

HEALTH AND DEVELOPMENT IN SOUTHERN AFRICA

Volume V

A Review of Health Care in Angola:  
Issues, Analyses, and Recommendations

This sector assessment was undertaken in conjunction with the Southern Africa Development Analysis Project and has been used extensively, but not totally, in the Main Report and Country Papers

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## I. INTRODUCTION

### A. BACKGROUND & ACKNOWLEDGEMENTS

This study is based largely on secondary source material available in the United States, much of it prepared several years ago. Validation of the data through visiting Angola was not possible under the contract financing the study. Certain important aspects of the research and writing of this study should be noted. Statistics collected in the research for this assessment should not be considered absolutely reliable. Data were often found to be contradictory, with differences, according to source, sometimes of considerable variance. A great deal of the material collected contained figures which were too old to be relevant to the current, altered situations. In general, a selection had to be made, and the most recent statistics available were used.

Original sources should be referred to for particulars on compilation of figures, methods of calculation, projections, and so on. In addition, because of the amount of research material collected, original sources may be referred to for additional relevant information which may not be contained in this report.

Another aspect which posed certain difficulties for the author was the problem of objectivity in the assessments. Some sources reflected clearly the "western" standpoint; many reflected a particular political bias or ideology.

While it is not possible for any researcher to prepare a "value-free" analysis, efforts were made to be as objective as possible.

The content of the report is largely descriptive; some of the information was obtained from travel notes and interviews from which observations were selected as illustrations to make a specific point.

It will be seen that the introductory section on political, economic, and social structures is relatively lengthy. This was felt to be necessary, given both the current complex historical, political, and economic situations as well as the strong interrelationship between health and more macro political-economic policies and events.

It was found that the FHC analysis of the major acute health issues in Angola agreed with the significant health priority areas which have been targeted by foreign donors. For this reason, recommendations and priorities for assistance are directly linked to the section on external assistance. Reliance on other donors' assessments of priorities was, in addition, felt to be relevant for the recommendations because these countries were not visited by a U.S. team nor was there contact with representatives from these countries. Reports from other donors, however, were often based on visits or direct government input and may therefore be assumed to be very relevant to the process of determining U.S. priorities.

The principal author of this desk study is Carol Carp.

In preparation of this report, William J. Bicknell, M.D., M.P.H., Health Policy Institute, Boston University, participated in the technical review process.

B. SUMMARY STATISTICAL PROFILE OF ANGOLA

<u>GENERAL</u>	Most Recent Estimate <sup>1</sup>
Per capita GNP (US \$ at current prices) (1974)	509 <sup>23</sup>
Population (in millions)	6.46 <sup>14</sup>
Land area (thousands of sq. km)	1,246.7 <sup>23</sup>
Arable land area (as % of total)	N/A
Population density (pop. per sq. km)	5.2
Population density (pop. per sq. km arable land)	N/A
Urban population (% of total)	18.3 <sup>23</sup>
Labor force in agriculture (%)	64 <sup>23</sup>
Age structure of population (% of total)	
0-4 years	17.6 <sup>23</sup>
5-14 years	24.5
15-59 years	55.3
65 + years	2.6
Adult literacy rate (%)	10-20 <sup>14</sup>
Km of roads	72,323 <sup>7</sup>
Km of paved roads	8,371 <sup>7</sup>

<sup>1</sup> Refer to sources as numbered in bibliography; "most recent estimates" are 1974 or later.

<u>HEALTH STATUS</u>	Most Recent Estimate
Life expectancy at birth (in years)	38 <sup>14</sup>
Infant mortality rate (per 1,000 live births)	203 <sup>14</sup>
Crude birth rate (per 1,000 population)	47 <sup>15</sup>
Crude death rate (per 1,000 population)	24 <sup>15</sup>
Population growth rate (% annual increase)	2.5 <sup>23</sup>
Number of years for population to double	28.6 <sup>2</sup>
Nutrition: Calories (average calories/day)	2,200 <sup>33</sup>
Protein (% of FAO requirements)	105 <sup>14</sup>
Malaria (cases, 1977)	600,000 <sup>31</sup>
Tuberculosis (cases, 1977)	200,000 <sup>31</sup>
Leprosy (cases, 1977)	20,000 <sup>31</sup>
Cholera (cases, 1974)	934 <sup>36</sup>
(deaths, 1974)	34 <sup>36</sup>
Typhoid Fever (cases, 1974)	424 <sup>36</sup>
(deaths, 1974)	4 <sup>36</sup>
Measles (cases, 1974)	5,881 <sup>36</sup>
(deaths, 1974)	70 <sup>36</sup>
Gonococca Infections and Syphilis (cases, 1974)	5,307 <sup>36</sup>

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2      Calculated: 70% annual rate of growth (1975)

HEALTH RESOURCES

Most  
Recent  
Estimate

Total per capita health spending (private and public, estimated)	Total % of GNP	N/A
Government health expenditures		
<u>Recurrent budget:</u> (in US \$ millions) (as % of total)		N/A
<u>Capital budget:</u> (in US \$ millions) (as % of total)		N/A
TOTAL BUDGET: (in U.S. \$ millions) (as % of total) (per capita)		N/A
Population per active physicians		11,110 <sup>14</sup>
Population per active nurse		N/A
Population per active auxiliary		N/A
Population per hospital bed (Hospital beds per 1,000 population)		357 <sup>14</sup> (2.8)

Unit of Valuation

When Angola became independent, it remained in the Portugese currency area. But in 1977 it broke this link and issued its own currency, the Kwanza (equal to 100 lwei). The government declared the Kwanza to be non-convertible in the international money market and is not quoted on international exchanges. It was originally issued in exchange for the escudo. [7, pg. 6]



II. A PROFILE OF ANGOLA: THE CONTEXT OF HEALTH AND DEVELOPMENT

A. PHYSICAL FEATURES

The land area of Angola comprises 481,351 square miles (approximately 1.3 million square kilometers). Angola is about the size of Egypt, and is larger than California, Texas, and New York combined. A south-north escarpment, which runs parallel to the Atlantic coastline of the country some hundred miles inland, forms its major topographical feature and shapes its demographic, economic, and ethnic patterns. [23, pg. I-1].

Its topography consists of flat to gently rolling coastal plains in the northwest and southwest, a belt of hilly to very rugged highlands, mainly in the western interior, and flat to rolling upland plains and scattered, low hills in the eastern two-thirds of the country.

The climate of Angola is predominately tropical, with distinct wet and dry seasons. Angola is situated in a zone of transition between the tropical rain forest climate to the north and the semi-arid and desert climates to the south. During the wet season extensive areas along rivers and the northern coast are periodically flooded. Flash floods also occur throughout the area during periods of heavy rain showers.

Locally-produced winds (called Berg winds) which are hot and sometimes dusty, occur near the coast. Although these winds occur throughout the year, they are most

frequent in winter (June - August) and may last as long as two to three days. With their onset, mostly in the morning, temperatures rise sharply, and the air may become very oppressive. As sea breezes set in, there is a sudden extreme drop of temperature and a corresponding increase in relative humidity.<sup>1</sup> [33, pg. 1-2]

Vegetation varies according to rainfall and altitude. The forest cover is heaviest toward the northwest and diminishes in the southwest to dry brushland.

B. DEMOGRAPHIC PROFILE<sup>2</sup>

The population of Angola is primarily rural and very unevenly distributed over the land area. Historically, most people have settled in the most fertile and moister regions. More than 70 percent of the population is concentrated in the western and northern parts of the country; densities in the eastern part are less than one person per square kilometer. [33, pg. 3]

The flow of people from the rural areas to the towns first became substantial during the 1950s and increased during the 1960s and early 1970s. Some rough data indicate

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3 At times the winds may be strong enough to cause sandstorms or duststorms which can effect medical evacuation. These winds can also produce headaches, discomfort, irritability, and an increase in respiratory ailments. Temperatures near or below freezing occur in the western highlands, which may have some relevancy for medical operations carried out during the winter months. (33, pg. 2)

4 The most recent census was in 1970, but figures are unreliable due to warfare conditions in that year. Likewise, demographic data estimates from recent years should be judged unreliable.

that urban migrants came primarily from the category of young males, ages 15 to 40 years. (This trend may be seen in other African countries as well.) This movement was disrupted during the war of 1975-76, and many cities were left partially abandoned due to the exodus of whites and the return of recent immigrants to their villages. [23, pg. I-12]

Angola's population of European origin, primarily Portuguese, grew rapidly after the 1940's and peaked in 1974 at an estimated 350,000 persons. Nearly all European Portuguese left the country by the latter half of 1975, and few are believed to be residing there now [23, pg. I-9-10]. A recent source estimates that there are now 40,000 whites in the country. [7, pg. 5]

Sources differ on the rate of population growth: one recent source estimates it to be 2.2 percent per year [14]; United Nations' projections cite 1.7 percent per year. If the latter estimate is taken, future annual rates, calculated according to standard demographic models, will increase gradually and peak at between 2.5 percent and 3.1 percent per year. If those rates obtain, Angola's population would double its 1970 level sometime between 1990 and 2000 [23, pg. IV-45].

The FAO shows population growth to have increased over the average of the 1961 - 1965 base period as follows [10, pg. 12]:

1965:	4 percent
1967:	7 percent
1969:	12 percent
1971:	16 percent
1973:	22 percent
1975:	28 percent

It is clearly difficult to assess population trends since 1974. The white exodus is one major aspect and has been accompanied by a reported exodus of the assimilado population (those of mixed ancestry) estimated at about 2 percent of the total population in 1970. Both of these population losses have had a crucial significance for manpower resources in all sectors, including the health sector.

The refugee population outside of Angola--possibly 600,000--is another significant aspect, as well as the refugee population in Angola from other areas. There is also reported to have been some movement of townspeople back into the rural areas. "It is probably safe to assume that the cities have at least temporarily ceased to grow and that their populations in early 1977 were no higher than they were in 1974. Nonetheless, the basic population nodes of Angola--in the port cities and in the main agricultural regions of the highlands, especially in the planalto of Huambo and Bie Districts--may be accepted as permanent features of Angolan demography." [23, pg. I-13]

The crude age and sex structure of the population, projected to the year 2000 and based on the census of 1950 and 1960, is shown in Table 1. No statistics on age and sex

Table 1  
AGE & SEX STRUCTURE OF THE ANGOLAN POPULATION  
(1950 - 2000)

