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A PRELIMINARY EXAMINATION OF THE DELIVERY OF PHARMACEUTICAL PRODUCTS AND SERVICES IN FOUR NATIONS IN WEST AND CENTRAL AFRICA

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ABSTRACT

During the month of January of 1979, a consultant team under the direction of the Project for Strengthening Health Delivery Systems in Central and Western Africa visited Nigeria, Togo, Senegal, and the Ivory Coast. The purpose of these visits was to examine the delivery of pharmaceutical products and services within these countries. This report is a summary of findings made on these visits.

Although the individual nations differed in their systems of drug distribution, certain common factors were observed among all the countries. First, the health officials estimated that between 20% to 40% of the total population participated in western type medicine The distribution of pharmaceutical products varies between 30% to 40% from the public sector, whereas the rest were distributed by the private sector. The 60% to 80% of the populations of these countries which live in the rural areas participate least in western type medicine. However, in each country visited, the health officials anticipated a rapid increase in the participation in western medicine.

The system of drug importation varies between countries, however, once within the region, the drugs flow freely across national boundaries.

A common observation of the health officials within the countries is a suspicion of the quality of the drugs being distributed to patients. Anecdotal evidence suggest that up to 10% of the drugs given to patients are of inferior quality, i.e., ineffective to

potentially toxic. This was substantiated by the team with the observation that drug recalls do not occur in Africa nor are there any, in place, mechanisms for quality assurance in the region.

A second major observation of the team was that drugs cost between two to three times as much in Africa as one would expect to pay in Europe or the United States. The reason for this high cost of drugs was not apparent to the team. This cost factor leads to excessive costs to the patient, lack of participation in western medicine and inappropriate drug therapies.

A third finding was an acute shortage of persons with even a minimum training in pharmacotherapy dispensing drugs to patients. The number of trained pharmacists is approximately one per 60,000 people. Much of the drug distribution is conducted by totally untrained and often unauthorized persons. This must result in inadequate and inappropriate use of the drugs.

These findings lead the consultant team to make the following recommendations:

1. Due to the extensive flow of drugs across national boundaries, only a system for regional quality assurance can be effective. Thus, we suggest that detailed studies be conducted which will lead to the establishment of small national and sub-regional laboratories and one sophisticated regional quality control laboratory.

2. To lower the cost of drugs to the patients within the region, consideration should be given to the development of a regional bulk purchasing system for a group of basic drugs. The utility of this approach has been demonstrated in both southern Africa and Asia. Further, such a system would facilitate regional drug quality assurance. Also, investigations should be carried to determine the feasibility of local drug production.

3. To insure the proper use of medications, all persons who distribute drugs must have a minimum of training in pharmacotherapy. Studies must be conducted to develop appropriate programs of training in pharmacotherapy for operators of patient medicine stores, depots, dispensaries and other primary health posts.

In summary, giant strides can be made in improving the health of the people by insuring that drugs of good quality are given to patients appropriately at a cost they can afford.

THE CONSULTANTS

INTRODUCTION

During the month of January, 1979, the Project for Strengthening Health Delivery Systems in Central and West Africa (SHDS) sent a team of consultants to Nigeria, Togo, Senegal and Ivory Coast to study the system of delivery of pharmaceutical products and services in those countries. The scope of work of the team is included in Appendix 10. The team included David M. Frence, MD, Project Director, SHDS, Abidjam, Ivory Coast; Mary Harvey, MPH, Associate Director, SHDS; Njifutie N'Jikam, Ph.D., MPH, C.U.S.S., University of Yaounde, Cameroun and Wayne O. Evans, Ph.D., Associate Dean, Massachusetts College of Pharmacy, Boston, Massachusetts, U.S.A.

During the visits to the countries, excellent cooperation was obtained from all persons contacted. Special thanks is due to the WHO country representatives and USAID contacts for great help in obtaining the information contained in this report. In each country, meetings were held with WHO representatives, USAID officials, ministers of health, chief pharmacists, private pharmacists, and others to obtain pertinent data. Further, the consultants would seek to confirm the information by visiting village dispensaries and by buying medications themselves. Part One of this report is a description of the system for delivery of pharmaceutical products and services in each country visited. Part Two of the report deals with local pharmaceutical production and includes some recommendations in this area. Part Three contains some suggested solutions to the various problems. Part Four is a recommended, basic drug list for the West and Central African area based on the incidence of disorders and therapeutically equivalent drugs. Finally, Part Five is a set of conclusions and a summary of recommendations by the consultants for further action.

The need to provide essential drugs of good quality at a low cost with the correct instructions for use to the people in less developed countries, is now a recognized world health priority. The Action Program on Essential Drugs of the 20 October 1978 meeting of the Executive Board of the World Health Organization (Appendix 1), the meeting of representatives of seven African nations with WHO officials in Geneva 6-10 November 1978, the Institute of Medicine, National Academy of Science meeting on 29-31 January 1979 in Washington, D.C., USA on Pharmaceutical for Developing Countries and the exploration by the African Development Bank of the Feasibility of Pharmaceutical Production in Africa are all illustrations of the recognition of the importance of this area. Already countries in the southern African area and in the South Pacific are banding together to purchase essential drugs on a regional basis. Thus the study conducted by the SHDS consultants seems most timely. It is our hope that this report will lead to further studies within the areas of concern and concrete action programs to improve the delivery of pharmaceutical products and services in West and Central Africa.

PART ONE

A DESCRIPTION OF THE CURRENT SYSTEM OF PROCUREMENT, DISTRIBUTION AND DISPENSING OF DRUGS IN WEST AND CENTRAL AFRICA AND THE PROBLEMS ENCOUNTERED IN THIS REGION.

PART ONE - A DESCRIPTION OF THE CURRENT SYSTEM OF PROCUREMENT, DISTRIBUTION AND DISPENSING OF DRUGS IN WEST AND CENTRAL AFRICA AND THE PROBLEMS ENCOUNTERED IN THIS REGION

In all four countries visited, the distribution of pharmaceutical products and services is conducted both in public and private sectors. Although the extent of participation of the two sectors varies among the countries, we observed that in all the countries the private sector is the main distributor.

The general estimate of most health officials in all the countries visited was that only 20% to 40% of the inhabitants received western type medications. Thus, the descriptions that follow pertain only to this population.

In all of the countries visited, the dispensing mechanism of the public sector could not provide an adequate supply of basic drugs to the rural areas. In all cases, we observed a shortage of drugs at this level. On the other hand at central distribution points, we observed a wide variety of drugs in storage.

In Nigeria, drugs are purchased by both government and private individuals from wholesale drug distributors. Of the total expenditure of about $200 million per annum, the public sector accounts for $27 million.

The public sector distributes drugs through federal, state and local government facilities. The private sector has both regular pharmacies and patent medicine stores.

A tremendous shortage of trained personnel inhibits effective delivery of products and services. For example, there is approximately one trained pharmacist per 53,000 people. Although, Nigeria is adding 300 pharmacists per year, the population growth rate of 2.9% wipes out this addition. The federal government of Nigeria in its long-term health plan proposes to have 100% participation of its population in western type medicine by the year 1990.

In Togo, all drug purchases are channeled through the private firm called Togopharma. The government purchases its drugs from Togopharma. Togopharma sells drugs to other pharmacies and it also has its own network of drug "depots" around the country from which private individuals may purchase drugs.

For two million inhabitants of Togo there are 29 trained pharmacists. Appendix 2 contains an analysis of the Togo health situation.

In Senegal, the government directly purchases drugs from pharmaceutical companies. The private sector receives all of its drugs from three wholesale companies. Of the total annual expenditure of $2,380,000, 20% is in the public sector. Drugs are only purchasable in regular pharmacies in the cities. There are approximately 90 trained pharmacists for their population of five million. Appendix 3 presents an official description of the health situation in Senegal.

In the Ivory Coast, the government directly purchases drugs from pharmaceutical companies, while private pharmacies obtain drugs

mostly from two wholesale companies. Of the total annual expenditure of about $49 million, 30% is in the public sector. Of the 75 pharmacies in Ivory Coast, 50 are in Abidjam. There are 152 trained pharmacists for the population of about 7.5 million. Appendix 4 is an official analysis of the health situation in the Ivory Coast.

During this visit the consultants the consultants observed that the systems of procurement, storage, distribution and dispensing of drugs in these countries are very similar and appallingly inadequate and ineffective. The deficiency lies primarily in the area of:

A. the quality of the drugs; there are no effective quality control mechanisms;

B. the cost of essential drugs is presently too high and practically unaffordable to the average citizen of this region; and

C. the acute shortage of trained personnel to correctly dispense essential drugs, expecially at the rural (village) level.

In this region the basis of drug use is predominantly self-medication involving the purchase of very expensive drugs (between two to ten times more expensive than in the USA or Europe) by uninformed consumers from equally uninformed dealers!

The following addresses each of the three issues mentioned above.

A. Regional Quality Control of Drugs

The twenty-eighth World Health Assembly recommended (Resolution WHA 28-65) that Member States:

1. apply the revised requirements for "Good Practices in the manufacture and quality control of drugs" as adopted by the Assembly and
2. participate in the revised "Certification Scheme on the quality of pharmaceutical products moving in international commerce" as adopted by the Assembly.

However, since there is as yet no mechansim by means of which one can ensure that drug manufacturers comply with Resolution WHA 28-65, it is in the vital interest of consumer nations to be able to test the drugs themselves. We found no evidence of any drug recalls in Africa. Moreover, there is no doubt that some drugs of very doubtful quality are shipped to Africa:

1. some poorly compounded;
2. some expired but redated by the manufacturers; and
3. some newly developed drugs not yet satisfactorily tested for efficacy and toxicity.

A few simple laboratories exist in some of the states (e.g. Nigeria, Senegal and the Ivory Coast) that are equipped to various extents for limited physical and chemical testing of drugs, but no facilities exist for pharmacologic, microbiologic and pharmacokinetic testing. Consequently, poorly compounded drugs may pass the physical and chemical analysis and still be bad drugs (ineffective or even toxic in many

cases); for example:

1. We found tetracycline tablets with calcium stearate as the excipient which drastically reduces the solubility and absorption of the drug; these tablets may prove to be satisfactory from physical and chemical analysis but unequivocally unsatisfactory if pharmacologic and pharmacokinetic studies are carried out.
2. Even when simple testing leads to the detection of bad drugs, as it happens rather frequently (e.g. in Zaire perhaps 10% of the drugs are unsatisfactory from physical and chemical analysis only), each of these states does not appear to have power to be able to apply pressure on the manufacturers to do something about it.

B. The Cost of Essential Drugs

The cost of drugs in Africa is generally two to ten times as high in the USA and other "Western Countries" while salaries (for those who are fortunate enough to have jobs) are generally less than a quarter of US salaries! Effectively, therefore, the drugs are $\frac{2 \text{ to } 10}{1/4}$ times as expensive in the region as in Western countries; i.e., some 8 to 40 times more expensive. For some individuals as much as 25% of their annual cash income is spent on drugs. This, no doubt has contributed to the development in all these countries, of a large illegal market from which one can buy any type of drug; usually at lower prices, sometimes these prices are lower than in the USA or Europe. Of course, the quality of such drugs is even more suspect. These drugs may be:

1. good drugs stolen from the ships or docks.

2. bad or expired drugs sold cheaply and smuggled in from other countries.

Nobody knows for certain where or how these drugs get into the region. However, once in, it is easy to see how the drugs will be distributed throughout the region through the existing extensive illegal traffice across the frontiers.

This market thrives because of an illegal system of self-medication which appears to work as follows: Every now and then one patient consults a physician, gets a prescription and buys his drugs from a regular pharmacy. He then passes the word around to his relations friends, and acquaintances, giving the description of his symptoms and the drug he received. Next time any of these people, including the person himself, has those symptoms (self-diagnosis) he goes to the market where the cost of medication is within his reach, and buys the drugs without prescription. Needless to add that the entire operation is very hazardous but thrives because of the low cost of drugs.

Although both the drug pedlars and the consumers need a minimum education on the use of drugs, giving them such training may not produce a significant change in the pattern of drug consumption unless something is done to reduce cost of drugs in the pharmacy as well.

An additional hazard of the high cost of drugs is the possibility of the development of drug resistant strains of microorganisms due to the patients taking too low a dose of antibiotics for too short a period. This poses a threat to the entire world.

C. Availability of Trained Personnel to Dispense Essential Drugs At the Rural (Village) Level

The population of 20 West and Central African States in the region is about 150 million, about 80% of which (120 million) live in the rural areas. Participation in "Western Style Medical Care" is estimated at from 20% to 40% (30 to 60 million); a number that is rapidly growing.

The four countries visited have national health plans that are basically a referral system with a large number of primary health posts throughout the country and a small number of specialists and University Teaching Hospitals at the apex of the pyramid. There is also a larger, private sector in which drugs are dispensed by minimally or totally untrained individuals.

In all the countries disease is diagnosed and drugs "dispensed" by the personnel that man these institutions; doctors, nurses, pharmacists, midwives, technicians, assistants and untrained, drug pedlars.

Attention should be focused on the rural areas where 80% of the people of this region live. For these people their first and often only access to Western medical care is the Primary Health

Posts (clinic, maternity, dispensary, rural health posts, depots, patent medicine store, itinerant nurse, and especially the untrained, drug pedlars.*

Due to certain constraints, such as shortages of doctors and other well-trained health professionals, and the high cost of drugs in the properly manned private pharmacies, most low-income dwellers also turn to the primary health posts and to the untrained drug pedlars.

There is a very acute shortage of health care delivery manpower trained in pharmacotherapy, especially in the primary (rural) level. The Dean of the School of Pharmacy at the University of Ife (Nigeria), Professor E.O. Ogunlana, summarized the situation beautifully in the following words: "In Africa, drugs are DISPOSED of and not DISPENSED."

*Refer to chart, page 9, Part One.

PART ONE

COUNTRY	SPECIALIST HOSPITALS	SECONDARY HEALTH POSTS	PRIMARY HEALTH POSTS
NIGERIA	University Teaching Hospitals and many Specialists Hospitals	District Hospitals Comprehensive Health Centers/ Health Centers	Clinics Maternity Dispensary Patent Medicine Store
TOGO	Centre Hospitaliers Universitaire (CHU) Private Hospitals	Divisional Hospitals Regional Hospitals	Maternity Dispensary Depot Itinerant Nurse
IVORY COAST	CHU Specialist Hospitals (Leprosy, Psychiatric, etc.	Regional Hospitals Provincial Hospitals	Dispensary Health Post Depot
SENEGAL	CHU Disease Control Centers Institute for MCH	Divisional Hospitals Medical Divisions (Health Centers)	Maternity Rural Health Post Village Pharmacy
ALL FOUR COUNTRIES	Institutional Pharmacy	Private Pharmacy	Depot Patent Medicine Store *Unauthorized Pedlar*

PART TWO

LOCAL DRUG PRODUCTION

PART TWO - LOCAL DRUG PRODUCTION

Of the four countries visited, only Nigeria and Senegal have facilities for the production of drugs. The facility at Yaba, Nigeria was not visited. However, a brief report of its activities is included in Appendix 5.

The Societé Industrielle Pharmaceutique de L'Ouest Africain (SIPOA) factory on route de Rufisque in Dakar was visited. A history and description of SIPOA is included in Appendix 6. This plant is a small, semi-automated facility for compounding and packaging drugs. All materials, both drugs and excipients are produced in Europe and shipped to SIPOA. The plan compounds and packages about 125 products. A list of these products is included in Appendix 7.

Its facilities included instruments for the production of sterile solutions and injectibles. The plant included a small quality control laboratory. At the time of the visit, two animals were being temperature tested, presumably for pyrogen. We were informed by the plant manager that they were operating at 50% capacity. We were also informed that the products from SIPOA are sold at the same price as comparable products imported from France.

In general, it can be stated that only a miniscule portion of the drugs used in West and Central Africa are produced in Africa. A full study of the possibility for drug production in Africa is now underway with the sponsorship of the African Development Bank in Abidjam. The Consultants for Trade and Industry, S:T Goransg 84, S-112 38 Stockholm, Sweden are conducting the study. Preliminary studies

are available from this source.

Although some forms of drug production require very advanced technology, not all do. Extraction techniques for active principles from natural products tend to require little equipment and advanced techniques. Further, extraction processes require a labor intensive agricultural economy to make them profitable. An examination of the conditions required to grow medicinal plants and an analysis of the cost of extraction of the active principles may well be worth the effort.

PART THREE

SUGGESTED SOLUTIONS TO THE PROBLEMS ENCOUNTERED IN THE QUALITY CONTROL, COST AND PROPER DISPENSING OF DRUGS IN WEST AND CENTRAL AFRICA

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Aware of this appalling situation and mindful of the extensive unofficial (illegal) flow of drugs across the borders of the states in the region, the national health authorities including university professors, local and resident World Health Organization experts in the four states visited subscribe to the view that there is an urgent need for:

1. An effective, well-equipped and efficiently manned Regional Quality Control Laboratory for testing drugs.
2. Regional bulk purchasing and local compounding of drugs in order to:
   a. guarantee the quality of drugs, and
   b. render the drugs cheaper and consequently more accessible to the people.
3. Trained personnel: cheap and good quality drugs without informed dispensing and utilization will serve no useful end. Indeed, they may even cause more harm than good. Hence, the need for dispensing personnel trained to minimum regional standards to dispense drugs at the village level, i.e., the village health worker. Further, a minimum training in pharmacotherapy should be required of licensed patent medicine store drug sellers, depot attendants or any other person conveying drugs to a patient.

1. Effective, Well Equipped and Efficiently Manned Quality Control Laboratories

a. Every state in the region or group of states is encouraged to set up a national quality control laboratory that can perform a limited number of tests. Such a laboratory will be more objective if it is independent of the centralized drug purchasing agency.

b. In addition to the individual national quality control laboratories, a more sophisticated and more versatile (consequently more expensive) regional quality control laboratory capable of carrying out all physical, chemical, pharmacologic, microbiologic, pharmacokinetic and other tests is necessary.

2. Regional Bulk Purchasing

It has been demonstrated in Africa and Asia that bulk purchasing of needed pharmaceuticals does actually lower the prices of drugs considerably (Appendix 8).

a. By centralizing the country's drug purchasing six years ago and introducing a world-wide bidding system to generate competitve offers from international supplies, Sri Lanka was able to buy some drugs such as Diazepam (Valium) at one seventieth (1/70) the price offered by the traditional multinational supplier.

b. Government controlled, centralized national drug purchasing, e.g. TOGOPHARMA in the Republic of Togo, does appear to have its

merits and may interest other states in the region. Afghanistan and Guinea are trying to set up national drug purchasing agencies.

c. The Commonwealth Regional Health Secretariat in Arusha has set up a working group to study the possibilities of joint drug purchasing by ten African nations: Botswana, Kenya, Lesotho, Malawi, Mauritius, Seychelles, Swaziland, Tanzia, Uganda, and Zambia.

d. Thirteen Arab nations have jointly formed a company, "The Arab Company for Drug Industries and Medical Appliances" to set up drug plants to meet the needs of the Arab nations.

e. In addition to drastically cutting down costs of drugs to the public, centralized and regional bulk purchasing of drugs will facilitate setting up efficient and effective quality control laboratory systems.

3. Training Needs

As has been demonstrated by the descriptions of the four countries visited, the need for trained personnel is almost overwhelming at every level of the drug distribution system. For this reason, the consultants believe that the traditional professional categories of health workers will have to be merged at the lower levels of the system. The distinctions between physician, nurse and pharmacist lose meaning when the need to provide adequate pharmacotherapy to 150 million people is immediate. The use of fully-trained health professionals in supervisory roles is required, but the actual delivery of service will have

to be performed by people with less training. To this end, we propose the training of a person to be called a "Village Health Worker".

The Village Health Worker will be responsible for the pharmacotherapy of a community of approximately 2,000 people. Therefore, assuming a population growth rate of 2.8 percent per year, or 200 million people in 1990, 100,000 such Village Health Workers will be required by that year.

The Village Health Worker will be expected to stock and maintain a Village Dispensary with a supply of basic drugs (See Basic Drug List in Part 5). He or she will work in conjunction with any other available health personnel, i.e., midwives, nurses, physicians or pharmacists. If no more qualified health personnel are available, the the Village Health Worker will be expected to deal with any complaint presented to him/her by definitive treatment, supportive therapy or referral. This will require that the Village Health Worker be trained in the symptomatic differential diagnosis and proper treatment of the disorders of highest incidence in his/her area. Since the Village Health Worker may be the only available health care worker, he/she must also be trained in basic hygiene, emergency first aid and record keeping.

At higher levels, the shortage and maldistribution of pharmacists impedes the development of a smooth flowing drug distribution system. Of particular importance is the virtual absence of clinical pharmacists. In the future, the consultants recommend that the Colleges of Pharmacy stress clinical pharmacy and that students sent from Africa to other

countries for training concentrate on clinical pharmacy. In countries with so few pharmacists, it is a waste to train students in pharmacy to have them later become retail businessmen. Clinical pharmacists would be ideal as supervisors for Village Health Workers. They offer the appropriate level of training in pharmacotherapy of disease states between the Village Health Worker and a physician.

Personnel need to operate drug production operations, including quality control, with appropriate background in industrial pharmacy are in very short supply. Use of professors from the schools of pharmacy for commercial production would virtually close the schools, Thus, African students must be sent to study industrial pharmacy in Africa and other countries. A variety of countries should be considered as training sites since the teaching and practice of pharmacy varies between different countries. Students trained with different viewpoints will contribute to the overall African knowledge base. For the immediate future, unfortunately, West and Central Africa will have to depend on non-Africans to aid in setting up drug production plants and quality control laboratories. However, with appropriate training of African students, this shortage could be alleviated within approximately ten years.

PART FOUR

BASIC DRUG LIST FOR A DISPENSARY IN WEST AND CENTRAL AFRICA

PART FOUR - BASIC DRUG LIST FOR A DISPENSARY IN WEST AND CENTRAL AFRICA

The following is a proposed list of basic drugs to be stocked and dispensed in a rural, primary health care unit. It is assumed that the persons prescribing and dispensing will have a minimum of training.

Part A lists the most common complaints and disorders with the drugs associated with their therapy. A drug or drugs of choice are listed with therapeutic equivalent drugs also indicated for each disorder.

Part B indicates the proposed basic drug list.

Part C is a list of common drugs with their bulk purchase costs. These costs are based on the prices from the U.S. Government Federal Supply catalog price schedule.

The following are assumptions underlying the basic drug list:

1. Persons at the primary health care level must be able to deal with all complaints that present themselves by definitive therapy, supportive therapy or referral.
2. Maintaining the patient in the community by drug therapy at a primary care level is preferable to the use of higher level medical units.
3. The drugs used should have multiple uses to minimize the stock inventory and knowledge needed to effectively use them.

4. Injectable drugs should be held to the minimum because of problems of storage and sterility.

5. Fixed drug mixtures are to be avoided where feasible.

6. If drugs are therapeutically equivalent, the cheaper drug should be chosen.

7. Where economically feasible, unit dose packaging should be chosen for ease of dispensing.

8. The drugs chosen should be based on disease incidence data when possible. Disease incidence data for countries of West and Central Africa in addition to that found in other appendices is included in Appendix 9.

PART FOUR

Part A

Disease	First Choice	Other Drugs As Alternates
1. Malaria	Chloroquine	Quinine Sulfate Amodiaquine Hydroxychloroquine
2. Measles	Attenuated Vaccine	
3. Meningitis Meningoccal	Ampicillin	Benzathine Penicillin G Chloramphenicol Sulfonamide
4. Dysentary, Bacilary (Shigellosis)	Rehydration Solution Codeine Tincture of Belladonna Bran or Psyllium Kalolin & Pectin	Ampicillin Chloramphenicol Tetracycline Sulfonamide
5. Dysentary, Amebic Amebiasis	Rehydration Solution Metronidazole Codeine Tincture of Belladonna Bran or Psyllium Kalolin & Pectin	Emetine & Tetracycline & Di-iodohydroxyquin (For Asymptomatic Di-iodohydroxyquin or Diloxamide Furoate) Iodochlorhydroxyquin Chlorquinaldol Chiniofon
6. Tuberculosis	Isoniazid	Para-aminosolicyclic Acid Ethambutol Streptomycin Rifampin
7. Round Worms (Nematoda)		
a. Ascaris	Piperazine	Pyrantel Pamoate
b. Necator	Pyrantel Pamoate	Thiabendazole
c. Ancylostoma	Pyrantel Pamoate	Thiabendazole
d. Trichuris	Mebendazole	Thiabendazole
e. Enterobius	Pyrantel Pamoate	Piperazine
f. Strongyloids	Thiabendazole	Pyroinium Pamoate
g. Loa Loa	Diethylcarbamazine	-----
*h. Onchocera	Diethycarbamazine & Suramin	-----
*i. Dracumculus	Thiabendazole	Dichlorophen

8. Tapeworms (Cestoda)	Niclosamide	Dichlorophen Paromomycin
9. Schistosomiasis	Niridazole	Stibophen Antimony Sodium Dimercaptosuccinate Hycantore
10. Trypanomiasis	Suramin	Pentamidine Hydroxystilbamidine Isethoinate Melarsoprol Melarsonyl
11. Trachoma	Tetracycline & a Sulfonamide & Tetracycline Ointment	Erythromycin Sulfonamide
12. Gonorrhea	Benzathine Penicillin G	Tetracycline Erythromycin Spectinomycin
13. Syphilis Venereal or Endemic	Benzathine Pencillin G	Long Acting Penicillin G Tetracycline Erythromycin
14. Leprosy	Dapsone	Refampicin Acedapsone Clofazimine Amithoiozone
15. Yaws	Benzathine Penicillin G	Tetracycline Erythromycin
16. Influenza	Aspirin	
17. Trichomoniasis	Metronidazole	Tinidazole Nimorazole
18. Urinary Tract Infection E. Coli, Proteus, Streptcaccus	Ampicillin	Nitrofurantoin Sulfonamide Trimethoprim & Sulfa-methoxazole Chloramphenicol Carbenicillin

Ring Worm (Dermatophytosis)	Griseofulvin	Undecylemic Acid Tolnaftate Miconazole Nitrate Haloprogin
20. Fungi (superficial)	Tolnaftate	Undecylenic Acid Iodine
21. Scabies	Benzyl Benzoate	Gamma Benzene Hexa-chloride Tetratethylthiruam Mono-sulfide Crotamiton
22. Hepatitis	None	
23. Polio	None	
24. Tetanus	Tetanus Immune Golbulin Tetanus Antitoxin	Penicillin G
25. Rabies	Antirabies Serum Rabies Vaccine	
26. Diabetes	Insulin	
27. Anemia Iron Deficiency B12 Deficiency	Ferrous Sulfate Folic Acid Vitamin B12	Ferrous Gluconate
28. Avitaminosis	Any Multiple Vitamin Mixture with 100% RDA	
19. Cold (URI)	Aspirin Phenylepherine	Oxymetazoline
30. Gastritis	Prochlorperazine Calcium Carbonate	Chlorpromazine Tincture of Belladonna
31. Allergy	Diphenhydramine	Any Other Antihistamine

32. Vaginal Candidisis	Miconazole Nitrate	Cholodantoin Gentian Violet Nystatin
33. Medications for Trauma	Morphine Ampules Tetanus Immune Golbulin	-----
34. Conjunctivities	Tetracycline Ointment	Erythromycin Ointment
35. Otitis Media	Benzathine Penicillin G	Ampicillin Erythromycin & a Sulfonamide
36. Cycstitis	Benzathine Pencillin G Tincture of Belladonna Methyline Blue	Ampicillin Sulfonamide Tetracycline
37. Pain	Aspirin Codeine	Morphine Paragoric
38. Epilepsy	Diphenylhydantoin	Phenobarbital
39. Psychosis	Chlorpromazine Imipramine	Any Other Phenothiazine or Tricyclic Amine
40. Poisoning	Ipecac Syrup	-----
41. Impetigo	Benzathine Penicillin G	Ampecillin Erythromycin
42. Pneumonia Streptococaccus	Benzathine Penicillin G	Cephalexin Erythromycin Vancomycin Kanamycin
43. Pertussis	Codeine Phenobarbital	Diphenhydramine Paragoric
44. Urethritis, Non Specific	Tetracycline	-----

45. Arthritis	Aspirin	Gold Sodium Thiomalate
46. Pediculosis	Gamma Benzine Hexachloride	Malathion
48. Bronchitis	Tetracycline Aspirin	Penicillin Ampicillin
49. Dermatitis Contact or Chronic	Any Corticosteroid Cream	Prednisone
50. Asthma	Aminophylline Epinephrine	Isoproterenol Ephedrine
51. Nausea	Chlorpromazine Tincture of Belladonna Charcoal	-----

Notes on Part A

1. Where Benzathine Penicillin G is indicated but lack of appropriate storage conditions or problems of sterility exist, Penicillin G Potassium tablets should be used. If resistance is a problem, an Isoxazole Penicillin such as Oxacillin, Cloxacillin, Dioxacillin or Florxacillin should be used.

2. Any of the following Sulfonamides are therapeutically equivalent: Sulfisoxazole, Sulfamethoxazole, Sulfadiazine, Sulfamerazine, or Sulfamethazine. Sulfamethoxypyridazine or Sulfadimethoxine are more slowly excreted and offer an advantage of fewer daily doses. However there is a danger of Exudative Erythema Multiforme associated with their use. Poorly absorbed Sulfonamides have been used in the treatment of Bacilary Dysentary. These Sulfonamides include Sulfasuxidine, Phthalylsulfathiazole and Sulfaquanidine. However, many strains of Shigella are now resistant to Sulfonamides.

3. Any of the following Tetracyclines are therapeutically equivalent: Tetracycline, Chlortetracycline, Oxytetracycline, Demeclocycline, Rolitetracycline, Methacycline, Doxycycline and Minocycline. An exception to this is Doxycycline, which is not excreted in the urine; thus, it does not accumulate in the blood of patients with renal failure and is not of use in urinary tract infections.

4. Cephalexin was chosen as the Cephlorsporin of choice because of its absorption from the gastro-intestinal tract. Cephradine could also be used orally.

Part B - Proposed Drug List for a Village Pharmacy in West and Central Africa

Drug	Use
1. Chloroquine	Malaria
2. Penicillin G Potassium Tablets	Meningitus Shigellosis Syphilis Gonorrhea Urinary Tract Infections Otitis Media Impetigo Pneumonia Bronchitis Yaws Cystitis Tetanus
3. Tetracycline	Shigellosis Trachoma Gonorrhea Syphilis Yaws Cystitis Bronchitis Non-Specific Urtheritis
4. Tetracycline Ointment	Conjunctivitis Trachoma
5. Sulfisoxazole	Meningitis Shigellosis Urinary Tract Infections Trachoma Otitis Meida Cystitis
6. Chloramphenacol	Any Infection Not Responsive to the Other Anti-infectives
7. Isoniazid	Tuberculosis
8. Para-aminosalicyclic Acid	Tuberculosis
9. Metronidazole	Amebiasis Trichomoniasis
10. Rehydration Solution	Dehydration

11. Codeine	Diarrhea Pain Coughing
12. Tincture of Belladonna	Diarrhea Colitis Gastritis Cystitis
13. Pyrantel Pamoate	Nematoda
14. Diethylcarbamazine (where needed)	Onchoceriasis
15. Suramin	Onchoceriasis Trypanomeasis
16. Niridazole	Dracumculus Schistomiasis
17. Dapsone	Leprosy
18. Apsirin	Pain Fever Inflamation
19. Griseofulvin	Ring Worm
20. Benzyl Benzoate	Scabies
21. Ferrous Sulfate	Anemia
22. A Multiple Vitamin	Avitaminosis
23. Phenylepherine	Congestion
24. Diphenhydramine	Allery Sedation Nausea
25. Miconazole Nitrate	Candidiasis
26. Ipecac Syrup	Poisoning
27. Morphine	Pain Shock
28. Chlorpromazine	Psychosis Sedation Nausea
29. Diphenylhydantoin	Epilepsy

30.	Imipramine	Depression
31.	Aminophylline	Asthma
32.	Gamma Benzene Haxachloride	Pediculosis
33.	Tetanus Immune Globulin (where storage is possible)	Infection
34.	Insulin (where storage is possible)	Diabetes
35.	Iodine	Fungicide Bacteriacide Amebacide

Part C

A list of common drugs with prices taken from the U.S. Federal Supply catalog (FSC 6508) dated October 1, 1979 as an example of drug costs to the user, i.e., hospitals or dispensaries with bulk purchasing. These costs include bulk price, repackaging and transportation to users. The population serviced by this system is approximately five million.

