

EXECUTIVE SUMMARY

During the past two years, the Ministry of health, with the assistance from technical specialists and from other government ministries and departments, has undertaken a comprehensive review of the health sector in Malawi. This document is the National Health Plan for Malawi for 1986-1995 which has resulted from that review. It is the result of a systematic planning process in which the plan was built through a series of steps. These steps and the corresponding chapters of this plan are shown below.

PLANNING STEP	CHAPTER(S)
1 Analysis of the current situation	1,2,3
2 Identification of problems and constraints	4
3 Setting of goals, overall objectives, strategies, for the 1986-1995 Plan	5
4 Setting of tasks and activities for the 1986-1995 Plan	6
5 Resource implications of the National Health Plan over the plan period	7
6 Re-organization of the Ministry of Health to achieve the Plan objectives	8
7 Determining the role of the private sector in the 1986-1995 plan period	9
8 Description of the implementation of the plan	10

This Health Plan is consistent with the national development policies and plans of the Government of Malawi. It recognizes that the Government of Malawi does not have unlimited resources to spend in the social sector, including health. The Plan has been prepared in such a way that it creates a better balance in health status between regions, age groups, and income groups; increases local participation; and is based on eliminating dependence on foreign finance for recurrent government budget expenditures. The Plan is directed at helping achieve the National Health Policy of Malawi: "to raise the level of health of all of its people through a sound services delivery system capable of promoting health; preventing, reducing, and curing disease; protecting life; and fostering general well-

being and increased productivity." The Health Plan recognises the progress made in the health sector since Independence, the important role played by other government departments and non governmental organizations such as the Ministry of Local Government and the Private Health Association of Malawi.

Chapter 1 describes the country and its general state of development. Malawi has made impressive progress since Independence in economic growth, per capita income, food production, infrastructure development, and education. The country has a stable government, pragmatic policies, and committed to development. Despite these impressive achievements, Malawi remains one of less developed countries. Steady progress in all sectors during this Plan period must continue.

Chapter 2 reviews the current population and health situation in the country. Due to declining death rates resulting from Malawi's gains in development, concomitant with stable, high birth rates, the population of Malawi is growing rapidly. The current population is about 7 million, with over 6 million in non-urban areas. The population is likely to double by the year 2007 under moderate forecasts. The age structure is young, with over 46% under the age of 15. Given this age structure and the rapid population growth, the dependent population may strain the country's resources, adversely affect savings, and increase the difficulty in raising per capita income.

While overall mortality is decreasing, the mortality in children under age five years has remained much higher than in many of Malawi's neighbouring countries: about 57% of deaths in Malawi are estimated to be in children 0-4 years of age. Infant mortality is now estimated to be about 150 deaths per 1000 live births. While urban infant mortality rates have declined significantly, rural rates have only minimally declined.

For children under the age of five, five causes account for more than one-third of deaths. Most of these deaths are preventable. For the population over age five, ten reported causes of death account for two-thirds of deaths. Many of these are preventable. The causes of morbidity generally are similar to the cause of mortality. Childhood and maternal malnutrition are important contributing factors in mortality and morbidity in Malawi and particularly affect the child from birth (low birth weight is often due to maternal malnutrition) through the age of two years. Even though Malawi has an adequate food supply overall, studies show that many young children do not receive enough calories each day due to feeding habits which are adverse to children.

Chapter 3 reviews the situation in the health sector in Malawi beginning with previous development and planning activities, followed by a review of current policies and strategies, organization and administration, services and programmes, supporting systems, and resources -- manpower, facilities, and finances. Services of the Ministry of Health and the Private Hospital Association of Malawi (PHAM) and other health providing agencies are described.

Chapter 4 begins to focus on the future by defining the priority problems and main constraints faced by Malawi during the 1986-1995 period. The priority problems derive from the perceptions of the population and of the technocratic and political community. The priority problem, as viewed by the population, is lack of access to health services when people are ill, in pain, are afraid, or need health advice. As such, they want services as close to home, available as many hours as possible per week, and at as low cost as possible. The priority problem, as viewed by the technocratic and political community, is that health status is generally unsatisfactory in view of the national health policy of the country. Health status may be defined in terms of mortality, morbidity, disability, and productivity: in Malawi, at this stage of development, the high mortality rate is the top priority health problem.

Although significant progress has been made to improve coverage, the problem of access to health services is greatest in the rural areas as compared to urban areas. The problem of unsatisfactory health status, as exemplified by high mortality, is greatest in children under the age of five in rural areas. Child mortality is, then the main health status problem in Malawi. As stated earlier, five causes account for over one-third of child mortality and some of these also affect the over-five population. These five - respiratory diseases, diarrhoeal diseases, nutrition related diseases, malaria, and immunisable diseases - plus skin and eye infections, are identified as first priority problems for this Plan period. In addition, five health conditions - parasitic and helminthic diseases, hepatitis, general trauma, venereal diseases, and selected chronic disease (including malignant neoplasms and hypertension) - are key causes of low health status in the general population (including children 0-4 years). These are identified as next priority problems for this Plan period.

Chapter 4 identifies a number of constraints that underlie and aggravate the health problems and could impede implementation of the Health Plan. The main constraint in improving access is financial. The development budget is 99% financed by external sources, but the recurrent budget for the Ministry of Health remains relatively limited at about K23.7 million in FY 84. PHAM also has a limited budget.

Other important constraints are in management, where lack of staff experienced in planning, day-to-day management of the delivery system (especially targeted child survival programmes), hospital management, and construction monitoring could hinder the progress of implementation; in manpower where there are problems in maintaining establishment levels in rural health centres and in meeting manpower targets; in family knowledge and skills in child rearing for child survival; and in technical areas, where the current health services have a wide focus of activities, a heavy workload of curative activities, and not enough specificity of skills to carry out planned and targeted child survival programmes.

Chapter 5 describes the goals, overall objectives, and strategies,

for the 1986-1995 plan period. The overall goal for the health sector is the National Health Policy quoted earlier. The 1985-1995 health goal is "to achieve the overall goal by increasing access to modern health care services for the population; improving health status, with an emphasis on survival for children 0-4 years of age, through core health services" To achieve the 1986-1995 health goal, six overall objectives have been set.

Overall Objectives of the 1986-1995 National Health Plan

1. To improve coverage through a rational network of available and acceptable facilities and services.
2. To establish effective mechanisms for Ministry of Health manpower development and deployment.
3. To improve the managerial processes of the expanded health delivery system.
4. To expand the range and quality of services directed at maternal health, children under age 12 months, and the children between 1-4 years by addressing priority diseases.
5. To improve the health status generally by strengthening relevant programmes.
6. To improve the nutritional status of mothers and young children as a basic strategy for achieving the medium term goals.

For each overall objective, a number of strategies are described. The expected outcomes of these objectives in 1995, shaped by the financial constraints, current health and population situation, and implementation capability within Malawi, are as follows: a cost-efficient health services delivery system with greatly expanded peripheral health services at the community and health centre level, supported by an improved, but only modestly expanded hospital sector; a health services delivery system where workers and managers are focused on a limited number of priority diseases, with special attention to rural children 0-4 years of age; and a delivery system better managed by strengthened central, regional, and district organizations whose staff will have been trained in a wide variety of management areas through improved training and manpower management procedures.

Chapter 6 describes in detail the activities that will take place for each of the tasks listed in Chapter 5.

Chapter 7 describes the resource requirements (facilities, manpower, and financial) for achieving the objectives of the Health Plan. The estimates given show that a considerable increase over existing level of resources is necessary. Since it is very unlikely that the MOP can be allocated enough money by the Treasury to finance all the planned activities, the need for assistance from donors as well as

exploring means of using resources more efficiently has been spelt out

Chapter 8 describes a modified organizational structure for the MOH which will facilitate the MOH's ability to continue making progress in the health sector during the plan period.

Chapter 9 draws detailed attention to the non-ministry service providers (PHAM, local government, private and traditional practitioners). The contributions to the health sector by these providers are noted. The greatest emphasis in this chapter is on PHAM, which is the major provider of services in Malawi after the MOH. PHAM received about one-third of its revenues from the MOH. PHAM hospital facilities account for over one-third of total admissions and in-patient days. Among just rural hospitals, PHAM facilities account for almost half of total admissions and in-patient days. PHAM also exercises a significant capacity to provide basic and in-service training of many categories of health staff, a capacity from which the MOH continually benefits.

The need for continued cooperation between the MOH and PHAM is noted, with discussion of some of the areas in which the MOH and PHAM will attempt to further their cooperation.

Chapter 10 describes how the Plan will be implemented. The Chapter is divided into two sections: the first deals with the most urgent aspect of the implementation, the organizational changes and improvements necessary to provide the framework for implementation of new technical programs. The second section provides the salient features of a continuing planning process, a process which will not cease on completion of the Plan document, but which will permit constant planning evaluation, and re-planning, on the basis of new discussions on Chapters 5, 6, and 7.

CHAPTER 1

BACKGROUND

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CHAPTER 1 : BACKGROUND

1.1 THE NATION OF MALAWI

Malawi is a landlocked country in east central Africa, south of the Equator. It covers an area of 118,500 square kilometres and has an estimated population of seven million. Malawi is bordered to the north by the United Republic of Tanzania; to the east, south and southwest by the Republic of Mozambique; and to the west by the Republic of Zambia. Geographically, the country is dominated by Lake Malawi, Africa's third largest and the world's thirteenth largest lake. Lake Malawi covers about one-fifth of Malawi; it lies about 460 metres above sea level and occupies the greater portion of the deep Rift Valley.

Malawi is divided into three administrative regions which are very different in topography and climate. The Northern Region consists largely of high plateaus ranging from about 1,500 to 2,500 metres. The temperature ranges between approximately 15 to 18 degrees centigrade. It is the least densely populated area, with a density of 24 people per square kilometre. The Central Region has a population density of 60. Along the lake the terrain is rolling and grassy, rising to highland plateaus ranging from about 1,000 to 1,200 metres. The average annual temperature is comparable to that of the Northern Region. The Southern Region is distinguished by a variety of climatic and topological areas: the extremely hot Shire Valley whose annual average temperature is about 27 C; the highest mountain in the country; and the cool, fertile Shire Highlands. This region has a density 87.

Variations in rainfall are as striking as variations in topography and temperature, but almost all the arable areas receive enough rain for year-round dryland farming, with the exception of a dry season that creates annual food shortages in some areas.

The climatic variability and generally fertile soil support a wide range of tropical and sub-tropical crops. The main food crop is maize. Tea, tobacco, cotton and groundnuts are prominent cash crops, generally grown on private estates. This estate agriculture accounts for about 7% of Malawi's GDP and for more than 80% of her exports. The Government is committed to the development of smallholder and estate agriculture alike, with the realization that diversified crops are necessary in view of unpredictable shifts in prices of tea and tobacco.

Culturally, Malawi consists of nine major tribal groups which have enough in common to allow comfortable and productive interaction. The national language, Chichewa, is taught along with English in all schools, so that linguistic divergence is not a constraint to effective government. In general the people of Malawi have been succes-

sful in welding their desparate ethnic groups into a functioning state. Since Independence in 1964, the Malawi Congress Party, under the leadership of His Excellency the Life President Ngwazi Dr. H. Kamuzu Banda, has guided the country in its efforts towards economic and social progress.

1.2 GENERAL INDICATORS OF DEVELOPMENT

At the time of Independence, the prospects for development were not promising. Malawi was a subsistence economy, with essentially no mineral resources. Regional disparities were severe; the Southern Region had achieved some semblance of prosperity through its tea and tobacco plantations, and the Northern and Central Regions lagged far behind the south in most important respects. Transportation was extremely limited, particularly in the Northern and Central Regions.

The massive efforts of the government during the past twenty years have resulted in some impressive achievements. The GDP grew at an annual average rate of 5.5% between 1967 and 1979, with the rate since 1970 averaging 7%. Per capita income has grown at an annual average rate of about 3%; and the unemployment rate is 5.3%. Malawi has been generally able to maintain self-sufficiency in food production, and even to export food to drought-ridden neighbors. The network of roads has been radically improved, and virtually all parts of the country are accessible most of the year. The establishment of Lilongwe as the country capital in 1975 has helped address the imbalance among regions. Along with these economic indicators, the government must be credited with important educational gains: from 1973 to 1982 the primary school enrollment rate rose from 52% to 70% and the literacy rate from 18% to 26%; secondary school enrollment has quadrupled since Independence.

Despite these impressive achievements, Malawi with a GDP one of the twenty least economically developed countries in the world. Roughly 90% of Malawians are farmers. The great majority of these are smallholders engaging in subsistence farming. Industrial development has been sluggish for a number of reasons including lack of mineral resources, limited access to ports, and shortage of trained personnel. Concomitantly, urbanization lags somewhat behind the level in comparable East African countries. The economy will undoubtedly remain largely agricultural in the foreseeable future.

Given a large agricultural sector, it is important to recognize that most indicators of development are substantially lower in the rural areas. Some examples:

	Percent of Population	
Index	Rural	Urban
o Literacy rate	23	45
o Mothers with some education	35	64
o Protected water source	25	73

o Households with radio	11	16
o Qualified teachers		
Lilongwe	74	89
Blantyre	57	89
Zomba	67	86

Along with the urban/rural discrepancies as shown, disparities continue among regions and districts despite partial success in distributing key commercial, educational, industrial, and political enterprises more equitably. A few key indicators serve to demonstrate these regional inequities:

- o The rate of literacy among women in the Northern region is about 33%, in the Central region 15%, and in the Southern region 14%.
- o The pupil/teacher ratio is 87:1 in the North, 91:1 in the Centre, and 76:1 in the South.
- o Access to improved water similarly ranges from 84% in the North through 78% in the Centre to 70% in the South.

Within each of the three regions, differences among districts can be striking, due to colonial circumstances, geography, and varying population density. The Government is intensifying its efforts to equalise conditions across Malawi through a policy of balanced development.

CHAPTER 2

CURRENT POPULATION AND HEALTH SITUATION

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CHAPTER 2 : CURRENT POPULATION AND HEALTH SITUATION

2.1 INTRODUCTION

This summary of population and health data is synthesised from various source documents including those prepared during the preparation of the National Health Plan.

2.2 DEMOGRAPHY

2.2.1 Mortality and Fertility

Mortality is high in Malawi, especially among infants and children. However, the crude death rate has fallen from approximately 30 in the period 1950-1955 to a current estimate of 22. Over the same period, life expectancy rose from 33 to 43 years.

The official Infant Mortality Rate (IMR) for Malawi is 151 deaths for every 1000 live births. Reports on the survival of children indicate that the IMR declined from about 200/1000 in the mid-1960s to about 190/1000 in the early 1970s. These reports also indicate that about 150/1000 children died between their first and fifth birthdays in the mid-1960s and that this rate had declined to around 140/1000 by the early 1970s. Hence, about 35% of children died during their first five years of life in the mid-1960s and about 33% in the early 1970s.

Compared to other east and southern African countries, Malawi's infant and child mortality rates are very high. For example, 35% of all children born alive to Malawian women aged 30-34 in 1970, were reported to have died. In neighbouring Zambia and Tanzania, the proportion dead was reported as only 22% and 25% respectively; in both Zimbabwe and Botswana 16%. These comparisons suggest the urgency of an improved health information system for Malawi and the need to isolate the factors which account for high mortality in Malawi.

Fertility is high. Based on the 1977 Census, the current birth rate is estimated at 54 births per 1000 population. Currently, the average number of births per woman during her reproductive years (fertility rate) is approximately 7.6. Rural fertility (about 7.6) is somewhat higher than urban fertility about (7.2). There are also significant regional variations, from 5.8-9.6 in the Central Region through 6.8-8.3 in the North, down to 7.1-8.3 in the South.

2.2.2 Marriage, International Migration, and Urbanisation

Female marriage is almost universal throughout Malawi. Nationally, the median age at marriage is 17.4 years, ranging from 16.9 in the Southern Region to 18.3 in the Northern Region. The lower fertility

rate in the Northern Region may be linked to later marriages in this Region. In the Southern Region, the fertility rate may be depressed by the high incidence of marital instability. In 1977, 12% of all women aged 30-34 in the South were divorced or separated, compared to 3% in the North and 5% in the Central Region. The prevalence of polygamy is difficult to ascertain given the high rate of migration among males. Its practice appears most common in the Northern Region where between 25% and 33% of enumerated males over age 40 reported more than one wife.

The levels and trends of international migration can be estimated by determining the ratios of males to females. These ratios show a gross deficiency of adult males (15-49 year) throughout Malawi from 1966 to 1970, with some lessening in 1977. These ratios confirm the findings of the 1966 census, in which 244,000 males were reported as working abroad, as opposed to 22,000 females. Approximately 200,000 males were reported at work outside Malawi at the time of the 1977 census.

Between these two censuses, the urban population of Malawi grew both numerically and proportionately; in absolute numbers, it more than doubled from about 202,000 to 464,083, and proportionately it increased from 5.0% to 8.5% of the total population. Most of the increase is attributed to in-migration of between 14,000 and 18,000 people annually. Recent data suggest that the trend toward increased urbanization continues, with approximately 12% of the total population now living in urban areas. This figure is still somewhat lower than the 15% urban population of East Africa as a whole.

2.2.3 Age Distribution and Child Dependence

Malawi's population is young. As shown in Table 2.1, 19.5% of the population is under the age of 5, over 47% is under the age of 15, and only 13.1% 45 or older. This distribution is characteristic of countries in which higher fertility exists for a long period of time.

Table 2.1: Demographic Statistics of Malawi

Population (1985 estimated)	7.058 million
% of population urban (1985 estimated):	11.9%
Crude Birth Rate (1982-1985, estimated):	54 per 1000 population
Crude Death Rate (1982-1985, estimated):	21.8 per 1000 population
Infant Mortality Rate (1982-1985, estimated):	151 per 1000 population
% natural increase (1982-1985, estimated):	3.2%
Total fertility (1982-1985, estimated):	7.8
Life expectancy (1982-1985, estimated):	41.1 (males)
	44.6 (females)

Population distribution (1985 estimate):

Age	Total	% of Total	Cumulative Percentage
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0-1 year	317,646	4.5	4.5
1-4 years	1,104,754	15.0	19.5
5-14 years	1,940,900	27.4	46.9
15-44 years	2,826,700	40.0	86.9
45 or more	868,900	13.1	100.0

Source : National Statistics Office

Along with this age distribution, Malawi is burdened with an unfavourable child dependency ratio (i.e., population ratio of children under 15 years to adults in the economically productive age group, 15 - 64 years). For every 100 adults there are 95 dependent children. By contrast, most Western nations typically have two or three adults in the economically productive ages for each dependent child. By the year 2,000, if current trends continue in Malawi, for every 100 adults there will be 101 dependent children.

2.2.4 Population Projections

The population of Malawi is estimated at about 7 million people in 1985. Given current fertility and moderate decline in mortality, the population could double by 2,000 given a moderate decline in both mortality and fertility levels, the population in 2000 will be between 11.6 and 11.7 million. Based on these projections, it can be assumed that with stable fertility, the target population for maternal and child health services (women aged 15-49 years and children under 5 years of age) will grow from the current (1985) 3.0 million persons to nearly 5 million by 2,000, with declining fertility, this target population will still be 4.5 million.

Reduction in the mortality rate without a corresponding reduction in fertility will increase the already high annual population growth rate to 3.7% by the end of the century. Such an annual rate of increase would defeat any effort at increasing the standard of living of the general population.

2.3 HEALTH STATUS

2.3.1 Age - and Disease-Specific Mortality

There exists no official requirement in Malawi for the reporting of births and deaths. Government and non-government facilities in Malawi regularly report the causes of death among in-patients to the central statistical office of the MOH. Inpatient, facility-based vital statistics are inherently limited and must be used cautiously in making inferences about the health of the general population. This is especially true in Malawi since there is regional variation in access to health services and in use of health services by varying cultural groups. In addition, certain age groups and certain disease conditions are less likely to be reported than others. However, as long as these limitations are kept in mind, this information does

provide some indication of health status and trends.

Since the vital statistics system does not report deaths completely, the age and cause-specific death rates are uncertain. It is possible to estimate percentages of all deaths for children under age five. This age group, about 20% of the population, accounts for at least 57% of all deaths in Malawi. This age group is clearly at highest risk of death in Malawi.

Data regarding age-specific mortality within the 0-5 age group are limited at present. The data that are available strongly suggest that about one-fourth of 0-5 mortality occurs in the first month of life, another one-fourth or more between the second and twelfth months, and the remaining one-half in the first through fourth year of life. Regional analysis indicates that rural infant mortality is twice urban infant mortality. Since nearly 90% of the population is rural, this means that over 95% of all infant deaths are in the rural areas. If this ratio hold true for rural children aged 1-4, then rural children under five years of age accounts for more than 50% of total mortality in Malawi. For children under age five, data are uncertain regarding regional variations in mortality.

It is uncertain how the age of the mother at first pregnancy and the average time between births affect under-five mortality in Malawi. However, data from other countries make it clear that mothers in the 15-19 age group and mothers having children less than two years apart have much higher child mortality rates.

Using in-patient data, the cause-specific mortality for the high priority 0-4 age group is shown in Table 2.2.

Table 2.2 : The Ten Leading Causes of Death in Children
0-4 year, 1983, from 6028 Reported Hospital Deaths

Disease	Total Reported Deaths	% Deaths	Accumulation Percentage
1. Measles	975	16.2	16.2
2. Pneumonia	786	13.0	29.2
3. Nutritional deficiency	673	11.2	40.4
4. Malaria	611	10.1	50.5
5. Anaemia	549	9.1	59.6
6. Diarrhoeal diseases	504	8.4	68.0
7. Tetanus	256	4.2	72.2
8. Disease of Nervous system	96	1.6	73.8
9. Accidents and Injuries	89	1.5	75.3
10 T.B.	28	0.5	75.8

Table 2.3 : The Ten Leading Causes of Death in Those Older than 4 in 1983 from 3534 Reported Hospital Deaths

Disease	Total Reported Deaths	% Deaths	Accumulation Percentage
1. Pneumonia	273	7.7	7.7
2. T.B.	268	7.6	15.3
3. Accidents	222	6.3	21.6
4. Malaria	208	5.9	27.5
5. Anaemia	206	5.8	33.3
6. Diseases of nervous system	204	5.8	39.1
7. Nutritional deficiency	114	3.2	42.3
8. Complications of pregnancy	111	3.1	45.4
9. Measles	83	2.4	47.8
10 Diarrhoeal diseases	78	2.2	50.0

Table 4.3 : The Ten Most Frequent Causes of Outpatient Visits for Age 0-4 in 1982 from 4.8 million Visits

Disease	Percentage of Total	Accumulative Percentage
1. Malaria	35.6	35.6
2. Respiratory infections	19.8	55.4
3. Diarrhoeal diseases	8.7	64.1
4. Inflammatory diseases of the eye	7.9	72.0
5. Skin diseases	5.6	77.6
6. Abdominal & GI symptoms	5.2	82.8
7. Trauma & Accidents	3.1	85.9
8. Measles	2.3	88.2
9. Nutrition deficiency disease	2.2	90.4
10. Hookworms & other helminthiasis	1.6	92.0

Table 4.4 : The Ten Most Frequent Causes of Outpatient Visits for Age over 5 years in 1983 from 7.5 million visits

Disease	Percentage of Total	Accumulative Percentage
1. Malaria	26.8	26.8
2. Respiratory infections	15.8	42.6
3. Abdominal & GI complaints	8.0	50.6
4. Traumatic conditions	5.7	56.3
5. Skin diseases	5.0	61.3
6. Eye diseases	4.7	66.0
7. Diarrhoeal diseases	4.6	70.6
8. Venereal diseases	4.2	74.8
9. Diseases of limbs and joints	4.0	78.8
10. Dental diseases	2.5	81.3

Note : The above data are for 21 districts only
Source : Statistic Unit - Ministry of Health

Table 2.2 shows that ten reported causes of death account for 76% of deaths in in-patients under the age of five, and that the top five causes account 60%. With the exception of "diseases of the nervous system," "neoplasm," and, perhaps, "accidents and injuries," the remainder of these causes are mostly preventable or treatable through primary health care approaches.

Although the data are uncertain, it appears that prematurity, tetanus, pneumonia, and diarrhoea are very important causes of death in children under age one month. Such deaths constitute one-fourth of under-five deaths. For children one month to one year, pneumonia, diarrhoea, under-nutrition, and malaria are likely to be most important, with measles contributing in the last 3-4 months. Older children are more susceptible to accidents than younger ones.

Several important inferences can be drawn from these data:

- o Children 0-4 years of age make up about 20% of the population; estimated deaths among this group account for 57% of all deaths in Malawi.
- o Estimated deaths among children 0-4 years of age from six leading causes account for more than 35% of all deaths in Malawi.
- o Five conditions - nutritional deficiency, pneumonia, malaria, measles, and diarrhoeal disease - account for at least one-third of all deaths in the country and are either mostly preventable or treatable using a primary health care approach.
- o Nutritional deficiency is thus a principal or contributing cause for a dominant fraction of preventable mortality in Malawi.

Table 2.3 shows that ten reported causes of death account for 50% of mortality in in-patients aged five and over. With the exception of "diseases of nervous system" and, perhaps, accidents, the remainder are either mostly preventable or treatable through primary health care approaches. The principal interventions would appear to be immunizations, improvement of nutrition, and early detection and treatment in respect of diarrhoeal, and pregnancy disorders.

2.3.2 Morbidity

Morbidity statistics in Malawi are drawn almost exclusively from out-patient facility reports (see tables 2.4 and 2.5). They have the same limitations as mortality statistics when extended to the total population. Used with caution, they provide an indication of morbidity status and trends. Based on these statistics, the leading causes of morbidity in Malawi parallel to the leading causes of death. Out-patient statistics suggest that the leading causes of morbidity are: malaria, respiratory diseases (including tubercu-

losis), diarrhoeal diseases, skin diseases, inflammatory eye diseases, general trauma, venereal diseases, hookworm and other helminths, dental diseases, and other combined childhood infections. Schistosomiasis and leprosy, while not among the ten leading causes of morbidity, reported by outpatient centres are significant public health problems in Malawi.

Among children 0-4 years, malaria accounts for 30%, tuberculosis for 21 %, and gastro-intestinal problems for 17 % of out-patients seen in 1979. Eye diseases (9.2%) are more significant than in adults, and schistosomiasis (15%) has significance as a morbidity cause in children. A household survey conducted in 1974 found 64% of rural children 0-5 unwell on the day of the survey, demonstrating the burden of illness in the growth, development, and well-being of Malawi's children.

From the morbidity data presented here one can draw several important conclusions:

- o Ten leading causes of morbidity account for 80% - 90% of all out-patient visits.
- o Children aged 0-4 years accounts for 40% of all visits. Their utilization rate is thus twice that for general population.
- o The first five diseases (malaria, respiratory diseases, diarrhoeal diseases, diseases of the eye, and diseases of the skin) account for about 78% of all recorded visits for children aged 0-4 years.
- o While large portions of the child population are immunized, 40% are unprotected from one or more of the major, preventable childhood diseases.

2.3.3 A Closer Look at Important Diseases in Malawi

Malaria, the leading cause of out-patient treated morbidity, is highly prevalent in all age groups and in every part of the country except at the highest altitudes. In 1978, WHO conducted malariometric surveys of 369 people in four localities - one at Rumphi, two at Laronga (both Northern Region) and one at Sucoma (Southern Region). The crude parasite rate* varies from 26% to 50%, about 72% of all positive smears being accounted for by Plasmodium Falciparum. The most common vectors in the localities surveyed were Anopheles gambiae and Anopheles funestus, the most commonly seen African vectors. It was confirmed that both species are susceptible to DDT. Most recently (July - December 1984), over 50% of the parasite in two sample districts showed some chloroquine resistance.

* The number of positive slides per 100 individuals surveyed.

Diarrhoea is an endemic problem in Malawi with high rates of mortality (ranked 5) and morbidity (ranked 3) in young children (0-4). Diarrhoea also causes significant problems in older children and adults (within the top ten leading causes of morbidity and mortality). Diarrhoea has a seasonal variation, with peaks occurring in December and January.

Diarrhoea is common in measles before a rash appears. It is often a presenting or associated symptom of pneumonia, middle ear disease, meningitis and other infectious diseases. Any infection may cause diarrhoea, especially in children. Repeated episodes of diarrhoea or starvation therapy for treatment are recognized causes of malnutrition. On the other hand, undernutrition determines the capacity of children to survive in the presence of diarrhoeal.

Cholera was first seen in Malawi in 1973 and since then has been a consistent health problem, particularly in the Southern Region. Since 1974, the number of cases of cholera and the number of deaths from cholera has declined, possibly because of the control programme which consists of environmental control, surveillance, and health education.

The incidence of diarrhoea and cholera is related to the availability of safe water and proper sanitation and waste disposal. Given current fertility and a moderate decline in mortality the population could double by 2000. Water-borne sewerage systems are available only to a very small proportion of the populations of the cities of Zomba, Blantyre, and Lilongwe. Nearly 27% of urban populations use septic tanks and 58% use pit latrines for excreta disposal. Similar data is not available for the rural population.

Measles

In 1979, measles accounted for 2% of total reported morbidity for all ages and 3.6% for children aged 4 years and under. Measles is usually under-reported because mothers tend not to seek assistance. In 1975, 24% of measles cases admitted to hospitals were children under 1 year of age, 53% in the age group 1-4 years, and 23% in those aged 5 and over. In 1977, of 20,517 reported in-patient cases there were 1,547 deaths (7.5%); in 1978, 2,171 deaths (9.4%) of 23,048 inpatient cases; and in 1979, 1,521 deaths (10.5%) of 14,527 inpatient cases. Since 1979 immunisation against measles has become an integral part of MCH Services, and field impressions indicate that the number of cases seen in hospitals and health centres is decreasing.

Schistosomiasis accounts for only 2% of total morbidity of all ages, and 1.5% for children age 4 years and under. However, this is a more serious health problem than the data suggest. It was believed earlier that it was not a problem outside irrigated areas where schistosomiasis became endemic and where infection rates rose rapidly. A survey of labourers newly recruited from all parts of Malawi for the Dwangwa Sugar scheme showed that almost 42% were infested with *S. Mansoni* on arrival; 35% had *S. Haematobium*. Similarly, a survey of Standard 1 pupils from 12 primary

schools around Lilongwe (not an irrigated area) showed that 50% had *S. Mansoni* and 15% had *S. Haematobium*.

General Observations

The pattern of the morbidity and mortality of infectious and parasitic diseases in Malawi has changed little since 1974. Exceptions could be the apparent decline in the incidence of measles and a slight upward trend overall in tuberculosis, perhaps due in part to better reporting. *Anklyostomiasis* (hookworm) shows a downward trend.

Data on the geographical distribution of the leading causes of morbidity and mortality are not available by district. Some information by region on out-patient first attendance, in-patients, and in-patient deaths is available for 1978 and 1979. In the Northern Region, there were 232 attendances for every 100 people, in the South 209 and in the Centre 147. It is difficult to determine to what extent this difference reflects a higher morbidity rate as opposed to the higher standards of education in the North and thus a greater tendency to make use of facilities, or to better outreach. In terms of specific diagnoses, the only marked regional difference in 1978 and 1979 were that the incidence of respiratory diseases, including tuberculosis, was about twice as high in the North and that the Central Region had fewer cases of gastro-intestinal and diarrheal diseases. No epidemiological investigations into the environmental determinants of morbidity have been carried out. For in-patients, a higher admission rate for all ten leading causes of morbidity seen in the Northern Region in both years.

2.3.4 Child Nutrition

Under-nutrition is an important contributory factor in mortality and morbidity in Malawi, particular in children under five years of age.

While there may be adequate production of food in national terms, problems facing individual families can counteract this advantage. Surveys have shown that pre-harvest shortages are frequent. Non-seasonal factors leading to lack of adequate breast-feeding supplements and poor intra-familial food distribution in some families need further investigation.

Clinic records and surveys such as the 1981 National Sample Survey of Agriculture (NSSA) show that between 25% and 60% of children under the age of five are below the correct weight for their age, depending on time of the year and location.

Most of the children in this category are underweight because of their lack of weight due to previous episodes of undernutrition combined with illness. While they are now the correct weight for their height, they will never reach the height they should be for their age, and so will remain stunted although otherwise growing normally. The NSSA data shows that about 65% of Malawian children are so stunted, but there may be need of downward readjustment of this figure by a few percentage points in the light of further

statistical analysis of the figures.