Medium/Variant	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000
Population Total (in 1,000s)	3969	4337	4723	5154	5670	6353	7181	8188	9395	10808	12462
Population, Males (in 1,000s)	2009	2196	2392	2611	2886	3216	3619	4112	4703	5406	6225
Population, Females (in 1,000s)	1960	2141	2331	2543	2784	3137	3562	4075	4682	5401	6237
Population, Ages 0-4 to Total (0/0)	18.2	17.8	17.1	16.7	16.8	17.6	17.8	18.1	18.1	18.0	17.7
Population, Ages 5-14 to Total (0/0)	25.6	25.6	25.5	25.1	25.2	24.5	25.1	25.9	26.4	26.8	27.0
Population, Ages 15-64 to Total (0/0)	53.6	54.0	54.8	55.6	55.7	55.3	54.4	53.3	52.7	52.2	52.2
Population, Ages 65+	2.5	2.7	2.6	2.5	2.3	2.6	2.4	2.7	2.8	3.0	3.1
Population, Under 20	54.1	53.6	53.0	52.3	52.2	52.4	52.6	53.6	54.5	54.9	55.1
Women Ages 15-49 to Females (0/0)	46.5	46.8	47.5	48.2	46.5	48.5	45.5	44.9	44.4	44.4	44.8
Dependency Ratios (per 1,000)	865.1	853.4	825.7	797.0	795.3	807.2	837.8	875.8	896.8	915.2	916.5
Child-Women Ratios (per 1,000)	793.6	767.7	729.2	704.4	737.6	765.4	789.0	808.1	816.0	812.4	791.4
Sex Ratios (per 1,000 Females)	102.5	102.6	102.6	102.7	103.7	102.5	101.6	100.9	100.4	100.1	99.8
Median Ages (years)	10.8	18.2	18.5	18.9	18.9	18.8	18.6	18.1	17.8	17.6	17.6
Proportion of Urban (0/0)	5.8	18.2	18.5	18.9	18.9	18.8	18.6	18.1	17.8	17.6	17.6
Population Density (per sq. km)	3	3	4	4	5	5	6	7	8	9	10
	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90	90-95	95-2000	
Rates of Growth (0/0)	1.77	1.71	1.75	1.91	2.27	2.45	2.62	2.73	2.82	2.85	
Natural Increase Rates (0/00)	18.0	19.0	19.7	20.7	22.7	24.5	26.2	27.3	28.2	28.4	
Crude Birth Rates (0/00)	51.0	50.5	49.5	48.2	47.2	47.0	46.8	46.0	45.1	43.6	
Crude Death Rates (0/00)	33.0	31.5	29.8	27.5	24.5	22.5	20.6	18.8	16.9	15.1	
Gross Production Rates	-	-	-	-	3.20	3.20	3.20	3.15	3.07	2.92	
Net Reproduction Rates	-	-	-	-	1.91	2.01	2.11	2.17	2.21	2.20	
Total Fertility Rates (0/00)	-	-	-	-	6502	6502	6502	6401	6226	5939	
General Fertility Rates	221.3	216.7	209.6	207.2	206.5	206.7	208.5	206.8	203.3	195.3	
Life Expectancy, Males (Years)	28.6	30.6	32.5	34.5	37.0	39.4	41.9	44.4	46.9	49.3	
Life Expectancy, Females (Years)	31.5	33.5	35.5	37.5	40.1	42.6	45.1	47.6	50.2	52.7	
Life Expectancy, Total	30.0	32.0	34.0	36.0	38.5	41.0	43.5	46.0	48.5	51.0	

Source: (23, p. I-15)

structure of the population have been collected since 1974.

C. HISTORICAL AND CULTURAL CHARACTERISTICS

Angola was a "colony" of Portugal until 1951, at which time the status of "colony" was changed to that of "overseas province". In 1972 this term was changed to that of "state." Such status changes did not, however, reflect a change in real power, which was wielded from Lisbon by the Salazar government, and by its successor, the Caetano administration. "Some of the more gross trading restrictions were altered but the states were obliged to hold their reserves in Lisbon, were unable to contract loans abroad, and had their socio-political structure and foreign policy dictated by the Portuguese government. The April 1974 military coup put an end to the Caetano administration in Portugal and the military junta set about phasing out colonial rule." [7, pg. 4]

On November 11, 1975, Angola became independent, in the midst of a civil war between three liberation movements. The MPLA (Movimento Popular para a Libertacao de Angola), with support from the USSR and Cuba, emerged victorious over the FNLA, UNITA, and FLEC movements, but today certain parts of these movements are still opposing MPLA and Cuban troops. This victory has not, therefore, ensured political stability in the country. Guerilla warfare is still being staged, including invasions from South Africa, causing major

disruptions in all sectors of the economy, as well as death, injury, and population displacement.

There are four major ethnic tribal groupings in Angola. The largest is the Ovimbundu, comprising 40 percent of the population, living in the central and southern parts of the country. The Bacongo make up 13 percent of the population and live in the northwest, spilling over into adjacent areas of the Congo and Cabinda. The Kimbundu, 23 percent of the total population, occupy the area inland from Luanda. The Chokwe live in eastern Angola and make up 8 percent of the population [33, pg. 3]. The main significance of these cultural identities at present lies in the fact that many of them became politicized during the recent war. Although it is false to view the civil war and current internal struggles as being based on tribal politics, "heightened ethnic sensitivities are important components of national politics in Angola". [23, pg. I-18]

Approximately 98 percent of the population speaks languages of the Bantu family, which are related but not mutually intelligible. Eighty-four percent of the population is animist, and much of the population actively follows traditional beliefs and customs; only 12 percent is Roman Catholic (there are 225 Roman Catholic missions with resident personnel of 1,441); and four percent is Protestant (the Baptists and Methodists have a number of missionary stations). [33, pg. 5, and 1, pg. 158]

D. THE POLITICAL SYSTEM

The current government of the People's Republic of Angola is composed entirely of members of the Movimento Popular Para a Libertacao de Angola (MPLA), one of the three major liberation movements active in Angola before the Portuguese coup of 1974. It has had effective government power since national independence on November 11, 1975.

Their eight years' experience before independence in administering the regions they controlled in southeastern Angola "gave them the opportunity to work out coherent approaches to many of the difficulties they now face. Indications of carefully-formulated policies have been appearing since the meeting of the Central Committee of the MPLA in early November, 1976." [23, pg. I-26]

The government has been recognized by most countries, although by February, 1977, neither the U.S. nor China had extended diplomatic recognition to the MPLA.

The MPLA has a socialist economic and political orientation, and has historically been committed to popular participation in the planning and management of social, political, and economic institutions. Institutions modeled along these lines were initiated between 1965 and 1974 in the regions of southeastern Angola. Although the MPLA assumed power without a national vote, local elections for members of the People's Councils in Luanda were held in 1976.

The violence of the war of 1975-76 and the exodus of skilled manpower have made parts of the country difficult to administer effectively in the short-run.<sup>3</sup> Labor stoppages and strikes have occurred. However, although initial management effectiveness was extremely difficult, "even during the height of the civil war, essential services never failed in Luanda and other cities under MPLA control. Its potential for effective administration began to appear by the end of 1976 and in the longer run seems high. It quickly completed systematic surveys of its assets, established priorities for the initial stages of reconstruction, and undertook negotiations to obtain materials and technical assistance that it required." [23, pg. I-29]

To enable popular participation in decision-making, the government has established an extensive program of political mobilization, self-defence militias, workers' committees and production co-operatives, and various youth, student, women's and workers' organs from village to district level. It is responsible for controlling prices and ensuring an adequate supply of food and essential commodities [1, pg. 157].

Banks were nationalized in 1975, the press, radio and television in 1976; as of 1977, the judicial system was to

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3. For purposes of administration, Angola is divided into into 16 provinces.

be reorganized [1, pg. 158]. In addition, insurance companies, all Portuguese-owned enterprises abandoned by their owners, and a variety of other corporate entities have been nationalized.

Foreign influence in Angola currently remains strong. The government requires Cuban military assistance against UNITA and FNLA/Zaire. Reconstruction of roads and of other war-damaged infrastructure depends on Cuban (and other) military and civilian support.

The present government structure is led by the Head of State (Dr. Antonio Agostino Neto). The Cabinet is headed by the Prime Minister and three Deputy Prime Ministers. The Minister of Health, as of May 1977, is Major Mario Alfonso de Almeida. [1, pg. 157]

A very recent source reporting on the first congress of the MPLA in December, 1977, quoted President Neto's objective of the "creation of a people's democracy as the first stage in building socialism. The Central Committee is to be enlarged threefold to 75, providing more personnel able to take the decisions in accordance with government policy and keeping a larger number of senior people under party control." Agriculture is to remain the basis of the economy and it will be financed by the revenue from the oil and other industrial sources [2].

E. THE ECONOMY<sup>6</sup>

Before the civil war, of all African countries Angola had the second highest national income per capita after South Africa. Its vast reserves of natural resources have not yet been harnessed because of the continuing civil war. Although income from Cabindan oil alone is estimated to be bringing in U.S. \$500 - 600 million yearly, a large part of foreign exchange earnings goes into military supplies. The need to import foodstuffs and other consumer goods has also increased due to the great destruction during the civil war and the loss of skilled workers, mainly Portuguese, who fled to escape the fighting. Nevertheless, some foreign exchange is being allocated to capital goods needed to rebuild the infrastructure. [7, pg. 5].

Table 2 shows the Angola Development Plan expenditures, 1966-72. Clearly, the major political changes since 1972 have radically altered economic priorities, but unfortunately no data are available on budget levels and allocations since then.

The following statistics provide a basic economic overview:<sup>7</sup>

Economic structure (%GNP)	
Agriculture	42 percent
Manufacturing	24 percent
Mining	10 percent [14]

<sup>6</sup> Current data on economic indicators generally represent estimates and, as with other indicators are often contradictory. Here, an attempt is simply made to summarize major economic problems and to give the reader an understanding of the situation.

<sup>7</sup> Data are latest available, 1970-75.

Table 2

## ANGOLA DEVELOPMENT PLAN EXPENDITURES, 1966-1972

(In millions of escudos)

		1966	1967	1968	1969	1970	1971	1972
Extraordin. Expenditure Development Plan	Communications & Transport	376	355	734	564	606	573	432
	Education	30	30	66	111	78	87	155
	Health		26	69	87	90	95	
	Other	388	348	483	430	570	525	755
	Other Expenditures	320	284	541	844	1,014	1,167	971
	TOTAL	1,164	1,059	1,893	2,026	2,360	2,447	2,313
Plan Expenditure in Detail	Agriculture, Irrigation, Forestry, Livestock	138	103	131	81	81	139	289
	Fishing	25	26	33	12	42	9	12
	Energy	87	99	39	72	100	73	134
	Mining	37	36	35	40	104	36	32
	Manufacturing	-	-	105	4	-	6	3
	Roads	230	214	581	367	390	267	233
	Railways	16	23	22	37	67	56	40
	Airports	69	66	37	42	39	114	72
	Ports	34	35	30	46	42	21	49
	Telecommunications	26	18	65	71	68	115	37
	Education	80	30	66	111	78	87	155
	Health		26	69	87	90	95	
	Other Social Affairs		16	-	-	-	-	-
	Housing	29	23	20	16	32	44	39
	Urban Affairs	7	9	22	66	67	58	83
	Cartography	33	26	18	10	9	6	-
	Investigation	22	20	21	106	129	148	161
	Other	11	7	58	34	8	6	3
TOTAL	844	776	1,352	1,202	1,346	1,280	1,342	
Public Debt	To Portugal	3,200	3,218	3,298	3,401	3,395	3,470	3,417
	To Others	1,509	1,705	2,251	3,121	3,865	4,200	4,975
	TOTAL	4,709	4,923	5,549	6,522	7,260	7,670	8,392
	Increase	510	214	626	973	738	410	722

Source: 23, p. III-3.

Gross national product (GNP)	US\$ 2,980 <sup>8</sup>
Gross domestic product (GDP)	US\$ 2,895 <sup>8</sup>
GNP per capita	US\$ 492 <sup>9</sup>
GDP per capita	US\$ 478 <sup>9</sup>
Average yearly real GNP growth (1970-74)	6.4 percent
Average yearly GNP per capita growth (1970-74)	4.2 percent
Retail price Index 1974 (1970=100)	138

Although sources differ, generally it appears that there was a sharp drop in GNP in 1975 and a further decline in 1976, although government measures undertaken in that year were expected to halt the decline by 1977.

Available statistics on labor force breakdown and wages are basically pre-independence. Present wage levels cannot be estimated. Of the labor force it can be said that 64 percent of the economically active population is engaged in agriculture.

A summary of the economic situation and prospects was offered by the Southern Africa Task Force, USAID:

Leaving aside the short-term reconstruction problems remaining from the civil war of 1975-76, Angola's proved and suspected mineral resources, existing transportation system, hydroelectric potential, low population density, and the zeal of a new government with a coherent ideology presents a wide range of development opportunities for the country. At the same time, the low population densities in many regions of the country make the delivery of services costly and limit the domestic market for consumer goods. Lack of skilled personnel and possible reluctance on the part of Kongo and Ovimbundu peoples may make difficult the distribution of the benefits likely to accrue from the opportunities listed above.

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8 Millions of 1973 U.S. dollars.

9 In 1973 U.S. dollars.

The MPLA government has repeatedly affirmed its intention to manage the national resources in the interests of the Angolan people. It has also indicated its unwillingness to see the benefits of national independence and economic development sequestered by a small urban middle class of the sort that developed after independence in many other African nations...