Drug	Dose	Number	Price In Dollars
Ampicillin Capsule USP	250 mg	1000	$ 37.63
Aspirin Tablets	324 mg	1000	2.13
Belladonna Tincture USP	473 ml		3.75
Chephalexin Capsules USP	250 mg	100	21.07
Chloroquine Phosphate Tablets USP	500 mg	500	48.11
Chlorpromazine Hydrochloride Tablets USP	25 mg	1000	25.19
Chlortetracycline Hydrochloride Ophthalmic Ointment	1% 3500 mg	12	7.35
Cloxacillin Sodium Capsules USP	250 mg	100	16.14
Codeine Sulfate Tablets NF	30 mg	100	7.59
Diphenhydramine Hydrochloride Capsules USP	50 mg	1000	6.12
Ephedrine Sulfate Capsules USP	25 mg	500	4.07
Erythromycin Tablets	250 mg	100	4.29
Ethambutol Hydrochloride Tablets USP	400 mg	100	18.40
Ferrous Sulfate Tablets USP	324 mg	1000	3.07
Gamma Benzene Hexachloride Cream USP	1%	60 gm	.36
Griseofulvin Tablets USP	500 mg	500	48.53
Hydrochlorothiazide Tablets USP	50 mg	100	7.70
Multivitamin Tablets	100% RDA	100	.51
Imipramine Hydrochloride Tablets USP	25 mg	100	1.37
Insulin Injections USP	U-100/ml	10 ml	2.82
Ipecac Syrup USP	30 ml		.43
Isoniazid Tablets USP	300 mg	100	1.16
Metronidazole Tablets USP	250 mg	250	47.50
Morphine Injection Syretle	16 mg	5	2.32
Nitrofurantoin Tablets USP	100 mg	1000	83.90
Nystantin Tablets USP	500,000 U	100	5.51
Oxacillin Sodium Capsules USP	500 mg	100	15.21
Penicillin V Potassium Tablets USP	800,000 U	100	3.69
Phenobarbital Tablets USP	32 mg	100	.54
Phenylepherine Hydrochloride Nasal Solution USP	1%	475 ml	3.14
Phenytoin Tablets USP	50 mg	100	1.58
Piperazine Citrate Syrup USP	100 mg/ml	473 ml	3.72
Promethazine Hydrochloride Tablets USP	25 mg	1000	6.06

Pyminium Pamoate Tablets	50 mg	50	4.94
Quinine Sulfate Tablets	324 mg	1000	58.95
Sulfasalazine Tablets NF	500 mg	500	12.75
Streptomycin Sulfate USP	1000 mg		.51
Sulfadiazine Tablets USP	500 mg	1000	18.09
Sulfamethoxazole Tablets USP	500 mg	500	17.58
Sulfisoxazole Tablets USP	500 mg	1000	7.94
Tetracycline Hydrochloride Capsules USP	250 mg	100	1.83
Theophylline Elixir	80 mg/15ml	3780 ml	5.23
Thiabendazole Oral Suspension USP	100 mg/ml	120 ml	2.51
Tetanus Toxoid USP	7.5 ml		.56
Tolnaftate Solution USP	1%	10 ml	1.52
Trimethoprim and Sulfamethoxazole	80 mg (Trimethoprim) 400 mg (Sulfamethoxazole)	500	38.62
Undecylenic Acid Solution	10%	59 ml	.48

From Federal Supply Catalog FSC 6508, C-6505/6508-ML

PART FIVE

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

PART FIVE - SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

Although each of the countries visited had a different of drug distribution, certain common problems emerged which have regional significance. Further, since the illegal flow of drugs across national borders is rampant, only regional or sub-regional solutions to certain problems are appropriate.

First, drug quality is suspect due to the lack of quality control laboratories in the region. The inability to test drugs coupled with the lack of drug recalls by pharmaceutical companies must make one suspicious of any drug in the region. The nations of Central and West Africa are literally at the mercy of the pharmaceutical companies and some anecdotal evidence exists to suggest that not all of the pharmaceutical companies are living up to the highest ethical standards. Without random testing of drug samples, hard data cannot be obtained. Only by establishing a quality control capacity in the region and drug recalls can quality assurance be credible.

Second, in all the countries visited, too great a diversity of drug products were being purchased. This adds to cost, problems of storage and requires more knowledge for their use. Most medical problems can be handled by a basic set of drugs. Purchasing and storing a variety of drugs which are therapeutically equivalent is wasteful. Thus, the development of a basic drug list reduces this waste.

Third, in all countries visited, the cost of drugs was a major limitation in proper drug therapy in both the public and private sectors. This cost could be reduced by bulk-buying of basic drugs on a regional or sub-regional basis. In this manner, pharmaceutical companies would be forced to bid for bulk orders with a resultant reduction in price. Also, with a minimum of technical knowledge or sophisticated equipment, some drugs could be produced in the region by using extraction methods from natural products. This not only reduces the price of the drugs, but also helps develop a labor intensive regional economic program.

Finally, there is a tremendous shortage of personnel trained in diagnosis of disorders, prescribing and dispensing of drugs and following the pharmacotherapy to its proper outcome. Too often the people are receiving their medications from people with no training at all or, at most minimal training. This situation is at a crisis state now and will become worse in the future since the imput of fully trained health care professionals is at a rate less that the rate of population growth. One reasonably successful way of dealing with a problem of this magnitude is the development of minimally trained primary care workers in large numbers. Approximately 100,000 such Village Health Workers will be required by 1990 to adequately insure proper pharmacotherapy to the population.

Summary of Recommendations

1. Determine the appropriate type and cost of regional and sub-regional or national quality control laboratories.

2. Establish a regional list of basic drugs with alternative therapeutic equivalents.

3. Investigate the feasibility of regional or sub-regional bulk purchasing of basic drugs.

4. Determine the economic feasibility of the use of natural products for the extraction and compounding of selected drug products.

5. Establish a regional training center for the education of the trainers of Village Health Workers with an emphasis on pharmacotherapy.

6. Emphasize clinical pharmacy and pharmacotherapy in the education of pharmacists to provide personnel to supervise Village Health Workers.

APPENDIX 1

ORGANISATION MONDIALE DE LA SANTÉ

EB63/ 19

20 October 1978

EXECUTIVE BOARD

Sixty-third Session

Provisional agenda item 19

ACTION PROGRAMME ON ESSENTIAL DRUGS

The Director-General has the honour to transmit herewith the report of the Board's Ad hoc Committee on Drug Policies, which contains proposals for a comprehensive action programme on essential drugs as outlined in resolution EB61.R17 and subsequently endorsed by the World Health Assembly in resolution WHA31.32. In addition, the Director-General wishes to draw the attention of the Board to the following information:

1. A circular letter (C.L.16.1978) was sent on 28 June 1978 to all Member States transmitting a copy of resolution WHA31.32. As at 15 October 1978, 20 governments had expressed interest in participating in consultations and negotiations for the establishment of the proposed action programme and had designated representative(s) for this purpose.

2. Comprehensive surveys have been undertaken in some of the countries most seriously affected by the shortage of essential drugs. A common list of essential drugs is being developed by five South Pacific countries. Moreover, representatives of seven African countries are meeting in November 1978 to consider how the proposed action programme could help most effectively in meeting their urgent needs.

3. The dialogue with pharmaceutical industries, either private or state-owned, is progressing in order to ensure their collaboration. It is not possible, at this preliminary stage, to predict how far such industries, particularly those engaged in production from raw materials to finished products, will contribute to the aims of the action programme. However, it is interesting to note that the new role of WHO in pharmaceuticals is becoming a subject of great interest in industrial circles.

4. After the discussions at the Thirty-first Health Assembly (May 1978), a number of major drug manufacturers (e.g., Bayer, Ciba-Geigy, Cyanamid, Hoechst, Hoffmann-La Roche, Sandoz) pledged their collaboration through the provision, to governments of the least developed countries, of selected products suitable for use in extending and improving the health care coverage of the population. These selected products would be made available under specially favourable conditions in economic packages, taking into account the requirements of primary health care and tropical climatic conditions, with uniform labelling, including generic names and possibly an emblem indicating the special character of the action programme, as the products should not move into the private commercial sector or be re-exported. The conditions would be more favourable if the requirements could be planned for a period of 3-5 years. The products concerned fall into the following categories: amoebicides, analgesics and antipyretics, antibiotics, anti-infectives, antimalarials, antischistosomals, antitrypanosomals, antituberculosis drugs, cardiovascular drugs, and vaccines. Further offers of collaboration are expected.

5. It is clear that these positive reactions from some drug manufacturers can be of no help without the political will of the governments to identify and tackle the problems in their own countries, and without the commitment of additional financial resources from the international community. In fact, as pointed out in the attached report, the first step should be the assessment of drug requirements in both the short and long term, taking into account countries' present and planned health programmes and distribution systems. The types and quantities of essential drugs needed could then be determined for a period of 3-5 years and the improvement of the supply position would become a key factor in extending health care coverage to the whole population.

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ANNEX

REPORT OF THE AD HOC COMMITTEE ON DRUG POLICIES OF THE EXECUTIVE BOARD ON THE ACTION PROGRAMME ON ESSENTIAL DRUGS

The Ad hoc Committee on Drug Policies was established by the Board at its sixty-first session (January 1978) to study and follow up the action programme on essential drugs proposed in resolution EB61.R17.[1] The Committee met in Geneva on 23 January 1978 and from 3 to 5 May 1978 under the chairmanship of Professor D. Jakovljević.

1. INTRODUCTION

1.1 The Ad hoc Committee recalled that the Executive Board, in proposing the action programme on essential drugs, had emphasized that urgent international action is required to alleviate the situation in developing countries, where large segments of the world's population do not have access to the most essential drugs and vaccines that are indispensable to ensure even minimum health care. In fact, for many diseases affecting millions of people in these countries, effective prophylactic and therapeutic agents already exist, but are not available in sufficient quantities and are not effectively distributed or utilized. Furthermore, at present some of them are too expensive for the less developed countries. In many cases locally available natural resources could be better utilized.

1.2 In the coming decades, the development of primary health care systems in the developing countries will require the concomitant development of pharmaceutical supply systems, including local production wherever feasible, adapted to the real needs of the majority of the population. Efforts will also be required in information, education and training in the proper use of drugs in the communities. In this perspective, the action programme on essential drugs proposed in resolution EB61.R17, when implemented, can make a significant contribution to "Health for all by the year 2000".

2. REVIEW OF ACTIVITIES

2.1 The Ad hoc Committee felt that the reorientation of WHO's programme in the drug field, following the adoption by the Twenty-eighth World Health Assembly of resolution WHA28.66 in 1975, had increased awareness of the main problems of relating pharmaceutical supply to health needs at the global and regional levels. The two regional meetings on drug policies and management for participants from the South-East Asia and Western Pacific Regions, held in Colombo and Manila in March 1978, had demonstrated the countries' wide acceptance of the new programme and their interest in the planned activities.

2.2 WHO staff had visited a number of developing countries to initiate surveys of national pharmaceutical supply systems, and this had led to the formulation of local projects in some countries. The Ad hoc Committee considered that, in the further development of this programme, WHO should give careful consideration to the proper balance of actions in the developing countries necessary, on the one hand, to achieve urgent improvements in the supply position and, on the other hand, to build up national capabilities. Otherwise, results could be counter-productive. For example, in some countries the provision of finished pharmaceutical products could inhibit or delay the step-by-step expansion of local production, starting with the simplest operations and moving towards the more complex ones. Conversely, the establishment of local production without a feasibility study of the health, economic, technological and logistic aspects could lead to inadequate quality or excessive cost of the products, which might not be suitable to meet the health needs of the population.

[1] WHO Official Records, No. 244, 1978, p. 11.

Annex

2.3 The Ad hoc Committee reviewed the background document (document A31/Technical Discussions/1) for the Technical Discussions to be held during the Thirty-first World Health Assembly on "National policies and practices in regard to medicinal products; and related international problems". This document reviewed the world situation, particularly in developing countries, and underlined the necessity of formulating national drug policies in the light of local health priorities. The Ad hoc Committee noted the trends towards increasing self-reliance and technical cooperation among developing countries (TCDC) in this field. Section 5 of the document, describing the technical and administrative components of drug policies and management of the pharmaceutical supply system, was considered to provide a very suitable framework for the development of the action programme proposed in resolution EB61.R17.

3. OBJECTIVE OF THE PROGRAMME

3.1 The Ad hoc Committee discussed the development of the action programme and the need to provide a definition of its objective. In accordance with the Board's resolution, the following definition is proposed:

> "The action programme on essential drugs is a global programme of international cooperation initiated by WHO and co-sponsored by (other UN agencies agreeing to participate) with the objective of strengthening the national capabilities of developing countries in the selection, supply and proper use of essential drugs to meet their real health needs, and in the local production and quality control, wherever feasible, of such drugs. The immediate aim of the action programme is to make essential drugs and vaccines available under favourable conditions to governments of the less developed countries in order to extend essential health care and disease control to the vast majority of the population"

3.2 To achieve this objective, it will be necessary at country level for individual governments to formulate a national drug policy linked with country health programming and to build up the infrastructure required to implement it. This will call in turn for the provision of additional resources of all kinds, involving the full collaboration of governments and agencies participating in the financing and execution of the proposed action programme. As the programme is primarily oriented towards the health sector of development, WHO should serve as the executing agency, in association with other United Nations organizations as appropriate, and should be responsible for its management.

4. ACTIVITIES IN THE COUNTRIES

4.1 The first step in the formulation of a national drug policy aimed at meeting the real health needs of the majority of the population must be to identify these needs, using all available health information, and to ensure that, once identified, they are reviewed regularly. Consideration should then be given to the extent to which the existing pharmaceutical supply system can meet the health needs, and to the steps necessary to improve its efficiency. At the same time, in some countries, it will be necessary to consider the role of traditional medicines in relation to modern drugs.

4.2 At the request of the government concerned, the proposed action programme could provide adequate support for a comprehensive survey of the country situation as outlined above, which could lead to further cooperation in strengthening the national technical and managerial capabilities and in building up the required facilities in the following main areas:

4.2.1 Drug selection and requirements. The selection, for the various levels of health care, of the most essential drugs of proven efficacy, acceptable safety and reasonable cost, that could best meet the needs of the majority of the population, is a prerequisite for extending the coverage of the population. Epidemiological surveys and clinical pharmacological expertise are required in drug selection and in determining the quantities required at different levels, particularly at primary health care level, taking into account local conditions.

Annex

4.2.2 Quality assurance. Once the most essential drugs and vaccines have been selected, there is a need for quality assurance of the products imported or produced locally. The building up of an effective quality assurance system requires personnel properly trained in drug procurement, analytical control and pharmaceutical inspection, as well as adequate equipment for quality control.

4.2.3 Distribution and logistics. In many developing countries, the main problem is to ensure that the "right" drugs are always available to the population that needs them, particularly in rural areas. The building up of an efficient distribution system requires careful planning and the provision of adequate storage facilities, inventory control, transportation facilities and skilled personnel at all levels, including the primary health care level.

4.2.4 Local production. The establishment or strengthening of local production of essential drugs and vaccines, where appropriate, requires long-term planning, taking into account the types of products and the quantities required, technical manpower, types of buildings and equipment for production and quality control, quantity, grade and cost of raw materials, etc. Feasibility studies could determine the capital investment required and the annual running costs so that the cost of local production can be compared to the cost of equivalent imported products.

4.2.5 Natural resources. The use of drugs of natural origin, particularly medicinal plants, can be improved through the proper evaluation of their usefulness in health care, the development of appropriate technology for the collection, cultivation, processing and establishment of specifications for widely used crude drugs, and the introduction of good practices for the production, quality control and distribution of finished products. Suitably trained personnel and adequate equipment are required for these activities.

4.2.6 Research and development. Among the priority areas for drug research and development in the developing countries are the following: the stimulation of research and development involving drugs and vaccines most relevant to these countries' health needs; the better utilization of locally available natural resources, including traditional medicines, for pharmaceutical production; and the development of appropriate technology for packaging and formulating the most essential drugs in the country.

4.3 In all these areas, information transfer, educational and training activities, and the development of technical cooperation among developing countries (TCDC), would require adequate support from the action programme. The programme could also help to improve the supply position of the least developed countries, where the lack of essential drugs and vaccines is the main constraint in developing national programmes for the extension of essential health care and disease control to larger segments of their population.

5. RESOURCES

5.1 In view of the scale and scope of the proposed action programme, the following resources would be required for its implementation, in addition to those available to WHO through its regular budget:

5.1.1 Financial resources made available to the action programme by cooperating parties (see below), which could be channelled through a special fund, the "Essential Drugs Fund", through the WHO Voluntary Fund for Health Promotion and through similar funds of other agencies.

5.1.2 Resources in kind (essential drugs and vaccines, raw materials, equipment, etc.) made available to the action programme by cooperating parties and administered by the executing agency through special protocols covering operations in each country.

5.1.3 Technical personnel, seconded by cooperating parties to the action programme.

Annex

5.2 In order to mobilize the widest possible support for the action programme, the Ad hoc Committee considered that, in addition to the co-sponsoring United Nations organizations, the following cooperating parties should be invited to participate:

5.2.1 Governments willing to contribute to the action programme in cash or in kind: governments providing technical support for the action programme; and governments whose countries are directly affected by the shortage of essential drugs and vaccines to meet the real health needs of the people through the implementation of national programmes of health care.

5.2.2 Those intergovernmental, nongovernmental and industrial organizations willing to contribute in cash or in kind, or to provide technical support for the action programme.

5.3 In this context, the Committee urged that steps be taken, as soon as possible, to establish a dialogue with the pharmaceutical industry to secure its active collaboration in the programme.

6. ADMINISTRATION

6.1 The Ad hoc Committee was informed of the technical and administrative structures of other special programmes for which WHO is the executing agency, but felt that it would be premature to make detailed proposals. However, it considered, on the basis of the experience gained in those programmes, that it would be appropriate to outline a possible management structure for the action programme so that negotiations could be initiated with potential cooperating parties (see Annex 1).

6.2 It is envisaged that there would be a "Joint Coordinating Board" (or "Committee") representative of the parties cooperating in the action programme, responsible for reviewing and approving the proposed plans of action and budgets for the programme and evaluating progress. In addition, the co-sponsoring United Nations organizations would be represented in a "Standing Committee" (or a "Steering Committee") intended to guide and coordinate their contributions to the action programme. Finally, there would be a "Technical Advisory Committee" (or "Panel"), comprising technical experts serving in their personal capacities, to review and evaluate the action programme from the technical point of view and to provide the Joint Coordinating Board with a continuous independent technical evaluation of all programme activities.

7. CONCLUSIONS

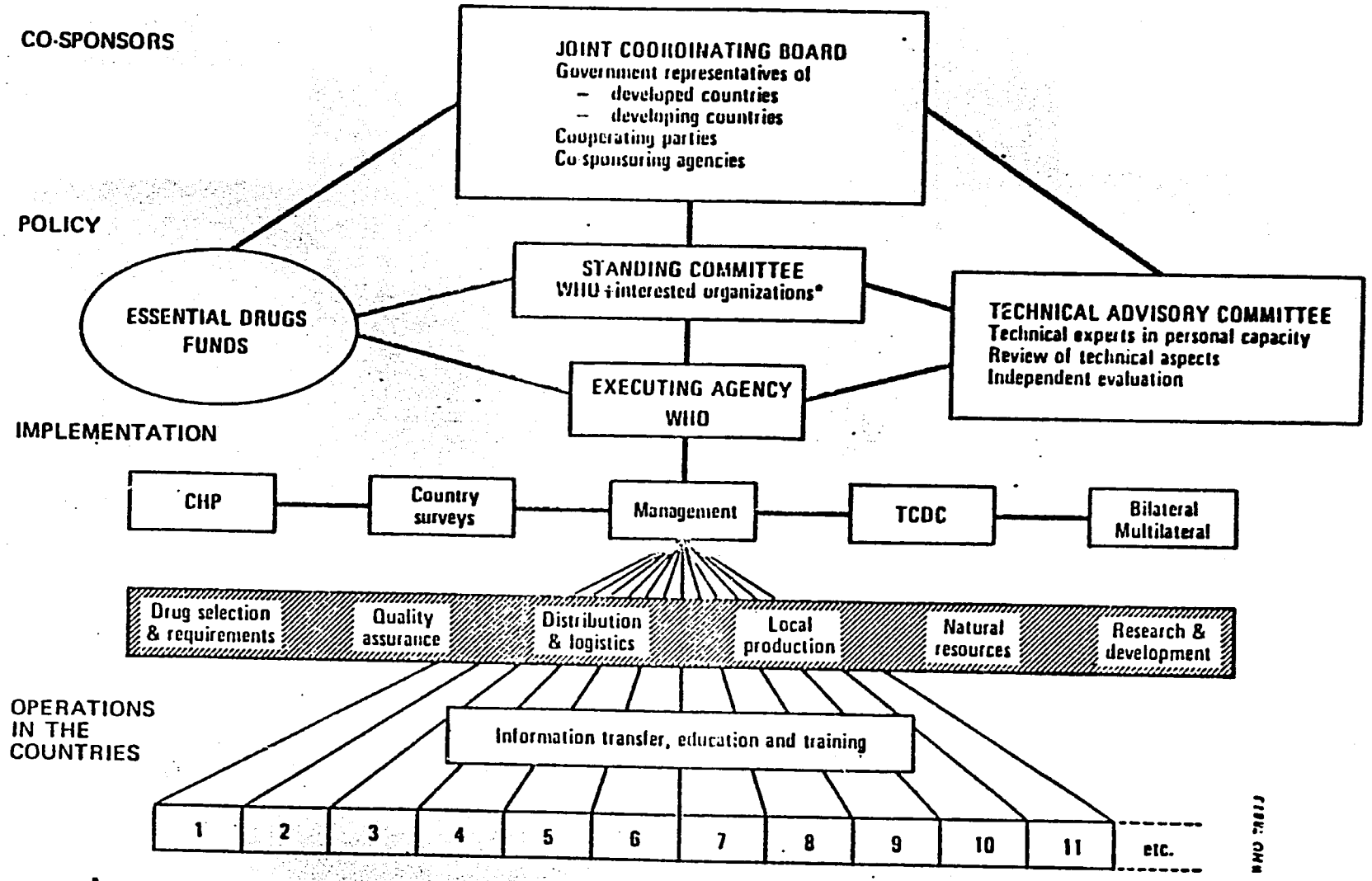
The Ad hoc Committee, having studied the information provided by the Secretariat on the reorientation of WHO activities and on possible ways of implementing the action programme on essential drugs proposed in resolution EB61.R17, arrived at the following conclusions:

7.1 When implemented, the proposed programme can make an important contribution to the extension and improvement of health care to those segments of the world's population which, at present, are denied access to even the most indispensable drugs and vaccines.

7.2 The meetings on drug policies and management held in the South-East Asia and Western Pacific Regions in March 1978 provided valuable information on the present situation in the developing countries concerned and on the acceptance of the proposed programme. Similar meetings should be convened in the other regions to extend the available base information and increase general awareness of the serious problems of access to essential drugs in the developing world.

7.3 Consultations and negotiations should be undertaken as soon as possible with the appropriate governments, agencies, and other parties to establish the action programme, including further discussions with the pharmaceutical industry to explain more clearly the aims of the proposed programme and to enlist the industry's active cooperation in its implementation.

ACTION PROGRAMME ON ESSENTIAL DRUGS: SUGGESTED STRUCTURE



*Efforts will be made, in due course, to solicit UNDP, UNICEF, UNIDO, UNCTAD and the World Bank to participate.

WHO 2882

APPENDIX 2

AIRGRAM

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FROM ADO/Niamey FILE: TOGO - GEN.

DATE SENT May 13, 1977

SUBJECT TOGO HEALTH SECTOR ASSESSMENT

~~SENSITIVE XXX~~

On the attachment which follows is the Health Sector Assessment for Togo. The compilation was completed in large part by Drs. Neils Poulsen and Anita Mackie of REDSO/Abidjan; Ms. Sally Sharp and Mr. William A. Young, AID Affairs Officer and Deputy Chief of Mission respectively in Lomé. Other contributors to the assessment include Mr. Roy A. Harrell, Jr., ADO/Niamey and members of the health PP design team supplied by the American Public Health Association.

As the Health Sector Assessment for Togo states, Togo is quite advanced in its health and population policies. The uniqueness of the Togo health situation is aptly demonstrated. Togo's health infrastructure is capable of delivering basic health services to the rural masses. The analysis presented in the following pages indicates that consideration should be given to further help to Togo in the rural health field if bilateral aid activities are expanded.

OTHER AGENCY

A PP outlining specific interventions in the health sector will be submitted to AID/W in July. This document is being finalized by the ADO/Niamey and REDSO/Abidjan.

attachment: a/s -

Airgram on Togo Health Sector Assessment &
2 charts Organigramme du Ministère de la Santé Publique
(AID/W: Please reproduce organigramme in reduced size for attachment to airgram)

PAGE OF PAGES

DRAFTED BY	OFFICE	PHONE NO.	DATE	APPROVED BY:
RHarrell/pw	ADO/Niamey		5/13/77	Walter Sherwin, Acting RDO

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DAP

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I. Demographic Profile

The surface area of Togo is 56,600 km^2. The population was by December 12, 1974 estimated at 2,197,900 giving an overall population density of about 39 inhabitants per km^2, one of the highest in Africa. The crude birth rate is estimated at 55 per 1000 population and the crude mortality rate at 29, giving a natural annual population growth rate of 2.6 percent.

The country-wide infant mortality rate (0-1 year) is estimated at 148 per 1000 live births, and the total child mortality rate (0 to 5 years) approaches 50 percent in rural areas. Life expectancy at birth is estimated at 40 years for both sexes.

About 60 percent of Togo's total land area is considered to be cultivable, but the 85 percent of the population which is rural inhabits only slightly more than 10 percent of the land. About 15 percent of the population live in the larger urban centers with over ten thousand inhabitants. The rural villages vary in size from a few hundreds up to almost 10,000 population. Migration from rural to urban centers is estimated at six to nine percent per annum.

Togo has similar demographic characteristics to most West African countries; but are also only rough estimates, and in this case based mainly on the 1970 population census and small demographic sample surveys carried out in 1973. Birth and death registration is far from complete, even in the capital city of Lome.

II. Major Health Problems

Malnutrition

The U.S. Public Health Service (PHS) has recently completed a nutrition survey of Togo. The survey was carried out in conjunction with the Applied Nutrition Unit, Division of Nutrition, Department of Agriculture in January/Feb 1977. The findings are presently being analyzed by the PHS. While final results are not yet available, preliminary data indicate that protein-calorie mal-nutrition or undernutrition of infants and preschoolage children is a serious health problem in Togo, although severe cases of kwashiorkor are rare.

Kawashiorkor or severe malnutrition was reported in 177 cases among some 30,000 preschoolage new patients treated at the Lome MCH center in 1976. But then, there is little doubt that undernutrition is frequent among the Togolese children 0 - 5 years old, which lowers their resistance to parasitic

and infectious diseases, resulting in the exceedingly high infant and child mortality rates, which tend to induce high fertility rates in order to replace the loss.

The Togolese health sector thus is characterized by the same vicious cycle found in most other West African countries.

Most Frequent Childhood Diseases

The most frequent childhood diseases seen in the Lome MCH center are:

1. Acute broncho-pulmonary disease
2. Diarrheas and dysenterias
3. Malaria (all forms)
4. Impetigo and other skin diseases
5. Worms and other intestinal parasites
6. Measles

These diseases account for about 80 percent of childhood morbidity in Togo. Most of the diseases are preventable through simple means such as better housing and clothing of small children exposed to cold and drafts during the rainy season; better sanitation and water supplies; distribution of anti-malaria drugs; more use of soap and water to keep skin clean; use of latrines to avoid infections with intestinal parasites; and immunization against measles.

The figures indicate that the major health needs in Togo, like in other developing countries, are not for expensive hospital-based medical care services, but for simple and inexpensive public health measures such as sanitation, health education and immunizations.

Diseases Surrounding Pregnancies and Deliveries - Maternal Mortality

An analysis of perinatal morbidity and mortality of women as well as their infants is important from several points of view. This group represents at least 20 to 30 percent of the population in developing countries; it is the group most vulnerable to the vicious circle of malnutrition, infectious diseases, high mortality and fertility rates; it accounts for more than fifty percent of total morbidity and mortality, and is thus the main target for health, nutrition and family-planning interventions.

In Togo more than fifty percent of the women examined at prenatal clinics suffer from anemia, most likely due to poor nutrition, iron and vitamin deficiencies. Intestinal parasites and malaria are among the most common findings in pregnant women. The lack of sanitary water supplies may account for some of these diseases. In 1974 (last available health statistics) there were 40 maternal deaths out of 43,815 deliveries attended by the governmental health services. About 1,500 pregnancies ended in spontaneous abortions and 143 pregnancies were terminated through induced abortions. There were 42,106 live births and 1,603 still-births and a total of 826 newborn children died in the maternity wards.

Maternal and infant mortality and pregnancy wastage rates are thus as high in Togo as in other West African countries indicating need for expanded and improved maternal and child care services including nutrition and child-spacing.

Major Communicable Diseases

Malaria: The most common communicable disease in Togo with more than 200,000 cases reported in 1974. While there is some seasonal variation in the incidence of malaria the spread of infections appears to continue year round in all parts of the country. Previous attempts to eradicate the disease in selected pilot zones have failed. The MOH is now starting a program of prophylatic distribution of niaquin to pregnant women and children in selected areas. The health services intend to expand this distribution as rapidly as possible to the whole country by utilizing itinerant health personnel.

Measles: There were more than 12,000 cases of measles but only 34 deaths, which is a relatively low death-rate compared with other developing countries.

Amoebiasis: Reported in 6,000 cases with 62 deaths, the highest death-rate of all communicable diseases.

Onchocerciasis: A major public health problem in the northern Central and Savana regions which are included in the onchocerciasis control project. WHO has established headquarters for this project in Lama Kara and is about to finish Phase I of the project.

Schistosomiasis: On the increase in most parts of the country. There were 4,300 cases of urinary and 664 cases of intestinal schistosomiasis reported in 1974. Most likely only a fraction of the actual incidence.

Smallpox and Yellow Fever: Are under control since the institution of systematic vaccination.

Trypanosomiasis: Two cases were reported in 1976. In spite of previous eradication attempts almost 5,000 cases of yaws (endemic treponematosis) were reported in 1974. No figures are available on the incidence of syphilis (venereal tresponematosis), gonorrhoea or other venereal diseases. Health personnel seem to agree that VD is on the increase, especially in the larger cities.

The incidence of leprosy and pulmonary tuberculosis are rapidly decreasing due to improved case finding and better treatment.

Conclusion: The pathology of Togo is similar to that of other West African countries. Communicable diseases are the biggest public health problem and are especially causing high morbidity and mortality rates in the most vulnerable group: pregnant women, lactating mothers, their infants and children.

III. Health Infrastructure

A. Administration Organization

Although somewhat outdated, the attached organogram of the Ministry of Health and Social Affairs) provides a good picture of the organization of the MOH on the central level. Administration is highly centralized with a vertical line of command. Policy decisions and health planning are made at the ministerial level with advice and consent of the cabinet and the manent Health Planning Unit.

The Director-General is responsible for the operation of all health services and for coordination of foreigndonor inputs. All division chiefs report to the Director-General or his deputy. There are eight divisions as follows:

Division of Administration is responsible for budget/financing, transportation and personnel.

Division of Epidemiology is responsible for epidemiological surveillance, control of communicable diseases, health statistics and tuberculosis control. The "Grandes Endemies" has five mobile units which covers the whole country with mass immunization programs: mainly smallpox, yellow fever, measles and BCG vaccinations against tuberculosis. DPT (diptheria, pertussis and tetanus) immunization of children and tetanus toxoid immunization of pregnant women are provided in all larger maternal and child health (MCH) centers.

Because of lack of refrigeration for storage of vaccines most rural dispensaries do not provide this service, but rely on visits by the mobile units from the "Grandes Endemies." The section of health statistics relies on the National Computer Center which serves all governmental needs. Because of difficulties with the computer the annual reports on "Statistiques Sanitaires" have been delayed for years. The GOT has not installed a new and larger IBM computer and the statistics section is catching up with its backlog.

The Division of Medical Assistance and Basic Health Services has responsibility for all hospitals, health centers and dispensaries, and for the training of the itinerant auxilliary health personnel in the pilot zone of Vogan.

The Division of Sanitation and Health Education is responsible for sanitary facilities, for setting sanitation standards, control and legislation of potable water supplies, refuse disposal, etc. The section of health education is responsible for health promotion, production of health education materials, training of health personnel in health education, etc. The chief of the section is also secretary-general of a newly created association of African health educators, which promotes health education in Africa through international conferences, etc. The health education chief has been one of the leading promoters of integrating family planning with maternal child health services. He presented this concept at a conference in Atakpame, February 1977, attended by some 25 health educators from Francophone West Africa. The health education division has also sponsored several radio and TV broadcasts on family health and sex education including family planning.

The Division of Maternal Child Health Services (MCH) is responsible for all MCH services including nutrition education and family planning. It supervises all MCH centers, provides training in MCH and family planning of health personnel, and has produced an excellent illustrated book on Family Health in Africa for trainers. This division will be responsible for the proposed Family Health Training Center in Lome.

The Division of Pharmacies is responsible for pharmaceutical supplies, inspection of pharmacies, and control of drug addiction.

The Division of Training is responsible for the training of public health personnel.

The Division of Laboratories is responsible for the National Institute of Hygiene and for regional and sub-division public health laboratories.

The Togolese Ministry of Health has a strongly hierachical structure with the major decisions being made by the Director-General of Health. In the event of his absence, decision-making is often postponed. The structure of the Ministry also leads to lack of coordination between divisions, and lack of information sharing between division heads on related programs outside the MOH. All the senior positions in the Ministry are held by well-qualified Togolese. The administrative structure is weak in health planning capability.

B. Health Facilities

Togo is divided into five health service regions (Lome, Atakpama, Sokode, Lama Kara and Dapaon). The capital is served by the 850 bed university hospital center (CHU) which also serves as the referral hospital for complex or serious cases referred in from the other areas. Each of the other four regions have a hospital center offering the usual services: medicine, obstetrics, pediatrics, surgery, pharmacutical and laboratory services and some specialty care. The regional hospital at Sokode is being rebuilt with French aid assistance and there are plans to utilize the original building for a training center for lower level health workers.

All the hospitals have a sliding fee scale according to the patient's ability to pay. At the CHU this ranged up to 6,000 CFA for the highest social category, and they estimated that up to 30 percent paid some fees for their care.

At the subdivision level there are now twelve small hospitals and the Ministry of Health has plans to construct more. In the private sector there are two hospitals and three clinics with a comparatively small number of beds, and with foreign physicians providing some of the staffing.

Compared with other West African countries, Togo has a very favorable ratio of hospital beds to population, 3434 beds for 2.2 million, or a bed for about 700 persons. Also the beds are better distributed to serve the rural areas than in many countries. In 1974 there were over 39,000 hospitalizations with an average length of stay of 13 days. The health facilities include:

The University Hospital Center in Lome (C.H.U.) - 850 beds

Four regional hospital centers with over 200 beds

Twelve subdivision hospitals in the capital city or town of each health district; their capacity varies from 50 to 170 beds.

