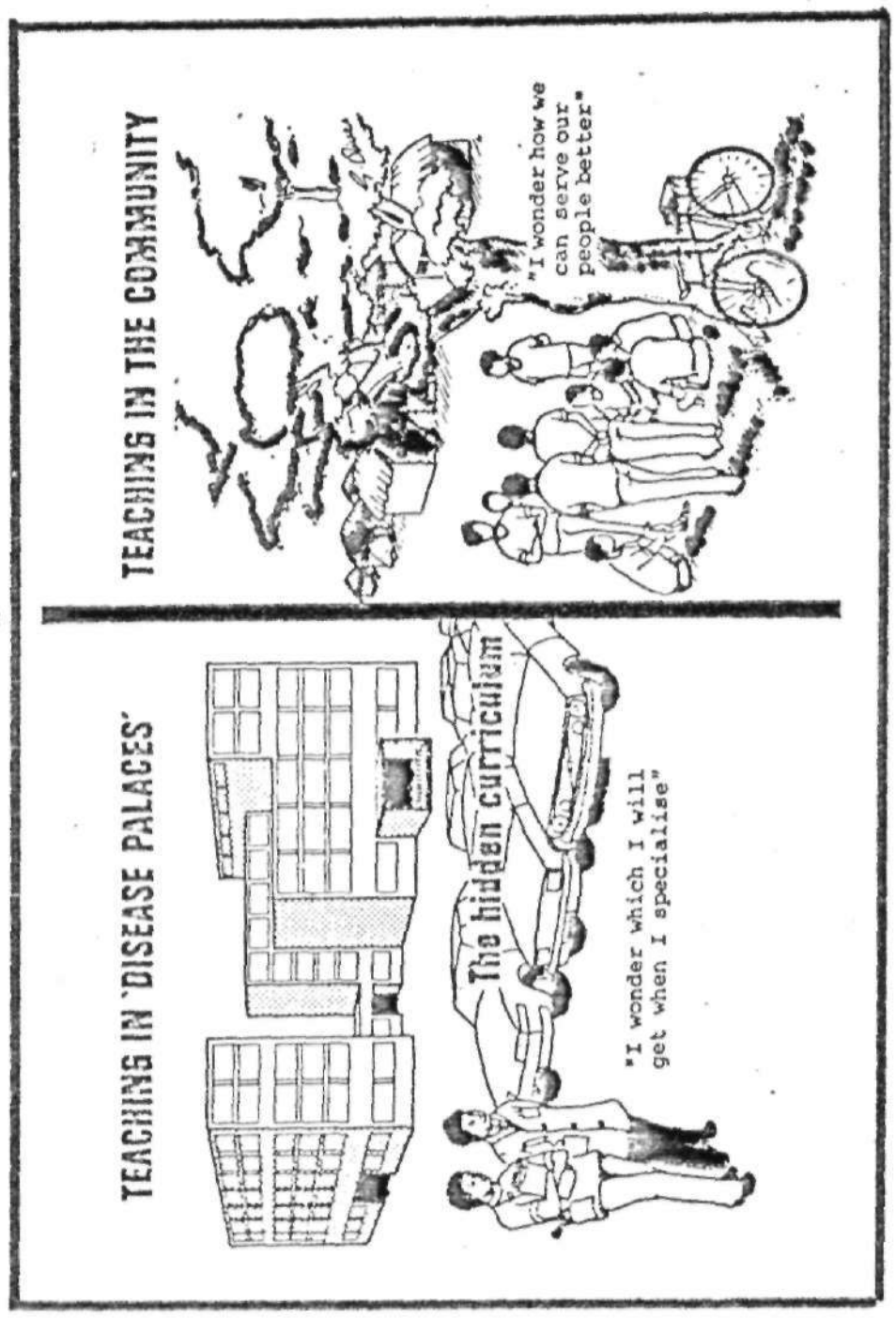
Figure VI again tries to exemplify Byrne's statement. It attempts to show the role the health educator and consultants could play in the co-ordination and teaching of health education throughout the medical student's training.

The hidden curriculum in the above mentioned figure attempts to point out the fact that medical students in developing countries should be thinking more about the importance of the community he lives in, and should try to serve it better. Figure VII tries to exemplify this statement better. Health education would appear not to be a speciality like medicine. It is a sub-speciality, but it makes a valuable contribution to almost all the branches of medical education and should not be ignored.

Medical schools are in the cities in developing countries. The medical student from the rural area is involved with the material expectations of the city élite and is thinking more of the curative aspects of medicine. He forgets that teaching prevention in his community is just as important as the curative side of medicine. (see Figure VII)

FIGURE VII

TEACHING IN 'DISEASE PALACES' VERSUS TEACHING IN THE COMMUNITY



Source: Adopted from Morley (1979)
"Medical Education in the Developing World - New Approach Needed"

THE ROLE OF THE DOCTOR IN HEALTH EDUCATION

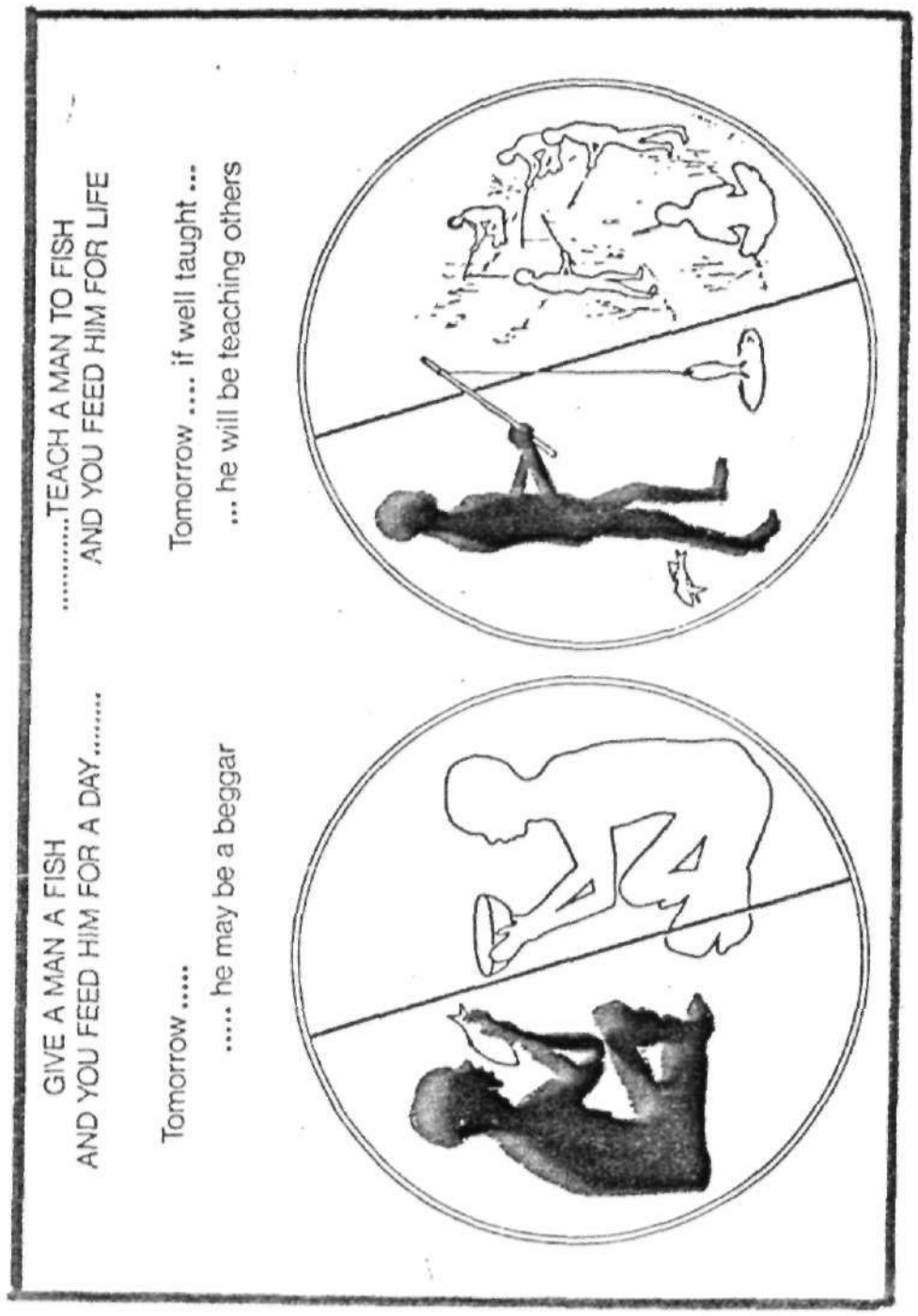
Cust (1979) states that every doctor in consultation with a patient, is involved with teaching health education. Not many doctors are fully aware that every word and action in his surgery is a form of health education.

In developing countries, for example, if there is an outbreak of cholera, the doctor has to study the aetiology of the disease. He then has to see what measures are to be taken to prevent further outbreaks. He has to study the community's knowledge, attitudes and practices before he can even try to alter or change their health behaviour (see Figure VIII).

Giving a patient tablets or an injection for any parasitic or infectious disease is important, but the patient should be taught how to take care of himself, so that he does not get reinfected again. This will decrease the patient's dependence on doctors (Figure VIII).

FIGURE VIII

TEACHING MAN TO CARE FOR HIMSELF



Source: Adopted from Morley (1979)
"Medical Education in Developing World - New Approach Needed"

The doctor's role in health education in the community is mentioned above. Following upon Cust's statement, this also applies to doctors in developing countries. In the medical officer's surgery, if a child has kwashiorkior, he has to use his skills to change the feeding practice of the infant. If there are many road accidents, he has to develop a programme that will make the drivers drive carefully. If the incidence of ancylostomiasis is high, he has to get the community to build public latrines to avoid open defaecating and urinating. If the infants are dying from measles and whooping cough, he has to develop a health education campaign programme, so that all the children will be immunised.

The doctor's success in the prevention and control of disease and in the promotion of health depends, 'inter alia' on an informed, motivated and involved individual and community. The doctor should consider health education as an intervention and as an activity aiming at assisting people to participate in health matters relevant to their personal and community interest on a sustained basis. Many of these attempts have not been successful. They failed because they were based on premises not universally valid or not valid for the particular circumstance.

If a doctor is to use the opportunities available to him for health education, he will require a certain body of knowledge

derived from behavioural sciences, together with a range of skills and techniques.

Whether the doctor uses the medical or social model, it would seem important that he should understand how an individual's current health related knowledge, attitudes and behaviour have developed. This requires a knowledge of the process of socialisation. Whatever the purpose of the contact between a doctor and his patient, or a group of patients, it is important that there is effective communication between them. As part of health education, the health educator would expect to give the intending doctor a fuller understanding of the communication process, so that he would receive better skills in communicating with his patients. A doctor frequently requires patients to remember information, for example, the amount of insulin to be taken.

A knowledge of the learning memory process should enable him to organise effective learning situations and those in which forgetting is reduced to the minimum. All health educators, whether they are doctors or otherwise, are concerned with the health related decisions made by people. The factors contributing to these decisions are complex and a variety of theoretical approaches have been developed to assist in the analysis of health decisions. The curriculum for the medical student will consider the approaches prior to discussing the possibility of, and technique for, the changing of health knowledge, attitudes and behaviour, both at the community and individual level.

As part of Part V, medical students will be required to plan, carry out, and evaluate health education programmes. In order to do this a 'systems approach' will be taught in the curriculum. An example of such an approach can be seen in the outline in Appendix II.

There are many aspects of behavioural science which are relevant to the work of health education, but in the absence of unlimited time in the medical curriculum, certain key areas, as mentioned above, must be highlighted. Some of these will now be discussed in a brief and concise manner to indicate the approach which will be adopted in the curriculum in Chapter 5.