The primary obstacles to development remain those of greatest importance in the short run: restoration of road and rail facilities, rebuilding the pool of vehicles, overcoming the reservations of the Kongo and Ovimbundu people toward the MPLA government, and restoring labor discipline in the cities. After these problems have been solved, Angola's prospects for economic development seem among the brightest in sub-Saharan Africa. [23, pg. II-13].

F. AGRICULTURE, ANIMAL HUSBANDRY, AND FISHERIES

The output of cash crops (coffee, sisal, maize, sugar, rice, bananas, tobacco, and cotton) has declined considerably since the civil war started in 1975. During the civil war, most of the coffee farms and plantations were abandoned and the berries were left unpicked, which caused pest infestation and root fungi to spread. After the MPLA victory, all the coffee farms and plantations abandoned by the expatriate farmers were nationalized. There have been, however, severe labor problems. The southern tribesman, who traditionally migrated seasonally to work in the plantations and who are supporters of UNITA, have refused to work in the north.

The following recent statistics give a brief agricultural overview: [14]

Food as % of Commodity Exports	40 percent
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Basic food grain production (KT per Capita)	81
Food exports as % of food imports	746 percent
Maize productivity (kilograms/ hectare)	849 kilograms

Although production has not been restored to former levels of output, some improvement has occurred [7, pg. 6]. "The independent government has recognized the dependence of most Angolan farmers on the national economy and acknowledges its commitment to the spread of development assistance to all parts of the population." [23, pg. IV-10]

Angola's soils are generally regarded as of limited use for agricultural purposes, owing to their low fertility and moisture-holding capacity. Since independence the government has given every indication that it will eventually shift the emphasis of its agricultural policies to peasant production, after it has restored large-scale agriculture for export and given African laborers on the plantations a government-led voice in the conduct of their operations. Recent estimates show that, in terms of volume produced and area planted, the majority of Angolan agriculture is devoted to the production of staples for domestic consumption. [23, pg. IV 1-5]

During the civil war, Angola's entire livestock industry was destroyed, resulting in a tremendous shortage of meat throughout the country. This is particularly acute in the bovine sector, which may take five to ten years to recover. Although there are a number of regions which

traditionally raise animals, there are in fact very few cows left. In order to rebuild the herds, the government has decided that all slaughtering must cease. To compensate for the ban, it encourages rearing of other animals, such as pigs, goats, rabbits, and poultry. [7, pg. 7]

Fishing was a major industry before the civil war, but during the war years the motor vessels were hired or stolen by refugees fleeing the fighting and most of the fleet was lost. Angola has signed fishing agreements with the USSR and with Cuba to help build up their fishing industry. [7, pg. 7]

#### G. INDUSTRY AND MINING

The disruptions in the ports in the wake of the Portuguese revolution, strikes, and the exodus of skilled Portuguese during 1975-76 has reduced production by more than three-fourths. Industrial production was reduced to an insignificant position in Angola's economy during 1976 and will undoubtedly require years of rebuilding to recover to the levels of 1973.

The ownership of many enterprises began to fall into government hands during 1974-1975 before Angolan independence, when nationalization policies decreed in Lisbon brought many large firms under state control. The independent government has continued along these lines. Only 70 of 504 "heavy industry" firms had been nationalized in late 1976. Long-term government objectives are to acquire control of over 80 percent of this sector.

Official development strategy is based on the exploitation of mineral resources to finance the creation of a related heavy industrial sector of the economy. The sedimentary oil basins around Angola have great potential. In 1975 an immense offshore oilfield at the mouth of the Congo River was discovered. The MPLA government has made it clear that it intends to "control strategic industries" and this seems to apply to the mining sector in particular. Diamonds, crude petroleum, iron ore, asphalt rocks, manganese ore, and sea salt are the principal minerals. [7, pg. 8-9]

The government seems confident of its ability to convert the industrial base built up before 1975 to satisfy the needs of Angolan citizens generally, with self-sufficiency to be attained in most foodstuffs, clothing, and bicycles, among other things. Large firms will be state-run for the most part, but certain small firms will remain private.

The government has already made substantial progress in conducting an inventory of national resources and an assessment of national needs. It has also taken steps to meet worker demands and to control strikes and other factors contributing to manpower shortages which have hindered industrial production. It now requires funds and skilled technical personnel for the repair and restarting of existing industrial plants. Cuba, the Soviet Union, and other countries are supporting them in those efforts. [23, pg. IV 46-52]

H. TRANSPORTATION

In 1974 there were 72,323 km of roads, of which 8,371 km were asphalted [7, pg, 11]. Extensive destruction was done to most of the roads and bridges during the war. A highway from Luanda to Cape Town is planned and another, from Uige to Quimbele, ultimately to be extended to the Zaire border, is under construction. [1, pg. 159]

Fleeing Portugese took most of the existing vehicles during the civil war; in 1977 only 4,000 cars, trucks, and buses were estimated as operational. Although some 5,000 vehicles remained, most are inoperational due to the lack of spare parts. [7, pg. 11]

The total length of railway track operated is over 3,000 km [1, pg. 159]. During the civil war the railway track and bridges were destroyed at various points, and since then UNITA guerrillas have continued to sabotage the railway line.

Since independence, Cabinda and Luanda appear to have become the major ports. Angola has its own airline and in 1978 announced it will form its own merchant navy, with support from the USSR.

Almost nothing is known about the status of Angola's communications facilities since independence.

I. HOUSING

Rural housing consists of a fabrication of poles interwoven with slender branches, twigs, or reeds, and daub houses grouped together in family compounds. Rural houses in which Europeans have lived are frequently stucco bungalows with tin roofs. Houses in agricultural settlements built by the government usually have two or three rooms and plaster walls with tile or tin roofs.

The sprawling suburbs of the cities are composed of dwellings built in the traditional manner and of tin shacks. Housing in the European sectors of the city consists of Portugese-style houses and modern buildings. [33, pg. 4]

The present housing situation has been summarized as follows:

Several partially-finished apartment buildings were abandoned in 1975, and an opportunity to add to the supply of modern housing in the urban areas could lie in rushing these to completion. These structures are unlikely to produce a return in the near future, so that government subsidization will probably be necessary. There is a broader need for improved urban housing, especially in Luanda, since the modern sector of colonial Luanda was relatively small and the several hundred thousand African residents of the city lived in rudimentary dwellings spread around the periphery of the city. The sort of industrial development implied by recent government policy statements will continue to draw rural Africans into the cities, and some form of organized development of housing will be necessary to accommodate not only these people but also those already living there. [23,pg. IV-53]

J. EDUCATION AND HUMAN RESOURCES

Under Portuguese rule, the Angolan educational system was severely neglected, and suffered from a shortage of funds, equipment, and trained personnel. Few educated Angolans and few educational institutions were left to the present government. This lack of resources worsened during the war.

After the MPLA victory, the government announced its plans to reorganize the educational structure and the formation of revolutionary cadres. All education services have been nationalized, and the declared objective is free universal education. Education is to be linked to production so that the basic factor in educational planning will be the manpower requirements of the nation. [1, pg. 159]

The literacy rate is estimated at between 10 and 20 percent. The Government plans to increase it rapidly. Primary enrollment is 31 percent of the school-age group; secondary enrollment five percent of the school age group. [14]

Available statistics do not show the numbers of university-trained Angolans of any race as of 1975. The MPLA could claim the services of college-trained Africans numbering (very roughly) in the low hundreds, nearly all of whom had received their highest degrees abroad. There is no count of skills held by Angolans generally. [23, pg. I-25]

The University and the Scientific Research Institute, which were established earlier, have been reorganized to combine teaching and research under the University. One may anticipate that the government will place a high priority on education. The MPLA acquired several years' experience operating its own school system in the rural portions of southeastern Angola. The Portuguese exodus has left the country desperately short of teachers; an educational resource base is practically non-existent. [23, pg. I 25-26].

### III. THE HEALTH SECTOR

#### A. A PROFILE OF THE HEALTH SITUATION IN ANGOLA

##### 1. Health Status and Patterns of Morbidity and Mortality

Availability of data on health status generally, and on morbidity and mortality specifically by disease, as with other data, has been directly affected by the unstable conditions in the country. These conditions--the continuing combat struggles, refugees and population flux, lack of basic resources for housing, sanitation, and clean water--are critically reflected in the health problems of the people. The standard of living in Angola is among the lowest in Africa. Birth and death rates appear to be increasing. Without foreign assistance, the provision of medical care would be practically nonexistent.

Angola has an inadequate system for the collection, reporting and publication of biostatistical information; reporting is based on admissions to medical facilities, and disease statistics cannot be considered reliable.

Despite the obviously difficult conditions which have contributed and continue to contribute to disease statistics collection, the MPLA Medical Assistance Services published in 1971 a listing of principal diseases and their percentages. The nosology breakdown is shown in Table 3; it is clear that those afflicted carried simultaneously several diseases:

TABLE 3

Malaria in its different forms	71.08
Parasitical diseases	34.0
Dermatoses	43.0
Respiratory diseases	19.0
Infected-contagious diseases	23.4
Leprosy	4.2
Pulmonary tuberculosis	3.7
Other forms of tuberculosis	1.6
War casualties	6.0
Malignant tumors	4.3
Anemias and other blood affections	27.6
Cardio-vascular diseases	3.7
Neurological affections	5.1
Psychosis	9.3
Rheumatism in its different forms	18.3
Deficiency diseases	25.7

[13, p. 21]

The most common diseases, according to recent sources, include dysenteries (all forms) and other enteric infections, tuberculosis and other respiratory infections, encephalitis, malaria, tetanus--including neonatal tetanus, leprosy, hepatitis, schistosomiasis, yellow fever, helminthiases, childhood diseases, and venereal diseases; recently an outbreak of cholera was reported.<sup>10</sup> [33, 31 and 26]

Principal causes of death include tuberculosis (all forms), hepatitis, meningococcal infections, malaria, and childhood diseases. [33]

Prevailing conditions which contribute to the high incidence of respiratory diseases, particularly tuberculosis, include overcrowding, malnutrition, and a weakened state of health due to other illnesses. The national incidence of tuberculosis has been estimated at 2.5 percent (about 150,000 cases). [31]

Food-, water-, and vector-borne diseases are serious public health problems, related to inadequate sewage disposal, food and water contamination, and a multitude of disease-bearing insects. Principal food- and water-borne diseases include amebiasis and shigellosis (dysenteries), cholera, typhoid and paratyphoid fevers, salmonellosis, tuberculosis, and hepatitis. [33, pg. 17]

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<sup>10</sup> See Appendix 1 for selected diseases, mode of transmission, geographical distribution, period of risk and additional information.

The prevalence of schistosomiasis is among the highest in Africa. Malaria occurs throughout the country except in the dry areas of the south. During and immediately following the wet season (April - November), mosquito vectors breed prolifically. [33, pg. 17]

Helminthic (worm) diseases are widespread; ancylostomiasis (hookworm) has the highest incidence, reaching 100 percent in many localities. This high incidence is significant because of this disease's relationship to iron deficiency anemia. A high incidence of hookworm infection has been found among medical patients. Ascariasis and trichuriasis have a generally low prevalence, but where conditions are favorable, as in the northeastern sections, the infection rate is high. [33, pg. 17-18]

Tetanus occurs frequently throughout the country and is particularly serious in rural areas. The most prevalent of the venereal diseases is gonorrhoea. [33, pg. 18]

Although widespread in Africa, arterial hypertension appears to be rare in the Angolan rural areas, as is arterial sclerosis. There are reports of heart problems such as acquired valvular defects, congenital diseases, and "irreversible cardiac failure of unknown clinical etiology." These are considered to be cases of endomyocardial fibrosis, associated with undernourishment. Diabetes also appears to be a problem. [13, pg. 16-17]

Many poisonous insects are found throughout the country, such as centipedes, scorpions, and spiders. Other poisonous invertebrates include bees, cone shell, Portuguese man-of-war, sea nettle, sea wasp, eagle ray, and sting ray. In addition, there are a number of poisonous snakes, some of which have very toxic venom.<sup>11</sup> No poisonous plants have been identified in Angola. [33, pg. 6]

Customs and religion play a significant role in many Angolans' disease concepts. Belief in tribal medicines as well as in spirits, witchcraft, and magic is still common. The cause of disease is believed by the majority of the population to be the work of the spirits of deceased members of the kin group. The diviner or traditional medicine practitioner of the local community is regarded as the primary source of information concerning the prevention and treatment of diseases, as well as their original causes. [33, pg. 5]

## 2. Food and Nutritional Status

Angola was self-sufficient in food production prior to the civil war, but, as has been shown, the unstable

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<sup>11</sup> For additional information on these poisonous insects, fish and snakes--including medical importance and distribution--and also for snakes antivenom availability, see pages 7-16, [33].

conditions have had an adverse effect on food production<sup>12</sup> and distribution, as well as storage.