One mental hospital with 32 beds

Two private hospitals, each with 80 beds

Three private clinics with about 30 beds each

Fourteen primary health centers

195 secondary health centers or rural dispensaries

52 maternal and child health centers

Two leprosy villages

Sixteen private medical clinics

One medical research institute

One National Orthopedic Appliance and Rehabilitation Center in Lome, and a subcenter in Lama Kara

The National Office of Pharmacies (Togopharma) has five regional pharmacies and some 65 small rural pharmacies or sales posts. Besides Togopharma, there are 15 private pharmacies in the major cities and some 40 small rural sales posts. There is thus easy access to modern medicines for all population, urban and rural, who can pay for it. Governmental hospitals, health centers and dispensaries distribute certain free medications to indigents as long as the stock lasts.

While the number of rural dispensaries and MCH centers in Togo is impressive, their maintenance, equipment, etc., leave much to be desired before they reach acceptable standards. Apart from the Pilot Region of Vogan where most centers are well maintained and have electricity and running water, the rural centers observed in other parts of the country lack these basic facilities. The GOT is aware of this problem and is seriously trying to remedy it.

In 1975 all the nation's primary health care centers, dispensaries and MCH centers were visited by the chief of the Government's hospital service. A major report1/ was prepared on his findings and is available. It concluded that existing facilities were poorly maintained, too small, lacked equipment and supplies, etc. In the area of personnel, while some staff were dedicated, many were not working well and the report suggested that measures to encourage personnel should be introduced. Subsequently, a request was made to UNICEF to support a major part of the expense for renovation and repair of rural facilities as well as to provide equipment and supplies for their operation. UNICEF support will most probably be forthcoming and this assistance will provide considerable impetus to development of rural services.

Laboratory facilities are scare in rural areas, and the number of laboratory technicians are insufficient to carry out the simple tests needed to assist the rural health workers with diagnostic and treatment assistance. The Central Laboratory in Lomé is charged with coordinating all the other facilities and establishing standards.

Dental services are almost nonexistent; there are only four dentists on the MOH staff. Dental extractions in the rural areas are performed by the paramedical personnel utilizing any facilities available.

1/ (Republique Togolaise, Minister de la Santé Publique, Direction Générale de la Santé Publique, "Rapport de Mission dans les différentes formations Sanitaires du Territoire de la République.)

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C. Health Manpower

The limited number of fully-trained medical personnel in Togo has resulted in reliance on paramedical personnel for the provision of health services in rural areas. Medical personnel are trained to and prefer to practice in urban areas where adequate facilities exist. Most Togolese physicians have been trained under the French system which emphasizes curative medicine.

There are currently about 135 physicians working in Togo, of whom a quarter are private. Almost all of the private physicians are located in the vicinity of Lomé and half of them have institutional affiliations as opposed to being in private practice.

TABLE I

Number of Physicians by Type of Employment

Togo 1970 -1976

YEAR	UNIV. HOSP. LOME	Central Services	Min. of Health Subdivision*	Total Public	Total Private	Grand Total
1970	22	13	29	64	23	87
1971	26	14	28	68	25	93
1972	14	15	35	64	29	93
1973	14	14	33	61	34	95
1974	23	14	30	67	33	100
1975P	32	18	35	85	35	120
1976P	35	25	40	100	35	135

*Including Centre de Santé de Lomé

P - Preliminary estimates

Cont

The Ministry of Health employs about 100 physicians. Slightly over one-third are affiliated with the University Hospital Center,* half of whom are Togolese, and half foreign nationals. All other physicians working for the MOH are Togolese. Only the CHU relies heavily on foreign assistance, most of it from France and Germany.

Nationwide, there is approximately one doctor for every 16,000 people. A breakdown of physicians by region revealed that 77 were employed in the maritime region in 1974 giving a density of one physician for 10,000 inhabitants. Kara region was the next best endowed with a physician for every 40,000 persons. Both plateau and central regions had only a physician for every 60,000. The Savana was the worst off with only three physicians or a ratio of about 90,000 persons to each physician.

Between 1975 and 1980 slightly over 30 Togolese medical students are expected to complete their studies. If all returned to practice in Togo, this would increase the number of physicians by 8 per annum. After 1980, the plans are for the University of Benin to graduate 20 physicians per annum. If they are able to achieve that target, and if the population projection for Togo of 4 million by 1980 is realistic, this would result in a physician ratio of about one for every 10,000 inhabitants. Even if optimistic projections for the number of physicians are made, it is highly likely that the present problem of mal-distribution of physicians will continue.

To date most medical students received their training outside the country. Some attended other African medical schools in Dakar, Abidjan and Yaoundé, and others went overseas. One of the problems which Togo has had with physicians receiving training abroad is a low-rate of returnees to Togolese practice. They have taken steps to counteract this problem. Physicians have returned from training in Russia, so increasing numbers have been sent there. The domestic training of medical students has been the other development.

The medical school at the University of Benin was established in 1970. To date there are about 75 students -- most of them Togolese -- enrolled in the first, second and sixth years of training. The first two years are primarily premedical science training. The Centre Hospital Universitaire (CHU) is used for clinical training, and sixth year medical students reside there. Currently, there are 48 interns working at the CHU. They receive housing, food and CFA 20,000 per month. Some of the interns are non-Togolese from Upper Volta, Niger, Benin and Haiti. The establishment of a medical school for a small country such as Togo is an expensive solution to the problem of lack of returning physicians; yet one has to appreciate the lack of success in the past when students were sent overseas, primarily to French schools.

*
Centre Hospital Universitaire (CHU)

Currently there are over 20 Togolese pharmacists, about half of whom are in the private sector. All of those in the private sector are employed in Lomé. All pharmacists are currently trained outside the country.

The number of midwives in 1976 was 201, of these 18 were known to be in private practice. In 1977 there were 55 midwives employed at C.H.U. The number employed by the Ministry of Health is at least 77, of whom 20 were employed at the Centre de Santé de Lomé and two at the Service de la Nutrition /poliqué.

Training of midwives is conducted at the École National des Sages-femmes in Lomé in a three-year post baccalaureate course. Current enrollment at the school is 85. The national plan calls for yearly output of 30 midwives. In 1973 there was a midwife for every 11,000 persons, and with an estimate of 201 in 1976 there was one for every 9,000. To achieve the World Health Organization goal of a nurse midwife for every 5,000, about 500 midwives will be required by 1980. It is likely that there will be about 350 by that time. Midwives suffer from the same problems of maldistribution as physicians, over 60 percent now work in the area of Lomé. Effective methods of recruitment and professional rewards will have to be sought to make rural-based practice more attractive.

The complete breakdown of medical personnel in the Ministry of Health in 1976 is given below:

Category	Number	Category	Number
Physicians	100	State nurses	521
Pharmacists	10	Midwives	201
Dentists	4	Assist. Sanitation	78
Sanitary engineers	3	Lab. Assist.	75
Hospital administ.	8	Auxil. nurses	168
Physicians assist.	48	Auxil. midwives	322
Laboratory techn.	5	Travelling nurses (agents itinerants)	148
Techn. agents-hlth	165		
Techn. agents sanitation	14		

The paramedical school (ecole paramedicale) in Lomé had a total of 300 students in 1975 in training to become nurses, laboratory technicians and auxiliary nurses. The goals stated in the National Plan are to produce the following number of graduates per annum:

100 nurses and state nurses

50 laboratory assistants

40 auxiliary nurses

30 midwives

The number of nurses (state and auxiliary) of almost 700 yields a satisfactory density of one to every 3,000 inhabitants and actually exceeds the World Health Organization's goals. About half the nurses are employed in the Lomé area, again giving a mal-distribution. The nurses who do work in the rural areas do so under difficult conditions: poor working environments, lack of equipment and medications.

The MOH is considering the placement of more diplomate nurses in the field, and increasing the number of lower level nursing personnel employed in hospitals.

Trained laboratory technicians and the laboratory assistants are in short supply. The recommended ratio is one for every 30,000. If the ambitious targets set in the plan are attained the situation should improve rapidly. The rural distribution of laboratory assistants is more satisfactory, even if average is at a low level. All 15 health subdivisions do have at least one technicians.

D. The Health Delivery System

Since 1965, the GOT with assistance of WHO, has developed a rural health delivery system in the Pilot Zone of Vogan near the capital of Lomé. GOT's strategy is to replicate this system as rapidly as possible to cover all regions of the country.

Basically, the health delivery system follows a pyra-medical model with the subdivision hospitals on the top, primary health centers at the next step, followed by rural dispensaries, and finally, by itinerant auxiliary personnel visiting all households in rural areas once a month.

The medical chief of the subdivision makes weekly visits to the primary health centers, and monthly visits to the dispensaries in order to provide curative health services as needed; but more important, to supervise paramedical and auxiliary personnel working in health centers and dispensaries. The itinerant personnel are supervised by the paramedical personnel.

The most innovative and impressive part of this system are the itinerant personnel. They are recruited on a competitive basis from young men or women who have at least six years primary schooling, and who are, preferably, from the area in which they will work. They receive a three-month theoretical course in basic health: general hygiene and sanitation, health education, nutrition, and recognition of the most common communicable diseases. The course is specifically aimed at preventive medicine and MCH. Following the theoretical course, the itinerants receive three months practical training in the rural health centers and dispensaries in the Pilot Zone before being assigned to their new area. Their duties include:

1. Recording of births and deaths
2. Epidemiological surveillance
3. Referral of pregnant women to nearest health facility for prenatal examinations.
4. Referral of mothers and infants for postnatal examinations and immunizations.
5. Nutrition surveillance, education and referral of severely malnourished children to appropriate health facilities.
6. Referrals of severely ill patients to appropriate health facilities.
7. Environmental sanitation, control of potable water supplies, sewage disposal, latrines, food stores, etc.
8. Distribution of prophylatic anti-malaria drugs and leprosy medication and first aid services for accidents, etc.

Besides being responsible to their supervisor, the itinerants are also responsible to village chiefs and/or to village health councils.

All primary health centers and major secondary health centers also include a MCH center which provide pre- and post-natal examinations, a small maternity ward for deliveries, immunizations of infants, and nutrition control and education. The MCH centers are staffed with nurse midwives and auxiliary midwives(matrones). The matrones are young village women with six years of primary schooling. They receive six months theoretical training in Lomé, followed by 6 - 12 months practical training in the Vogan pilot area under supervision of the nurse midwives.

In order to facilitate practical field training of auxiliary health personnel and to staff all rural health centers and dispensaries in the country more rapidly, the GOT with the assistance of WHO established in 1975 a second pilot zone in the region around Lama Kara in the northern part of the country. This second zone is part of an integrated rural development project. The regional AID-WHO sponsored "Strengthening of Health Delivery Systems" (SHDS) project has recently surveyed the Lama Kara zone for the purpose of evaluating possibilities of utilizing this zone as one of its demonstration projects under Phase II of SHDS for delivery of low-cost rural health services.

While no thorough evaluation of the above described rural health delivery system has been made, surveys carried out by the DAP team in preparation of this DAP revision have shown convincing evidence that it works well. The system is being introduced in all regions of the country and appears to reach a substantial portion of the rural population.

While the pilot zone of Vogan is better-staffed and has better facilities than the rest of the country, all regions are now reasonably well covered by subdivision and district hospitals, primary and secondary small health centers or rural dispensaries, staffed with paramedical personnel, nurses or nurse-midwives, and most - but not all - with auxiliary itinerant and midwifery personnel.

There are, however, many problems. Most of the small rural health centers observed outside the pilot zone suffer from lack of good and clean water supplies and other sanitary facilities; lack of electricity; lack of basic equipment such as gas or kerosene refrigerators for storage of vaccines, and even lack of decent beds for the women to rest in after delivery; lack of transportation for the itinerant and supervisory personnel; and at times lack of medication and other basic supplies. Nevertheless, everywhere the health personnel were doing their best. When medications are out of stock, there is almost always a small Togopharma sales post nearby, and distance in Togo from outlying rural dispensary to nearest primary health center or hospital is usually not too big to get help in an emergency.

Conclusion: In spite of obvious deficiencies in health facilities and insufficiencies of trained health personnel, the health infrastructure in Togo is sound and within reach of a larger percentage of the rural population than is the case of most of the neighboring countries.

The Togolese rural health delivery system is making a serious attempt to reach the majority of the rural population through its itinerant personnel and utilization of low-cost paramedical personnel and auxiliary midwives. The MOH has had good experience with this system and good response to the itinerant health workers from the rural population. It, therefore, plans to stay with this health delivery system rather than experiment with voluntary (unpaid) village health teams ("matrones and secourists") as is the case in Niger and other West African countries. While pressures for curative medicine are high, the health services are not neglecting preventive medicine and are expanding maternal child health services, health and nutrition education, sanitation, and immunizations; and most important, the MOH is now intending to include child-spacing or family planning as an integral part of its MCH services. When all personnel have received training in family planning motivation, education and technology, the Togolese rural health delivery system could provide an excellent vehicle for distribution of oral contraceptives to rural women through its itinerant health personnel.

IV. Health Financing

In common with most other West African countries, Togo's health sector suffers from inadequate financing and a declining share of the national budget. The economy of Togo has shown a steady growth during the 70s. The general operating and investment budget has increased from CFA 12 billion in 1972 to a recent estimate of CFA 55 billion for 1977. Mining, particularly of phosphates, forms an important segment of the export economy and contributed towards the 10 percent increase in the budget which occurred between 1976 and 1977.

The health budget has dropped as a percent of the general operation and investment budget from almost eight percent in 1968, to about 6.5 percent in 1972 and 1973, to slightly over 3 percent in 1976. Between 1972 and 1976 the general budget more than doubled, so in terms of total CFA allocated for health, the health budget has shown a steady growth. However, if allowance is made for inflation, it is likely that the MOH budget has remained about on a steady level since 1972. These amounts under-represent total health expenditures since private sector health expenditures are unknown.

As indicated in Table 2, personnel salaries receive three-quarters of the health sector budget. Unlike some West African countries, there has been a slight decrease in the percent of the budget going to payment of salaries, though the decline was only from 78 percent in 1972 to 75 percent in 1976.

Health Budget and National Budget
TOGO
(in CFA 1,000,000)
Table 2

Year	National Budget	Health Budget	Health as % of Nat.	Health Personnel Budget	Health Material Budget
1972	12,283	798	6.5	625	173
1973	13,484	880	6.6	685	195
1974	16,245	943	5.8	738	205
1975	30,515	1,252	4.1	960	292
1976	50,019	1,584	3.2	1,185	399

Source: Rapport D'Activities des Services de Sante 1967 - 1976 Pg. 4,5

Government health expenditures per capita in 1976 was U.S. $2.90, a relatively high figure for most developing countries. The estimated per capita Gross Domestic Product is only U.S. $215.

Little information is available on the nature of hospital financing. One breakdown of the health budget by functional categories shows hospitals and clinics receiving 57 percent of the total health budget. Any breakdown of the health budget must be viewed as an approximation. The CHU budget, an essential component of any rural-urban breakdown, or of the medical education costs, does not appear in the 1976 budget under either the MOH or the Ministry of Education. The CHU budget was stated to be approximately CFA 1.0 billion by an official of the MOH.

While it is difficult to allocate individual items, it would appear that about 75 percent of the health budget is spent on curative medicine, the remainder on preventive medicine. Likewise, an informed estimate of the percentage of the health budget spent in the urban area of Lome would be about 50 percent.

V. Health Planning

Togo's Third Five-Year Economic and Social Development Plan (1976-1980) lists the country's six most important development areas in order of priority.

They are:

1. Water
2. Rural development
3. Industrial development
4. Communications infrastructure
5. Education and health
6. Tourism

An analysis of the proposed budget estimated and the various structures established to execute development shows a different ordering of priorities. The total $1,169 billion is allocated for --

1. $324 million for communications infrastructure
2. $300 million for industrial, urban and tourist building projects, artisan and commercial development
3. $248 million for education and health development
4. $224 million for rural development
5. $60 million for administrative development
6. $4.5 million for employment and professional training

While education and health are listed as fifth priority, they receive the third largest amount, but the major recipient is education which will receive $234 million, leaving only $13.6 million or CFA 3,397 million.

In the Third Five-Year Economic and Social Development Plan, 1976-1980, the health policy is expressed as follows:

"Health and education are among the highest priorities of the Plan. The health philosophy is to reach the largest possible number of the population. To obtain this, the emphasis will be:

1. On mobile rather than stationary health workers
2. On village dispensaries rather than on "subdivision hospitals"

3. On renovation and equipping of already existing health facilities rather than on new construction; and

4. on preventive medicine.

A gap exists between the expressed goals of the health policy and the budgetary realities. However, it should be recognized that there are pressures on the GOT to provide more sophisticated western-type curative health services, just as there are in other developing countries. Therefore, in terms of expenditures the plan exhibits a compromise to some extent between the need to expand the hospital network, especially to the northern sectors of the country, and to expand the network of itinerant health workers.

The following items are listed in the National Plan for expenditures in the health sector (in million CFA):

1) Improvement and expansion of Stationary Health Facilities

Improvement of C.H.U. Lome	480
Improvement of 4 regional hospitals	80
Improvement of 8 primary health centers	17
Improvement of 50 dispensaries	50
Equipment of existing facilities	200
Completion of one district hospital center	100
Construction of regional hospital center in Sokode	700
Construction of 7 district hospital centers	700
Construction of 15 new dispensaries	100
TOTAL.....	2,427

2) Nutrition

Control of food products	25
Nutritional research	9
Nutritional education	6
	40

3) Maternal & Child Health

Anti tetanus vaccines	24
"Tetracoq" (Diptheria, pertussis, tetanus and poliomyelitis)	64.24
Cold chain for vaccine storage	10.01
Construction and equipment of a school health center	50
TOTAL.....	148.25.

4) Control of Communicable Diseases, "Grandes Endémies"

Onchocerciasis control	50
Yellow fever vaccine	6
Measles vaccine	4
Anti tetanus	2
Poliomyelitis	1
Tuberculosis: control (vaccine & treatment	31
Construction of national TB centers	96
TOTAL.....	190

5) Sanitation

Construction of laboratory in Sokode	40
Three trucks	30
Construction of five regional buildings for storage, repair and offices	33
One thousand latrines (six seats each)	50
One Hundred Fifty water supply facilities	20
TOTAL.....	173

6) Health Education

Production of audio-visual material central level	3
Establishment of H E centers in Dapaon and Lama Kara	4
TOTAL.....	7

7) Pharmacies

Construction of pharmacies in Dapaon, Lama Kara, Sokade and Atakpame	70
Construction of a large regional warehouse at Lama Kara	25
TOTAL.....	95

8) Togopharma

Construction and equipment, Lomé	43
Construction and rehabilitation sales points	27
TOTAL.....	70

9) Paramedical Education

Paramedical school - nursing school	50
School for midwives	50
School for auxiliaries	150
TOTAL.....	250
GRAND TOTAL.....	3,397

About 70 percent of the health budget will be devoted to the construction, expansion and functioning of health service facilities: hospitals, clinics and dispensaries. The percentage of this money expected to come from external funding is not known. French aid (FAC) was given for the construction of the regional hospital center at Sokode, the largest single budgetary item.

Eighty percent of the funds for improvement of health facilities are for facilities to serve the rural areas. Rural populations must have access to district or regional hospitals for more complex medical problems which cannot be treated in primary health centers or dispensaries.

Of the thirty percent of the budget remaining after construction of the health facilities, the largest share of CFA was devoted to education. The plan was to give CFA 50 million each to extending both the paramedical and midwifery schools, and CFA 150 million for the construction and equipment of a school for auxiliaries.

The next largest budgetary item was for programs against preventable diseases. Over three-quarters was devoted to campaigns against two diseases: tuberculosis and onchocerciasis. The remainder was mainly for vaccines which would be administered by Les Grandes Endémies.

The next two budget items in order of significance were for sanitation and MCH programs, both of which have as their target the rural population and preventive medicine. Health education and nutrition both received only the most minor share of the health budget.

The items in the health budget should not be considered as the only items in the National Plan which will have an impact upon health. Improvements in both the urban and rural water supply can be expected to benefit health. However, while water was the first priority in the plan, no systematic or coordinated attack on rural water problems appeared to be under way. Responsibility for well digging was scattered among several ministries.

Likewise in the sector of the plan which deals with rural development, the programs which are oriented towards increasing food production will presumably have an impact on dietary improvements. Under normal weather conditions, the majority of rural dwellers grow sufficient staple food crops to satisfy their needs. However, normal growth conditions for all crops in all areas of the country rarely occur; and efficient movement of food crops from areas of surplus to deficit then becomes important. Nutrition education which is needed to improve the dietary practices of pregnant and lactating mothers, and small children, received scant attention in the plan.

The main planning organ in Togo is the Ministry of Plan. Its responsibilities include setting the general orientation and global objectives of the plan. It is obvious from even a superficial perusal of the published plan that the planning methodology needs to be improved. National planning lacks clearly set priorities and goals and then a targeted and coordinated approach by which these goals can be attained. It is likely that an improved data base, a more coordinated administrative structure and better staffing are all necessary before the National Plan can be improved.

At the health policy level within the Ministry of Health, the same problems exist as at the national level. The priority of rural health services with an emphasis on preventive care is not carried out at the budgetary level. Planning responsibility within the Ministry is scattered and uncoordinated with each division making known its future needs. A planning staff, even a small but well-trained one, is needed within the Ministry to enable the priorities to be implemented. Since overall authority in the Ministry is centralized, such a planning unit will have to function with the full support of the Director General.

VI. External Assistance

Because Togo has somewhat limited national financial resources, it has depended upon bilaterla, multilateral and private voluntary agencies for financial, technical and administrative assistance. French government aid has always contributed significantly to the Togolese development activities.

The last year for which full figures on the extent of external assistance to the Ministry of Public Health was available was 1975. In a summary prepared by the United Nations Development Program (UNDP), $38.6 million of external assistance was reported, slightly under 60 percent in technical assistance. The educational sector received most assistance, followed by transport and communications, with the rural sector ranking third.

The health sector received $2.03 million in technical assistance. The largest donation was for construction of a hospital in Sokode for which French aid (FAC) gave $1.63 million. Most of the other aid was in the form of technical assistance. German aid (RFA) gave a total of $769,000 for 5 physicians, 9 technical assistants and 25 volunteers as well as some equipment, and participated in

4 projects. Five experts and equipment were placed in the region of Kara by UNDP/WHO. A professor and two technicians were paid for a short-term contract by WHO at the medical school, University of Benin. Some student stipends for study locally and abroad were also provided by WHO.

A German aid organization and Cathwell donated technical assistance, equipment and medications for control of leprosy. United States AID donated vaccine for immunizations. The People's Republic of China gave technical assistance by providing physicians and supporting staff to a hospital (Bon secour) in Lome. This team which gives medical and surgical care, as well as training in acupuncture techniques, is still active. No monetary value has been disclosed for this assistance.

WHO has continued to give support to the "Centre de Formation for its two training programs. One is national in focus and trains middle-level laboratory technicians for three years. The second is regional and trains physicians, health inspectors and health educators, as well as nurses and midwives in four separate short-term courses in public health and preventive medicine. WHO financing is used mainly for stipends and student travel in the latter program.

United Nations Fund for Population Activities (UNFPA) is currently in the final stages of developing a program for training medical, paramedical and social workers in family planning. Part of the intense local interest in family planning was sparked by a very successful seminar on sex education given for school inspectors and funded by UNFPA. It has been requested to provide support for the recycling of a total of about one thousand nurses and technical personnel over the five-year plan period. In theory therefore, by 1980 the Government will be in a far better position to staff some of its new regional and rural facilities than it is now.

The Peace Corps had previously supported volunteers working in primary schools giving health education. However, the program had a high dropout rate for various reasons including lack of counterparts and had been discontinued. A more successful program conducted by a limited number of volunteers appears to have been the development of audio-visual aids for health education. A recent request was for volunteer to teach sex education.

With the exception of one volunteer conducting health/nutrition in Atakpame, the Peace Corps has no health program in Togo and none planned for the near future. However, plans are underway for having six volunteers conducting sex education programs in secondary schools with Togolese counterparts under agreement with the Ministry of Education.

United National Children's Fund (UNICEF) has been requested to furnish equipment for rural health centers, a program it financed with $127,000 in 1975. The UNICEF representative stated that he had requested more details on its projected use prior to making any decision.

VII. Social Profile - Population - Family Planning

A "Socio-demographic survey of the Republic of Togo' was carried out in 1969 by the Department of Sociology, University of Ghana, in conjunction with the Department of Geography, "Institut de l'Enseignment Superieure du Benin" (now Universite du Benin) Lome.*

The findings of this survey provide a great number of data from rural areas in all regions of Togo(maritime, plateaus, Central, Savanna). The survey includes such health-related subjects as: water supplies and refuse disposal; antenatel, postnatal and maternity practices, knowledge of, attitudes to and practice of family planning (KAP studies); and attitudes to, and extent of, unwanted pregnancies and induced abortions.

While reference is made to the original papers for those especially interested, the following highlights may be of general interest.

Water Supplies - Latrines - Refuge Disposal

In Togo 12.5 percent of the population has water piped in the house, twenty percent walk less than 100 miles to catch their water, while some [illegible] percent have between 100 m and 1 km. to nearest water supply and 7.5 percent must walk as far as 1-4 kms. The water source is in most cases rivers, water-holes or dams, and only about 30 percent of the population get their water from wells. Only 4 percent have water closets, and another 12.5 percent use private pits or latrines. More than 50 percent [illegible] eate in the bush or at the beach and another 26 percent use public pits.

Some 42 percent of the population use refuse dumps for disposal of their household refuse while more than thirty percent just throw it in the bush or outside the house.

The above data clearly demonstrates the lack of sanitary installations in the rural villages of Togo and the widespread use of highly unsanitary practices contributing to the high incidence of infantile diarrhoeas, intestinal parasites and vector-born diseases.

Head of Households Occupation-Education-Communication-Transportation

About 90 percent of the heads of households are men and 85 percent of them are occupied as farmers or farm laborers. Sixty-five percent

are illiterate, while 12 percent have completed primary school and another 10 percent have completed middle school (equivalent of 10th grade). Seven percent of the households subscribe to a daily newspaper (which brings news in Ewe, the most common language in Togo). Thirty percent of the households own a radio, but another 40 percent listen regularly to radio news at their neighbors' or at public gathering places. About 15 percent of the households were listed as possessing a car or other vehicle.

The rural population in Togo is thus not as isolated as in most other rural areas in Africa. With about 70 percent of the heads of households listening regularly to radio news there are good possibilities for introducing mass educational programs in health, nutrition, child-spacing, etc. In fact, several radio and TV programs on family health, health education, sex education, sex mental health, nutrition, etc., have already been broadcasted.

Antenatal, Postnatal and Maternity Practices

Seventy-five percent of the women asked by the survey "who should assist with delivery" answered: doctor, nurse or nurse-midwife. The remaining 25 percent either did not know or preferred to accomplish their deliveries in their homes assisted by family members or by traditional birth attendants (matrones). More than 90 percent of the women would seek medical care for their children when they were sick.

The mean distance to the nearest hospital/clinic is about 9 kms. and seventy percent of the population lives within a radius of 10 kms from a health facility. Asked about how to get there, more than 96 percent of the women said: by foot, and about 60 percent said it was easy to get there while the remaining found it somewhat difficult; but only a few percent said they had never been there. Forty percent of the women stated that they visited the hospital/clinic often and an equal 40 percent said they visited it rarely; and an additional 12 percent said, "only when indisposed."

Asked about if they were well received at the hospital/clinic, the countrywide response was 82 percent answering yes. In the Savanna as many as 95 percent of the women interrogated were satisfied with the reception they received in the hospital or clinic.

The above data shows an almost unheard of degree of confidence in and satisfaction with governmental rural health services. The personnel who carried out the survey were well warned against the tendency of the respondents to be "nice and positive" when asked about governmental services. They were instructed to win the confidence of the women and explain to them that they could be frank in their replies which would be kept anonymous. But, nevertheless, only a very few women complained about long waiting time, poor treatment by or poor

attitudes of the health personnel.

Knowledge Of, Attitudes To and Practice of Family Planning (KAP Survey)

The first KAP survey in Togo was carried out as a pilot project in the Maritime region in 1969, but was later expanded to cover the whole country. The survey questionnaire concentrated on the following issues:

(a) Ideas and conceptions about spacing of births and desirable birth intervals.

(b) Awareness of consequences of frequent births at intervals considered too short.

(c) Actual spacing habits and practices.

Attitudes on Spacing

About 90 percent of the respondents would like to have their children spaced out: eight percent would like theirs close together and two percent did not know.

The majority of the women did not only want their children spaced out but 98 percent had definite ideas about the approximate number of years they want between their children. Thus 8 percent would like a space of one year between their children. Twenty-three percent prefer 2-year intervals while 50 percent or half the total number prefer 3 years. Another 17 percent would like to have their children at intervals of 4 years or more.

While the will or the desire not to have children too close together exists among 9 out of 10 women interviewed, the methods adopted to achieve the desired spacing clearly show the ignorance of the women in this regard.

Thus, only 8 percent of the women would see a doctor/midwife or use drugs. Sixty-two percent would come to definite terms with husband or would avoid husband's sexual approaches, sleep elsewhere, or move to parents' homes. Another nine percent would advise husband to satisfy himself elsewhere/find another woman for husband/polygamy; and 20 percent of the women would do nothing; leave it to God or Destiny; or "don't know what to do."

Asked about the effects of lack of suitable spacing on mothers and children about 80 percent of the women were aware of the bad effects on the health of the children. About 20 percent mentioned the economic and

financial burden on the family and 11 percent added to this the psychological and emotional effects on mothers of too short intervals between births.

In spite of the expressed need for child-spacing, 37 percent of the women condemned the use of contraceptives for moral or religious reasons or because "the methods are dangerous." Twenty-six percent expressed unconditional approval of family planning. Four percent did not know and the remaining would approve the use of contraceptives under certain conditions such as avoiding having too many children; if the family was unable to support the children; or if special circumstances surrounding the pregnancy would justify it.

Only ten percent of the women endorsed abortions, but the majority of them stated that the number of abortions in their area was increasing, that young people practice it, or that abortions are induced because people no longer want a large number of children.

Fertility Characteristics

The mean age of women at first marriage varies from a low of 16.4 years in the Savanna to a high of 18.2 years in the Maritime region resulting in a mean age of 17.5 years in the whole country.

The young age at first marriage is reflected in the rather high fertility rates found in the survey. The total number of pregnancies of all women (aged 15 - 50) interrogated in the survey averaged 4.7; and the number of pregnancies per mother interviewed was 5.2.

However, a great number of these pregnancies were wasted in still births, 0.08 per woman, or in abortions, 0.33 per woman, resulting in an average number of living children per woman of 2.9 and of mothers of 3.2. The difference between the above figures (pregnancies minus wastage rates and number of living children) may reasonably well be explained by the high infant and child mortality rates.

In order to establish total fertility rates and trends in fertility rates during three generations. the women were asked about fertility experience of their mothers and maternal grandmothers. The average number of children born to the mother was 6.4 and to the grandmother 4.9. While this may look like an increase in fertility rates from one generation to the next, the true explanation is probably that the women interviewed did not know how many children borne by their grandmothers had died.

There are also some discrepancies between the total number of children the family would like to have if he/she had no children, which amounted to 6.4 children per family and the fact that 60 percent of the women interviewed stated that they did not want more children than they already had.

Family Planning Perspectives

The above figures demonstrate the gap between the desires of rural Togolese families for child-spacing and their actual fertility experience. The survey also shows good opportunities for the rural population to utilize modern governmental health services and a high degree of confidence in these services if one is sick; but on the other hand the survey demonstrates a lack of knowledge on the part of the rural population that health services also can help them fulfilling their desires for child-spacing by effective and safe means which do not interfere with their religious or moral beliefs.

The Government of Togo and national leaders outside of the government have accepted the findings of the survey and have in recent years developed a philosophy and a policy that fully endorses, supports and sustains the conclusions of the Socio-demographic survey and attempts to meet the desires of the rural population for child-spacing.

One of the first initiatives in developing family planning information, education and services has been taken by the National Family Planning Association which was created January 2, 1975, and officially recognized by governmental decree on May 3, same year. By February 17, 1977 the statutes of the Association were slightly revised with broader goals and objectives and the name was changed to the Family Welfare Association...(Association Togolaise pour Le Bien Etre Familial). The goals and objectives of the Association may shortly be recapitulated as follows:

1. To contribute to the quality of life of the Togolese population

2. To inform the population on the problems and conditions surrounding births of its children

3. To assist the parents in family planning -- as needed

4. To assist in safeguarding the rights of women and children

5. To keep the governmental powers informed on family life in Togo and suggest means of improving it.

The Association is sponsored by and affiliated with the International Planned Parenthood Federation (IPPF), and has received technical and in-kind support from the GOT, which has provided facilities for a family planning clinic which is held in a Ministry of Public Health clinic in Zongo and for the headquarters of the Association in Lomé. So far, the accomplishments of the association have been encouraging. Besides the FP clinic and headquarters in Lomé, the association was a co-sponsor with UNFPA of a highly successful conference on sex education in Lomé in July, 1976, and has already established affiliate chapters in all regions of Togo.

The Association plans to concentrate its efforts on:

(i) education of national leaders in FP through local, regional and national seminars; (ii) education of the public through radio, newspapers and other mass educational means; and (iii) assisting the MOH in establishing FP clinics in all regions of the country.

The GOT has also shown initiative in reaching its goal of integrating FP services in all its maternal child health (MCH) centers.