Remaining children who are underweight for their age, are so because they are underweight for their height, these being "wasted" or "thin" children. These children are "wasted" because of disease coupled with lack of food at the time of measurement. The NSSA data suggest that these number up to 20% of children, depending on time of year and location.

The most critical time for children is their time of weaning to food other than breast milk. The quantity, quality and frequency with which such food is given is critical for successful weaning. Pure maize (or cassava, sorghum, or millet) porridge is inadequate. While most parents are able to mix other locally available food to improve weaning, it seems many are unable to do this. Possible reasons include lack of knowledge and lack of resources.

In the light of the above, a locally-produced infant weaning and child-rearing food composed of a mixture of maize, beans and groundnuts is on sale and is also being distributed to nutrition rehabilitation clinics and health centres as part of WFF assistance.

While there may be some impact by increasing the availability of such foods, and of providing, preparing and giving food in general, problems faced by some families may prevent them from making maximum use of such advice. It is therefore felt that reduction of the impact of disease (especially those priority diseases that are the focus of the plan) will be important in ensuring the continued growth of those with inadequate food intake.

The Malawi approach to Primary Health Care focuses on the problem by emphasizing the growth monitoring of all children, the detection of families who have problems in caring for their priority diseases, and the provision of appropriate education on feeding. In addition, discussions will be held with community leaders on how best to overcome the problem uncovered. As the approach is multisectoral, the various sectors can also contribute their advice and action on these problems.

2.3.5 Maternal Nutrition

Very little is known about maternal nutrition in Malawi. UNICEF reports "anaemia" to affect 15% to 25% of pregnant women. Poor maternal nutrition is a factor in low birth weight, which in turn is strongly associated with increased peri-natal and infant mortality. Poor maternal nutrition probably is a factor in maternal infections and a contributing factor to Malawi's high maternal death, some evidence of which is seen in Table 2.3.

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CHAPTER 3: THE HEALTH SECTOR IN MALAWI TODAY

3.1 INTRODUCTION

This Chapter highlights the salient features of the health sector since 1964 and the earlier activities from which it evolved: the policies, strategies, and plans that guide current activities: the organisational and administrative framework, the services and programmes offered, the systems that support service delivery, the resources that are available: and the many achievements that have taken place to date.

3.2 PREVIOUS DEVELOPMENTS AND PLANNING ACTIVITIES

3.2.1 The First Years of Independence.

Under the first 5-year plan, from 1965-1969, resources were devoted primarily to curative services, with the emphasis on construction of facilities and development of manpower for these facilities including the training of SRN's which began in 1965 with the opening of the National School of Nursing, Blantyre: and the training of Registered midwives, which began in 1970. As the 5-year plan was implemented, it became clear that these endeavours could not alone achieve the desired impact on health status. Thus, in 1971, the government requested assistance from WHO in drawing up a plan to improve the impact of health services in the country. In 1974, this plan was adopted by government and became the official framework for health development.

3.2.2 The 1973-1988 Health Plan

The priorities established under this plan included:

- o the reorganisation of the MOH
- o the development of basic health services
- o the control of communicable diseases
- o the improvement and extension of existing hospitals, construction of new hospitals, and creation of a training school for paramedicals
- o manpower development.

Shortly after approval of the 15-year plan, a "mini-plan" was designed to strengthen maternal and child health care services, specifically with the following objectives:

- o increase immunisation coverage to 90% of children under 5
- o provide health and nutrition education to combat malnutrition among children, pregnant women, and nursing mothers
- o promote family life education.

These priorities were made more concrete by the adoption of the following objectives and targets:

- o the establishment of a country-wide basic health services system with a primary health centre for every 50,000 people, a sub-centre for every 10,000, and a health post for every 2,000.
- o considerable reduction, by 1990, of mortality and morbidity from malaria, diarrhoeal diseases, schistosomiasis, and tuberculosis:
- o improvement in the provision of safe water supply and sanitation by increasing the coverage of the urban water system, assisting the rural population to dig boreholes and protected wells, providing more urban water-borne sewage systems, promoting sanitation through health education and technical advice, and offering advice for construction of better housing:
- o promotion of nutrition by integrating nutritional activities into family services and by introducing relevant technologies:
- o improvement of maternal and child health by providing adequate antenatal and postnatal care to all pregnant women, reducing mortality and morbidity among pregnant women and children, and increasing vaccination coverage against measles, polio, diphtheria, pertussis, tetanus and tuberculosis.

Since 1978, as an addition to the existing plan, the government has endorsed the concept of primary health care (PHC) as the basis for the strategy to achieve "Health for all by the year 2000".

Primarily, the PHC approach aims to improve health by improving the effectiveness and efficiency of existing services and programmes through community involvement. However, in order to have maximum impact on health status, PHC activities in Malawi focus on four priority areas: maternal and child health care, water and sanitation, and early treatment of a limited number of major diseases, and the creation of the infrastructure for PHC which will enhance multisectoral cooperation.

The 1973-1988 Plan is being revised because of a recognition of delivering and developing health services

3.2.3 The 1982 Plan for Primary Health Care.

In 1981 the MDH initiated a pilot programme to train thirty Primary Health Workers (PHW's) in three districts. Evaluation a year later showed that if the programme were expanded to cover the entire country, the MDH would not be able to afford to pay the PHW's. Difficulties in supervision and support were also identified, largely attributable to insufficient orientation of area-level workers and of the communities in which the PHW's were working.

Based on this evaluation, a modified plan was developed and set out in a 1982 document, "Plan of Work for the Primary Health Care Process in Malawi." The key feature of this plan was the substitution of volunteer Village Health Workers (VHW's) for paid PHW's. This was to introduce greater flexibility with regard to village health workers or volunteers who might perform services for the community for support of PHC.

The plan stressed the importance of community orientation and participation, the training of support staff, and multisectoral collaboration. Each VHC, with the assistance of the area PHC team, identifies health priorities within its community, and then decides which problems it can tackle alone, and which need to be dealt with by individuals with training in special skills.

The plan also proposed to add three districts a year until 1990, by which time the entire country would be covered, and since 1982 great efforts have been made to orient people at all levels to the PHC approach. This has included training sessions for health staff, for tutors from training institutions, and for other staff from other Ministries at national and regional levels and individuals from the nine districts in which PHC activities have so far commenced.

3.3 POLICIES, STRATEGIES, AND PLANS

3.3.1 Current Health Policy

The overall MOH policy is to raise the level of health of all Malawians through a sound services delivery system which will promote health by preventing, reducing, curing disease, by protecting life, and by fostering general well-being and increased productivity. This is to be fulfilled by adopting PHC as the major philosophical underpinning of the health services delivery system: by maintaining hospital services as an integral part of the total system: by promoting the concept and practice of child spacing: by encouraging coordination among all partners in the health sector: and by assisting non-governmental organisations involved directly or indirectly with the health sector in ways consistent with MOH goals and objectives.

3.3.2 Strategies to Effect Health Policy

Since 1980, these policies have been implemented through the

following strategies:

- o the provision of a comprehensive health care delivery network throughout the country, comprised of a Primary Health Centre for every 50,000 people, a health sub-centre for 10,000 and a health post for 2,000 as well as health services at the community level to be provided by PHWs
- o the strengthening and expansion of MCH services and health education
- o the replacement and renovation of old and inadequate hospital facilities in both rural and urban areas
- o the strengthening of measures to prevent and control communicable diseases, including vector control, provision of basic sanitation facilities and water supply, and early detection and treatment of diseases
- o the training of health personnel at all levels and the orientation of health manpower to meet the needs of the communities in which they work. Unfortunately, the training of adequate and appropriate personnel has lagged behind because of inadequate facilities and changing trends in health delivery.

3.3.3 The Private Hospitals Association of Malawi

The second-most important provider of health care is the Private Hospitals Association of Malawi, PHAM: this group is made up of missionary groups which run hospitals and clinics. PHAM was organised in 1967 and now represents fifteen Catholic and Protestant denominations. Its executive offices are situated in the MOH headquarters, in order to foster close cooperation and collaboration with the MOH. PHAM does not have its own health policy but operates within the framework of the Government health policies. PHAM's major objectives:

- o to improve and expand health care facilities through interdenominational cooperation
- o to cooperate with and complement government health agencies
- o to develop and undertake training programmes for nurses, paramedical staff and allied personnel
- o to provide medical and health services.

PHAM's strategies and activities have been primarily oriented to hospital-based care, although PHAM has recently been expanding its efforts in clinic-based and outreach care. PHAM follows the following MOH policies and strategies toward PHC.

PHAM is financed from three sources, government, fees for

services, and donations, each of which contribute roughly equal proportions, but since PHAM units are independently financed, some are relatively well off, while others have financial problems.

3.4 ORGANISATION AND ADMINISTRATION

3.4.1 The Ministry of Health

The MOH has prime responsibility for developing policies, planning strategies, and programmes, for health care in Malawi, and for the quality of that care through monitoring and evaluation. Details of current organisation its problems, ways of monitoring and evaluating to increase efficiency are given in Chapter 8. Day-to-day decision-making in the MOH tends to be centralised. Although health services are integrated at the operational level, at the management level services and programmes are categorical. At the central level, there are discrete categories for clinical services, (essentially all hospital services) MCH services, PHC services (nutrition, EPI, diarrhoea, etc.) and other special programmes such as leprosy and bilharzia control.

Other government departments involved in the health sector include, for example, the Department of Personnel, Management and Training, in the Office of the President and Cabinet (OPC), which is responsible for both policy and administration of internal and external staff training. The OPC provides the chairmanship for the national coordinating committee on preventive health services, nutrition activities, and integration of health education, established in 1969, which coordinates the policy and financial aspects of the Bureau of Health services in the MOH. In addition to using extension staff to bring about improvements in family nutrition, child care, and hygiene, the government has been including health infrastructure in its rural development schemes.

3.4.2 The Private Hospital Association of Malawi (PHAM)

PHAM is the second-most important element in the health sector. It is made up of church-related and other private voluntary agency facilities, which are coordinated with MOH services, but not in a clearly defined way. The MOH assists PHAM by providing it with an annual grant which is used mainly for local staff salaries. PHAM facilities generally charge patients for treatment, with the exception of under-fives preventive service clinics, and a number of communicable diseases such as T.B., STD and Leprosy.

PHAM is centrally headed by an executive secretary with one assistant. Policies and strategies are discussed by an Executive board representing the 15 groups. Each group has its own Director and Board (usually a missionary board).

PHAM facilities manage themselves though with some guidance from the central PHAM offices. Although PHAM's authority relation-

ship with its member facilities is non-binding, supervision and training schemes do exist among PHAM facilities.

PHAM facilities are integrated with MOH health services from the perspective of management and administration, and MOH supervisory staff do undertake supervisory visits to PHAM facilities. The frequency of visits appear to be infrequent and the quality of supervision uneven.

3.4.3 Other Service Providers.

Local Government and other agencies such as the Army, Police, industries, and estates, provide curative and preventive services in varying degrees of scope and sophistication. However, the services provided by these groups amount to a very small portion of the total health services provided in the health sector each year.

Private practitioners, traditional healers and birth attendants (TBAs) do not have any strong national organisations. The number of private doctors is very small: only about thirty-five currently practice. There are more than 5,000 traditional healers in both rural and urban areas, of whom about 400 belong to the herbalists association. There are also more than 5,000 TBAs in Malawi, of whom about 600 had been trained as of July 1985. It is planned to train another 800 within the next four years. With the exception of the trained TBAs, none of these practitioners have formal links with the MOH health system. There is a growing need for the formal health care system to work more closely with this traditional health sector, in view of the limited resources fundable through government.

3.5 CURRENT SERVICES AND PROGRAMMES

3.5.1 The Ministry of Health

Nomenclature

The MOH offers a wide variety of services to the public. Expansion of the range of services has been so great during the last decade that nomenclature of services has grown with imprecision. For the purposes of this plan, "service" is loosely defined as a combination of preventive, curative, and educational interventions.

Broadly speaking, MOH health services tend to be categorised as either curative or preventive services. These services (known by a variety of names) include all those services that generally comprise comprehensive health care systems: emergency care, obstetric care, paediatric care, surgery, maternal care, child care, infant care, child spacing, etc. In this section the substance of health services is discussed in greater detail, highlighting the distinctions between services at various levels of the system. In Chapter 8, organisational issues are covered.

Health Services

The services of the MOH are currently provided at five levels within the context of PHC

- o community
- o health centres and rural hospitals
- o district hospitals
- o central hospitals
- o special hospitals.

Services at the community level include outreach activities conducted through mobile clinics held either in public places or at manned or unmanned health posts. Services at the community level stress activities and interventions associated with under-fives care, provided through one vehicle for many of the programmes discussed later in this section. The out-reach activities include health education, discussions regarding environmental sanitation, information about treatment of diarrhoeal diseases. Immunisations, pre-natal and postnatal care: under fives services such as weighing and screening. Postnatal services are limited. With the introduction of Child Spacing, postnatal services will be expanded at all health facilities. Children's weights and immunisation records are recorded on "Road to Health Charts" which are retained by mothers and monitored at the clinics. In addition, modest curative care is offered, but these services are limited by the fact that few of the workers at the community level have clinical training. Children in need of curative treatment are generally referred to a fixed facility.

Health centres and rural hospitals offer similar services, except that rural hospitals were originally established with limited inpatient capacity which has been maintained. Health centres include dispensaries, maternities, and units combining the two. They generally offer curative services, pre-natal care, natal care, post-natal care, infant care, and all the services offered by outreach clinics. Many health centres conduct nutrition clinics attended by children who have been identified as underweight at under-fives clinics. Nutrition clinics offer nutrition education, food preparation demonstrations, and free food supplements.

District hospitals are the referral centres for health centres, and also serve the local town populations. They offer outpatient and inpatient services, including maternity, paediatric, adult female, adult male, and often isolation facilities for communicable disease patients. They also provide all the necessary support services, both medical (e.g. laboratory) and non-medical (e.g. laundry). In addition, all preventive services offered at health centres and through outreach activities are also offered at district hospitals.

Central hospitals act as the district hospitals for their own districts. They are distinguished from ordinary district hospitals in that they provide specialist referral care for their respective regions. They also act as training hospitals for the attached training institutions.

Special hospitals offer very specific services, including mental health services, and inpatient care for leprosy and tuberculosis cases. A summary of health facilities is shown in Table 3.1.

Health programmes

The MOH has often recognised the need to strengthen a particular aspect of its services, in response to which it has initiated special programmes to develop, organise, and oversee the effort to change or improve health care. Some programmes are on-going, other are intended to last only until the changes are fully institutionalised and integrated into the regular health service delivery system. Still other efforts or activities by the MOH are "programme-like," but are not officially designated as programmes. Currently there are a number of special programmes in effect, including the following:

- o Child Spacing
- o Combatting Childhood Communicable Disease (CCCD)
- o Expanded Programme of Immunisation (EPI)
- o Bilharzia control
- o Leprosy control
- o Tuberculosis control
- o Environmental health and sanitation.

The child spacing programme is regarded as essential to the strengthening of the maternal and child health services of the MOH. Child spacing services are very recent, but will undoubtedly become even more important in the future. Currently they are available at all the district hospitals and the two central hospitals. Preparations are now underway to extend services and to expand the range of services available.

The CCCD programme was initiated in 1983. It focuses upon the problem of reducing child mortality and child morbidity especially in the areas of diarrhoea and malaria. Its key elements are as follows:

- o the promotion of oral rehydration treatment for diarrhoeal diseases

- o the promotion of the utilisation of anti-malarial drugs for expectant mothers and children under five
- o the integration of these activities into the Community Health Sciences Unit at the central level, and into Primary Health Care at the village level
- o the expansion of the EPI programme (discussed below).

The EPI programme was initiated in 1976 as a pilot programme with emphasis on the strengthening of the cold chain. In 1978, the two-phased nationwide systematic immunisation of children under 5 years of age began. The programme currently offers full courses of measles, DPT, polio, and BCG vaccines to children under 5 years. Good coverage rates have been achieved among target groups. The programme's current emphasis is on improving these rates.

The Bilharzia control programme was initiated in 1981, and concentrates on selected large rural population. Earlier activities which centred around irrigation schemes throughout the country, People in non-irrigation areas also require protection, and should be included in any control effort. This broader target has been adopted in the current programme. The programme involves population chemotherapy and is being implemented at two sites. The objectives of the programme are to study drug delivery in rural settings, to identify drug regimens most effective for control of incidence and prevalence of bilharzia and to determine the optional length of time for treatment regimens, and to train existing health staff in schistosomiasis control technology.

The leprosy control programme began in 1964 as a mobile service concentrating on the southern region. Its main objective was the reduction of the incidence of leprosy to a level at which static clinics could care for all those afflicted. The programme was privately operated (by LEFRA) until 1975 when it was to the MOH. In 1973, LEFRA established a nationwide mobile treatment network, which was completed in 1978 with the help of other private groups.

The existing tuberculosis control programme was launched in 1964. It puts emphasis upon case finding, treatment, and immunisation. It is centrally organised and administered by a medical officer and a health inspector. At the regional level, Regional TB officers are in charge of the programme, while at the district level, health assistants function as tuberculosis officers. The programme stresses health education activities. BCG is given as part of the EPI programme. District hospitals serve as in-patient units and out-patient review centres, and health centres provide out patient treatment. One major concern is the follow-up of defaulters: this will need to be addressed in the coming years as the programme is strengthened.

The environmental health programme is an on-going joint effort between the MOH and the Water Department. The former provides sanitation systems while the latter is responsible for

providing water. The MOH's contribution to this programme is spear-headed by the health inspectorate and includes water testing, food inspection, public education, and encouraging the construction of pit latrines and proper waste disposal. Although the provision of water has proceeded at a fast rate, the sanitation aspects have lagged behind because they were started only about 3 years ago.

Other MOH activities are "programme-like" but are not officially designated as programmes. Primary Health Care and Health Education fall into this category, and have been afforded a special and significant emphasis by the MOH. PHC is viewed as a multisectoral approach to health care delivery and is sponsored through a coordinating body referred to as the PHC core group, which operates out of an office within the central offices of the MOH and through a field staff located at Regional and District levels. It is attempting to develop a Malawi-specific PHC approach to health services delivery at the peripheral level. PHC is currently being implemented in nine districts. Its current activities are based on several years of work in community-based services.

Health education occupies a special status within the MOH. It is promoted through, or associated with, many of the specific services of the health system. In an effort to coordinate the health education activities of the MOH, a special office for health education was established. So far, curative and preventive measures taken to reduce or eliminate the priority health problems have yielded only modest results, partly due to inadequate participation of individuals, families and communities. Among other causes, it is believed that inadequate information and education is an essential factor.

Efforts have been and continue to be made by many individuals, services and organisations to bridge this information and knowledge gap but so far these efforts have not been as effective as desired because of the following:

- inadequate mastery of the skills and techniques of information and education for health by a majority of those involved;
- inadequate coverage of the target population which should be reached with the necessary health information and appropriate technologies to help them handle their problems;
- shortage of qualified health educators at different levels to the tasks of organising promoting and directing health education programmes and activities to reach the target population;
- lack of adequate facilities to produce and distribute appropriate health information and education materials to reach target groups especially the at risk families;
- lack of sufficient knowledge about the social, cultural, economic, behavioural, environmental and service related aspects of these priority problems;

- absence of an effective mechanism to coordinate the efforts being made by different sectors and organisations to inform and educate the people on health;
- absence of an effective managerial system in health information and education programmes and activities;
- the inferior status and weak structure of the Health Education Unit, within the MOH and the absence of a carrier structure for Health Educators. Necessary strategies and activities are planned in order to strengthen the Health Education Unit (see chap. 6)

3.5.2 The Private Hospital Association of Malawi (PHAM)

PHAM operates 20 hospitals, 39 primary health centres and 85 other health units, making a considerable contribution to the health sector in Malawi. PHAM hospitals account for just over one-third of all admissions and in-patient days: PHAM rural hospitals provide about half of all admissions and inpatient days, but PHAM facilities see less than 14% of total out-patient first attendances. PHAM has significantly fewer health centres than the MOH, and sees fewer patients per unit, and thus its contribution is heavily weighted towards in-patient care although this is changing rapidly in view of the support being given to Primary Health Care.

The range of specific services offered by PHAM is similar to that of the MOH: full curative services are offered at most PHAM facilities, and in recent years there have been successful efforts to establish some preventive services, usually MCH services, and mostly facility based. Most preventive services are free of charge. Sick children presented at under-fives clinics are either treated or referred to the nearest appropriate health facility. In addition to the environmental and maternal health services, child spacing advice and assistance is available.

3.5.3 Other service providers

Local government, agencies other than PHAM, and private practitioners, also provide significant health care service to the public. Services provided by local government authorities are in the form of health centres and focus upon maternity services. Other agencies such as the Police, Army, estates, etc, also provide a varying range of curative services to selected sub-populations. In the case of private companies and estates, these are usually simple clinics staffed by auxiliary workers. Private practitioners offer almost exclusively curative services. Traditional practitioners also provide a variable range of mainly curative services, though TBAs often provide some preventive services.

3.6 MANAGERIAL PROCESS

3.6.1 Supporting sections

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Clearly the functions of planning, personnel, etc, come under the title "managerial process," and fulfil very important roles. However, the problems of inadequate staffing of various sections and inadequate training are discussed at length in chapter 8 although some specific activities are also presented in Chapter 6. for that reason no analysis of these systems is presented here.

3.6.2 Personnel Information

Ideally, the personnel records office should be the main source of data on the current staffing situation in the MOH, providing up-to-date records of established posts and vacancies, and details of the individuals actually employed. The efforts of the records office to carry out these functions are hampered by systems are the number of staff now employed.

The Department of Personnel, Management, and Training of the Office of the President and Cabinet is setting up a computerised personnel system for all government employees. However, this system will cover only those in established posts and will not be in operation for some time. Moreover, because this systems will rely on data from each Ministry, the MOH will need to improve its own personnel records system to benefit from the new central system.

The establishment control system in the records office is manually controlled and accounts for units only as far down as the district hospital level. No details regarding health centres are recorded.

As for individual records, the source of information is the standard Malawi Government record care. Each individual compiles his/her own records, and there is no provision for regular, methodical updates. The record cards are stored in boxes which are not constructed to protect them from damage or loss.

3.6.3 Health information.

Gathering information

The health information and health management information systems attempts to meet national planning and evaluation needs, and to provide health information for international reporting requirements. Information available at the national level falls into the following six categories.

o Morbidity and Mortality

There are no mandatory reporting requirements for vital events in Malawi. Information available regarding the prevalence of disease and death comes from the major health services units.

All facilities, government and private, are required to provide morbidity and mortality information monthly: the

emphasis is on infectious diseases. Non communicable diseases are reported for planning purposes. Special ad hoc surveys such as the EPI evaluation studies and the Nutrition survey of the Ministry of Agriculture are additional important sources of health information.

o Service Delivery

The Ministry required monthly statistical reports on MCH, regional, and district activities. The MCH form is fairly comprehensive in terms of curative care but provides no information on the incidence of diarrhoea, tetanus toxoid immunisations, or preventive activities. The regional and district summary forms include a wide variety of information.

o Service Utilisation

These figures derive from the MCH monthly forms and from hospital discharge sheets and inpatient censuses.

o Administration and Finance

The MOH has a comprehensive system of vouchers for use in assuring accountability and control of expenses, but this system does not generate sufficiently detailed management information on a regular basis. However, the planning unit has used the voucher system to analyse ways in which the MOH might reduce its operating expenditures.

o Drugs and Medical Supplies

The MOH has a considerable capacity for collecting information regarding drugs and medical supplies. The information system of Central Medical Stores (CMS) attempts to control inventory, keep track of drug demand, and monitor accounts.

o Supervision

Information on supervisory activities will soon be collected in one area. Health Education Sanitation Promotion (HESP) has developed and is now testing forms to delineate the activities of HSAs. Otherwise supervision information is not standardised or tabulated on a regular basis.

Processing and Use of Information

The information generated in the categories listed above flows from the reporting unit upwards through the MOH hierarchy, usually to the office of the chief statistician at the central level. Selected information collected is tabulated and published periodically as an MOH statistical report. Currently the MOH does not have a data analysis capability to match the need for health

statistics analysis. The time span from the occurrence of a statistical event to its publication is a minimum of five months.

3.6.4 Supervision

Supervision of field workers is currently the responsibility of the DMO and others at the district hospital. In most districts, it is only from the hospital that transportation is available to enable any supervision to take place. Existing guidelines for the relationship between supervisor and supervisee do not clearly define the interaction or set targets for the frequency with which any worker should be supervised.

Nevertheless, supervision does occur. Either the DMO or other district level staff visits most health centres at least once every 6 weeks, and often more frequently. This supervision is apparently useful for improving the supervisees' motivation and performance, but no objective data exist to corroborate this impression.

Supervision of this district by regional and central personnel occurs, but not systematically. From the centre, separate lines of authority exist for overseeing the activities of medical, nursing, and preventive health workers. In addition, the different categorical programmes maintain their own lines of authority. Coordination among these separate supervisory lines is weak. Private practitioners, traditional healers, and traditional birth attendants practice without MOH supervision, with the exception of trained TBA's. A more detailed discussion of existing supervision is given in Chapter 8

3.6.5 Drugs and Supplies

The organisation which supplies drugs to the health sector is known as Central Medical Stores (CMS). CMS is part of MOH and has been receiving a subsidy until April 1984. Since then it has been required to be operated as a self-accounting and self-financing body.

CMS presently operates on a revolving fund at a level of about K3.1m of which K2.7m is a temporary advance from the Treasury. Annual turnover was in the region of K3.5m in 1983-84. Pricing of drugs to hospitals is currently fixed at CIF value plus 12.5% to cover all operating costs, and to enable CMS to operate on a no-loss, no-profit basis.

Procurement

Overseas manufacturers and suppliers form the largest source of supply to CMS: the majority of items are purchased through international tender. Procurement lead times can range from seven to fourteen months for consignments coming by sea, because of

long tender procedures, delays in clearing at seaports, and road transport into Malawi.

Local manufacturers of pharmaceuticals also participate in CMS tenders and are offered a 20% price advantage against foreign firms as a means of encouraging local production. Unfortunately, their contribution so far has been very small.

In addition to drugs procured by CMS, there are several other sources of drug supply in the form of gifts and donations from UNICEF (for specific programmes), WHO, bilateral aid, religious and non-sectarian voluntary groups which sponsor specific country programmes and activities, and drug manufacturers.

Inventory control and storekeeping

The inventory control systems provides for an inventory review once every nine months for each class of product, and is the basis for the nine-month procurement cycle noted above. Inventory control procedures throughout the drug and supply system include only recording of issues, receipts, and balances on bin cards. There is little or no use of minimum/maximum stock levels, classification of inventory, pre-set buffer stocking, or the exercise of other methods of inventory control to assist the timing of and magnitude of orders. Document control is however quite good.

Drugs and supplies procured from overseas and items manufactured by CMS are stored centrally at the Blantyre facility, though new facilities are to be constructed at Mzuzu and Lilongwe.

Drug assembly, repackaging, and distribution

Drugs and medical supplies are assembled and shipped in bulk to major health facilities. Repackaging is carried out at the local facilities to create packages of quantities suitable for distribution to the public. The stages of the distribution system are as follows:

- o Each government hospital is given an allocation by the MOH to purchase supplies from CMS for its own use and that of its peripheral units. Usually this allocation is made in two instalments within the fiscal year to represent six months' requirements. Orders tend to be heavier at the beginning of a budget period.
- o District hospitals complete drug requisition forms to order different drugs and supplies. The basis for orders varies among districts, but always includes provision for the needs of peripheral facilities. As with international procurement, the lead time for filling purchase orders of the government hospitals is long and varies considerably for a variety of similar reasons. The pattern of ordering varies considerably due to the inadequacy of inventory control systems at district hospitals.

In the event of a stockout at CMS, a system of recording back order or "due-outs" is in operation, whereby CMS automatically dispatches the item in question as soon as CMS receives its next consignment of goods.

CMS supplies all requirements of government hospitals, except in instances where the drug in question has to be restricted due to low stock levels at CMS. CMS can also restrict or completely stop issues to any district hospital which exceeds its financial allocation for drugs.

Distribution from district hospital to the peripheral units is controlled by the district hospitals. Requisitions for monthly supplies are reviewed in the light of the size of stock at the hospital, and general availability of any given item from CMS. A decision regarding what proportion of the requisition request will be sent to the peripheral unit is made by the pharmacy assistant. Drugs and supplies are then distributed each month, concurrent with the distribution of salaries.

In addition to this formal requisition for supplies, many peripheral units have to place one or two emergency order per month when stocks of vital drugs run out. Usually such orders are for a small number of drugs which are sent to the peripheral units either by bus or bicycle.

Manufacture

CMS is currently engaged in the manufacture of certain pharmaceutical products at its Blantyre facility. These products include simple liquid medicines for oral and external use, creams, ointments, and oral rehydration salts. In addition, small quantities of simple preparations are manufactured at pharmacies of the general hospital at Zomba, GECH in Blantyre, and KCH in Lilongwe. Lack of technology, quality control, pharmacists, and good production management, have precluded further expansion of the current manufacture capability or manufacture of more advanced products, including tablets and sterile preparations.

3.6.6 Training.

The MOH currently has four training schools: the Lilongwe School for Health Sciences, the Blantyre school of Nursing and Medical Assistants for SRNs and MAs, and the Zomba School of Nursing for Enrolled Nurse/Midwives. In addition to the MOH training schools, there are a number of other institutions training health personnel in the country. The university trains SRNs at the Kamuzu College of Nursing in Lilongwe and Health Inspectors at the Polytechnic in Blantyre. The majority of EN/M training in the country is carried out by PHAM at a number of schools attached to their hospitals. A summary of the categories trained by the government (MOH and the university) and by PHAM institutions is shown in Table 3.2.

The four types of information required to describe and, later, to analyse, the quality of any training system are the teaching personnel, the curricula and training materials, postgraduate performance and the facilities.

Teaching personnel

Table 3.3 summarises the numbers of teaching staff in post for each of the training institutions. There are currently 57.5 full time teaching staff.

Curricula

Each training institution has a curriculum and other training materials which are used as the basis for conducting each training course. Their depth and quality vary, with some considered perfectly acceptable for current training activities, others requiring significant revision. They are all structured as a series of topics, rather than deriving directly from the job descriptions of the positions for which they are intended.

For two cadres, SRNs and EN/Ms, more than one institution provides basic training. Each institution has developed its own curriculum, although a standard examination partly constrains the possible divergence from a common training programme. In addition to examinations there is need to find ways of evaluating the quality of training.

Training facilities

Facilities for a training institution include: training equipment, libraries, classrooms, offices, student and staff accommodations at field sites. The Blantyre School of Nursing has hostel accommodation for 110 students. As intakes increase to 35 per annum, by 1987 a further 30 student rooms will be required. In addition, the school requires at least three classrooms, a large hall which can be used for both large and small groups, more office accommodation, and an adequate library, all of which are to be provided under a current ADF financed project.

The medical assistants school at Blantyre shares accommodation with the nursing school. Currently, there are 56 students at the school, projected to increase within a year to 80. The school currently has 26 hostel rooms which house not only the second years students but also other students coming for attachments. Thus even now, three students are being forced to share a room, and this problem will become even more acute with the projected increase. Attempts have apparently been made to convert an unused garage into student accommodation, but this project had to be postponed because of a lack of funds.

There are currently four staff members teaching, supervising, and carrying out all the administrative duties of the school. There is accommodation, available for only one staff member and at present one of the other members of staff lives near the school. Students are therefore totally unsupervised outside normal working hours. The school currently has one classroom only, requiring the third-year group to borrow a small classroom from the nurses. The single practical room on the site is also shared. Again, office accommodation is limited to one single room plus a second office shared with the nursing staff.

The Zomba school of nursing also has difficulties with hostel accommodation and office space. There is a maximum student hostel capacity of 70 students, to accommodate the general nursing

students, the midwifery students, and those on psychiatric training, as well as other students sent to the mental hospital on practical placements. The school is "managing" at the moment with bunk beds in corridors. Last year, the university provided some relief with accomodation at Chancellor College, which is several kilometres away. In view of the fact that the MOH is aiming for greatly increased intakes at the school, current accomodation simply will not suffice.

In comparison, the Lilongwe School for Health Sciences appear well endowed, although there is still pressure at the school to accomodate the full time students and provide rooms for those participating in refresher courses.