KEY AREAS IN BEHAVIOURAL SCIENCES AND THEIR IMPORTANCE IN MEDICAL TRAINING

1. The relationship between knowledge, attitude and practices (K-A-P) and their implication for health education

The main reason for failure in health education is because people assume that:

(a) a man's behaviour is rational

(b) that a positive high correlation exists between knowledge and behaviour.

Thus, adoption of health behaviour becomes the consequence of the process of knowledge leading to attitude leading to practice. The K-A-P premise implies that knowledge leads to attitude change, which leads to change in behaviour. Hence, the failure in the output indicator (behaviour) is interpreted as the failure of the input (education), which would seem to be a logical deduction. For example, the Surgeon General's report of the health hazards of cigarette smoking is by now common knowledge, yet in certain groups, the number of people smoking is increasing. There are various stages between knowing the fact (cognitive component) and executing a behaviour (action component), which is depicted in Figure IX (Galli, 1979)

FIGURE IX

INTERMEDIATE PHASES BETWEEN KNOWLEDGE AND BEHAVIOUR

1	A	B	C	2
Knowledge of Appropriate Health Action	Perception	Interpretation	Salience	Putting the Knowledge into Action

Source: Galli (1979) Foundations and Principles of Health Education

2. Socialisation and Health

Socialisation has two or three processes which affect the individual health career (see Figure X).

2.1 Primary Socialisation

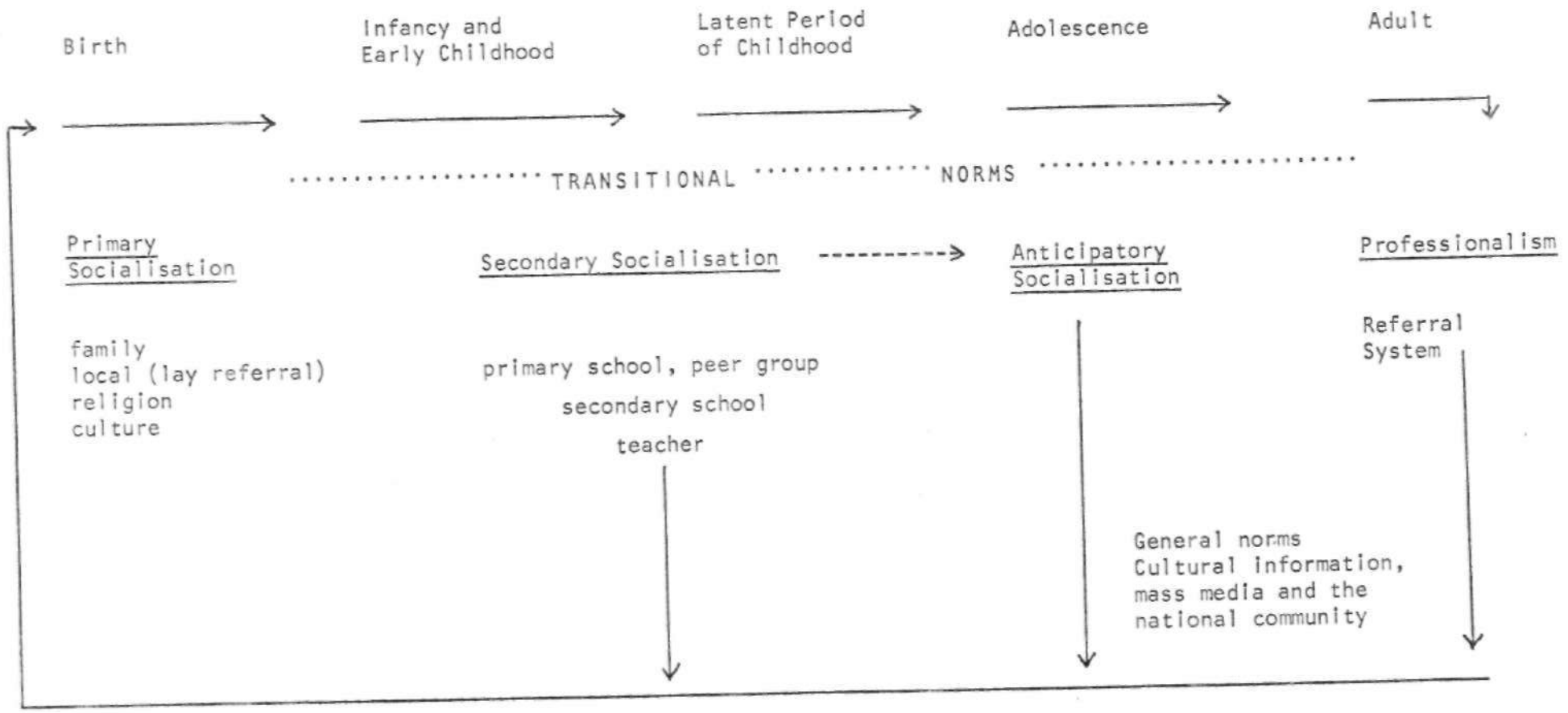
This is the term applied to the early influence of the homes, parents, relatives and close friends. The process of primary socialisation operates on a system of reward and punishment and involves a modelling process. For example, a child may be given a sip of palm wine in an African society because his behaviour is good; he therefore learns from this example and he will then, not only value palm wine, but all alcoholic drinks. His values and attitudes may be positive to all alcoholic beverages in later years.

The children are carried on their mother's back in African societies, wherever they go, and may be breast-fed while the mother is walking or riding on a bus. In this society there is positive shaping, because of the closeness or affective or cultural bonding which could affect resocialisation at a later age.

All the norms, values, routines, attitudes and health habits are internalised during this period. The health knowledge is being formed in the early years of childhood.

FIGURE X

HEALTH CAREER IN A DEVELOPING COUNTRY



Source: Adapted from Tones (1980) Lecture Notes, Diploma in Health Education, Leeds.

2.2 Secondary Socialisation

This term defines the ways in which other agencies transmit norms; the school is probably the major secondary socialising agency (Tones, 1979). This takes place when the children start to attend gatherings and other institutions other than their home environment.

Secondary socialisation is more formal than primary and there is less emotional involvement. The children attending schools are now living and integrating with other children and new adult teacher.

It takes place during the later parts of childhood and adolescence. Tones (1979) mentioned that the Jesuits believed in recruiting their disciples at an early age. Their maxim "Give me the child and I will give you the man" is likened by Tones to the 'Law of Primacy', which claims that early influence is powerful and longer lasting than later influence. Therefore, teaching health education in school is very important, and the doctor should know this, especially if he wishes to carry out mass education campaigns in a village. He should start with the school first - news will be taken home to relations.

2.3 Anticipatory Socialisation

This may be described as the positive orientation of individuals to non-membership groups (Baric, 1979), for example, students being members of different organisations and acquiring some of the groups' mannerisms.

2.4 Resocialisation

Tones (1979) mentions that socialisation may be used to describe attempts to change existing values, attitudes and motives. If one, therefore, tries to enforce rules which are counter to an ethnic group, this could cause a clash or cultural conflict.

3. The Nature of Communication Process and the Importance of Affective Doctor-Patient Communication

A doctor should cultivate the art of listening to his patient and communicating properly with him. His patient may be illiterate or otherwise, therefore he must rephrase his statements until the patient understands.

Communication is defined as "the transfer of ideas or information from one person to another" (Ritchie, 1975).

It is the origin of language, but it exists even without speech.

When a person meets another, he passes on information and receives it automatically, and this occurs even if they cannot speak the same language. Facial expression, stance, demeanor, gesture and tone of voice, all convey a message. For example, in India, shaking the head means "yes", but in Western Europe it means "no" (Ritchie, 1975).

To be successful in transferring an idea, information or message from one person to another, it is essential, first of all, to gain the attention of the receiver (patient). The patient should understand the words that are spoken, or see characters that make for easy acceptance of the idea and then take action. These processes can be clearly set out in a diagrammatic form (see Figure XI).

The receiver considered in this model may be a patient in a doctor's surgery, or a group in the community. In analysing the effectiveness of successful communication there are four main processes that transmit the message, viz.

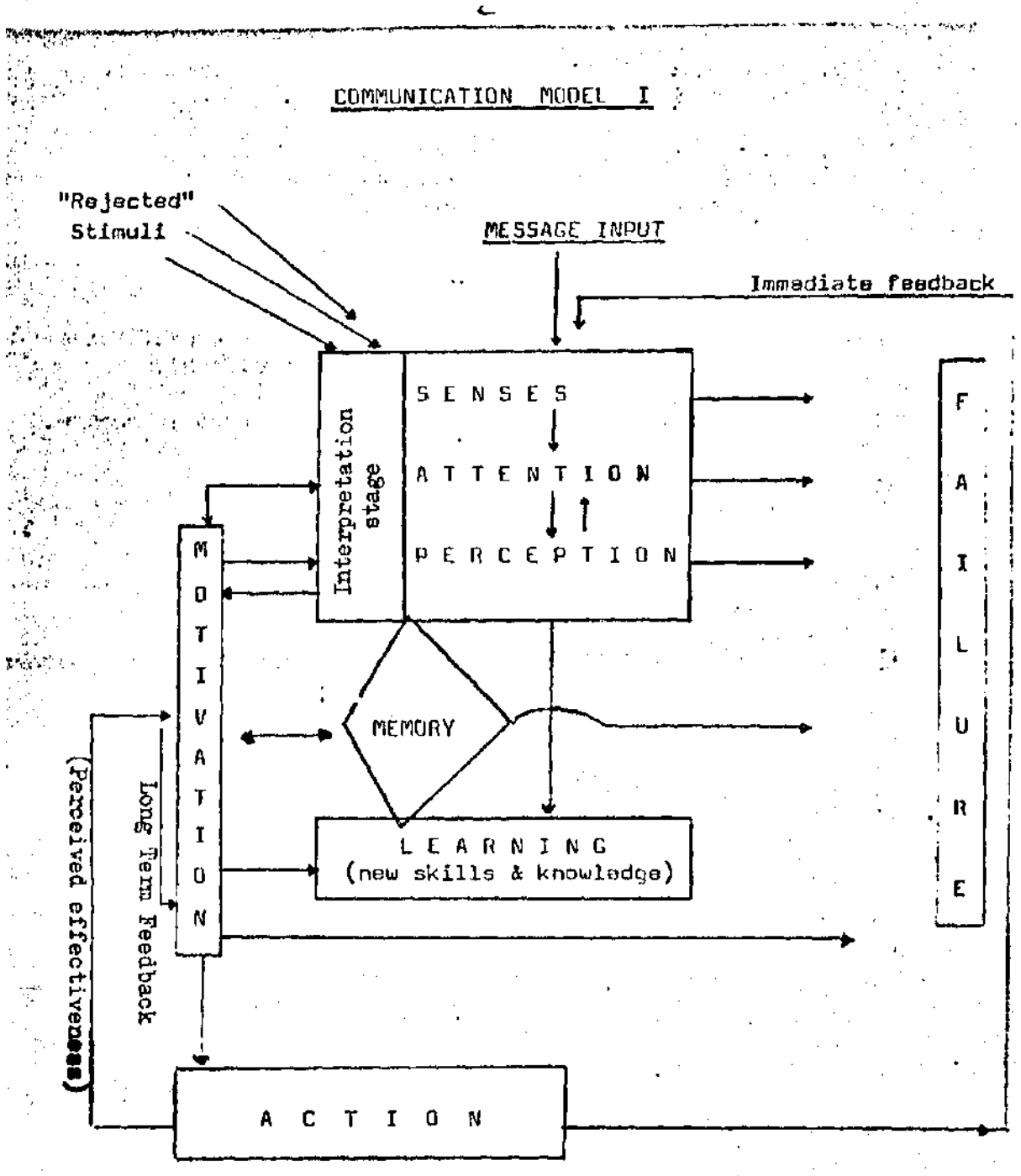
(a) The Source

(b) Coding

(c) Decoding

(d) Feedback

FIGURE XI



Source: Tones (1979)

Communication Model I
Lecture Notes
Diploma in Health Education

3.1 The Source

Since the actions of the receiver (patient) are the yard sticks to measure effectiveness of communication, it is necessary to know some of the attributes of the source that control the receiver's reception to new ideas, viz.