While this goal hitherto has been a controversial issue between the MCH services and other parts of the Ministry of Health and Social Affairs, and the Ministries of Plan and Education, it appears now that there is mutual agreement by all parties to support such a policy. High governmental officials of all three ministries mentioned above participated in and made substantial contributions to the seminar on sex education. The MOH has already trained a number of nurse-midwives and doctors to work as trainers in family planning for its medical, paramedical and auxiliary personnel as well as for its social agents. It is presently negotiating an agreement with the United Nations Fund for Population Activities, (UNFPA) to support this training through payment of per diem and lodging for the trainees, scholarships for foreign trainers or professors, and for equipment and supplies to enable graduates of the training program to extend their services to the rural population of Togo.

In order to effectively facilitate such training programs, the GOT is seeking foreign assistance to establish a training center which would provide the facilities for practical or clinical as well as theoretical training and applied research in family planning. While the policy of the GOT falls short of setting demographic goals in terms of reduced birth, ferility and population growth rates, the GOT is still a leader among Francophone West African

countries in adopting a policy of integrating family planning with its rural MCH services. With the Ministry of Health's emphasis on training and utilizing its paramedical, auxiliary health personnel and social assistants for this purpose, it appears to be a reasonable assumption that its policy ultimately will result in lowering fertility rates at a reasonable cost.

The Ministry of Education has been very active in promoting family health and sex education. It has already introduced sex education as a subject in the primary schools, and is planning to introduce sex education including family planning in all secondary schools as a priority subject. There are presently four officials from the Ministry of Education abroad studying the subject. Furthermore, the Ministry has requested assistance from the Peace Corps for volunteers to assist in teaching sex education in the secondary schools and from USAID for assistance in training teachers at the proposed family health center. Sex education is also a subject for frequent discussions on radio, TV, and in the newspapers. One recent example of this was a program entitled "Week of Mental Health and Sex" which was highly publicized throughout all of the mass media.

VIII. Summary Conclusions: Recommendations for AID Interventions

The findings of above analysis of Togo's health sector may shortly be summarized as follows:

The health sector is characterized by a vicious cycle of malnutrition, high incidence of parasitic and infectious diseases, high infant-child and maternal mortality rates, and high fertility and birth rates.

While the emphasis on health services for several years has been on curative medicine and concentrated in the capital of Lome, the 1976-80 Plan gives emphasis to expanding curative and preventive health services to all regions of the country and on reaching as many of the rural population as possible with basic health services, maternal and child health services, immunizations, health education and sanitation. It also gives emphasis to development of safe rural water supplies, an important factor for improving the health situation of the country.

In what follows, it is recommended that A.I.D. consider assistance over the next several years for:

a) Support to the rural health delivery system, including particularly a facility for training in family health, and the design and production of education materials on family health.

b) Support for strengthening health and demographic data collection, analysis, storage and use.

c) Support of activities in the nutrition field

d) Support of programs to enable rural populations to have reasonable access to safe water.

AID's assistance in the health field should be coordinated with that provided by the Peace Corps. Specific emphasis is given on training of paramedical and basic auxiliary personnel to staff rural health centers, and on improving and expanding the number of rural MCH centers and dispensaries.

A unique feature in Francophone West Africa is the GOT's interest in introducing sex education in the schools and integrating child-spacing as a part of its maternal and child health services, and through training of all paramedical and auxiliary personnel in Family Health to enable these services to reach a major part of the rural population. The KAP surveys mentioned above demonstrated a deeply felt need by the rural population for child-spacing and a possibility for high acceptance of family planning when carefully introduced in a way the rural population can understand and which does not offend their religious and moral convictions.

The climate for introducing family planning as a means of child-spacing is therefore excellent in Togo. This concept is not only adopted by the Ministry of Public Health, but is endorsed by Social Affairs, the Ministries of Communication, Education, etc.

In order to get training in family health started as soon as possible the GOT with assistance of the UNFPA will start a number of short-term training courses, workshops and seminars for its medical and paramedical personnel in 1977 and 1978. This training will take place wherever feasible facilities can be found in Lomé or in regional and district level health facilities.

The GOT considers this an intermediate solution only. In order to provide in-depth training and recycling of all its personnel in the concepts of family health and to truly demonstrate an integrated approach to MCH, nutrition and family planning services, the GOT feels a need for establishing a family health training center in Lomé and has requested assistance for such project from USAID.

While doubts have been raised on the desirability of establishing another training institution in the capital city of Lomé, it is difficult to find an alternative. There is need for an institution that can provide the practical as well as the theoretical training in the many aspects of human reproduction, fertility, sex education, FP motivation, education and technology. To obtain this, three elements are necessary:

(1) A qualified teaching staff, obstetricians, pediatricians, general practicioners, nurse-midwives, health educators, etc.,

(2) A sufficient number of patients from which to learn all aspects of "family health;" and

(3) easy access to other medical facilities, scientific, and training institutions, for referrals, research, scientific cross-fertilization as well as for coordinating training programs.

While neither condition (1) or (3) exists outside of Lomé, it is possible that already existing facilities may be renovated, combined and/or programmed to provide the kind of in-depth training in "family health" desired by the GOT. This possibility should be thoroughly explored before AID funds be committed for new construction. However, in any case, whether by renovation of existing facilities or by new construction, the establishment of a family health training center in Lomé may be a key element in bringing family health and child-spacing to the Togolese population, urban as well as rural. Furthermore, such center will be the first of its kind in Francophone West Africa and may well serve as a demonstration center for other West African countries and accept selected trainees from these countries.

The center may therefore be a possible investment for AID in Togo.

There are constraints: Care should be taken to ensure that the majority of the health personnel trained in the center actually return to their rural environment and have the facilities, equipment and material to practice what they learned from their training. Another important point is the need for establishing health and demographic measurements to establish the impact on health, fertility, population growth, etc.

Directly related to the objectives of the center, but not necessarily limited to support of the functions of the center, AID may consider support to:

(1) Strengthening of health and demographic data collection, analysis, storage and utilization.

(2) To the design and production of health education materials on family health.

(3) To the development of curricula and training programs in family health for different levels of trainers and trainees at the center, paramedical schools, and in the MCH and rural health centers.

(4) Strengthening middle level health management of the center on regional, division and subdivision levels through support to in-service training seminars, participant training, etc.

(5) Strengthening transportation and logistic systems to assure better supervision of rural health personnel and distribution of medications, etc.

(6) AID might also consider in coordination with UNICEF and UNFPA, providing equipment and supplies to MCH and rural health centers.

(7) Assisting the GOT to strengthen its epidemiological surveillance system, provide certain vaccines and assist in maintaining the "cold chain."

The above interventions or assistance would all support the development of basic rural health services and strengthen the outreach of the National Family Health Center.

In the field of nutrition, AID could support the MCH nutrition program. However, specific recommendations for nutrition intervention will need to be formulated in further discussions with the GOT, and taking into account the PHS survey - (a preliminary report of that survey shows that children throughout the country suffer from chronic under nutrition and anemia).

The foregoing analysis of Togo's health sector indicates that consideration should be given to further help to Togo in the rural health field if bilateral aid activities are expanded. The uniqueness of the Togo health situation has been demonstrated in the foregoing. The health infrastructure presents an opportunity to initiate innovative approaches to solving problems connected with the delivery of basic health services to the masses. That is to say (1) there does exist in Togo a well-defined health infrastructure that does function as best it can within its limited resources; (2) Togo health infrastructure is manned primarily by Togolese and not wholly dependent on expatriate manpower; (3) there is a GOT willingness to try innovative approaches in providing health services to its populace, as is readily apparent in the example of trying to duplicate the Vogan Regional Pilot Health System throughout the country; and (4) GOT plans to train and increase health manpower to provide more services to the rural areas as is evidenced by increase expenditures for health services and infrastructure planned for northern Togo. Therefore, should a bilateral program come about in Togo, AID should investigate the potentials for assisting the GOT in its efforts to provide increased and effective health services to the rural populace. Such assistance coud be in the form of assisting the Government of Togo to duplicate the Vogan Health Delivery System financed by WHO throughout the country.

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APPENDIX 3

A l'attention de Monsieur le Premier Ministre.

Note sur la situation sanitaire

du Sénégal : activités et perspectives.

I. CHANGE DE LA SITUATION

L'analyse de l'évolution et de la situation du "secteur santé" au seuil du Ve Plan quadriennal 1977-1981 est la suivante :

1. Infrastructures médicales :

. 9 hôpitaux
. 34 centres de santé
. 60 maternités
. 427 postes de santé
. 66 PMI
. 7 secteurs des grandes endémies.

Ce qui donne une capacité d'hospitalisation de 5.786 lits, très inégalement réparties : 2.916 pour la région du Cap-Vert, 137 pour le Sénégal-Oriental.

2. Personnel médico-sanitaire

- Médecins :

. 311 dont :

- 146 en santé publique (84 étrangers)
- 92 au CHU (42 étrangers)
- 73 privés (43 étrangers)

Leur répartition est inégale dans les régions :

- 77 % pour le Cap-Vert
- 2 % pour le Sénégal-Oriental

La densité de médecin est de :

- 1 médecin pour 4.108 habitants au Cap-Vert
- 1 médecin pour 86.973 au Sine-Saloum.

- Pharmaciens :

. 90 (non compris les pharmaciens du CHU)
dont 57 au secteur privé et 24 au secteur public.

- Chirurgiens dentistes :

. 37 dont 22 au secteur privé et 15 au secteur public
La densité est de 1 dentiste pour 137.[illegible].

- Sages-Femmes :

. 280 dont 21 privées.
On compte 1 sage-femme pour 3.295 femmes âgées de 15 à 49 ans.

90

- Infirmiers, Infirmières et Agents [illegible] :

  . [illegible] infirmiers [illegible] pour le secteur privé

  . [illegible] infirmières dont [illegible] privées

  . [illegible] agents [illegible]

- Agents sociaux :

  . [illegible]

- Autres catégories de personnel :

  . [illegible] personnel scolaire

  . 1[illegible]0 personnel de la production

  . [illegible]97 agents de bureau.

II. ACTIVITES DES FORMATIONS SANITAIRES

Le rendement de la médecine de soins se résume en 1976 comme suit :

1. Morbidité :

- 3.785.847 consultants
- 10.865.778 consultations
- 10.869 hospitalisations
- 1.435.968 journées d'hospitalisation

La région du Cap-Vert absorbe 7,7 % des hospitalisations.

2. Accouchements :

93.930 accouchements ont été entrepris dont [illegible],6 % au Cap-Vert, 2,4 % au Sénégal-Oriental.

3. Activités de médecine préventive :

Axées sur le dépistage, le contrôle et la prophylaxie de certaines maladies telles que lèpre, trypanosomiase, onchocercose et trachome :

ont été effectuées par le service des Grandes Endémies :

- [illegible] prospections
- [illegible] vaccinations antivariolique
- [illegible] -"- antiamarile
- 150.159 -"- antimyocolenses
- [illegible] -"- anticholériques
- [illegible] -"- B.C.G.

Ajouter à cela les activités des services d'hygiène dont essentiellement celui du Cap-Vert.

III. [illegible]

L'objectif "santé pour tous en l'an 2000" assigné par l'OMS aux Etats, est conforme à nos plans de politique de développement dont le secteur santé est un des [illegible].

Pour l'atteindre, il [illegible] de faire une véritable révolution sanitaire qui nécessite :

- une volonté politique des Etats
- une stratégie de développement

Dans la perspective de l'horizon 2000, et pour réaliser les objectifs sanitaires définis au Ve Plan de développement économique et social 1977-1981, il a été nécessaire de prendre et d'envisager les mesures suivantes :

1. Dans le domaine de la restructuration

- Le projet de restructuration du Ministère de la Santé est soumis au Gouvernement ;

- Un vaste plan opérationnel de restructuration (collection, construction, équipement) est en cours.

2. Dans le domaine des priorités définies dans la doctrine de notre politique sanitaire: (priorité à la prévention, à la médecine de masse, aux zones rurales) :

- Obligation est faite aux médecins boursiers du Sénégal de servir la fonction publique le temps de leur engagement.

- Désormais tous les jeunes médecins doivent d'abord être affectés en zone rurale; de même que le personnel para-médical sorti de nos écoles de formation.

- Nécessité alors d'offrir au personnel des zones rurales un cadre opérationnel.

3. Dans le domaine de la formation

- la réforme des écoles de formation para-médicale est entreprise :

= Ecole des Sages-Femmes : l'élevation du niveau de recrutement : baccalauréat est envisagé. Il est également envisagé de doubler les effectifs.

= Ecole des Agents d'assainissement de Mambole : le decret de réforme est soumis au Gouvernement. Transformée en école de Techniciens de l'assainissement elle recrutera au niveau de B.F.M. et la durée des études portée à 4 ans;

= Ecoles des auxiliaires dentaires : ne recrutera désormais que des infirmiers d'Etat.

= Ecole des Agents sanitaires : l'augmentation de l'effectif et le relèvement du niveau de recrutement sont en cours d'étude.

4. Dans le domaine des relations extérieures

La présence du Sénégal dans les rencontres internationales relatives à l'examen des problèmes de santé présente d'autre intérêt. Elle permet non seulement de faire connaître notre politique de santé, les réalisations, mais d'inciter des aides.

La délégation sénégalaise a contribué positivement aux discussions des Assemblées de l'Organisation Mondiale de la Santé (OMS) à Genève (Mai 1978) et à Kigali (Septembre 1978).-

Toutes ces mesures nécessitent des moyens qu'il importe de dégager pour mieux concrétiser la volonté politique du Gouvernement d'atteindre l'objectif "santé pour tous en l'an 2000"./-

Le Ministre

Appendix 3 (2 copies)

PHAREV I5

ENDA - PROGRAMME FORMATION POUR L'ENVIRONNEMENT - B.P. 3370 - DAKAR - UNCTAD (GENEVE)

LA CONSOMMATION PHARMACEUTIQUE AU SENEGAL

Ière partie :

Circuit d'approvisionnement et de distribution des médicaments.

Dr. Sylvie EPELBOIN

Dr. Lionel ROBINEAU

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Frappe : Ndèye Aminata DIOUF
Ameth DIA

ENDA : Le programme "Formation pour l'Environnement" est commun à l'Institut Africain de Développement Economique et de Planification (IDEP-DAKAR), au Programme des Nations Unies pour l'Environnement (UNEP-NAIROBI) et à l'Organisation Suédoise pour le Développement International (SIDA-STOCKHOLM)

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LA CONSOMMATION PHARMACEUTIQUE AU SENEGAL.

par le Dr. Sylvie EPELBOIN *
et le Dr. Lionel ROBINEAU *

Ce document s'inscrit dans le projet PHAREV "Environnement et implications sociales de la technologie pharmaceutique moderne et traditionnelle au Sénégal", et fait directement suite au PHAREV I3, qui traitait des aspects qualitatifs des besoins pharmaceutiques au Sénégal. Il tente de cerner plus particulièrement les aspects budgétaire et législatif du dispositif pharmaceutique, le fonctionnement des secteurs public et privé, les rapports entre les différents organismes et instances en liaison avec la consommation médicale.

Nous nous efforçons de présenter les éléments les plus précis possibles, compte tenu des informations qu'il nous a été parfois difficile de recueillir. Les données chiffrées parfois arides de par leur caractère théorique, nous ont semblé indispensables à connaître afin de posséder une base de discussion à partir de faits existants et concrets.

L'étude de la consommation pharmaceutique au Sénégal se déroulera en deux temps :

<u>Ière partie</u> : Circuit d'approvisionnement et de distribution des médicaments (PHAREV I5).

<u>2ème partie</u> : Habitudes de prescription et de consommation médicales (PHAREV I6).

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* ENDA.

La Consommation Pharmaceutique au Sénégal

Plan de l'étude

Ière partie : Circuit d'approvisionnement et de distribution des médicaments.

A) Législation sur l'entrée des produits au Sénégal

1. Origine des produits
2. Visas d'importation
3. Taxes douanières
4. Contrôle qualitatif.

B) Le budget pharmaceutique

1. Budget pharmacie au sein du budget santé.
   - a - répartition selon les services
   - b - répartition régionale
   - c - budget hôpitaux publics
2. Commentaires
   - a - évolution au cours des dernières années
   - b - comparaison des différents secteurs
   - c - Fongo Limbi : l'exemple d'un poste de santé isolé.

C) Les organismes de distribution

1. publics
   - a - l'exemple du CHU de Fann : demande et réception des médicaments dans un hôpital d'Etat
   - b - La Pharmapro
     - Budget
     - Vente des produits
     - Prix des médicaments

c - La Pharmacie de l'Hôpital Principal

d - La Pharmacie d'Approvisionnement de St-Louis

2 - Les organismes privés : les grossistes

a - Laborex

b - UPIA

c - SENEPHARMA

d - Caractéristiques communes aux 3

e - Système de fournitures

f - moyens de pression.

D) Pharmacies privées et dépôts pharmaceutiques

I) Les pharmacies privées

a) Nombre et répartition des officines : la disparité régionale

b) Les pharmaciens

- conditions de création et d'exploitation
- fonctionnement des pharmacies
- contrôle des pharmacies.

2) Les dépôts pharmaceutiques

3) Rôle effectif des pharmaciens dans le conseil thérapeutique

4) Les pharmaciens et la médecine traditionnelle.

E) Les prix de vente des médicaments

I) Secteur public

2) Secteur privé

3) Comparaison des prix à la vente.

F) <u>La production locale : la SIPOA</u>

I) histoire de la création de la SIPOA

2) organisation de la SIPOA

3) objectifs que s'était fixé la SIPOA

4) liste des spécialités fournies

5) l'approvisionnement

6) la fabrication

7) la distribution

8) les problèmes auxquels se heurte la SIPOA

a) le secteur recherches

b) le projet d'usines de pansement

c) l'hostilité des pharmaciens

d) l'attitude gouvernementale

e) la réticence du consommateur

f) pour l'avenir.

CONCLUSION

II (voir PHAREV I6).

Méthodologie

Cette recherche a été effectuée simultanément dans différentes directions que nous ne citerons que brièvement :

I) enquête des services publics

Ministère de la Santé
Inspection des Pharmacies.

2) enquête menée auprès des pharmaciens dans différents quartiers de Dakar avec notamment relevés systématiques d'ordonnances.

3) entretiens avec des dirigeants de l'industrie pharmaceutique locale

4) enquête réalisée dans différents postes de santé de brousse, et dépôts pharmaceutiques non centraux

5) travail bibliographique.

Circuit d'approvisionnement et de distribution des médicaments

Les différentes dispositions législatives régissant l'approvisionnement et la distribution des médicaments au Sénégal n'ont pas été modifiées de façon radicale depuis 1960. C'est pourquoi nous en exposons les grandes lignes sans reprendre en détails les anciens textes existants.

A - Législation sur l'entrée des produits au Sénégal

1) Actuellement, la majorité des produits, finis et semi-finis, proviennent de France, par l'intermédiaire des filiales françaises des trusts pharmaceutiques multinationaux. Cependant, la politique actuelle est de multiplier les pays fournisseurs, et des appels d'offres sont faits, par l'intermédiaire des ambassades à différentes nations, notamment l'Italie, l'Espagne, les Etats-Unis, le Mexique, la Yougoslavie.

2) Un visa d'importation est nécessaire pour l'introduction de tout médicament au Sénégal. Celui-ci est délivré par la Commission des visas. Selon certains, de nombreuses pressions peuvent s'exercer au niveau de la commission ; les décisions sont prises sur dossiers (présentés par les laboratoires).

Le coût du visa est de 50.000 frs CFA par produit.

Selon certaines informations, il nous avait été fait mention d'une nouvelle législation obligeant les laboratoires à représenter tous les produits devant une commission de contrôle, laquelle éliminerait les produits faisant double emploi avec ceux fabriqués ou conditionnés au Sénégal ; cela avait eu pour but de protéger les produits SIPOA (usine pharmaceutique sénégalaise dont nous reparlerons en détail). Mais cette information nous a été infirmée par l'Inspection Générale des Pharmacies.

3) Les taxes douanières touchent tous les médicaments, hormis ceux qui étaient énumérés sur la liste des produits sociaux que nous avon publiée dans le PHAREV 13.

Elles sont calculées de la façon suivante :

- Taxe statistique à taux unique, calculée sur la valeur CAF (coût-assurance-frêt) : 3 % (T.S.)
- I.C.A.C. (taxe sur le chiffre d'affaires) : I3,5 % (les sérums et vaccins de l'Institut Pasteur sont totalement exemptés).

Ainsi, sur un médicament dont la valeur à l'entrée au Sénégal est IOO frs, la taxe s'élève à :

- T.S. (= 3 F) + D F (= IOfrs) = I3 frs
- Taxe forfaitaire : 22 % de (C.A.F. + TS + DF) = 22 % de II3 F = 23 frs
- T.G.A. = I3,5 % de (C.A.F. + T.S. + D.F. + T.F.) = I3,5 % de I36 = I9,36

Donc taxe globale = 3 + IO + 23 + I9,36 = 56 F

Au total 56 % de la valeur CAF et 6I % pour les produits hors marché Commun.

Depuis l'année I977, un processus de détaxe a été entrepris. Une première tranche de 33 % a déjà été appliquée ; malgré un certain retard pris dans le programme (la taxe O était prévue pour I978), la deuxième tranche de 33 % de détaxe devrait bientôt être appliquée.

4) Un contrôle qualitatif des produits d'importation devrait sous peu être mis en place au Sénégal : un devis pour la création d'un laboratoire de contrôle à la Faculté de Médecine et de Pharmacie est prêt, mais sa réalisation n'a pas commencé. Le rôle d'un tel laboratoire serait de contrôler les médicaments importés de l'étranger et ceux fabriqués sur place.

B) Le circuit pharmaceutique public

I) Budget pharmacie au sein du Budget Santé

Nous publions ci-dessous les données relatives au Budget Pharmacie, et aux différents secteurs qui sont concernés, pour les dernières années. Les sources de ces documents sont :

- La thèse de M. LOUHOUDI Tayebi, I976 "Contribution à l'étude de la consommation médicamenteuse au Sénégal"
- Le Budget général du Ministère de la Santé Publique du Sénégal", année financière I977-I978.

a - Part du Budget Santé dans le budget Général :

- en I963-64, les crédits affectés à la Santé Publique et aux Affaires Sociales se chiffraient à 2.806.755 frs, soit 9 % du budget national
- en I976, sur un budget général de 96 milliards de frs CFA 5.067.I86.000, soit 5,3 % pour la santé Publique dont :
  - 3.596.775.000 pour la Santé,
  - I.258.02I.000 pour le matériel,
  - 2I2.390.000 pour des affectations particulières.

b - Répartition des crédits alloués en 73 et 74 aux hôpitaux et services centraux par le Service Central de la Pharmacie. Sont également consignés les crédits prévus pour I976 ; on note une importante augmentation portant notamment sur le matériel, et les secteurs endémies et épidémies - Ceci est consigné dans le Tableau n° I.

Rubriques	Crédits I974	Crédits I975	Crédits prévus I976
Régions médicales	I05.000.000	I00.000.000	II9.900.000
Service d'Hygiène	I0.800.000	8.820.000	I2.000.000
Epidémies	500.000	500.000	2.000.000
Secteurs spéciaux (Endémies)	2.500.000	2.I07.000	4.000.000
Centres PMI de Médina et des Départements	I0.000.000	I0.000.000	I4.000.000
Matériel technique et réparations	I0.275.000	I0.275.000	25.000.000
	I38.275.000	I3I.702.000	I76.900.000
Hôpitaux et Services centraux	-	300.687.000	340.000.000

TABLEAU N° 2

SERVICES	Crédits alloués en I973	Crédits alloués en I974
Hôpital A. Le Dantec	II6.000.000	II8.000.000
Centre Hospitalier de Fann	53.500.000	53.400.000
Hôpital Annexe Thiaroye	4.000.000	4.500.000
Institut d'Hygiène	I6.000.000	I7.000.000
Centre Médico des Fonctionnaires	I.000.000	I.000.000
Laboratoire de SOR (St-Louis)	2.000.000	2.000.000
Hôpital J.L. de Diourbel	9.300.000	I2.300.000
Hôpital Régional de Kaolack	I7.000.000	I8.000.000
Centre de Transfusion Sanguine	6.400.000	6.400.000
Hôpital Régional de St. Louis	28.000.000	29.000.000
Hôpital Régional de Tambacounda	3.500.000	4.000.000
Hôpital Régional de Ziguinchor	7.500.000	8.200.000
Formation Principale de Ziguinchor	7.000.000	7.700.000
Hôpital Régional de Thiès	7.000.000	7.700.000
Soins aux Tuberculeux	6.000.000	8.000.000
Maternité de Thiès	2.000.000	2.000.000
Urgences	6.082.000	6.082.000
	292.282.000	307.282.000

Crédits alloués I973/74 = 307.282.000

" " I972/73 = 292.282.000

Augmentation I5.000.000

TABLEAU N° 3

Répartition des crédits alloués par le Service Central de la pharmacie aux Régions (en dehors des hôpitaux Régionaux) en 73/74, ces crédits couvrent les dépenses en médicaments, pansements et matériel médico-chirurgical léger.

REGIONS MEDICALES	CREDITS A ALLOUES au titre de 1973/74
Région du Cap-Vert	
C.M. = 6	
P.S. = 5	
Centre Hospitalier de Rufisque	I.000.000
Polyclinique de Rufisque	700.000
Dispensaire AMA Rufisque	I.000.000
P.S. de Rufisque	I.100.000
Dispensaire de Bel-Air	I.150.000
Dispensaire de Pikine	2.050.000
Région du Sine-Saloum	
C.M. = 9	
P.S. = 59	
Dispensaire de Kaolack	2.200.000
Postes Secondaires de Kaolack = I2	I.800.000
Circonscription Médicale de Fatick	I.500.000
Postes Secondaires de Fatick = II	I.600.000
Formations Principales de Sokone	I.000.000
P.S. de Sokone = 5	900.000
Formations Principales de Koungheul	900.000
Postes Secondaires de Koungheul = 3	500.000

C.M. = Centre Médical

P.S. = Poste de Santé

REGIONS MEDICALES	CREDITS A ALLOUER au titre de 1973/74
REPORT...	I7.400.000
Circonscription Médicale de Nioro du Rip	
Postes Secondaires de Nioro du Rip = 9	I.600.000
C.M. de Foundiougne	I.600.000
P.S. de Foundiougne = 3	I.000.000
Circonscription Médicale de Gossas	500.000
Postes Secondaires de Gossas = 7	I.500.000
C.M. de Kaffrine	I.I00.000
Postes Secondaires de Kaffrine	I.600.000
C.M. de Guinguinéo	I.600.000
	700.000
Région de Thiès	
C.M. = 8	
P.S. = 3I	
Circonscription Médicale de Thiès	
Postes Secondaires de Thiès = 9	I.I00.000
Circonscription Médicale de MBour	
Postes Secondaires de MBour = 6	2.500.000
Secteur de Joal	900.000
Postes Secondaires de Joal = 3	I.600.000
C.M. de Khombole	400.000
Postes Secondaires de Khombole = 4	I.600.000
C.M. de Mékhé	600.000
Postes Secondaires de Mékhé	I.600.000
Secteur de Tivaouane	300.000
Postes Secondaires de Tivaouane = 6	I.500.000
Postes Secondaires de Cayar	700.000
P.S. de Thiadiaye	600.000
	600.000

REGIONS MEDICALES		CREDITS A ALLOUER au titre de 1973/74
REPORT.....		42.600.000
Région du Sénégal Oriental		
C.M. = 3		
P.S. = 23		
C.M. de Tambaccunda		2.000.000
Postes Secondaires de Tamba	= 6	
Circonscription Médicale de Bakel		I.000.000
P.S. de Bakel	= 8	I.000.000
C.M. de Kédougou		I.000.000
P.S. de Kédougou	= 7	I.000.000
Région de Casamance		
C.M. = 6		
P.S. = 54		
Dispensaire de Santiaba		I.400.000
P.S. de Santhiaba		2.I00.000
Secteur Médical d'Oussouye		600.000
P.S. d'Oussouye	= 7	I.200.000
C.M. de Bignona		2.500.000
P.S. de Bignona	= I7	2.000.000
C.M. de Séchiou		2.000.000
P.S. de Séchiou	= 8	I.400.000
C.M. de Kolda		I.700.000
P.S. de Kolda	= 6	I.I00.000
C.M. de Vélingara		I.I00.000
P.S. de Vélingara	= 3	600.000
Région de Diourbel		
C.M. = 5		
P.S. = 29		
C.M. de Diourbel		4.200.000
P.S. de Diourbel		I.300.000
C.M. de Bambey		800.000
Postes Secondaires de Bambey	= 5	I.I00.000

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REGIONS MEDICALES		CREDITS A ALLOUER au titre de I973/74
C.M. de Mbacké		800.000
Postes Secondaires de Mbacké	= 5	I.200.000
C.M. de Linguère		I.I00.000
P.S. de Linguère	= 7	I.400.000
C.M. de Kébémer		800.000
Postes Secondaires de Kébémer	= 5	I.200.000
		80.300.000
Magasin du Service de Santé de StLouis		I7.700.000
		98.000.000
PROVISIONS		
Transports médicaments		I.000.000
Dépenses de médicaments		
Imprévus		I.000.000
		I00.000.000

Dakar, le 22 Décembre I973

Les documents présentés ci-dessous reproduisent certains éléments du chapitre 542 du budget du Ministère de la Santé Publique et de l'Action Sociale, pour l'année I977/78, et les prévisions pour I978/79.

TABLEAU N°. 4

	I977/78	I978/79
Art. 8570 Médicaments des Régions Médicales	I24.I05.000	
Art. 8580 Médicaments pour l'Institut d'Hygiène et de Phtisiologie	I8.000.000	35.250.000
Art. 8600 Hygiène et prophylaxie du Cap-Vert vaccins, médicaments	7.486.000	7.486.000
Art. 8630 Insecticides, vaccins, matériel technique	8.820.000	
Art. 8651 Lutte contra grandes endémies, matériel, médicaments etc... (sur un budget de II.68I.000)	300.000	
Art. 866I Lutte contre les endémies	500.000	
Art. 8662 Campagne de masse	I5.67I.000	
Art. 8663 Médicaments des secteurs spéciaux de la lutte contre les grandes endémies	2.I07.000	
Médicaments, matériel médical du Centre PMI Dakar	I0.000.000	
Centre PMI départements (divers)	3.500.000	I5.000.000

TABLEAU N° 5

Budget Hôpitaux Publics

	Budget général I977/78	Médic. vaccin mat. méd-chir I977/78	Méd. Vac. Mat. médic. chir. I978/79
Hôpital Le Dantec, Dakar	35I.800.000	I90.000.000	269.000.000
Centre Hospitalier de Fann	I65.736.000	80.600.000	88.600.000
Hôpital de Saint-Louis	97.I70.000	45.000.000	45.000.000
Hôpital de Kaolack	8I.879.000	32.000.000	33.500.000
Hôpital de Thiaroye	36.098.000	3I.098.000	
Hôpital de Diourbel	64.32I.000	I5.300.000	32.000.000
Hôpital de Ziguinchor	29.770.000	I3.000.000	I6.000.000
Pharmacie d'Approvt. Dakar-Hann	2.800.000		
Pharmacie d'Approvt. St-Louis	500.000		
Centre National de Transfusion Sanguine - Dakar	24.695.000	6.500.000	6.500.000
Etablissements de santé (Postes de Santé + C.M. sauf C.V.)		44.I82.000	44.I82.000
Camp pénal de Koutal (internement des lépreux et délinquant	I4.824.000		
Hôpital de Ourossogui	70.200.000	I8.000.000	I8.000.000
Hôpital de Ndioum	52.050.000	I4.500.000	I4.500.000

2 - Commentaires

- De ces chiffres, nous pouvons d'emblée tirer quelques observations très simples.

a - L'augmentation des crédits alloués au fil des années aux centres hospitaliers est importante pour certains secteurs entre I977/78 et I978/79.

Exemple : Hôpital Le Dantec

73/74	74/75	77/78	78/79
II6.000.000	II8.000.000	I90.000.000	269.000.000

ou, moins spectaculaire, Fann.

53.500.000	53.400.000	80.600.000	88.600.000

alors quelle était infime entre I973 et I974.

La répartition très inégale en médicaments et subventions entre les agglomérations urbaines et le milieu rural.

En I974, l'agglomération Dakar-Thiès-St-Louis qui représente 25% de la population du Sénégal bénéficiait de plus de 60 % du budget médical (239.650.000 frs).

b - Comparaison entre les différents secteurs

. L'analyse des données de I978 et du tableau n° 5 montre la stagnation dans certains domaines, pourtant fondamentaux.

Exemples	I965	I977	Evolution
P.M.I. Dakar	I0.000.000	I0.000.000	———
P.M.I. départements	I2.500.000	3.500.000	

Le secteur P.M.I., déjà défavorisé dans la région dakaroise, a vu ses moyens largement diminuer dans les autres régions.

TABLEAU N° 6

Rappel de ces mêmes données il y a I2 ans.

	Exercice I965	Exercice I966	Exercice I967
Régions Médicales	I36.000.000	I36.000.000	II0.000.000
Service d'Hygiène des Régions	I4.000.000	I4.000.000	I4.000.000
Lutte contre les épidémies	I.500.000	I.500.000	I.500.000
Médecine de masse	26.000.000	30.000.000	I0.000.000
Lutte contre les endémies	6.000.000	6.000.000	400.000
P.M.I. (Dakar-Médina)	I0.000.000	8.000.000	8.000.000
P.M.I. (Départements)	I2.500.000	I2.500.000	5.700.000
Hôpitaux du Sénégal	270.000.000	257.830.000	207.000.000
T O T A L =	480.500.000	465.930.000	370.200.000

(D'après Tayebi LOUHOUDI).

• Enfin, le déséquilibre important qui existe entre l'approvisionnement en médicaments des hôpitaux et celui des dispensaires : ainsi en 73/74

307.202.000 frs étaient destinés aux hôpitaux

I00.000.000 frs aux dispensaires.