Prohibitive fuel and fertilizer prices and general inflation also have contributed to difficulties in adequate food production. Food distribution is also aggravated by security problems (e.g., attacks on convoys).[31] In addition, certain customs such as food taboos still are honored by much of the population. Among the Bantus, for example, certain traditional food habits allow only the particular food of a tribe to be eaten by tribal members. Most tribes exclude meat from their diets and some tribes prohibit pregnant women from consuming milk. Such customs contribute to nutritional disorders and are related to the prevalence of many common diseases. Taboos regarding the nursing of children after the first few months of life contribute greatly to the high infant mortality rate.

During the height of the civil war, food shortages occurred in many areas of the country and the possibility of starvation became a serious threat. As will be shown in a later section, the United Nations and other international

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12. According to a per capita food production index based on the 1961 - 1965 period, food production in Angola increased/decreased over that period's production as follows:

1967:	+ 4 percent
69:	+ 8 percent
71:	+ 5 percent
73:	- 2 percent
75:	- 28 percent

organizations and governments joined in a relief program to provide the Angolans with food and financial aid.

Currently there are insufficient numbers of refrigeration and storage facilities; food sanitation is inadequate. Public health and veterinary regulations exist but are not adequately enforced. Food is sold in open markets and is exposed to dust, dirt, and flies; food spoilage is a major problem.

Widespread malnutrition has increased the incidence of endemic diseases such as tuberculosis, intestinal infections, and tetanus. There are also widespread nutritional deficiencies such as pellagra, kwashiorkor, vitamin A deficiency, scurvy, and beriberi.

The principal food crops are bananas, coffee, corn, manioc, plantains, sugar, and vegetables. Small amounts of wheat, powdered milk, canned products and condiments must be imported or, to a certain extent, are received through donor assistance.

The daily per capita caloric intake is estimated to be 2,200 (the U.S. average is about 3,160). Carbohydrates constitute the major portion of the diet. In some areas, limited protein consumption is due to cattle being regarded as a source of wealth, having religious importance. [33, pg. 4]

Four different species of insects are commonly consumed in Angola, providing valuable protein, minerals, and

vitamins: lake flies, dried caterpillar larvae, mature locusts, and mature termites. [16, pg. 91]

Due to the lack of cattle and the problems associated with distributing large amounts of skim milk powder generally received from foreign donors, Angola is in need of a plant to reconstitute skim milk. There are dairies in Luanda which could undertake milk reconstitution, and the government has given consideration to this development.<sup>13</sup>[31].

### 3. Environmental Impacts on Health

#### a. Housing

As has been shown, the poor living conditions in Angola have worsened because of the civil war. Housing throughout the country is generally overcrowded and inadequate. In rural areas livestock is quartered close to the human living area. Overcrowding and livestock proximity lead to the infestation of living quarters with insects and rodents and to the transmission of diseases among humans and between animals and humans. In urban areas, unsatisfactory housing is made more overcrowded and unhygienic by the addition of large numbers of job-seeking rural dwellers. Urban slums, as one sees throughout Africa, will be a

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<sup>13</sup> See [12, pg. 301-346] for a detailed description of the problems of malnutrition in Angola in the years preceding this decade.

prevailing problem for the independent government for years to come. [33, pg. 3-4]<sup>14</sup>

b. Water

Adequate supplies of water are provided for most of Angola through surface and ground sources, particularly in the interior northwest, northeast, and tableland regions. Prior to the civil war, at least eight cities had municipal water systems which served parts of their areas; treatment was by chlorination.

In other areas water, was obtained from impounded streams, wells, and waterholes [33, pg. 5]. A great number of springs and water networks were destroyed during the war. A large part of the country is without safe drinking water, due to human and animal contamination.

Seepage, back siphonage, and cross-connections render water from wells and municipal systems unsafe. Many of the streams provide abundant, good-quality water year round; but ground water from deeper consolidated beds is generally

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14 "Public transportation, water, sewage, telephone, and electric utilities will require substantial investment to expand them beyond their present limits within the confines of the formerly European sections of the cities. Provision of adequate public services may, in most instances, involve urban redevelopment of the most basic sort, since additional water supplies may need to be brought long distances, and dirt roads leading to and from the formerly African sections of the towns (which often became impassable during the rains) must be improved. The provision of utilities may well be deferred until plans are firm to replace the present dilapidated structures with new residential blocks." [23 pp. IV-53-54]

poor. Shortages occur in some areas during the dry season from June to August. In the southwest, rain water is collected and stored for use during the dry season. Some of the municipal water systems may have been destroyed during the civil war. [33, pg. 5]

c. Sanitation

Prior to the civil war, sections of several of the larger cities were served by sewerage systems which deposited untreated sewage into the sea and rivers. A new and larger system was installed in the capital city of Luanda in 1965. Cesspools serve the better dwellings in areas where sewerage systems are not available; disposal systems in slum areas are either limited or unavailable. Some rural villages have pit latrines; however, indiscriminate defecation prevails and creates health hazards. Night soil is not used as fertilizer.

Garbage and refuse were collected regularly in the larger cities, hauled away in special vehicles, and dumped in controlled areas. This procedure has probably been adversely affected by unstable conditions which prevail in the country. Garbage and waste are disposed of indiscriminately in the rural areas. [33]

Resettlement camps, which have been established for strategic and military reasons, have not had the resources available to take adequate account of sanitation needs, thus

aggravating the already serious health problems among villagers. [26, pg. 7]

d. Occupational Hazards

Because Angola is basically an agricultural nation, industrial toxins and air pollution are not serious problems. It is not known to what extent respiratory and other health problems associated with mining are existent.

4. Family Planning/MCH

No information is available on family planning issues in Angola.

Table 1 provides additional relevant demographic information such as reproduction and fertility rates, female population, etc. Given the estimate that Angola's population would double its 1970 level sometime between 1990 and 2000 (see Section II.B), the "extremely low densities of past years (only 13 per square mile at the time of independence) would then only slightly surpass those in Zaire in 1974 ( $23/m^2$ ) and not yet equal those of Mozambique in the same year ( $30/m^2$ ). They would have far to go before attaining the densities of 1974 in Zimbabwe ( $44/m^2$ ) or Tanzania ( $40/m^2$ ). Given the natural wealth of the country, growth in GNP ought to exceed the population growth assumed in these projections. Estimates by international financial institutions placed the post-1961 growth rate of the economy at 8 to 9 percent and (suggested) that even faster rates could be obtained with proper government policies. It may

be expected that the independent government will do better in this regard than the Portuguese. Population growth does not seem to present important obstacles to development, except to the extent that low densities will hinder the growth of domestic markets for consumer goods and raise the cost of distributing social welfare evenly throughout the country." [23, pg. 45-46]

Out of an estimated 6,000,000 population in Angola in 1977, approximately one-third were children [22]. There is a high rate of infant mortality, aggravated by malnutrition and childhood diseases. Children particularly are affected by anemia and kwashiorkor. Most newborn babies who contract measles die as a result of dehydration caused by uncontrollable diarrhea and pulmonary complications [13, pg. 18]. WHO data on late foetal deaths for 1973 give a total of 2,243 or 17.7 percent of live births, and infant mortality, 3,745 or 21.7 percent. [35, pg. 15]

Because of the high incidence of venereal diseases, pregnant women are in need of long-acting penicillin injections. The diets of pregnant women are often not adequate, due to the practice of eating less, possibly to facilitate delivery by keeping the size of the child small.<sup>15</sup> [2, pg. 339]

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15. See this source for additional information on nutritional problems among children and mothers.

The loss of many young males in the war, as well as the apparent trend of young males migrating from rural to urban areas, most probably will have an effect on the traditional division of labor, marriage patterns, and other complex sociological patterns--which all have a bearing on family planning and child care, but no information is currently available on these issues.

In 1976 there were an estimated 50,000 orphans in Angola. A UNICEF team, after a visit to the country, decided that the nutrition needs of displaced children and pregnant women in the most seriously affected provinces were among the most urgent problems of the emergency phase. [30, pg. 7-8]

##### 5. Mental Health

Although little information is available on mental health issues in Angola, it would be a logical assumption that the attendant pressures of the civil war and the continuing conflict situation in the country, the break-up of families and other social institutions and loss of family members, destruction of property, and the rapidly changing traditional roles and customs, coupled with the extremely difficult living conditions, would have a substantial impact on the population's mental health. Research on other African countries, where some of these trends are apparent, reflects their toll on mental health, and the much more unstable conditions in Angola surely must have an impact on this health issue.

## 6. Special Problems

A major, acute health problem derives from the current struggle in Angola between SWAPO liberation forces supporting the People's Liberation Army of Namibia and South African troops. South African troops, using bombs, paratroopers and heavy weapons as well as tanks and ground troops, have, for example, attacked refugee camps, killing and wounding thousands of Namibians and Angolans. Clearly, future health care of the Angolan people will have to be directed to the needs of wounded victims of this struggle, including many children.<sup>16</sup>

The whole problem of refugees from neighboring countries, from Angolan rural areas to its towns, and from Angola to neighboring countries will continue to pose difficult health problems for the new government. One source estimates that there are currently 225,000 refugees in Angola, plus 700,000 in groups of returnees, moving from refugee camps towards resettlement.<sup>17</sup>

In addition, Angolan refugees who are living in Portugal and elsewhere, and who are disillusioned and unhappy with their life there, will be a future problem as they return to Angola.<sup>18</sup>

The United Nations estimated in 1975 that nearly one million Angolans lived in neighboring countries,

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16. See for example [24].

17. See also [19].

18. See [9].

most accommodated in camps. Their future return will pose additional social and economic, as well as health problems.

Priorities will clearly have to be set in regard to national resources needed to rebuild the war-shattered economy. Foreign Minister Jose Eduardo dos Santos has estimated war damage at between \$600-700 million--plus an estimated \$300 million needed to rebuild the economy. These acute needs will clearly override health needs for years to come, despite MPLA's stated concern to confront health and other social problems. [23, pg. IV-53]

B. THE HEALTH DELIVERY SYSTEM

1. Health Care During Armed Conflict

In order to understand the current and planned delivery of health care under the MPLA, it is important to have knowledge of their past experience in providing medical services during the armed struggle.<sup>19</sup> The MPLA medical service--known as SAM--began its activities in Angola in 1963 with the advance of armed conflict and guerrilla warfare. It carried out its work at regional, zonal, and sectoral levels. The regions covered represented more than two-thirds of the total area of Angola. Many on the medical staff were killed during this period--the cadres of SAM were guerrillas who took part in the fighting as well. Cadres were trained at a school for elementary medical care, in operation since 1969.

Treatment was given by the staff in field dispensaries built with rural materials and also by mobile teams who covered hundreds of kilometers on foot in order to reach the people scattered throughout the country [13, pg. 8-13]. Besides medical treatment, SAM encouraged the cultivation of cassava and beans, and promoted animal husbandry and fishing. [13, pg. 34]

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<sup>19</sup> Certain aspects of the war had an ecological, health-related impact. It is not known to what degree the environmental health hazards created at that time have an impact today. For example, beginning in May 1970, the Portuguese colonial army began to spray chemical products, herbicides, and defoliants on the cultivated fields of the liberated regions in East Angola, burning trees and crops needed for consumption. Tubers eaten from these fields caused several cases of abdominal colic and diarrhea. [13, pg. 5-6]

A SAM document from 1971 reported of a planned mass vaccination campaign for that year, as well as expansion of the school and training of cadres, building of a 30-bed hospital and increase in the number of field dispensaries. In this document, a very comprehensive list of personnel, drugs, and equipment planned for each dispensary was cited.