3.1.1 Communication Skills

and

3.1.2 Knowledge of the Source

3.1.1 Communication Skills:

There are three skills which the source ought to have:

(a) The skill of encoding, that is, handwriting and speaking

(b) The skill of decoding, that is reading and listening

and

(c) The skill of reasoning and listening

3.1.2 Knowledge Level of the Source:

In any communication process, lack of knowledge of the source or over-loading can affect the message and make it difficult for the receiver to understand what is being communicated, for example, the source knowledge about communication effects and motivation.

3.2 Coding

This can be defined as the actual physical spoken word from the source. When we write, the writing; when we print, the picture; when we gesture, the movement of our arms. The expression on our face conveys the non-verbal message (Tilford, 1979).

The code has to have a format to make the message understandable and well organised. There are three choices of format, namely:

3.2.1 Symbolic

3.2.2 Iconic

and

3.2.3 Enactive

3.2.1 Symbolic

This is the most abstract and the commonest one; it is the spoken language.

3.2.2 Iconic or Pictorial

These are the most universal forms involving fewest skills which can or need to be taught.

3.2.3 Enactive (real objective)

This is the presentation of the source or use of live objects. An example is a child delivery class

where students are allowed to see and handle equipment used in child delivery, as well as observe patients in labour, teaching, or breast self-examination for cancer.

3.3 Decoding

The patient has received the code from the source. The messages have been both cognitive and affective in modes, and transmitted through the media by use of symbolic, iconic or enactive formats.

Has the patient interpreted the message? Has he decoded it the way the doctor intends it to be interpreted?

The doctor will have to evaluate this by means of feedback.

3.4 Importance of Feedback

Successful communication depends on feedback. This may be immediate in face to face communication or more contained when a pre- or post-test is used to measure effectiveness, or when some kind of 'reading ease formula' is used to assess intelligibility.

Methods have to be used by which one can obtain feedback from the audience on how their understanding,

attitudes and behaviour have changed. For example, a story or local proverb can be most useful as a way of introducing a new idea and stimulating discussion and therefore feedback.

The length of the message influences the memory. If the message is broken into 'bits' which can be easily remembered, this will pass into the short term system, from which it can be re-circulated many times until it attains a sort of permanence and passes into the long term system, where it can be extracted when required.

4. A Brief Description of Learning

The problem of learning arises in many different medical situations. The Medical Officer may have to get his diabetic or handicapped patients to learn new dietary or working habits.

Hillgard et al (1967) defined learning as a relatively permanent change in behaviour that occurs sometimes as the result of a practice. Relating this to health education, it can be said that real learning is the process through which an individual (or a community) through his own involvement, activity, or efforts becomes changed:

(i) in the things he thinks and feels

(ii) in the things he knows (knowledge)

(iii) in the way he believes (attitude)

(iv) in respect to what he does and the way he does it (practices and behaviour)

There are many types of learning. Some emphasise what the learner actually does; this is the movement he makes, for example, when he learns to ride a bicycle, and the reward and punishment he gets for good and poor performance.

Outline of the Types of Learning

Many investigators have written articles on learning, but Gagné's(1975) hierarchical list of the eight types of learning appears to be simple and could be easily applied in health education.

He distinguishes between eight different types:

Single learning

S-R (association learning)

Learning psychomotor chains

Learning verbal chains

Multiple and simple discrimination

Concept learning

Rule (principle) learning

Problem-solving (learning by discovery)

The medical student will be taught how to use them in his studies. He has to study anatomy, physiology, biochemistry, pharmacology (and so on) in varying degrees. They are mentally exacting and some will require little memorising of names and formulae, while others will also require a concept grasp of a complex system. He will also need them to teach his patient. Hence, learning cannot be separated from remembering or recalling.

Long and Short Memory

The patient's acquisition of the message depends on his intelligence, understanding and previous knowledge. For example, the senior citizen getting the tablets mixed up can be due to poor or faulty coding, or the vehicle used by the doctor. That which is perceived and acquired is then passed on into the storage bank by means of a memory system (see Figure XIII). For example, the doctor writes 1 - 1 - 1 on the packet of the patient's tablets.

FIGURE XII

LONG AND SHORT TERM MEMORY

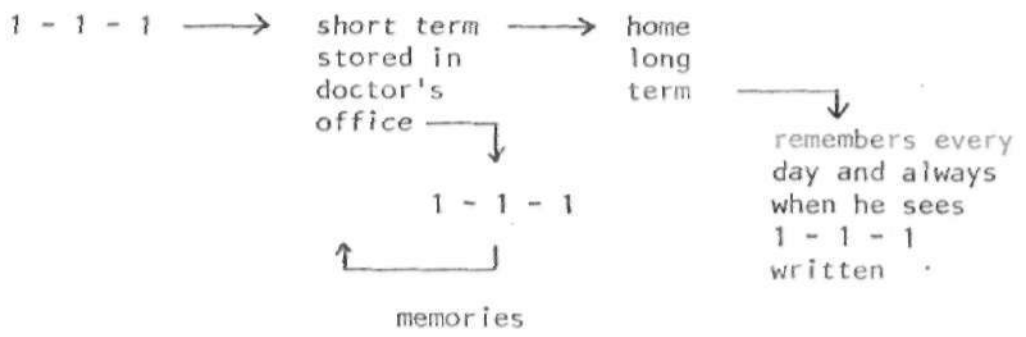
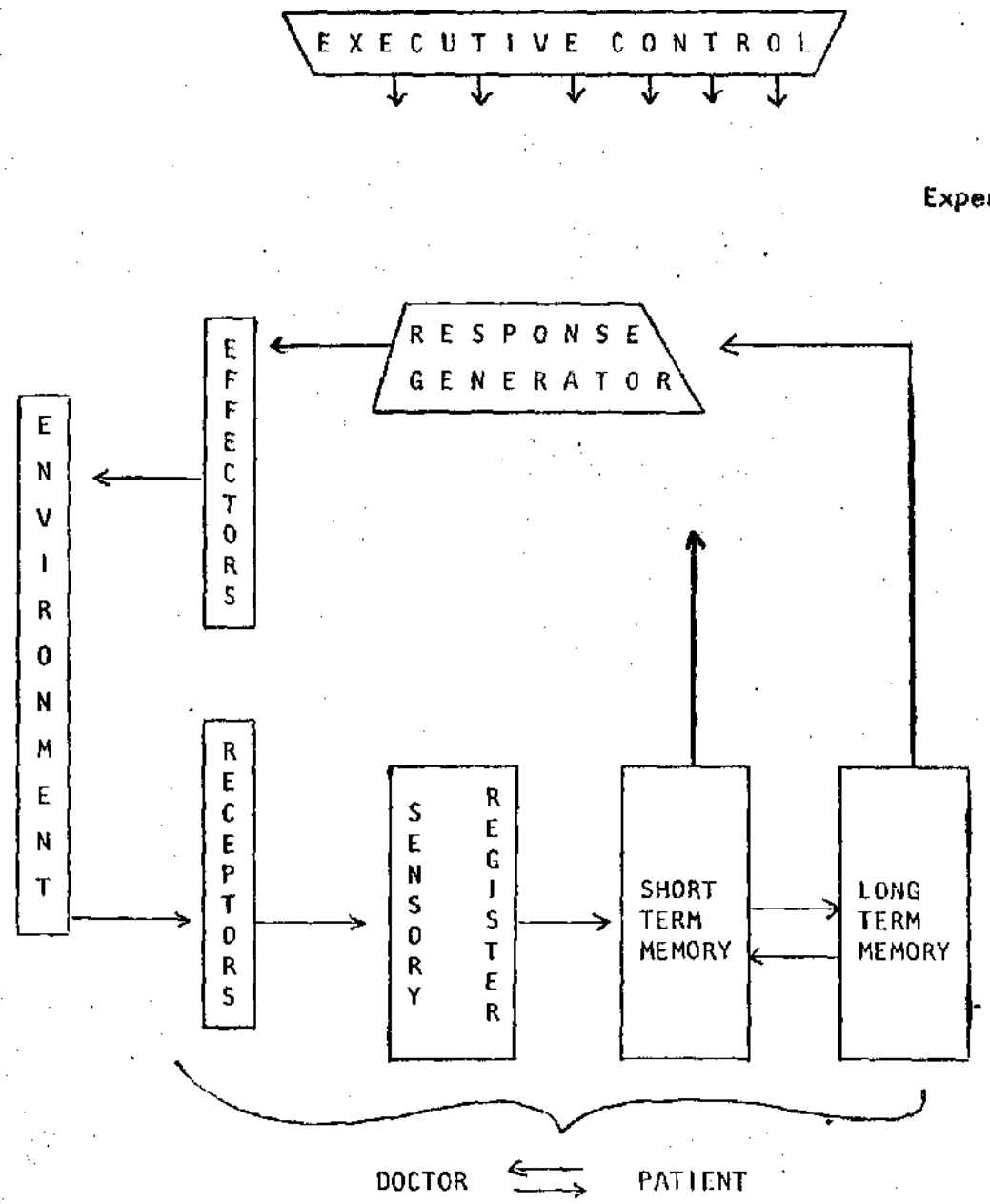


FIGURE XIII

MODEL OF LEARNING AND MEMORY



Source: Gagne (1975)
"Essential of Learning for Instruction"

Circumstances Affecting Recall

The way memory is tested is by recall. The doctor asks the patient the amount of insulin he is taking and how he gives himself the insulin. If the patient is able to tell him correctly, then he has learnt how much insulin he is to take daily. If not, he will have to re-learn the learning process again (see Figure XIII). Tones (1979) states that recall is selective; the items recalled will be determined by ego involvement and uniqueness. Recall involves interpretation and reconstruction. This may involve distortion due to conventionalisation. He further states that Freud has described motivated forgetting as having depression, fatigue and dual personality. Motivation is vital in recall if the patient has to force himself to see this 'particular' doctor, then he may not be able to recall the amount of insulin he has to take.