Pratiquement, il en résulte une situation sanitaire critique dans de nombreux postes ruraux.

c - Prenons l'exemple extrême du poste de santé de Fongo Lembi, département de Kédougou, Sénégal Oriental, aux frontières de Guinée, couvrant une population de plusieurs milliers d'habitants.

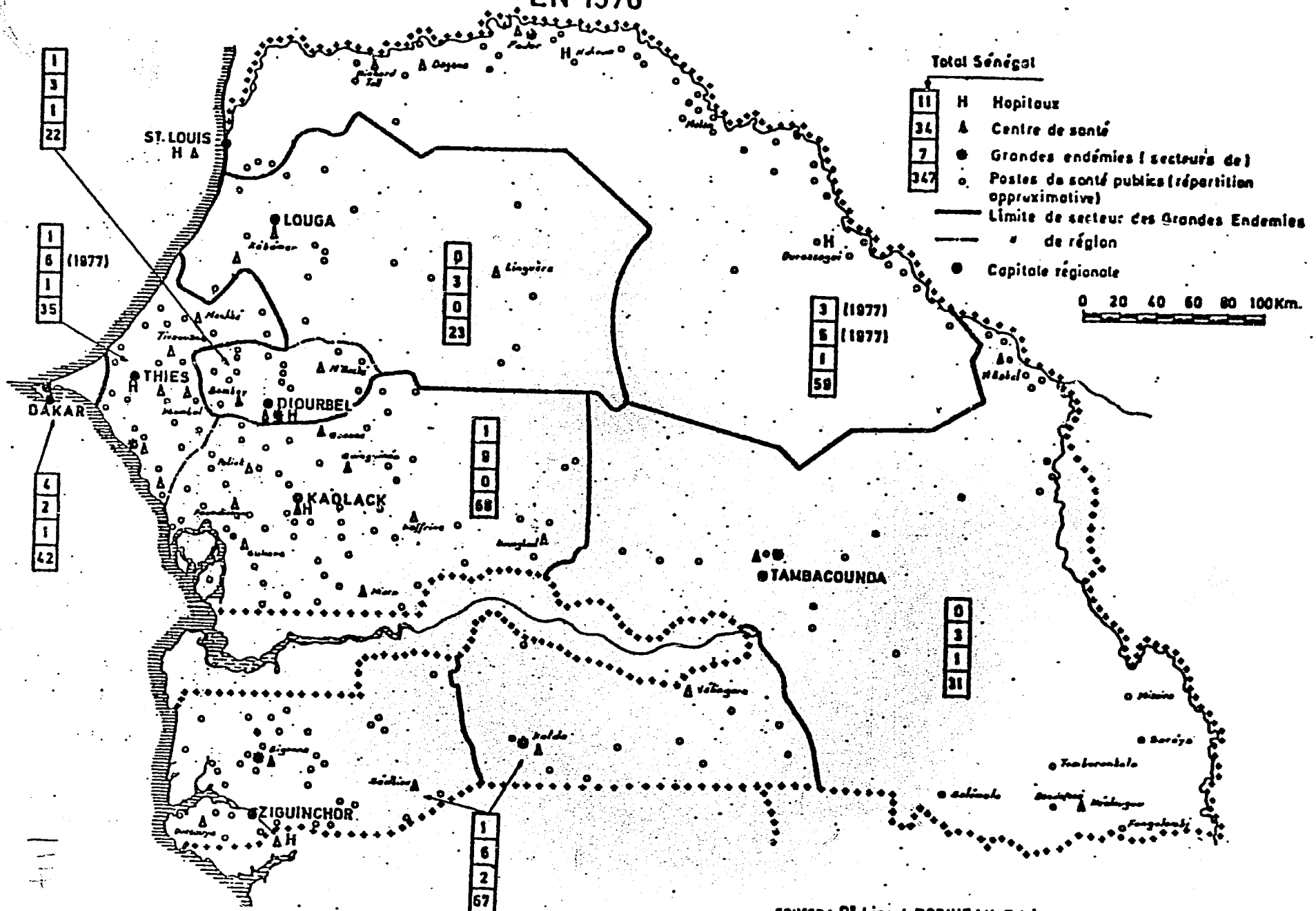
La carte ci-contre "Infrastructures sanitaires au Sénégal en I976" (Dr. L. ROBINEAU ENDA) montre tout d'abord la disparité de densité de l'infrastructure sanitaire entre les différentes régions, et notamment la pauvreté en dispensaires du Sénégal Oriental (limité grossièrement au Nord-Ouest par deux lignes allant de Tambacounda à Bakel et Tambacounda à Kédougou au Sud-Est).

Les fournitures pharmaceutiques qui arrivent à Fongo Lembi viennent de la Pharmapro de Dakar, qui envoie une commande groupée pour la région à l'hôpital de Tambacounda. De Tambacounda, des médicaments sont répartis entre plusieurs centres de santé départementaux.

A Kédougou, le médecin-chef doit approvisionner son propre dispensaire et 9 postes de santé (Salemata, Bandafassi, Sareya, Fongo Lembi, Tomborokoso, Missira, Dindefelo, Kossanto).

Ainsi, en décembre I977, l'infirmier de Fongo Lembi ne se trouvait-il plus en possession que de quelques comprimés de nivaquine et d'aspirine, d'une ou deux ampoules d'un million d'unités de pénicilline, de quelques compresses.

INFRASTRUCTURES SANITAIRES AU SENEGAL
EN 1976



source : Dr Lionel ROBINEAU Environnement Africain
n° hors-série Juin 1978

La dernière livraison avait eu lieu trois mois auparavant, et, au fur-et-à-mesure des tris son propre lot avait été réduit, pour les médicaments essentiels, à une ou deux boîtes de I.000 comprimées de nivaquine, 2 boîtes d'aspirine et de sulfaguanidine, 40 millions de pénicilline représentant 4 à IO traitements complets (un traitement anti-infectieux minimum et efficace nécessite en moyenne pour un adulte deux injections quotidiennes de la dose d'I M. de pénicilline pendant 5 jours).

Voici donc quelques chiffres illustrant l'état de dénuement au bout de la chaîne de distribution.

Enfin, reste le problème du détournement des médicaments publics à des fins privées qui s'effectue à différents niveaux de la chaîne de transport et de distribution. On retrouve ces produits dans les marchés, dans les dépôts pharmaceutiques, ailleurs... avec des indications bien souvent fantaisistes.

Tout ceci anticipe légèrement sur le chapitre suivant : la distribution.

C - Les organismes de distribution

I) Publics

a - L'exemple de Fann : demande et réception des médicaments dans un hôpital d'Etat.

Prenons, d'abord, le problème de distribution à l'envers. Comment un hôpital peut-il se fournir en médicaments ? Le circuit classique demande réception de médicaments nous a été exposé dans ses grandes lignes par le Docteur Badiane, ancien pharmacien-chef de l'hôpital de Fann.

"... Le budget est réparti entre les médecins-chefs des différents services en fonction du nombre de lits et du coût clinique (par exemple, il y a un gros budget pour les maladies infectieuses, car tous les malades de l'intérieur arrivent à Fann).

A partir du budget partiel qui leur est alloué, les médecins-chefs font la commande. Il y a donc une nomenclature hospitalière plus des produits "hors nomenclature" qui sont des "extras" pour lesquels on demande une facture au fournisseur, le tout en s'arrangeant pour ne pas être en dépassement.

A la pharmacie tout est regroupé, le rapport global de présentation de la commande est transmis à l'Inspecteur des Pharmacies qui l'envoie au pharmacien-chef d'approvisionnement, celui-ci rassemble toutes les commandes qu'il passe globalement et répartit à leur arrivée. Pratiquement, il arrive que tel ou tel fabricant n'exécute pas la commande car certaines dettes ne sont pas encore réglées (on s'adresse directement à eux, et on ne passe pas par les grossistes que pour les urgences).

Il arrive alors parfois que les pharmaciens ne soient servis qu'à 60 %, si des laboratoires n'ont pas voulu livrer à cause du retard de paiement. Il faut alors s'approvisionner chez les grossistes, alors que l'argent est déjà engagé ailleurs..."

b - <u>organisation de la Pharmapro</u>

La Pharmacie Nationale d'Approvisionnement, ou Direction des Pharmacies : Pharmapro tient le rôle de grossiste distributeur de l'Etat ; elle ravitaille en médicaments et matériel toutes les formations publiques hôpitaux et centres de santé. Ancienne Pharmacie Fédérale installée à Rufisque, elle depuis 1953 à Dakar-Hann. 33 personnes travaillent dans l'établissement dirigé par un pharmacien.

<u>Budget</u>

Hormis le budget de fonctionnement (5.428.700 frs CFA), le fond annuel de roulement pour 1977-78 est de 800 millions de frs CFA. Cette somme se décompose en

450 millions (fonds de roulement, fictif, inutilisable)

350 millions (découvert utilisé pour toutes les opérations).

Les 800 millions, sur un compte spécial du Trésor, sont avancés par l'Etat, et lui sont remboursés au fur-et-à-mesure que les formations sanitaires payent les fournitures demandées avec leurs crédits de fonctionnement.

Le fonds de roulement permet la constitution d'un stock de réserve suffisant pour faire face aux à-coups de la demande, avant même l'ouverture de l'exercice budgétaire, ce que ne permettraient pas de simples crédits budgétaires.

Le budget I978-79 est comparable à l'année précédente.

• Fournitures - Fournisseurs

La priorité est donnée à la SIPOA (Société Industrielle Pharmaceutique de l'Ouest Africain) dont nous détaillons plus loin le fonctionnement). Quand celle-ci ne peut fournir, des appels d'offres sont faits aux laboratoires par le biais des ambassades.

Selon M. NDIAYE, (I) 26 % des achats de médicaments de la Pharmapro sont faits à la SIPOA, ce qui concerne 37 % de la production de la SIPOA soit I48 millions de francs.

L'achat de médicaments couvre 70 % du budget, les 30 % restant étant consacrés au matériel chirurgical.

Au total donc 75 % des achats proviennent de l'étranger, et en majorité de fournisseurs français.

Des problèmes matériels, de manque de personnel, d'organisation, entraînent des retards dans l'approvisionnement puis dans l'acheminement des produits, ce dont se plaignent les centres régionaux.

• Vente des produits

Les établissements et organismes suivants achètent les médicaments à la PHARMAPRO à leur prix de revient :

(I) NDIAYE (M) "Les industries pharmaceutiques à Dakar" Maîtrise de Géographie 77-78.

- Hôpitaux
- Dispensaires publics (centres médicaux et postes de santé)
- Volontaires du Progrès
- Dispensaires catholiques
- Peace Corps
- Maisons Familiales de Thiès
- Projet Belgo-Sénégalais
- Projet Santé de Gossas
- Communautés rurales
- autres associations de bienfaisance reconnues
- organismes parapublics divers.

Les pharmacies privées achètent à la PHARMAPRO les médicaments aux prix de revient majoré de 25 %.

- Prix des médicaments

Nous donnons ci-dessous pour exemple, les prix à l'unité des produits pharmaceutiques les plus couramment vendus : (I)

TABLEAU N° 7

PRIX DES MEDICAMENTS LES PLUS COURANTS (PHARMAPRO 1978)

Nom	Quantité	F. C.F.A.
Aspirine	I kg	I.IOO
Nivaquine	I cp	I,80
Flavoquine	I cp	6
Pénicilline	I A. IO^6	29,60
Extencilline	600.000 U.	50
"	I.200.000 U.	89
Ganidan	I.000 Cp.	I.754
Quinoforme	0,25	34,30
Pomade Aurécomycine I%	I tube	48
" " 3%	I "	88

(I) Les prix changent d'un jour à l'autre, sauf ceux de SIPOA fixés pour l'année.

Nom	Quantité	F. CFA
Quinimax	0,20	28
"	0,10	19
Sultirène	1 cp	2
Argyrol	1 litre	715
Gardénal	0,20	20
"	0,04	15,50
Fumafer	1 cp	5
Heptamyl	5 cc	45
Hexacycline	1 fl	610
Buscopan	1 cp.	8
"	1 A.	50
Direxiode	1 cp.	5,50
Eurax	1 tube	223
Solucamphre	2 cc	4,69
	5 cc	8,21
Gluconate Ca	10 cc	6
Glucosé Iso	500 cc	146

Ces quelques chiffres donnent une idée du prix de vente des médicaments courants.

Nous envisageons le système de fixation de ces prix, et la comparaison avec les prix au public pratiqués dans le privé, au chapitre "Prix de vente des médicaments" : IC.

Le choix des médicaments dépend, bien entendu, de la commission des visas.

Une liste de 3.025 produits disponibles a été établie à la PHARMAPRO.

c - La pharmacie de l'hôpital principal à Dakar est autonome. L'Hôpital Principal est un service public sénégalais géré par la France en vertu d'accords franco-sénégalais. Sa pharmacie le ravitaille en médicaments et matériel, l'ensemble représentant 162 millions peur 1977. Sur cette somme, 75 millions sont affectés à l'achat de médicaments, dont 69,5 millions (93 %) s'effectuent à l'extérieur.

Sur les 5,5 millions d'achats intérieurs, 2,5 millions sont des commandes à la SIPOA et 3 millions aux grossistes, sans passer par la PHARMAPRO

Ses actionnaires sont, depuis I973, pour une part majoritaire, des pharmaciens installés au Sénégal, dont la plupart sont sénégalais ; le reste du capital étant détenu par des sociétés françaises.

Son capital est de I48.400.000 frs.

Depuis I973, il y a eu de grands changements dans la politique de l'entreprise : relâchement des relations avec les sociétés LABOREX installées ailleurs en Afrique, modernisation des moyens, de la gestion faite sur ordinateur.

Les fournisseurs sont à 95 % extérieurs dont 90 % sont les filiales françaises de laboratoires pharmaceutiques, tels que SPECIA ROUSSEL, ROCHE, BRISTOL, la SIPOA ne représentant qu'environ 4 %.

Le chiffre d'affaires I976-77 a été de I,4I0 milliard de francs, dont 80 % pour la pharmacie et 20 % pour la parfumerie.

b - UPIA

L'Union Pharmaceutique Inter-Africaine, créée en I957, au capital de 69.33I.750 frs, est une société dont 8I % des actions sont détenues par des pharmaciens sénégalais. Comme LABOREX, l'UPIA se ravitaille en quasi-totalité en France.

Son chiffre d'affaires est en augmentation progressive depuis I974, atteignant I.600 milliards de francs en I977.

c - SENEPHARMA

La Société Pharmaceutique Sénégalaise a été créée en I975 avec un capital de 28,5 millions de francs CFA (porté en mai 76 à 43,5 millions).

Elle est fonctionnelle depuis Mai 76.

Tous les actionnaires sont sénégalais et pharmaciens, à part quelques médecins et membres du personnel paramédical.

SENEPHARMA importe 90 % de ses produits d'Europe de l'Ouest, et surtout de France, les I0 % restants proviennent de la SIPOA, mais aussi des sociétés Valdafrique, DICOPA. Le chiffre d'affaires "prévu" pour I977-78 est de I à I,2 milliard.

d - AU TOTAL

Les trois sociétés de vente en gros des médicaments, toutes installées à Dakar sont les seules à avoir le droit de commander, dédouaner, fournir les officines et hôpitaux. Elles ont la même fonction qui est de recevoir des médicaments conditionnés et contrôlés par le fabricant, sur lesquels est apposé le visa.

En théorie, elles sont très différentes : SENEPHARMA a été conçu pour briser le monopole détenu par LABOREX et UPIA, mais déjà certains souhaitent la création d'un quatrième larron pour "brouiller les acrtes". En fait, si l'on peut constater que l'apport du capital de LABOREX est varié, que celui de l'UPIA est entièrement détenu par des pharmaciens, et à 8I % sénégalais, et celui de la SENEPHARMA IOO % sénégalais, on ne trouve, en dehors de la différence de composition du capital, que peu d'originalité chez chacun des 3 grossistes. Tous s'approvisionnent pour 90 % à 95 % à l'étranger, ont le même réseau de distribution, les mêmes méthodes, des chiffres d'affaires du même ordre.

e - Le système de fourniture

Aux officine est le même que le système français ; les produits sont fournis :

- à crédit payables par traite,
- ou au comptant (avec dans ce cas une "ristourne" qui est passée de 5 % à 3 % en I974.

f - Les moyens de pression exercés sur les pharmaciens par les laboratoires et les grossistes, relèvent surtout de la pratique des "unités gratuites" distribuées pour chaque commande passée. Ci-dessous nous reproduisons un passage à la liste distribuée par un grossiste aux pharmaciens et officines où sont indiquées pour chaque produit les "U.G.".

LISTE DES PRODUITS AVEC UNITES GRATUITES AU I7.OI.I977

d - AU TOTAL

Les trois sociétés de vente en gros des médicaments, toutes installées à Dakar sont les seules à avoir le droit de commander, dédouaner, fournir les officines et hôpitaux. Elles ont la même fonction qui est de recevoir des médicaments conditionnés et contrôlés par le fabricant, sur lesquels est apposé le visa.

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LISTE DES PRODUITS AVEC UNITES GRATUITES AU I7.OI.I977

- 2 à Mbour,
- 4 à Kaolack,
- 2 à Diourbel,
- 3 à Saint-Louis,
- I à Bignona,
- 2 à Ziguinchor,
- 5 à Thiès,
- I à Kolda,
- I à Tambacounda,
- I à Mbacké,
- I à Louga,

57 pharmacies, soit 76 % se trouvent dans l'agglomération urbaine Dakar-Thiès, ce qui représente une énorme concentration de possibilités pharmaceutiques sur une faible surface ; cela fait une pharmacie pour I9.000 habitants dans la région du Cap-Vert. Les 4.200.000 habitants du reste du pays sont désservis par (75-52) = 23 pharmacies, soit en moyenne une pour I82.000 habitants.

Le tableau suivant indique la densité de pharmacies par régions et le nombre de pharmacies par habitant :

TABLEAU N° 8

Régions	Villes	Nombre de pharmacies	Population	Densité d'habitant/pharmacie
Cap-Vert	Dakar-Pikine-Guédiawaye-Rufisque	52	984.666	I8.936
Thiès	Thiès/Mbour	7	698.994	99.856
Sine-Saloum	Kaolack	4	I.007.736	25I.934
Diourbel	Diourbel/Mbacké	3	425.II3	I4I.704

NOM DU PRODUIT	QTE + U.G.	QTE + U.G.
SALVATIS POUDRE	IO + 2	
SERORHINOL GOUTTES NASALES	I5 + I	
SOLUCETYL COMPRIMES EFFERVESCENTES	I5 + I	
SPECILLINE POMMADE I5 G.	I5 + I	
SPECILLINE COMP. 200.000 U.I.	IO + I	IOO + 20
STILLA COLLYRE	I5 + I	
STIMUTONYL 28 AMP. BUV. ADULTES	29 + I	
STIMUTONYL 28 AMP. BUV. ENFANTS	29 + I	
STREPTOMYCINE I G 4 ML SPECIA.	IO + I	IOO + 20
STREPTOMYCINE I G 4 ml SARBACH	IO + I	IOO + 20
STREPTO PENI O,5O G/I M SARBACH	IO + I	IOO + 20
STREPTO PENI I G/I M. SARBACH	IO + I	IOO + 20
STREPTO BIPENI I G I MILLION	IO + I	IOO + 20
STRONGENOL AMPOULES BUVABLES	I5 + I	

D - Les pharmacies privées et les dépôts pharmaceutiques

I - Les pharmacies privées

a) Nombre et répartition des officines

Il y a actuellement 75 pharmacies d'officines ouvertes au Sénégal dont :

- 47 à Dakar-centre,
- 3 à Pikine-Guédiawaye,
- 2 à Rufisque,

Casamance	Ziguinchor/Bignona Kolda	4	736.527	I84.I3I
Région du Fleuve	Saint-Louis	3	528.437	I76.I45
Région de Louga	Louga	I	4I7.737	4I7.737
Sénégal Oriental	Tambacounda	I	286.I49	286.I48
TOTAL (I)		75	5.085.388	72.648

Là encore, la disparité par région est évidente ; la région de Louga, avec une pharmacie pour 4I7.737 habitants et celle du Sénégal Oriental sont les plus défavorisées.

Que ce soit dans les domaines public ou privé, l'inégalité entre région est flagrante.

b) Les pharmaciens

Le système des études est le même qu'en France. Des étudiants viennent à Dakar de plusieurs pays d'Afrique de l'Ouest. Ainsi la promotion I978 de la Faculté de Pharmacie ne comprend que 5 Sénégalais, les autres venant du Bénin, du Libéria, de la Guinée, du Togo etc...

A Dakar, sur 47 pharmaciens, 4 sont français, 5 Libanais.

. Conditions de création et d'exploitation

Pour ouvrir une pharmacie à l'heure actuelle, il faut être sénégalais. (Avant I973, la condition requise était un antécédent de cinq ans de service au Sénégal). S'il existe encore aujourd'hui à Dakar deux pharmacies créées dans la deuxième moitié du I9ème siècle, nombreuses sont les créations récentes.

I) D'après H.N. NDIAYE, op. cit. (Nos données en diffèrent quelque peu étant plus récentes. La plupart nous ont été fournies par Mr. FAYEMI, ancien pharmacien-chef à St-Loui . Le nombre des pharmacies de Grand-Dakar est passé de 47 à 5I depuis I an.

Pour qu'une officine soit exploitée régulièrement, son titulaire doit avoir fait la demande d'enregistrement au Ministère de la Santé Publique, sous le timbre et l'Inspection des Pharmacies. L'enregistrement est fait sous forme d'un arrêté ministériel (I).

. Fonctionnement des pharmacies

Les textes en vigueur prévoient que le pharmacien exerce personnellement sa profession et ne peut s'absenter de son établissement.

Le personnel (vendeurs, préparateurs, coursiers) comprend de 3 à 6 personnes en moyenne.

Les vendeurs sont recrutés au niveau du certificat d'études, parfois du Brevet. Leur formation se fait sur place.

Actuellement, il existe un projet de création du diplôme de préparateur en pharmacie.

. Contrôle des pharmacies

Le Conseil de l'Ordre consent une aide, ou une caution à une aide bancaire, à tout jeune pharmacien désirant s'installer. Si la gestion est mauvaise, c'est le Conseil qui la prendra en charge.

Il est présent dans toutes les instances où les pharmaciens sont représentés.

L'Inspection des pharmacies publiques et privées, attachée au Ministère de la Santé, contrôle sur le plan législatif et déontologique le fonctionnement des pharmacies.

2 - Les dépôts pharmaceutiques

De taille variable, il en existe I72 actuellement sur le territoire du Sénégal. Ces dépôts sont tenus par des commerçants qui sont rarement qualifiés en quoi que ce soit dans le domaine pharmaceutique.

(I) Source : circulaire n° 00562 de l'Inspection des Pharmacies, avril I978

De par leur nombre, ces dépôts seraient censés toucher une grande partie de la population ; ils sont approvisionnés par les pharmacies d'officine et pratiquent les mêmes prix qu'elles, soit des prix inabordables pour les populations moyennes urbaines et rurales.

3 - Rôle effectif des pharmaciens dans le conseil thérapeutique

Plus encore que dans les pays occidentaux, le pharmacien africain se voit fréquemment sollicité pour un conseil thérapeutique, par des malades ou des parents de malade craignant d'aller consulter un médecin car ne pouvant l'assumer financièrement ; ce peut être aussi en complément d'une visite chez le médecin ou chez le guérisseur.

Après avoir passé plusieurs journées dans des officines, nous avons été frappés par la fréquence des demandes, la variété des réponses diagnostiques et thérapeutiques apportées par le pharmacien ou le vendeur. Ceci, à notre avis, mène à deux réflexions :

- le peu de formation du personnel de pharmacie (souvent sollicité par les malades au même titre que le pharmacien) est-il compatible avec un rôle de conseil thérapeutique avec toute l'autorité sur le malade que cela comporte ?

- L'impact évident du pharmacien sur la population par le biais du conseil thérapeutique, ne pourrait-elle être utilisée pour faire passer des notions d'hygiène, d'éducation sanitaire etc... au même titre qu'un conseil individuel sur un produit ?

4 - Les pharmaciens et la médecine traditionnelle

Ainsi que chacun le sait, les pharmacies, ici comme ailleurs, vendent, en proportions variables suivant le type d'officine, des produits de parfumerie et de toilette sophistiquées, des chewing-gum à saveur "médicale" etc... Dans certaines pharmacies, les rayons exposant ces produits sont les plus importants.

A l'opposé, il existe une ou deux pharmacies à Dakar qui font des préparations "traditionnelles". Il est évident que ceci ne peut être qu'une partie des activités, et nous avons abordé ailleurs (PHAREV I3) les problèmes de conditionnement que cela pose.

Sans nous appesantir sur ce problème qui sort du cadre que s'est proposé cette étude, nous voudrions simplement évoquer la vente, dans certaines pharmacies sénégalaises (à un prix élevé), sous des étiquettes de laboratoires diverses, des médicaments homéopathiques conditionnés en France tels que du quinqueliba... etc...

E - Le prix de vente des médicaments

Nous envisageons successivement la fixation du prix des médicaments dans le secteur public, puis privé, pour ensuite les comparer.

I - Secteur public

Le prix des médicaments à la vente aux hôpitaux, tels que nous en avons vu quelques exemples dans le chapitre consacré à la PHARMAPRO, est fixé de la façon suivante :

- Un dossier d'importation est établi par la société transitaire qui assure le transport. Pour un lot de médicaments donné, le prix total (P) comportera le prix à l'exportation du produit (p) tel qu'il est défini dans le pays d'origine, auquel s'ajoutent les taxes douanières (d) (cf. chap. IA), les frais d'entrepôt (e) et de transport (t)

$$P = p + d + e + t$$ (le tout converti en C.F.A.).

Le prix unitaire donné pour chaque produit est multiplié par un coefficient qui permet d'obtenir le prix de vente PHARMAPRO.

Soit F le montant total des facturations pour la commande (en FF) le coefficient k est égal à :

$$k = \frac{P \text{ (C.F.A.)}}{F \text{ (F.F.)}}$$

Le coefficient retenu par la PHARMAPRO est k = 80.

Prenons un exemple : un flacon d'Hexacycline vendu par le fournisseur 8,87 FF sera délivré par la PHARMAPRO au prix de 8,87 x 80 = 710F C.F.A.

2 - Secteur privé.

Les prix fixés par les pharmaciens sont calculés de façon variable suivant la catégorie de médicaments.

a) certains produits sont dits sociaux du Ministère de la Santé. Ils figurent sur une liste plusieurs fois remaniée : la dernière en date regroupe I33 produits dits "à coefficient 48" (cf. PHAREV I3 : aspects qualitifs des besoins pharmaceutiques au Sénégal.

Un manuel édité chaque année en France répertorie la liste de tous les médicaments fabriqués en France, fixe leur prix de vente à l'intérieur du territoire, et leur prix à l'exportation. Ce manuel s'intitule: le SEMPEX thérapeutique.

Les produits sociaux sont vendus au prix indiqués sur le SEMPEX, selon la conversion I P = 50 frs C.F.A.

Quand ces produits ne figurent pas sur le SEMPEX, ils sont vendus au tarif du fournisseur.

b) Les médicaments français ne se trouvant pas sur la liste des produits sociaux sont beaucoup plus nombreux : à titre d'exemple, l'un des grossistes, l'UPIA présente dans son catalogue du 23.5.78 à l'usage des pharmaciens 3.523 produits dits S.F. Si l'on ôte les I33 produits sociaux, il reste donc 2.390 produits, auxquels viennent s'ajouter I.245 produits (D.F.) de toilette, de parfumerie, ou matériel divers.

Leurs prix SEMPEX sont multipliés par un coefficient 74.

c) Les produits étrangers autres ne figurant pas sur le SEMPEX sont vendus au prix du fournisseur multiplié par le coefficient I37.

d) bénéfice des pharmaciens.

Il représente environ 30 % du prix SEMPEX (en moyenne). Il faut préciser que dans certaines pharmacies les produits de luxe (toilette, parfumerie), représentent un énorme pourcentage de la vente et assurent à eux tout seuls une grosse part des bénéfices.

Les médicaments inscrits au tableau A.B.C. comme dangereux, poisons ou toxiques subissent une majoration de 22 frs CFA/unité pour les produits non inscrits sur la liste des produits sociaux, I2 frs CFA/unité s'ils le sont. Cette somme revient au pharmacien.

Au total : les médicaments non inscrits sur la liste des produits à coefficient 48 sont vendus à des prix bien plus élevés que le prix du pays qui les exporte, ce qui est d'autant plus difficile à assumer pour la population que la moyenne des salaires est bien plus basse.

A l'opposé, les produits de la liste à coefficient 48 sont parfois vendus à perte, et de toute façon le bénéfice à la vente est faible ; rares sont les pharmacies où la demande thérapeutique d'un malade sera orientée vers un de ces produits.

En fonction des données précédentes, on peut estimer :

3 - Comparaison des prix à la vente dans les pharmacies d'officine et à la PHARMAPRO

Le tableau suivant, repris à partir de la thèse de M. NDIAYE "Les industries pharmaceutiques à Dakar", analyse les prix de trois médicaments fondamentaux, l'aspirine (antipyrétique, anti-inflammatoire), la chloroquine (antipaludéen), la tifomycine (antibiotique), à la PHARMAPRO (PNA) et en pharmacie privée (Pcie).

Produits		Présentation	Prix globaux	Prix unitaire
Chloroquine	P.N.A	6.000 cp	I0.800	I.80/comprimé
	Pcie	I.000	5.560	5.56/ "
		I00	500	5 / "
		20	I40	7 / "
Aspirine	P.N.A	I6 kg	I76 00	II00/kg
	Pcie	I kg	3.500	3500/kg
Tifomycine	P.N.A	200 cp	I.300	6,50/cpr.
	Pcie	I2 cp	384	32 /compr.

E - La production locale : la SIPOA

Il existe trois unités de production pharmaceutique au Sénégal, toutes trois rassemblées dans la région de Dakar. La plus importante est la SIPOA. L'usine Valdafrique est la plus ancienne : elle ne fabrique pas que des produits pharmaceutiques et est d'importance moindre. L'Institut Pasteur de Dakar assure une certaine production de vaccins et de sérums ; c'est donc la SIPOA qui retiendra notre attention et dont nous allons rapporter les caractéristiques principales.

I) Histoire de la création de la SIPOA

Le projet de société Industrielle Pharmaceutique de l'Ouest Africain a été conçu dès I968. En I969, le Président L.S. SENGHOR charge la SONEPI d'étudier les possibilités d'implantation d'une usine pharmaceutique pouvant fabriquer des produits et les vendre à des prix compétitifs. En effet, des chiffres de I966 montraient que le secteur public avait importé pour 700 millions de frs CFA en un an ; le secteur privé pour 500 M, soit I,200 milliard en tout.

En septembre I972, une convention est signée avec la filiale française SOFFIN du laboratoire Boehringer Ingelheim. Cette convention établit la création d'une société d'économie mixte alliant la SOFFIN et le Gouvernement sénégalais. A la création, en décembre I973, les parts de l'Etat Sénégalais étaient de 20 % contre 80 % pour la SOFFIN.

En raison de son statut, la société bénéficie d'exonération fiscale ; par ailleurs, la convention précise que l'Etat sénégalais doit lui acheter à un taux préférentiel, et que les bénéfices de la société peuvent être transférés à l'étranger.

2) Organisation de la SIPOA

Les divers services sont :

- Service laboratoire et service de contrôle
- Service médical
- Service administratif
- Service de la production.

Commentaires : Les différences de prix sont évidentes. S'il est vrai que le mode de présentation de la PHARMAPRO, par grandes quantités, permet des prix plus bas, cela n'en explique pas pour autant l'énorme marge ; chloroquine et aspirine coûtent trois fois plus cher en pharmacie, et la Tifomycine 5 fois.

Le problème se pose par exemple au niveau des villages, où l'infirmier du dispensaire, ne disposant pas de médicaments en quantité suffisante, envoie les malades les acheter au prix fort dans les dépôts pharmaceutiques.

Le pharmacien, directeur de l'usine, contrôle une équipe de 66 membres.

Le chiffre d'affaires est en augmentation, il est ainsi passé de 280 millions de frs CFA en 1975 à 400 millions en 1977.

3) Objectifs que s'était fixés la SIPOA

A sa création, la SIPOA devait répondre à un triple objectif :

- la fabrication de médicaments usuels pour les hôpitaux
- " " de produits essentiels pour les officines et les pharmacies villageoises
- la fabrication sous licence des produits les plus vendus.

le tout visant à un approvisionnement dans les meilleures conditions de prix, de qualité et de délai des collectivités publiques et privées tant au Sénégal que dans les Etats voisins.

4) Liste des produits fournis

Une liste de 100 produits finis représente la production de la SIPOA.

La plupart sont des médicaments de première nécessité : analgésiques, antipyrétiques, antibiotiques usuels, sulfamides, chloroquine, quinine, antiparasitaires intestinaux, vitamines.

Les différentes formes de présentation sont réalisées :

- ampoules (46)
- solutés massifs (17)
- solutés buvables (1)
- sirops (2)
- comprimés (27)
- gelules (8)
- pommades (2).

Enfin, il existe une liste de 15 spécialités disponibles en pharmacie selon 25 présentations (ou conditionnement) différents.

5) L'approvisionnement

a - Le service d'achat et de transit assure les opérations avec l'extérieur par l'intermédiaire de la maison-mère, la SOFFIN.

b - La matière première, à part l'eau, et, pour une certaine mesure, le cartonnage, le sucre, provient en totalité de l'extérieur.

c - Les pays exportateurs sont nombreux.

On peut citer la France, l'Allemagne, les U.S.A., la Chine, l'URSS, la Tchécoslovaquie...

Coût : En 1977, 200 millions de frs CFA ont été consacrés à l'achat de matières premières pour un budget de 400 millions, soit 50 %

6) La fabrication

Le processus de fabrication est strictement identique à celui en vigueur dans l'usine mère. L'usine comporte plusieurs ateliers : atelier des injectables, atelier pour la fabrication des comprimés et des gelules, atelier de conditionnement, laboratoire d'analyse et de contrôle des produits.