Similarly the Kamuzu College of Nursing certainly has much better facilities than its counterpart in Blantyre. Student accomodation is adequate, with 204 rooms. However, office space is short, and the school is using 16 bedrooms and one whole classroom for office and storage space.

Finally, there is the question of accomodation at the peripheral units. Available housing exists in insufficient number to house staff; the lack of suitable housing is quoted by staff as one of the major factors in the reluctance of staff to work in the rural areas. According to a recent survey, the MOH currently provides an average of two staff houses per existing peripheral unit, although the distribution is not even. Clearly this situation means that at most peripheral units, accomodations for visiting trainees do not exist.

3.7 RESOURCES

3.7.1 Manpower

The types and numbers of personnel currently working in the MOH service derived in part from the various uncoordinated programs which existed prior to Independence, and in part, from the efforts since Independence to consolidate programmes into a national health system. In the 1973-1988 National Health Plan, a five-tiered health service system was envisaged, containing health posts, health sub-centres, primary health centres, district hospitals, and the central, general, and specialist hospitals. Standard staffing patterns were developed for each kind of unit.

The system which has evolved since 1973 however, differs from the planned pattern in three respects:

- o Health posts staffed by a single MCH assistant have proved to be untenable, primarily due to the isolation felt by these female workers, most of whom have married and left their jobs;
- o Rural hospitals, which had originally been expected to play referral, supervisory, and administrative roles vis-a-vis health sub-centres, have not significantly exp-

anded: most of those in existence have relatively little direct relationship with the smaller health service units in their area;

- o Due to shortage of funds and of trained personnel, most of the planned staffing patterns - especially below the hospitals level - have not been achieved.

As a result, the system which exists today is three-tiered. At the lower end are the health centres. These are further subdivided into complete (i.e. comprised of both a maternity and dispensary) and incomplete (comprised of either a maternity or dispensary). Currently the most common staffing pattern at this level is a unit with one MA, one EN/M, and one HA or HSA although the staffing levels according to the establishment ought to be 2MAs, 2EN/Ms and 1HA.

At the next level is the district hospital, of which there is one per district, and which serves as a primary health care unit for its nearby area and as a referral, supervisory, logistics, and administrative centre for the remainder of the district. Actual staffing patterns differ significantly from one district hospital to the next.

Finally, at the pinnacle of the system, are the three large hospitals in Blantyre, Lilongwe, and Zomba, plus the specialist mental and leprosy hospitals.

Staff posts are established officially by the government to reflect a combination of the desired staffing patterns and a realistic expectation of filling them. 85% of the 4962 established posts are filled as seen in table 3.4.

As far as departures of staff from the service are concerned, there are many different reasons for leaving, the most common of which are to obtain a better position, to raise children, to marry, and to retire. Because the health system as a whole is relatively young, average staff ages are also young. As a result, average loss rates - at least from MOH service - are fairly low.

There is, however, considerable lateral movement in certain categories of staff between institutions in different locations. This is particularly true for nurses. There is pressure on married women to follow the work locations of their husbands, and for single women to work in the urban centres. Future expansion of posts for the nursing professions are likely to be predominantly in the rural areas, and the opportunities for transfer to the central hospitals may be a good deal fewer than exist today. It is possible, therefore, that pre-retirement losses for certain groups of staff will increase unless the posting of staff is managed very carefully.

The final element of the supply of manpower is those individuals who are not now but will in the future be staffing the health service. The great majority of these are current and future students in MOH, PHAM, or university training institutions. In addition, a few people will enter (or re-enter) the service through other channels, such as shifting from PHAM to MOH employment, returning to work after raising children or other "semi-retirement" activities, or entering MOH employment directly from an overseas training course. However, with the exception of physicians, dentists, and pharmacists, the numbers of new staff coming from these sources are small, and their importance is slight. Malawi has been effective over the past decade in training fairly large numbers of most categories of personnel for the health system.

A closer look at the number of trainees entering and graduating from existing training programmes, however, reveals two major constraints:

- o irregularities in student admissions, including some years with no new admissions for certain courses, and
- o very high student dropout rates with loss rates of up to 41% in some programmes.

3.7.2 Facilities and Equipment

Facilities refer to the buildings, equipment, furniture, and vehicles, within and with which the health staff work. Although not as important a resource as manpower, a sufficiency of equipment and space is needed in order for clinical and preventive programmes to function efficiently.

So far as buildings are concerned, there is considerable variation in quality. Some are in excellent condition, while others require considerable improvements. Few include adequate staff accommodation. The total number of health centres which are at least partially developed is 569. All facilities which are currently dispensaries or maternities are to be upgraded to full health centres.

The distribution of total existing health facilities is slightly irregular, ranging from 0.6 units per 10,000 population in the Central Region to 0.8 in the Southern Region, to 1.5 in the Northern region. However, the apparently much higher figure in the North is explained by lower population density: a health service unit must be reasonably accessible, and fewer people live within reach of each unit.

The quality of existing facilities varies, although the majority are very good. A national survey disclosed that 28 of the MOH health centres are in need of major repairs or replacement, and that an additional 15 require substantial improvement in their water systems. Housing is required for 197 staff at the existing health centres.

3.7.3 Finance

Income

Financial resources are available to the health sector through the MOH, PHAM, and other local government bodies. Of these, the financial resources of the MOH are the largest, making up over 85% of the total of these resources.

MOH income is derived from three sources. Government revenues (originating from income tax, profit tax, surtax on goods and service, and import duties) which are allocated by the treasury to the MOH are placed into the MOH recurrent account. This allocation constitutes about 7% of all government expenditure, and about 97% of MOH recurrent funds. "Appropriations in aid" derived from income-generating activities of the MOH constitute about 3% of recurrent income (2.5% from medical fees alone). External assistance to the government in the form of foreign loans and grants and some local contributions make up the MOH's "development account", used primarily for capital expenditures. Development account income was scheduled in 1983-84 to be 57.5% of the total income of the MOH. Actual income from external assistance is not available, but is unlikely to have equalled the scheduled income.

Income to PHAM is derived principally from government allocations, fees, and overseas donations. Income to PHAM was approximately K3.3m in 1981, the last year for which data is available. Government contributions (primarily for Malawian staff employed by PHAM and for selected drugs) amounted to approximately 34.7% of total PHAM income. Fees and donations from overseas made up about 33.7% and 25.8% of revenue respectively.

Local government income to the health sector was K250,000 or about 1.1% of the total health sector income in 1983-84.

Total income to the health sector in the form of fees to private practitioners, healers, etc, is not known. However, it is known that licensed doctors in Malawi had an income of approximately K4m in 1983-84.

Expenditure

The MOH, PHAM, and other local government bodies spend their resources in similar patterns. MOH and PHAM expenditures are the focus of attention here.

The MOH

MOH recurrent expenditure represents over 85% of the combined recurrent expenditures of the MOH, PHAM, and other local government service providers. MOH expenditures are described from two perspectives: by delivery system components and by sub-headings of the MOH budget.

Figure 3.4 shows the distribution of MOH recurrent expenditures by sub-head. While salaries make up the largest single item in the listing, (31.5%) this is an underestimate due to the fact that staff pensions are funded by a different Ministry. Nevertheless, salaries are a relatively small percentage of recurrent expenditures by international standards. By contrast, plant and vehicle charges absorb a relatively high (19.1%) of total recurrent expenditures. Medical equipment and drugs took up 15.8% of the recurrent budget in 1983-84, well below the average (22%) share they absorbed in earlier years. This is due to the effect of German commodity aid during this period. Otherwise, trends in MOH expenditure are fairly stable.

While the proportion of recurrent expenditure estimated for staff at the health centre level is greater than at all hospitals (42 versus 33%). Health centres are thus more labour-intensive than hospitals, their only costs apart from staff being drugs, supplies, and transport.

The recurrent expenditures by the MOH by programmes are not readily available, and a description of the distribution of recurrent expenditures is complicated for several further reasons. The distinction between various types of expenditure is often blurred. Further, expenditures on different parts of the system, (i.e. health centres versus district hospitals) are not easy to define in terms of the emerging interests of the MOH. The categories do not clearly circumscribe the costs of what have now become operational sub-systems: clinical services versus preventive services. And this extends to the components within each of these areas: expenditures for supervision, transport, facilities, etc.

Total development expenditure for the 1984-85 financial year was scheduled to be approximately K27m. Most of the development programmes are related to curative services, with most scheduled allocations being for physical infrastructure. District hospital improvements are scheduled to absorb the highest proportion of the 1984-85 expenditure, although development of MCH programmes is scheduled over the 3-5 year life of all programmes to absorb the greatest portion of all total development account expenditures.

PHAM

The reporting of expenditures by PHAM is incomplete, and the information that is available is derived primarily from a 1981 survey of PHAM by the Centre for Social Research. Generally, the PHAM financial contribution in the health sector is heavily weighed in support of in-patient care. However, in recent years, efforts have been made to expand outreach and preventive activities, especially in the area of under-fives clinics and primary health care, though PHAM still spends a larger proportion of its recurrent budget on hospital services than the MOH. 65% of PHAM expenditure goes to hospitals, and of the remaining 35%, a considerable proportion goes to rural hospitals.

PHAM units, with the exception of health centres, also spend a significantly higher proportion of their resources on staff costs compared with the MOH. Only part of this higher ratio reflects the higher cost of expatriate staff. Medical supplies take up about the same share as in the MOH, while transport is considerably lower, reflecting the absence of area-wide responsibilities for many units, and possibly a more efficient allocation of resources.

Local Government

The Ministry of Local Government, through the district councils, runs approximately 94 health units (mainly maternities). These units charge fees to their patients. Salaries of staff are low, and buildings and equipment are minimal. Total recurrent expenditure on these units was estimated in 1981 to be approximately K372,000. In addition, the urban councils of the major urban areas provide environmental health services. It should be noted that while district councils require approval from the MOH to build rural units, these units are usually subsequently built on self-help. For many years now these health units have been underutilised, poorly managed and provide a rather low standard of health care when compared to MOH facilities. Some attention will need to be paid to this problem. Ministry of Local Government has always wanted to hand over the running of these facilities to MOH.

Other agencies

Other Ministries and Departments such as the Army and other agencies, such as estates, provide health services for their employees. In the case of private companies and estates, these are usually simple clinics, staffed by an auxiliary worker. Their contribution to total health sector expenditure is minimal. It is worth mentioning that as the country industrialises, certain health hazards/problems will begin to emerge. The MOH will need to constantly monitor and take appropriate action to deal with such problems. It can be said at this stage that private agencies will have to participate more actively in providing health services.

Private practitioners

The modern private sector is a rapidly-growing, but still very small part of the health sector. There are approximately 35 private doctors, largely in Blantyre and Lilongwe. In 1981 their income was estimated to be around K2m. This figure is now probably closer to K2.5m: the insurance scheme (MASM) alone pays out K1.2m per year in the form of a monthly capitation payment of K4 for each insured person on a doctor's books. At present, only a few private doctors have in-patient facilities, but several have plans to set up maternity and/or general units.

Information on expenditure on traditional practitioners is thin. A figure of K588,000 was estimated for the year 1981, but this is probably on the low side. Similarly, information on private purchases of drugs is unavailable beyond the estimated K2.7m spent

on purchases of drugs from Malawi Pharmacies in 1981. Expenditure on products in common use in Malawi such as aspirin and chloroquine sold in grocery stores throughout the country is also unknown.

While it is generally true in most countries that private expenditure tends to be substantial, the available evidence suggests that this is not necessarily true in Malawi. A UNICEF survey in 1979 found that only 25% of rural households had any medicines in their houses. The urban household expenditure survey of 1979-80 found that on average, low income groups spent about 1% of cash expenditure on health care. However, it also found that the lowest income group (under K20 per month) spent nothing. Average cash income in rural areas is less than K12 a month, suggesting that little private health expenditure occurs there either.

3.8 ACHIEVEMENTS TO DATE

As stated in 3.2.2, the five priorities established under the 1973 health plan were:

- 1 reorganisation of the MOH
- 2 development of basic health services
- 3 control of communicable diseases
- 4 improvement and extension of existing hospitals, construction of new hospitals, and creation of a training school for the health sciences.
- 5 manpower development.

If viewed as major objectives, these priorities form a basis for discussion of progress to date. Overall much progress has been made during the current plan period. The achievements related to each priority are described below.

Reorganisation of the MOH

With regard to this priority, the plan proposed changes at the central level to strengthen the technical divisions and to facilitate decentralisation of administration. Implementation to strengthen the technical divisions has taken place, although in a slightly different form from that initially proposed. Further strengthening is still required especially at regional level. Key technical units are in place, and the MOH is moving to finalise a range of technical sections at the centre.

As to decentralisation, some decentralisation of activities to the regional level has taken place, most notably in the areas of MCH and Environmental Health. An integrated regional office cannot be said to have been established. The MOH recognises that the whole region/district public health network remains weak and anticipates continuing to press for further strengthening of decentralisation.

Development of basic health services

Basic health services comprise elemental medical and preventive services: it was proposed to develop them in the following ways:

- o increased geographical access to services based on extension of the basic health services in standardised fashion by construction of networks of facilities, including primary health centres, health subcentres, and health posts.
- o expansion of the range of services through a general strengthening of MCH services and health education.
- o pilot work for future extension and expansion through the creation of a community level of health services.

The MOH's first efforts to extend the system and expand services simultaneously has had mixed results. Access has been increased by the extensive construction programme, and the range of services offered has been broadened by the strengthening of the MCH programme. But increasing accessibility has not been able to keep pace with the demands for services.

Extension of basic health service institutions occurred initially in the form of additional primary health centres, subcentres, and health posts. However, experience with manned health posts was not entirely satisfactory, and development of additional health posts and primary health centres was set aside. In their place, emphasis is currently placed on development of a facility serving about 10,000 people and referred to simply as a "health centre". New health centres have been built, and subcentres are being upgraded to health centres status.

With regard to broadening the range of basic health services, an MCH programme was initiated with the creation of an MCH department in the MOH and the establishment of posts at all levels. The programme encompasses antenatal, natal, and postnatal services for mothers as well as under-fives clinics emphasising simple treatments, infant care, and health education. Services for both mothers and children are provided through both fixed facilities and mobile clinics. While significant additions to health services have been made through the MCH programme, staff shortages, erratic funding, and heavy workloads have inhibited these services from achieving a maximum impact.

EPI began in 1978. This programme was designed to strengthen the cold chain and to immunise specified target groups of the child population against measles, DPT, polio, and tuberculosis. The results based on field sample surveys, have been positive: of the target population, 72% has received BCG, 68% a third dose of polio vaccine, and 66% a third dose of DPT vaccine. About 55% of the target group has received full immunisation for all EPI-designated

immunisations.

No significant expansion of the existing broad range of curative services, has occurred with the exception of the District hospital replacement programme.

In addition to achievements in extending the reach and the range of basic health services, pilot schemes have been undertaken to assess the potential for greater community participation and to adapt the concept of primary health care to the particular needs of the people of Malawi. These efforts have included the training of new cadres of health workers, including MCH assistants, and Health Surveillance assistants. All these cadres have been engaged in some limited aspect of primary health care work.

Control of communicable diseases

Apart from the EPI programme noted above, effort in this regard has focused on programmes to control diarrhoeal diseases, malaria, schistosomiasis, and leprosy. These programmes have met with mixed results. Smallpox has been eradicated from Malawi. The control programme for diarrhoeal diseases has been successful in its initial development stages. With diarrhoea a leading cause of death, major emphasis on implementation is now needed.

Current policies on malaria control provide for the presumptive treatment of fevers; continuous monitoring of anti-malarial efficacy; selective antimalarial chemoprophylaxis; vector control; and health education.

The program for the control of malaria in Malawi is hampered by problems of a management/administrative nature, as well as those involving the progressive development of resistance by the parasite to existing chemotherapys. Certain steps have been taken to address these problems with the result being a series of very excellent recommendations on the case management and epidemiological assessment of malaria in Malawi. While these efforts have addressed certain critical technical aspects of the malaria control problem other issues remain to be resolved.

Central management of malaria control activities through the National Malaria Control Committee has been a crucial factor in the successful monitoring of antimalaria treatment and chemoprophylaxis efficacy. However, this activity has failed to serve the basic management needs of the program. Two areas where the committee structure has not been effective have been with service extension problems, such as the supply of malaria drugs, which are generally available commercially. At health facilities, drugs are frequently poorly utilized, maldistributed, misused or unavailable because of logistical and planning difficulties, and comprehensive community health education.

No mechanism exists for the routine assessment of practices

by health care personnel, other logistical factors that impede the extension and utilization of services, or to measure the extent of coverage or utilization of services. These are generic programmatic concerns that require regular and intensive managerial attention even though a committee may have a clear role to play in the eventual resolution of such problems.

The committee structure has proven to be an excellent tool for the establishment of effective policy but inappropriate for handling day to day management issues involved in the establishment, implementation and monitoring of a disease control program; such a committee would probably improve EPI activities as well.

Schistosomiasis control had a positive influence; however, endemicity appears to be a fact of life in Malawi, and will require an ongoing control programme, as will leprosy.

In a broader context, the plan proposed communicable disease control through expansion and extension of sanitation and water supply systems. These systems have indeed been expanded and extended under the current plan, but large portions of the population are still without adequate facilities. The MOH and other Ministries are now in the early stages of implementing yet another major water and sanitation project which represents a multi-sector effort to provide facilities and community education.

Improvements to the hospital system

The 1973-88 plan proposed two improvements to the hospital system: the extension of the physical facilities to new areas, and expansion of hospital system services (i.e. the referral network).

The physical plant of the hospital system has grown during the existing plan period. The system has seen the addition of district hospitals, and some additions to central hospitals.

An expanded referral services has been established covering all districts and the central hospitals. This has been made possible, in part, by the addition or renovation of physical facilities. While the referral process is not fully established, it is in fact operating to a greater or lesser extent throughout the country. Further development is required.

Manpower development

In the area of manpower development, the current plan proposed significant increases in trained staff at all levels of the health system. The production of key cadres by training institutions will be greatly enhanced. As a result, the growth of staff in the service has largely matched or exceeded the rate of population growth, with the exception of medical assistants who have suffered from a stop-start approach to their training. In the ten years from 1973 to 1983, MOH staff have increased by 70%, with much

of the growth achieved before 1978 when the rate slowed substantially. While the principal technical service cadres have made satisfactory progress, some technical support cadres still appear disproportionately low in comparison to service staff.

The supply of new doctors, dentists, and pharmacists continues to pose problems to the MOH. These professionals will continue to be trained abroad, in the early years of the plan and the number of qualified candidates for whom it has been possible to arrange training overseas has not met the need. Growth in these cadres has been minimal, and large numbers of expatriate staff are still required to meet the minimal requirements of the MOH. As an important step in confronting these problems, feasibility and technical studies for a new medical school have been initiated and decisions have in principle been made to establish a centre for higher learning which will initially serve to upgrade existing staff (clinical officers) to doctor level and later train fresh candidates to be doctors, dentists, pharmacists etc. During Plan implementation, resources to establish this centre will be sought.

CHAPTER 4

HEALTH PRIORITIES AND MAIN CONSTRAINTS FOR THE 1986-1995 PLAN PERIOD

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CHAPTER 4: HEALTH PRIORITIES AND MAIN CONSTRAINTS FOR THE
1986-1995 PLAN PERIOD

4.1 INTRODUCTION

The first three chapters have described Malawi, its current population and health situation, and the status of the health sector today. This chapter begins to focus on the future by defining the priority problems and constraints faced by Malawi during the 1986-1995 period.

4.2 THE HEALTH PLANNING APPROACH

The overall process followed by the Ministry of Health in preparing the plan has been to systematically build the plan through a series of steps. These steps and the corresponding chapters are shown below.

<u>PLANNING STEPS</u>	<u>CHAPTER (S)</u>
1. Analysis of the current situation	1, 2, 3
2. Identification of problems and constraints	4
3. Setting of overall goals, objectives, and strategies, for the 1986-1995 Plan	5
4. Setting of specific objectives and activities for the 1986-1995 Plan	6
5. Forecast of resources requirements to 1995	7
6. Re-organisation of the Ministry of Health to achieve the Plan objectives	8
7. Determining the role of the private sector in the 1986-1995 Plan period.	9
8. Description of the implementation of the Plan.	10

The Government of Malawi has limited human and financial resources to devote to the health sector. As health care costs continue to rise, and as other development sectors must be served, an essential element of Ministry of Health planning is priority setting: deciding which health problems are most serious to the population and to the development of the country and to determine

which problems are amenable to improvement based on existing technology and Malawi's current and projected levels of human, financial and facilities resources. Once the most important problems are thus identified and placed in priority order, it is possible to take steps to alleviate these problems within the overall policies and strategies of the government and the values of the people of the country.

In defining the health priority problems, certain expectations must be kept in mind. From the view point of the people, the expectation of the health system should provide care for the ill, those in pain, are afraid, and/or need health advice. The average family wants this care to be as close to home, available as many hours per week, and at an affordable cost. They want this care to be culturally sensitive, and be appropriate to the severity of the problem. These desires may be summed up as maximum accessibility to appropriate health care.

Other expectations of the health system are defined by the state of technical knowledge rather than by the average person. Health status is usually defined in terms of mortality and morbidity levels, and often, depend on the general state of development of the country and on disability and productivity levels. Governments want to reduce mortality and morbidity and disability in their population and raise productivity through planned services and programmes involving all relevant segments: the public sector, non-government organisations individual providers, community and the family. These services and programmes are most successful when they are targetted on the portion of the population having the problem, are often based on preventing rather than merely reacting to problems, and are as cost effective as possible.

These expectations and the five critical underlying factors discussed above - existing technology, finance, manpower and infrastructure including the intersectoral approach - must all be considered when priority health and population problems are selected.

4.3 PRIORITY HEALTH AND POPULATION PROBLEMS

The following list of priority health and population problems which have been chosen from the above lists of leading causes of death and disease, are amenable to the technologies that exist and are within the financial, manpower and infrastructure limitations of Malawi. Others, which are not among the leading causes of death and disease, have been added to the list of priority health and population problems because effective technology for control exists and with few additional resources, they can be controlled along with the other priority diseases and problems.

Figure 4.5 : Priority Diseases for 1985-1995

1. Respiratory Diseases (incl. TB)
2. Diarrhoeal Diseases
3. Nutrition-related Diseases
4. Malaria
5. Communicable childhood diseases including tetanus:
Measles, Whooping Cough, Childhood tuberculosis, Tetanus
Neonatorum, Diphtheria and Polio
6. Skin and Eye Infections
7. Parasite and helminthic disease
8. Hepatitis
9. General trauma
10. Venereal Diseases
11. Chronic Diseases including:
Malignant Neoplasms and hypertension
12. Complications of pregnancy

Regarding health status, it is clear that children under five years of age suffer excessive levels of mortality and morbidity relative to the rest of the population. The key findings of Chapter 2 are recapitulated here:

- o Children under 5 years of age make up about 20% of the population; they account for 57% of all deaths in Malawi.
- o Deaths among children under 5 years of age from six leading causes account for more than 35% of all deaths reported by Malawi Hospitals.
- o Five conditions - nutritional deficiency, pneumonia, Malaria, measles, and diarrhoeal diseases - account for at least one-third of all deaths in the country and are either mostly preventable or treatable using appropriate technology in the PHC context, and by an emphasis on improved nutrition among mothers and young children.
- o Ten leading causes of morbidity account for 80% -90% of all out-patient visits.
- o Care for children under 5 years accounts for 40% of all visits.
- o The first five diseases (malaria, respiratory diseases, diarrhoeal diseases, diseases of the eye, and diseases of the skin) account for about 78% of all recorded visits for children under 5 years.
- o The ten leading causes of morbidity account for 82% of all out-patient visits for persons 5 years or older.
- o While large portions of the child population are fully immunized, 65% are unprotected from one or more of the major, preventable from childhood diseases.

These findings suggest that sub-groups of the population at large require additional and differing kinds of attention from the health Services.

- o The Ministry of Health will target more resources toward a core set of health services for treatment and prevention of first priority diseases as they occur in children under 5 years of age.
- o Improvement of maternal health by strengthening ante-natal, natal, and post-natal preventive and curative services.
- o selected disease when associated with the population over 5.

4.4. MAIN CONSTRAINTS IN SOLVING HEALTH PROBLEMS

4.4.1 Constraints in Improving Access to Modern Health Services

During the last ten years, the Government of Malawi has tried to improve access to modern health services in a number of ways. The 1973-1983 Health Plan stressed expansion of health centres, sub-centres, and health posts in rural areas; improvement and extension of hospital services including centres for family health and training of paramedical and nursing staff. In 1982, the Ministry of Health approved a plan of work for primary health care in Malawi which stressed the use of volunteer village health committees at the community level, assisted by Health Surveillance Assistants paid by the Ministry of Health and based at a health centre base. These policies, strategies, and plans are appropriate for improving access and have been effective. During this Plan period, significant gains will be made in access, especially in remote rural areas, with an understanding of the constraints inherent in the management of a peripheral health system.

FINANCE

Increased access to modern health services is limited by financial constraints. The development budget is 99% financed by external sources and is nearly entirely for construction. Given the country's current level of development and development policies, including a conservative approach to social sector spending, the recurrent budget of the Ministry of Health (about K23.7 million in FY 84/85 or K3.4 per capita) is provided almost entirely (97%) through treasury allocations. PHAM, supported by government payments, fees, and overseas donations, also has a limited budget. The Ministry of Health's recurrent budget is about 84% of the total recurrent expenditure with PHAM contributing 15% and local government 1.1%. These funds are heavily committed to existing hospitals (58%) and management and training systems (11%), leaving less than 30% of expenditure for rural services, including government health centres and

prevention (21%), and grants to PHAM and composition of the recurrent budget limit the amount of internal financing of the development budget. Accordingly, there are a limited number of health centres and they are rather distant for the average rural family to visit easily. Some existing hospitals are inadequate, dilapidated and have a heavy demand. Moreover, with the introduction of child spacing, the need for facilities to provide mothers with child spacing services is urgent. Many cases at hospitals are of a relatively simple nature that could be treated at health centres if they were more accessible.

To increase access, therefore, the recurring and development budget will rise proportionally in favour of the peripheral health system, for health centre and community-based, services, and to impact on health status priorities.

Management

Management of the health services delivery system is also a key constraint to access. Within this general constraints, the specific issues are: lack of enough experienced staff in national planning, financial planning, budgeting and control; day-to-day operations management; drug management; and information systems at central, regional, district, and health centre levels. The Ministry of Health is consistently overexpending its recurrent budget due to various procedures and insufficient financial planning and control systems. Day-to-day operations management, especially manpower management, including supervision - affects the vacant post rates. When drugs are lacking, utilisation of health centres drops dramatically. These constraints adversely affect access to the health system by lowering the reliability and quality of services provided to the population. They will be addressed during this Plan period.

Problems in hospital management contribute to overcrowding in hospitals. The heavy demand at the hospital out-patient departments means that patients have on average less than one minute with the health provider. For this and other reasons, inappropriate cases are often admitted to the hospitals and patients stay in the hospital too long, using up bed space and scarce drugs, supplies, and food resources. Hospitals are often managed by physicians who have heavy responsibilities for patient care and are essentially clinically oriented and lack experience and interest in hospital administration. Hospital management and administration will receive priority attention during this plan period.

Manpower

A special constraint is in the area of manpower. Health posts staffed by a single MCH assistant have proved untenable, primarily due to the isolation felt by these female workers. Vacant post rates are high for a number of categories of workers, especially medical officers, medical assistants, pharmacists, radiographers, dental technicians, and health inspectors. There is also a drift from peripheral health centres toward district towns and hospitals,

leaving the rural centres only partially staffed and with high turnover, and contributing to the over-utilisation of hospitals. The productivity of the health personnel is hampered by low salaries, considering long training and the unsocial hours worked as compared to other personnel of the same level in the civil service, inadequate supervision, and lack of promotion and career advancement opportunities. Manpower shortages have been compounded by difficulties in reaching training targets due to irregularities in intake levels; shortage and frequent turnover of trainers; lack of dormitory space; and higher loss rates during training. Manpower management problems will potentially increase due to the considerable expansion of the health personnel in rural areas during this Plan period due to the already existing housing problem and that of married nurses. All these problems will receive priority attention.

4.4.2 Constraints in Improving Child Survival

Morbidity and mortality data cited in Chapter 2 clearly justify a need to focus on child survival in the effort to improve health status. During the last ten years, the Government of Malawi has tried to improve child survival in a number of ways. The 1973-1988 Health Plan stressed expansion of basic health services. In addition, the "mini-plan" which was developed as part of the plan focused on maternal and child health services with specific objectives for immunization coverage; health and nutrition education for children and pregnant women; ante-natal and post-natal care; diseases control activities that would focus on malaria and diarrhoeal diseases, among others; and improvements in safe water and sanitation through improvements in urban water supply and protected wells for rural areas. These policies and strategies are appropriate for improving child survival but have had only limited success thus far.

The main constraint in achieving improvements in child survival has been the lack of access to modern health services as noted in the previous section. The key underlying constraint is the lack of knowledge and skills of families, especially mothers, about child rearing for child survival. This is due to the levels of education of families at this stage of Malawi's development and the child rearing practices found in traditional a culture. So far, education of families and communities about MCH and the priority problems have not been as successful as desired. This may be in part because families and communities have generally been passive recipients of services from a centrally planned system, rather than involved participants being responsible for their own health. As such, there has not been effective collaboration for mutual education and improvement of the health of communities. The limited success of the Ministry of Health education services may also indicate that the health education planners have not studied the needs of the communities well enough in planning and carrying out their programmes. In addition, participation by family members in early treatment is only now becoming recognised as a viable adjunct to facility-based, practitioner-oriented health care (for

example, oral rehydration therapy administered in the home by family members is an effective way to reduce mortality from diarrhoea, one of the highest priority health problems among children under 5 years of age.). During this plan period there will be considerable efforts to improve family knowledge, attitudes, and practices relating to health care.

Another important constraint has been the inadequate focus of the current health services on prevention of mortality in the most vulnerable age groups within the broad under 5 years age group. It is likely that 25% of all rural under 5 year age group deaths occur in the first month of life (the neonatal period) and another 25% between 1-12 months. For the neonatal period, health services must focus on the main contributors to neonatal mortality: pregnancy before the age of 20, successive births less than two years apart, low birth weight, malaria leading to prematurity, maternal malnutrition, neonatal tetanus, birth injuries, and other early childhood infections. Many of these conditions are influenced by the health of the pregnant mother. For a 1-12 month-old child, the focus must be on the main contributors to mortality in the age group and include prevention and early treatment of lower respiratory diseases, diarrhoeal diseases, malaria, and vaccine-preventable diseases. In the 1985-1995 period, there will be increased efforts to reduce mortality in these critical age groups, with the requisite attention to the health of the pregnant mother.

A further constraint to improving child survival is that the health services incorporate so many activities that few can be carried out with enough time and attention to affect child survival. Even where services are targeted to the 0-4 age group, they do not focus adequately on the first priority health problems of these children, especially in rural areas. For respiratory diseases, public education and early case finding and treatment are not yet satisfactory. For diarrhoeal diseases, use of oral rehydration therapy is low. For nutrition-related diseases, growth monitoring and feeding practices remain inadequate. For malaria, prevention is far from satisfactory and the treatment regimen for those children affected by drug resistance is only just now being adequately determined. For immunisable childhood diseases and ante-natal tetanus, there has been progress in promoting immunisations, the challenge is to maintain and improve this progress. Levels of eye and skin infections remain high in rural Malawi. During this plan period, the service activities for children 0-4 will concentrate on these priority diseases in the context of a set of core curative and preventive health services.

Yet another key constraint is that the knowledge and skills of the workforce in dealing with the first and second priority diseases is not satisfactory. At present, the workforce has reasonable clinical skills in treating some, but not all, of the maternal problems and first priority diseases. However, there are not enough workers or cadres of workers trained to assume clinical responsibilities. Further, most, if not all, workers need improvement in the planning and management of services to actively influence families and communities about these problems. Managerial staff at the health centre,

district, regional, and central level do not have enough specific knowledge about management and supervision of these kinds of services and related programmes. The basic training programmes do not yet adequately address the clinical aspects of priority health problems. Pre-service and in-service training programmes will focus more specifically on popularizing the available technology through PHC so as to more effectively address priority diseases during this Plan period.