5. The Nature of Decision Making Related to Health, i.e. Health Belief Model and Health Action Model

5.1 The Health Belief Model (H.B.M.)

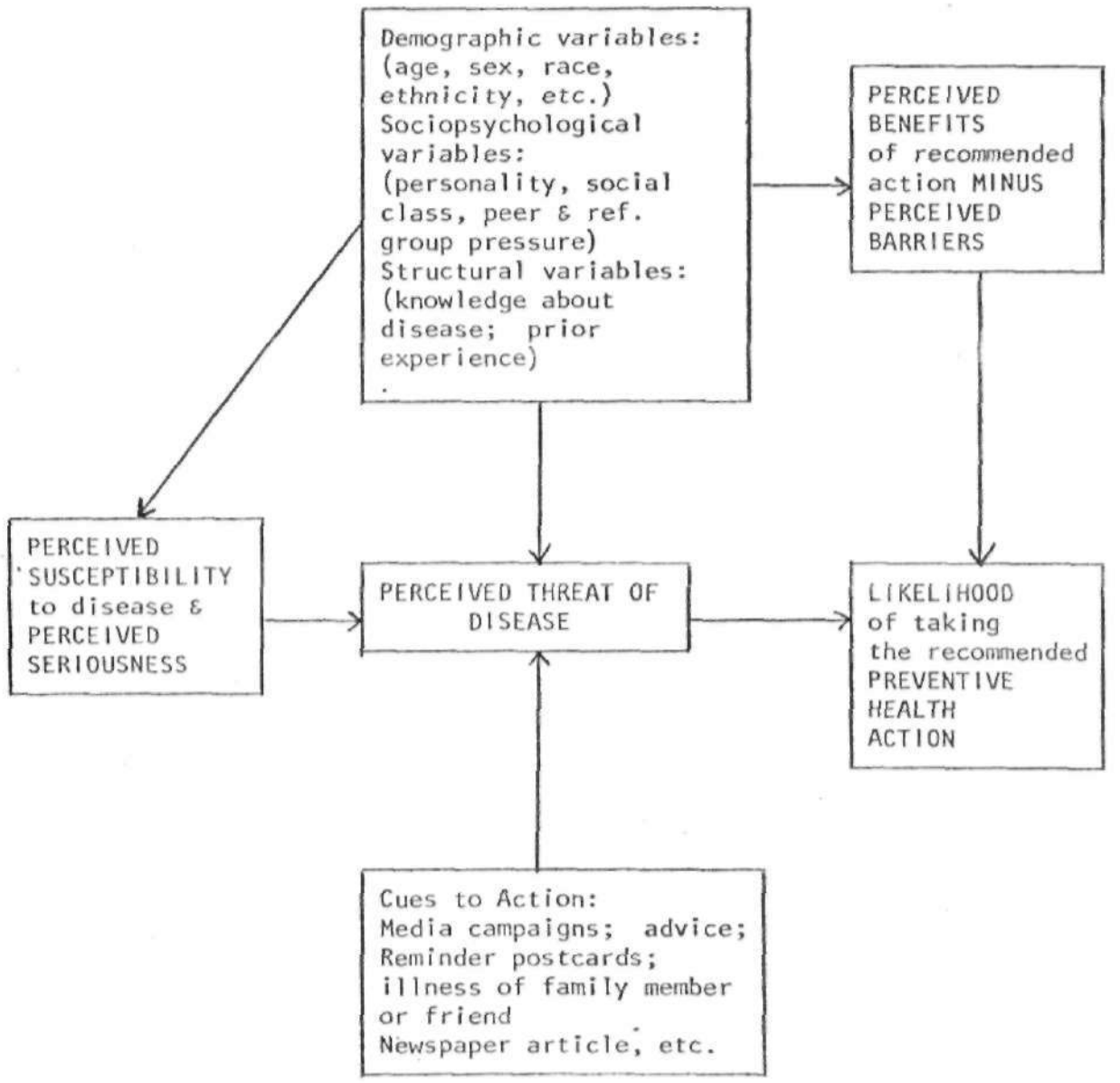
A health belief model, as suggested by Becker (1974), is an excellent example of linking individual attitudes to preventive health actions. The H.B.M. assumes that the consumer's (patient) attitudes and beliefs are important determinants of health action. Within this

framework, beliefs concerning four sets of variables are used to account for variations in health care utilisation when cues to actions, such as symptoms are present. They are the individual's views to his own vulnerability to illness, his beliefs about the severity of that illness, defined either in terms of physical harm or interference with social functioning, his perception of benefits associated with actions to reduce the level of threat and vulnerability, and his evaluation of potential barriers associated with the proposed action which be either physical, psychological or financial.

The first two variables determine an individual's subjective state of readiness to take specific health action. The last two variables act as opposing cost/ benefit forces which in combination with the individual's level of readiness to act, determine probability, as well as the kind of health action. Thus, the probability of action is function of the level of perceived threat, determined by beliefs concerning vulnerability and severity, beliefs about the potential for benefits from the proposed action taken to counter the threat, and the estimated level of cost or inconvenience involved in pursuing the proposed action. It would appear, then, that a relevant stimulus must be present to trigger health action. (Figure XIV)

FIGURE XIV

THE HEALTH BELIEF MODEL



5.2 Health Action Model (H.A.M.)

This model is derived by Tones (1980) from Fishbein's Value Expectancy Theory and incorporates the Health Belief Model (Becker, 1974). (See Figure XV)

The model provides a theoretical framework within which one is able to analyse the factors involved in reaching health related decisions, for example, to stop bottle-feeding, to boil drinking water, or to use contraceptives. The model states that the intention with respect to a preventive health action is a product of the interaction between belief factors and motivational factors.

The lay and professional referral system will generate beliefs about, and motivations to comply with, the action which feed into the individual's belief and motivational systems.

Once an intention is arrived at, it will only translate into action if various enabling factors are present

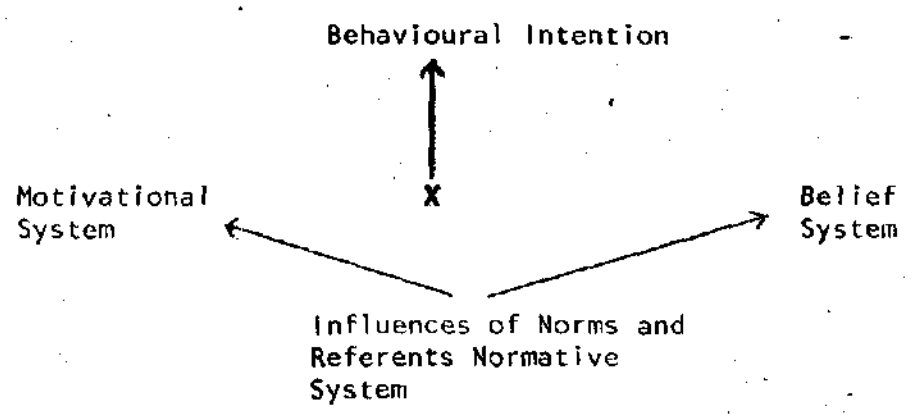
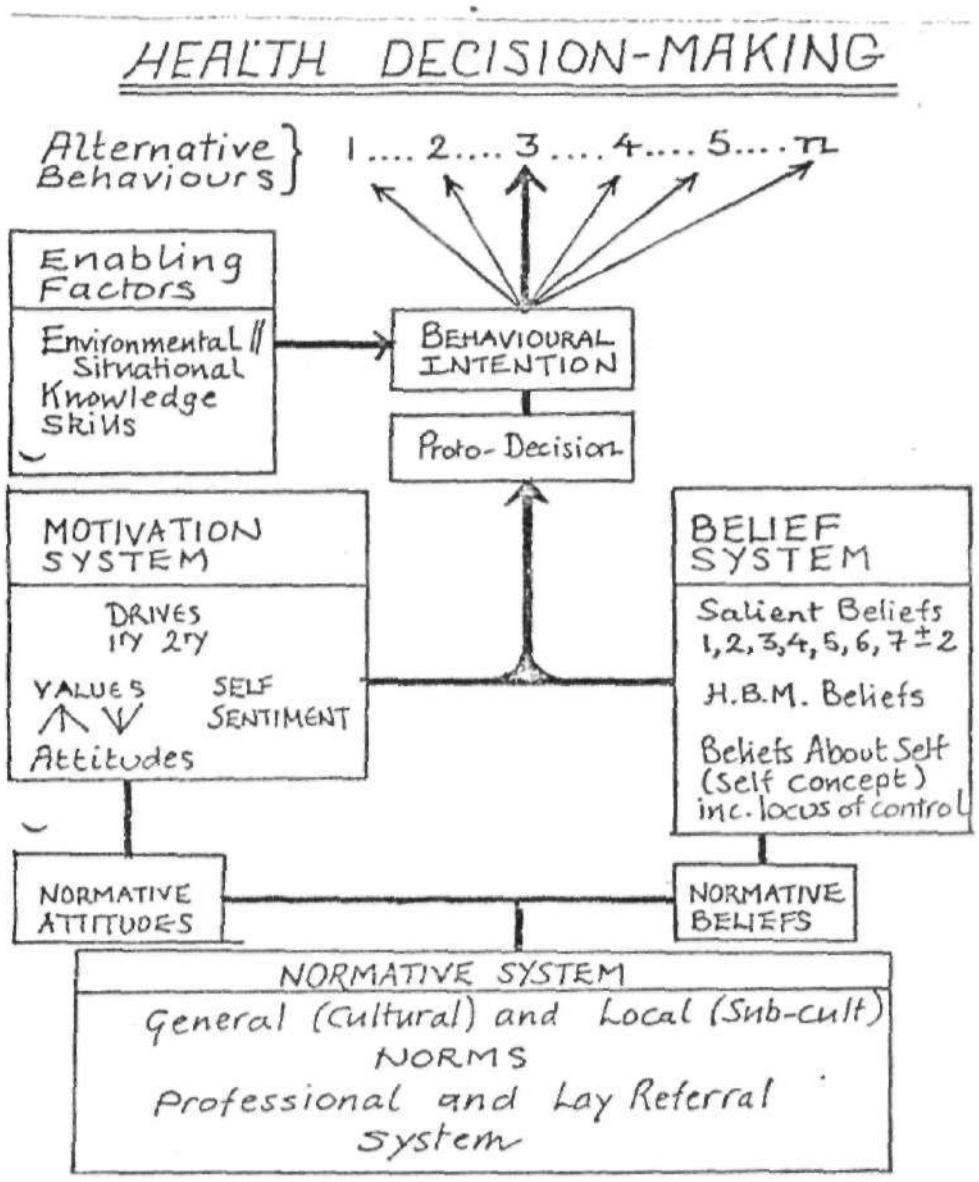


FIGURE XV



THE HEALTH DECISION MAKING MODEL SHOWING THE VARIOUS SYSTEMS AND FACTORS WHICH MAY OR MAY NOT AFFECT THE INDIVIDUAL MAKING THE RIGHT DECISION.

Source: Tones (1980)
Lecture Notes
Diploma in Health Education

A brief description follows:

Normative System

Norms describe actual culture, sub-cultural or group behaviours and the behaviours expected of social roles, for example, most women in developing countries breast-feed their babies.

The Lay Referral System

The influence of other people is of the highest importance in the decision making process. This influence may range from the general effect of norms to the much more powerful effect of the influence exerted by 'significant others', for example, husband. The whole process of seeking help involves a network of potential consultant from the intimate and informal confines of the nuclear family, through successively more select, distant authoritative laymen, until the 'professional' is reached. This network of consultants, which is part of the structure of a local lay community and which imposes one form of seeking help, might be called the lay-referral structure.

Professional System

This refers to the doctor, nurses and auxiliary workers.

Normative Beliefs

These define an individual's beliefs about

(a) the nature of the norm

(b) the reaction of significant other, that is, mother

(c) reaction of professionals and other referents.

Belief System

A belief is a probability judgement that links some object or concept to some attribute, for example, "I believe that smoking causes lung cancer". Beliefs are cognitive and do not indicate feelings for or against the object of the beliefs.

Beliefs are grouped into various categories, for example, those about self, cause-effect belief and the H.B.M. beliefs.

Motivation System

An individual will have a set of value systems related to any particular health action. This will generate both positive and negative attitudes to the action. (A value is a set of prized beliefs).

Examples of value systems are, family, deferred gratification, health, self-esteem, career, and religion.

Drives are likely to over-ride socially acquired values. Maslow (1954) describes five levels that, according to him, operate in turn, each building upon the prior one.

(i) Basic physiological needs - hunger, thirst

(ii) Safety needs - physical comfort, security, protection

(iii) Love, affection, 'belongingness', needs - giving and receiving affection

(iv) Self-esteem, status, recognition needs - sense of self-worth, strength, self-confidence, capability, adequacy

(v) Self-actualisation, self-fulfilment, creative growth.