In 1969 the SAM school of nursing reported 14 student nurses, of which one qualified as a nurse's assistant and 13 as assistant nurses. The plan of work for 1970-71 included:

[13, pg. 22]

- o Expansion of the number of sanitary cadres;
- o Intensification in the training of cadres;
- o Organization of the population for mass vaccinations;
- o Diffusion of standards of hygiene to the population; and
- o Expansion of sanitation methods for the population.

The curriculum of the school of nursing was as follows:

- o Concepts of Anatomy and Physiology;
- o Concepts of Seminology;
- o Hygiene and Social Medical Action;
- o Medical Pathology - adapted to the nosology conditions in Angola;
- o Surgery (pathology);
- o Technical Surgery;
- o Concepts of Biology - overall knowledge of the microorganisms, in the protozoan, helminthic, pathogenic fungi, and arthropod organisms of disease;
- o Techniques of Nursing;

- o Basic Assistance;
- o Obstetrics and Gynecology.

The following quote from this document shows their projected needs for 1972 and budget: [13, pg. 24]

Taking into account past activities and present perspectives for improving the quality of our medical installations, we foresee a quantitative development of as much as 20 percent over 1971.

The projects concern the possibility of improving the equipment at our hospital in Dolisie (People's Republic of Congo - Brazzaville) and our three dispensaries on the eastern frontier of Angola; in developing the medical services inside our country; in developing further the three dispensaries and creating more medical installations.

Thus, we expect to maintain the following in operation during the course of 1972:

- o Two hospitals - one already functioning in Congo Brazzaville - with a continued total of sixty beds for consultation, and medical, surgical, orthopedic, and obstetric treatment. These hospitals should be equipped with all the equipment necessary towards such ends.
- o Three large dispensaries, with six beds for post-operationals, functioning along the eastern frontier of Angola.
- o One dispensary/office in Lusaka for treating circulatory ailments, with the central administrative and coordinating office of SAM attached.
- o Two hundred small dispensary posts within Angola.
- o Two nurses training schools annexed to the hospitals, each with twenty students.
- o Two nurses assistants training schools annexed to the large dispensaries, each with twenty students.
- o All of the above will entail an increase of 20 percent on our medical personnel.

This increase will permit health services for the major part of the territories in Angola under the politico-military control of MPLA. [13, pg. 24]

BUDGET OF EXPENDITURE - 1972

1 - Capital expenditure

- a) Construction of three dispensaries along the eastern frontier.....\$60,000
- b. Construction of dispensary-cum-office in Lusaka.....\$ 2,000
- c. Purchase of furniture and materials for the above.....\$ 5,000

2 - Recurrent expenditure

For food expenses, petty office expenses, transport, purchase and storage of materials, publications, etc.....\$16,000

TOTAL \$83,000

[13, pg. 33]

The MPLA medical assistance services received large amounts of donations--either in the form of money or in the form of medical and medical-related supplies or personnel--from numerous countries, organizations and individuals throughout the world. [13, pg. 4]

At present Angolan and Cuban medical teams are providing emergency care to victims of the South African invasions against the liberation struggle carried on by SWAPO. This care includes emergency surgery, coordination of blood donors and distribution of blood, and transportation of extra medical supplies to hospitals dealing with the most critically injured. The airport and other buildings have been transformed into temporary hospitals. [24, pg. 26]

In 1977 the Angola Red Cross (ARC) was attempting to train regional "red cross officers and volunteers in order to educate the general public in first aid, basic health care, hygiene, and nutrition. The ARC, with the assistance of a member of the Bulgarian Red Cross, was slated to organize an ambulance service for the capital city (Luanda) and to help set up a national blood transfusion service. The ARC operates two free dispensaries, distributes medicinals through existing medical facilities, and provides baby food to needy families. No information is available on the existence of a civil defense organization." [33, pg. 31]

## 2. Health Facilities and Services

Health facilities provided by the Portuguese for African populations in Angola were rudimentary. Major hospital facilities were located in urban areas--Lobito, Malanje, and other large towns in the interior. Health services for the Europeans were far superior to those provided for the Africans, even though improvements were made in building rudimentary dispensaries in the rural areas between 1965 and 1974. The MPLA established its own public health service in the areas of Angola that it administered during those years.

Sources differ on numbers and organization of health facilities. Table 4 shows data on health facilities according to one recent source.

Another recent source cites for the year 1972 (at which time Angola was a Portuguese province, with medical facilities mainly owned and operated by the government) a total of 347 hospitals with 18,011 beds, for a ratio of 1

TABLE 4  
DEVELOPMENT OF HEALTH FACILITIES IN ANGOLA,  
1960 - 1972

	<u>1960</u>	<u>1967</u>	<u>1970</u> <sup>20</sup>	<u>1971</u>	<u>1972</u>
General hospitals (total)	160	175	173	168	197
Government	97	101	88	82	97
Maternity homes	35	n/a	42	53	60
TB sanitariums	1	6	7	7	2
Sanitary posts	649	687	691	1,183	1,318
Beds in medical installations		9,341	15,191	15,797	18,645

[23, pg. 43-44]

20 A U.N. reference gives the following listing for 1970:

4 principal hospitals  
10 district hospitals  
235 dispensaries  
697 health posts in the rural areas.

[26, pg. 7]

bed per 323 population or 3.1 beds per 1,000.<sup>21</sup> The larger medical facilities had the latest medical equipment and operating techniques [33, pg. 33].

A WHO document gives further data on hospital facilities, shown in Table 5.

According to this source, in 1972, for all hospitals, there were an estimated 320 inhabitants per bed, or 3.1 beds per 1,000 population. In the same year there were 20.4 general hospital beds per 10,000 inhabitants; 173.1 admissions per 10,000 inhabitants and 8.5 admissions per bed; the bed occupancy rate was low, 26.5 percent, and the average length of stay was 11.4 days.

In local or rural hospitals in 1972 there were an average of .79 beds per 1,000 population, 12.30 admissions per 1,000 population and 15.5 admissions per bed. The bed occupancy rate was 90.9 percent and the average length of stay was 21.4 days.

In government medical and maternity centers in this same pre-independence year there were .14 beds per 1,000 inhabitants. [37]

WHO sources from 1973-74 show for the previous years a population to hospital bed ratio of 362:1; government hospitals made up 42 percent of the total number of hospitals in the country. [38]

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21 By comparison:  
1972: Congo: 5.6 beds/1,000 pop.  
1973: Zaire: 3.0 beds/ 1,000 pop.  
1973: Namibia: 10 beds/1,000 pop.  
1973: U.S.: 6.9 beds/1,000 pop.  
[33, pg. 33]

Table 5

## MEDICAL FACILITIES IN ANGOLA

	Type of Administration	Establishments	Beds	Admissions or Discharges	Patient Days	Avg Length of Stay
General Hospitals	T	54	11,829	100,528	1,143,218	11.4
	A	19	5,120	49,470	891,520	18.0
of which:	B	21	6,381	41,018	108,207	2.6
	C	14	328	10,100	143,491	14.2
General Medicine	A	-	2,165	-	-	-
General Surgery	A	-	761	-	-	-
Obstetrics	A	-	819	-	-	-
Pediatrics	A	-	369	-	-	-
Infectious Diseases	A	-	706	-	-	-
Psychiatry	A	-	280	-	-	-
Local or Rural Hospitals	T	143	4,604	71,479	1,527,653	21.4
	A	78	2,483	37,318	725,935	19.4
	B	65	2,121	34,161	801,718	23.4
Medical & Maternity Centers	A	106	821	-	-	-
Maternity Hospitals	T	26	-	-	-	-
	A	11	-	23,517	93,189	4.0
Maternity Hospitals	B	15	-	-	-	-
Tuberculosis	A	2	757	1,212	210,305	173.5
Leprosaria	A	16	-	-	-	-
TOTAL (incomplete)	T	347	18,011	-	-	-
	A	232	9,181	-	-	-
	B	101	8,502	-	-	-
	C	14	328	-	-	-

Type of Administration: T = Total Establishments  
 A = Government Establishments  
 B = Private Nonprofit Establishments  
 C = Private Profit Establishments

Source: (37)

Since the end of 1975, many facilities have fallen into disrepair and have been destroyed and/or looted.

Most recent statistics show 67 hospitals in Angola, 153 health centers and innumerable mobile clinics. The population coverage used for mobile clinics by the government for planning purposes is set at 20,000 [31]. All medical facilities are government-owned and operated. Data on 15 selected general hospitals are provided in Appendix 2. The selection was made on the basis of the 10 largest facilities (1977) and of five others which are representative of most other facilities in the country. [33, pg. 33]

According to a UNICEF source, there is a 280-bed TB hospital built in 1972. It is an excellent hospital and well-maintained. The current medical staff is inadequate, consisting of seven doctors in all (including one female Cuban doctor). Because of the paucity of doctors, the nursing staff has been given much greater responsibilities than normally. X-ray microscopy services are considered to be excellent. However, there are no facilities for sputum cultures. The modern steam laundry cannot be properly maintained, due to the shortage of qualified technicians. [31]

No information is available on the organization of the Ministry of Health.<sup>22</sup> The organization that existed

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22. Key members of the Ministry of Health (May, 1977) [31]:  
Dr. U. Fresta, Director General  
Dr. D. Bernadino, Director of Public Health  
Dr. Anna Ferreira de Aguiar, Director Medical Supplies  
Dr. F. Abrantes, Medical Equipment and Drugs

before independence in 1975 was staffed and operated principally by Portuguese personnel. Cuban physicians and advisers are currently assisting the central government in the organization and delivery of health services, but details are not available. Provincial health directors have been appointed by the Ministry to conduct surveys of the medical-health conditions in the provinces. The Angolan Ministry of Health has a very limited capability to provide medical care for the population without foreign assistance.

A recent source stated that health centers are still only at the development stage. It is planned that they will be headed by paramedicals known as "Adjoint-Medicale." These health workers were undergoing an intensive six-month training course in 1977. The health centers, which were built by the Portuguese, are to a great extent void of much necessary equipment, which was taken by the Portuguese. [31]

No information is available on the current percentage of the national budget devoted to health. Table 2 showed health expenditures as part of the development plan, 1966-72. The World Bank, citing WHO statistics from 1973, shows the following figures [38]:<sup>23</sup>

- o Health budget as percent of national budget:  
5.1
- o Health budget as percent of GNP: 1.1
- o Government health expenditures per capita (U.S.\$):  
3.95

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23 Calculated by dividing "per capita expenditure" figure by estimates of per capita GNP for 1971, as published in World Bank Atlas, 1973.

It is a logical assumption that health necessarily has had a relatively low priority in the past years of extreme resource constraints, but that it will increasingly receive more attention, although Angola's dependency on foreign aid will determine the actual amount.

a. Medical Warehouses, Medical Supplies, Non-Hospital Medical Laboratories, and Blood Banking

There are two main medical warehouses in Luanda, mainly supplied with UNICEF drug items. In one of those, the 1977 purchases of drugs were the equivalent of approximately \$200,000 per month or 40 cents per capita. New plans at that time projected the expenditure of 500 million kwanzas (\$15 million) per annum which would increase the per capita yearly expenditure on drugs to \$2.50. Eleven pharmaceutical technicians and two pharmacists staff the medical warehouses.

[31]

The Ministry's intent is to provide medicines to the masses at large rather than to the elite as previously; it can be expected that types of supplies provided will reflect this shift. Of further interest as a reflection of the new order of democratization in Angola is that a UNICEF visitor to one of the warehouses found the Director of Medical Supplies, a female with a doctorate in pharmacy, working alongside the laborers in re-arranging the stacking of cases full of drugs. This official was told that the Director-General of Health had been similarly engaged the previous Sunday. Cuban personnel are also active in this

distribution, particularly in the northern part of the country.

UNICEF has assisted the Angolans in developing and supplying a drug list for health centers.