A further constraint to improving child survival has been ineffective management of the health services delivery system, especially in relation to the core services: Maternal health and the priority diseases. There is a dearth of staff, both in actual numbers and in experience, able to plan technical programmes for maternal health and priority diseases; to manage day to day operations, with an emphasis on technical supervision; to manage drugs effectively; and to develop health information systems for monitoring at central, regional, district, and health centre levels. The focus of management is too broad and diffuse to maximise impact on child survival. During this plan period, technical programme improved, organising activities through periodic work plans for priority problems. More effective day-to-day operations management, especially supervision, will ensure that workers carry out assigned tasks for priority diseases. This implies that job descriptions will be reviewed and/or established as necessary. Drug management for priority diseases will be improved to ensure that critical drugs are regularly available throughout the health services. Better information systems for the priority diseases will make it possible to monitor progress in reducing mortality from these diseases and improving child survival. By strengthening management, improvements in child survival will be greatly enhanced during the Plan period.

CHAPTER 5
GOALS, OVERALL OBJECTIVES AND STRATEGIES,
FOR THE 1986-1995 PLAN PERIOD

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CHAPTER 5 ; GOALS, OVERALL OBJECTIVES AND STRATEGIES, FOR THE 1986-1995 PLAN PERIOD

5.1 INTRODUCTION

In the previous chapters an analysis of the health problems and the existing patterns of health services of Ministry of Health and other health providing agencies are presented. The development initiatives by the Ministry of Health for the next decade are outlined in the context of problems and constraints to progress in the health sector.

During the planning process, a number of service options were considered by the Ministry of Health. For planning purposes, a forecast for the projection of financial resources assumes:

- o a 2% per annum real growth rate in Ministry of Health budget after 1990. This figure is conservative and takes into account past trends in allocations to MOH;
- o savings from increased efficiency;
- o some additional income from raising existing fees;
- o no new fees. It should be noted however that the question of cost recovery will continue to be studied during this plan period.

Based on this forecast, the Ministry of Health budget will be K26.2 million in 1995 expressed in 1983/1984 prices. The resource availability forecasts suggests that the Health Plan must be modest in its resources requirements and, in many ways, in its expectations. The chosen option is a cluster of services which achieves a near balance between felt health problems and projection of available health system resources. Expected outcomes are based on this option, and objectives, strategies, and targets are framed within it. Within this chapter, five overall objectives are identified. For each objective, relevant strategies are detailed.

5.2 GOALS AND OVERALL OBJECTIVES

5.2.1 Goals:

The overall health goal for Malawi, stated as the National Health Policy is:

To raise the level of health of all of its people through a sound health service delivery system capable of promoting health; preventing, reducing and curing disease; protecting life; and promoting general well-being and increasing productivity.

For this 1986-1995 Plan period, the following medium-term goals (1986-1990) are set:

To achieve the overall goal by: achieving a drop in early child mortality of 33.3% over a five year period; achieving an improvement in maternal health; and impacting on the extent and severity of illness due to major causes of morbidity among persons 5 years of age and over through the Primary Health Care approach and/or core health services.

5.2.2 Overall Objectives

To accomplish the 1986-1995 health goal, six overall objectives are set:

1. To improve coverage through a rational network of available and acceptable facilities and services.
2. To establish effective mechanisms for Ministry of Health manpower development and deployment.
3. To improve the managerial processes of the expanded health delivery system.
4. To expand the range and quality of services directed at maternal health, children under age 12 months, and the children between 1-4 years by addressing priority diseases.
5. To improve the health status generally by strengthening relevant programmes.
6. To improve the nutritional status of mothers and young children as a basic strategy for achieving the medium term goals.

For each of the six objectives, there is given below, the appropriate strategies.

5.3. STRATEGIES TO ACCOMPLISH THE OBJECTIVES

5.3.1 Strategies to Accomplish Objective 1

- 1.1 Further establish the community role in Primary Health Care.
- 1.2 Extend the presence of health centres and rural hospitals
- 1.3 Strengthen the hospital system
- 1.4 Strengthen the integration of services at district level

5.3.2 Strategies to Accomplish Objective 2.

- 2.1 Strengthen Ministry of Health program of personnel development
- 2.2 Establish responsibility in the health planning section for manpower planning.

5.3.3 Strategies to Accomplish Objective 3.

Strategy 3.1 Review drug policy and legislation

- 3.2 Strengthen the management processes for drug production and delivery system.
- 3.3 Introduce improved management systems and programs of training to strengthen personnel management and supervision throughout the health delivery system.
- 3.4 Strengthen the planning process of the Ministry of Health.
- 3.5 Strengthen financial planning and control procedures
- 3.6 Provide information basis adequate for effective planning, management and evaluation.
- 3.6 Strengthen information basis adequate for effective planning management and evaluation.

5.3.4 Strategies to Accomplish Objective 4

- 4.1 Strengthen family health services

5.3.5 Strategies to Accomplish Objective 5

Strategy 5.1 Strengthen selected disease control services through a complementary community and facility-based approach

5.2 Strengthen Environmental Health Services

- 5.3 Strengthen the Health Education Component so that it is capable of promoting healthy behaviour which will make maximum impact on the major health problems of the country

5.3.6 Strategies to Accomplish Objective 6

Strategy 6.1 To improve the nutritional status through a multisectoral approach

5.4 EXPECTED OUTCOMES

In Chapter 4, the main health and population priority problems were enumerated and discussed. They include a limited access by the population to modern health services, general poor health status, particularly among children 0-4 years of age, and rapidly increasing population. These priority problems are re-stated in this chapter as overall objectives within the overall goals of the Ministry of health. It is instructive to articulate a view of the health services delivery systems as it will appear in 1995 if these goals and objectives are met.

The vision of the health services delivery system desired for 1995 is shaped by three variables: financial resources, the current health and population situation, and the implementation capability of the Ministry of Health. In the first regard, limited financial resources have been and will continue to be a central factor in shaping the existing health services delivery system. The health services delivery system of the 1990's will need to be as cost-efficient as is consistent with established safe preventive and curative interventions.

The second variable, the current health and population situation, leads to a focus on the priority diseases and the 0-4 age group (especially of the families at risk) as identified in chapter 2. The health services of 1995 clearly should have improved health status by decreasing the incidence and prevalence of these diseases.

The third variable, implementation capability, is directly related to the Ministry of Health's capacity to manage itself; that is, to plan, budget, administer, monitor, supervise, evaluate etc. The management system of the Ministry of Health in 1995 should have improved through the efforts of this Plan to strengthen central, regional, district, and peripheral levels of the health services delivery system.

These three factors - financial limitations, priority diseases, and implementation capability - form a basis for forecasting the 1995 health system.

With these themes in mind, it seems clear that the philosophy that guides health services in 1995 must have three cornerstones: widespread access to health services; prevention, the least expensive of interventions with which to deal with priority diseases; and early treatment in cases where an illness cannot be prevented. Fortunately, preventive and early treatment interventions appropriate to the priority diseases and problems in Malawi are also interventions which can in many cases be successfully and safely placed in the hands of modestly trained individuals, including family members.

With widespread access to services, prevention, and early treatment interventions as the guiding philosophy, the health services

delivery system in 1995 can be described in terms of the following components:

- o Community-based health services;
- o Health centre-based health services;
- o Hospital-based services;
- o Special hospitals;
- o Central Ministry of Health functions
- o Overall management approach.

In 1995, the peripheral health services, comprised of community based and facility-based services offered through standardised health centres, will be functioning throughout Malawi. Community-based services will have increased access by extending services to new levels, serving as an interface between the community and health system. Health Surveillance Assistants (HSAs), in conjunction with the PHC area teams will be tested for effectiveness as agents working with communities in two major ways: helping villages identify their health problems and monitoring the work of Village Committees trained during the Plan period.

HSAs training and supervision of village committees will be for a set of core health services that will have met the goals and objectives of this plan. The community-based approach, supported by HSA's, if found effective and the area PHC team will have greatly expanded the range of services available to people as well as extending services to many more people.

In 1995, a comprehensive network of health centres will be in place. Existing sub-centres (dispensary or maternity units) will have been upgraded to health centres, dispensary plus maternity and new health centres will have been constructed throughout the country. Each health centre will be manned by two medical assistants, four Enrolled Nurse Midwives (ENMs), one Health Assistant and three servants. These manning levels will however be determined according to specific needs of health centres. The health centre will be providing all the clinical services currently provided, but will have been reorganised, focusing on the delivery of core health services which emphasise priority problems and diseases. Selected core services will have been strengthened through special programmes such as the CCCD, Child Spacing, and others. Health Centres will be serving as referral centres for community-based services and will be effectively coordinating all outreach services.

Hospital-based services, including referral/tertiary and district hospitals, will be offering a similar range of services as they currently do. Access to these services will have been improved by having filled established posts at hospitals, by increased establishment of posts in some grades, by rehabilitating four

hospital facilities, by establishing a referral centre for family health in the Northern Region and by constructing an urban centre for family health in Lilongwe. The hospital-based services will be more cost-efficient due to improved management structures, and due to improved policies for admissions, discharge, referral, accounting, fee and fee collection, and insurance. The hospital-based services will be serving as referral centres for health centres, with central hospitals at the top of the referral chain.

In 1995, special hospitals will have been renovated and appropriately staffed. In 1995, the central organisation's capability to formulate policy and programmes will have been strengthened. Manpower of the central Ministry will have received long-term training. Established posts will have been filled, and selected categories of a restructured central Ministry will have been expanded. Planning, budgeting, and operational research capabilities will have been expanded and strengthened. The Community Health Sciences Unit will have carried out operations research; evaluation activities; gathering, tabulating, and analysing of national planning statistics; epidemiological investigations; and laboratory reference and support work. Specialised information systems relevant to planning, budgeting, personnel, programme evaluation, supervision, etc. will have been improved, as will the analytic capability of the Ministry of Health staff.

The operational management and administration of the health services system will have been de-centralised. The regional and district levels of the system will have been strengthened to enable intensive supervision and administrative decision-making. Accounting systems will have been overhauled, and regional and district accounting teams will have been developed. At all levels clear job description, including service and supervisory responsibilities, will be in place and operational for all staff. Direct supervision lines of authority between each category of staff and their counterparts at lower levels will have been established. Categorical supervision (within one category of worker down the system) and horizontal supervision (Medical Assistant vis-a-vis all staff at a health centre) will have been re-affirmed and strengthened at both regional and district levels. These improvements will have been supported by extensive regional and district level development and training activities.

In summary, the health system in 1995 will be characterised by broad access to health services. It will be more cost-efficient, more closely targeted to the populations at greatest risk for priority diseases, and better managed at all levels. Every component of the system - community - and facility-based peripheral services, hospital-based services, the central Ministry, and the regional and district levels - will be stronger and more effective. As a result, mortality will have significantly decreased, especially among children under 5 years of age, and the National Health Policy of Malawi will be closer to realisation.

CHAPTER 6

TASKS AND ACTIVITIES FOR 1986-1995 PLAN PERIOD

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CHAPTER 6 : TASKS AND ACTIVITIES FOR 1986-1995 PLAN PERIOD

INTRODUCTION

In chapter 5, the overall objectives, strategies and targets of the 1984-1995 National Health Plan were outlined. This chapter sets forth the tasks and activities through which each overall objective and its strategies can be achieved.

4.2 OBJECTIVE 1 : TO IMPROVE COVERAGE THROUGH A RATIONAL NETWORK OF AVAILABLE AND ACCEPTABLE FACILITIES AND SERVICES

Strategy 1.1 : Further Establish the Community Role in PHC

A model of primary health care organization being developed builds on the programmes and activities already underway to extend and improve all services (including health) into the community. The model/strategy aims at expanding access and strengthening existing programmes to improve child survival, as well as improving service coordination, relevance and management. The range of activities that should eventually be carried out within the community will, in general be determined by the perceived needs of the community. The rhythm of adoption of different activities will vary from village to village according to problems identified and available resources. It should be emphasized that the tasks for this plan are provided for the health sector only. Similarly, detailed objectives for the support of primary health care will have to be drawn up by the other sectors and organisations involved. Four specific tasks have been identified for further establishing the community role in PHC.

Four tasks have been identified for this strategy.

Task 1.1.1: Clarify links with community leaders and groups through PHC area teams

Activities

- o The appropriate community-based services will be defined through the process of identifying health problems which will be initiated through both formal and informal contacts by the area team. The community leaders and committee members will have received task oriented training to improve their existing support of communities.
- o In the first phase of expansion of core health services, there will be need to identify community leadership and other established structures with the following characteristics:
 - receptivity to the idea of a modified approach by the services

to the support of FHC;

- willingness to accept increased responsibility for primary health care in their communities;
- demonstrated leadership capabilities and relevance of structures in the community.
- willingness to extend support for those families most at risk.

Task 1.1.2: Clarify the community liaison role of HSA and possibly one or more female workers or volunteers.

Activities

- o Prepare a written description of the new role and responsibilities of the Health Surveillance Assistant (HSA) and possibly one or more female workers or volunteers including
 - guiding, educating and supporting the village committee in preventive and modest clinical measures to improve health;
 - acting as a link between communities, village-level development activities, and the formal health system;
 - helping to motivate village committees to explore and activate initiatives to improve community health status;
 - acting as a role model by developing a demonstration home visit programme as well as by coordinating with and participating in mobile underfives clinics and other village health activities.
- o Alerting the family to its role and responsibilities in recognition of selected diseases, awareness of prevention and early treatment interventions, and administration of selected treatments.

Task 1.1.3: Develop methods for setting community health priorities.

Activities

- o Members of the area team (including health personnel) are to work with community leadership and members in the process of identifying problems facing the community - especially those most at risk.
- o To establish within each sector short-term and long-term objectives with the community in addressing those problems.
- o To examine with community members the extent of support already provided within the community for primary health care, and establish whether further training is required in certain aspects

(e.g. ORT, drug handling, deliveries, disease recognition, maternal care, family support, nutrition) to improve that support.

- o Develop an evaluation method which will be based on how coverage of those most at risk and their ability to cope with the illness most frequent in that area is being achieved.

Task 1.1.4 : Prepare Plans for Community Action

Activities

- o Determine criteria for implementation, taking into account the health centre development plan, information about facility development, training schedules (if possible), and knowledge and extent of cooperation of individual communities. These criteria will include:
 - adequacy of support structures at the community level, as evidenced by:
 - . a supervision and management system to support community-based activities;
 - . a medical and technical supply system that provides for uninterrupted service to the community.
 - . referral mechanism for patient problems too difficult for community level health care.
 - willingness in the community to assume responsibility for and actively participate in support of primary health care.

Strategy 1.2: Extend the Presence of Health Centres and Rural Hospitals

Task 1.2.1 : To prepare 2-3 months after the completion of the plan, a detailed health centre and rural hospital extension plan that includes siting, upgrading and/or replacement of these units by district and by year. This planning activity will continue on a regular basis after the plan on physical facilities will have been finalised.

Activities

- o Obtain from the district health team a priority listing of needs for health centre renovation and repair, staff housing, and health centre expansion, including conversion of maternities and dispensaries into health centres.
- o Analyse the need for new health centres, by district, using criteria which include catchment population, distance from the nearest health facility, local health problems, geographical terrain, and local community support. The criterion of 10,000 population per health centre and 5 mile radius as catchment area will still be used in order to develop a national priority ran-

king for health centre expansion, based upon:

-district differences in health status indicators (if available);

-comparison of current health centre expansion activities among districts;

- o The Planning Unit, which will have been reorganised and strengthened, will play an important role in coordinating the establishment of national priorities for allocation of resources for facilities.

Task 1.2.2 : Carry out an analysis of service workloads leading to revised staffing standards and job descriptions (note that activities of this objective are closely related to those to be carried out under 1.4.1)

Activities

- o Prepare a written job description of the new role and responsibilities of Health Assistant (HA), as a member of the area health team, emphasizing support and supervision of HSAs and provision of specialist environmental health services within communities.
- o Prepare a written job description of the new role and responsibilities of the Enrolled Nurse/Midwife (ENM), emphasizing provision of maternity and child health services through the direct MCH care and by directing and supporting MCH activities of the HSA and TBA. These new responsibilities include:
 - provision of facility-based maternity and child related health services (ante-natal, obstetrical, post-natal, neonatal, under-five clinics);
- o participation in outreach clinics;
- o visiting and treatment of individuals referred by the HSA. Prepare a written job description of the new role and responsibilities of the Medical Assistant (MA) as leader of the area health team, emphasizing the planning and coordination of health centre activities and the direct provision of preventive and treatment services in both health centres and community.

Task 1.2.3 : Establish a program to ensure availability of all categories of staff.

Activities

- o Provide sufficient accommodation and teaching space at the training schools.
- o Ensure correct timing of intakes to training institutions.
- o Reduce the drop-out rate in the training institutions.

Task 1.2.4 : Clearly define the management structure, the services to be provided and the supervisory system for health centres and rural hospitals.

Activities

- o The activities for the management structure are covered under section 8.3.4 of chapter 8.
- o The services to be provided at health centre and rural hospital level will be more specifically defined. It is envisaged that in addition to their existing general services, there will be priority services to improve child survival amongst those families most at risk in the community. Health centre staff, including community members, will have responsibilities in the community to carry out direct interventions through outreach visits.
- o Improve specificity of definitions of the scope and role of outreach services (for example mobile clinics and home visits) in the improvement of access to health services, especially priority services:
 - outreach services will continue to be undertaken jointly by hospital and health centre outreach staff. These services will be extended. Existing manned and unmanned health posts will be included as outreach posts where this has not yet been done;
 - home-visiting will be extensively developed. Area team members and community leaders will devote much of their time to home visits. Further study is needed to determine how ENMs and MAs can be brought more actively into home visiting activities.

Strategy 1.3 : Strengthen the Hospital System

Commitment to improving access through extension of peripheral health services does not imply a dismantling of the hospital system. In fact, hospital services and staffing will expand modestly, with modernisation of existing district hospitals and provision of additional peripheral health units. The role of the hospital in support of improved access and improved child survival aims at increasing quality of life at a cost the community and government can afford. This will be done by improved use of hospitals. Four tasks have been identified for strengthening the hospital system: 1.3.1 specify urgent needs for limited renovations and expansion; 1.3.2 clarify hospital roles and introduce admissions and discharge procedures to strengthen their referral function; 1.3.3 review and redefine establishment staffing levels; 1.3.4 establish a program to ensure availability of categories of staff in numbers specified above.

Task 1.3.1 : Specify urgent needs for limited renovation and expansion.

Activities

- o Develop guidelines for the replacement of hospitals that focus on

productivity and efficiency and not necessarily on expansion of bed capacity.

- o Evaluate each proposal for a new or replacement hospital by criteria that includes:
 - the merit of the proposal as compared to other priority services or planned service developments;
 - the availability of health manpower needed to staff the facility;
 - potential changes in future hospital utilisation pattern;
 - projected non-funded development and recurrent costs.

Task 1.3.2 : Clarify hospital roles and introduce admissions and discharge procedures to strengthen their referral and supervision function.

Activities

- o Specify the services to be provided at each hospital level covering late-stage treatment of patients, in relation to the core health interventions, and determine specialist services in relation to other disease states and emergency medical services.
- o Develop a proper system for the referral of patients so that the hospitals are not overloaded with problems that could be dealt with within the community and through the health centre services. Develop a proper system for the referral of patients back from the hospital services to those who originally referred the patients. This could include a method by which information can be exchanged and action taken at the referral centre and guidance provided for further action and follow-up by the more peripheral parts of the facility-based system.
- o Regarding these policies, the Ministry will encourage clinicians to develop efficient admission and discharge norms that will include but not be limited to:
 - developing criteria for admission for broad categories of patient complaints;
 - investigating practical alternatives to admission for certain types of illness and other problems;
 - investigating development of certain types of home health services that would allow for treatment and convalescence at home, allowing for earlier discharge;
 - establishing hospital discharge planning groups to facilitate efficient and early discharges;
 - to maximise use of existing bed capacity in hospitals through regular monitoring of in-patients and establishment of a follow-up system for covering patients.
 - investigating hospital system problems that lead to delays in diagnosis, treatment and discharge of patients, beginning with a patient flow analysis.

Task 1.3.3 : Review and redefine establishment levels

Activities

- o Review staffing patterns in relation to productivity and efficiency.
- o Review staff work schedule with a view toward maximum practical use of hospital facilities in the evenings and weekends.

Task 1.3.4 : Establish a program to ensure availability of all categories of staff.

Activities

The specific activities here are the same as those in objective 1.2.3 except that they apply to hospital based staff.

Strategy 1.4 : Strengthen the Integration of Services at District level

Four tasks have been identified for strengthening the intergration of services at district level. These are:

Task 1.4.1 : Complete functional analysis.

Activities

- c Carry out a complete functional analysis to include (a) district health needs assessment, (b) enumeration of services currently delivered (including PHAM facilities), (c) appraisal of appropriacy of services provided and mode (clinic or outreach); and (d) designation of priority service gaps.

Task 1.4.2 : Specify the composition and roles of district and regional health teams.

Activities

The activities for this objective are covered in chapter 8.

Task 1.4.3 : Establish procedures for preparing annual work plans with collaboration with all interested parties (including PHAM) within the district.

Activities

- o Refine the district PHC team so that it becomes an effective machinery for preparing annual work plans, not only of PHC activities, but other health related activities.
- o Continue with the reorientation seminars and workshops so as to ensure that both politicians and civil servants agree on what health activities ought to be implemented in each year.

6.3 OBJECTIVE 2: TO ESTABLISH EFFECTIVE MECHANISMS FOR MINISTRY OF HEALTH PERSONNEL DEVELOPMENT AND DEPLOYMENT

Strategy 2.1 : Strengthen the MOH Program of Personnel Development

Each community-based worker must be capable of offering both clinical and preventive interventions. Without access to such combined skills, patients/clients are forced to bypass such a worker and present themselves directly at higher levels of the referral system. Experience elsewhere has shown that although it is difficult to combine clinical and preventive roles in one health worker, primary health care workers who are not able to offer even modest help in the face of a clinical problem are not accepted in either role. Indeed, in the context of home-visiting, the random encounter with a family member who is sick (most likely a child with one of the priority diseases) and for whom a simple treatment can be provided is often the most effective vehicle for bringing preventive or early treatment information to the family members and the community. Although household visiting is time-consuming, it is feasible in Malawi, given the MOH's decision to use Health Surveillance Assistants (HSAs) as the most mobile member of the area health team which will help promote and provide community-based services. HSAs should be able to help communities recognise their roles and responsibilities in prevention and early treatment of diseases.

The training of peripheral health staff must be broad, rather than compartmentalised and narrow. Training programmes will be based upon comprehensive analyses of tasks, roles, and responsibilities, and standing orders must be elaborated for each category of staff. Both basic and in-service training programmes will be strengthened by expanding the practical aspects of training (e.g. role-playing, demonstration, and direct experience). In reality, practical training everywhere tends to be less than anticipated, generally because of a lack of appropriate training settings or training materials. It is essential that there be effective long-term plans for developing training sites for practical training. In addition, practical experience can be interjected into didactic training through role-playing and participative demonstrations--including the continuous training by supervisors.

In order to guide, manage, and support large numbers of peripheral workers, supervisory practices will be strengthened. Supervision systems are needed to cover not only staff working within the health facilities but also those working largely within communities. In recognition of this need, the MOH is committed to the establishment of clear supervisory procedures and measures covering administrative, clinical and preventive, and educative/communicative skills, as well as to the development of training and assessment skills in the supervisors themselves. This is dealt with in chapter 8 of this plan.

In addition, the MOH intends that there be a direct link between supervision and in-service training. Part of the supervisor's role is

the assessment of the strengths and weaknesses of individual health workers and the identification of the training needed to help individuals improve their skills and performance. Such information is a vital guide for the development of relevant in-service training programmes. Experience elsewhere has shown that it is advantageous if supervisors assume a prominent role in training programmes.

The issues discussed above give rise to still another element of this strategy: the need to strengthen the capability of the MOH to coordinate and plan for the desired expansion (both manpower and facilities). This need is recognised by the Ministry, and is addressed among the specific objectives of this objective, in Strategy 2.2 and in the discussion of the re-structuring of the MOH in chapter 8 of this document. Issues regarding manpower development, particularly, have been studied at great length by the MOH. While minimum staffing standards have been developed, the Ministry needs to study this further. Nonetheless, several manpower development issues have been discussed by the Ministry and general policy formulation initiated. These issues include the following:

- c In the past, training in certain categories within Malawi has been somewhat irregular, with cancellations occurring through administrative delays. The MOH will make every effort to ensure that training schedules are not disturbed. Students drop-out rates from training have been very high, with losses of as much as 41% in some programmes. Better information on health service jobs and careers, improved selection, and good discipline at the training schools all need to be pursued to reduce wastage. In addition, current accommodation and training facilities and student/teacher ratios at all the MOH schools need to be improved; this effort should also have an impact on the retention of students.
- o Curricula require revision, particularly for those cadres concerned with primary health care services, (Medical Assistants, Enrolled Nurse/Midwives, and Health Assistants). There is a recognized need for detailed task analysis for each of these cadres from which new curricula can be developed, ensuring relevance of training to the needs of the communities.
- o Current training intakes for the training of Registered Nurses, Clinical Officers, Medical Assistants, Health Assistants, and Public Health Nurses, appear adequate to meet proposed minimum 1995 staffing requirements. The enrolled Nurse/Midwife situation is more complex because of the flow of such staff from PHAM to MOH. Efforts will be directed toward increasing the number of authorised posts to make use of the existing pool of labour before increases in MOH training capacity are considered.
- o Following the graduation of Health Inspectors from 1982, 1983 and 1984 intakes (i.e. after 1987), the MOH will have sufficient staff to meet all its currently identified 1995 requirements. The MOH will have to decide whether to withdraw entirely from the Polytechnic for a number of years or to utilise this facility for the training of other cadres such as dental,

pharmacy, or radiography technicians.

- o An annual manpower planning process, intergrated with overall health planning and budgetary planning cycles, will be implemented. Routine monitoring of the manpower situation and progress towards manpower targets will be carried out and reported to senior MOH officials.

Four tasks have been identified for strengthening the MOH program of personnel development.

Task 2.1.1 : Expand and Strengthen the Training Section to include competence in management training.

Activities

- o Establish a strengthened and capable Training Section as an integral part of the Planning Unit to assist in the development and production of training programmes and materials. This section needs to be staffed with or have access to central trainers and assistants, as well as to develop its own capacity for training central level trainers. This section will be responsible for the management and coordination of all training; basic, pre-service, in-service, and overseas. This section will also evaluate training programmes and coordinate curriculum reviews and encourage training institutions to undertake their own evaluations.

Task 2.1.2 : Develop an overall strategy for pre-service and in-service training covering all categories of service and managerial staff.

Activities

- o Enumerate guidelines for training, including the following:

Both pre-service and in-service training programmes (or revisions to existing programmes) will be developed with and implemented through central trainers-including training institutions, regional trainers, and district training teams. Central trainers will act as the senior level staff who will develop most curricula and training programmes with or without external assistance. Where there is a need, external assistance may be drawn on to train central trainers through demonstration. Regional trainers will be trained by the central trainers and will coordinate all regional in-service training. District training teams are as yet not fully defined, but will be district level personnel (categorical district level supervisors including those from other sectors and possibly a fulltime coordinator).

- Selected supervisors (district level) will participate as trainers in district level in-service training after they themselves have been trained. Not all supervisors will qualify as trainers.

- In-service re-orientation will be designated as needed by staff in post whose new roles, responsibilities, and standing orders will require re-orientation.
 - In-service training will be on-going and have two major objectives: to transmit new information and skills to staff, and improve/strengthen existing skills and knowledge. Trainers to trainee ratios at any level of the system will not exceed 1:5 to 1:10.
 - Training sessions will consist of less didactic instruction, and more role-playing, demonstration, and participatory activity, along with practical, well supervised on-site experiential training.
 - In-service training and supervision will be directly linked. Health categorical supervisors (Clinical Officers, Public Health Nurses, and Health Inspectors) will participate in development of in-service training. Information from supervision rounds will be incorporated into creation of training sessions. District Training officers will provide the global view of training, including topics established by the central MOH which will have had contributions from other sectors.
- District training officers will also provide the technical skill and coordinating effort for each in-service training programme.
- At full productive level, district training teams will develop three to four in service training programmes per year. Until basic training is adjusted, each graduating class of each cadre of health staff for health centre level and below will undergo a pre-service training programme to enable them to introduce/teach the core health services.
 - Senior level trainers (possibly including consultants) will demonstrate to trainers how to develop their own training programme.
 - All trainers will be identified from among groups of candidates, with the understanding that not all candidates will become trainers. Trainers will be trained and then some selected as full-time trainers after demonstrating ability.
 - Existing basic training will be modified to meet new MOH objectives. As an interim measure, a pre-service programme will be developed to orient new staff each year immediately after graduation. Staff already placed in the system will undergo some form of training from which the pre-service programme may be drawn. Staff turnover can be dealt with through a combination of required pre-service and in-service programmes.
 - Supervisors, who must be proficient in all the skills and knowledge required of the staff whom they supervise, will be trained before the cadres of health staff they supervise.

- o Identify basic, pre-service, and in-service training facilities for both temporary and long-term needs.
- o Identify training resources (apart from facilities) needed for all types of training of central, regional, and district level trainers supervisors; and HSAs, ENMs, HAs, and MAs.
- o Establish a schedule for changes to all training programmes, taking into account resources and ability to develop curricula.

Task 2.1.3: Prepare curricula and conduct training courses following the above strategy

Activities

- o Develop curricula to train central, regional, and district level trainers.
- o Develop curricula to train each of the service delivery staff with new or expanded roles (i.e. HSAs, HAs, ENMs, MAs)
- o Develop curricula for the training of trainers at each level.

Task 2.1.4 : Design procedures to ensure supervisory systems will flag specific training needs

Activities

- o Design a supervision form that is appropriate for assessment of staff skills, knowledge and attitudes vis a vis the roles and responsibilities of each cadre of health staff at each level. This form will:
 - be a guide for the supervision visit
 - provide a record to assist the supervisor in follow-up activities;
 - assist supervisors in planning their contribution to in-service training programmes.
- o Assess the potential for routine analysis of the results of a nationwide sample of supervision forms, and design forms accordingly. Analysis of such a sample could help the Central Training Section determine in-service/basic training programme topics, and serve as a periodic indicator of programme activity.

Strategy 2.2 : Establish Responsibility in the Health Planning Section for Manpower Planning.

Two tasks have been identified for this strategy:

Task 2.2.1: Establish a system for mor development of MDH pesonnel.

Activities

- o Work with the Personnel Section to establish an improved person-
nel information system which will provide:
 - detailed records of applicants for training, students in
training, drop-outs and those deployed after graduation.
 - current staffing situation in the MOH.
 - up-to-date records of established posts and vacancies and
details of the individuals actually employed.
- o Work with the Personnel Section so that it can undertake the
following activities which will provide information for manpower
planning:
 - develop personnel histories to provide the Planning Section with
an instantly available list of staff with particular training and
in-service experience;
 - develop strategies for career advancement.
 - replace the current establishment control system with a filling
system with new information to facilitate simple identification of
vacancies, matching of transfer requests, staff personnel
information storage and retrieval.

Task 2.2.2: Develop analytical capabilities for assessing
patterns and problems in career development.

Activities

- o Ensure that certain members of the Planning Unit, in collabora-
tion with the personnel section, have the necessary training to
enable them analyse and assess patterns of staffing.

**6.4 OBJECTIVE 3 : TO IMPROVE MANAGERIAL PROCESSES OF THE EXPANDED
HEALTH DELIVERY SYSTEM**

Strategy 3.1 : Review drug policy, and legislation

One Task has been identified for strategy 3.1

Task 3.1.1 : To redefine drug needs, rationalise the manufacture,
importation and use of drugs.

Activities

- o Maintain an active advisory committee with membership from both the MOH and CMS which will:
 - periodically revise the drug list.
 - help the MOH decide on packaging and distribution of supplies below the health centre level.
 - produce a national drug formulary, not merely a drug list.
 - periodically revise the national drug formulary.
- o Review the drug legislation with the aim of establishing a sound drug control administration which would ensure that only useful drugs are used in the country and that they are of good quality and are used properly.
- o Train and deploy suitably qualified personnel to carry out registration, licencing and inspection functions under the new drug legislation. The use of pharmacy assistants whenever possible is recommended.