Les différentes étapes de la fabrication sont variables suivant le produit le plus vendu, les opérations qui se succèdent sont les suivantes

- Mélange du principe actif avec l'excipient
- Humidification jusqu'à obtention d'une pâte
- Granulation
- Séchage à l'étuve des granulés
- Concassage des granulés
- Lubrification
- Compression à la pastilleuse.

La dernière étape est le conditionnement.

7) La distribution des produits SIPOA

Le service d'information est assuré par un visiteur médical, qui représente simultanément les produits Boehringer Ingelheim.

La vente se fait dans une double direction : Sénégal et pays extérieurs.

Selon la mémoire de M. NDIAYE, (les industries pharmaceutiques à Dakar), la distribution se fait 50 % à l'intérieur et 50 % à l'extérieur. Il cite pour 1977 les chiffres de vente au Sénégal de 200.000.000 sur un chiffre d'affaires de 400.000.000.

Selon les informations recueillies auprès du directeur de la SIPOA, l'exportation représenterait 75 % de la production.

Au Sénégal même, les ventes sont faites environ pour les 3/4 à la PHARMAPRO, 1/4 aux grossistes, en quantité équivalente pour chacun des 3 (un tout petit pourcentage étant réservé à l'Hôpital Principal de Dakar).

8) Les problèmes auxquels se heurte la SIPOA

Nous énumérons rapidemment les diverses difficultés rencontrées dans le fonctionnement de l'usine, telles qu'elles nous ont été exposées de divers côtés, notamment par le pharmacien-chef de la SIPOA :

a - Le secteur recherches, prévu à la création de l'usine, n'a toujours pas vu le jour.

b - Un projet d'usine de pansements, refusé à la création de la SIPOA par le Gouvernement Sénégalais qui pensait le confier à un industriel national, n'a jamais été réalisé.

c - L'hostilité des pharmaciens d'officine s'est manifestée à plusieurs égards

- Nous avons déjà envisagé le "manque à gagner" des pharmaciens sur des produits qui sont pour beaucoup sur la liste des produits à coefficient 48 (cf. chap. prix de vente). Les pharmaciens se sont malgré eux ralliés à un projet visant à favoriser la prescription de produits sociaux.

- Par ailleurs, à la création de la SIPOA, les pharmaciens ont protesté car ils n'étaient pas associés au projet ; or, depuis décembre 1977, la SIPOA a procédé à une augmentation de son capital de 270 millions, le faisant passer de 60 à 330 millions, en l'ouvrant aux pharmaciens nationaux.

L'état actuel est le suivant :

- SOFFIN : 183 millions
- Etat du Sénégal : 54 millions
- Pharmaciens Sénégalais : 33 millions par action de 5000 F.

Or, de décembre 1977 à juillet 1978, aucun pharmacien n'avait encore acheté d'action.

d - L'attitude gouvernementale

Selon des informations recueillis à la SIPOA, une nouvelle législation au niveau de la Chambre de Commerce oblige les laboratoires à soumettre à autorisation préalable toute importation de médicament, pour protéger l'industrie locale : cela aboutirait à ce que tout produit pouvant être fabriqué au Sénégal n'aurait pas de concurrent étranger.

Selon le Conseiller Technique au Ministère de la Santé, aucune loi n'oblige ces laboratoires à représenter leurs produits devant la commission de contrôle (qui est en fait une commission d'agrément).

Il existe par contre une convention de durée limité destinée à protéger les produits SIPOA de la concurrence, mais elle est contournée. La protection des produits SIPOA ne s'appliquait, en fait, qu'aux produits non encore commercialisés au Sénégal avant la création de SIPOA.

e - La réticence du consommateur

Tout observateur a pu remarquer, la scène suivante se déroulant dans une pharmacie d'officine : un malade se plaignant d'un mal de tête et réclamant de l'aspirine, préfèrera l'aspirine importée à celle de la SIPOA.

Scientifiquement, la technologie semble impeccable. Mais le public n'est pas convaincu. Ainsi que nous le disions déjà dans PHAREV 13, le manque d'information au public, le peu d'enthousiasme des pharmaciens, l'indifférence hostile des médecins concourent à ce refus des consommateurs

f - Pour l'avenir

De tout cela résulte que le marché national est fermé. Les principaux client sont le Mali, la Mauritanie, le Cameroun.

Or, l'Afrique de l'Ouest représente à l'heure actuelle un marché de 110 millions de consommateurs, dont 5 millions au Sénégal ; ce pays est au quatrième rang des pays africains importateurs de produits pharmaceutiques, après le Nigéria, la Côte d'Ivoire et le Cameroun.

Ce marché potentiel devrait être en faveur d'implantation rentable d'industries locales. Or, à l'heure actuelle, plusieurs pays de l'Afrique de l'Ouest ont des projets de construction de leur propre usine pharmaceutique.

Mais ces différentes usines nationales, même si les projets ne sont pas identiques d'un pays à l'autre, ne risquent-elles pas de simplement se concurrencer sur un même marché, sans apporter de solution nouvelle aux problèmes de dépendance par rapports aux trusts multinationaux de fabrication et de recherche que nous avons exposés plus haut ?

En brève conclusion...

Quelques réflexions générales peuvent être tirées de l'analyse des structures existantes, bien que ce chapitre ne puisse être considéré isolément par rapport aux autres aspects de la consommation médicale.

On peut observer :

I) Au niveau fabrication :

Les problèmes posés par le fait que l'industrie locale ne soit pas autonome, et qu'en réalité la consommation pharmaceutique sénégalaise soit entièrement dépendante des trusts multinationaux.

2) Au niveau distribution :

La grande disparité entre les secteurs public et privé, sur le plan quantitatif (moyens disponibles) et qualitatif (ce que nous reverrons dans le Pharev I7).

L'inégalité de répartition des moyens entre les grands centres urbains et les régions éloignées, les difficultés de fonctionnement de certains postes de santé périphériques.

Les conclusions générales seront regroupées dans la rédaction finale du projet définitif PHAREV, qui tentera d'analyser l'ensemble des informations contenues dans les différents documents.

APPENDIX 4

Appendix 4

REPUBLIQUE DE CÔTE D'IVOIRE
Union - Discipline - Travail

BILAN DIAGNOSTIC

DU
MINISTERE DE LA SANTE
PUBLIQUE ET DE LA
POPULATION

1976 - 1978

EVOLUTION DU BUDGET DE FONCTIONNEMENT DU MINISTERE DE LA SANTE PUBLIQUE ET DE LA POPULATION

(1971 - 1978)

(chiffres exprimés en millions de Francs)

AN		BG	BS	BS/BG	P	M	M/ M + P
Plan quinquénnal 1971 -1975	1971	62 700	6 581	10,5 %	3 968	2 614	39,7 %
	1972	71 876	6 732	9.4 %	4 031	2 729	40,4 %
	1973	82 748	7 830.	9,4 %	4 813	3 013	38,5 %
	1974	108 800	9 544	8,8 %	5 068	3 554	37,3 %
	1975	126 800	10 469	8,2 %	6 542	3 825	37,1 %
	1976	153 700	12 338	8,0 %	7 967	4 229	34,6 %
	1977	198 300	15 664	7,8 %	9 643	5 668.	37,0 %
	1978 *	223 200	19 192	8,6 %	12 279	6 432	34.3 %

B.G. = Budget Général de Fonctionnement
B.S. = Budget de Fonctionnement du Ministère de la Santé Publique
P = Budget de Fonctionnement du Personnel
M = Budget de Fonctionnement en Matériel

* Ne tient pas compte du Budget rectificatif.

EVOLUTION DES INVESTISSEMENTS DU MINISTERE DE LA SANTE PUBLIQUE ET DE LA POPULATION

(Le BSIE de 1971 à 1978)

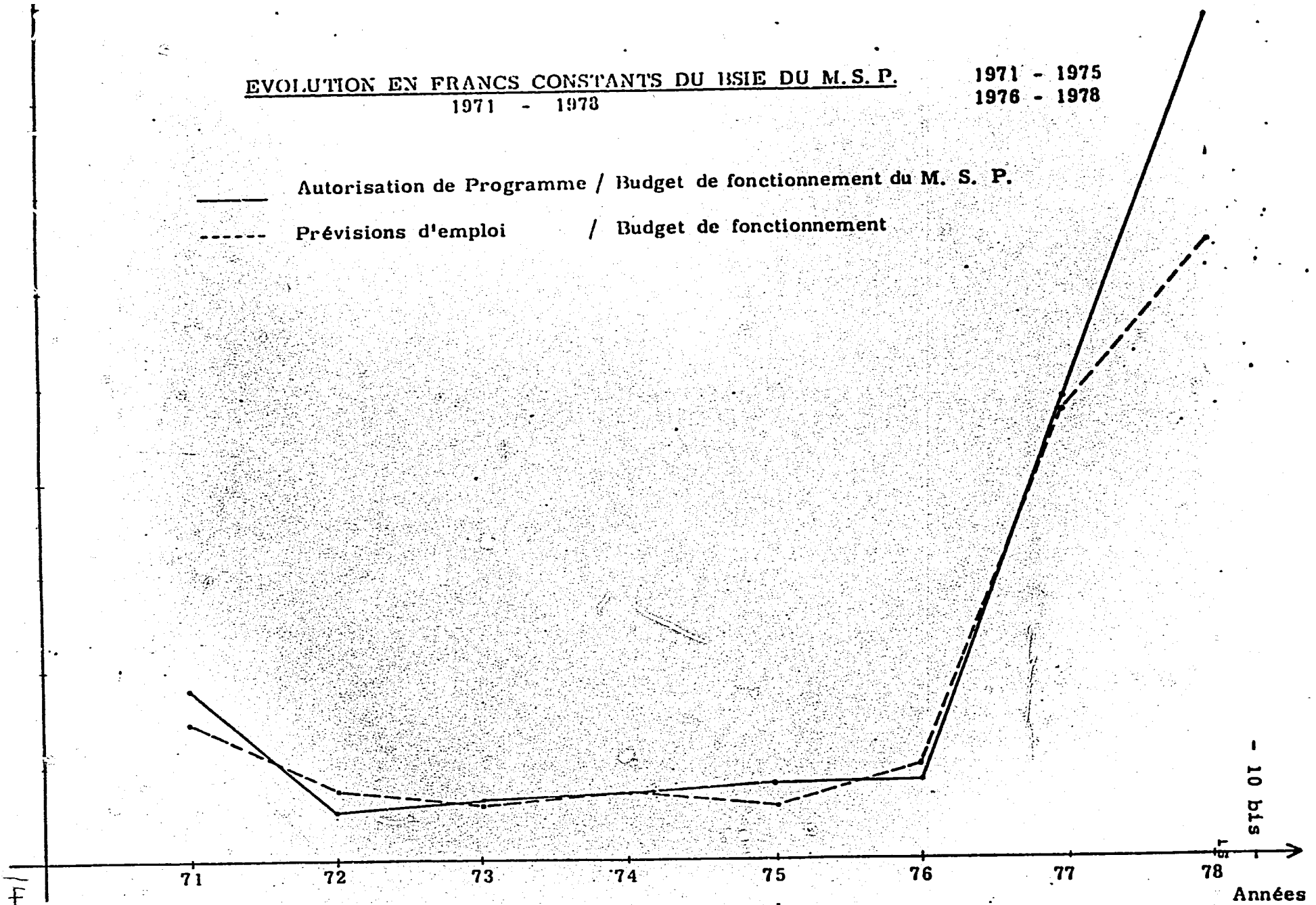
chiffres exprimés en millions de francs.

	AN	Budget de Fonctionnement du Ministère	A. P.	AP/Budget	P. E.	PE/ Budget
PLAN QUINQUENNAL 1971 - 1975	1971	6 581	1 211	18 %,4	941	14 %,3
	1972	6 732	341	5 %,0	506	7 %,5
	1973	7 830	490	6 %,3	450	5 %,7
	1974	9 544	662	6 %,9	672	6 %,9
	1975	10 469	820	7 %,9	601	5 %,7
	1976	12 338	1 017	8 %,2	1 234	10 %,0
	1977	15 664	7 631	48 %,7	7 401	47 %,2
	1978	19 192	16 901	88 %,0	12 315	64 %,1

A. P. : autorisation de programme

P. E. : prévision d'emploi.

SOURCES BSIE & J. O.


EVOLUTION EN FRANCS CONSTANTS DU BSIE DU M.S.P.
1971 - 1978
1971 - 1975
1976 - 1978
Autorisation de Programme / Budget de fonctionnement du M. S. P.
Prévisions d'emploi / Budget de fonctionnement
71
72
73
74
75
76
77
78
Années

FORMATION DU PERSONNEL MEDICAL ET ASSIMILES

Evidemment il s'agit essentiellement de la formation des Médecins, mais il ne faut pas oublier pour autant celle -plus récente il est vrai- des Dentistes et des Pharmaciens.

Les effectifs d'étudiants en médecine continuent à croître comme le montre le tableau ci-dessous.

Années	IV	AEA	ENA	Total	% IV / Tot.
1974/1975	398	88	148	634	63
1975/1976	498	110	122	730	68
1976/1977	581	107	130	818	71
Variations en % sur trois ans	+46	+22	-12	+29	-

IV = Ivoiriens ; AEA = Autres Etudiants Africains ; ENA = Etudiants non Africains.

On remarque que le nombre des étudiants Ivoiriens en Médecine augmente. C'est un facteur important, dans l'optique de la planification : en effet, dans les études de projection, on ne peut tenir compte que des nationaux. Les étrangers -quels qu'ils soient- sont censés retourner exercer dans leur pays d'origine.

Cette évolution en faveur des Ivoiriens est un mouvement commencé depuis plusieurs années ; la répartition par nationalité des étudiants inscrits dans les différents cycles des études le montre bien.

REPARTITION DES ETUDIANTS INSCRITS PAR NATIONALITE
POUR L'ANNEE 1976-1977

Nationalité / Année	Ivoiriens	Africains	Français	Autres	Total par an
1er Cycle	281	19	37	19	356
2e Cycle	235	39	40	13	347
Cliniques et 3e Cycle	65	24	18	8	115
Total par nationalité	581	102	95	40	818
% par nationalité	71	12	12	5	100

Les effectifs des étudiants en médecine reçus aux examens est un des éléments qui permet de faire des projections correctes sur les effectifs de Médecins que l'on est en droit d'espérer au cours des années à venir. Le tableau ci-dessous fournit les données relatives à l'année scolaire 1976 - 1977.

EFFECTIF DES ETUDIANTS EN MEDECINE RECUS AUX EXAMENS

(1976 - 1977)

	ANNEE	IVOIRIENS		A.E.A.		E.N.A.		TOTAL			% A/I	% A/P IV.	% A/P A.E.A.	% A/P E.N.A.	% A/P TOTAL
		P	A	P	A	P	A	I	P	A					
1er CYCLE	A_1 MEDECINE	176	98	16	6	37	25	229	229	129	56	56	37.50	68	56
	$PCEM_1$ DENT.	23	12	2	-	5	3	30	30	15	50	52	-	60	50
	TOTAL 1ereAN.	199	110	18	6	42	28	259	259	144	56	55	33	67	56
	A_2 - $PCEM_2$	82	81	7	6	9	8	98	98	95	98	99	86	89	97
	TOTAL 1er CYC	281	191	25	12	51	36	357	357	239	67	68	48	71	67
2e CYCLE	B1 - DCEM1	103	92	12	11	17	16	132	132	119	90	89	92	94	90
	B2 - DCEM2	62	61	17	15	11	11	90	90	87	97	98	88	100	97
	B3 - DCEM3	33	33	14	14	8	8	55	55	55	100	100	100	100	100
	B4 - DCEM4	38	36	15	15	17	17	70	70	68	97	95	100	100	97
	TOTAL 2e CYC.	236	222	58	55	53	52	347	347	329	95	94	95	98	95
3e CYCLE	CLINIQUES	29	22	12	12	12	9	53	53	43	81	76	100	75	81
	DOCTORAT UNIV	-	-	1	1	-	-	8	1	1	12.50	-	100	-	100
	DOCTORAT D'ET	12	12	4	4	6	6	54	22	22	41	100	100	100	100
	TOTAL 3e CYC	41	34	17	17	18	15	115	76	66	57	83	100	100	100
TOTAL GENERAL		558	447	100	84	122	103	819	780	634	77	80	84	84	77

AEA = autres étudiants africains ; ENA = étudiants non africains

P = Présentés ; A = admis.

Le commentaire suivant concerne les pourcentages d'Etudiants Ivoiriens admis selon les différents cycles.

Au cours du premier, 68 % des étudiants qui se sont présentés ont été admis ; le véritable problème pour le planificateur qui doit faire des projections est de savoir ce que deviennent ceux qui ont échoué. Deux hypothèses extrêmes permettront de comprendre l'importance de la question en matière de prévision. On supposes d'abord que tous ceux qui ont échoué à un examen abandonnent. La production de Médecins ne peut alors se calculer à partir des effectifs totaux d'étudiants inscrits mais seulement en fonction des réussites obtenues chaque année. L'autre hypothèse extrême suppose que tout le monde réussisse un jour ou l'autre ; tous les étudiants qui ont échoué une année arriveront à la réussite une autre année. L'effectif total des étudiants finira à la longue par se transformer en Médecins Diplômés. Aucune de ces hypothèses ne correspond à la réalité ; il faut avoir des données statistiques réelles dur le pourcentage d'étudiants qui, au niveau de chaque année, abandonnent totalement les études médicales. Alors seulement des projections correctes pourront avoir lieu. Des études sont en cours pour obtenir de telles données.

Il y a par ailleurs, des éléments pour estimer un phénomène qui se produit en fin d'études médicales et qui perturberait toute projection qui se baserait sur l'hypothèse selon laquelle les études de médecine durent réellement 7 ans. En fait, les étudiants en médecine qui ont parcouru avec succès le 1er et le 2e cycles, perdent leur élan en fin d'études ; ils traînent ainsi pendant plusieurs années lors de la préparation de leur thèse. Le tableau ci-dessous le montre bien. Il correspond à la situation des années 1977 et 1978.

La quatrième année n'a été assurée que pour l'année scolaire 1975/1976. Le manque d'enseignants n'a pu permettre la continuation de la quatrième année en 1976/1977. Les étudiants sont allés terminer leurs études en France, comme d'ailleurs pour la cinquième année qui a toujours eu lieu exclusivement en France.

Le nombre d'inscrits pour chaque année est reporté dans le tableau ci-dessous.

NOMBRE D'INSCRITS
A L'INSTITUT D'ODONTO-STOMATOLOGIE

Année d'étude / Année scolaire	1ère	2ème	3ème	4ème
1974/1975	(a)	16	7	(b)
1975/1976	(a)	25	15	9
1976/1977	(a)	25	18	(b)
1977/1978	48	26	22	(b)
1978/1979	46	28	22	(b)

(a) : les effectifs des étudiants de première année de dentaire n'ont pas été ventilés au sein de l'année commune avec les étudiants en médecine.

(b : les étudiants de quatrième année sont allés en France poursuivre leurs études.

ECOLE DE PHARMACIE

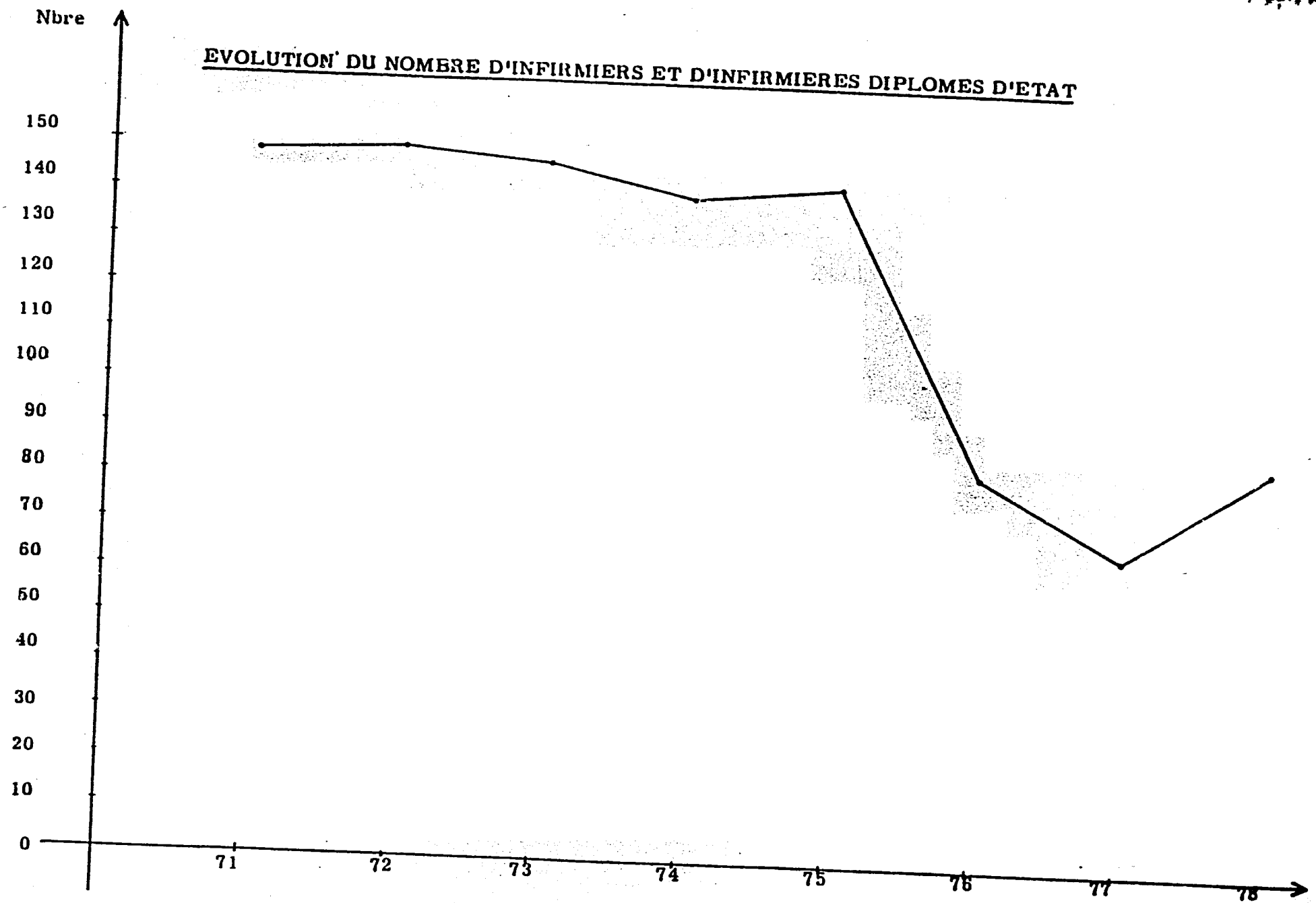
Elle est de formation plus récente ; elle n'a commencé à fonctionner qu'en octobre 1977. Elle connait les difficultés de démarrage inhérent à tout début ; le manque de personnel enseignant est le handicap le plus important à surmonter.

Au cours de l'année universitaire 1977/1978, il y a eu 32 inscriptions en première année de pharmacie.

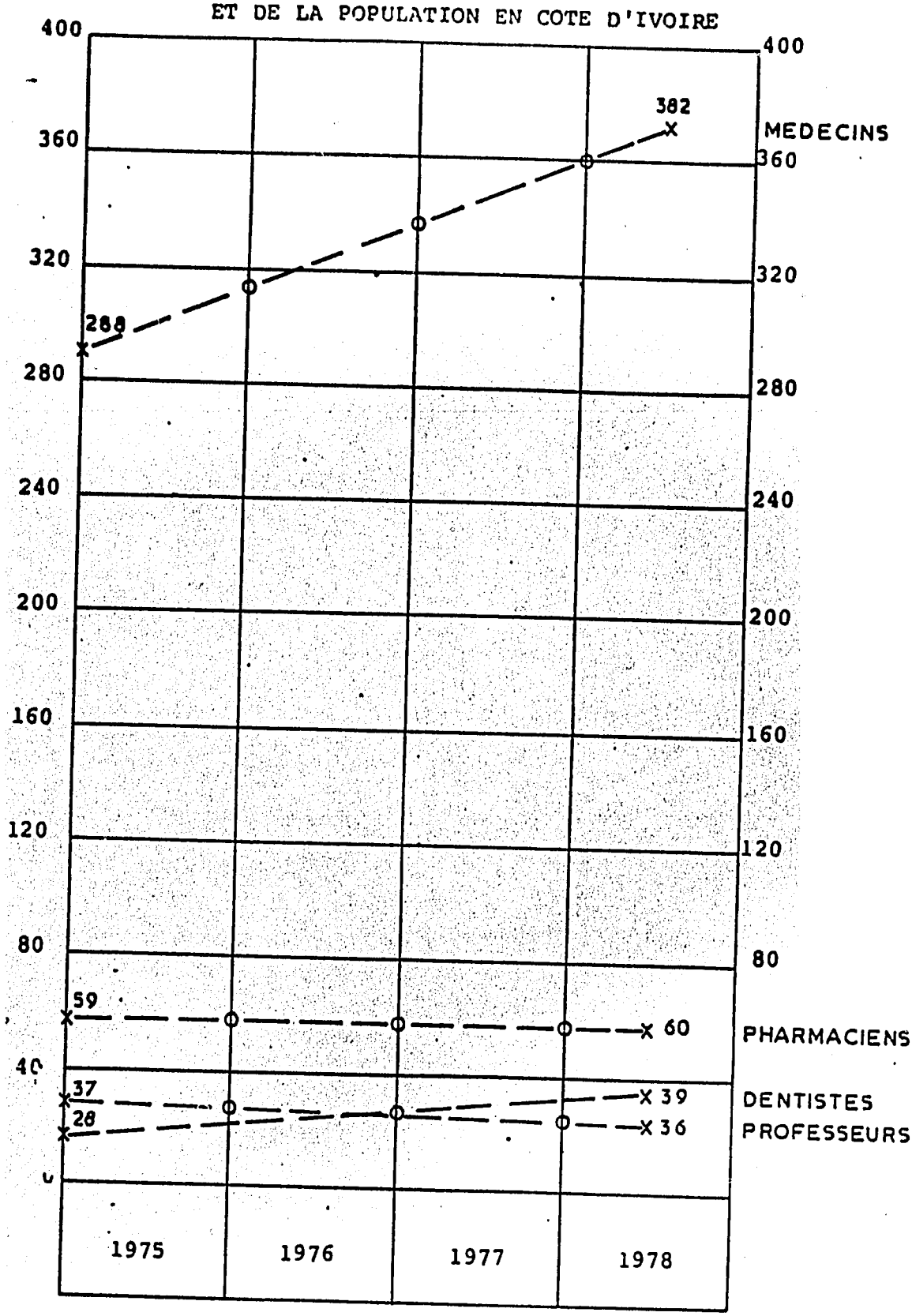
Pour l'année universitaire 1978/1979, le nombre d'inscrits est de 36 pour la première année et 12 pour la deuxième.

EVOLUTION DES EFFECTIFS DE L'ECOLE NATIONALE DES SAGES-FEMMES

	ANNEE SCOLAIRE	Nbre d'élèves inscrits en ..			Effectif total	Nbre de diplômes	Taux de réussite
		1ère année	2è année	3è année			
Plan quinquénnal 1971 - 1975	1970 - 1971	118	56	47	221	40	85 %
	1971 - 1972	106	92	45	243	45	100 %
	1972 - 1973	137	91	81	309	77	95 %
	1973 - 1974	76	121	76	273	68	89 %
	1974 - 1975	60	92	94	246	92	97 %
	1975 - 1976	62	48	96	206	93	96 %
	1976 - 1977	63	59	39	161	39	100 %
	1977 - 1978	105	52	53	210	52	98 %


EVOLUTION DU NOMBRE D'INFIRMIERS ET D'INFIRMIERES DIPLOMES D'ETAT
Nbre
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
71
72
73
74
75
76
77
78

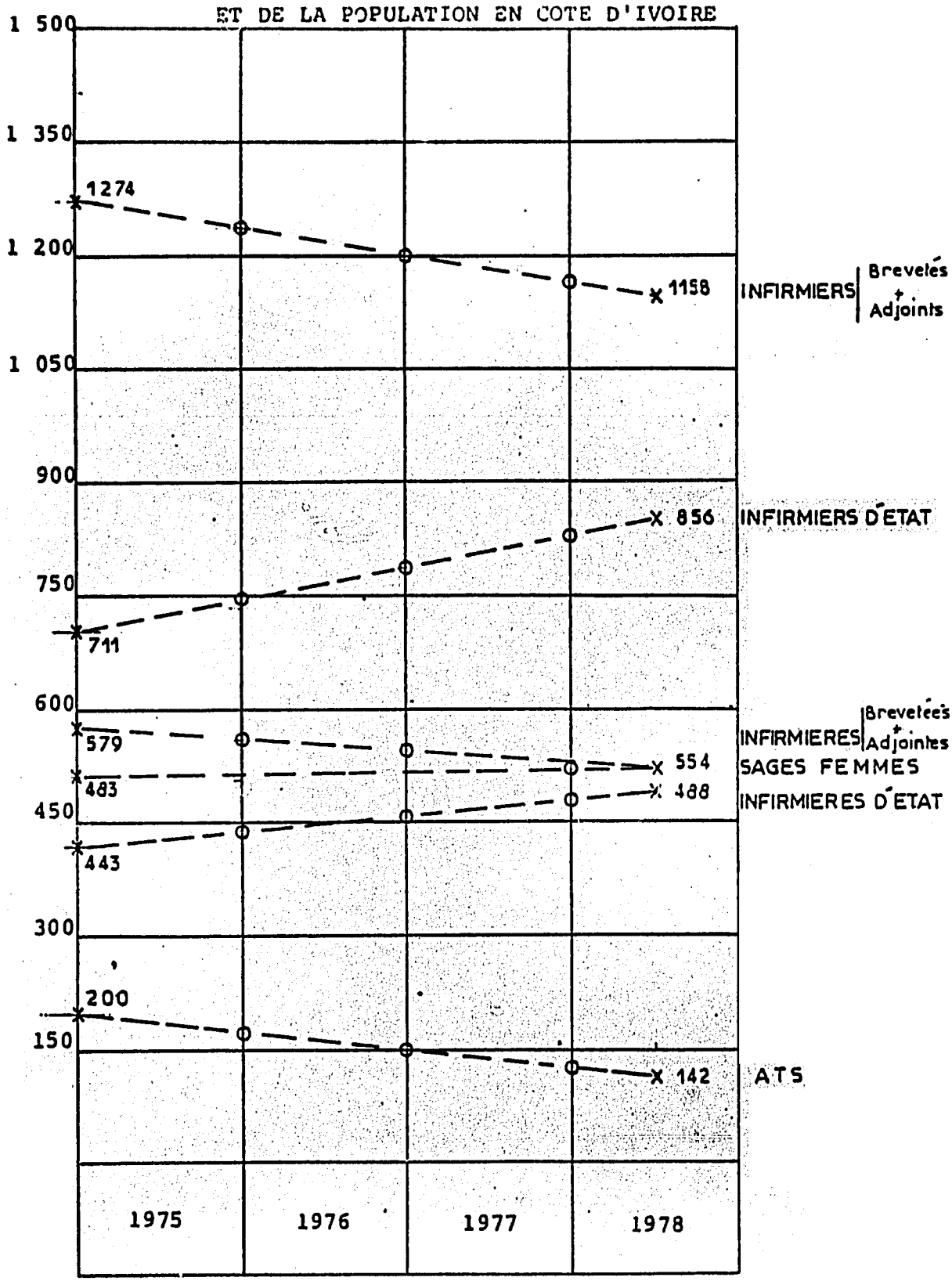
(1) EVOLUTION DU PERSONNEL MEDICAL
EXERCANT DANS LE CADRE
DU MINISTERE DE LA SANTE PUBLIQUE
ET DE LA POPULATION EN COTE D'IVOIRE



X Chiffres réellement constatés

-------0----- évolution par interpolation.