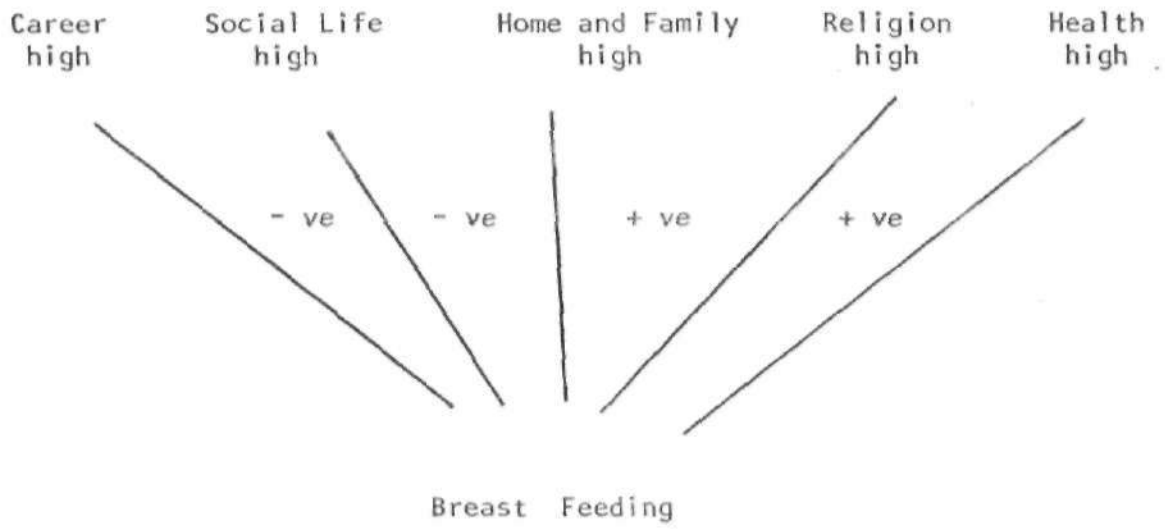
Although these levels overlap and vary with time and circumstance, Maslow's concept of such hierarchy may help the doctor to understand patient needs and to plan health care accordingly.

The output from the motivation system may be seen as a complex of positive and negative forces having some definable strength.

Behavioural intention will depend on the strength of motivation and also on the level of the sum of the probabilities of the belief system.

Below is a hypothetical attitude/value system for breast-feeding.

The overall balance is positive in relation to breast-feeding.



As stated earlier, the individual holds certain beliefs about the nature of norms. She will also be more or less motivated to comply with the perceived norms and wishes of the other people.

Enabling Factors

Before intention can be translated into practice, the following conditions may have to be fulfilled.

(a) an appropriate environment situation should be present, for example, hospital should provide enough benches for each individual to sit on

(b) individual may need a certain level of knowledge, for example, how to place 'eye drops' into her eyes

(c) may need certain skills, for example, what is the best position one should be in when placing drops into the eyes.

Attitude Change

The term 'attitude', when it is employed by the medical student, may well be used rather loosely to refer to either a cognitive or an affective function. In other words, it will sometimes refer to a psychological attribute having to do with knowledge, and on other occasions, to be concerned with values, feelings and motivation.

A belief, on the other hand, is a statement of subjective probability and may range from a tentative hypothesis, to a statement of total conviction. The expression, "I believe that smoking is harmful to health" may wrongly be considered by some to be an attitude, for it is more likely to mean, "I have established a subjective probability of 90 per cent that smokers are more likely to suffer ill health than non-smokers". This statement is primarily concerned with knowledge. Indeed, unless an individual holding this belief is more concerned about his future health than the pleasures he or she derives from smoking and the anticipated discomfort of withdrawal, then it should not be surprising that belief does not lead to action

on his part.

Motivation is supposed to involve values and their subordinate attitudes, together with more basic 'drives', such as sex and various additions, such as alcohol, smoking, over-eating.

The previous paragraphs, attempt to explain briefly, attitudes and ways in which beliefs and motivation work.

The doctor has to know how to introduce attitude change. He or she must remember that change is all around man - in the season, in his social environment and in his own biological processes. Since man is adaptive and used to change, how is it that in health he tends to resist it?

Roger (1962) classified people in a society by a system which he describes in five groups.

(1) *The innovators who are usually adventurous* people
(2) The early adopters who are usually people who command respect
(3) The early majority who are people who take decisions after due deliberation
(4) The late majority who are often the sceptical
(5) The laggards, who are those who cling to the traditional ways.

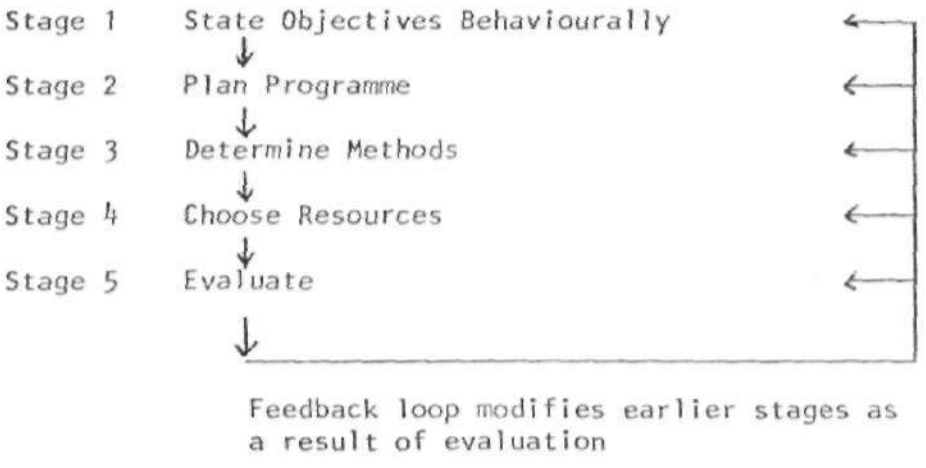
It would, therefore, be pointed out that the health worker should use the early adopter, because his influence on the group is of great importance, and his followers present a vital social influence in spreading new ideas and practices.

The other factors that are involved in attitude change, are the formulation of persuasive communication. This involves the analysis of the 'change' process in terms of the source, message, audience factors and the vehicle/method factors. These are all involved in changing the community's attitude and modify their behaviour.

The Systems Approach

Churchman (1968) defines the word 'system' as a set of parts co-ordinated to accomplish a set of goals.

Tones (1974) devised a model which clearly shows the stages in the systems approach. His attempt is to show that this model, if followed, can help to change behaviour or attitudes.



An outline of a 'Systems Approach' can be seen in Appendix II.

It is hoped that the mentors in medical schools will find these key areas useful to their medical students. If behavioural sciences are placed into the curriculum for at least four years, the students will be better equipped to meet the nation's needs.

CHAPTER FIVE

THE CURRICULUM

This health education curriculum cannot be considered without looking at the syllabus in the Faculty of Medicine of the Ahmadu Bello University (A.B.U.), in Zaria, Kaduna State. This is to see the established departments, their course content, and the number of teaching hours that are allocated throughout the five year period, to the behavioural sciences. Following this, is one of its department, which is Community Medicine. This is included because it deals with the community as a whole. The health educator could, therefore, integrate and co-ordinate health education through this department. Its aims and objectives are also outlined.

If the behavioural sciences are to be co-ordinated into the pre-clinical and clinical years, this will involve the inclusion of the Institute of Health (I.o.H.). The Institute of Health runs a group of Teaching Hospitals and provides facilities for the clinical teaching of the medical students. It is examined to see if it provides facilities for health education in its hospitals.

Finally, the health education curriculum for the medical school is outlined. It is hoped that its contents will be accepted.

THE SYLLABUS OF THE UNDERGRADUATE MEDICAL EDUCATION PROGRAMME IN ZARIA, KADUNA STATE

The Faculty of Medicine

The Faculty of Medicine offers courses of instruction leading to the award of the degree, M.B., B.S. It admitted its first batch of students in October, 1967, and produced its first graduates in 1972.

Institutional Objectives

The faculty aims to produce medical graduates who, at the end of their courses, would:

(i) Appreciate the principal anatomical, physiological and biochemical processes that underlie the understanding of disease and its managements

(ii) Diagnose health disease in individuals, particularly those disorders prevalent in the country, and treat them by the best accepted contemporary methods available

(iii) Define the major health needs of the individual and the community, identifying the priorities and constituting measures to prevent disease and to control its prevalence

(iv) Promote, by education and by research, greater understanding and knowledge of disease in individuals and in the community

(v) Work as a member of a Health Care Team and be able, both by precept and by example, to influence the other members of the group

(vi) Continue his own education by the acquisition of new knowledge, attitudes and skills

(vii) Realise his own limitations, both in respect of ability and experience, and understand how best to compensate for them

(viii) Display a continuing sense of personal responsibility both towards the problems of individual patients and the community of which he is a part.

The New Curriculum

Ten years after its inception, the Faculty of Medicine felt the need to reappraise the philosophy of its educational programme. As part of this exercise, a committee was set up in January, 1977, to revise the undergraduate medical curriculum. Some of the main features of the new curriculum are:

(i) The introduction of an elective period

(ii) The reduction in the number of major examinations from five to four and the decision to encourage

(iii) Inter-disciplinary co-ordinated teaching as a step toward integration at a later date.

Stage I

The teaching of the normal structure and function of the human body dominates this period of the curriculum. It extends over five terms; the whole of the first year and the first two terms of the second year. The basic principles of Community Medicine and Pharmacology are also taught at this stage.

The allocation of teaching time is shown in Table XIII for Parts I and II of the M.B. B.S. programme. Their examinations are at the end of the third and fifth term respectively.

TABLE XIII

THE ALLOCATION OF TEACHING IN THE FACULTY OF MEDICINE, AHMADU BELLO UNIVERSITY, ZARIA

TERM	Number of Hours				
	Anatomy and Genetics	Physiology	Biochemistry	Comm. Med.+ Psychology	Pharmacology
1	120	60	20	30	-
2	120	70	20	30	30
3	60	35	25	15	20
4	120	70	70	30	-
5	50	30	30	-	-
Total	470	265	165	105	50

Stage 2

This is the third term of the second year and covers a period of fourteen weeks. The main objective of this period is to introduce the students to clinical medicine. There will be two main courses:

(i) Introduction to Laboratory Medicine - 6 weeks

(ii) Introduction to clinical methods (Medicine and Surgery) - 8 weeks

Over the 14 week period, there will be three hours of lectures in Pharmacology every week.

Clinical Training

Stages 3 - 5

This part of the course will be over a period of 33 months. The main objective is to assist the student to acquire the necessary core knowledge and develop those skills and attitudes that will form the basis of his subsequent medical practice. To achieve this, students will be involved in all aspects of patient care as they rotate through the different disciplines. There will also be a conscious effort to get the student to develop interest, not only in his patients, but also in the patients' families and environment, so as to appreciate the role of the individual's home and the community, in the prevention of diseases, the promotion and maintenance of health and the treatment of illness.

The setting for the relevant learning experiences will be in hospital wards, clinics and health centres under the Institute of Health Management.

Stage 3

This is the beginning of students' direct contact with patients. It will run from late September to the end of July of the following year, coinciding with the third year of the medical course.

Students will rotate through the following postings:

(1)	Medicine I	- 8 weeks
(2)	Surgery I	- 8 weeks
(3)	Laboratory Medicine I	- 8 weeks
(4)	Medicine II	- 8 weeks
(5)	Surgery II	- 8 weeks
(6)	Community Medicine	- 2 weeks

There will also be class lectures/seminars in Laboratory Medicine (96 hours), Community Medicine (120 hours), Pharmacology (44 hours), and Radiology (12 hours).

During the Medicine and Surgery Clerkships, there will be 2-hour weekly social medical seminars/family visits. The Department of Community Medicine will carry the organisational responsibility for these seminars in collaboration with the Departments of Medicine and Surgery.

Stage 4

During this 12-month period, the fourth year of the course, the student will be posted to the following disciplines:

(1)	Obstetrics and Gynaecology	- 16 weeks
(2)	Paediatrics	- 16 weeks
(3)	Orthopaedic	- 4 weeks
(4)	Ophthalmology	- 4 weeks
(5)	Anaesthesia	- 4 weeks
(6)	Psychiatry	- 4 weeks

When students are doing their posting in Paediatrics and Obstetrics and Gynaecology, the Department of Community Medicine shall organise 2-hour weekly seminars in collaboration with these departments.

Stage 5

By this last stage of the course, most systematic instructions would have been completed. As part of his final preparation, the student is given increasing clinical responsibility under supervision, especially during the Malumfashi Posting.