Strategy 3.2 :Strengthen the management processes for Drug Production and Delivery System

Proposed changes in the pattern of health services particularly with the development of the Primary Health Care, and recent changes in relationship between the Central Medical Stores (CMS) and the MOH (as discussed in Chapter 3) place new demands upon CMS to be more responsive to MOH needs at the lowest cost, while the CMS Treasury Fund exercises full financial independence. In addition, CMS must therefore re-establish the drug needs of the nation's new health system and revise its internal procedures regarding supply, inventory control and budgeting. It will have to re-establish its storage and shipment/trans-shipment procedures and identify new facility needs.

Five tasks have been identified for strategy 3.2:

Task 3.2.1 : Improve cost efficiency in Procurement Procedures.

Activities

- o Classify products handled by CMS according to different suitable methods of procurement required in line with their nature and source of supply and depending on standard lead times established for each method.
- o Revise existing tender/contract documents used for drug procurement to increase the information supplied, to assist in tender decisions, and to protect quality standards.
- o Implement computerised re-ordering and tender scheduling systems to improve speed and thus reduce lead times.

Task 3.2.2: Improve stock control procedures

Activities

- o Implement a r of two months; specify the placing of an order only if the inventory position at the time of review is less or equal to a predetermined minimum stock level.
- o Implement a new inventory control card to record information relating to daily transactions, outstanding orders, unmet hospital requirements, and controls necessary for the management of inventories.
- o Classify all drugs handled by CMS into very high value, and low value items, with predetermined procurement periods. The very high value items to have the shortest procurement period.
- o Maintain a buffer stock of three month's consumption for all very essential drugs and for drugs frequently required in epidemic
- o Establish new inventory control and stock reservation systems at district and central hospitals as a means of ensuring availability of adequate supplies at small units.

Task 3.2.3: Improve storage and storekeeping procedures.

Activities

- o Replace existing drug stores having inadequate facilities in a phased manner at each government hospital by using standard specifications to be determined by senior pharmacy staff.
- o Establish regional depots at Lilongwe and Mzuzu to serve the central and northern regions, respectively.
- o To review the career structure in drug Supplies Management.

Task 3.2.4 : Establish an effective production and distribution system.

Activities

- o Construct a new manufacturing unit at the proposed stores complex in Lilongwe and carry out modifications to the existing manufacturing areas at Blantyre.
- o Develop a quality control laboratory attached to each of the manufacturing units to ensure maintenance of the quality of both manufactured items and imported ones to predetermined standards.
- o Train and deploy suitably qualified staff at all levels especially with emphasis on pharmacy assistants and technicians to undertake production, quality control and packaging operations at the two units mentioned above.

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Task 3.2.5 : Ensure the financial viability of the supply system

Activities

- o Establish working capital needs-currently estimated at K5.million. This figure should be reviewed periodically so that it reflects the changing circumstances.
- o Define and establish mark-up on drug sales-currently set at 12.5%.
- o Reduce average stock on hand or its value by approximately 50% during a four year period through adjustments of procurement period for high value items. This system is meant to ensure availability of essential items by releasing funds otherwise tied up in large stock levels.
- o Reduce the amount of write off due to expiration of drugs by using a computer to monitor shelf life and taking early steps to use the drugs before expiry.
- o Increase the proportion of drugs produced domestically, after establishing that this can be done effectively at a cost less than of imported drugs and that the manpower is available.
- o Review procedures intended to reduce wastage as discussed in association with other tasks.
- o Speed up the invoicing system by replacing the batch computer system, and more generally, improve the financial information systems required for decision making by introducing an online computer system or a mini-computer.

Strategy 3.3 : Introduce Improved Management Systems and Programs of Training to Strengthen Personnel Management and supervision throughout the health delivery system

Four tasks have been identified for strategy 3.3

Task 3.3.1: Achieve a sense of organisation purpose and team work within the MOH through a program of motivational education.

Activities

- o Continue and finalise the study on the current management structure so as to identify the strengths and weaknesses.
- o Identify the management system that can be implemented maximising the expertise of administrative officer level and select appropriate programmes to orient the professional administrative officers to hospital administration.
- o provide the necessary training-both within and outside the country for each member of the hospital management team.

- o facilitate at each hospital the establishment of institutional goals and objectives and plans of work which are congruent with national goals and objectives.
- o Organise for hospital managers, short courses, initially every three months so as to achieve the Health Plan objectives and thereafter at regular intervals.

Task 3.3.2 : Achieve operating efficiencies and cost reduction at all levels through the introduction of management improvements and training in their application.

Activities

- o Examine, together with the management team, the problems experienced at hospitals.
- o Review the internal organisation of patient/bed allocation and doctors/specialist teamwork.
- o Establish a supervisory system which incorporates work plans and personal accountability.
- o Establish a managerial climate which fosters co-operation and peer review.

Task 3.3.3 : Strengthen and Develop collaborative arrangements with PHAM and other private and community groups to ensure the overall effectiveness and efficiency of management of all health services in the general interest of the citizens of Malawi.

Activities

- o Most of the activities for collaborative arrangements with PHAM and other non-government and community groups are discussed in chapter 9.

Task 3.3.4 : Attain increased worker effectiveness and productivity through a program of selectively supportive supervision and in-service training

Activities

- o Develop a central system which has effective monitoring at all levels.
- o Establish effective and efficient supervisory practices for all key health personnel.

Strategy 3.4 : Strengthen the Planning Process of the MOH

The MOH will take measures to strengthen its management systems at the central level so as to increase its ability to carry out managerial functions efficiently. In addition, priority will be given to

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the formation of regional and district levels of management so that these can coordinate and manage operations in the field, direct and support the extension of primary health care through core health services, and help relieve administrative loads on the central level. This will enable the central level to concentrate on its policy-making and national overview functions. At each level of the MOH, the planning process will be used to facilitate achievement of objectives. Four tasks have been identified for strengthening the Planning process of MOH.

Task 3.4.1: Strengthen the analytical and evaluative capability of the health planning section.

Activities

- o Continue to provide appropriate long and short-term training to all staff of the Planning Section. Training should emphasise developing skill in the planning process and the analysis of information. This will help the planning unit staff's capabilities programme budgeting and monitoring of the Plan.

Task 3.4.2: Strengthen MOH capability in and authority to commission health systems research.

Activities

- o The Health Planning Section and the CHSU unit will have to collaborate so as to establish a program of research addressing health problems. It is expected that the agenda for such research during the Plan period will be set forth by a committee to be appointed by the CHS.

Task 3.4.3: Increase planning capability throughout the MOH management ranks.

Activities

- o Establish through the Planning Section a long term strategy to expose all central and key regional and district managers to the planning process as applied to health.
- o Identify appropriate external assistance to support multiple in-country planning exercises. This is likely to occur after appropriate research indicates the need for modification of the 1986-1995 Plan.
- o Identify and implement ways of focussing donor assistance on objectives of MOH. This effort will include clearing proposed projects with the Planning Unit and some MOH body which can determine if the proposed assistance meets objectives of the MOH and does so with the minimum impact on recurrent costs.

Task 3.4.1: Expand and Strengthen the Staffing of the Health

Planning Section.

Activities

- o Fill all established posts and create new ones in the Planning Section and reorganise the section within a career development scheme that has prospects for advancement.
- o Re-enforce the planning unit's capability for resource mobilisation for the plan implementation.
- o Create as part of the Planning Unit, the capability for project management.
- o Establish an effective flow of information with other relevant government departments.

Strategy 3.5: Strengthen MOH Financial Planning and Control Procedure

Improved coverage, especially through peripheral services, will generate increased demand for recurrent funds from the MDF. Even with the most optimistic forecasts of the future share of national income allocated to the MOH, the projected financial needs of the Ministry cannot be met. Projected savings through improved efficiencies will help to close the gap between the financial resources needed in the future and those projected to be available. Nevertheless, other sources of income will be necessary if adequate service to the public is to be sustained and expanded. It will be necessary, therefore, to consider the phased introduction of fees for all services to the public, with the exception of certain priority areas of health concern.

At the same time, it will be necessary to review the distribution of MOH financial resources, with preferential allocations for primary health care. Any additional funds made available through MDF allocations, savings on expenditures, and income from fees will be used primarily for the expansion of peripheral services.

The MOH will rigorously assess the impact of capital expenditure from the development account on recurrent costs. This will help to ensure that the substantial capital development resources available are utilised to support MOH service development priorities and that the recurrent costs of commissioning the facilities thus provided can be absorbed and maintained.

Three tasks have been identified for strengthening financial planning and control capabilities.

Task 3.5.1 Extend accounting staff to district level and strengthen capacity for financial analysis and cost control.

Activities

- o Establish the post of senior assistant accountant, and create the new post of Budget Section Leader, who will, under the Chief Accountant be responsible for budget formulation.
- o Specify functions of the district accounting staff and establish a set of financial reports which will provide the results of current surveillance of expenditure and other resource uses; e.g. indices of transport use and costs, indices of food purchased etc.
- o Increase the effectiveness of fee collection through computer invoicing and control of debtor accounts, especially at central and general hospitals.
- o The Chief Accountant and the budget and accounting section heads should be given opportunity for training in hospital financial management and cost analysis.
- o Develop a positive attitude among senior officers at the district and regional levels to cost documentation.

Task 3.5.2 : Improve budgeting procedures to include program and performance budgeting systems.

Activities

- o Re-design the MDH budget to reflect more accurately the new pattern of desired services. Curative and primary health care services are viewed as essential major budget categories. Further breakdowns within these major categories, by services, type of facility, district, programme, etc. will be useful.
- o Development of a programme and performance budgeting system.
- o Establish cost centres at general and central hospitals and use computers for costing data.
- o Attempt to obtain more accurate costing or cost estimates with each successive round of budgeting. This implies an on going refinement of a data collection system for the foreseeable future.
- o Modify the procedures for accounting and control regarding expenditures so as to obtain more useful budgeting information.
- o Develop a set of technical manuals detailing all procedures to be followed by the new Budget Section.
- o Establish a link for effective communication and flow of information with the Planning Section in order to help both sections to be responsive to changing circumstances.
- o Establish a strategy for generating district interest and input in the budgeting and accounting activities of the MDH.

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- o Develop/strengthen all procedures regarding revenue, expenditures, and budgeting with an eye toward essential computerisation during the ten-year Plan.

Task 3.5.3 : Identify ways to improve fee collection.

Activities

Establish and execute a scope of work for the Planning Section to undertake relevant studies.

Strategy 3.6 : Strengthen Information basis adequate for effective planning management and evaluation.

General Observations

MOH needs information for two different purposes, to assess the effectiveness of major programs and to assess the efficiency of the use of resources. Additionally, information is needed to guide broad policy relating to the appropriateness of the MOH priorities in the use of limited resources.

In addressing health information and health management information requirements MOH must concentrate on data acquisition specific to the goals and objectives set forth by the National Health Plan. In this way pertinent data is the product sought, aggressively analysed and turned into information which can guide valid decisions to terminate, alter or continue programs.

Current data on infant child and maternal mortality is based upon inpatient reports. This is neither a complete report of the frequency of these events nor a satisfactory basis for a statement of the proportionate distribution of deaths by cause in the population.

The exceptional power of a vital registration system to produce clear understanding of the force of mortality in defined age groups and in major geographic areas is denied to chief executives in MOH due to the absence of a statutory requirement for the registration of births and deaths in Malawi. However, this limitation can be overcome by recently developed survey methods.

Health management information serves the purpose of cost, cost effective and benefit-cost analysis. Managers of significant health programs require skill in the use of management data, as well as a knowledge of the state of art and science of the technical disciplines involved in their programs.

Task 3.6.1 Develop the capability for acquisition of data on mortality, morbidity, natality and nutritional status pertinent to the 3 designated medium term goals.

- o Two options (1) a biennial sample survey of the population

(see appendix 1 to this Chapter for assumptions to determine size of sample)

(2) a continuous survey of sentinel areas are to be considered with a choice to be made of one. Option 1 is stronger for validity of national estimates but more expensive. Option 2 is less expensive but less likely to meet the criterion of rigor for national estimates.

- o Assign overall responsibility for the survey to the Planning Unit. Delegate operational responsibility to the Community Health Sciences Unit (CHSU) to include (1) instrument design and test (2) field execution and (3) data analysis.
- o Complete the physical facility for CHSU to include basic laboratory space and equipment sufficient to perform surveillance on common communicable diseases e.g. tuberculosis, leprosy, schistosomiasis, diarrhea.
- o Staff CHSU with individuals trained in microbiology parasitology, biochemistry and epidemiology.

Task 3.4.2 Develop a formal health management information system to include specified reports to management echelons.

- o Identify content of periodic and ad hoc reports; e.g.
 - Annual compilation of facilities in place and under construction to include size with ratio of beds to population by district.
 - Annual admissions by hospital according to age and discharge diagnosis.
 - Persons served and No. of visits by Outpatient Facility for each district.
- o Design data acquisition, for each periodic report, to assure maximum use by district and central office staff.

Maximize employment of state of art data storage and analysis equipment.
- o Assure processing and analysis and distribution on a management relevant time frame. This will require 2 additional professionally qualified analysts adequately trained in computer data management.
- o Provide short term training to district and regional staff on management information use and in the acquisition of valid data.

6.5 OBJECTIVE 4: TO IMPROVE CHILD SURVIVAL OF THE UNDER FIVE AGE GROUP

The Ministry of Health recognises that the pattern of health services needs to be modified towards prevention and early treatment if there is to be a positive impact on child survival. A health system which waits for mothers and children to come to a fixed facility for services generally finds that these people arrive too late for interventions to have maximum effect. Those who do seek preventive services are generally only a small proportion of the population and often those least likely to need preventive advice. In order for the health services to have a more significant impact on child survival, the Ministry of Health intends that more of the total efforts be expanded to place in the hands of those closest to the community, knowledge, skills and means of effective prevention and early treatment as close to the family as possible. This will be accomplished through the PHC programme in the community and by focussing the health services on programmes that address priority diseases.

In an effort to improve coverage and make services more meaningful to the target population, efforts will be made to introduce the delivery of integrated MCH services within the PHC approach. With this approach mothers and children will be seen on a daily basis in the clinic, instead of separate clinic days. This will help personnel to think of mothers and children as a unit, or one family sharing the same environment and problems.

Strategy 4.1 : Strengthen Family Health Services

Seven tasks have been identified for Maternal and Child Health Services in the plan period.

Task 4.1.1 : To introduce integrated MCH services

In this plan period, the present Antenatal and Underfive clinics will stop to exist as separate entities, but will be combined to form daily integrated and comprehensive MCH clinics.

Activities

- o Mothers and children will be singled out from the general out-patient clinics and all their needs attended to fully.
- o Antenatal and postnatal mothers will be attended to as outlined in Task 4.1.2 below.
- o Children will also receive care according to the outline in Task 4.1.4 below.
- o Integrated services will be introduced nationwide following a

trial period in a few centres.

- o Health personnel will be trained in the provision of comprehensive integrated MCH services (which will include care of the mother and child including provision of child spacing services).
- o Study tours will be organised to other countries, with an objective of observing the running of integrated services.
- o Studies will be made to find out additional resources required in order to provide comprehensive MCH services on daily basis.

Task 4.1.2 : To Strengthen Maternal Care Services so as to ensure that mothers are kept healthy throughout pregnancy and delivery so that they produce normal and healthy babies.

Activities

- o Establish treatment and management protocols, for use by each cadre of health workers, (including Traditional Birth Attendants) appropriate to the level at which they are working. Protocols will cover priority problems during antenatal, natal, and postnatal period.
- o Establish and update preventive interventions and protocols for the priority diseases throughout pregnancy labour and the postnatal period. These protocols will be accompanied by a strong Health Education component.
- o Both the antenatal and postnatal services will be offered on a daily basis and well integrated with the child care services, so that both mother and child are seen together as a family on the same day.
- o Strengthen maternity services:
 - strengthen maternity facilities by expanding health centres;
 - open up new outreach antenatal clinics services;
 - continue the training of more TBAs, using a revised syllabus, with added roles, so as to extend services to more people in the community.
- o Strengthen supervision capacity of maternal services by all health personnel at each level for the level below them, especially supervision at the peripheral level by the district staff.
- o Order and maintain adequate supplies of equipment, drugs, food supplements, record forms to ensure smooth running of the services.

- o Strengthen in-service training of all staff involved in delivering maternal services.
- o Establish an ongoing monitoring and evaluation system for programme activities.

Task 4.1.3: To expand and strengthen Child Spacing services in the whole country.

The Objectives of this programme are:

1. To provide both technical and managerial skills, in Child Spacing, to all cadres of health personnel.
2. To introduce the delivery of Child Spacing services to the family and community as an integral part of MCH services.
3. To introduce to the community and its local leaders the concept of Child Spacing as it relates to maternal and child health in Malawi.
4. To conduct research into the current knowledge attitude and practices (KAP) of the community with respect to Child Spacing
5. To establish an inbuilt monitoring and evaluation system for the smooth running of the programme.

Activities:

- o Formulation of a five year National Child Spacing Plan of action.
- o Development of curricula for the training of trainers and service providers.
- o Procurement of child spacing commodities and training material.
- o Strengthen hospital facilities to provide space for Intergrated MCH and child spacing services.
- o Conducting training of Trainers, service providers, programme supervisors, and tutors.
- o Disseminate information to parents and the community on the availability of child spacing services.
- o Initiate and conduct KAP studies.
- o To monitor and evaluate the programme from time to time.
- o Initiate and provide child spacing services to cover the whole country in a phased out approach.

Task 4.1.4: To strengthen child care services which are aimed at reducing infant and childhood morbidity and mortality by keeping children healthy throughout the first five years of life.

Activities:

- o Introduce the use of management intervention protocols, to each cadre or health personnel, for priority diseases. i.e:
 - Malaria
 - Measles and other EPI diseases
 - Diarrhoea diseases
 - Respiratory diseases
 - Nutrition disorders (including Anaemia)
 - Eye and skin diseases
 - Parasites etc.
- o Establish prevention interventions protocols for priority diseases listed above.
- o Strengthen health education and information component of the Family Health Programme about care of children through the use of Radio Messages, posters, flip charts, booklets, talks etc.
- o Establish or strengthen the following services through which the above intervention programmes can be carried out.
 - Neonatal clinic service - 1st month of life. Baby to have weekly physical examination weighing, BCG and to provide information and education to mothers on baby care.
- o Establish with the overall MCH programme underfives services in all new health facilities and those old health facilities which do not at present provide underfive services.
- o Strengthen supervision capacity of all MCH staff in child care especially supervision of the clinics at the peripheral level.
- o Order and maintain adequate supplies of all the equipment, drugs, records and food supplements needed, to provide proper child care services.
- o Strengthen in-service training of all MCH personnel in management of all priority childhood diseases.
- o Establish an ongoing monitoring and evaluation system for programme activities.
- o All the above mentioned activities for child care are to be carried out in the comprehensive MCH clinics which will be introduced.

Task 4.1.5 : To Strengthen the EPI Programme.

Activities

- o To consolidate and maintain cold chain system to ensure vaccine potency and improve vaccine distribution system.
- o To increase public awareness and participation about prevention of EPI diseases in close collaboration with health education and community participation.
- o To introduce systematic and regular evaluation of coverage at all levels.
- o To train and motivate all levels of staff regarding EPI management.
- o To integrate immunisation services in the total health delivery within the Primary Health Care.
- o To strengthen surveillance of EPI diseases through monitoring and reporting at all levels in close collaboration with the CHSU.
- o Establish morbidity and mortality data for all EPI diseases through specific studies.
- o Establish sentinel sites for reporting and monitoring EPI diseases by 1987.
- o By 1987, introduce and integrate immunisation services into the daily outpatient departments in all hospitals in order to increase immunisation coverage.
- o Obtain and maintain adequate cold chain equipment and spare parts by 1986.
- o Conduct courses for mid-level managers and peripheral staff in EPI management every year.
- o Ensure availability of immunisation services to 100% of fixed and outreach facilities by 1989 through provision of necessary equipment.
- o Improve supervision of EPI activities through development of check lists and feedback mechanisms by 1987.
- o Prepare/adapt EPI modules for use by peripheral staff by 1986.
- o Districts to identify and arrange periodic visits to inaccessible areas (every 3 months) to give immunisations.
- o Develop communication materials and channels for public information about immunisations by 1986.
- o Include EPI in curricula of schools and Health Training Institutions by 1989.

- o 80% of the eligible target population fully immunised by 1990 through increased outreach approach and maximised use of mothers and child's contact with a health facility.
- o Immunisations available to all eligible target population by 1995 through the above described activities.

Task 4.1.6: To Strengthen the Control of Diarrhoea Diseases.

Activities

The following activities will be implemented, as an integral part of the MCH/PHC programme, during the first 5 years of the Diarrhoeal Disease Control Programme (1985-1989).

- o Assign the manager appointed for the malaria program for the coordination of the diarrhoeal diseases (see malaria section).
- o Promotion and Development:
 - procure ORS packets according to national requirements;
 - establish the use of ORS at all levels of the health system;
 - produce ORT health education materials for use at all levels and in schools;
 - study feasibility of a National ORS packet production plant.
- o Distribution:
 - establish and implement an ORS packet storage and distribution system for all levels of the health system.
- o Training and Health Education:
 - conduct training for all cadres of health personnel, village health workers and TBAs, on ORT;
 - training mothers in preparation and administration of sugar, salt solution (SSS);
 - disseminate information to mothers and the general public about use of ORT.
- o Operational Research:
 - carry out studies to determine the best types of health information and education materials for promoting the use of ORT.
 - carry out study on the feasibility and/or capability of mothers to prepare SSS in the home.

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6.6 OBJECTIVE 5 : TO IMPROVE THE STATUS OF THE GENERAL POPULATION BY STRENGTHENING RELEVANT PROGRAMMES

Chapter 5 identified three strategies to achieve Objective 5.

Strategy 5.1 : Strengthen Disease Control Services

Seven tasks had been identified for strengthening the disease control services in this plan period.

Task 5.1.1 : To reduce the mortality from malaria

Activities

- o To review the services of malaria treatment, malaria treatment schedules and vector control methods.
- o Educate the public towards early recognition, treatment and prevention of malaria.
- o Foster treatment with adequate doses of anti-malarials instead of only anti-pyretics and or nalgestics.
- o Ensure that policy development and program implementation for malaria is coordinated with existing and planned disease control activities to ensure the effective practice and extension of services.
- o Ensure easy access to anti-malarial drugs for the public.
- o Provide chemoprophylaxis to high - risk groups.
- o Train health personnel on the diagnosis, treatment and prevention of malaria.
- o Appoint a centrally located manager for malaria and diarrhoeal with specific responsibility for the daily coordination and monitoring of disease control activities. This would complement the work of the malaria committee by providing oversight for the implementation of policy, effective use of existing reserves, and the identification of problems that require specialised inputs.
- o Ensure proper coordination of membership on the malaria and diarrhoeal committees so as to improve integration of the planning and implementation of the programme services at central as well as at delivery level.

Task 5.1.2 : Improve the Control of Acute Upper Respiratory Infections

Activities

- o Educate the public and family members to be alert to risk

factors and early signs and symptoms of respiratory infections

- o Encourage early and accurate diagnosis followed by appropriate antibiotic treatment.
- o Promote the follow up of cases to ensure that complete resolution of the disease has occurred.

Specific Objective 5.1.3: Improve the prevention and control of major causes of blindness and make essential eye care available to all; and improve the control of skin infections.

Activities for Specific Objective 5.1.3

- o Carry out baseline assessments of blinding disorders in at least 50% of the districts by 1990 so as to plan eye programmes in such districts.
- o Operationalise national programmes for the prevention of blindness in the country including the development and application of mechanisms for evaluation by 1990.
- o Expand the implementation of the training schemes in eye care for personnel at the primary and first referral levels so that 50% of the districts are covered by 1990.
- o Strengthen the institutional capabilities to allow for research on improved technologies for the prevention and treatment of blinding disorders, particularly within health care systems based on primary health care.
- o Carry out evaluation exercises by establishing simple national surveillance systems for blinding diseases and mechanisms for monitoring the provision of eye care as part of general health services' evaluation.
- o Promote early recognition and treatment of skin diseases starting at the village level.

Task 5.1.4 : To expand control programmes for schistosomiasis, onchocerciasis, trypanosomiasis, leprosy and tuberculosis.

Activities

Schistosomiasis

Review the schistosomiasis control programme during the early months of Plan implementation so as to decide the best strategy for controlling schistosomiasis. Meanwhile however, the following activities will be undertaken:

- o Take steps to ensure that drugs for treatment of schistosomiasis be available at all static health facilities especially since CMS does procure sufficient amounts of drugs

to make this possible.

- o Ensure that the currently accepted diagnostic techniques are introduced at all health centres.
- o Since schistosomiasis is a community based problem, steps will be taken to integrate the programme within the PHC approach because this problem can most successfully be tackled through community participation. The communities will be mobilized, as for other helminthic infections, to supply themselves with safe water and sanitary facilities and also help implement the environmental and behavioural modifications that eliminate or reduce the intensity of transmission.
- o There will be need to carry out operational research.

Onchocerciasis

- o Onchocerciasis is endemic and known to be a public health problem in the Shire Highlands, especially in Thyolo district where a control programme started and should be strengthened
- o Finalise the prevalence survey currently being carried out in Thyolo District to delineate the geographic distribution and intensity of infection. The studies on the biology of the simuliid vectors to determine breeding sites, fly distribution and transmission potential and also the Laboratory studies to be carried out to determine the best larvicides for control should be finalised so that active control of the simuliid vectors in Thyolo by 1988 by which time biological studies will have yielded enough information.
- o In addition to Government resources for control, solicit resources from the private sector in the affected areas. There has been an indication for such support.

Trypanosomiasis

While in terms of numbers trypanosomiasis is not a significant public health problem, it does cause an inordinate amount of suffering. There is always the fear that as long as the infection exist there may be a repetition of epidemics similar to the ones that occurred in the 1920s. A three year preparatory phase will be implemented to :

- o Conduct epidemiological surveys of populations adjacent to tsetse infected areas.
- o Carry out epizootical surveys in domestic animals.
- o Do studies in tsetse fly bionomics in relation to transmission potential and therefore evolve a control strategy.

- o As this is a regional programme, involving Malawi, Mozambique, Zambia and Zimbabwe. It is anticipated that aerial spraying will be a major control tool though within Malawi fly traps which are more efficient due to the size of the fly infected areas will also be used.

Leprosy

To strengthen the Leprosy Control Programme with long term goals of reducing the incidence of Leprosy until a time when routine services can manage all cases. To this end therefore the activities will be:

- o Detection of possible new cases through examination of patches, nerves deformities and paralysis and also taking and and fixing slit skin smears and examinations for mycobacterium larvae.
- o Supply of anti leprosy drugs through mobile treatment services.
- o Continuous education of patients on prevention of plantar ulcers and deformities through demonstration.
- o Continuous follow-up of defaulters, through the cooperation of the community.
- o Assessing the impact of the leprosy control measures in regard to case finding and treatment.
- o Carry out a vaccine trial.
- o Increase public awareness on early detection and treatment of leprosy.

Tuberculosis

The objective of the Tuberculosis programme is to reduce tuberculosis to a level where it is no longer a public health problem.

Overall Strategy:

The basic approach will be more of strengthening treatment, case-finding, continuing with BCG immunisation (under EPI), reorganisation of the Tuberculosis Programme and to know the actual magnitude of the problem and review its trend at regular intervals. The following courses of action will be taken:

- o Produce a revised Tuberculosis Manual and make it available to all Health Units. This will give guidelines on organisation of the TB Programme and on all TB Control measures.
- o Conduct a prevalence survey to be done by 1986 to determine the size of the problem and epidemiological parameters of

importance in future evaluation of the impact of the control measure.

- o Ensure that there is continuity in the coordination of the programme at all levels. At the Central level there should be a supervisory team to consist of the TB Programme Coordinator, a TB Laboratory staff and a Pharmacy Assistant.

Activities for the Control of TB

- o Establish 3 posts for Regional TB Coordinator to implement and coordinate TB activities in the three regions.
- o Train laboratory staff for the "Central" TB Laboratory which apart from routine services, will act as a quality control centre and centre for coordinating in-service training for laboratory staff at other microscopy centres.
- o Conduct training for all cadres of health personnel through yearly regional seminars on the diagnosis, management and prevention of Tuberculosis.
- o Educate the community in collaboration with the health education unit to be aware of the early signs and symptoms of Tuberculosis and impress on them that TB is now a curable disease.
- o Education visits for TB Programme Coordinators to neighbouring and other countries to learn from their experience.
- o TB programme coordinators to attend important international TB Conference/Seminars in order to keep abreast with the current developments in TB management and management of other chest diseases.
- o Strengthening treatment by:
 - passive case-finding to be intensified;
 - expanding microscopy services and ensure continuous supply reagents;
 - active case-finding to be encouraged wherever possible.
- o Improve case management by:
 - ensuring treatment is given to all patients diagnosed
 - ensuring continuous supply of anti-TB drugs to all Treatment Units and ensure that easy access to patients;
 - with external assistance gradually introduce short course regimens (containing Rifampicin) for both new and previously treated patients to cover the whole country by 1988. Ten of the country's 24 districts have already been covered with the shorter regimens with assistance from the International Union Against Tuberculosis;
 - provide chemoprophylaxis to high-risk group;
 - to improve compliance, case-finding and tracing of

defaulters by doing the following-

- provide continuous health education to patients.
 - the staff at all health units be involved in follow-up of patients;
 - every health unit should have a Surveillance Assistant. Some of these will be employed from those who were previously lepra Clinical Attendants;
 - encourage community involvement.
- o Expand prevention activities through EPI by continuing to give BCG and promote closer exchange of information on BCG immunisation between EPI and TB Programme Coordinator.
- o Programme management tools to be used will include:
- regular evaluation of tuberculosis control measures.
 - regular evaluation of the impact of the TB Control measures on the magnitude of the problem.

Task 5.1.5 : Introduce additional disease control programs as resources permit and priorities dictate.

Activities

- o Sexually Transmitted Diseases: Establish programme objectives and targets directed towards public education, aggressive case finding, early treatment and follow-up of contacts.
- o Accidents and General Trauma : Establish programme objectives and targets including, inter alia, a descriptive analysis of the cause of accidents and general trauma and legislation for safety standards on roads and in the workplace.
- o Parasitic and Helminthic Diseases: Establish programme objective and targets directed toward eliminating the source of infection screening and early treatment of cases.
- o Hypertension: Establish programme objectives and targets directed towards early recognition and effective treatment of elevated blood pressure.
- o Malignant neoplasms: Establish programme priorities objectives and targets for neoplasms to determine areas requiring development screening and early treatment.
- o Hepatitis: Establish programme objectives and targets directed towards establishment of district-by-district incidence data, population screening and immunisation in high-incidence districts.

Strategy 5.2 : Strengthen Environmental Health Services

One task has been identified for strengthening the environmental

health services in this plan period.

Task 5.2.1: Improve waste disposal practices and increase the availability of potable water to rural populations.

Activities

- o Review existing plans for environmental health and sanitation interventions by:
 - construction of demonstration excreta disposal units in schools as well as protected shallow wells and washing slabs
 - research into various possible types of excreta disposal units using different materials and techniques to find those methods that are most economic and suitable so as to satisfy local conditions.
- o To increase manpower for environmental health and activities. By 1990 one hundred (100) environmental health officers are to be trained. There will also need to introduce a degree level program at the polytechnic for environmental health officers - this will have to be combined with the program for health education. There will also be need to train HSA so as to gear them to activities they currently undertake.
- o Train health personnel especially at health centres in appropriate technologies on low cost sanitation e.g. pit latrines (VIP). To this end, a low cost sanitation unit will be established.
- o Educate the rural communities regarding the importance of the provision and use of pit latrines.
- o To improve the availability of water to families both qualitatively and quantitatively in rural areas so that by 1990, 75% of the rural population has access to potable water. This will be done:
 - by increasing public awareness, in collaboration with the Health education unit, of the importance of proper water usage.
 - by creating, through PHC mechanisms and a referral system for maintenance of water sources by community involvement.

Strategy 5.3 : Strengthen the Health Education Component so that it is capable of promoting healthy behaviour which will make maximum impact on the major health problems of the country

One specific objective has been identified for strengthening the health education component.

Task 5.3.1 : Strengthen the Health Education Component so that it is capable of promoting healthy behaviour which will make maximum impact on the major health problems of the country.