In 1977 Angola had authorized the expenditure of \$1 million for the handling and transport of supplies, including the purchase of three forklifts. Problems associated with warehousing and handling facilities for large-scale shipments include congestion of transit goods, lack of road transport, mice and cockroach infestation, and dock workers refusing overtime. Motor mechanics are urgently needed. The 1977 U.N. fleet in Angola consisted of 63 trucks and Kombi's. [31]

The Department of Public Health possesses an excellent warehouse headed by a nurse and a pharmacist; a government intravenous fluid laboratory; and a government pharmaceutical factory in Luanda, with approximately 40 workers. All facilities use manual operation, as there is no automation of any kind. [31]

The warehouse supplies health centers in the Luanda region and environs, using its own transport for deliveries. It is geared up to provision all the health centers which are due to be established.

The private pharmaceutical factory was to be nationalised in 1977. In 1977 Angola was on the verge of signing a bilateral agreement with Hungary for the establishment of

warehouse. Many of the drugs were of bilateral origin, mainly from the USSR, Bulgaria, and Cuba. These warehouses have their own (inadequate) fleet of trucks, made up of three 20-ton trucks and two 5-ton trucks. Deliveries to hospitals are made by airfreight on the Angolan national airline, TAAC. [31]

At this time the Director-General of Health had developed a national formulary of basic generic drugs. While a province of Portugal, Angola was an importer of medical material, and remains an importer today. In 1971, 1972, and 1973, medicines including antibiotics were among Angola's principal imports: respectively, 302.6, 382.9, and 473.5 million escudos. [28, pg. 17]

In the past, all medicinals except castor oil were imported in finished form or as bulk material for repackaging. The country presently has no production capability. Most medical materials are imported from or donated by Cuba, the USSR, or the East European countries. Brazil has donated yellow fever vaccine in response to requests from the Angolan government. [33, pg. 45]

In 1977 there were no drug manufacturing firms in the country but most trans-national drug companies are represented. The government planned to assume complete control of the importation of drugs and pharmaceuticals, realizing that while the needs are great, the distribution problem will remain serious, due to the lack of organization and

Figure 1

GOVERNMENT MEDICAL LABORATORIES

Location & Name	Type	Mission	Remarks
<p><b>BENGUELA</b></p> <p>Regional Laboratory of Animal Pathology</p>	<p>Veterinary, public health, research, diagnostic, manufacturing</p>	<p>Veterinary research &amp; diagnosis, vaccine production, &amp; distribution of veterinary products</p>	<p>Branch of Central Laboratory of Animal Pathology in Nova lisboa (Huambo)</p>
<p><b>LUANDA</b></p> <p>Bromatology Laboratory (Study of food poisons)</p> <p>Central Hospital Laboratory</p> <p>Pharmaceutical Analysis Laboratory</p> <p>Regional Laboratory of Animal Pathology</p> <p>Research Institute for Sleeping Sickness</p>	<p>Public health, diagnostic</p> <p>Public health, diagnostic, research, training</p> <p>Public health</p> <p>Veterinary, public health, research, diagnostic, manufacturing</p> <p>Research, training</p>	<p>Food, toxicological, &amp; pathological examinations</p> <p>Diagnostic &amp; routine public health laboratory. Advice, training &amp; supervision for government hospital laboratories throughout province</p> <p>Pharmaceutical analysis &amp; packaging of pharmaceuticals for use in government medical facilities</p> <p>Veterinary research &amp; diagnosis, vaccine production &amp; distribution of veterinary products</p> <p>Central headquarters for research on sleeping sickness. Research training &amp; supervision of 5 mobile teams &amp; other fixed facilities</p>	<p>Principal clinical &amp; public health laboratory for province</p> <p>Branch of Central Laboratory of Animal Pathology in Nova lisboa (Huambo)</p>
<p><b>MOCAMEDES</b></p> <p>Regional Laboratory of Animal Pathology</p>	<p>Veterinary, public health, research, diagnostic, manufacturing</p>	<p>Veterinary research &amp; diagnosis, vaccine production &amp; distribution of veterinary products</p>	

a pharmaceutical factory, which was to include a section to produce desperately needed intravenous fluids. [31]

The Central Warehouse is responsible for provisioning hospitals. A chart has been designed whereby regions or provinces report on population coverage as well as the number of cases (in-and out-patient) seen in a quarter. Drug requirements are then replenished on the basis of these established parameters.

In 1977 the Government had come to the conclusion that they had made adequate provision for drugs for 1977-78. They were then in the process of studying their requirements for the year 1978-79 which UNICEF was to help provide, along with other supplies.

Due to an outbreak of cholera in 1977 there was an urgent need for cholera vaccine. [31]

b. Nonhospital Medical Laboratories

At present, the existing laboratories in Angola are capable of providing only routine testing. The medical research and development capability was lost when the Portuguese medical and subprofessional personnel left the country. Prior to November 1975, the medical laboratories listed in Figure 1 were engaged in the type of research indicated.

c. Blood Banking

As a province of Portugal, Angola did not have the capability to provide for its blood and blood products

Location & Name	Type	Mission	Remarks
Scientific Investigative Institute NOVA LISBOA (HUAMBO)	Research	Food, nutrition & entomological research	
Central Laboratory of Animal Pathology	Veterinary, public health, research, diagnostic, manufacturing	Veterinary research & diagnosis, vaccine production & distribution of veterinary products	
Institute of Agriculture Investigation	Research	Research in agriculture & foods. Research in control of insect vectors of veterinary diseases & some human diseases	
Medical Research Institute SA DA BANDEIRA	Research	Research in endemic diseases, principally trypanosomiasis, malaria & schistosomiasis	
Scientific Investigative Institute	Research	Research in agriculture, foods, & some diseases	
Source: (33, pp. 34-41)			

requirements, and still cannot provide for its needs. There are no separate blood banks and no national program for the collection and distribution of whole blood or fractionation of blood. Probably some of the hospitals operated by Cuban medical personnel collect blood for transfusing surgical patients. Blood products must be imported. [33, pg. 33]

d. Disease Control and Immunization Projects

A 1977 source cited tuberculosis control programs existing at that time to include chemotherapy, health education campaigns, and provision of BCG vaccinations to both urban and rural inhabitants. A major BCG campaign was launched in June, 1977 [31]. Malaria control measures included spraying, but this was conducted irregularly and only in certain urban areas during the hot seasons. A slight decrease in the incidence of schistosomiasis had been brought about by improvement of irrigation and water supplies. Control measures included improvement in environmental health and health education. Little was apparently done to control venereal diseases. [33]

A Tanzanian newspaper article from April 8, 1977 reported on a vaccination campaign in Angola: [3]

One and a half million Angolan children received their first dose of anti-polio vaccine today in the biggest campaign for preventive medicine ever launched in Angola, it was announced here.

The campaign has been in preparation for many weeks and the operation has been dubbed "Protecting the Children's Health".

<u>Small Pox:</u>	3 million children (0-14 years);
<u>Polio:</u>	2.154 million children (0-10 years); and
<u>Yellow Fever:</u>	600,000 persons in endemic areas.

Eighty-five percent of the total vaccinations will be carried out in 25 mobile clinics where specially trained teams of vaccinators will be sent. The rest will be done at 33 hospitals and 38 health centers throughout the country.

UNICEF is providing 25 Landrovers as well as the vaccines, equipment (including jet gun syringes), cold chain equipment for vaccine storage, and the camping equipment for the mobile clinic staff. Total budget for the five-year program is set at \$1,866,300. [22]

### 3. Human Health Resources and Training

Table 6 shows number of health manpower resources in Angola, 1960 - 1972: [23, I-44]

As with other statistics, data on health manpower differ according to source. For example, for the year 1972 one reference cites 162 doctors in service and 1,000 nurses of all categories [26, pg. 7], figures which are considerably less than those given in Table 6.

WHO publications from 1973-74 cite 8,463 inhabitants per physician, 26,070 inhabitants per non-physician primary health worker, and 4.9 support personnel per physician. [38, pg. 79]

It began with a systematic census of children under 10 in all villages and urban areas in the country.

They were counted by officials of the People's Movement for the Liberation of Angola (MPLA), who worked closely with mass organizations, especially the Organization of Angolan Women (OMA).

The vaccine is to be given in the form of candy, a technique developed in the United States and then in the Soviet Union. Cuban medical personnel will assist. The second dose is scheduled for June 3. The People's Republic of Angola has stressed a policy of free medical care for all and a systematic campaign for preventive medicine for abolition of various diseases.

Last year, the Government carried out a campaign to vaccinate animals against rabies. A large publicity campaign against typhoid fever also signalled the beginning of the implementation of the policy of preventive medicine that has long been contemplated by MPLA officials.

As soon as the country declared independence all medical treatment became free in the hospitals of the capital and in the 16 provincial hospitals." [3]

There appears to be some religious objections to disease control programs and other modern medical procedures among some of the tribes living in remote areas.

UNICEF recently initiated a five-year immunization project in Angola (Expanded Program of Immunization [EPI]) targeted for three million children, ages 0-15 years. Planned coverage of the program will include:

<u>BCG:</u>	3 million children (0-15 years);
<u>DPT:</u>	1.73 million children (3 months - 5 years);
<u>Measles:</u>	275,000 children (9 months - 5 years);
<u>Tetanus:</u>	1.8 million children 5-14 years); 1.5 million child-bearing or pregnant women; 1.4 million working men;

Another more recent source gives for the year 1973 383 physicians in Angola, for a ratio of one physician per 15,400 inhabitants. For the same year, it cites 138 pharmacists, 53 medical assistants, 1,187 nurses, 2,046 assistant nurses, 192 nurse-midwives, and 192 assistant midwives. Ninety-three veterinarians are cited for 1975. (33)

A WHO listing for health personnel in 1973 is shown in Table 7.

In March 1977, Angola had 114 Cuban physicians, 55 Angolian physicians, and 50 physicians from other countries. This total of 219 physicians means a ratio of one physician per 25,100 population.<sup>24</sup>

As of May 1, 1977, private medical practice was no longer permitted in Angola. A very recent source reports that there are at present "60 medical men available to man the health centres" in the country; a further 40 doctors were expected to graduate the summer of 1977. "The law prescribes that new graduates spend a minimum of three years in health centers. After the 1977 graduation, there will be a steep decline in the number of doctors graduating because most of the earlier-year students were from well-to-do families who had left with their parents at the time of the

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<sup>24</sup> By comparison, in 1975 the Congo had one physician per 6,338 population and Zambia had one physician per 9,315 population; in 1973 Zaire had one physician per 28,800 population. During the period 1973-74 the U.S. had a ratio of one physician per 620 inhabitants.

TABLE 6  
DEVELOPMENT OF HEALTH MANPOWER IN ANGOLA,  
1960 - 1972

	<u>1960</u>	<u>1967</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
Physicians	234	290	464	415	561
Inhabitants/ physician	20,700	18,400	12,200	13,900	n/a
Dentists	8	20	23	n/a	n/a
Inhabitants/ dentist	605,000	266,000	247,000	n/a	n/a
Pharmacies	46	68	90	n/a	n/a
Nurses	577	840	1,629	1,780	1,994
Midwives	116	191	211	222	317

[23, pg. IV-44]

exodus." It is expected that it will take about five years to bring the number of graduates back to the 1977 level.

[31]

Since independence, virtually all trained medical personnel in Angola have left the country. Most were European Portuguese. Currently the minimal public health capability that exists in the country is provided by a small number of Angolan physicians and a large number of Cuban medical and other health care personnel, by Algerian physicians, dentists and para-professionals, and by a small number of medical and other health care personnel from other countries.

The Angolan armed forces are supported principally by Cuban medical teams [33, pg. VII]. In 1977 there were a reported total of 11 pharmacists in the medical warehouses.

[31]

WHO also has medical personnel in the country, including a chief epidemiologist in the Ministry who is to help direct the immunization project [22]. Clearly, trained medical personnel are in urgent demand, though in the longer term it is expected that Angola will wish to train its own medical people.