The allocation of time is as follows:

(1)	Revision for Final M.B.,B.S. Part I	- 6 weeks
(2)	Elective Period	- 6 weeks
(3)	Medicine III	- 5 weeks
(4)	Surgery III	- 5 weeks
(5)	Malumfashi Posting	- 5 weeks
(6)	Revision for Final M.B.,B.S. Part II	- 5 weeks

(*See Appendix III for Outline of new medical* curriculum hours)

(Faculty of Medicine Undergraduate Programme, 1979)

Department of Community Medicine

The Department of Community Medicine was the outcome of the realisation that Nigeria, a fast developing country, urgently needed community medicine physicians with a wide community outlook, rather than 'cure' and 'individual' orientated physicians.

Medicine is considered a tool of social welfare, and the new health services need a re-orientation for the development of comprehensive health care for the community, both rural and urban. The Jessop Report (1976) emphasised this point and suggested that community medicine pervade the whole M.B.,B.S. course from the beginning to the end.

The objectives of the department are as follows:

At the end of the five years of the training programme in Community Medicine, a medical student should be able to demonstrate:

1. Ability to assess the health of a community as much as that of the individual in areas where limited facilities exist for delivery of medical care. More specifically, he or she should be able to:

   1.1 Identify the following factors which affect the whole of a community:
   - ecology
   - demography
   - economic situation
   - social and cultural behaviour

   1.2 Apply epidemiological methods to investigate the prevalent diseases in a community

   1.3 Quantify (wherever possible) the magnitude of the health problem in order to establish priorities for remedial action.

2. Ability to institute measures for the prevention of health disorders and communicable diseases.

4.5 Analyse the data

4.6 Draw valid conclusions

4.7 Make feasible recommendations in the light of available resources and technical facilities.

5. Ability to administer health units:

5.1 Build up a team spirit and maintain order

- By defining the objectives to be achieved in a specified period and making these objectives acceptable to the team
- By determining the methods to achieve the objectives
- By assigning specific tasks to teach team member
- By co-ordinating the activities of the team

5.2 Supervise the team's activities

5.3 Ensure the maintenance of available equipment in good working order

5.4 Submit periodical reports on the ongoing activities and state of existing resources and on the problems still requiring remedial action and resources required for this action.

Although the department controls no beds, it runs both urban and rural health clinics at Samaru and Malumfashi District villages, providing elements of comprehensive health care within the resources of the department.

The department is responsible for conducting lectures, demonstrations, visits, seminars, tutorials, projects and field training of medical students throughout their course. This is to foster a spirit of community service, team work, and integrated approach for both assessment and amelioration of community health problems.

The Department of Community Medicine Activities

1 Teaching

The department partakes in activities and training programmes of the following courses:

1.1 Sub-degree courses:

Nursing

Midwifery

Home Economics

Dietetics and Catering

1.2 Undergraduate

M.B., B.S. (all parts)

Veterinary

Undergraduate (cont)

M.P.H. (Health Education)

B.Ed. P.H.E.

1.3 Postgraduate

Fellowship of Nigerian Medical Council (F.N.M.C.).

The teaching in the M.B.,B.S. course at all levels was recognised and rationalised to fulfil the objectives laid down.

2. Services

Under five clinics

Dental clinics

Mobile Health Clinics

Immunisation

School Health Service

Chest clinic

3. Organisation

The department is under reorganisation into the following sections:

3.1 Epidemiology, vital statistics and demography

3.2 Behavioural Science

3.3 Public Health Laboratory, including public health, chemistry, nutrition, clinical pathology and entomology

3.4 Family Health Care Programme and Service including rural and urban health centres and chest clinics

3.5 Environmental Health

3.6 Mesium and Training Aids Sections

(Annual Report for the Year, Department of Community Medicine, 1975/76)

Institute of Health (I.o.H.)

Established in accordance with Statute

The I.o.H., Ahmadu Bello University, was established under the Ahmadu Bello University Law (Amendment) Directors 1967, given by the Interim Administrative Council of the former Northern Nigeria. Its establishment was a bold attempt during very difficult times to remedy the very acute shortage of doctors and well-trained paramedical staff in the Northern States.

It was a common experience in the 1950s and early 1960s that very few doctors in Northern Nigeria were stationed in only a few hospitals, which were separated from one another by long distances throughout the region. The few medical auxiliaries available at that time were based mainly in the rural clinics, and there was no organised co-ordination of health care between the clinics and the hospitals. Referrals from clinics to hospitals were very few

and far between and were usually done at the late stage of illness with the result that the rural people came to regard hospitals as places where people went to die. Together with the Faculty of Medicine, the I.o.H. was established to assist in solving these problems.

On the 1st April, 1968, when the Northern Nigerian Government was dissolved and the six Northern States were established, the I.o.H. became responsible for the following:

(1) In Kaduna

- The New Hospital
- The Old Hospital
- The Nursing Home
- School of Nursing
- Two Dispensaries

The bed complement of 474 in 1968 which has now been increased to 560 by the 1st October, 1974.

(2) In Zaria

- The General Hospital
- Infectious Disease Hospital
- School of Nursing
- School of Pharmacy
- Two Dispensaries

The bed complement of 222 in 1968 and 262 by the 1st October, 1974.

(3) The Orthopaedic Hospital in Kano

(4) The Ahmadu Bello University (A.B.U.) Hospital, Malumfashi, was opened in December, 1968, with a bed complement of 63 which has now been increased to 78. Malumfashi District is approximately 70 miles from Zaria.

Part V M.B.,B.S. students do their five-week rural posting in this rural hospital and also in the community.

The A.B.U. Teaching Hospital (which is made up of the four hospitals above) now has a bed complement of 1,210.

(5) On the 1st April, 1970, the I.o.H. assumed responsibilities for the School of Hygiene in Kano which trains Public Health Inspectors and Public Health Assistants. Also the Medical Auxiliaries Training School in Kaduna, which trains dispensary assistants, rural health assistants and leprosy inspectors; mostly for the States and Local Governments.

Organisation

The Statute which came into force on the 1st June, 1972, established the I.o.H. Board of Governors, whose functions inter alia are:

> "To give policy direction....; to prescribe the organisation and administration of the constituents institutions, within the Institute ..... etc., the Board's powers exercised subject to the overall control and direction of A.B.U. Council and to any regulations made by Senate."
>
> (A.B.U. Calendar, 1974/75)

This Statute also established the Professional and Academic Board with powers (subject to the overall control and direction of the Board of Governors and to regulations made by the Senate) to arrange, regulate, and supervise the various teaching programmes and the conduct of examinations in these programmes within the Institute; and to award diplomas, certificates and other distinctions, to consider any matter relating to the Professional and Academic work of the Institute, and to deal with any matter referred to it by the Board of Governors or the Senate.

Hospital Facilities

Specialist medical care and teaching is provided in Medicine, Surgery, Paediatrics, Obstetrics and Gynaecology, Community Medicine, Radiology, Anaesthesia, Pathology (Histopathology, Chemical Pathology and Haematology), Microbiology in Zaria and Kaduna Hospitals and Clinics, Ophthalmology, Maxillo Facial Services and Psychiatry are provided in Kaduna. Orthopaedic Surgery is provided at Dala-Kano and Ear, Nose, and Throat Surgery in Zaria. Community Nursing Service and a limited amount of HEALTH EDUCATION are undertaken.

Training Programme

The I.o.H. provides the following training programmes:

(1) Clinical facilities for the training of medical students and pre-registration house officers.

(2) Student-Nurse Training

(3) Training Medica Laboratory Technologists

(4) Medical Auxiliaries personnel (e.g. dispensary assistants and rural health assistants)

(5) Post-registration Nurse Training in Midwifery, Ophthalmic Nursing, Orthopaedic Nursing and Anaesthetic Nursing

(6) Medical Equipment Technicians

(7) Post-graduate Training of medical doctors for the Fellowship of the Nigerian Medical Council

(8) Training of Medical Record Clerks/Statistical Assistants.

Aims and Objectives of the Institute

(1) To provide medical education as cheaply as possible

(2) To provide the most practical doctor, who would become immediately useful to the community

(3) To extend the doctor's usefulness in the community by using the health team concept

(4) To raise the level of knowledge and the usefulness of medical auxiliaries

(5) To promote service orientated research

(6) To provide the best medical care we can afford to those who most need it

(7) To assist in establishing more teaching hospitals based on the above philosophy

(8) To develop facilities for post-graduate medical education

(9) To assist State Ministries of Health in the maintenance and repair of hospital equipment.

(10) To establish additional courses for the training of other para-medical staff.

(A.B.U. Calender, 1974/1975)

It can be seen that in the undergraduate programme, 105 hours has been allocated to Part I, M.B.,B.S. in the teaching of psychology and community medicine. Health education is taught in that said department in Part III, but the amount of hours allocated and course content were not mentioned. This shows that behavioural sciences have been established in the curriculum.

Coe (1975) said that behavioural sciences appear to have more continuity throughout the entire medical education programme in Latin America, whereas in the United States of America (U.S.A.) the programmes are concentrated in the basic science years, or in the clinical years, but not throughout the whole professional education process.

The Latin American countries are developing, just like Nigeria, and their medical needs are alike, unlike those of the U.S.A. It would be beneficial to the Nigerian medical education, if they adopted the Latin American method of teaching behavioural science throughout the entire medical programme.

THE CONTENT OF HEALTH EDUCATION FOR THE UNDERGRADUATE PROGRAMME IN A MEDICAL SCHOOL IN NIGERIA

The inclusion of health education in a medical school can be a lengthy and difficult task. This lies in getting the following into the programme:

(1) The inclusion of the subject throughout the entire medical programme

This subject is part of the behavioural sciences and it should be taught concurrently.

(2) Health education should be co-ordinated into the students' pre-clinical and clinical training

This could only be done through the combined efforts of the I.o.H., the Faculty of Medicine and the Department of Community Medicine. This may help to bring about the inter-disciplinary co-ordinated teaching which was mentioned earlier in the syllabus of the Faculty of Medicine. If this subject is co-ordinated into the other departments, then there would be continuity throughout the entire medical education. This would also increase the number of hours.

(3) The size of the classes affect the teaching methods

A total number of 20-22 students in a class would be ideal for teaching. This would allow for teaching methods that the student could use in community work or giving individual counselling. The shortage of staff, space and monetary funds would not allow for this method. This paper will not dwell on the subject.

The Foundations of Health Education

In teaching health education in a medical school, there are basic foundations that the medical students need to know. The first is the psychological foundation which examines the factors that influence health behaviour and explores the principles that motivate people to behave in a certain manner.

Sociological foundation incorporates issues, for example, how people live and the social forces that influence their behaviour are responsible for the quality of health they exhibit. Other social problems are included, for example, sanitation, mental health and alcohol.

The medical students will be studying in Federal Teaching Hospitals and later as doctors they could work in one of the 19 States in Nigeria. These states are made up of people with different ethnic and cultural backgrounds. The anthropological foundation of health

education advances the position that while the primary task of the medical student is to positively influence health behaviour, he or she must be aware of the cultural traditions and ethnic beliefs that will influence his client's behaviour.

For example, the doctor should be able to understand, first, why his client goes to the traditional doctor and why the wife has to wait for her husband to come before she goes to the clinic, or why the woman prefers to go home rather than stay in hospital. If the doctor understands the cultural habits of his population, he will be able to work with them.

The field of health education will draw upon the contribution of research in other areas, for example, law and science. The medical student will be versed in scientific knowledge and he should know how to apply these in the community. Health education will do just that. Figure XV depicts the components of the foundation of the health education model.