Activities

- o In collaboration with other sectors, identify target groups to be reached with specific health messages in the priority problem areas.
- o Design, pretest, posttest produce and diffuse/distribute specific health messages, such as flipcharts, posters, comic books, picture or image boards, leaflets, booklets, recorded tapes, synchronised slide-tape materials, radio spots, jingles etc. to cover topics within the priority problem areas to identified target groups.
- o Reorientate health and allied personnel such different forms or retraining programmes to increase their capacity to carryout effective health information and education.
- o Establish a career structure for qualified health educators.
- o Carryout a rational programme of training for health educators at different levels withing the country and abroad.
- o Establish and equip health education units at regional and district levels by raising the status of the Health Education Unit of the MCH to an autonomous division with the MOH.
- o Strengthen family and community health education through the organisation of appropriate learning, experiences and the training of the various community organisations especially the leaders of such organisations.
- o Mobilisation of communities to effectively participate as partners in FHC activities.
- o Undertake operational research.
- o Establish a forum for regular exchange of ideas and experiences among groups, organisations or institutions involved in information and education for health in Malawi.
- o Establish an appropriate system of monitoring and evaluating health information and education programmes and activities of individual, family and community levels.

6.7 OBJECTIVE 6 : TO IMPROVE THE NUTRITIONAL STATUS OF MOTHERS AND YOUNG CHILDREN AS A BASIC STRATEGY FOR ACHIEVING THE MEDIUM TERM GOALS

Strategy 6.1 Improve the nutritional status through multisectoral approach

Task 6.1.1: To reduce Malnutrition Rates

Activities

- o (a) Develop a new approach to nutrition education based on the following priority points.
 - Promotion of breast feeding for the first two years of life.
 - Supplementation of breast milk with other foods beginning from the fourth month.
 - Encouraging frequent feeding of underfives, pregnant and lactating mothers, and increase amounts of various foods at each meal.
 - Encourage variety of mixed ingredients per meal and at least four meals/day for underfives.
 - Promote use of Likuni Phala as a weaning food.
 - Increase use of foods rich in carotene (dark green leafy vegetables) by young children and pregnant and lactating women.
 - Increase caloric density by adding sugar and oil to food.
 - Encourage use of groundnuts, beans, pigeon peas which provide a concentrated source of energy and protein.
 - Promote early treatment of malaria, measles intestinal worms and respiratory infections which are contributing factors to malnutrition.
 - Encourage early oral rehydration and continued feeding for children with diarrhoea.
 - Promote food hygiene practices to prevent infectious diseases which often contribute to malnutrition.
- (b) Communicate the new approach to all staff who give nutrition information talks in MCH clinics through refresher courses and to community members through the Primary Health Care approach.
- o Promote production of Likuni Phala as a weaning food, using

the revised formula and procedure, both on a commercial scale and household level:

- arrange with Grain and Milling Company (GRAMIL) to produce Likuni Phala using the revised formula and procedure, initially on small industrialised scale;
 - arrange with Grain and Milling Company (GRAMIL) to determine the market potential for industrially processed Likuni Phala in both urban and rural segments;
 - assess the acceptability of the new Likuni Phala whose ingredients will be toasted before grinding, and to which minerals and vitamins will be added to prevent rancidity and to combat nutrient deficiencies. Questionnaires will be sent to hospitals, underfive clinics, nutrition clinics and nutrition rehabilitation centre to assess the acceptability;
 - if the product proves to be acceptable, popularise it;
 - produce posters indicating the merits of Likuni Phala over imported weaning foods;
 - produce leaflets for wide distribution through the Ministry of Health, Ministry of Agriculture, Ministry of Education and Ministry of Community Services;
 - conduct seminars or training of staff who give nutrition talks in MCH clinics in proper preparation of the Likuni Phala at the household level.
- o Promote the production of Likuni Phala at the household level using the same formula but adding vegetables and fruits for vitamins.
- o To control vitamin A deficiency by establishing a programme directed towards prevention of Xerophthalmia.
- o To institute the long term control measure of goitre by implementing a program of salt iodisation.
- o Prevention of Nutritional Anaemia by expanding the existing services for prevention of nutritional anaemia through proper nutrition education and adequate distribution of ferrous sulphate and multivitamin tablets to all pregnant mothers and children in MCH clinics.
- o Expand and improve the quality of growth monitoring by :
- training all health personnel involved in weighing children; on accurate scale reading and proper weight recording on growth chart;
 - regular Monitoring of growth by weighing a child once a month during the first year of life and weekly at nutrition

clinics;

- improving the screening of children at MCH clinics by improving a checklist for staff to follow;
- involving more than one staff to do the screening to ensure adequate time to examine each child and advise mothers accordingly;
- training staff to look for risk factors which may lead to nutritional deficiency;
- teaching mothers and the community the importance of the weight chart and how to interpret it;
- teaching mothers (quoting examples if possible) the interaction between diseases and malnutrition;
- Making available to all health facilities all the record forms required for nutritional services;
- Teaching members of village committees through the PHC system how to monitor a child's weight;
- To strengthen intersectoral approach with other agencies.

CHAPTER 7

THE RESOURCE IMPLICATIONS OF THE NATIONAL HEALTH PLAN OVER THE NEXT 10 YEARS

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CHAPTER 7

THE RESOURCE IMPLICATIONS OF THE NATIONAL HEALTH PLAN OVER THE NEXT 10 YEARS

7.1 INTRODUCTION

The strategies, targets, and activities described in chapter 5 and 6 reflect significant shifts in Ministry of Health policy for the next ten years, and have equally significant implications for resource utilisation in the future. This chapter considers these implications, with a view to assessing, in an approximate way, the feasibility of the previous chapters.

A detailed budget for the next ten years is not given. The principal reasons for this are as follows. First of all, all activities cannot be sufficiently specific detailed for those activities to be "costed". Where this level of specificity is not achieved, mechanisms are described whereby such specificity can be sought during the plan period. Secondly, relative input prices into the health sector in Malawi are by no means stable. The relative price of labour has fallen significantly over the period 1980-1984, but it may well rise again. The relative price of medical supplies is also unstable, since it depends critically upon the exchange rate, which fluctuates considerably, and economic conditions elsewhere. Thus, to "cost" future activities in terms of salary costs and "other costs", on the assumption that there is some fixed ratio between the two, (the relative cost of labour compared with fuel fell by over 32% in the 30 month period between the middle of 1982 and the end of 1984) is unlikely to be very useful.

However, this does not mean that this chapter cannot indicate whether the plan is likely to be overambitious or not. While it may not provide a "10 year budget", it can serve at least to indicate those shifts in the allocation of resources over the next ten years, which are critically important if the Ministry is to achieve the goals contained in this plan. In other words, if it is intended to introduce a new development programme, that programme must be financed and staffed, and the plan should indicate where such resources are to come from.

The following sections attempt to synthesise these resource shifts by analysing first the manpower implications of the planned service delivery system over the ten year period followed by the cost implications, both capital and recurrent of the planned development programmes and finally the current and expected financial position of the Ministry of Health.

7.2 MANPOWER IMPLICATIONS OF THE PLAN

7.2.1 Current Situation

The successful implementation of the plan apart from other things,

hinges upon the availability of appropriate and adequately trained manpower, who are deployed according to service needs and priorities and who are properly supported and supervised.

The MOH had as of June 1984, 4962 established posts of which 739, or 15% were vacant. Table 7.1 gives, for each category of staff, the approved establishment and the number of posts that were filled, as at June, 1984.

In terms of overall numbers of vacancies, the positions of Registered Nurses (130 vacancies) and Medical Assistants (166 vacancies) stand out most sharply. A lack of authorised posts in some cadres had forced the MOH to utilize vacancies in other categories to employ personnel in excess of established posts.

TABLE 7.1 : MOH STAFFING SITUATION - JUNE 1984

CATEGORY	ESTABLISHMENT	STAFF-IN POST	IN POST AS % OF ESTABLISHMENT
Medical Officer	136	84	62
Dentist	11	8	73
Clinical Officer	184	178	97
Medical Assistant	517	351	68
Registered Nurse	497	367	74
Enrolled Nurse/Midwife	907	919	101
Pharmacist	13	9	69
Pharmacy Technician	6	1	17
Pharmacy Assistant	26	32	127
Laboratory Technician	29	25	86
Laboratory Assistant	84	55	65
Radiographer	17	9	53
X-Ray Assistant	9	8	89
Dental Technician	11	7	64
Dental Assistant	12	9	75
Physio/OT	12	6	50
Health Inspector	101	65	69
Health Educators	-	5	-
Health Assistant	231	169	73
Other Established	2159	1916	89
Total	4962	4223	85

Sixty percent of all trained service personnel are working in hospitals and thirty-two percent in the health centres and rural hospitals. Within the hospital sector, there are large variations between the central/general hospitals and the district hospitals in terms of staff per unit of service, with the central hospitals having twice the number of trained personnel per in-patient than the district hospitals.

7.2.2 Manpower Requirements of Planned Service Delivery

Based on what are considered minimum staffing standards for each category of staff and level of service and/or planned service development for the next ten years, the total numbers of staff required have been calculated. A summary of manpower needs for the whole MOH is shown in Table 7.2.

Fifty-nine percent of the total increase in staff required by 1995 is for the development of primary health care services as represented by the health centre and rural hospital programmes. A further 34% is to staff developments in the hospital services, with the balance of 7% for other support services and functions.

7.2.3 Manpower Requirements of PHAM and other agencies

In the absence of well defined plans for the delivery of health services by PHAM and other agencies over the ten year plan period, it is difficult to make projections of the levels of staff that will be required. In view of the problems being faced by a number of these agencies in running their health units, it seems reasonable to assume that there will be no significant expansion in their level of operation during the ten year plan period. These agencies will at best maintain the current level of services with no or very little increase in staffing requirements. Based on this assumption, the expected level of technical staff requirement by 1995 is presented in Table 7.3.

Current training intakes for the training of registered nurses, clinical officers, health assistants and public health nurses appear adequate to meet 1995 staffing requirements. The enrolled nurse/midwife situation is more complex because of the flows of staff between PHAM and the MOH. It would appear that there is a significant number of already qualified enrolled nurse/midwives that are not currently employed who would wish to work for the MOH. Following the graduation of Health Inspectors from the 1982, 1983 and 1984 intakes (i.e. after 1987), the MOH will have sufficient staff of this cadre to meet all its currently identified 1995 requirements.

The MOH is a young service and losses for reason of retirement have been and will continue to be small at a projected level of less than 1% annually over the next ten years. Pre-retirement losses are

TABLE 7.2 : MANPOWER REQUIRED 1995 AT MINIMUM STANDARDS

Staff Category	In-Post 1984	Required 1995	Existing as % of Required
Medical Officer	84	154	55
Clinical Officer	178	292	61
Medical Assistant	351	923	38
Public Health Nurse	37	87	43
Registered Nurse	330	549	60
Enrolled Nurse/Midwife	919	2180	42
Dentist	8	31	26
Dental Technician	7	14	50
Dental Assistant	9	41	22
Pharmacist	9	70	35
Pharmacy Technician	1	15	15
Pharmacy Assistant	32	66	48
Radiographer	9	11	82
X-Ray Technician	-	2	-
X-Ray Assistant	8	31	26
Laboratory Technician	25	27	93
Laboratory Assistant	55	95	58
Other Technical	27	43	63
Health Inspector	65	81	86
Health Educators	5	70	7
Health Assistant	169	256	66
Health Surveillance Asst.	298	674	44
Administrative Staff	486	818	59
Other Support Staff	2562	4122	62
Total	5674	10,652	54

also low. Annual loss rates vary between 2% - 5% with the exception of pharmacy assistants for whom private sector employment opportunities have been considerable. With the expansion of services in the rural areas, however, and the traditional difficulty of retaining female staff to work in relatively isolated locations, pre-retirement losses for certain cadres may increase substantially over the next ten years.

In terms of the labour market; there would appear to be no shortage of applicants to training institutions to join the health services. Applications for training in health professions within the country average 30 for every training place available. There is also a waiting list for scholarships for overseas training. The major problems however, which need to be addressed urgently are very high student drop out rates from training which are as high as 41% from some programmes, the low return rate of students trained abroad, and lack of adequate local training facilities.

For the local schools, high student drop out rates have been found

to be mainly due to lack of adequate information on health services jobs and careers, poor selection and poor discipline at training schools, inadequate accommodation and training facilities and inadequate student: teacher ratios.

Another issue that needs to be addressed is that of authorised established posts for the different staff categories. For the MOH to meet its staffing requirements, it should not only have sufficient numbers of appropriately trained personnel but should also have a corresponding amount of authorised posts for each category required.

7.3 CAPITAL PROJECTS PLANNED OVER THE TEN YEAR PLAN PERIOD

Table 7.4 gives a list of planned capital projects over the ten year plan period, their estimated cost, both capital and recurrent and a tentative implementation schedule.

7.3.1 Expansion of Chancellor College

The capital costs of the envisaged centre for higher learning that is to be established at Chancellor College in Zomba, for medical personnel in the country, are difficult to estimate at this stage. This is largely because the MOH has not carried out any similar project in the past. However, capital cost estimates have been provided in the table based on cost of providing facilities of a standard similar to those existing at Chancellor College which have been estimated to be in the area of K63,500 per student. The total cost of K12.7m provided therefore assumes a total capacity of 200 students per year. The project, which is to start in the second year of the plans implementation, is spread over a five year period.

It is assumed that the centre will not start operating until the final year of the project, which will be the sixth year of the plan's implementation. It is further assumed that only half (100) of the intended capacity will be admitted in the first year of the centre's operation, moving on to full capacity in the following year. The recurrent cost figures given are based on the University of Malawi's estimated average recurrent cost per student per year of K4,200 (rounded up) that was used for their 1984/85 budget estimate.

7.3.2 Urban Centres For Family Health

For the proposed centres for family health, cost estimates (capital) were based on past experience in providing comparable facilities (e.g. wards, equipment etc) as those intended for these centres, elsewhere in the country. The cost is higher for the proposed centre in the north mainly because other support facilities, such as administration block, laundry, kitchen etc, will have to be provided which already exist at Kamuzu Central Hospital, the proposed site for the urban centre for family health in the Central Region. Facilities for such a centre already exist in the South at Queen Elizabeth Central Hospital though some expansion is needed to bring the standard up to

TABLE 7.3 : EXPECTED 1995 STAFF REQUIREMENT IN THE HEALTH SECTOR

those planned for the North and Central regions, hence the item "expansion to Queen Elizabeth Central Hospital". District Hospitals already have adequate facilities for MCH activities as a result nothing further has been planned for in this area period.

The recurrent cost implications of expansion to QECH are likely to be negligible since inpatient numbers are not expected to increase significantly.

In Lilongwe, the establishment of the Urban Centre for Family Health will permit the old maternity to be deployed for other activities, and it need no longer constitute part of the hospital. The cost of maintaining this unit has been very high for logistical reasons, and the cost of all the transport and telephone communication etc between the two sites will be saved. All together, a total of K16,9m will be needed for the two urban centres for family health and the extension to QECH. However, with the provision of better services for mothers and children, patient demand is likely to be higher, with the associated cost implications. Furthermore, the establishment of urban health centres is likely to increase cost even more, given that additional staff, etc, are required. On the other hand, it is hoped that these units will reduce patient demand at the central hospital, and it is therefore likely that the running costs of these units will be offset by savings at the hospital, especially on the grounds that these units will deliver "early treatment", and patients who would otherwise be admitted as inpatients at the hospital can instead be treated as outpatients because clinical intervention will have been made much quicker.

So the determination of the recurrent cost implications of the new UCFH in Lilongwe is not an easy task, because of the conflicting factors described above. For these reasons, it is difficult to ascertain whether the implications will be positive or negative, but certainly their magnitude in either direction cannot be very significant. A provisional figure of K10,000 new recurrent cost is provided. Further detailed investigation will be made in the early months of the plan period.

The recurrent cost implications of the UCFH in Mzuzu will certainly be very positive. Even with detailed investigation into likely patient numbers etc, it is unlikely that a confident estimate can be provided. Here it is assumed that costs of the unit will be more than a standard district hospital, but not as great as the central hospital in Lilongwe: thus it is assumed that the resources absorbed by this unit will be of the order of the running costs (at present) of Zomba General Hospital, which caters for well over 500 patients a night, and includes several specialist facilities.

7.3.3 District Hospital Replacement Programme

It has been assumed that the cost of replacing a district hospital will not differ much from the cost of hospitals that have been replaced recently. A total of four replacement hospitals are expected to be completed over the ten year plan period with a fifth

one just started. Though no definite figures can be given on what the incremental recurrent cost per each district hospital replaced will be, there is likely to be a slight increase, judging from experience with other hospitals that have been replaced recently. An average figure of K47,000 is given in Table 7.1. In all, K16.75m in capital cost will be required for the planned replacements of district hospitals over the plan period.

An item 'DISTRICT HOSPITALS UNDER CONSTRUCTION' is included in the Table. No capital costs are shown because the funds are already available and allocated and therefore need not be budgeted for in this plan period. Since, as pointed out earlier, they are expected to generate additional recurrent costs when they start operating, these costs are included as they will have to be provided for from funds allocated for the Ministry's operations in this period. These hospitals are Karonga, Mchinji, Salima where construction is in progress and Ntchisi, for which funds are already available though construction work has not started yet.

7.3.4 Zomba General Hospital Replacement

The capital cost of replacing Zomba General Hospital is estimated to be higher than that of an average district hospital mainly because it is larger and offers some specialist services. As such it requires more funds for building, equipment and other support services. No significant new recurrent costs are expected to be generated because it is basically a replacement of old dilapidated buildings with new ones with no expected increase in patient numbers.

7.3.5 Health Centre Construction

The capital cost presented for health subcentre construction assumes an average capital cost of K170,000 per centre and K100,000 per dispensary or maternity. If the criteria of 10,000 population within a five mile radius for each health centre were to be used and, leaving out populations within hospital catchment areas, a total of 133 health centres would have to be built over the plan period. With the Ministry's intention of upgrading existing facilities by adding missing components where only either a dispensary or maternity exists, a total of 93 units will have to be upgraded (9 maternities and 84 dispensaries according to 1983 statistics). The total capital cost, if this were to be achieved, would come to K32.25m. This does not take into account units that might need to be replaced or renovated. Some more work will have to be done to set some realistic target for this programme. Chapter 10 points out the need for such an exercise to be carried out early in the plan period.

The expected recurrent costs are based on an estimate of K10,000 per year per each health centre--K7,000 for a dispensary and K3,000 for a maternity. This take into account staff costs, supplies, maintenance but does not take into account depreciation on buildings and equipment, and supervision cost, which is rather difficult to determine per unit. The figures given are therefore very modest.

7.3.6 Replacement of Zomba School of Nursing

At an estimated capital cost of K5.5m , the Zomba School of Nursing is to be replaced, early in the plan implementation. This is not only because the facilities are poor and in very bad condition but also, considering how important the cadre of enrolled nurses is, to increase the output which at present is inadequate to meet MOH requirements. It has been estimated that this expansion will generate additional recurrent cost of around K45,000 per year.

7.3.7 Expansion of Blantyre School of Nursing

The capital cost for this project, which is already in progress, has not been given in 7.3.1. Because of the expansion, the project is expected to generate additional recurrent costs which have been estimated to be around K30,000 per year, bringing the total recurrent cost per year for the school to K80,000 from the current level of about K50,000.

7.3.8 Construction of Staff Housing

The last item on the list of planned capital projects over the plan period is an ongoing project of staff housing construction. The problems of inadequate accommodation especially for junior staff in the district hospitals and health centres has been one of the key obstacles preventing the MOH from achieving manpower and staffing targets in the past, largely for the following reasons.

First of all, the lack of staff accommodation has created a significant obstacle to the mobility of staff around the country. A number of existing health centres have only 2 houses attached to the unit, with the result that the full staffing levels cannot be achieved. The same is true of district hospitals, especially those not yet replaced, where the number of houses available is often less than half of that required. The result is that the newer hospitals will tend to be favoured somewhat when new recruits/graduates are distributed around the country.

The second point is that with accommodation in short supply, and what accommodation there is often being in very poor condition, staff may well be discouraged to the point of resignation. During the background work an estimate of the number of qualified nurses in the country who are unemployed was made. The figure was found to be very considerable indeed. It is difficult to estimate the extent to which the accommodation factor contributes to the decision to resign, but it is likely that it plays a fairly significant role.

It is therefore intended to improve the situation as with regards to staff housing through an ongoing annual construction programme. Between 40 and 45 houses, the majority of which will be the most junior type houses, will be constructed each year. Capital costs are estimated at K650,000 per annum: which would cover cost of

building 4 class D houses at an average cost of K21,000 each, and 40 class E houses at an average cost of K14,000 each. Recurrent costs will be negligible, and have not been estimated.

7.4 OTHER RECURRENT COSTS

The extension of programmes such as Primary Health Care, MCH, EPI and central organisation developments will have cost implications that should be taken into account when considering the resources that will be needed over the plan period. No detailed costing of all the aspects and activities involved can be done at this stage because the specific details have not been worked out yet. The cost given in Table 7.5 is a summary by programme of estimated additional MDH expenditure required to fund the recurrent cost of approved Projects from the year 1985/86 to 1990, that do not fall under the capital projects category.

TABLE 7.5 SUMMARY BY PROGRAMME OF ADDITIONAL MDH EXPENDITURE REQUIRED TO FUND THE RECURRENT COSTS OF APPROVED DEVELOPMENT PROJECTS

PROGRAMME/DELIVERY SYSTEM	ADDITIONAL MDH RECURRENT EXPENDITURE (1)				
	1985/86	1986/87	1887/88	1988/89	1989/90
PHC extension	85,200	49,050	89,000	35,700	-
MCH	12,600	25,400	24,000	-	-
EPI	2,700	122,400	5,200	-	-
Drug Production & delivery	147,650	-	-	-	-
Manpower developments	77,580	82,400	40,000	-	-
Central Organisation developments	72,000	36,300	5,300	-	30,000
	102,430	316,550	163,500	35,700	30,000

(1) The sum each year represents the additional expenditure required over and above the expenditure level of the previous year.

7.4.1 PHC Extensions

The cost of PHC extensions includes costs associated with training district staff initial training for VHCs, TBAs etc and refresher training for AHC, VHC, TBA and HSA in PHC districts. In addition, it includes costs for running motor vehicles, bicycles and motor-bikes for both primary health care extension and for sanitation and health education in water project areas. The costing assumes that MDH will take over initial training from AID in 1987 and that donor support for training continues to 1987. It also assumes UNICEF assistance for drugs continues.

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To sum up, additional costs of about K85,200 are expected to be incurred in the 1985/86 financial year in the extension of PHC, with other additional costs of K49,050, K89,000 and K35,700 for the second, third and fourth years respectively of the planned extension. This comes up to a sum of K258,950 in additional recurrent cost for the extension of Primary Health Care activities by 1990.

2.4.2 Maternal and Child Health

The cost for the extension of the programme include training of TBAs and running costs for vehicles, motorbikes and bicycles. It is assumed that the MOH will take over costs of training TBAs in 1987/88 and that assistance from UNICEF, WFP and AID for drugs and supplies continues.

For the Expanded Programme on Immunisation it is assumed that external assistance for vaccines and supplies continues over the next ten years and the additional costs presented are the MOH contributions specified in project documents. All together, the additional recurrent costs for the MCH/EPI extension come up to K15,300, K148,800 and K29,200 respectively for the years 1985/86, 1986/87 and 1987/88. This comes up to a total additional recurrent cost of K193,300 over the current expenditure, by 1990 for the extension of MCH/EPI programmes.

2.4.3 Drug Production and Delivery

With the CMS becoming a self financing entity, it is estimated that about K295,300, the estimated amount of MOH subsidy to CMS will be saved, in the sense that MOH will no longer make this much money available to CMS. It is assumed however that no net savings will be realised on drug budget.

2.4.4 Manpower Development

The cost of the manpower development presented in this Chapter relates to the Health Institutions project the Ministry of Health is carrying out in conjunction with Howard University. The additional recurrent costs presented relate to the cost of training Community Health Nurses, at an estimated intake of 30 per year, training Health Assistant at an estimated intake of 25 per year, Medical Assistants at an intake of forty per year, providing counterpart tutors and cost of running motor vehicles. The estimated additional recurrent costs are K77,580, K82,400 and K40,000 respectively for the first, second and third years with a cumulative total of K199,980. It is assumed that first intakes will be in 1986/87, except for community health nurses for whom training has already been started.

2.4.5 Central Organisation Developments

This category includes costs associated with the Community Health Sciences Unit, Health Education and Sanitation, some elements of Primary health Care, Disease prevention and control, Health

Education, Diarrhoeal Diseases and Malaria Control. For the Community Health Sciences Unit, cost estimates includes salary cost for some members of staff plus vehicle running expenses for the unit.

For health Education and Sanitation programme, the cost provided under central organisation developments include those for running a vehicle and supplies, starting from the year 1985/86. This is based on the assumption that donor funding ends by 1985/86. The cost of running one vehicle for the core group is provided for under primary health care as well as the cost of running a vehicle for disease prevention and control. For health education, extra costs, starting 1986/87, represent the cost of providing extra supplies, as specified in the project document. Other costs included are the cost of running two vehicles, one each respectively, for diarrhoeal diseases control and malaria control, starting from 1986/87. Assuming the level of expenditure will have reached its maximum on these programmes by 1990, we would expect the expenditure pattern not to change significantly for the period 1990 - 1995.

7.5 EXHIBITION OF EXISTING OCCASIONS: POTENTIAL FOR SAVINGS

Government expenditure in the MDH over the last decade or so has remained fairly constant in real terms. However, decreasing real MDH allocations have led to growing annual overspends since 1973, which have undermined any efforts at financial control significantly.

Analysis of health recurrent expenditure can not easily be broken down by health programme. The budget incorporates a crude distinction between administration and training (MDH headquarters and training institutions), prevention and control of endemic and epidemic disease (the public health inspectorate) and curative institutions (hospital and health centres).

The figures given above do not take into account technical assistance from different donors. Table 7.5.1 gives estimated amounts of expenditure on ongoing health programmes for the financial year 1984/85, mainly funded from external sources.

Inevitable variation may exist on expenditure on externally funded programmes because most of them are tied to particular projects whose flow funds might not be evenly distributed over the years. Projects have been allocated to programmes according to the project's major objective unless the cost of each programme can be clearly separated out. Since one project may cross cut several programmes, the distribution of expenditure by programme is therefore approximate. Total expenditure on the child spacing programme, which is also largely financed by donors, is not available. The total sum of 110,707,500 given for the technical assistance category is therefore an underestimate.

TABLE 7.6: SUMMARY BY PROGRAMME OF ESTIMATED EXPENDITURE ON TECHNICAL ASSISTANCE PROGRAMMES OF THE MOH

PROGRAMME	1984/85 ESTIMATED EXPENDITURE (K000)
Primary Health Care Extension	1,834.8
Maternal and Child Health	3,747.4
EPI	643.1
Training Schools and manpower developments	4,288.7
Central Organisation Dev.	863.6
Expatriate Medical personnel	2,330.0
Total	13,707.6

7.6 OVERALL FINANCIAL REQUIREMENT OVER THE PLAN PERIOD

On the whole, K96.6m will be required to fund all the capital projects planned over the plan period. These capital projects are expected to generate new recurrent costs of as much as K3.6m per annum by 1995. The present level of recurrent expenditure (1984/85 final account) is K28.m. This, however, does not take into account donor expenditure on technical assistance programmes which in 1984/85 was estimated to be K13.7m. If this is taken into account, recurrent expenditure on Ministry of Health operations and programmes rises to K41.7m. Planned extension of programmes such as PHC, MCH, EPI, manpower developments and central organisation developments are expected to generate additional recurrent costs estimated at K0.66m per annum by the year 1990. Putting all these costs together, by 1995, recurrent cost expenditure of the Ministry is expected to be at least K45.96m per year.

7.7 FINANCING THE PLANNED ACTIVITIES

A large proportion of the MOH development budget is financed by donors with the Malawi Government only contributing a small proportion where the project specifies there is a need for some local contribution. It is therefore assumed that the bulk of the funds needed for Development activities will come from donors.

It is however, rather difficult to get donors to provide funds for recurrent costs arising out of development projects that they finance. The Ministry of Health will, therefore, bear the recurrent cost of the development projects that have been planned for the plan period. It is however assumed that donor funds will still be available for the various programmes financed under technical assistance. This assumption implies that of the estimated K45.96 recurrent cost needed by 1995, the K13.7m currently being borne by donors under different programmes will continue to be borne by them. This leaves about K32.26m in constant 1984/85 prices to be met from the MOH recurrent budget.

7.7.1 Sources of Recurrent Funds

The major source of funds for the MOH recurrent expenditure is the allocation from Treasury. As already pointed out, for many years now, this has been far below what a realistic allocation for the Ministry would have been, leading to overexpenditures.

As an example, the allocation for the 1985/86 financial year is K21.5m (net) in spite of the fact that expenditure in the 1984/85 financial year was K28m. Trends in the budgetary allocation are difficult to predict. An assumption is made that real budgetary allocation will remain at the level of the 1985/86 allocation. With this assumption, a deficit of at least K10.76m is expected by 1995. Means of financing this deficit have got to be identified.

7.7.2 Potential For Savings

A breakdown of expenditure by activity in 1983/84 is given in table 7.7.2.

TABLE 7.7

CATEGORY	1983/84 EXPENDITURE BY CATEGORY		
	SALARIES	OTHER	TOTAL
Headquarters admin	418,894	1,261,494	1,680,388
Q.E.C.H.	851,685	3,190,948	4,042,633
K.C.H.	742,629	2,222,985	2,965,614
Zomba Hospital	333,433	696,037	1,029,470
District Hospitals	2,412,673	3,323,671	5,738,344
Special Hospitals	249,429	305,171	554,600
All rural units	1,028,192	677,547	1,705,739
Training	110,617	520,525	631,142
Health Inspectorate	211,075	360,528	571,603
Subsidy to Central			
Medical Stores	109,997	372,519	482,516
Health Education, MCH etc	331,919	426,000	757,919
Grants to PHAM etc	-	1,441,928	1,441,928
GROSS EXPENDITURE	6,800,543	14,799,353	21,599,896
APPROPRIATIONS IN AID INCLUDING HOSPITAL			683,368
NET TOTAL EXPENDITURE			20,916,528
OVERALL SAVINGS ACHIEVED			
PERCENTAGE SAVINGS ACHIEVED			

It is clear that if the MOH is to effect savings from recurrent expenditure over the next 10 years, the focus of this effort must be

those areas which absorb large portions of the annual budget. Two institutions, the central hospitals in Blantyre and Lilongwe, spent a massive K7m in 1983/84, almost a third of total MOH expenditure. Other areas of concern were the district hospitals (including Zomba) at about 30%: headquarters administration at 8%, and rural units at almost 9%. Therefore, almost two-thirds of total expenditure was incurred by the 24 government hospitals, with expenditure on non-curative non-institution based activities very low.

It has been clear for some time that savings can be effected in the hospitals without detriment to the "output" of these institutions, especially in areas concerned with food, overhead, drugs, vehicle expenditure, and hospital supplies. This potential has now been quantified as part of some detailed expenditure analyses carried out for the largest spender, QECH in Blantyre. The analyses concluded that on the basis of expenditure patterns in 1983/84, with more effective local management and a few simple interventions, over 44% of all non-salary expenditure could be saved: and given that the work already done has probably failed to identify all the possible areas where savings can be made, this figure may be closer to 50%.

It is intended that the MOH conduct similar studies in other areas where expenditure is high: headquarters and KCH in particular. While it is unlikely that percentage potential savings are as high in the districts, there is no specific reason why one should expect the figure to be any lower at KCH and at headquarters than it is at QECH.

The MOH plans to effect those savings discussed above in non-salary expenditure through improvements in the effectiveness of hospital management and management systems. Already the MOH is poised to implement an action plan at QECH which will be under way by the end of 1985, and also intends to initiate the same process at KCH almost concurrently. On the basis of these programmes, similar initiatives will be taken by the third quarter of 1986 at headquarters, the district hospitals, Zomba General Hospital, the special hospitals, and the rural units. It is assumed that the potential savings for all these categories is 25%, with the exception of the sub-centres where savings on existing activities are estimated to be 10%. From the detailed work carried out on QECH, these estimates would appear cautious, but on the other hand there are grounds to argue that potential savings would be lower because all these institutions are smaller and therefore likely to be more manageable.