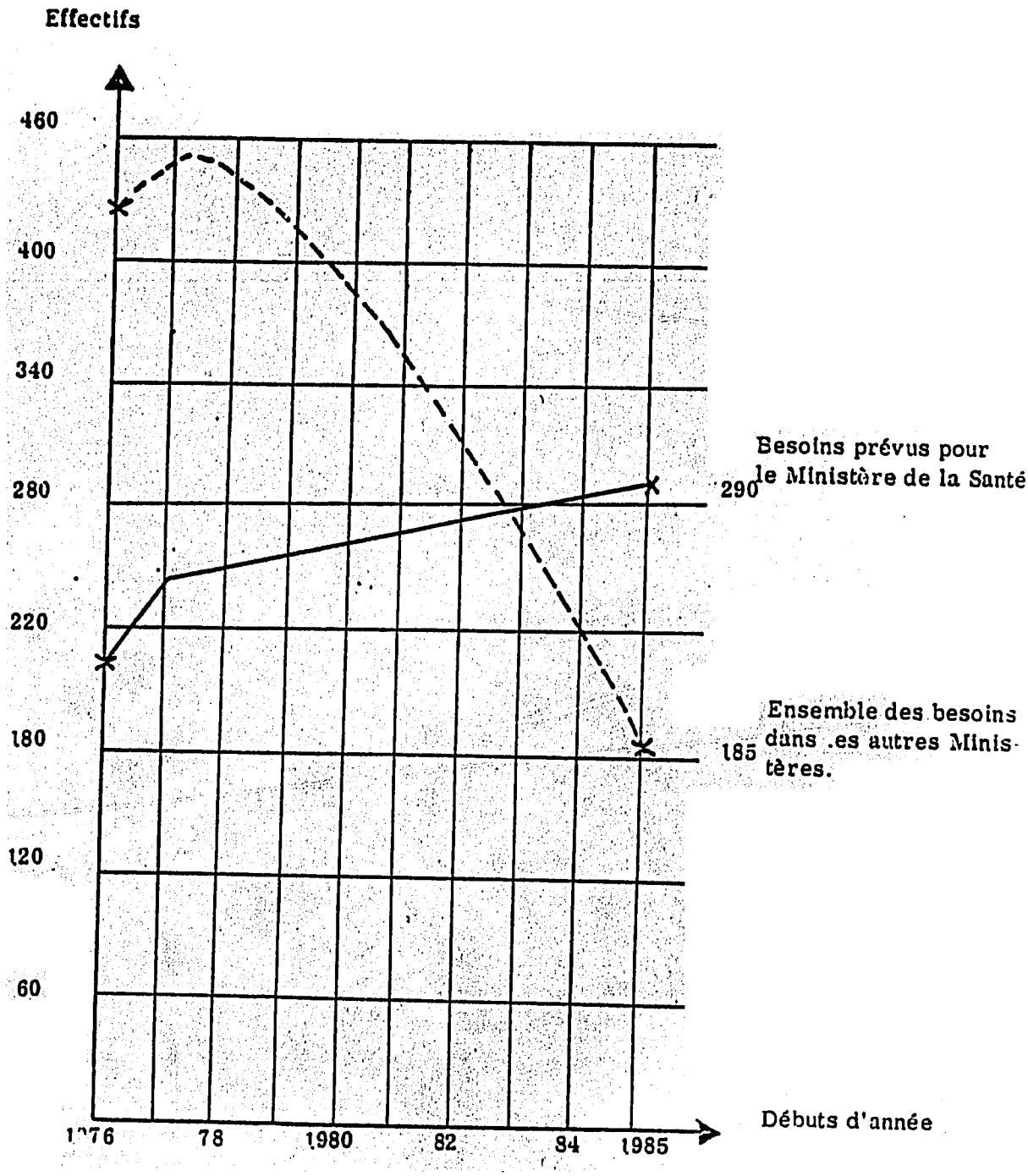
(2) EVOLUTION DU PERSONNEL PARAMEDICAL
EXERCANT DANS LE CADRE
DU MINISTERE DE LA SANTE PUBLIQUE
ET DE LA POPULATION EN COTE D'IVOIRE



✱ Chiffres réellement constatés

-----0----- évolution par interpolation.

(3) PERSPECTIVES 1976 - 1985 DES EFFECTIFS DE L'ASSISTANCE TECHNIQUE FRANCAISE EN COTE D'IVOIRE



Source : Ministère du Plan.

EVOLUTION DES EFFECTIFS DES PRINCIPAUX CORPS MEDICAUX SELON LEUR ORIGINE OU STATUT

-	Fin 1974	Fin 1975	Fin 1976	Fin 1977	mi 1978
MEDECINS :					
FONCTION PUBLIQUE	124	-	-	-	145
COOPERATION FRANCAISE	115	122	131	-	138
CONTRACTUELS	51	-	-	-	91
TEMPORAIRES	9	-	-	-	18
PHARMACIENS					
FONCTION PUBLIQUE	34	-	-	-	39
COOPERATION FRANCAISE	7	8	8	-	10
CONTRACTUELS	7	-	-	-	13
TEMPORAIRES	0	-	-	-	1
CHIRURGIENS-DENTISTES					
FONCTION PUBLIQUE	8	-	-	-	4
COOPERATION FRANCAISE	11	11	8	-	14
CONTRACTUELS	10	-	-	-	10
TEMPORAIRES	0	-	-	-	2

TECHNIQUES DE LA PHARMACIE CENTRALE

Chiffres exprimés en millions de Francs

	AN	B.S.	Matériel	Fournitures techniques Pharmapro (55)	
				en millions de Francs	en % du métériel
PLAN QUINQUENNAL 1971 - 1975	1971	6 581	2 614	1 105	42,3 %
	1972	6 732	2 729	1 150	42,1 %
	1973	7 830	3 013	1 250	41,5 %
	1974	9 554	3 554	1 318	37,1 %
	1975	10 469	3 825	1 768	44,9 %
	1976	12 338	4 229	1 768	[illegible]
	1977	15 664	5 668	1 878	33,1 %
	1978	19 192	6 432	2 100	32.6

NB. Les fournitures techniques de la Pharmapro sont essentiellement des médicaments.

TABLEAU N° I : Evolution des accidents corporels liés aux accidents de la route

Année	Nombre d'accidents	Nombre de tués	Nombre de blessés
1971	3.418	332	6.389
1972	3.844	385	7.126
1973	1.119	357	2.521
1974	1.514	356	3.780
1975	2.372	464	4.849
1976	4.930	576	9.544
1977 (*)	3.542 (*)	560 (*)	5.858 (*)

(*) Les données relatives à 1977 sont provisoires. En effet, elles sont sous-estimées ; tous les rapports de police et de gendarmerie ne sont pas encore parvenus à la Direction des Transports Terrestres.

TABLEAU N° II : Evolution du nombre des accidents corporels en fonction du parc automobile

Année	Effectif du parc automobile	Nombre d'accidents corporels	Taux d'accidents pour mille véhicules
1971	105.865	3.418	32,3
1972	121.419	3.844	31,7
1973	137.179	1.113	8,1
1974	150.678	1.514	10,0
1975	164.199	2.372	14,4
1976	184.062	4.930	26,8
1977 (*)	161.600 (*)	5.858 (*)	36,3 (*)

(*) Provisoire

TABLEAU VI : Taux de mortalité et de morbidité par accident de la route pour 100.000 habitants

	Population (milliers)	Tués	Taux de mortalité	Blessés	Taux de morbidité
60	3.651	169	4,62	1.027	28,12
61	3.904	197	5,17	1.309	34,41
62	3.962	177	4,46	1.018	25,69
63	4.127	232	5,62	1.404	34,00
64	4.299	198	4,60	1.164	27,07
65	4.479	204	4,55	1.401	31,28
66	4.665	212	4,54	1.428	30,60
67	4.860	229	4,71	1.353	27,84
68	5.062	336	6,63	3.100	61,24
69	5.273	271	5,14	3.040	57,65
70	5.493	376	6,84	4.940	89,93
71	5.722	332	5,80	6.389	111,66
72	5.960	385	6,52	7.126	121,17
73	6.260	357	5,75	2.521	40,66
74	6.460	356	5,51	3.780	58,51
75	6.720	464	6,90	4.849	72,15
76	6.989	576	8,24	9.544	136,56

Source : IMBOUA - BOGUI P. 13

LES ACCIDENTS DE TRAVAIL

Ils sont réputés être importants dans le monde industriel développé. Il est difficile d'avoir une idée précise pour les pays du tiers-monde ; en effet, les seules statistiques disponibles sont généralement limitées au secteur moderne d'activité. Il en est ainsi en Côte d'Ivoire où l'on ne peut saisir l'importance des accidents du travail qu'au sein des travailleurs qui sont obligés de cotiser à la Caisse Nationale de Prévoyance Sociale (C.N.P.S.).

A la fin de 1975, la C.N.P.S. récense 256.934 travailleurs assurés contre le risque accidents de travail et maladies professionnelles et près de 270.000 au 2 Mars 1977. La ventilation selon la C.N.P.S. de ces affiliés par secteur d'activité est présentée dans le tableau ci-après.

	au 31/12/1975 (1)		au 3/02/1977 (2)	
		%		%
01. Services publics, Ministères	-	-	.611	0,23
02. Agriculture, forêt, élevage, exploitation forestière	10.625	4,14	12.016	4,45
03. Industrie manufacturière	6.456	2,51	22.343	8,28
04. Industries extratives	20.571	8,01	6.967	2,58
05. Bâtiments, T.P.	43.956	17,11	46.068	17,07
06. Commerce	47.733	18,60	50.744	18,81
07. Transports	11.283	4,39	11.923	4,42
08. Gens de maison	7.524	2,93	8.424	3,12
09. Etablissements publics autonomes	15.543	6,05	17.422	6,46
10. Assurance volontaire	7		9	
11. Professions libérales	4.388	1,71	4.629	1,72
12. Associations confessionnelles, sportives culturelles	206	0,08	226	0,08
13. Assemblée Nationale	-			
14. Exploitations forestières avec scieries	1.450	0,56	1.546	0,57

15. Enseignement privé	746	0,29	972	0,36
16. Activité maritime (pêche, navigation)	196	0,08	219	0,08
00. Non précisé	86.200	33,54	85.701	31,77
TOTAL	256.934	100,00	269.820	100,00

(1) Rapport d'activité 1975 de la C.N.P.S.

(2) Statistiques du fichier embauchés par code d'activité - Listing ordinateur de la C.N.P.S.

Le total des accidents de travail déclarés a été réuni dans un tableau extrait d'une récente étude faite pour la C.N.P.S. par la SETEF (Etude des accidents de travail et des maladies professionnelles - Nov. 1977).

ANNEE	ABIDJAN	%	BOUAKE	%	TOTAL
1970	16.715	90,4	1.778	9,6	18.493
1971	16.486	88,8	2.080	11,2	18.566
1972	16.328	88,9	2.030	11,1	18.358
1973	16.843	89,1	2.061	10,9	18.904
1974	16.363	87,8	2.271	12,2	18.634
1975	16.194	87,4	2.339	12,6	18.533
1976	16.307	87,0	2.444	13,0	18.751

Si on se fie à ces statistiques, le nombre d'accidents de travail est stable en Côte d'Ivoire. Y-a-t-il une sous-déclaration ? La constance des effectifs n'indique-t-elle pas plutôt un plafon de la capacité de la C. N. P. S. à traiter les dossiers ? Il est difficile de répondre ; le doute est permis en raison de la croissance économique de la Côte d'Ivoire au cours de ces dernières années. Peut-être l'évolution de la gravité des accidents du travail va-t-elle mieux fournir les renseignements ? Il ne le semble pas lorsqu'on étudie les statistiques fournies par cette étude.

Le nombre de victimes hospitalisées, d'après le traitement des données disponibles à la C. N. P. S. serait de l'ordre de 1 % du total des accidents du travail déclarés.

	1971	1972	1973	1974	1975	1976	Total 71 - 76
Victimes hospitalisées	110	80	104	228	105	34	661
Dossiers traités	12.304	12.954	13.142	11.817	11.446	3.994	65.657
%	0,9	0,6	0,8	1,9	0,9	0,9	1,0

Le volume des IPP (Invalidité Partielle Permanente) ne semble pas, d'après les rapports d'activité de la C. N. P. S., augmenter au cours du temps.

	1971	1972	1973	1974
Demande de reconnaissance d'IPP.	294	448	426	443

Il en est de même pour les décès enregistrés à la suite d'un accident de travail.

	1971	1972	1973	1974
Dossiers de décès déposés	135	95	134	117

On ne peut guère aller plus loin. Et si on devait conclure, on serait obligé de reprendre la majeure partie des conclusions faites par les auteurs du rapport de la SETEF (Etude des accidents de travail et des maladies professionnelles - Nov. 1977).

Le nombre des accidents de travail en Côte d'Ivoire peut être estimé pour 1975 entre 28.000 et 30.000, les maladies professionnelles reconnues comme telles sont peu nombreuses mais in minimum d'effort est également fait pour les dépister ;

Les victimes d'accident de travail sont surtout des hommes jeunes ;

La durée moyenne des arrêts de travail seait légèrement supérieure à 13 jours, près de 7 % des victimes seraient arrêtées plus d'un mois ;

Les lésions sont pour près des deux tiers, situées aux pieds et aux mains, ce qui signifie que l'application de moyen de protection individuelle devrait entraîner une baisse très sensible des accidents de travail ;

La mécanisation de l'appareil de production n'est pas une cause déterminante du nombre élevé d'accidents de travail, elle est par contre très probablement une cause directe de la gravité des lésions ;

Un faible nombre d'entreprises enregistre un fort pourcentage du nombre des accidents de travail déclarés en Côte d'Ivoire, toutes les entreprises en déclarent pas les accidents de travail qui se produisent chez elles ;

- Les formations médicales publiques et privées paraissent en nombre insuffisant sur le territoire national ;

- Il est fort probable que les victimes d'accidents graves ne bénéficient pas de la totalité des prestations auxquelles elles peuvent prétendre ;

- Le coût global des accidents de travail en Côte d'Ivoire peut être estimé à 3,750 milliards de F. CFA en 1975 ;

- La C.N.P.S. enregistre un excédent de recettes par rapport aux dépenses du régime des accidents de travail et des maladies professionnelles de l'ordre de 38 %.

INCIDENCE DE LA TUBERCULOSE AU NIVEAU DES CAT

(Les primoinfections latentes étant exclues)

	1971	1972	1973	1974	1975	1976	1977
ADJAME	1 027	1 047	987	948	984	1 019	795
TREICHVILLE	384	494	612	545	615	525	523
BOUAKE	606	650	400	593	492	611	636
DALOA	268	308	275	254	360	259	265
KORHOGO	152	132	-	139	84	152	154
FERKE	-	-	-	93	62	64	49
MAN	-	-	112	78	140	165	189
ABENGOUROU	-	-	291	140	125	161	192
GAGNOA	-	-	-	-	-	-	132
SAKASSOU	-	-	-	72	?	?	?
DABOU					?		
TOTAL	2 437	2 658	2 677	2 790	2 862	2 946	2 935

PREVALENCE DE LA TUBERCULOSE EN COTE D'IVOIRE
AU NIVEAU DES CENTRES ANTITUBERCULEUX (CAT)

	1971	1972	1973	1974	1975	1976	1977
ADJAME	2.785	2.987	2.785	2.755	2.863	3.084	2.958
TREICHVILLE	2.167	2.552	2.810	2.746	3.151	2.609	2.046
BOUAKE	1.800 ?	1.803	1.910	2.347	2.383	2.193	1.836
DALOA	699	770	778	703	899	953	1.090
KORHOGO	264	423	435	372	418	453	496
FERKE	-	94	136	102	100	123	113
MAN	-	122	386	378	597	457	532
ABENGOUROU	-	-	291	270	535	445	274
GAGNOA			200		500		591
SAKASSOU	250 ?	362	264	299	300	535	234
DABOU						98	156
TOTAL	7.965	9.113	9.993	9.972	11.746	10.952	10.326

Le tableau suivant montre des chiffres de prévalence c'est-à-dire l'ensemble des cas (anciens et nouveaux) existant à une période donnée. Il est alors normal que ce chiffre augmente car chaque année s'ajoutent les nouveaux cas dépistés. Seule la guérison permet de diminuer l'incidence (ou la mort évidemment...). Comme la tuberculose est une maladie longue à guérir, on constate tout au long de la période quinquennale précédente, l'augmentation des tuberculeux pris en compte dans les CAT de Côte d'Ivoire. On notera cependant une tendance à la baisse de la prévalence au cours des années 1976 et 1977 que l'on peut interpréter comme le témoin d'une guérison plus rapide des cas traités

Le dernier tableau montre l'augmentation du nombre de vaccinations par le B. C. G. Elle est surtout importante au cours des années 1976 et 1977. Ici aussi, l'effort vaccinatoire devra être fourni pour réduire à la longue, l'importance de cette maladie qui peut être vaincue et doit l'être. Il s'agit maintenant, on le sait, plus d'un problème d'organisation des soins que de nouvelle thérapeutique. Ce sera le 3ème point de ce chapitre consacré à la lutte anti-tuberculeuse.

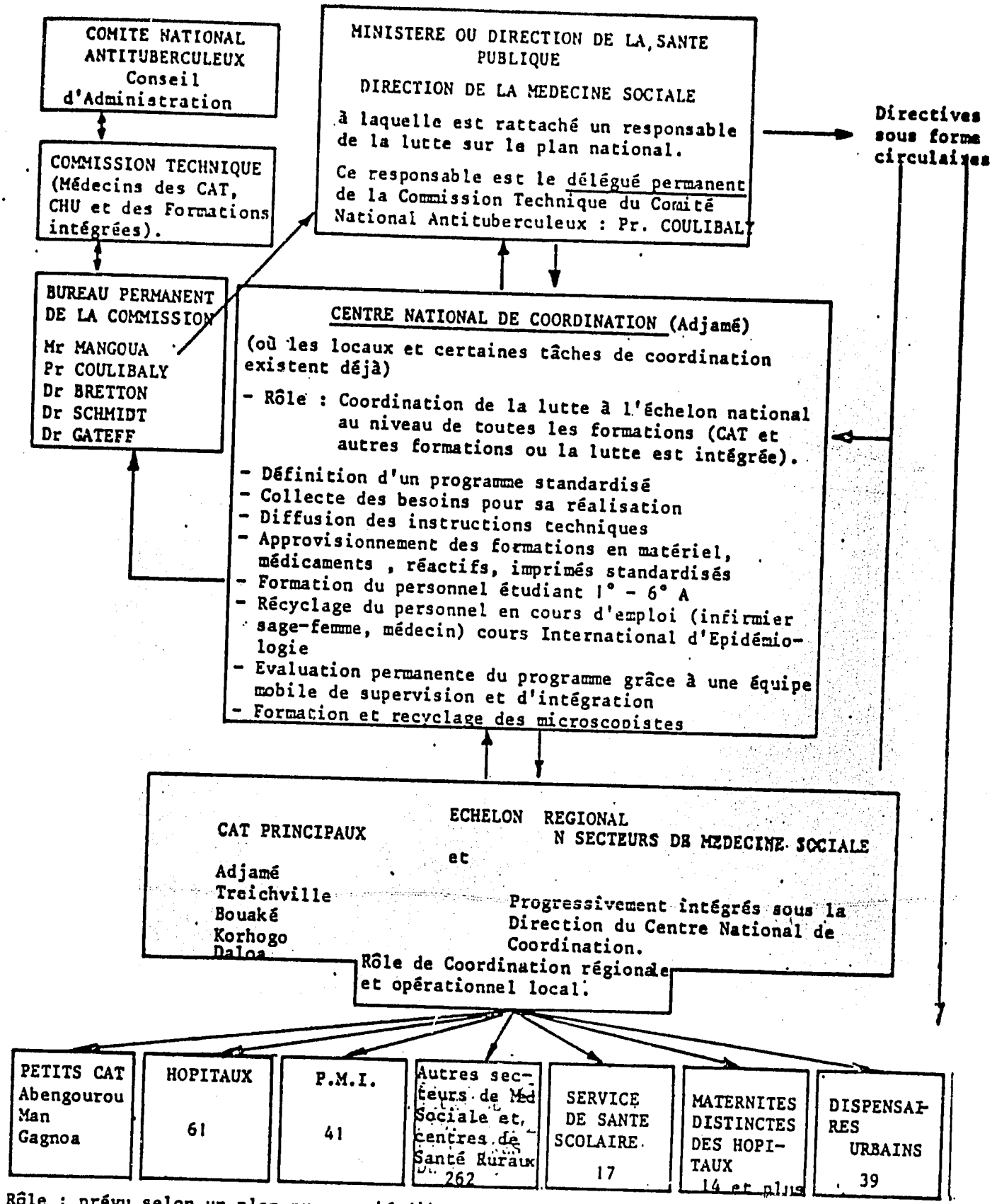
La réorganisation dont on va parler est le fruit d'un long dialogue où la commission technique du Comité National Anti-tuberculeux a joué un rôle important. On est parti de la constation suivante : les CAT, à de rares exceptions près, sont les principaux organismes qui diagnostiquent et traitent la tuberculose en Côte d'Ivoire. Ces formations ne couvrent évidemment pas l'ensemble du pays ; d'autre part, il est difficile d'envisager une multiplication indéfinie des CAT. Il apparaît donc de plus en plus nécessaire de réaliser progressivement l'intégration de la lutte anti-tuberculeuse dans toutes les formations de base.

Le projet d'organigramme ci-dessous montre les principales lignes de force de cette organisation qui prendra forme dans les années à venir.

VACCINATIONS BCG PAR LES CAT

	1971	1972	1973	1974	1975	1976	1977
ADJAME	30 345	22 474	20 736	29 617	32 976	32 976	48 696
TREICHVILLE	14 923	9 450	6 888	12 747	13 036	33 819	31 246
BOUAKE	9 186	9 023	6 324	8 168	7 376	35 704	26 690
DALOA	5 243	14 113	21 200	13 732	6 884	11 368	17 745
KORHOGO	1 507	3 885		14 797	5 103	4 612	10 492
FERKE		681		3 531	2 134	2 082	1 232
MAN			1 281	6 678	407	12 815	3 395
ABENGOUROU				2 493	3 748	4 660	18 650
GAGNOA				551		391	3 604
DABOU						599	?
TOTAL	61 204	59 626	56 429	92 274	77 540	153 000	161 750

PROJET D'ORGANIGRAMME (Déc. 1976)



Rôle : prévu selon un plan progressif d'intégration par niveau figurant au tableau I

VACCINATIONS PRATIQUEES PAR L'INSTITUT D'HYGIENE

ANNEES	VARIOLE	FIEVRE JAUNE	ROUGEOLE	CHOLERA
1970	512.924	511.597	414.528	2.183.944
1971	660.297	199.371	542.309	851.266
1972	265.761	32.241	221.418	124.938
1973	59.698	29.378	136.518	73.616
1974	843.297	738.966	79.703	45.511
1975	376.518	328.107	110.832	211.752
1976	127.505	45.683	66.547	44.9[illegible]

STATISTIQUES DE MORBIDITE ET DE MORTALITE

DES MALADIES TRANSMISSIBLES

Les chiffres réunis dans le tableau ci-joint permettent mieux que n'importe quels éléments de connaître plus facilement l'évolution des maladies transmissibles et d'en établir une hiérarchie par ordre d'urgence et d'importance.

Une revue des différentes maladies appelle les commentaires suivants :

I - ROUGEOLE

- Nombre de cas signalés	:	83 000 environ
- Nombre de décès	:	2 000
- Taux de mortalité	:	2,4 % (en général 5 à 10 %)

Malgré les mesures préventives, la rougeole constitue toujours un problème prioritaire de Santé Publique.

Si les 400 000 vaccinations pratiquées n'ont pas permis de diminuer de façon significative l'incidence de la maladie, c'est pour plusieurs raisons dont les plus importantes sont les suivantes :

- Les mêmes sujets sont vaccinés plusieurs fois ;
- Les vaccinations touchent de nombreux enfants hors cible ;
- Certaines campagnes sont effectuées tardivement après les épidémies ;
- Insuffisance de généralisation géographique.

La réorganisation actuelle prévoyant une coordination nationale assurée par l'Institut d'Hygiène qui est chargé de la conservation et la distribution du vaccin ainsi que la collecte des statistiques, permettra de réaliser les campagnes à temps.

Chasue Base de Médecine Rurale doit faire son programme et l'exécuter avant les épidémies de Janvier-Février.

.../...

II - LE TETANOS

- Nombre de cas signalés : 3.000 environ
- Nombre de décès : 600
- Taux de mortalité : 20 % (en général entre 30 et 50 %).

Le nombre de vaccinations est encore insuffisant.

Dans l'avenir les programmes de vaccination doivent permettre de toucher en priorité :

- 900.000 enfants de 3 mois à 3 ans
- 350.000 femmes enceintes.

III - LA COQUELUCHE

- Nombre de cas signalés : 25.000 environ
- Nombre de décès : 200
- Taux de mortalité : 1 %

C'est le programme élargi de vaccination associant les vaccinations contre la Diphtérie, le Tétanos, la Coqueluche et la Poliomyélite qui permettra de faire une généralisation géographique et démographique suffisante, susceptible de réduire l'incidence.

IV - LA POLIOMYELITE

- Nombre de cas signalés : 500 environ
- Nombre de décès : 42
- Taux de mortalité : 9 %

La poliomyélite reste une maladie des enfants de moins de cinq ans. Cette maladie n'est pas un problème négligeable et son importance s'affirmera vraisemblablement dans les années à venir avec l'amélioration des conditions d'hygiène, le maintien de la croissance démographique et l'efficacité de la surveillance et de la notification.

V - LA TUBERCULOSE

Se référer aux commentaires des Médecins des Centres Antituberculeux.

VI - LE CHOLERA

- Nombre de cas signalés : 362
- Nombre de décès : 23
- Taux de mortalité : 6 %

Malgré les mesures préventives, cette maladie évolue depuis son apparition en 1970 selon le mode endémique avec quelques poussées épidémiques que l'on arrive à circonscrire en agissant sur les foyers par des vaccinations.

VII - LA RAGE

- Nombre de cas déclarés : 9
- Nombre de décès : 9
- Taux de mortalité : 100 %

Dans les fiches reçues, certains Centres enrégistrent les vaccinations comme des cas de maladies. La correction a été faite en ne retenant que les cas de maladies.

C'est avec des mesures énergiques d'élimination des chiens errants, de vaccinations des animaux et d'éducation de la population que l'on arrivera à diminuer l'incidence de cette maladie qui reste toujours mortelle.

VIII - LA VARIOLE

L'éradication de la variole a été certifiée en Afrique Occidentale en 1966. Sur les fiches, certains Centres ont signalé des cas qui après vérification, revèlent une erreur de diagnostic (varicelles graves).

IX - LA FIEVRE JAUNE

- Nombre de cas signalés : 56
- Nombre de décès : 9
- Taux de mortalité : 16 %

Les cas pris en compte dans ce tableau sont ceux qui ont été confirmés par les examens de laboratoire et qui proviennent de la région de Bouaké, Dabakala.

D'après les enquêtes, le virus circule en permanence dans les réservoirs animaux notamment chez les singes qui affectent les moustiques qui le transmettent à l'homme.

X - LE PIAN

- Nombre de cas signalés : 51.755
- Nombre de décès : 143
- Taux de mortalité : 0,003 %

Cette incidence élevée justifie une campagne de traitement contre le pian.

MORBIDITE/MORTALITE ET NOMBRE DE VACCINATIONS EN COTE D'IVOIRE - 1977

		Rougeole	Diphtérie	Tétanos	Coqueluche	Polio	Tuberculi.	Choléra	Rage	F. Jaune	Variole	Rubéole	Plan
0 - 1 an	C	18.695	6	824	6.438	123	27	1	1	1		5	1.033
	D	863		305	74	4	2	1	1	1			33
1 - 4 ans	C	35.351	17	553	10.141	212	53	23	3	3		55	10.707
	D	942		49	122	36	6	2	3	1			31
5 - 14 ans	C	18.524	56	730	6.270	68	462	68	6	16		85	20.029
	D	224	2	52	20	2	20	3	6				33
15 ans +	C	4.050	77	601	521	63	1.465	148	3			125	13.642
	D	20		58			78	4	3				6
Ages Inc.	C	4.129	18	367	352	23	1.920	90	6	36		41	6.770
	D	96		96	2		120	3	6	7			40
Totals	C	83.202	175	3.060	24.442	489	4.032	362	19	56		311	51.755
	D	2.013	2	580	218	42	226	23	19	9			143
	%	2,4	1,1	20,7	0,9	8,6	5,6	6,3	106,0	16,4			,003
Nbre Vacci.		397.942	68.795	83.243	58.286	43.310	187.286	196.786	5.669	59.346	89.594		

(I) RENDEMENT DES DISPENSAIRES URBAINS ET HOSPITALIERS

DEPARTEMENT	NB de D	Moy. de C/ jour	NB Moy. ER	NB de C par ER/jour	NB Moy. EI	NB de C par EI/jour
BOUAFLE	2	65	7	9	12	5
BOUAKE	7	85	15	5	14	6
DIMBOKRO	3	185	17	11	21	10
KATIOLA	1	32	15	2	15	2
DABAKALA	-	-	-	-	-	-
DALOA	3	136	11	12	5	27
GAGNOA	4	60	10	6	9	7
SEGUELA	3	70	15	5	7	10
BONDOUKOU	3	69	19	3	13	5
BOUNA	2	93	3	31	7	13
KORHOGO	1	16	-	-	5	3
FERKE	-	-	-	-	-	-
BOUNDIALI	3	77	3	9	6	13

- NB de D : Nombre de dispensaires à statistiques utilisables.
- Moy. de C/Jour : Nombre moyen de consultations faites par jour.
- NB Moy. ER : Moyenne des effectifs réalisant des soins.
- NB de C par ER/jour : Nombre de consultations faites par jour en moyenne par chaque personnel soignant.
- NB Moy. EI : Moyenne des effectifs de personnel infirmier.
- NB de C par EI/jour : Nombre de consultations faites par jour en moyenne par chaque Infirmier.

(II) RENDEMENT DES DISPENSAIRES URBAINS ET HOSPITALIERS

DEPARTEMENT	NB de D	Moy. de C/ jour	NB Moy. ER	NB de C par ER/jour	NB Moy. EI	NB de C par EI/jour
ODIENNE	1	24	4	6	3	8
MAN	5	109	9	12	7	15
BIANKOUMA	-	-	-	-	-	-
GUIGLO	3	97	8	12	10	10
DANANE	-	-	-	-	-	-
TOUBA	1	30	13	3	4	8
ABENGOUROU	2	62	16	4	18	3
ABIDJAN	17	182	10	18	7	26
ABOISSO	1	63	18	4	16	4
ADZOPE	2	61	7	9	15	4
AGBOVILLE	1	65	28	2	22	3
DIVO	2	218	12	18	13	17
SASSANDRA	3	69	7	10	10	7

- NB de D : Nombre de dispensaires à statistiques utilisables.
- Moy. de C/jour : Nombre moyen de consultations faites par jour.
- NB Moy. ER : Moyenne des effectifs réalisant des soins.
- NB de C par ER/jour : Nombre de consultations faites par jour en moyenne par chaque personnel soignant.
- NB Moy. EI : Moyenne des effectifs de personnel infirmier
- NB de C par EI/jour : Nombre de consultations faites par jour en moyenne par chaque infirmier.

(I) RENDEMENT DES CONSULTATIONS DES DISPENSAIRES RURAUX

DEPARTEMENT	NB de D	Moy. de C/ jour	NB Moy. ER	NB de C par ER/jour	NB Moy. EI	NB de C par EI/jour
BOUAFLE	10	36	3	12	2	18
BOUAKE	25	30	4	8	2	15
DIMBOKRO	14	46	4	11	3	15
KATIOLA	4	42	2	21	2	21
DABAKALA	2	25	2	13	2	13
DALOA	5	64	5	13	4	16
GAGNOA	9	34	2	17	2	17
SEGUELA	5	54	3	18	2	27
BONDOUKOU	23	27	3	9	2	14
BOUNA	6	66	2	33	2	33
KORHOGO	11	33	4	8	2	16
FERKE	7	18	3	6	2	9
BOUNDIALI	10	26	4	6	2	13

- NB de D : Nombre de dispensaires à statistiques utilisables.
- Moy. de C/jour : Nombre moyen de consultations faites par jour.
- NB Moy ER : Moyenne des effectifs réalisant des soins.
- NB de C par ER/jour : Nombre de consultations faites par jour en moyenne par chaque personnel soignant.
- NB Moy EI : Moyenne des effectifs de personnel infirmier.
- NB de C par EI/jour : Nombre de consultations faites par jour en moyenne par chaque infirmier.

(d) RENDEMENT DES CONSULTATIONS DES DISPENSAIRES RURAUX

DEPARTEMENT	NB de D	Moy. de C/ jour	NB Moy. ER	NB de C par ER/jour	NB Moy. EI	NB de C par EI/jour
ODIENNE	11	22	2	11	1	22
MAN	-	-	-	-	-	-
BIANKOUMA	-	-	-	-	-	-
GUIGLO	6	26	3	9	2	13
DANANE	7	60	2	30	2	30
TOUBA	6	55	4	14	2	27
ABENGOUROU	17	35	4	9	3	11
ABIDJAN	20	43	3	15	2	22
ABOISSO	4	33	4	8	1	33
ADZOPE	8	30	3	10	2	15
AGBOVILLE	1	36	2	18	1	36
DIVO	14	40	3	13	2	20
SASSANDRA	17	40	3	13	2	20

- NB de D : Nombre de dispensaires à statistiques utilisables.
- Moy. de C/jour : Nombre moyen de consultations faites par jour.
- NB Moy. ER : Moyenne des effectifs réalisant des soins.
- NB de C par ER/jour : Nombre de consultations faites par jour en moyenne par chaque personnel soignant.
- NB Moy. EI : Moyenne des effectifs de personnel infirmier.
- NB de C par EI/jour : Nombre de consultations faites par jour en moyenne par chaque infirmier.

ANNEXE I-1

MINISTERE D'ETAT CHARGE DE LA SANTE
PUBLIQUE ET DE LA POPULATION

REPUBLIQUE DE COTE D'IVOIRE
Union-Discipline-Travail

DECRET N° 77-94 du 25 FEV. 1977

portant réorganisation du Ministère de la Santé Publique et de la Population.

LE PRESIDENT DE LA REPUBLIQUE

SUR rapport du Ministre de la Santé Publique et de la Population,

VU le Décret n° 76-163 du 4 Mars 1976 portant nomination des membres du Gouvernement,

LE CONSEIL DES MINISTRES ENTENDU,

D E C R E T E

ARTICLE PREMIER.- Le Ministre de la Santé Publique et de la Population dispose, pour l'exercice de ses attributions, en plus du Cabinet des Directions et Sous-Directions suivantes qu'il est chargé d'organiser par arrêté.

1. LA DIRECTION DE LA SANTE PUBLIQUE ET DE LA POPULATION.

Cette Direction comprend les Sous-Directions et Services suivan

- La Sous-Direction de la Santé Rurale
- La Sous-Direction de la Santé Scolaire
- La Sous-Direction de la protection Maternelle et Infant
- La Sous-Direction des Centres Antituberculeux
- Le Conseil de Santé
- Le Service de la Population
- Le Service de la Médecine du Travail
- Le Service de la Médecine privée
- Le Service de l'Odonto-Stomatologie.

2. LA DIRECTION DES AFFAIRES FINANCIERS.

Cette Direction comprend les Sous-Directions suivantes :

- La Sous-Direction du Budget et de la Comptabilité .
- La Sous-Direction du Matériel.