The Plan of the Curriculum

The general plan of the curriculum for the medical school will be:

(1) The Philosophy of Health Education

(2) The General Aims

(3) The Objective - only an example of a specific objective will be given

FIGURE XV

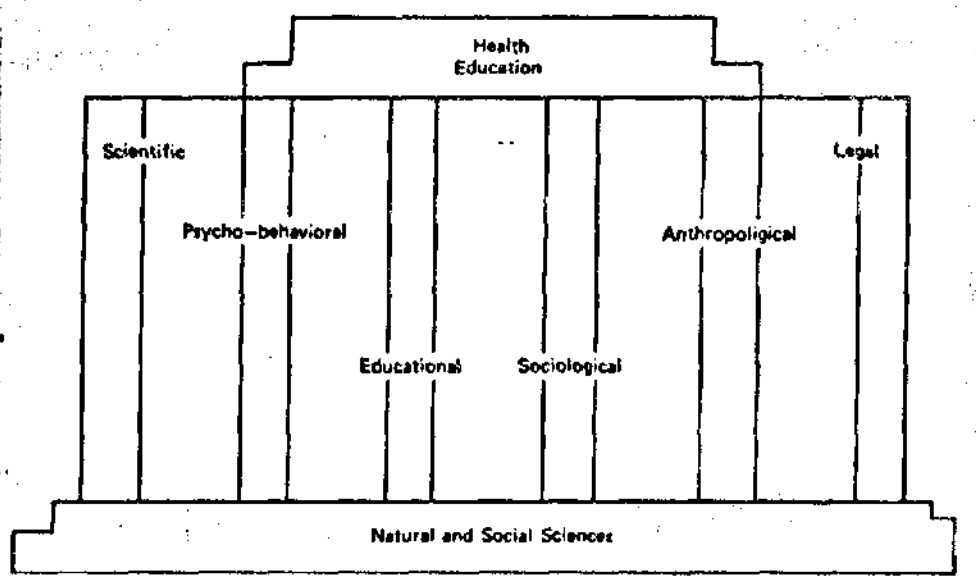


Figure XV. Foundations of health education model. (*The Journal of School Health*, 46, 3, March 1976, p. 158. Copyright 1976, American School Health Association, Kent, Ohio.)

(4) The Weekly Programme Content

(5) The Methods

(6) Resources

(7) Evaluation and Feedback

This plan will be very broadly based and will be made out for Part I, II, III, and V medical students.

Philosophy

The study of health education will help the medical students in M.B.,B.S. Part I, II, III and V, to promote positive, physical, social, and mental health in the community.

Health education should help them to meet the challenges of today's and tomorrow's changing fields of medical and social sciences. It will help them to participate in the reconstruction of the society and provide concurrent learning opportunities which are conducive to the maintenance and promotion of individual and community health.

They should have the necessary skills to help in the promotion and application of new knowledge, to act in a healthful way, and to help prevent and control infectious diseases in the village or community.

PART I M.B. B.S.

HEALTH EDUCATION COURSE

General Aim

1. The medical student, following a basic programme of health education, will understand the basic principles that are involved in the course, and the variety of disciplines that are involved and applied in health situations. Examples will be given on situations in Nigeria and other African countries.

2. The medical student will describe different models in health education and assess their relevance in application to health education.

3. The medical student will demonstrate proficiency in the models of communication of innovation, and the basic techniques used in learning principles as they apply to health education.

4. The medical student will apply the basic cultural anthropological principles involved in the following:

   birth
   infancy
   religion
   traditional medicine and
   weaning practice

5. The medical student will define the doctor's role and other health workers in health education and know the methods used in health education.

Specific Objective Example

At the completion of the course, each student will be expected to define the following:

health education, cognitive, affective and conative.

WEEKLY PROGRAMME
(one hour per week)

Week 1 Introduction

(a) Health and disease

(b) Traditional views on health

(c) Contemporary views on health

Week 2 Defining Health and Health Education

(a) The aims of health education in schools and the community

(b) Defining:

Cognitive

Affective

Conative

Week 3 Models of Health Education

(a) 'Education' Model

(b) 'Social' Model

(c) 'Subversive' Model

(d) 'Medical' Model

Week 4 Communication of Innovations

(a) The difference between 'developing' and 'industrialised' societies

(b) The s-shaped curve of diffusion

(c) The importance of source of recognition of need for change

(d) The various categories of adopter

Week 5 Communication of Innovation

(a) The hypodermic and aerosol models; the two-step and multi-step of adoption of innovations

(b) The relative roles of mass media and inter-personal communication

(c) The various categories of 'leadership'

(d) The principle of homophily and heterophily.

Week 6 The Model of Communication

(a) Transmitting of information:
Source to Audience

(b) Audience receives and decodes message

(c) Memory and Learning

(d) Motivation

Week 7 The Model of Communication

(a) The principles of perception and attention

(b) The principles of channel capacity

(c) Principles of economy

(d) Some implication for health education

Week 8 Education Foundation

(a) Learning Theories

(b) Health Teaching

Week 9 Education Foundation

(a) Applying learning to health teaching

(b) Innovation approach

Week 10 Foundation of Health Behaviour

(a) Socialisation and the motion of health career

(b) Primary and secondary formation of health norms

Week 11 Sociological Foundation

Definitions of the following:

(a) Socialisation

(b) Culture

(c) Sub-culture

(d) Formation of norms

Week 12 Sociological Foundation

(a) Anticipatory

(b) Self-actualisation

(c) Resocialisation formation of health

Week 13 Psycho-behavioural Foundation

(a) Concepts of:

motivation

homeostasis

homeokinisis

extrinsic

intrinsic

(b) Maslow Law (self esteem)

Week 14 Psycho-behavioural Foundation

(a) Definitions of the following:

attitudes

values

beliefs

(b) The effect of cognitive,

affective conative/action

components of attitudes

Week 15 Psycho-behavioural Foundation

(a) Attitude Theories

(b) Attitude changing factors toward health

Week 16 Psycho-behavioural Foundation

(a) Attitude changing factors toward health (continued)

(b) Relationship between beliefs, attitudes and the effect they have on behavioural change

Exercise

Week 17 Anthropological Foundation

(a) Religion and Spiritualism

(b) Traditional Medicine

Week 18 Anthropological Foundation

(a) Birth

(b) Infancy

Week 19 Anthropological Foundation

(a) Child rearing practices

(b) Weaning practices

Week 20 (a) What is the doctor's role in health education?

(b) Who does health education?

For example: The Medical Officer

The Nurse

The Teacher, etc.

Week 21 Methods in Health Education

Exercise

Week 22 Review

Assessment

The students will be given two exercises to complete and hand in.

PART II M.B. B.S.

HEALTH EDUCATION COURSE

General Aim

The medical student will be introduced to legal and scientific foundation and also the health education agencies in Nigeria.

Specific Objective Example

At the end of the course, each student will be expected to list the health education programmes in Nigeria.

WEEKLY PROGRAMME
(one hour per week)

Week 1 Establishing needs for health education by reference to Nigerian health data

Establishing the role for health education in:

(a) relation to the problems

(b) combating the problems

(c) approaching the problems

Week 2 Educational Methods

(a) Looking at Scientific Journals

(b) Writing scientific articles in health education

Exercise

Week 3 Health Education Methods and Programmes in:

(a) Hospitals - bedside
clinics

(b) Schools

(c) Communities

Week 4 Legal Foundation

(a) Health Legislation

(b) Legal provisions for health education

Assessment

One exercise will be given to the student.

PART III M.B. B.S.

HEALTH EDUCATION COURSE

General Aim

The medical students will be able to promote health education and

have a greater understanding and knowledge of preventive diseases in individuals and the community. They will develop better communication skills and will know why individuals make rational or irrational health decisions. They will be able to develop a health education programme.

Specific Objective Example

At the completion of the course, each student will plan and write a health education programme.

WEEKLY PROGRAMME

(one hour per week)

Week 1 Communication, Medicine and Health

(a) Doctor-patient communication

(b) Learning theory and patient education

(c) Role play

Week 2 Socialisation and the Motion of Health

(a) Family Life

(b) Social stratification

(c) Over population

Week 3 Socialisation and the Motion of Health

(a) Health Career Model (example nutrition)

(b) Disease prevention and control

Exercise

Week 4 Health Decisions

(a) Value-expectancy theory

(b) Health Belief Model

Week 5 Health Decisions

(a) Fishbein's Approach

(b) Health Action Model

Buzz Group

Week 6 Health Decisions

(a) Health Action Model

(b) Beliefs, attitudes and social pressures

Exercise

Week 7 (a) Illness behaviour and utilisation of health services in Nigeria

(b) Lay Referral System

Week 8 Planning Health Education Programme

(a) Systems Approach

(b) Objectives

(c) Methods

Week 9 Planning Health Education Programme

(a) Programme content

(b) Resources

(c) Evaluation

Week 10 Health Education Methodology

(a) Questionnaire design

Week 11 Health Education Methodology

Class Exercise

Designing a simple question on scabies

Week 12 Health Education Methodology

(a) Mass media and use of resources

(b) Using group discussion

(c) Counselling techniques

Week 13 Looking at a Health Education Programme in Nigeria and Evaluating its Effectiveness in Relationship to:

(a) Decrease in illness

(b) Use of service

(c) Professional outlook

(d) Buzz Group

Week 14 Review

Assessment

Two exercises will be given to the students

PART V M.B. B.S.

PRACTICUM

(A period of 2½ weeks)

The practicum will provide opportunities for the Part V M.B. B.S. students to work with individuals and groups in a rural setting. Opportunities should include participation in health education programmes in the community and patient education. Patient education means, those experiences designed to influence learning which occurs as a person receives preventive, diagnostic, therapeutic, and/or rehabilitative services, including experiences which arise from coping with symptoms, referral to source of information, prevention, diagnosis and care, and contacts with health institutions, health personnel, family and other patients (Galli, 1978).

General Aim

The medical student will know the content for his teaching specialities and will be able to guide his patient and carry out practical health education experiences during a rural posting under supervision of any lecturer in the department.

Specific Objective Example

At the end of the 2½ week rural posting, each student, through the practicum, will demonstrate his communication skills in a clinical setting within 5 - 10 minutes.

Programme Content

The supervisor will be looking for the following in the health education programme designed by the medical students:

(a) Use of communication skills in doctor/patient communication

(b) Use of learning theory in patient education and the health education programmes for the community.

Methods of Teaching

The medical students will develop their own methods and plans. The supervisor will look for the use of the 'integrated curriculum' in their fieldwork.

Resources

The medical students will be evaluated on the format, vehicle used and personnels required.

Evaluation

As stated earlier, the students will be evaluated on the following:

(1) Objectives

(2) Programme content

(3) Communication skills

(4) Methodology used in the principles of learning

(5) Research finding

(6) Use of the 'integrated curriculum'

(7) Social skills

METHODS OF TEACHING PART I, II, III and V M.B. B.S. MEDICAL STUDENTS

It would appear that in medical schools, the methodology used mainly in the lecture room is the didactic (one way method) technique. It has been the mode of communication used by the lecturer to his students. These lectures are usually a formal informative discourse on a particular subject delivered before a large number of students.

Ali and Fernandes (1972) both did a survey among 884 medical students from medical colleges in Egypt, Iran, Lebanon, Pakistan, Tunisia and the Syrian Arab Republic, in order for the students to evaluate their medical education.

The students commented on the teaching methods used as follows. (This is a summary)

(1) Eighty seven per cent of all the students thought that teaching in their college could be improved. The students in the upper grades felt that teaching could be improved.

(2) Lecture method was rated the most useful by 26 per cent of the students and practical demonstrations by 62 per cent. Students in grade one showed a greater preference for the lecture method than those in subsequent grades. The clinical method was preferred by a greater proportion of students in the upper grades. Preference for seminar and practical methods remained more or less the same throughout all grades (see Table XIV)

TABLE XIV

EVALUATION OF TEACHING METHODS BY YEAR OF STUDY

Preferred Method	% of students in grades				
	1	2	3	4	5-6
Lecture	55	43	42	23	20
Seminar	35	38	48	40	40
Clinical	48	49	62	87	90
Practical demonstrations	56	59	58	60	66

Source: Ali and Fernandes (1972)

(3) Desire for more teaching aids was expressed by 81 per cent of all the students.