Thus, as a result of a positive programme of improvements in management effectiveness and management systems, by year 4 of the plan period, considerable resources will have been released for deployment elsewhere.

There is expected to be a growth of revenue under the "Appropriations in Aid" umbrella. Though this category contains a large number of different types of revenue, many of which represent the reimbursement by donors of activities funded under the recurrent budget, in quantitative terms most of this revenue comes

from hospital fees levied in the paying sections of the three largest hospitals. In 1983/84 under K700,000 was raised in revenue, but it is officially estimated that this will be raised to K1.5m in 1985/86 on the basis of the new fees which were introduced in April 1985. The impact of the new fees will be two-fold. Firstly they represent a general price rise and are likely to result in considerably higher revenue per patient, and secondly the new schedule is much more workable, and is likely to assist the accounting departments to lower the non-collection rate, which is currently extremely high.

In addition to these factors, the schedule will be revised each year on the basis of changes in costs, and where demand for services is clearly fairly price inelastic these price rises will more than reflect changes in costs. The issue of cost recovery in areas where a potential for realising additional revenue exists will be studied early in the plan period with the intention of boosting the financial position of the Ministry.

The MOH will benefit significantly in financial terms by implementing the programme of management strengthening and systems improvement which is due to begin in the near future; first of all at the key cost centres, and later on the other institutions. The Ministry will also gain from the decision to revise hospital fees, and the intention to review these annually with a view to maximising revenue. These factors will release over 28% of total expenditure by the end of the sixth year, which can be used to fund the recurrent costs of new development programmes. The magnitude of funds to be realized from a cost-recovery programme can not be estimated now but there seems to be a significant potential for raising additional funds.

7.8 CONCLUSION

This chapter, on the whole has addressed itself to two major constraints which might hinder the successful implementation of the plan, namely financial and manpower constraints. It is not enough only to have sufficient numbers of all the cadres the MOH needs in its service delivery. Even when it is feasible to train all the necessary personnel needed, the question of availability of funds to meet salary costs should be looked into and if available, questions of authorised establishment and deployment of staff will have to be carefully considered.

On the financial side it is assumed that most of the development projects planned will have to be financed by external donors since the MOH does not have sufficient funds of its own to meet some aspects of the planned expenses. Once donors have been identified for various projects, it is assumed that the Ministry of Health will bear the necessary recurrent costs arising as a result of the implementation of these projects. The Ministry will have to identify means of using the existing resources more efficiently and minimize wastage. A potential for savings has been identified which if explored, might be one of the major means of

mobilising resources for the new as well as expanded programmes the Ministry intends to implement within the plan period. Consideration will also be given to the issue of cost recovery.

CHAPTER 8

STRUCTURE RE-ORGANISATION OF THE MINISTRY

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CHAPTER 8

STRUCTURE RE-ORGANISATION OF THE MINISTRY

8.1 INTRODUCTION:

The strategies, targets, and activities described in chapter 5, and 6 reflect a significant shift in Ministry of Health policy for the next 10 years. One of the strategies in chapter 6 is 4.7: implement structural re-organisation of the Ministry of Health. Because of the importance of this strategy in the implementation of the plan, it is given its own chapter.

8.2: THE EXISTING ORGANISATION STRUCTURE

The Principal Secretary (PS) is the most senior Manager and is responsible for the overall functioning of the ministry. The technical branch of the Ministry is under the Chief Medical Officer (CMO) who is directly responsible for the 3 Regional/General Hospitals, the 21 district hospitals and their peripheral health activities shown in Figure 8.1. He has a Deputy (the Deputy Chief Medical Officer - DCMO) who is responsible for the coordination of these 5 central functions which cover Epidemiology (Public Health Inspectorate and Laboratory Services), Maternal and Child Health, Nursing, Pharmacy and paramedics.

On the administrative side the Deputy Secretary (DS) is responsible for the Planning Department and, through an Under Secretary (US), for 5 staff departments covering Finance, Personnel, Training, Administration and Internal Audit.

Below the central level the MOH is divided into regional, district and peripheral levels. There are 3 regions each having a small Regional Health Team consisting of a Regional Health Inspector (RHI) and his team and a Regional MCH Coordinator. The Regional Public Health Inspector is in charge of the Regional Office and reports to the Chief Public Health Officer. The reporting relationships of the MCH Coordinators are unclear. Each district has a Medical Officer (DMO) who reports to the CMO. Each DMO has a team to run the District Hospital and the peripheral health units (rural hospitals, health centres, mobile clinics). Figure 8.4 illustrates a typical district organisational structure.

8.2.1 : Deficiencies of the Existing Organisational Structure

Having analysed the existing organisational structure, the following organisational deficiencies were identified:

- (1) The functional roles of the MOH were not clearly defined and understood and hence some individual departments could not relate their activities to corporate goals and therefore their ability to

act in an effective, coordinated way was reduced. In addition, the objectives and role of some individual departments was not adequately defined which detracted from inter-departmental coordination. For example, the role of the MCH Department in relation to that of the Nursing Department and the District Medical Officers has not been adequately clarified. This has led to difficulties in defining the activities of the Regional MCH Coordinators for example and to a lack of fully effective coordination between the two departments. This general ambiguity as to the role and organisational position of certain departments within the Health Care Systems detracts from organisational effectiveness. For example, lines of authority were not always clearly defined which created a situation where professional rivalry and unnecessary conflict could develop.

(2) According to the existing structure there are seven separate technical activities: Hospital Services, MCH, Nursing Services, Epidemiological Services, Pharmaceutical Services, the Health Inspectorate and Paramedical Services (figure 8.1). This grouping of functions is largely correct given the fact that Hospital Services, MCH, Pharmaceutical Services, Epidemiology and Nursing are separate functions. The justification for having Paramedical Services separate from the hospital function with an independent reporting relationship to the DCMO is not particularly valid. However, because there will not be a senior manager looking after hospitals reporting to the DCMO in the new organisational structure the Principal Clinical Superintendent should continue to report directly to the DCMO.

(3) Many individual roles are inadequately defined which leads to role confusion and some role conflict both of which work against organisational effectiveness. Clearly defined job descriptions are necessary if an organisation is to operate effectively.

(4) There are too many levels of authority in the technical and administration branches of the MOH. In the administrative branch for example, under the PS there is a DS who is formally responsible for the Planning Department in addition to supervising a US who is, according to the organisational chart and his job description, responsible for finance, personnel training and administration. In fact, the Chief Planner largely reports to the PS and to the CMD so the DS's role is to manage the US and act as Deputy to the PS. The DS-US relationship is organised on a one-on-one basis which in this situation cannot be justified. What it does is to over-extend the chain of command between the PS and the operating levels of finance, personnel etc. which is the level at which key basic operations are carried out. It is therefore recommended that the role of a deputy to the DS (i.e. the US) is inappropriate and that the US role should be retitled.

(5) There are many other examples in the MOH of an excess of authority levels. Clearly the maximum number of positions that can be supervised effectively by a particular manager (that is, his span of control) varies with the complexity of the task and the calls on the manager's time over and above the coordination of his immediate subordinates a manager can handle effectively is between 5 and 8

depending on the nature of the task. In the MOH headquarters what is evident is the small number of positions that most senior officers are expected to manage. Seven is the maximum but 2 or 3 subordinates is much more common. Unless the manager has a lot of wider responsibilities attempts should be made to give managers more than 2 or 3 subordinates to manage.

(6) In the districts, the opposite problem occurs that is, managers are asked to control working groups which are far too big to manage effectively. Span of control and responsibility at the lower levels is particularly interesting because this is where the supervisor is expected to manage key basic operations crucial to the effectiveness of the MOH. In particular, supervision by district staff (DMO's Matrons, Health Inspectors, Senior Clinical Officers, MCH Coordinators and Public Health Nurses) requires considerable improvement. This is not a criticism of the people playing these roles but a reflection on the lack of role clarity, inadequate structure of the supervisory roles (span of responsibility and control is too wide), inadequate numbers of supervisors to achieve effective control and to some degree inadequate training. These criticisms also apply to the Referral Hospitals where control of resources needs radical and immediate improvement given the large proportion of MOH resources spent in these institutions. We are convinced of the key importance of improved supervision to better health care and this view will be reflected in the emphasis we put on the training of supervisors in our implementation plan. In advocating this approach we are aware of the difficulties of achieving an appropriate balance.

(7) The decision making process in the Ministry is over centralised. This is particularly so in the case of the CMO who is inundated with routine operational questions which should be answered lower down the hierarchy. Some managers are striving to achieve greater delegation but they are hampered by a scarcity of expertise and experience, lack of effective management information, poor management system such as budgetary control and confusion over authority limits and accountability. A degree of devolved authority is called for which should be operated in such a way as to allow line managers to be called to account for their performance and that of their departments. Although in health care it is difficult to identify individuals with sole control over resources given the large number of interests which interlock, clear lines of accountability must be defined and appropriate management controls established within a system where authority is decentralised.

(8) In the MOH there is a lack of a clearly defined **general management function**. This general management role has to be performed by identifiable individuals who will provide the driving force to seek and accept direct and personal responsibility for developing management plans, securing their implementation via appropriate controls and monitoring actual achievement. It is therefore proposed that a general management system organised around clearly defined organisational objectives and directly related to specific centres of authority and responsibility be established.

(9) Managerial systems are inadequate in the Ministry. Examples are the absence of firm establishment control, an ineffective financial management system, and a weak management information system.

8.3 : PROPOSALS FOR Re-ORGANISING THE MINISTRY

The objectives of the National Health Plan as found in Chapter 5 will be used as the basis for the development of health services. A statement of objectives will be brought to the notice of all staff and specifically used on training and induction courses, and in ministerial publications. This statement will help clarify the objectives of each department in particular, the objectives and role of their central advisory functions should be clarified. Some of these functions are advisory e.g. (Personnel, Finance, Epidemiology.) As line managers they formulate, coordinate and propagate Ministry policy. These departments should be considered to be an integral part of the health care system and should not be treated as functions separate from the mainstream of activities. That is, these departments are all part of an array of health delivery services which should be organised by type of service (medicine, surgery, obstetrics, paediatrics etc) and not by discipline (doctors, nurses, x-ray technicians etc).

In recommending a new Organisational Structure the key points of emphasis are, firstly, that the structure should facilitate the integration of all health care activities and the administrative services and not encourage the separation of disciplines. Emphasis on team work must therefore be a central feature of the implementation plan. Secondly, an organisation is only as good as the people within it. In Malawi there is a shortage of local professional and technical manpower in crucial areas of the MOH. The need for developing self sufficiency in these key areas is of crucial importance and has to be taken into account in the restructuring process.

8.3.1 : Central Structure

The first recommendation is that there should be six departments within the technical wing of the Ministry. These Divisions should reflect the seven main functions/activities of the Ministry, namely: Family Health Services, Hospital Services, Epidemiology, Nursing Services, Pharmaceutical Services, Paramedical Services and Health Education Services. The heads of these departments should report to a Deputy Chief Medical Officer who should report to the Chief Medical Officer whose role should be renamed Chief of Health Services CHS (see figure 8.2).

The role of the CHS will be largely to provide overall leadership, direction and coordination. He will define and articulate policy and have overall responsibility for the orderly realisation of the 10 Year Plan. In order to enable the CHS to spend time looking after strategy issues and in particular, to manage the implementation of the 10 Year Plan, the CHS should have a Deputy to look after the

operational activities of Central Departments, to be directly responsible for the 3 Regional Health Officers and the Senior Medical Superintendents (SMS) of the 3 regional/referral hospitals. When the performance of these hospitals has been improved and effective control over resources established the SMS's of the three big hospitals can then report to the Regional Health Officers. The DCHS will be able to fulfill this demanding role only if his immediate subordinates are given the authority to make operational decisions and are trained to do so.

Within the administrative wing there will be two departments:

(1) A department responsible for manpower management and development, training, recruitment, salary and wage administration, management services and general administration. This department will be called the Personnel and Administration Department. The role of this Department vis-a-vis the Central Department of Personnel Management and Training will have to be clearly defined.

(2) A significantly strengthened Finance Department responsible for effective budgeting and financial control will be established.

The administrative functions will be headed by the Deputy Secretary (DS) but without a deputy (i.e. and Under Secretary). In the case of absence of the DS, temporary cover will best be provided by the nomination of an appropriate subordinate in an acting capacity either on the basis of ability or by seniority or by rotation as appropriate. This will clearly require an effective career development policy. Shortening the chain of command in this way would improve communication lines, facilitate clearer definition of responsibility and allocation of duties between jobs and thus make for greater accountability. This would also create the need for the DS to develop technical skills in personnel and finance rather than simply those of an administrator.

The Chief Health Planner will report directly to the CHS who will be responsible for the Plan's implementation. He will be responsible for the planning of health requirements, resources and developments, and for the project monitoring and evaluation. The training institutions will report to the training officer who will be part of the planning unit. The Planning Department will be strengthened and staffed to fulfill this demanding role and Officers will be an integral part of the Ministry. That is, they should be trained health planners. For their career development in the long term certain incentives will have to be worked out. The posts in the planning unit which are not departmental should be made so.

8.3.2 : The Regional Structure

The objective of establishing a Regional Health Team will be to provide an additional level of authority able to coordinate the health care activities of the MOH and other agencies (PHAM and Local

Authorities) more effectively than is happening at the moment. If this objective is achieved then headquarters staff will be relieved of having to make day to day decisions affecting the regions. This will enable headquarters staff to play their strategic role of policy formulation and direction planning and reflection without being inundated with operational queries.

Regional Health Officers will need support staff but these teams will be kept as optimum as possible. With the inclusion of a Regional presence there will be at least 4 levels in the delivery of health care, namely; Headquarters, the Region, the District and the peripheral units. Within the general management system advocated here, the general managers are to be responsible for managing total resources in both a technical and administrative sense. Individuals in the general team can have functional links with specialists in their disciplines whose role is to give advice when asked and to be responsible for the technical proficiency of those who report functionally to them.

Figure 8.3 illustrates these and other points given in the introduction of Regional Health Officers (a general manager role). And the Regional Nursing Officers, The Regional Public Health Officer, the Regional MCH Coordinator and the Regional Nursing Officers should be responsible in both a technical and administrative sense to the RHD for their day to day activities. But the key point is that the line boss of these three managers in the Regional Team will be the Regional Health Officer. He will be responsible

for the day to day technical and administrative activities of all those in the regional team. In particular he will be responsible for keeping expenditure within budget on a month by month basis.

The decentralisation message is clear. It must not lead to unjustified additional overhead costs given the intense pressure on the Ministry's recurrent costs. In particular, it must improve management accountability, it must lead to quicker response to questions and requests for help from the districts and it should lead to improved communications and a great feeling in the districts of being an integral part of the Ministry. In short it should lead to improved organisational effectiveness at the minimum additional cost. To achieve this there is a need for clearly defined job descriptions, clear statements of individual authority and responsibility levels, clear lines of communications, clearly defined individual goals and targets, clear cut supervisory procedures simple but effective information systems and comprehensive training in how to operate the new systems.

The Regional Health Team will consist of a Regional Health Officer supported by a Regional Public Health Officer, a Regional MCH Coordinator, a Regional Nursing Officer a Regional Health Education Officer and a small administrative team plus the District Health Officers. At this stage of the Ministry's development, it is inappropriate to include in the Regional team representatives of the other Headquarters departments that is Pharmacy Services and the

coordinating role of the Principal Clinical Superintendent. Whether these departments need strengthening at headquarters will be demonstrated following a detailed staff inspection. The reporting principles to be adopted within the Regional team are as illustrated in diagram 8.3. Three of the four people reporting to the RHO have functional links with Headquarters managers. Only the DHO has no functional links.

The South and the Centre have Regional Hospitals each with a Senior Medical Superintendent in charge. The utilisation of resources in QECH and KCH requires considerable improvement. Both are prime targets for the implementation programme and detailed studies of the way they are managed should be done as soon as possible. Given their size and importance it would be unwise to attempt to integrate them into the Regional structure at this stage.

At this stage therefore, these will be put under direct Headquarters control and have their Senior Medical Superintendents (and that of Zomba General Hospital) reporting to the Deputy Chief of Health Services. However, when their use of resources is effective they could be put under RHOs.

8.3.3 : The District Structure

The district level is one of the two key areas in the Ministry in terms of improving the utilization of resources. The other is associated with the control of the two Regional Hospitals by the Deputy Chief of Health Services. Because of the need to improve the utilisation of existing resources and the need to strengthen PHC activities, resources allocation at the District level should be treated as a priority. The District Health Services cover the delivery of primary and secondary level health care activities through the provision of the following services: in-patient, out-patient, medical and other curative activities such as radiological and laboratory, dental and ophthalmic services; environmental sanitation and hygiene and communicable disease control and out-reach personal preventive activities (notably MCH).

District Health Team should be headed by a District Health Officer (DHO) who will be responsible for all the curative and preventive activities pursued in the District including the leadership of the health team for PHC. They should have a team consisting of a District Hospital Secretary responsible for transport, maintenance, and general administration, a matron of the District Hospital who will be responsible for nurses in the District Hospital and for maintaining standards of nurses operating in health centres with maternity wards and out-patients activities (i.e. curative activities), a Clinical Officer, a District Public Health Officer, a District MCH Coordinator and a district health educator (see figure 8.4).

In addition, the heads of the Primary Health Centres (rural hospitals) should report to the District Health Officer. The heads

of the Health Centres should also report to the DHO. Thought should be given to the provision of pharmacy services in the district. At the moment this is given by an officer at TA level who reports to a Clinical Officer in the District Hospital. It may be thought appropriate to upgrade this function to have a pharmacist reporting direct to the DHO given the crucial need to control drugs etc. much more effectively.

At the moment one of the most significant anomalies is the lack of formal authority vested in the post of District Medical Officer. The success they achieve is largely a function of their authority as a doctor, their personality and diplomacy. The majority of the hospital staff perceive themselves to be responsible in varying degrees to others outside the hospital organisational structure. This has resulted in a situation which the District Medical Officers often feel they do not have the authority to give orders to many of their staff. This situation has to be changed by:

1. Designating the District Health Officer as the formal boss of all members of the District Health Team in both an administrative and a technical sense. His new role will be that of a general manager responsible for all resources (people, capital and materials). This must include the authority over all members of his management team.

2. Recruitment, basic training and initial posting of hospital staff should remain the responsibility of the heads of central departments and their regional representatives. They will also be responsible for the manpower planning activity associated with their function so they should be involved in career development and promotion of their cadres on a national basis. However, since the DHO's are to be general managers, members of their staff must not be moved without them being consulted. The system adopted should be that vacancies should be advertised and coordinated regionally or centrally but no transfer can take place without prior consultation with the DHO's.

3. Once posted individuals are to be regarded as being totally under the district Health Officer or his delegated officer's authority and on the establishment of the hospital or the District Health Team.

4. Once posted, there should be no change to each officer's status without prior and full consultation with the DHO. This to include grading, designation, duties, duty stations etc. This approach allocates to the District Health Officer a **General management** role. While recognising that any generalised statement about what management ought to do is likely to be only partially true for particular situations, there is some value in defining general management as the responsibility drawn together in one person for planning, implementing and evaluating performance.

These general management role should be performed at many levels in the organization not just at the top. It has to be performed by identifiable individuals who will provide the driving force to seek

and accept direct and personal responsibility for developing management plans, securing their implementation via appropriate controls and monitoring actual achievement. This role therefore involves responsibility for the effective use of all resources (people, capital and materials). That is, they should be given the responsibility to meet performance targets in all these 3 main input areas and given the authority consistent with this responsibility. In order to execute these responsibilities general managers such as the District Health Officers will need among other things:

1. Clearly defined job description which emphasise the elements of the general management function and clearly states his authority over all members of his management team.
2. Administrative and professional support. For example, an effective District Hospital team and in particular a well trained Hospital Secretary.
3. A management budget which relates work load and service objectives to financial and manpower allocations, which will sharpen up the questioning of overhead costs. In particular, procedures are needed which spell out the role of the Chief Accountant's Department in providing management accounting support in the development of the budgets and monitoring performance against them and clear rules for reporting variation between budgets and performance and authorisation limits.
4. Other relevant management information such as up to date establishment and compliment figures to enable the DHO to exercise effective establishment control.

The above role of the general manager may be further illustrated by reference to issues within hospital administration. The broad principles along which the Ministry should supervise and coordinate hospital services include the following:

1. The Deputy Chief of Health Services will be a general manager responsible for coordinating the activities of technical services and the curative institutions, providing the CHS with up to date information and support in policy formulation, programme planning and development, recruiting, assigning and providing career development for clinical staff and coordinating the provision of administrative and technical information. He will be a general manager of the total resources of the professional wing of the Ministry and he will be responsible for a management budget and held accountable for keeping within its monthly constraints.
2. Another key general manager will be the Regional Health Officer (RHO). He will be directly responsible to the DCHS. He will be responsible for the effective use of total resources in their regions and he will have his own management budget, covering all health care activities in the Region and he will be held accountable for ensuring no overspending takes place. He will receive functional support and work closely with the Assistant Chief of Health Services, the Chief Pharmacist and the Principal Clinical

Superintendent in Headquarters.

3. The District Hospitals will be run by a general managers (the District Health Officers) who will be directly responsible to the Regional Health Officer. They will have their own management budgets for their hospitals and for all other health care activities in the districts which again they will be held accountable for.

4. Each hospital should operate as an integrated management unit with a management hospital team which meets regularly to discuss all aspects of running the hospital. Each hospital management team should have adequate authority delegated to it to discharge the responsibilities assigned. Functional heads in the Ministry Headquarters or the Region should not issue direct instructions or monitor specific functions in a hospital without the DMO being aware of the activities.

5. A key aspect of this general management role is being held responsible for controlling total resources and being given the authority to execute these responsibilities. This should provide the DHO, for example, with the flexibility to manage their own affairs without undue interference from their superiors. Hospital organisation and systems however, should be scrutinised on a regular basis by the RHO to ensure consistency of approach and adherence to the standards required. The Ministry should introduce an effective system of monitoring performance (technical and administrative) and provide direction, guidance and coordination as necessary.

6. Each of the three levels of general managers mentioned above (DCHS, RHOs and DHOs) will be assisted in the delivery of health care by functional managers at headquarters and in the regions and districts. Such functional managers will be nurses, clinical officer, hospital secretaries and others.

8.3.4 Management of Peripheral Health Units

Perhaps the most crucial area of all, given the importance of the Primary Health Care approach, is to ensure the effective operation of the peripheral units and the supervision of the medical assistants (MAs), health assistants (HAs), nurses and the health surveillance assistants (HSAs) operating within them. Considerable time and effort should be spent on devising a clear hierarchy of supervision, on training supervisors to act as managers of scarce resources and, in particular, structuring their roles so they can effectively manage the way the work is organised and in providing well structured procedure manuals and standing orders coupled with clearly defined referral systems.

Support for the primary health care activities in the health centres will come from four sources: the PHN, EN/M, matron, DPHU, health educator apart from the support from other sectors.

As in the Regional structure this organisational structure stresses the distinction between line and functional or staff responsibilities.

The line responsibility for managing the health care activities of the health centres rests with the District Health Officer, and the Senior Medical Assistant and his team. The District MCH Coordinator, the Public Health Officer and the District matron are there to give technical support but they should not possess executive authority or control treasury vote funds.

This proposed total organisational structure is as found in figure 8.5 which it is believed will lead to creating the three issues of balance which experience has shown are central to the effective operation of any health system.

The first concern is the balance between hospital and community services. The second concerns the balance at the periphery between curative, personal preventive (MCH) and community functions (communicable disease control environmental sanitation). Thirdly, there is the balance between service delivery and supervisory responsibilities.

CHAPTER 9: PHAM AND OTHER NON-MINISTRY HEALTH SERVICE PROVIDERS IN
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CHAPTER 9: PHAM AND OTHER NON-MINISTRY OF HEALTH SERVICE PROVIDERS
IN THE 1986-1995 PLAN PERIOD

9.1 INTRODUCTION

In previous chapters the details of strategies for attaining specific objectives were discussed. PHAM, local government health service providers and other health providers (hereinafter referred to as 'non-Ministry service providers') are mentioned briefly in this context. However special attention needs to be drawn to the coordination of future activities of these service providers, especially PHAM, with those of the MOH.

The need for this special attention stems from the inter-relationship of Ministry and PHAM health service systems. PHAM makes a significant contribution to the provision of total health services in Malawi and receives a significant subsidy from the Ministry each year. For economic reasons and common objectives there is need for closer coordination. PHAM training centres are an important source of trained health services personnel for MOH health facilities, as well as a source of technical expertise. Historically, it has not been uncommon to find a small-scale periodic transfer of administration of PHAM-operated facilities to the Ministry. The scale of this trend could increase in the future. As a result, both Ministry and non-Ministry services providers have expressed the need for greater coordination of their activities to the extent possible given the disparate nature of the health service units among non-ministry service providers.

This chapter comprises three parts: a brief recapitulation of existing situation of non-ministry service providers; an identification of the points of structural and operational interaction where non-ministry service providers might interact (and their extent of interactions) with the Ministry objectives as presented in the previous chapters; and structural integration of MOH and PHAM programs.

9.2 GOVERNMENT POLICY TOWARDS PHAM

At present, the MOH provides two types of assistance to PHAM:

- o funds to cover the cost of Malawian staff employed by PHAM: and a small amount for training schools (K1,338,413 in 1983/4);
- o funds for free drugs and supplies to in PHAM units for TB, Leprosy, STD and Bilharzia (K121,233 in 1983/4 and MCH supplies.

*This includes Red Cross, estates ADMARC, private and and traditional practitioners, LEFRA, other government departments etc.

In addition, since PHAM units are permitted to purchase their drugs from Central Medical Stores, they benefit from the subsidy the MOH at present gives to CMS. Since the government's aim is now to make CMS self-supporting, this subsidy will be eliminated in the future.

The total assistance to PHAM in 1983/4 represented 6.8% of the MOH expenditure. The budget for 1984/5 gives a figure of K2,267,523 or 13.3% of the MOH budget. It is unclear whether this represents a definite policy to increase the PHAM grant, or merely reflects the action of the Treasury in cutting back the MOH budget on other sub-heads. Expenditure by the MOH for 1984/5 is, however, running well ahead of the budget so the eventual share going to PHAM may be around 8-9%. It appears to be the MOH policy at present to maintain assistance to PHAM as a constant proportion of the MOH's budget. In the future, assistance may therefore rise or fall, depending on the availability of resources.

On the development side, the approval of the MOH is required for any new PHAM units, and it had been agreed that the MOH will not build a new unit near an existing PHAM unit. In the past, PHAM units have benefitted from development funds available for health under agricultural development projects and development of Health Centre Services project.

There has been, and still is, a strong feeling among church organisations that the MOH should take over certain PHAM facilities. There is also public support among some populations in catchment areas of PHAM facilities for the MOH to take over these PHAM facilities since people would prefer to have a free service. Given the MOH's financial position, however, it maintains a policy of not taking over any PHAM facilities.

9.2.1 Recurrent Expenditure

A significant change in the financial structure of PHAM units occurred in 1978 when the government (MOH) considerably increased its grant to PHAM. The government now contributes about a third of the revenue of PHAM units, fees constitute another third, and donations and 'other' the final third. The proportions differ significantly by type of unit: donations go mainly to hospitals and to health centres, which get over half their revenue from fees and 40% of their operating expenses from the government. PHAM Health centres are thus almost totally financed.

While the government policy on assistance to PHAM ensured the survival of many PHAM units, many are still in financial difficulty. This is particularly true for the Anglicans and for the CCAP in the northern and southern regions because they receive little overseas support and in addition try to maintain low fees. The financial difficulties of some units also reflect problems to do with the nature of the overseas assistance they receive: donations are more readily available for capital developments than recurrent costs, and in the recent past there has been a considerable expansion of physical facilities, producing a recurrent cost burden that units are having difficulty

bearing.

9.2.2 Health Services

PHAM health facilities make a major contribution to health services in Malawi. In the area of hospital care PHAM contributes just over one-third of admissions and in-patient days, and for rural health facilities, it is nearer half. In the area of out-patient care, however, PHAM both has significantly fewer health centres, dispensaries and maternities than the MOH, and sees fewer patients per unit. Thus, the MOH sees 96 per cent of total out-patient first attendances.

The PHAM contribution is thus heavily weighted towards in-patient and hospital care, though in recent years efforts have been made to expand the outreach and preventive activities of PHAM units, especially through under-five clinics, and more recently, primary health care.

PHAM's training of Enrolled Nurse Midwives is significant. Their estimated number of Enrolled Nurse Midwives (three-year program) graduated each year is 154. The two-year Enrolled Midwife course produces 72 candidates each year. By comparison, the annual total output of the MOH nursing programs (one four-year programs and one three-year program) is 60 nursing candidates.

The great majority of PHAM expenditure is for hospital and health centres in rural areas, where its share of total MOH-plus-PHAM expenditure is about 33%. Overall, PHAM contributes about 20% of total MOH-plus-PHAM expenditure on curative institutions.

Sixty-five per cent of PHAM expenditure goes to hospitals, and out of the remaining 35%, a considerable proportion goes to rural health facilities.

The pattern of inputs of PHAM units differs significantly from that of the MOH. PHAM units have a significantly higher cost of expatriate staff. Medical supplies take up about the same share as in the MOH, while transport is considerably lower, reflecting the limited area of responsibilities for many units. The PHAM Unit average of K3.70 per in-patient can be contrasted with an estimated MOH figure for district hospital in-patients of K4.60 per day. Neither of these figures is adjusted for the cost of out-patient care, so that part of the cost difference is likely to result from the greater number of out-patients seen at MOH hospitals. Another part (perhaps K0.50 per patient per day) arises because PHAM units do not provide food. Other reasons for this difference still need to be investigated, and more accurate unit costs established.

9.3 OTHER SERVICE PROVIDERS

9.3.1 Ministry of Local Government

The Ministry of Local Government, through the District Councils, provides approximately 94 health units (mainly maternities). These units charge fees to their patients. Salaries of staff are low and buildings and equipment minimal, so the service provided is generally inferior to that in MOH units. Total recurrent expenditure on these units was estimated in 1981 to be approximately K372,000, though this seems very much on the high side and a figure of K250,000 or less appears more realistic. In addition, the town councils of the major towns provide environmental and MOH health services. The MOH together with Ministry of Local Government will examine the reasons why health facilities operated by local authorities are not properly run so as to find means for cooperation and improvement of services.

9.3.2 Other Agencies

Under government ministries (e.g. Agriculture) and other agencies (e.g. estates and private companies) provide health services for employees. In the case of private companies and estates, these are usually simple clinics, staffed by an auxiliary workers and not open to the general public. Their contribution to total health sector expenditure is minimal. There is need to initiate a dialogue with these agencies so that they can be more interested and involved in workers health. Other non-Government organizations which provide health services to the population include Leprosy Red Cross etc.

9.3.3 Private Practitioners

The non-traditional private sector is a rapidly growing, but still very small, part of the health sector. There are approximately 30 private doctors, largely in Blantyre and Lilongwe. In 1981 their income was estimated to be around K2m. This figure is now probably closer to K2.5m: the insurance scheme (MASM) alone pays out K1.2m a year in the form of a monthly capitation payment of K4 for each insured person on a doctor's books. At present only a few private doctors have in-patient facilities, but several have plans to set up maternity and/or general units. There is need to ensure that new facilities are inspected to ensure that they are of good standard. In addition to this there will be need to continue to examine issues regarding private practice.

Information on expenditure on traditional practitioners is extremely sketchy. A figure of K598,000 was estimated in 1980, but this seems on the low side in light of the estimated number of 5,000 TBAs and unknown number of other traditional practitioners. Similarly, good information on private purchases of drugs is unavailable, though K2.7m was estimated in 1982 for purchases of drugs from Malawi Pharmacies. To this figure needs to be added an unknown expenditure on products such as aspirin and chloroquine sold in grocery stores throughout the country.

9.4 THE NEED FOR COOPERATION

The magnitude of PHAM contribution to Malawi health services and training of health manpower, coupled with the significant financial contribution that the MOH makes to the overall operation of PHAM units, requires that close cooperation and coordination take place. In a large context, given the limited resources available for health services, it is in the best interest of the MOH to continue to foster viable alternative sources for health care services, provided several conditions are met:

- o to the extent possible, services provided are consistent with MOH policy and priorities;
- o the continuing contribution and further program activities of these alternative sources are accounted for and become an integral part of the MOH planning process;
- o the day-to-day operation of services proceeds in concert with daily operations of the programmes of the MOH;
- o services provided are consistent and of high quality.