In addition to these health workers, the diviner or traditional practitioner appears to play an important role in the delivery of health care, particularly in the rural areas. "The diviner uses invocations and ritual sayings,

TABLE 7

HEALTH PERSONNEL IN ANGOLA, 1973

Physicians		383
Medical Assistants		53
Multipurpose Health Auxiliaries		333
Dental Technicians		19
Pharmacists		87
Pharmacy Assistant		138
Veterinarians		5
Veterinary Attendants		9
Nurse Midwives		92
Assistant Nurse Midwives		192
Nurses		1069
Nuns		118
Assistant Nurses		1928
Physiotherapists		18
Orthoptists		2
Medical Laboratory Assistants		108
Laboratory Aids		28
Medical Radiology Technicians		60
X-ray Assistant Technicians		2
Sanitary Engineers		1
Health Inspectors		6
Entomologists		1
Other scientific or professional specialists in health		2
Medical social workers		20
Other technicians in health		54
Other Health Auxiliaries		39
	<u>Per 10,000 population</u>	<u>Population per health person</u>
Physicians	0.7	15,170
Pharmacists	0.1	66,800
Medical Assistants	0.7	15,060
Nursing Personnel	5.4	1,870
Nursing and Mid- wifery Personnel	5.8	1,710

Source: [37, pg. 2 ff.]

#### IV. FOREIGN ASSISTANCE<sup>25</sup>

Relative to other southern Africa countries, Angola received low levels of foreign assistance up to 1975. Before then, a variety of international organizations cooperated on aid for refugee populations outside Angola. Considering Angola to include the areas under administration prior to 1974, small amounts of foreign donor assistance may be said to have reached Angola's people. For example, UNESCO, the Food and Agriculture Organization (FAO), and the World Food Programme (WFP) provided assistance in the form of education for movement leaders (primarily MPLA) in Tanzania, and donated nearly a million dollars worth of food to liberated areas of Angola in 1974. [23, pg. III-4]

In 1975 Angola began to receive accelerated assistance to meet its most pressing needs.<sup>26</sup> Primary sources of development assistance in that year were the UN (principally UNDP, UNICEF and the UNHCR), Sweden, Federal Republic of Germany, Cuba, the USSR, and certain Eastern European socialist countries.<sup>27</sup>

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25 Comprehensive information concerning development aid activities in Angola is not available. This section reflects information published at this time, with the focus on health and health-related assistance. Though possibly incomplete, it does point out the direction of most pressing assistance needs in the country.

26 "The government has expressed its determination to "pay its own way" and to repay foreign donors for assistance rendered. It is confident of its long-term ability to finance its own development and will take international aid only in forms consistent with national pride and self-respect." (234, pg. III-1]

27 See [21] for more detailed information.

amulets, and herbs in treating illnesses." [33] No information is available on their numbers or the extent of their influence.

#### Training

In 1974 there were reported to be four schools for health auxiliaries [26, pg. 7]. In 1977 there was a nursing school located in the city of Benguela; it had 63 students and was staffed by Cuban personnel. Cuban personnel have also initiated training programs for nurses in some of the outlying villages and are engaged in training nurses' and midwives' aides.

A new request was forthcoming for the fiscal year 1977/78. The amount will be Sw. Cr. 50 million (\$11.75 million) and the same amount can be foreseen annually.

In May of 1978 it was reported: "Sweden is to give SWAPO 20 million kroner (about \$4 million) in its next budgetary year starting in July. In 1977 SWAPO received 14.5 million kroner, including special aid of 4.5 million kroner to buy medicines and basic essentials for Namibian refugees in southern Angola." [17]

b. Cuba, the Soviet Union, Eastern European Socialist Countries

Exact information on the amount and kinds of assistance from socialist countries is not available, particularly in the area of health, but, as has been shown throughout this report, this assistance, particularly in the health sector, including financial and manpower support, has been substantial.

Cuban military forces have undertaken a variety of tasks, ranging from rebuilding damaged roads and bridges to training Angolan military cadres. Cuba has also provided large amounts of medical assistance, technical assistance in the forestry sector, teachers, and skilled technical personnel in a variety of other fields. [23 pg. III-1,2]

In 1977 it was reported that health agreements between Angola and certain of the East European countries had been signed. [33, pg. 31]

c. United Nation's Organizations

In 1975, UNICEF, in regard to proposed Angolan health assistance, wrote: [26, pg. 7]

The following listing of foreign donor assistance after independence is by country and/or organization:

a. Sweden

Sources differ somewhat on exact amounts and direction of Swedish aid. According to one source: [21, pg. 3]

- o The Government of Sweden provided about \$2.1 million to the MPLA during 1970-1975 for humanitarian assistance plus \$560,000 donated through UNESCO to the MPLA school in Dolosie, Congo. After independence, Sweden provided three emergency grants to Angola during 1976 as follows:
  - \$2,291,000 in March for food, transport, educational equipment, medicines, and medical equipment.
  - \$3,125,000 in May for ferries, flotation bridges, and other transport equipment. Technical staff were also provided.
  - \$8,322,000 in November for FY 1976/77 was divided among aid to the UNHCR, WFP, and a Swedish relief organization. The remaining funds were placed at the disposal of the Angolan government.

Another source reports: [31]

- o The Swedish allocation to Angola for fiscal year 1976/77 amounted to 40 million Swedish Crowns (\$9.41 million). Out of this, an amount of 25 million Sw. Cr. (\$5.88 million) is considered as bilateral aid, 8 million Sw. Cr. (\$1.88 million) through UNHCR, 5 million Sw. Cr. (\$1.17 million) through WFP for wheat and 2 million Sw. Cr. (\$0.47 million) through a Swedish Church Mission essentially earmarked for medical work.

SIDA received from the Ministry of Health through the Foreign Ministry, a firm request dated 20th March 1977 for Sw. Cr. 17.5 million (\$4.12 million) worth of medical supplies and transport.

It is to be noted that the request to SIDA includes the following cold chain elements: -

Kerosene Refrigerators	120
Chest Freezers for Provinces	16
Electric Refrigerators for Health Centers	100

supplies costing some \$500,000 had already been delivered to Angola.<sup>28</sup>

UNICEF also supplied high-protein foods, drugs, multi-vitamins, and a special food mixture for children and pregnant mothers in the worst affected areas. [29]

Also in 1976, the UN and other relief organizations stepped up relief efforts targeted for an estimated 50,000 refugees in camps on the southern border with Namibia [4]. The UN High Commission for Refugees was in August of this year reported to be putting together an \$80 million program for refugees in Angola and neighboring countries. [23, pg. III-1]

In 1977 UNICEF was reported to be supplying 11.5 million tablets of chloroquine to Angola, as well as intravenous fluids and oral rehydration salts [22]. The UNICEF comprehensive immunization project has already been described earlier in this report.

The FAO announced in May of this year its intent to give \$41,600 in aid to Angola to help meet the urgent food needs of the refugees from South Africa. The African National Congress of South Africa appealed for aid for 1,140 malnourished refugees, many of them children, who sought shelter in Angola. The Angolan government endorsed the request. [8, pg. 9].

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28 See [30] for a complete listing of UNICEF projects.

"After a survey of the problems and an assessment of the situation, health posts and dispensaries destroyed or in disuse during the hostilities will be rebuilt and reopened. Mass campaigns against endemic diseases will be launched and an immunization programme for children will be undertaken. A crash program for the rapid training of auxiliary health personnel will also be undertaken. Wells will be sunk in order to improve the supply of drinking water in villages and in the new resettlement camps."

In the same year, UNICEF planned to provide Angola from its general resources \$300,000 for 1975, and \$200,000 in 1976. In addition, special assistance programs for Angola were planned in the amount of \$350,000 for 1975, and \$250,000 in 1976. Of the total \$1,100,00 for these two years, \$400,000 was slated to go to health services and \$300,000 to water supply.

Under health services:

- o Drugs and medical supplies for rural health outposts and dispensaries; drugs and supplies for mass campaigns against endemic diseases; vaccines for immunization campaigns; support for training programs for auxiliary health staff.

Under water supply:

- o Equipment and construction costs for wells and water supply systems in new resettlement camps. [26, pg. 18-20]

In March and April 1976, UNICEF missions visited Angola to assist in the establishment of emergency rehabilitation and longer-term development programs for mothers and children. UNICEF proposed, in May of 1976, assistance measures costing some \$4 million for the years 1976 and 1977 in the fields of child planning and nutrition; health; education; and social services and transport maintenance. Relief

The budget of the ICRC through May, 1978 shows 80,000 Swiss francs for medications for the Angola Red Cross and SWAPO; 300,000 Swiss francs for further medical aid; 50,000 Swiss Francs for food; for 40,000 Swiss francs for freight, including medicines. [6, pg. 5]

The European Economic Community reported in March, 1976 that it had provided emergency food commodities in response in an appeal from the UNHCR and ICRC of 100 M.T. of skimmed milk powder, of which 25 M.T. were flown in. During 1975/76 Angolan refugees living in Zaire received aid from the EEC in the amount of three months' consumption of cereals (2,000 M.T.), milk powder (150 M.T.), and butter oil (100 M.T.), for 30,000 people. [21]

Individual EEC countries--including Great Britain, the Netherlands, West Germany, Belgium, and Denmark--also offered aid to Angola in 1976. [23, pg. III-2]

The International Committee of the Red Cross provided long-term assistance to an estimated 225,000 sick and wounded in Angola in 1976. This assistance included 13 mobile medical teams, dispatchment of medical supplies and high protein food, as well as other customary Red Cross Assistance regarding prisoners and missing persons [4]. The total amount of Red Cross aid to Angola from January to April, 1978 was 192,500 Swiss francs [5, annex I]. In May of 1978 the Angolan Government issued a decree under which the emerging Angola Red Cross was officially founded. The International Red Cross (IRC) announced in this month that:

"Constant increase in number of victims of fighting between South African armed forces and those of SWAPO has impelled ICRC to increase medical assistance to latter. A long-term programme, including prostheses and rehabilitation for war disabled, is now being studied with SWAPO medical staff. Two tons of emergency medical supplies (basic units for hospitals) have just been sent to Angola."

- o Development of the service delivery infrastructure, particularly expansion of mobile health teams;
- o Water, sanitation and proper waste disposal, particularly in the rural areas;
- o Development of mid- and senior-level management and supervisors, and training of auxiliary health manpower;
- o A reliable, though not necessarily expensive, central laboratory.

Of crucial importance in recommendations such as these, based only on reports and literature, without an incountry visit and without any input from the Angolan government itself, is to urge establishment of communications with the Angolan government and coordination of any proposed assistance with other foreign donors and international organizations providing support.

V. PRIORITIES AND RECOMMENDATIONS

Angola's current, critical health needs are substantial. Vast amounts of foreign donor assistance provided in this sector since 1975 have complemented Angola's own courageous commitment to rehabilitation and development of infrastructure, but the needs remain.

The difficulties of the past--many years of negligence under colonial rule and the effects of civil war, widespread destruction, the exodus of qualified personnel at all levels, and the serious deterioration of the economy--are currently being confronted by the Angolan government with the additional burdens of internal political struggle, and armed conflict with South Africa. Current priorities and recommendations are directly determined by the need for essential resources for the most vulnerable populations in the most seriously affected areas. Future priorities will be affected by the development of the present conflicts, both military and political, and by the development of the government's efforts to re-build the economy.

In general, the most acute assistance needs are in the areas of relief support to refugees and victims of the fighting, as well as emergency and basic health care to the population.