(4) Twenty seven per cent of the entire sample felt that students could do well in examinations if they depended

> solely on lectures. This method decreased gradually with advancing grades, from 35 per cent in grade one to ten per cent in grades five and six.

The results of the above survey among medical students, show that they preferred lectures, seminars, clinical and practical demonstrations. They would like to have more variations in their lectures. Straight lectures are very boring to any student and the use of slides or buzz groups would help to improve this. It seems that they like working in small groups. Groups are effective in any learning situation. As this paper mentioned earlier, the methodology that will be used here will bear in mind the class size and the availability of space.

The Lecture

The main justification for lecture is where the material to be conveyed does not already exist elsewhere - for example, in books - in an appropriate form. The lecture is inappropriate for achieving affective goals, for teaching skills and for promoting problem solving. It becomes more successful to the extent that additional approaches are incoporated.

Procedure

The following approach would apply equally to the class teaching, but in the latter case, exposition would not necessarily be employed.

(a) Gain attention

(b) State aims

(c) Provide advance organiser

(d) Indicate lecture objectives

(e) Use progressive differentiation where relevant

(f) Show how new ideas relate to existing ideas and experience

The lecture may be supplemented with different approaches, e.g.

(i) require application of new knowledge to problem solution test for acquisition of knowledge

(ii) hold dialogue with students to clarify misconceptions, etc.

In order to generate change of pace and renew attention, buzz groups may be used. Appropriate A-V aids and handouts will improve a 'straight' lecture (Tones, 1980).

The total number of new medical students for the College of Medicine, University of Lagos for the 1978/79 session was 33 (Dada, 1979). In other universities the figures may be more, or even up to 90 in the first year. Therefore, the methodology used here would be lecture. Films, slides or transparencies would also be used. Time would be allotted for discussion, and questions for the students to ask. Buzz groups may be used for five minutes. These would be used as a means of feedback. Without feedback it would not be possible to gauge the cognitive and affective impact of the

communication on the students, nor modify the approach in response to such feedback (Tones, 1980).

PART III

The method used here again would be mainly the LECTURE. Films, slides or transparencies would be used with lectures. In addition, the following methods would be used:

Role Play

This is a way of developing imagination, tolerance and the power for the student to see him/herself from the outside and the other student from the inside, so reducing conflict. It also enables students to either agree or disagree with the discussion.

The Buzz Group

This technique is used in teaching large groups. It usually lasts for five minutes, and generally the discussion will be followed by feedback to the main topic. This method appears to stimulate rigorous discussion and it has been suggested to have been used in large groups successfully (Tones, 1980).

PART V

The Part V will be involved in a practicum which has been outlined in the programme content. Using the systems approach, a health

education programme will be planned and carried out, in groups of twelve, in a rural area.

The 'Integrated Curriculum' (Figure VI, Chapter 4)

During the rural posting, the 'integrated approach' would be used by the students in a clinical setting in the rural area. Concentration or emphasis would be put on observing the counselling skills used, and also the use of behaviour modification in preventive and curative medicine. The health educator will co-ordinate the programme.

Behaviour Modification

This would be directed at removing unwanted behaviour with something unpleasant, by desensitising negative emotions which have been attached to desirable behaviour. For example, the mother who comes to the clinic with her child having diarrhoea, and having a dirty feeding bottle with rancid milk inside. She will be told to drink the milk herself to see if she likes the taste.

Counselling

The supervisor will be looking at how each medical student applies

the methods learnt in communication and social skills. The supervisor will look for the following:

(a) how the student listens to his patient

(b) the student's empathy

(c) the student's interpretation of the non-verbal communication of his client, for example, the student will try to persuade his patient to deliver her first baby in hospital instead of in her home

(d) the use of preventive medicine in his doctor/patient relationship.

RESOURCES FOR ALL YEARS

The following will be used

1. Transparencies to show, for example, the communication model, perception, learning methods, the systems approach, the health belief model, the health action model, and statistical data in Nigeria. These will be prepared by the Medical Illustration Unit. An overhead projector will also be needed.

2. Slides on various subjects will be shown. A slide projector will be needed.

3. Films will be needed. These will be supplied by the University Education Film Unit.

EVALUATION FOR ALL YEARS

All students will be evaluated by their class assignments and examinations. Health education questions will be included in Parts I, III and V M.B. B.S. end-of-year examination. Part II will be evaluated by assignments only.

All students will be allowed to evaluate the course content at the end of the session.

READING LIST

Students will be assigned readings that relate to the pertinent topics in the course. The reading list can only be made available when the books available in the University Medical Library are known.

The Medical School, Department of Community Medicine, and the Institute of Health, realise that health education is important in the hospital, in teaching to medical students and to the community.

The aims of health education for Nigeria showed that the hospitals and medical schools need to have more health education imput in their programmes.

It would appear that the social and behavioural science subjects are

related to health problems and should be practised at both individual and macro levels in hospitals and the community.

If family clinics are set up, then these could be collaborated with the staff in the departments of Paediatrics, Obstetrics and Gynaecology and others. These could be co-ordinated into a useful health education programme for the family.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

Nigeria's mortality and morbidity pattern shows that many of its infectious and parasitic diseases are preventable. The climatic factors help to prolong many of the diseases. With the stress on universal primary education, it is hoped that the health education programmes in schools will be more beneficial and meaningful in the future generation.

Health education is a priority in the programmes in the Basic Health Services Scheme and the government's aim here is to provide better health care for all. However, this is not enough. Health legislation policies would help to alleviate many of the present health problems. For example, making sure that the entire population receives pipe-borne water and a better standard of living would help to ameliorate many of the parasitic and infectious diseases.

The findings of the models of health in Britain, China and Tanzania were very provocative. China's crude death and birth rates have fallen tremendously since 1948. These were not effected by changes in health care alone, but by improvements in NUTRITION, SANITATION and BETTER LIVING STANDARDS, which were achieved through massive health education campaigns. Like the Chinese, the Tanzanian government stressed prevention, but continued to provide curative services instead. Their health patterns appear to remain the same. Also, the doctors who are trained in developing countries, appear to be better equipped, on completion of their training, to work in the British National Health Service Hospital than in their own country's environmental conditions.

In developing the curriculum, the role of the doctor in health education was reviewed. The doctor is a health teacher at the time of consultation and with groups of patients. He disseminates information to his patients, villagers, by means of health education. He therefore needs to develop good doctor/patient communication and social skills.

The following recommendations were made:

1. There should be a strong emphasis on teaching behavioural sciences in medical schools in developing countries. For example, in order to change the community's health behaviour, the doctor has to study their knowledge, attitudes and practices. Hence, he will need the foundations of the health education model.

2. In order to do number one, there will have to be increased continuity throughout their entire medical training. Continuity in this sense means that what the students learn in the first year would be more closely linked with the content in the second year and those would in turn have bearing on the following year. This would automatically increase the number of teaching hours.

3. In order to do numbers one and two, this would involve the Department of Community Medicine. It would, therefore,

draw upon skills from other departments in the Faculty of Medicine. For example, the problem of malnutrition could be presented to students from a biochemical, physiological perspective, along with the behavioural sciences, and the paediatric department. The health educator could co-ordinate such a programme because health education would be a sub-speciality in the Department of Community Medicine.

4. In order for the medical doctor to work with the community, he needs to understand their health beliefs. In doing this, he has to understand the community's cultural values and beliefs. These beliefs must be understood before he tries to change their behaviour. They appear to be integrated into the total concepts of their health and affect their values about health and disease in the community, which, in turn, become an integral part of their lives (Paul, 1955 and Read, 1966). These health attitudes underlie the very reasons for their utilisation or non-utilisation of the health services in the village (Anderson, 1963).

The presentation or non-presentation of a patient's symptoms may be used from his own traditional point of view and this should not be overlooked when the doctor is dealing with his community (King, 1970).

Through further health education, people can be taught to rationalise their beliefs and hence modify their actions. If a change in

behaviour occurs, then the quality of life will be improved. This can only be done if the community's traditional or folk beliefs can be counterbalanced with health education. One place for this counterbalancing to take place is within the everyday learning situation of a medical student's life. This will help him to perform his duties better, either in the rural or urban communities, when he finally becomes a Medical Officer.

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APPENDICES

APPENDIX I

TABLE I

Source: International Classification of Diseases (1978)
W.H.O. Geneva

Number	Name of Disease
591	
593	Urinary calculus
595 - 599	Infections of the kidney
601 - 607	Other inflammation of the prostrate
612 - 929	Disorders of ovary, fallopian tube, pregnancy and childbirth
508	Pneumonia and other lung diseases
510 - 512 - 514	Other diseases of the
519	respiratory system
321 - 333	The nervous system, meningitis
341 - 344 -	Other demyeleraty diseases of
346 - 356	the Central Nervous System
370 - 373	
376 - 380	

N.B. Only the diseases that are of importance are mentioned.

APPENDIX II

OUTLINE OF A SYSTEMS APPROACH

SYSTEMS APPROACH TO ANTE-NATAL HEALTH EDUCATION

1. Introduction: description of 'systems approach'

2. The nature of maternal and infant mortality
   - anaemia
   - prolonged labour
   - parity
   - age
   - health and reproductive history prior to each pregnancy
   - environmental factors
   - neonatal tetanus

3. Extent of the Problem

   Data from a) fact sheets
   b) Harrison (1978)

4. Trends in obstetrics disease

5. Cost of disease
   - Financial and other cost

6. Aetiology
   - Outline aetiology as presently understood.
   - Make reference to Harrison's work.
   - Either come to an assessment of the evidence
   - OR conclude that an assessment must be reached before a programme is instituted.

7. Prevention

Distinguish primary, secondary and tertiary prevention and health education for each.
For example, for primary prevention, health education would be to promote routine giving of tetanus toxoid to all mothers in areas where neonatal tetanus is common and proper nutrition for secondary health education would be the promotion of effective use of services and the delivery of babies in hospital (high risk mothers especially).
Health education for tertiary prevention would be to promote proper care for mothers with chronic diseases, such as tuberculosis, leprosy and renal diseases.

8. Services

To what extent do they supply demand.
Comment on regional differences.

9. Social Engineering

Legal - enforcement of primary education
Fiscal - possible in relation to dietary factors
Environmental - provision of iodine salt

10. Behavioural Outcome of Ante-natal Health Education

e.g. regular, efficient ante-natal care
regular visits to M.C.H. clinics.

11. Target Populations

Women between ages 15 - 45 years

12. Characteristics of Target Population

Discussion on

a) Knowledge of target groups about ante-natal care

b) Beliefs

e.g. Health Belief Model

Salient Beliefs

Exemplify in beliefs discussions

a) values, attitudes, drives, (e.g. fear)

e.g. general health motivation,

deferred gratification

b) practices related to ante-natal care

c) influence of others - norms; professional; lay referral system

13. Aims

State for the population as a whole and exemplify in relation to specific target groups.

Objectives

A few examples of behavioural objectives will be stated, short and long term objectives.

14. Pre-test

Target groups for relevant K-A-P.

15. Planning the Programme

General points will be outlined and discussed

16. Choice of Methods to Use in Programme

Identify Methods

a) To promote appropriate knowledge and skills

b) Promote or modify beliefs

c) Promote or modify attitudes

i.e. group discussion-decision

d) To explore values

e) Long term measures

i.e. promoting locus of control

17. Identify agencies - refer to health career

e.g. M.C.H. clinics in educating young mothers about ante-natal care

schools - parentcraft

18. Identify personnel - very briefly

e.g. community midwives and other health workers for young mothers

19. Consider need for in-service training

20. Evaluation

Modify programmes where necessary before repetition.

APPENDIX III — OUTLINE OF NEW MEDICAL CURRICULUM