Following are discussions of how this above agenda might be met. Noted first are points of interaction between the MOH and PHAM as related to the previous strategy statements, followed by a suggested structural format for a closer integration of PHAM and the MOH.

9.4.1 Points and Scope of Interaction with the MOH Core Services

In the context of MOH strategies intent to reorganise the existing pattern of health services around a set of core services, there is a need for interaction between Ministry and non-Ministry service providers. As the second most important provider of services, PHAM can greatly increase its current impact on health status. As with Ministry health services, it must place greater emphasis upon prevention and early treatment of the priority health problems. It desirable for Ministry and non-Ministry service providers to:

- o adopt similar service and equivalent facilities, using standardized preventive and curative intervention protocols;
- o adopt updated job descriptions for equivalent non-Ministry personnel as these are updated for Ministry personnel.

PHAM's experience in developing core health services could be used in the "PHC District" to provide valuable expertise in the Ministry's effort in this regard. The MOH should use PHAM units in PHC districts as part of the initial implementation districts for Ministry core services.

Expansion of Peripheral Health Services and Health Staff

The MOH intends to expand peripheral health services and numbers of health staff at the peripheral level, as well as their roles and responsibilities. Non-Ministry physical facilities, will probably not experience any increase during the next ten years. Indeed, non-Ministry service providers probably will be unable to expand the range of services offered through any category of health facility without major assistance. However, it is to mutual advantage:

- o to explore the potential for the Ministry to establish peripheral health staff posts in non-Ministry health facilities;
- o to explore how the excess training capacity of non-Ministry programmes might be adapted to Ministry training needs;
- o for Ministry and non-Ministry health programmes to integrate district-level supervision and in-service training;
- o for non-Ministry health service providers with relevant expertise to participate in Ministry curriculum development.

Redefinition of Hospital Services

In the context of the MOH National Health Plan, it will be useful for Ministry of Health and non-Ministry health facilities to:

- o share their experience so as to identify areas for gains in efficiency and savings;
- o share their experiences regarding admissions and discharge policies and explore fee-for-service issues.

Improved Budgeting

In recognition of the need to monitor recurrent costs, the MOH intends to undertake a systematic effort to improve budgeting and control expenditures. It would be of mutual interest for all health programmes to exchange, in uniform format, through district level authorities, routine information which is used to generate unit costs.

Improved Planning Process

The Ministry has opted for a systematic effort to foster development and use of a planning process at all levels of health service development. In the context of a planning and budgeting cycle at the central level it is suggested that:

- o PHAM's status be equated with a Ministry Section for the purpose of facilitating its participation in the planning cycle;

- o PHAM eventually enter the planning/budgeting cycle through the submission of proformas, as will be required in all Ministry Sections.

9.5 STRUCTURAL INTERGRATION

For a more closely integrated MOH and PHAM program, a number of organisational activities should be undertaken:

9.5.1 Policy Level

At a national level, a policy group chaired by the MOH and consisting of representatives of PHAM and other non Ministry health service providers will meet at least annually for a general review of:

- o MOH policy and priorities in reference to current program activities and new service developments of PHAM units;
- o financial standing of the PHAM units and their anticipated future needs in reference to resources available from the MOH;
- o development or modification of structural changes in PHAM/MOH organisations of health services that would lead to better integration of services.

9.5.2 Program Planning Level

At this level the MOH, program managers will consider PHAM as an integral part of any service development. This implies that in the planning of modification or introduction of services, representatives of PHAM are intimately involved in the process.

9.5.3 Operational Level

For health services to operate smoothly, there must be cooperation between and coordination of services in the day-to-day activities of PHAM and the MOH. Although this informally exists in many areas, these activities should be strengthened and improved. Suggested mechanisms include:

- o Strengthening and redefining the role of the District Hospital Committee (perhaps better renamed the District Health Committee). This would be a working committee in the district consisting of all health providers and be charged with:
 - planning and coordination of activities through joint development of a district workplan;
 - resolving problems arising between the various service

providers;

- local program review for consistency and quality of service.
- c Developing a district supervision and management plan that include all health units and may involve PHAM physicians providing professional supervision to government health centres.

This would occur when it was geographically reasonable. (The Use and Functions of Management Information). On recommending the above, it is recognised that a number of issues need to be addressed, such as:

- o the separate discrete identity of PHAM entities, with only an informal national structure;
- o the difficulty for some PHAM units in providing a service or supervising an activity (such as child spacing) with which the sponsoring organisation is not in agreement.

Better integration of services between PHAM and the MOH will undoubtedly create administrative and programmatic difficulties. However, the potential benefits of closer cooperation make it mandatory that creative solutions be found.

9.5.4 Special Considerations Related to the Financial Needs of PHAM

The financial position of the MOH limits its ability to assist PHAM further. Moreover, given the bias of PHAM units toward health facility based service, it is probably not a top priority for the MOH to support an existing curative network rather than to develop new services where none exist. In addition, the low utilisation of PHAM facilities is not necessarily a problem that urgently needs to be tackled if it requires extra government resources. If the government faces a choice between increasing the patient load of PHAM units by increasing its subsidy to permit a reduction in fees and expanding government facilities, the decision might be made on the basis of which option will give the greatest return in terms of improvement of health. The MOH already devotes substantial resources to hospitals. It will therefore not necessarily be a priority to remedy low in-patient utilisation levels as opposed to assisting the more peripheral PHAM units. Moreover, the introduction of general fees by the Ministry of Health should increase the attractiveness of PHAM units.

Some of the options to the MOH in relation to PHAM are:

- o identify those peripheral units which provide the only health service in the area, and provide enough financial support to enable them to offer services on the same term as government;
- o increase the government subsidy to only the health centre level, on the condition that the fees charged are lower, (perhaps by

50%) and approach the fees introduced by the MOH;

- o increase the government subsidy to all PHAM units, on the condition that fees are standardized at a low level (for instance, 50% lower);
- o plan the eventual takeover of all PHAM units.

Given the cost of the various options, the most feasible ones are to provide an additional subsidy to selected units (cost equal to maximum of 11.4% of MOH 1983/4 expenditure). This issue will be studied and a better option chosen taking into account the economic situation.

9.5.5 Possible Solutions to the Problems of Local Authority Units

The MOH has yet to make a decision on whether to take over local authority units or leave them as they are. If it wishes to absorb them eventually into the MOH network, this would cost roughly the equivalent of 1.3% of MOH expenditure, or K274,500 (net cost, allowing for income from MOH fees, possible offset to a small degree if funds are transferred from the Ministry to Local Government to the Ministry of Health). The MOH could insist that certain conditions to do with the quality of the building and availability of staff housing should be met prior to takeover. Further information on the location and costs of units is required before detailed policy decisions are made.

CHAPTER 10

THE FUTURE - A PLAN FOR CHANGE

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CHAPTER 10

THE FUTURE - A PLAN FOR CHANGE

INTRODUCTION

The purpose of this this Chapter is to indicate how the Plan is to be implemented. The Chapter is divided into two sections: (1) the organisational changes and improvements necessary to provide the framework for implementation of new technical programmes; (2) the salient features of a continuing planning process. It has been clear in the discussion of chapter 5, 6 and 7, that not all information required for this plan document has been available. Where the plan has been unable to achieve a sufficient level of specificity, it is clearly important that the plan provide those mechanisms whereby that specificity can be achieved in the future. The purpose of the latter section, therefore, is to set out the MOH's commitment to a continuing planning process, and to highlight some of the specific worktasks to be performed within the short term to contribute to the planning process.

10.1 IMPLEMENTATION OF INSTITUTIONAL CHANGE

There is ample evidence to suggest that corporate plans fail at a very early stage, largely because of one or both of the following factors, both of which must be taken into account for the purposes of the implementation strategy:

- o inadequate management commitment and effectiveness;
- o the wrong intervention strategies are chosen and too many initiatives are taken at any given stage.

Clearly the objectives of the plan require significant changes in virtually all the activities undertaken by the MOH, and so it is crucially important to devise the correct implementation strategy.

The MOH, in order to be successful, must offer the right service and must do so in a cost effective way. The six overall objectives of the plan fit neatly into these two categories. Improving access, child survival, and health status, are all tantamount to providing the right service. Strengthening the management capability and expanding manpower development clearly address the task of improving the utilisation of resources.

Although all the objectives are interconnected, the first three are dependent upon the success of the following two - i.e. they cannot be achieved without capable management and the necessary manpo-

wer resources. In other words, the ability of the MOH to achieve the plan objectives is a function of the existing implementation capability of MOH staff, which, though partly conditioned by the availability of finance is more a function of the availability of skilled personnel at each level and the effectiveness of management.

For some time, "institutional" constraints have impaired the implementation of development programmes. (Institutional constraints refer to prolems of management, that is, the reluctance of senior managers to make decisions and to take responsibility for their implementation, as well as inadequate management skills, excessive "red tape", inappropriate staffing patterns and levels, etc.) And it is in recognition of the fact that development is impaired more by institutional factors rather than by technical factors that the emphasis in the early stages of the plan period is upon institutional development: that is, strengthening the performance of the MOH to increase its capacity to absorb additional capital and technology, and aid, in the form of technical assistance.

The initial emphasis in the implementation plan should therefore be on the task of improving management capability and in particular the ability to use resource efficiently. This conclusion is further supported by two additional factors: first of all the MOH, which has consistently failed to avoid a large annual overexpenditure on recurrent budget, is now under pressure to control expenditures effectively, and to keep within the overall allocations for 1985/86. Secondly, there is evidence that MOH managers at many levels take a relatively relaxed view towards cost control. There is no doubt that considerable savings can be achieved, as long as a major initiative is taken to reduce costs. Indeed, these savings may in fact be the only way of funding some of the planned activities contained in previous chapters, given that further finance from central government is unlikely.

Thus, top priority will be given to improving the management of existing resources. Once expenditure is under control, costs are lower, and the implementation capability of the MOH has been improved with management training, improved control systems, etc, the technical aspects of the plan can be tackled with confidence.

In order to improve total resource utilisation, it is clear that initiatives must be taken to improve labour, material, and capital productivity. In view of the fact that it is not possible to take initiatives in every single area of inefficiency, it is clearly necessary to select specific interventions where maximum impact can be achieved, i.e. those areas where costs are high and where potential for reducing them is greatest.

In the MOH, the major costs are labour, vehicles, drugs, and food. The factors which push these costs up are, in the case of vehicles for example, the age of the MOH vehicle fleet, inadequate procurement policies, inadequate care and maintenance, inadequate pooling of vehicles, etc. As for labour, some factors which push costs up are ineffective management and supervision, and inadequate organisational structures. Clearly it is important to identify those

factors which are most interconnected, and which, if acted upon, are likely to lead to the most positive results in terms of improved efficiency. Four such factors stand out:

- (a) Ineffective management and supervision.
- (b) Inappropriate organisational structures and a lack of clarity in each individual's role.
- (c) Inadequate management controls over materials, (e.g. drugs, food, fuel) money, (e.g. no effective management accounting system), capital, (vehicles) and people. (establishment control)
- (d) Inadequate pay and conditions of employment.

These factors are depicted in an interconnected square (see diagram) the centre of which is the overall objective, to improve the utilisation of existing resources. Initiatives should be taken in all four areas in order to achieve the overall objective i.e. to improve total productivity, it is no accident that the key initiatives cover improvements in labour productivity, capital productivity, and material productivity.

10.1.1. Committed and Effective Management and Supervision

There are two distinct constituents to this factor, one being the need to obtain the commitment of all managers to the changes implied by the 10 year Plan and the implementation strategy, and the second being the need to develop effective managers who are able to achieve results.

(a) Management commitment. Stage one.

It is common in organisations that individual managers say they are committed to a course of action, but their behaviour is inconsistent with this expression of support. Frequently this is a function of the failure of concerned superiors to involve and consult subordinates in effecting change. This can lead to opposition. It is therefore vital that all managers and supervisors in the MOH are informed and consulted about the Plan and its implications, and that senior managers sustain the commitment of their subordinates. This will be accomplished as shown below:

- o The planning team which will continue to work on the Plan will be involved in final discussions on the Plan. Misgivings of individual managers will be recognised and resolved.
- o Each senior manager will be responsible for briefing and consulting his or her own management group, to assure individual commitment of junior managers and their thorough knowledge of details of the Plan. The Chief and Deputy Chief Of Health Health Services will consult all

District Health Officers including the Medical Superintendents.

- o Once DMO's have been consulted and problems ironed out, they in turn will brief the district teams. It is important that this be done by the DMO's and not heads of department from headquarters in order to establish the authority of the DMO's in their new general management roles.
- o The final stage involves the briefing of key supervisors in the district, who will in turn brief their working groups.

Clearly this process is time-consuming, but it is important to obtain the commitment of management at all levels. At senior levels the emphasis in this process will be on consultation, rather than briefing, whereas at lower levels the briefing element will take precedent.

(b) Management effectiveness. Stage two.

Once sustained commitment is obtained, the success of the plan will be dependent upon the effectiveness of management. Effectiveness refers not to the process of "dealing with paperwork" as fast as possible but to the achievement of positive results. Currently the emphasis in the MOH is more on the former than the latter, but clearly a more decisive management approach is required to achieve improvements in resource utilisation. The key concept in this context is that of the general manager, described in Chapter 8. The general manager, at whatever level, assumes responsibility, vested in one individual, for planning, implementing, and evaluating performance. The role must clearly be performed by individuals who can provide the driving force to seek and accept direct and personal responsibility for developing management plans, securing their implementation using the appropriate controls, and monitoring actual achievements.

In the MOH context, early attainment of management competence to cope with the demands of the development programme is necessary. This might involve a programme of management training, but typically traditional training provides only knowledge to managers within a structured off-the-job learning experience, usually unrelated to the manager's own working environment. This type of education has tended to over-emphasise an individual's analytical ability, leaving the ability to take action underdeveloped.

Therefore, management development activities of the MOH make use of current real management problems in the MOH; i.e. action learning by doing, designed around day to day issues, and in particular those changes envisaged for the future which are intended to improve the effectiveness of the MOH. Thus management training at an early stage in the plan period will be based upon learning by doing combined, with traditional course work. The objective of

this process is to render management at all levels sufficiently effective to meet their responsibilities during the plan period.

Specifically, Stage 2, will involve:

- (a) Early designation of senior managers, including the 2 DCHS, CND, 2 ACHS, 3 RHO, SMS, ACPO, CA, and the CHFO. A general management training programme will then be designed for them around the task of implementing the national health plan. This programme will be carried out on a part-time basis, and will consist of several separate residential periods during which specific teaching of the latest approaches to general management will take place including modules in human resources utilisation, financial management, operational management, organisational policy, health planning, etc. There will also be group work, and individual project work, designed around the problems of improving effectiveness and implementing the Plan.
- (b) An equally pressing priority concerns the importance of making an immediate impact on the use of existing resources at the two central hospitals. This is particularly urgent if the MOH is to stay within its allocation for 1985/86. Recent MOH studies have indicated that the two large hospitals consume over one third of all recurrent resources, and that significant savings are feasible, which can be realised fairly quickly with improvements in the effectiveness of management. The estimated savings potential is over 10% of total annual non-salary expenditure in the MOH, and so improvements in management effectiveness at GECH and KCH are a top priority for early implementation. On the basis of these activities, further improvements can be initiated at all other major units.
- (c) The next priority for management training is at the DHO level. The DHO will be the general manager at the district level responsible for all health care activities in the district: this will be a demanding role, and the effective performance of the DHO is of crucial importance to the success of the whole change programme. DHO training will adopt the same pattern as that described for (a) above with DHO's coming together as a single group either on a regional or a national basis, to work on general management issues for a series of separate residential periods. Project work designed around day-to-day problems will feature in this training, which will include Regional Environmental Health Officers and Regional MCH Coordinators. Once again, this programme will last 12 months, and will be conducted by competent trainers: this group and the senior management group will meet from time to time to discuss issues of mutual concern.
- (d) The effectiveness of the district health team is of central

importance, and again management training will be done in groups. This programme will promote the use of teamwork in the solving of day-to-day problems, and will cover the DHO as facilitators, hospital secretaries, senior clinical officers, matrons, district environmental officers, and MCH coordinators. This training may not involve residential period because of the problems of removing all the individuals from the hospital at any one time. Shorter training sessions featuring the evaluation of operational problems associated with the introduction of the health plan should be the core of the programme, which should last for 12 months in the first instance. Satisfying the specific training needs of members of these teams such as hospital secretaries can be designed into these training programmes.

- (f) A similar training programme should be devised for the Regional Health teams, once they are established.
- (g) Finally, a training programme will be implemented for supervisors, whose performance levels vis-a-vis administration of transport, discipline, food, expenditure, etc, are crucial to the success of improved resource utilisation. Currently clerical, maintenance, cleaning, and other support staff is carried out at a pace which could be significantly improved if supervisors were appropriately trained and motivated if their roles were properly defined and invested with the correct authority, and if those they supervised were motivated to give of their best. That is, an essential pre-requisite for establishing this control over the work organisation is the presence of supervisors/managers able and willing to manage the organisation of work in a total social (to do with people) and technical (to do with technical aspects of the job) sense. For this to be achieved, four conditions must be met.
 - (i) the supervisory structure must be correct.
 - (ii) supervisors must be appropriately trained.
 - (iii) the management systems controlling work must be effective.
 - (iv) pay and conditions of services must be seen to be fair and adequate.

Although these four factors are closely interconnected, they are not of equal importance. Primary importance is given to the correctly defined supervisory role, because without the correct span of control and the correct role content in terms of authority and support, the likelihood of the supervisory role being played effectively is significantly reduced. This is irrespective of pay and conditions, etc. Thus, the organisational structure should be defined before supervisory

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training takes place. Where individual roles are to change significantly, as is likely with supervisors, then it is clearly necessary to define them first, before determining training needs. The training itself should be carried out within the context of their own working environment wherever possible, where the training can be related to specific tasks rather than bringing supervisors from very different backgrounds together in a central institution where the training will be, by definition, of a general nature. The aim must be to create more effective supervisors which means their training should be specifically related to their day to day tasks. In particular, this training should feature the construction of:

- new job descriptions which emphasise that it is the role of the supervisor to manage his group effectively. This will require support from their superiors and the appropriate level of authority built into the role;
- new supervisory work routines and procedures which clearly define the way the role is to be played and what is expected of them.

Senior managers should give serious thought to the position of supervisors, because without the effective control of the way work is organised, there is little chance of improving the overall performance of the MOH. Many supervisors feel ignored by senior managers, and many purposefully avoid attempting to control their subordinates and the responsibility for improving performance by controlling costs and the quality of the service from their departments. This situation will be changed, firstly by restructuring the role, and secondly by training.

(c) Appropriate Organisational Structures. Stage three.

A key feature of the training programme for senior managers, DHO's, and District management teams is to discuss the proposals for reorganising the MOH. These proposals will be discussed and agreed amongst the groups, modified as appropriate, and then implemented as a priority of the implementation plan. This will constitute stage three of the implementation process, although it will run concurrently with stage two.

The essentials of the reorganisation process, which is described fully in Chapter 8, are as follows.

- (a) The higher levels of the MOH organisation will be reorganised as indicated in diagram 16. The CHS will be responsible for directing the implementing of the 10 year plan, for heading the technical branch of the MOH, and for clarifying health care policy. In the first task, he will be assisted by the Planning Unit which will assist in monitoring the plan and also its implementation. The DCHS will be responsible for coordinating the activities of head-

quarters staff, the RHO's, the SMS's, and the DHO's. The administrative section of the MOH will be reorganised by reducing the number of authority levels, (removing the position of US), incorporating general administration into the Personnel and Administration Department. The heads of the Personnel and Finance Departments will need to be skilled managers able to initiate improvements in the performance of their section.

- (b) The introduction of the Regional Health teams will then be implemented. Their individual roles and operating procedures will be clearly defined following discussions within their training group, and implemented as soon after as is possible.
- (c) Detailed case studies of the structure, operation, and performance of KCH, QECH, and a sample of districts should be commissioned as soon as possible, and suggested organisational and operational changes made.
- (d) No fundamental reorganisation is intended for the District Health Teams. Changes will be limited to the additional authority to be built into the general management role of the DHO, and the ways in which the team operates. These operating procedures will be devised by way of project work during their training programme.
- (e) There will be a major change in the supervision of health centres. The Medical Assistants (regraded to Senior Medical Assistants) in charge of the health centres will report to the DHO, who will be held responsible in both a technical and an administrative sense for the Enrolled Nurse/Midwives, the Health Assistants, and the Health Surveillance Assistants. This line authority and responsibility is quite different from the functional responsibilities of the District MCH Coordinators and the Public Health Inspectors who will advise members of the health centre team.
- (f) Once the basic organisational framework is in place, the structure of each department must be precisely defined, including the appropriate establishments, gradings, and job descriptions. Departmental managers may seek the assistance of the management services branch of DFMT in this process. During these departmental reviews, priority attention must be given to designing the appropriate supervisory structures. In doing so, two particular aspects of the supervisory role will be taken into account:
 - (i) the size of a working group a supervisor is to manage, the supervisor's span of control should not be too large. It is likely that if a working group consists of more than 15 or so individuals, the group performance deteriorates, and supervision becomes difficult.
 - (ii) the span of responsibility of the supervisor, i.e. what the supervisor has to do, should also not be too wide.

Clearly this will depend on the supervisor's quality and training. However, it is intended first of all to determine the type of role to be played in terms of authority and responsibility, and then to train the existing supervisors to perform that role.

Clearly the accounts, personnel, administration, and planning sections will be prime targets for this task, as described in Chapter B. Since these changes involve the adoption of new systems, the introduction of schemes of service, and considerable modifications to the service offered by these departments, their introduction will take some time. Therefore, the earlier the initiatives are taken, the sooner the results will have impact.

10.1.2. Effective Management Controls Over Staff, Money, Capital, and Materials

Once both management commitment has been obtained, and the MOH has embarked upon a process designed to render management effective and to establish an appropriate organisational structure, the next task is to ensure that all management systems, including discipline, budgetary control, inventory control, etc, are functioning correctly and efficiently. During stages two and three, line managers responsible for these systems will design the appropriate procedures for these systems, and an action plan for implementation. This should constitute part of the project work to be undertaken as part of the management training process. Obviously these new systems will not be implemented concurrently - budgetary control may be implemented early, inventory control a little later - but implementation in all systems areas should have begun within 6 months of the implementation process.

Management control over staffing

Effective systems for controlling establishments at all grades above and subordinate class should be introduced. Details of approved establishments for each salary grade by Ministry, Department, and operating unit, should be available in table form which would also include complements and hence vacancy levels. These tables should be updated every month.

A similar system may be introduced for the industrial classes. At the moment this group, which numbers over 2,000 in the MOH, is largely uncontrolled, with responsibility for their administration delegated to junior staff at site level. Decisions as to how many industrial class workers should be employed, on what terms and where, must be coordinated by Controlling Officers at a senior level in order to get the establishment under control. The personnel section should have control over this group, and have powers of inspection, and should visit work sites on a regular basis. They will identify those jobs which more appreciatively belong to the permanent establishment, and make proposals for the transfer of such officers into more permanent terms of service. They will also review pay arrangements with a view to achieving a unified system for the payment of wages and

allowances and for the regular inspection of pay records. Finally, it is clear that utilisation of these staff is poor, and there is therefore a need for improved supervisory control.

The MOH will also strengthen controls to ensure that changes to individual grades are approved, and that vacancies exist before such changes take place.

Finally, there will be improvements in controls over staff behaviour, including absenteeism, timekeeping, overtime, and general discipline. Effective systems of control will be devised and implemented consistently.

Management control over money and capital

The most critical problem facing the MOH is how to control its overexpenditure on the revenue budget. In order to create this control, the following steps will be taken.

- (a) A management accounting system will be introduced to monitor spending behaviour. This should ensure that existing sub-heads, such as O4 and O8 are broken down systematically and specific areas of overspend are identified and rectified.
- (b) On the basis of this, a management budget process will be introduced, which will facilitate control of expenditure on a monthly basis, and which will identify variances.
- (c) These budget systems will be linked to appropriate cost centres as soon as possible, in order that expenditure analysis can be carried out by establishment (rather than by district).
- (d) Within the cost centre approach, the MOH will introduce responsibility accounting, under which each manager will be held responsible for those costs which are incurred by his or her department.
- (e) The MOH will design and introduce systems to collect the information on costs and activities necessary for establishing management accounting. One or two pilot sites will be identified, at which these information systems and the management accounting systems will be initially developed.
- (f) Each manager responsible for a cost centre will submit monthly reports within a week of the cut-off date of each monthly account.

One of the major contributory factors to the revenue overexpenditure is the problem of inadequate control over vehicles, which are the largest element of capital. Necessary management initiatives in this area are:

- (a) Standardizing and Controlling the size of vehicle fleets by, for example, reducing the number of reserve vehicles,

spot hiring to meet peak demand, and pooling general purpose vehicles.

- (b) Regularly reviewing replacement policy with the object of establishing the correct balance between maintenance costs and replacement costs. This involves determining the economic lives of each vehicle group.
- (c) Reviewing fuel control with the objective of identifying rogue vehicles and to reduce pilfering.
- (d) Introduce better purchasing policies with the object of obtaining vehicles at the lowest overall costs (e.g. purchase in batches, avoid over-detailed specifications).
- (e) Introduce controls on the use of vehicles to avoid illegitimate use.
- (f) Introduce controls on maintenance costs and the cost of spares. For example, the scheduled visits to workshops for services should be monitored to establish maintenance frequency.
- (g) Introduce effective management controls over maintenance carried out by drivers on their vehicles.
- (h) In view of the financial responsibility given to drivers when they are allocated vehicles, the MOH will review critically, on a periodic basis, the performance of individual drivers, not only in terms of driving competence, but vehicle care, and the fuel consumption of their vehicles.

Control over other elements of capital such as fixed plant and equipment, buildings, office equipment, and medical equipment, should be introduced to ensure that expenditure on these items is controlled and that adequate resources are allocated for maintenance.

10.2 : THE CONTINUING PLANNING PROCESS

10.2.2 The Planning Process

The first and most important task for the implementation of the National Health Plan is to establish a formal, continuing, planning process. This process should permit constant evaluation and re-evaluation of the conclusions and guidelines of this plan document: it should tackle the annual task of service planning, and should incorporate annual budgeting, expenditure reviews, annual manpower allocations, and the associated service targets. Clearly the process will involve a management committee at the top levels of the MOH, but due to the complicated and often detailed nature of the work, smaller working groups or committees will obviously also be

required. The planning unit will have a key role to play, especially as with regards to coordinating the working groups, and synthesising information and recommendations for the main planning committee. The MOH recognises the cruciality of the establishment of the planning process, which thus remains a top priority for the short term implementation of the plan. Clearly many of the techniques of administering a planning process may be unfamiliar to the MOH, and for this reason some limited and selective technical assistance may well be required.

10.2.2 Activities to be Carried out in the Short Term

Many of the central themes of chapters 5 and 6 are based on the priority problems discussed in chapter 4, which in turn are derived largely from hospital-based morbidity and mortality data. It is fully recognised that there are weaknesses to hospital-based data, and also that there is little district or regional data available, and for this reason, it is intended that further epidemiological survey work be carried out in the short term. In particular, it is clearly important to obtain some quantitative indication of regional variations in incidence rates for priority diseases, and also to obtain more specific information on mortality rates for sub-age groups between the ages of 0 and 5. Ultimately, the Community Health Sciences Unit, to be established in Lilongwe by mid 1986, will perform the task of providing the planning process with selected epidemiological information: however, until the CHSU begins to operate fully, it is clearly necessary to fill some of the information gaps, possibly with selective sample surveys, during the early stages of the plan and to maximise the information from the 1984 on mortality and fertility undertaken by NSO.

The third area in which further work is required concerns the siting and staffing of rural health centres. Chapter 7 tentatively included a provisional figure for the number that it is intended to build over the next ten years. However, the requirement currently used, that 10,000 people should live within a radius of 5 miles of a health centres is clearly outdated, given the new objective of maximum coverage. A criterion based solely upon population is also unlikely to be of strategic use, because this would mean too dense a network of sub-centres in the south, with the opposite in the north. Clearly this would not meet the objective of accessibility, nor would it be very efficient. It is therefore intended that the MOH adopt the sole criterion of accessibility, either in terms of distance or in terms of travelling time in order to determine the siting nationwide of health centres.

Clearly this will mean that some units will face higher demands than others. This problem would be addressed by establishing staffing levels for each unit on the basis of the strength of demand. This would mean that sub-centres in heavily populated areas would be well-staffed, with those in more lightly populated areas being staffed by smaller numbers.

It is therefore necessary for the MOH, very early in the plan

period, to carry out the necessary work to establish how many sub-centres are required, where they are required, what the patient demands will be, and thus what the staffing level should be. This will involve first of all geographical considerations, secondly population, epidemiological, and utilisation rate considerations, and thirdly considerations as to which cadres are required to address the particular problems of the area and how many are required: e.g. in an area where environmental health problems are particularly serious, there will clearly be a need to provide extra environmental manpower. Thus, in order to address the objective of accessibility, sub-centres will be sited on purely geographical criteria, and staffing levels will be the variable which will be set according to demand levels: but in order to carry out these intentions, a considerable amount of work needs to be done.

The activities described in chapters 5 and 6 have particular implications for the job descriptions of cadres working at almost all levels of the health care delivery system, and there are clearly further implications for the training curricula of many cadres. Currently, no review of curricula in some of the training institutions has been undertaken, but in recognition of the fact that students should be fully prepared for the new types of work described in chapter 6, some changes will inevitably be required. Similarly there may be implications of new programmes for the continued training of existing staff. One example is the child spacing programme. Clearly some basic training is required not only for students but for qualified staff as well, for the programme to spread successfully to all districts.

Nutrition as a fundamental determinant of infant mortality has been identified as a prime issue. It has been targeted also as a critical factor in maternal mortality and in premature birth. The attack on malnutrition will be made on a multisectoral basis. The Interministerial Committee on Nutrition will be briefed on the National Health Plan in general and on the Nutrition Initiative (objective 6) in particular. The MCH Section through a senior officer will prepare a critical time frame to carry out the activities set forth in Chapter 6 for Objective 6. Liaison will be established and maintained by the senior officer with the ministries of Agriculture and Community Services. Field Supervision of this program will be accomplished through Regional Health Offices while the CHSU will be assigned program impact assessment. The technical assistance of the Centre for Social Research will be sought for impact assessment.

A great deal of technical work will also be undertaken during the early stages of the plan period for example in the area of Maternal and Child Health Care, including in particular Child Spacing and Under-Fives programmes. Details of this work were given in particular in section 6.3 of Chapter 6, but the key elements are as follows. First of all, a number of sets of protocols are to be developed for both prevention and intervention of priority diseases, for mothers, infants, and children up until the age of 5. Secondly, the MOH should, as a matter of priority, develop the 5-year Child Spacing plan: in view of the fact that this is a relatively new programme, little detailed research has been carried out to

date, and there is clearly a need to press forward with implementation as soon as possible. Thirdly, in the same context, it is necessary to review MOH activities with respect to Traditional Birth Attendants, particularly in the area of training. Currently, the MOH offers basic training courses for TBAs but there may be further potential in the area of cooperation with TBA's. As a first step, the MOH should evaluate the possibility of an expanded role for the TBA, and should review the curriculum for TBA training accordingly. There is a great deal of work to be done in the area of malnutrition. The plan has identified malnutrition as a key priority problem, but to date information on the type and prevalence of malnutrition is fairly sparse, and preventive and curative protocols are relatively undeveloped.

Finally, further work is required on the subject of research into hospital costs and ways of improving the utilisation of resources. Chapter 7 referred to some detailed work carried out in early 1985 which identified the key problem areas in one of the central hospitals and offered concrete recommendations as to how considerable savings can be achieved. This important theme was also discussed in the first section of this chapter, in the context of MOH plans for institutional change. Clearly similar work should be carried out in the other major cost centres, including the MOH headquarters, if the potential savings are to be realised early in the plan period. In the same context, there is clearly also a need to study hospital practices concerning admissions and discharges. In view of the fact that it is inpatients, especially long-term inpatients, who absorb large volumes of resources in the hospitals, there is clearly a need to evaluate the feasibility and likely impact of some formal admissions policy measures. It is likely that patient loads might be reduced fairly significantly as a result, thus reducing further the level of hospital costs throughout the country.