The following areas should be given consideration in the development of health assistance priorities in Angola:

- o Categorical immunization programs and BC6--provision of drugs and maintenance of already existing programs;

Diseases of Concern	Mode of Transmission	Geographical Distribution	Period of Risk	Remarks
<u>Botulism (Clostridium Botulinum, C. Parabotulinum)</u>	Eating infected fish or canned foods which are inadequately cooked	Countrywide	All year	No statistical data available
Brucellosis ( <u>Brucella</u> spp.)	Drinking contaminated milk	Countrywide	All year	No statistical data available
<u>Cholera (Vibrio Cholerae Serotypes)</u>	Eating or drinking contaminated food or water	Countrywide	October through December	25 cases as of 7 May 1977
<u>Clostridium Perfringens</u>	Eating inadequately heated leftovers	Countrywide	All year	No statistical data available
<u>Echinococcosis (Echinococcus Granulosis)</u>	Eating food or drinking water contaminated by infected dogs	Countrywide	All year	No statistical data available
<u>Enterobiasis (Enterobius Vermicularis)</u>	Eating contaminated food; fomites	Countrywide	All year	No statistical data available
Hepatitis (Type A) (Ungrouped Virus)	Eating or drinking contaminated food or water	Countrywide	All year	Endemic, 1,244 cases, 1974
Paratyphoid Fever ( <u>Salmonella Paratyphi</u> )	Eating or drinking contaminated food or water	Countrywide	All year	No statistical data available
Shigellosis (Bacillary dysentery) ( <u>Shigella</u> spp.)	Eating or drinking contaminated food or water	Countrywide	All year	460 cases, 1974
Salmonellosis ( <u>Salmonella</u> spp.)	Eating or drinking contaminated food or water	Countrywide	All year	716 cases, 1976

Appendix 1  
SELECTED DISEASES

Diseases of Concern	Mode of Transmission	Geographical Distribution	Period of Risk	Remarks
Ancylostomiasis ( <u>Necator Americanus</u> )	Larvel form penetrates skin	Countrywide	All year	No statistical data available
Bunyamwera Fever (Arbovirus, Group C)	Mosquito bite ( <u>Aedes Lineatopennis</u> )	Central High-lands	April through September	No statistical data available
Chickenpox (varicella) (Varicella-Zoster virus)	Person-to-person: Fomites	Countrywide	N/A	1,705 cases, 1974
Dengue Fever (Arbovirus Group B)	Mosquito bite ( <u>Aedes aegypti</u> , <u>A. Mariae</u> )	Coastal Regions	N/A	No statistical data available
Diphtheria ( <u>Corynebacterium Diphtheriae</u> )	Person-to-person: fomites	Countrywide	All year	9 cases, 1973
Encephalitis, viral (Arbovirus)	Mosquito bite ( <u>Culex</u> spp.)	Coastal Region	N/A	16 cases, 1974
Filariasis ( <u>Wuchereria Bancrofti</u> )	Mosquito bite ( <u>Aedes</u> spp.) ( <u>Culex pipiens</u> )	Hot, damp area near coast & along rivers & makes in northern part of the country	All year	DDT resistant
<u>FOOD &amp; WATERBORNE:</u>				
Amebiasis (amebic dysentery) ( <u>Entamoeba Histolytica</u> )	Eating or drinking contaminated food or water. Flies are mechanical transmitters	Countrywide	All year	939 cases, 1974
Anthrax ( <u>Bacillus Anthracis</u> )	Eating contaminated food; fomites; dust	Countryside	All year	81 cases, 1973
Ascariasis ( <u>Ascaris Lumbricoides</u> )	Eating infected salads or raw meat	Countryside	All year	No statistical data available

Diseases of Concern	Mode of Transmission	Geographical Distribution	Period of Risk	Remarks
Leptospirosis ( <u>Leptospira</u> spp.)	Immersion in contaminated water	N/A	N/A	No statistical data available
<u>MALARIA</u>				
Benign tertian ( <u>Plasmodium Vivax</u> )	Mosquito bite ( <u>Anopheles</u> spp.)	Countrywide; except extreme desert areas	April through November	Endemic countrywide; 165,667 cases, 1974
Malignant Tertian ( <u>P. Falciparum</u> )	Mosquito bite ( <u>Anopheles</u> spp.)	Countrywide; except extreme desert areas	April through November	see above entry
Quartan ( <u>P. Malariae</u> )	Mosquito bite ( <u>Anopheles Sacharovi</u> )	Countrywide; except extreme desert areas	April through November	see entry for Benign tertian
Measles (Myxovirus)	Person-to-person; droplet spread	Countrywide	April through November	6,091 cases, 1974
Meningitis, meningococcal ( <u>Neisseria Meningitidis</u> )	Person-to-person; discharge from nose & throat of infected person	Countrywide	N/A	138 cases
Mumps (Myxovirus)	Person-to-person; droplet spread; fomites	Countrywide	All year	1,268 cases, 1974
Onchocerciasis ( <u>Onchocera Volvulus</u> )	Blackfly bite; ( <u>Simulium</u> spp.)	Northern half of country	N/A	Endemic
<u>PLAGUE</u>				
Bubonic ( <u>Pasteurella Pestis</u> )	Fleabite ( <u>Xenopsylla</u> spp.)	Benguela & Cuando Cubango districts	February	Endemic; 49 cases 1975

Diseases of Concern	Mode of Transmission	Geographical Distribution	Period of Risk	Remarks
Staphylococcal ( <u>Staphylococcus</u> spp.)	Eating food left unrefrigerated too long	Countrywide	All year	No statistical data available
Taeniasis & Cysticercosis ( <u>Taenia Saginata</u> or <u>T. Solium</u> )	Eating inadequately cooked beef or pork	Countrywide	All year	No statistical data available
Trichinosis ( <u>Trichinella Spirilis</u> )	Eating inadequately cooked pork	Countrywide	All year	No statistical data available
Trichuriasis ( <u>Trichuris Trichiura</u> )	Eating contaminated salads or vegetables	Countrywide	All year	No statistical data available
Tuberculosis ( <u>Mycobacterium Tuberculosis</u> )	Drinking contaminated milk; person-to-person	Countrywide	All year	2,913 cases, 1976
Typhoid Fever ( <u>Salmonella Typhi</u> )	Eating or drinking contaminated food or water	Countrywide; highest incidence in Luanda Dist.	All year	Epidemic in Uige Province in Dec., 1976
Histoplasmosis ( <u>Histoplasma Cap-sulatum</u> )	Blackfly bite ( <u>Simulium</u> spp.)	Countrywide	All year	No statistical data available
Influenza ( <u>Myxovirus</u> )	Person-to-person; droplet spread; fomites; airborne	Countrywide	January through June	631 cases January through April, 1976
Leishmaniasis, cutaneous ( <u>Leishmania tropica</u> )	Sandfly bite ( <u>Phlebotomus</u> spp.)	Countrywide; except desert areas	N/A	Control programs include insecticide spraying
Leprosy ( <u>Mycobacterium Leprae</u> )	Not established	Countrywide; highest incidence in Malanje Dist.	All year	134 cases 1976; incomplete report

Diseases of Concern	Mode of Transmission	Geographical Distribution	Period of Risk	Remarks
Tetanus ( <u>Clostridium Tenani</u> )	Would contamination	Countrywide	All year	Endemic; no statistical data available
Trachoma, <u>Chlamydia (Bedsonia) Trachomatis</u>	Person-to-person; flies, fomites	Countrywide	N/A	4 cases, 1972
Trypanosomiasis, African ( <u>Trypanosoma Gambiense</u> )	Tsetsefly bite ( <u>Glossina fuscipes quanzensis, G. palpalis palpalis</u> )	Countrywide	All year	Endemic; 4 cases 1973
<u>TYPHUS</u>				
Endemic, fleaborne ( <u>Rickettsia Prowazeki var, Typhi</u> )	Fleabite ( <u>Xenopsylla cheopis</u> )	Countrywide	N/A	No statistical data available
Epidemic, louseborne ( <u>Rickettsia Prowazeki</u> )	Louse bite; crushed tissues or feces of louse ( <u>Pediculus Humanus Humanus</u> )	Countrywide	N/A	No statistical data available
<u>VENEREAL DISEASES</u>				
Chancroid ( <u>Haemophilus Ducreyi</u> )	Sexual contact	Countrywide	None	No statistical data available
Gonorrhoea ( <u>Neisseria Gonorrhoeae</u> )	Sexual contact	Countrywide	None	5,091 cases, 1974
Lymphogranuloma Venereum, <u>Chlamydia (Bedsonia) trachomatis</u>	Sexual contact	Countrywide	None	No statistical data available
Syphilis ( <u>Treponema Pallidum</u> )	Sexual contact	Countrywide	None	662 cases, 1974
Whooping Cough ( <u>Bordetella Pertussis</u> )	Person-to-person; droplet spread; fomites	Countrywide	All year	3,482 cases, 1974

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Diseases of Concern	Mode of Transmission	Geographical Distribution	Period of Risk	Remarks
Sylvatic ( <u>P. Pestis</u> )	Contact with infected wild rodents	Countrywide	N/A	No statistical data available
Poliomyelitis (Picornavirus)	Person-to-person	Central & Northern sections of the country	N/A	5 cases, 1974
Rabies (Rhabdovirus)	Animal bite; contact with animal saliva	Countrywide	None	8 cases, 1972
<u>RELAPSING FEVER</u>				
Louseborne ( <u>Borrelia Recurrentis</u> )	Crushing infective louse into bite wound ( <u>Pediculus Humanus Humanus</u> )	Central highlands	None	15 cases, 1974
Tickborne ( <u>B. Recurrentis</u> )	Tick bite; coxal fluid of tick ( <u>Ornithodoros Papillipes</u> , <u>O. Tholozani</u> )	Countrywide, especially rural areas	N/A	Endemic
Sandfly Fever (Arbovirus)	Sandfly bite ( <u>Phlebotomus</u> spp.)	Countrywide	N/A	Control programs include insecticide spraying
Schistosomiasis ( <u>Schistosoma Haematobium</u> , <u>S. Japonicum</u> )	Larval form enters body from fresh water	Countrywide	All year	Endemic; no statistical data available
Streptococcal disease, hemolytic (scarlet fever) ( <u>Streptococcus pyogenes</u> )	Person-to-person; foodborne	Countrywide	All year	Endemic; no statistical data available
Sylvan Yellow Fever (Arbovirus)	Mosquito bite ( <u>Aedes</u> spp.)	Countrywide; areas with high rainfall	April through November	Endemic

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Diseases of Concern	Mode of Transmission	Geographical Distribution	Period of Risk	Remarks
Yaws ( <u>Treponema Pertenuae</u> )	Person-to-person; fomites	Countrywide	April through November	No statistical data available
Yellow Fever (Arbovirus)	Mosquito bite ( <u>Aedes</u> spp.)	Countrywide; elevations above 2,290m	March through July	Endemic; no statistical data

Location & Name	Beds	Hospital Services	Remarks
MOCAMEDES Regional Hospital	62	Medical, pediatrics, X-ray, laboratory	Staffed by Cuban personnel
NOVA LISBOA (HUAMBO) Central Hospital	N/A	Medical, surgical, X-ray, laboratory	
SA DA BANDEIRA Central Hospital	240	Medical, surgical, X-ray, laboratory	
SILVA PORTO Regional Hospital	N/A	Medical, surgical, X-ray, Laboratory	Masonry structure
VILA HENRIQUE DE CARVALHO Regional Hospital	N/A	Medical, surgical, X-ray, laboratory	Masonry structure
VILA SERPA PINTO Regional Hospital	N/A	Medical, surgical, X-ray, laboratory	Masonry structure

Appendix 2  
SELECTED GOVERNMENT GENERAL HOSPITALS

Location & Name	Beds	Hospital Services	Remarks
BENGUELA Central Hospital	250	General medical, X-ray, laboratory	Masonry structure; staffed by Cuban personnel
BUNGEI Civilian Hospital	55	Medical, surgical, TB	
CABINDA Regional Hospital	54	General medical, surgical	
CALUQUEMBE Regional Hospital	129	General medical, surgical	8 masonry buildings
CARMONA Regional Hospital	N/A	General medical, X-ray, laboratory	Several one-story masonry buildings in good condition
CAXITO Civilian Hospital	120	Medical, surgical, X-ray, laboratory	
CHISSAMBA Civilian Hospital	140	Medical, surgical, X-ray, laboratory	6 masonry buildings
LOBITO Civilian Hospital	190	Medical, surgical, X-ray, laboratory	
Regional Hospital	82	General medical, X-ray, laboratory	Masonry building; staffed by Cuban personnel

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