3. LA DIRECTION DES AFFAIRES ADMINISTRATIVES.

Cette Direction comprend :

- La Sous-Direction du Personnel
- La Sous-Direction du Contentieux.

.../...

4. LA DIRECTION DE LA MEDECINE HOSPITALIERE.

Cette Direction comprend les Sous-Directions et Services suivants :

- La Sous-Direction des Hôpitaux Publics
- La Sous-Direction des Centres de Santé Urbains
- La Sous-Direction des Centres Hospitaliers et Universitaires
- Le Service de la Réglementation Hospitalière

5. LA DIRECTION DES SERVICES PHARMACEUTIQUES.

Cette Direction comprend les Sous-Directions suivantes :

- La Sous-Direction de la réglementation
- La Sous-Direction de la Pharmacopée
- L'Inspection des Pharmacies.
- La Sous-Direction du Laboratoire de Galenique
- La Sous-Direction du Laboratoire National de la Santé Publique

6. LA DIRECTION DES RELATIONS REGIONALES ET INTERNATIONALES.

Cette Direction comprend :

- La Sous-Direction de la Coopération Technique
- La Sous-Direction des Relations Régionales et Internationales
- Le Service des Stages et de l'Accueil
- Le Service des Relations Nationales

7. LA DIRECTION DE LA PHARMACIE CENTRALE DE LA SANTE PUBLIQUE.

Cette Direction comprend :

- La Sous-Direction des Approvisionnements
- La Sous-Direction des Importations
- La Sous-Direction de la Comptabilité

8. LA DIRECTION DE LA TRANSFUSION SANGUINE.

9. LA DIRECTION DE LA PLANIFICATION ET DE LA PROGRAMMATION SANITAIRES.

Cette Direction comprend :

- La Sous-Direction de la Planification
- La Sous-Direction des Bâtiments
- La Sous-Direction des équipements

.../...

10. LA DIRECTION DE LA DOCUMENTATION ET DES STATISTIQUES SANITAIRES.

Cette Direction comprend :

- La Sous-Direction de la Documentation
- La Sous-Direction de la Comptabilité Analytique
- La Sous-Direction des Statistiques Sanitaires.

11. LA DIRECTION DE LA FORMATION ET DES PROFESSIONS MEDICALES ET PARAMEDICALES.

Cette Direction comprend :

- La Sous-Direction de la Formation Paramédicale
- Le Service des Professions médicales et paramédicales.

ARTICLE 2.- Sont rattachés au Cabinet, l'Inspection Générale de la Santé Publique et les Instituts suivants :

- L'Institut d'Hygiène
- L'Institut Raoul Follereau
- L'Institut National de Santé Publique
- L'Institut Pasteur
- L'Institut de Cardiologie d'ABIDJAN.

ARTICLE 3.- Le Ministre de la Santé Publique et de la Population dispose, en outre, des organismes à caractère consultatif suivants :

- Conseil Consultatif National de la Santé Publique et de la Population
- Conseil National de l'Hygiène Publique et Sociale
- Commission de la Thérapeutique

ARTICLE 4.- Sont abrogées les dispositions du décret n° 69-48 du 20 Février 1969 portant réorganisation du Ministère de la Santé Publique et de la Population et toutes dispositions contraires au présent décret.

ARTICLE 5. - Le Ministre de la Santé Publique et de la Population est chargé de l'exécution du présent décret qui sera publié au Journal Officiel de la République de Côte d'Ivoire./-

Fait à ABIDJAN, le

Félix HOUPHOUET-BOIGNY

APPENDIX 5

[illegible] "Transfers of [illegible] multinational enterprises", by [illegible] 1976)

Appendix 5

The subject of the transfer and development of technology has become one of the most critical topics currently being debated by governments, cooperatives and associations. In the pharmaceutical and other health fields the governments, UNIDO, WHO and other international institutions have been particularly interested in the effects and benefits which a technology might have on the society, on the economy and on the development goals of the developing nations. This case ~~report~~ study deals with the establishment of a pharmaceutical plant in Nigeria.

Establishing an initial dosage plant

The operation began in the traditional fashion as an export market handled through an agent relationship. When it was clear that the market was growing rapidly, the company decided to establish a dosage plant for pharmaceutical products. The Nigerian Government was also anxious to import technology and help establish an independent, self-sustained infrastructure as soon as possible.

The planning began in 1970 and in 1976 the plant was running at a fairly satisfactory rate.

Initial planning

A system for planning and establishing initial programmes for construction, start-up and value engineering was based on market surveys and production requirements. The investment of time and people at an early stage provides control guidance and operating plans for successful future operation.

Planning, budgeting and technologies

A project manager, in close cooperation with the company's HQ, the African Management Centre and the (future) country management, was appointed. His function was mainly that of a coordinator with line and staff support from various sources in the company. His function was, of course, also

Initial marketing and start up information [illegible] on the basis of a "Probable Project Proposal" from the country manager.

The Regional Management Centre provided technical information for a "Preliminary Design Basis". At this stage, senior engineers from the parent organisation were hired and this planning expertise helped to ensure that the project was not frustrated by inadequate planning and lack of technical skills.

In order to estimate manufacturing costs, expertise from other countries helped to adapt the planning to the intrastructure of the country, e.g. source of raw materials and equipment requirements. These planning and management skills represent a valuable technology often overlooked and form the basis for successful future operations. Some of the persons working with the project were to be key persons in the future organisation, a matter of great psychological and practical importance. During the first 2-3 years of construction and starting up, the specialists and their local counterparts spent approximately 50% of their time in formal on-the-job training. It must be borne in mind that the number of trainees must be in excess of the immediate need, as several people left for other jobs and positions both within the company and with competing companies. Approximately 20% were lost to competitors and/or government institutions.

Practical matters

Availability of items like cement, steel, cinder blocks, piping, etc. is short in many African countries, although competent building companies were locally available. At the company HQ, eight to thirty different specialists were involved from time to time in the early planning, both at plant site and at HQ. Though local construction and architectural firms were used, the specialised

characteristics of pharmaceutical plant design had to be transferred to the local firms, who thus gained new experience - especially in sterile and controlled installations and other pharmaceutical plant construction.

During the course of developing the plant, the company invited a series of reviews and critics of the project to accumulate comments and lessons applicable to the next situation.

Design and construction technology

Pharmaceutical manufacturing requires an extremely reliable production area resulting from strict construction specifications. Sterility of storage and work areas demands construction standards that had not been previously required by Nigeria. Experience gained is an asset not only to the company concerned but also to Nigeria as a whole.

The field construction engineer had spent 12 years on different construction sites for pharmaceutical plants and had successfully constructed a similar plant in Indonesia. In order to draw experience from other countries, the architects at the HQ supplied a series of concepts and detail drawings. Mechanical and electrical engineering and air conditioning requirements are some examples. For the plant facilities, 40-50 main drawings were required from the HQ, along with 10-15,000 specification sheets and equipment drawings. The project was developed and construction made in close cooperation with governments, not only to get approval but also to help the government technicians understand the new procedure.

The company was eager to train not only management but also the lower level labourers. Many new ideas developed from this system and modern tools could be utilised to a great extent, thanks to this training effort.

As mentioned above, training is an essential element of manpower development within the company - but a costly one. The government requires the company to train and develop local management and this creates certain problems concerning the daily running of the factory. The inability to hire foreign technicians, due to a restricted quota system, hampers OJT (on-the-job training), which training might be improved if an option were available. As mentioned above, the company put great importance on training and a great deal of technology given is new to the country. The hourly workers often have only rudimentary education and possibly little exposure to the company skills used, for example in food processing. For many, however, the training will begin with how to use rulers and simple scientific tools and then progress to the actual maintenance and operation of the blenders, encapsulations, slugging machines, etc. Throughout the training, the "attitudes for quality control" is emphasized.

Value engineering technology

The first year of operation is the most critical one. Thereafter refinements and adaptations for the best operation procedures can be introduced. This includes also seeking new ways of reducing costs, improving production quality and adapting the basic system to improve efficiency. The experience gained is pooled in a "Technology Pool" for all African units.

Periodic audits of country operations are an important factor for determining new means of increasing efficiency, cost performance and implementing new procedures.

Quality control is improved and assured by distributing documents containing information from other QC laboratores, stability data, etc. Purchasing, traffic, production planning and inventory control will also be improved as experience is gained.

these various forms of [illegible] production
[illegible] infrastructure for [illegible]
and also create an image of quality and national commitment.

APPENDIX 6

Appendix 6

II - La production locale : la SIPOA

Il existe trois unités de production pharmaceutique au Sénégal, toutes trois rassemblées dans la région de Dakar. La plus importante est la SIPOA. L'usine Valdafrique est la plus ancienne : elle ne fabrique pas que des produits pharmaceutiques et est d'importance moindre. L'Institut Pasteur de Dakar assure une certaine production de vaccins et de sérums ; c'est donc la SIPOA qui retiendra notre attention et dont nous allons rapporter les caractéristiques principales.

I) Histoire de la création de la SIPOA

Le projet de société Industrielle Pharmaceutique de l'Ouest Africain a été conçu dès 1968. En 1969, le Président L.S. SENGHOR charge la SCNEPI d'étudier les possibilités d'implantation d'une usine pharmaceutique pouvant fabriquer des produits et les vendre à des prix compétitifs. En effet, des chiffres de 1966 montraient que le secteur public avait importé pour 700 millions de frs CFA en un an ; le secteur privé pour 500 M, soit 1,200 milliard en tout.

En septembre 1972, une convention est signée avec la filiale française SOFFIN du laboratoire Boehringer Ingelheim. Cette convention établit la création d'une société d'économie mixte alliant la SOFFIN et le Gouvernement sénégalais. A la création, en décembre 1973, les parts de l'Etat Sénégalais étaient de 20 % contre 80 % pour la SOFFIN.

En raison de son statut, la société bénéficie d'exonération fiscale ; par ailleurs, la convention précise que l'Etat sénégalais doit lui acheter à un taux préférentiel, et que les bénéfices de la société peuvent être transférés à l'étranger.

2) Organisation de la SIPOA

Les divers services sont :

- Service laboratoire et service de contrôle
- Service médical
- Service administratif
- Service de la production.

Commentaires : Les différences de prix sont évidentes. S'il est vrai que le mode de présentation de la PHARMAPRO, par grandes quantités, permet des prix plus bas, cela n'en explique pas pour autant l'énorme marge : chloroquine et aspirine coûtent trois fois plus cher en pharmacie, et la Tifomycine 5 fois.

Le problème se pose par exemple au niveau des villages, où l'infirmier du dispensaire, ne disposant pas de médicaments en quantité suffisante, envoie les malades les acheter au prix fort dans les dépôts pharmaceutiques.

La pharmacien, directeur de l'usine, contrôle une équipe de 66 bres.

Le chiffre d'affaires est en augmentation, il est ainsi passé de 100 millions de frs CFA en 1975 à 400 millions en 1977.

3) Objectifs que s'était fixés la SIPOA

A sa création, la SIPOA devait répondre à un triple objectif :

- la fabrication de médicaments usuels pour les hôpitaux
- " " de produits essentiels pour les officines et les pharmacies villageoises
- la fabrication sous licence des produits les plus vendus.

le tout visant à un approvisionnement dans les meilleures conditions de prix, de qualité et de délai des collectivités publiques et privées tant au Sénégal que dans les Etats voisins.

4) Liste des produits fournis

Une liste de 100 produits finis représente la production de la SIPOA.

La plupart sont des médicaments de première nécessité : analgésiques, antipyrétiques, antibiotiques usuels, sulfamides, chloroquine, quinine, antiparasitaires intestinaux, vitamines.

Les différentes formes de présentation sont réalisées :

- ampoules (46)
- solutés massifs (17)
- solutés buvables (1)
- sirops (2)
- comprimés (27)
- gélules (3)
- pommades (2).

Enfin, il existe une liste de 15 spécialités disponibles en pharmacie selon 21 présentations (ou conditionnements) différents.

5) L'approvisionnement

a - Le service d'achat et de transit assure les opérations avec l'extérieur par l'intermédiaire de la maison-mère, la SOFFIN.

b - La matière première, à part l'eau, et, pour une certaine mesure, le cartonnage, le sucre, provient en totalité de l'extérieur.

c - Les pays exportateurs sont nombreux.

On peut citer la France, l'Allemagne, les U.S.A., la Chine, l'URSS, la Tchécoslovaquie...

Coût : En 1977, 200 millions de frs CFA ont été consacrés à l'achat de matières premières pour un budget de 400 millions, soit 50 %.

6) La fabrication

Le processus de fabrication est strictement identique à celui en vigueur dans l'usine mère. L'usine comporte plusieurs ateliers : atelier des injectables, atelier pour la fabrication des comprimés et des gelules, atelier de conditionnement, laboratoire d'analyse et de contrôle des produits.

Les différentes étapes de la fabrication sont variables suivant le produit le plus vendu, les opérations qui se succèdent sont les suivantes

- Mélange du principe actif avec l'excipient
- Humidification jusqu'à obtention d'une pâte
- Granulation
- Séchage à l'étuve des granulés
- Concassage des granulés
- Lubrification
- Compression à la pastilleuse.

La dernière étape est le conditionnement.

7) La distribution des produits SIPOA

Le service d'information est assuré par un visiteur médical, qui représente simultanément les produits Boehringer Ingelheim.

La vente se fait dans une double direction : Sénégal et pays extérieurs.

Selon la mémoire de M. NDIAYE, (les industries pharmaceutiques à Dakar), la distribution se fait 50 % à l'intérieur et 50 % à l'extérieur. Il cite pour 1977 les chiffres de vente au Sénégal de 200.000.000 sur un chiffre d'affaires de 400.000.000.

Selon les informations recueillies auprès du directeur de la SIPOA, l'exportation représenterait 75 % de la production.

Au Sénégal même, les ventes sont faites environ pour les 3/4 à la PHARMAPRO, 1/4 aux grossistes, en quantité équivalente pour chacun des 3 (un tout petit pourcentage étant réservé à l'Hôpital Principal de Dakar

8) Les problèmes auxquels se heurte la SIPOA

Nous énumérons rapidemment les diverses difficultés rencontrées dans le fonctionnement de l'usine, telles qu'elles nous ont été exposées de divers côtés, notamment par le pharmacien-chef de la SIPOA :

a - Le secteur recherches, prévu à la création de l'usine, n'a toujours pas vu le jour.

b - Un projet d'usine de pansements, refusé à la création de la SIPOA par le Gouvernement Sénégalais qui pensait le confier à un industriel national, n'a jamais été réalisé.

c - L'hostilité des pharmaciens d'officine s'est manifestée à plusieurs égards

- Nous avons déjà envisagé le "manque à gagner" des pharmaciens sur des produits qui sont pour beaucoup sur la liste des produits à coefficient 46 (cf. chap. prix de vente). Les pharmaciens se sont malgré eux ralliés à un projet visant à favoriser la prescription de produits sociaux.

- Par ailleurs, à la création de la SIPOA, les pharmaciens protesté car ils n'étaient pas associés au projet ; or, depuis décemb I977, la SIPOA a procédé à une augmentation de son capital de 270 mill le faisant passer de 60 à 330 millions, en l'ouvrant aux pharmaciens n naux.

L'état actuel est le suivant :

- SOFFIN : I83 millions
- Etat du Sénégal : 54 millions
- Pharmaciens Sénégalais : 33 millions par action de 5000

Or, de décembre I977 à juillet I978, aucun pharmacien n'avait encore acheté d'action.

d - L'attitude gouvernementale

Selon des informations recueillis à la SIPOA, une nouvelle législation au niveau de la Chambre de Commerce oblige les laboratoires à soumettre à autorisation préalable toute importation de médicament, pour protéger l'industrie locale : cela aboutirait à ce que tout produit pouvant être fabriqué au Sénégal n'aurait pas de con rrent étranger.

Selon le Conseiller Technique au Ministère de la Santé, aucune loi n'oblige ces laboratoires à représenter leurs produits devant la commission de contrôle (qui est en fait une commission d'agrément).

Il existe par contre une convention de durée limité destinée à protéger les produits SIPOA de la concurrence, mais elle est contournée. La protection des produits SIPOA ne s'appliquait, en fait, qu'aux produits non encore commercialisés au Sénégal avant la création de SIPOA.

e - La réticence du consommateur

Tout observateur a pu remarquer, la scène suivante se déroulant dans une pharmacie d'officine : un malade se plaignant d'un mal de tête et réclamant de l'aspirine, préfèrera l'aspirine importée à celle de la SIPOA.

Scientifiquement, la technologie semble impeccable. Mais le public n'est pas convaincu. Ainsi que nous le disions déjà dans PHAREV I3, le manque d'information au public, le peu d'enthousiasme des pharmaciens, l'indifférence hostile des médecins concourent à ce refus des consommateurs

f - Pour l'avenir

De tout cela résulte que le marché national est fermé. Les principaux client sont le Mali, la Mauritanie, le Cameroun.

Or, l'Afrique de l'Ouest représente à l'heure actuelle un marché de 110 millions de consommateurs, dont 5 millions au Sénégal ; ce pays est au quatrième rang des pays africains importateurs de produits pharmaceutiques, après le Nigéria, la Côte d'Ivoire et le Cameroun.

Ce marché potentiel devrait être en faveur d'implantation rentable d'industries locales. Or, à l'heure actuelle, plusieurs pays de l'Afrique de l'Ouest ont des projets de construction de leur propre usine pharmaceutique.

Mais ces différentes usines nationales, même si les projets ne sont pas identiques d'un pays à l'autre, ne risquent-elles pas de simplement se concurrencer sur un même marché, sans apporter de solution nouvelle aux problèmes de dépendance par rapports aux trusts multinationaux de fabrication et de recherche que nous avons exposés plus haut ?

APPENDIX 7

S.I.P.C.A

Appendix 7.-

S.I.P.O.A.
Km 10, Route de Rufisque
B.P. 2086
D A K A R.

17 JAN 1979

LISTE DES MEDICAMENTS

MODELE HOPITAL

/AMPOULES/

ACETATE DESOXYCORTICOSTERONE	5 mg	B/100 - 1 ml
ACETATE DESOXYCORTICOSTERONE	10 mg	B/100 - 2 ml
ADRENALINE	1 mg	B/100 - 1 ml
ATROPINE	0,25 mg	B/100 - 1 ml
CAMPHOSULFONATE DE SOUDE 167 mg/ml	100 mg	B/100 - 2 ml
CAMPHOSULFONATE DE SOUDE 167 mg/ml	100 mg	B/100 - 5 ml
CHLORPROMAZINE	25 mg	B/100 - 5 ml
CHLORURE DE POTASSIUM	10 %	B/100 - 10 ml
CHLORURE DE SODIUM	9°/oo	B/100 - 5 ml
DIPROPHYLLINE	200 mg	B/100 - 2 ml
EAU BIDISTILLEE		B/100 - 2 ml
EAU BIDISTILLEE		B/100 - 5 ml
EAU BIDISTILLEE		B/100 - 10 ml
EMETINE CHLORHYDRATE	40 mg	B/100 - 1 ml
EXTRAIT FLUIDE ERGOT DE SEIGLE	1 gr	B/100 - 1 ml
FORMIATE DE QUININE	250 mg	B/100 - 1 ml
FORMIATE DE QUININE	500 mg	B/100 - 2 ml
GLYCEROCACOSTRYCHNINE	1 mg	B/100 - 1 ml
HYPOSULFITE DE MAGNESIE	10 %	B/100 - 10 ml
LOBELINE	3 mg	B/100 - 1 ml
LOBELINE	10 mg	B/100 - 1 ml
NEOSTIGMINE	0,5 mg	B/100 - 1 ml
NICETHAMIDE	25 %	B/100 -1,5 ml
NICETHAMIDE	25 %	B/100 - 5 ml
OUABAINE	0,25 mg	B/100 - 1 ml
PHENOBARBITAL	40 mg	B/100 - 1 ml
PHENOBARBITAL	200 mg	B/100 - 1 ml

LISTE DES [illegible]

MODELE HOPITAL

/AMPOULES/ - (SUITE) -

PROCAINE CHLORHYDRATE	2 %	B/100 - 5 ml
PROCAINE CHLORHYDRATE 2 % ADRENALINE		B/100 - 5 ml
PROGESTERONE	10 mg	B/100 - 1 ml
PROGESTERONE	25 mg	B/100 - 1 ml
QUININE INJECTABLE	100 mg	B/100 - 1 ml
QUININE INJECTABLE	200 mg	B/100 - 2 ml
QUININE INJECTABLE	400 mg	B/100 - 4 ml
SPARTEINE SULFATE	50 mg	B/100 - 1 ml
STRYCHNINE SULFATE	1 mg	B/100 - 1 ml
VITAMINE B.1	100 mg	B/100 - 2 ml
VITAMINE B.1 100 mg + B.12 1000 mcg		B/100 - 2 ml
VITAMINE B.6	50 mg	B/100 - 2 ml
VITAMINE B.6	250 mg	B/100 - 5 ml
VITAMINE B.12	100mcg	B/100 - 1 ml
VITAMINE B.12	1000mcg	B/100 - 2 ml
VITAMINE C	100 mg	B/100 - 2 ml
VITAMINE C	500 mg	B/100 - 5 ml
VITAMINE K.1	20 mg	B/100 - 1 ml
VITAMINE K.1	50 mg	B/100 - 1 ml

/SOLUTE MASSIFS/

SOLUTION ACD		F/250 ml
SOLUTION ACD		F/500 ml
BICARBONATE DE SODIUM	1,4 %	F/250 ml
BICARBONATE DE SODIUM	1,4 %	F/500 ml
CHLORURE DE SODIUM	9°/₀₀	F/250 ml
EAU DISTILLEE		F/500 ml
GLUCOSE ISOTONIQUE	5 %	F/250 ml
GLUCOSE ISOTONIQUE	5 %	F/500 ml
GLUCOSE HYPERTONIQUE	10 %	F/250 ml
[illegible]		[illegible]

LISTE DES MEDICAMENTS

MODULE HOSPITAL

/SOLUTES MASSIFS/ - (SUITE) -

GLUCOSE HYPERTONIQUE	15 %	F/250 ml
GLUCOSE HYPERTONIQUE	15 %	F/500 ml
GLUCOSE HYPERTONIQUE	30 %	F/500 ml
MANNITOL	10 %	F/250 ml
MANNITOL	10 %	F/500 ml
MANNITOL	25 %	F/500 ml
SORBITOL	5 %	F/500 ml
SORBITOL	10 %	F/500 ml

/SOLUTE BUVABLE/

CHLORPROMAZINE	4 %	F/125 ml

/SIROPS/

CHLOROQUINE	0,5 %	F/500 ml
PIPERAZINE	15 %	F/500 ml

/COMPRIMES/

ACETARSOL	250 mg	B/ 500
ASPIRINE	500 mg	B/2000
ASPIRINE	500 mg	B/1 kg
CHARBON	500 mg	B/1 kg
CHLOROQUINE	100 mg	B/1000
CHLORPROMAZINE	25 mg	F/1000
CHLORPROMAZINE	100 mg	F/ 100
DELTA CORTISONE	5 mg	F/ 100
DISULONE	40/80	B/1000
FUMARATE FERREUX	200 mg	B/ 500
ISONIAZIDE	50 mg	B/1000
ISONIAZIDE	150 mg	B/ 500

.../...

[illegible]
[illegible] Place [illegible] Rafism[illegible]
B.P. 2096
- [illegible] -

LISTE DES MEDICAMENTS
MODELE HOPITAL

/COMPRIMES/ - (SUITE) -

PAREGORIQUE F.H.M.		B/1 kg
PECTORAUX F.H.M.		B/1 kg
PERMANGANATE DE POTASSIUM	250 mg	B/1 kg
PIPERAZINE SEBACATE	250 mg	B/ 960
PHENOBARBITAL	10 mg	F/1000
PHENOBARBITAL	50 mg	B/1000
PHENOBARBITAL	100 mg	B/1000
SULFAGUANIDINE	500 mg	B/1000
SULFAMETHOXYPYRIDAZINE	250 mg	B/1000
SULFATHIAZOL	500 mg	B/1000
TERPINE 100 mg + CODEINE 10 mg		B/1 kg
UROTROPINE	500 mg	B/1 kg
VITAMINE B.1	100 mg	B/ 500
VITAMINE B.1	250 mg	B/ 500
VITAMINE B.6	250 mg	B/1000
VITAMINE C	500 mg	B/1000
VITAMINE C TAMPONNEE	500 mg	B/ 100

/GELULES/

AMPICILLINE	250 mg	B/ 100
CHLORAMPHENICOL	250 mg	B/ 100
OXYTETRACYCLINE	250 mg	B/ 100
TETRACYCLINE	250 mg	B/ 200

/PEMMADES/

[illegible] OPHTALMIQUE	1 %	B/ 20 Tubes de 5 grs
[illegible] DERMIQUE	3 %	B/ 60 Tubes de 15 grs

APPENDIX 8

Appendix

Drugs point to new economic strategy

Five years ago Sri Lanka was able to buy all the diazepam tablets it needed for one-twentieth the price this commonly used tranquilizing drug was being offered by the traditional multinational supplier. It was a lucky outcome of a policy initially forced upon this small island by its precarious foreign exchange position.

The policy began in the 1950s and pioneered the new tropical restricted drugs list concept. In 1971, only some 400 generic drugs were allowed for sale in Sri Lanka. In 1972, the country's drug purchasing was centralized in a State-owned agency; and a world-wide bidding system was introduced to generate competitive offers from international suppliers. In 1973, it was able to buy 33 essential drugs and vaccines at less than a third of the prices quoted by the multinational suppliers.

by Anil Agarwal

If Sri Lanka, with one of the weakest and most vulnerable economies in the world, was able, albeit perforce, to find an effective way of bargaining with the massive pharmaceutical multinationals, how will the developing world fare if it closes ranks? In fact there is now what can be described as an informal and unwritten strategy on pharmaceuticals, a common current thinking in a number of United Nations agencies.

The Government of Guyana—as co-ordinator of the Trade, Technology and Industry sector of the non-aligned Action Programme for Economic Co-operation—leads an interregional project. It is funded by the United Nations Development Programme (UNDP). A task force of experts from the World Health Organization (WHO), UN Industrial Development Organization (UNIDO) and UN Conference on Trade and Development (UNCTAD), has been set up: an unique arrangement within the UN system in which several agencies are helping, on a specific issue, under the guidance of the developing countries themselves.

The task force is now on a tour of 23 (extendable to 20) developing countries—helping formulate integrated national drug policies and identifying specific projects for regional and interregional co-operation. These are vital components of the strategy which has the benefit of many studies—particularly the major analysis (1975) on technology transfer in the pharmaceutical industry, by Dr. Sanjaya Lall of Oxford University—and the political backing of the Third World, as voiced by many leaders and more than one conference.

Already some truths can be accepted as self-evident—the number of essential drugs for the majority of health problems is small, the number of international suppliers is very large; the technology to manufacture the essentials is within the economic reach of many developing countries even with relatively small markets, the technology is available within the Third World; and, if national procurement and manufacture programmes were similar, co-operation would be simple.

Countries within a region could, therefore, collaborate in drug purchasing, market intelligence, quality control, research and development and, possibly, even joint production of those drugs and vaccines which may be beyond the economic reach of some.

A restricted drugs list would be the starting point. Each country would have to draw up its own, according to its disease pattern and foreign exchange position.

Dr. Halfdan Mahler, WHO's Director-General, has pointed out that nearly 90 per cent of the Third World's health needs can be met with just one to two per cent of the drugs available on the markets of most Third World countries. India has some 15,000 branded drugs, Brazil about 14,000. An official Indian committee noted in 1975 that 116 drugs could meet most of the country's needs. WHO has prepared a model list of fewer than 220 essential generic drugs.

The next step would be to restrict imports to the listed drugs and centralize purchasing as much as is politically feasible. Preferably, drugs for the entire country should be imported through one agency. Certainly public sector imports must be centralized.

On setting up local drug industries, UNIDO suggests backward integration—countries should begin with small packaging plants, then set up formulation plants to tablet and capsule certain imported bulk drugs, and progress to manufacturing the bulk drugs themselves from imported intermediates and basic chemicals. The technologies for formulation and packaging plants are available in a number of developing countries, like Argentina, Brazil, Egypt, India and Mexico.

But for the manufacture of synthetic drugs, UNIDO believes that the small-scale multi-purpose plants being used in India are very appropriate. In these a number of chemically-related drugs can be manufactured in batches. For a mere $500,000, an Indian firm (with financial assistance from UNIDO) has supplied Cuba with a plant to manufacture 15 drugs. UNIDO sees pharmaceuticals as a major area for future industrialization and technical co-operation in the Third World. Countries which already have or are planning multi-purpose plants, include Brazil, Egypt, Libya, Mexico, Sri Lanka and the Andean Pact countries: Bolivia, Colombia, Ecuador, Peru and Venezuela.

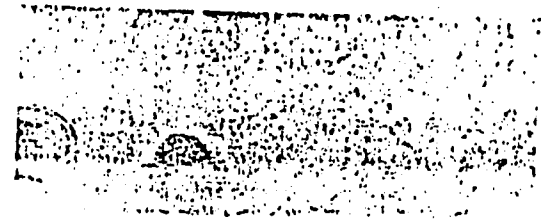
Herbal drug industry

The lead of China and Viet-Nam can also be followed. Several essential drugs can be easily produced from medicinal plants, particularly for use at the village level. Both UNIDO and WHO now support the use of medicinal plants. Many Third World countries can set up simple herbal drug industries within three years. As identification, cultivation and study of medicinal plants need multi-disciplinary expertise—in botany, agriculture, soil sciences, pharmacology and chemical technology—use of medicinal plants is another area with considerable scope for Technical Co-operation among Developing Countries (TCDC).

Many of these ideas are already being implemented. Guyana, for instance, now restricts its drug imports to those in its national formulary. All the Andean Pact countries have a basic medicaments list for all government purchases. The Andean Pact States and the Caribbean Community are also preparing regional formularies. The latter, being very small countries, now pool their drug purchasing. They jointly imported 39 drugs in 1977 and 69 this year and hope to extend their regional co-operation to joint quality control and production, after their Caribbean Centre for Pharmaceuticals is established. The former Secretariat is now planning a regionally integrated drug industry. The developing member States of the South Pacific Bureau for Economic Co-operation, many of them small islands, decided last year to merge some purchases with Papua New Guinea's drug tendering scheme.

The Commonwealth Regional Health Secretariat in Arusha has meanwhile set up a working group to study the possibilities of joint drug purchasing by 10 African nations: Botswana, Kenya, Lesotho, Malawi, Mauritius, Seychelles, Swaziland, Tanzania, Uganda and Zambia. Afghanistan and Guinea are trying to set up national drug buying agencies.

Thirteen Arab nations have jointly formed a company, the Arab Company for Drug Industries and Medical Appliances, to set up drug plants to meet the growing needs of the Arab region. The non-aligned task force's report should open up possibilities for increased regional and interregional collaboration.



"Medicinal plants provide essential drugs"—scene in Bolivia. WHO photo

But, while the strategy may be gaining acceptance, it will certainly not be very smooth. Countries will surely meet opposition from the international drug industry, usually channelled through the local medical community. The training of doctors is such that, even in the Third World, they tend to prefer brand names and certainly do not like any restrictions on their freedom to prescribe. Patience and education, both of the lay public and the medical community, will be needed if governments intend to implement elements of this strategy. Protests against efforts to rationalize drug use, on the argument that doctors and patients are being denied the best, can have a considerable effect on any government. For historical reasons, few developing country consumers prefer products from local industry or other parts of the Third World. The international drug industry is often quick to fan these doubts. National policy-makers will need a strong political will to overcome these difficulties.

So much progress has, in fact, been made in the drugs sector, that it needs to be asked at the UN whether the task force on pharmaceuticals can become a model for developing strategies for collective Third World self-reliance in other industrial sectors. Could what has been achieved without any lavishly funded project or international conference possibly be repeated for, say, fertilizers, iron and steel, computers and solar-powered irrigation pumps as well?

All Western governments have extensive systems for social and economic intelligence to help them develop their policies. The developed countries even have the joint Organization for Economic Co-operation and Development (OECD) Secretariat. The Third World has nothing similar even though the need for a secretariat has often been expressed. Given the lack of funds and all the differences within the Third World itself, it is unlikely that such a secretariat will be set up in the near future.

UN agencies are, to some extent, filling this gap. But inter-agency differences (a phenomenon not peculiar to the UN system) still leaves room for greater co-ordination and integrated effort. The task force on pharmaceuticals by putting together the various ideas that keep floating around but never get a chance to come together, has not become the co-ordinator of all the agencies but has certainly provided them a purposeful and reasonably co-ordinated framework to function within. This arrangement could well turn out to be far more effective than giant verbose international conferences.

Anil Agarwal, former Science Correspondent of The Indian Express, is Assistant Editor of Earthscan.

APPENDIX 9

Appendix 9

Cause of morbidity	Number of consultations	Percentage of total number of consultations
1. Malaria	292,000	28.0
2. Diseases of the respiratory tract	199,000	19.0
3. Entheritis and diarrhoea	148,000	14.2
4. Diseases of the digestive system	136,000	13.0
5. Intestinal helminthiases	89,000	8.5
6. Diseases of teeth and periodont	35,000	3.4
7. Iron deficiency anemia	24,000	2.3
8. Diseases of the genitourinary system	21,000	2.0
9. Measles	20,000	1.9
10. Gonococcal infections	11,000	1.0
		93.3

Source: Ministère de la Santé Publique. Togo

The main causes of death are also shown in that series of publications.

Cause of mortality	Number of deaths	Percentage of total number of deaths
1. Unknown causes	308	11.8
2. Entheritis and diarrhoea	110	7.8
3. Malaria	83	5.9
4. Tetanus	82	5.8
5. Avitaminoses	78	5.5
6. Anemias	58	4.1
7. Dysenteria	46	3.3
8. Measles	44	3.1
9. Meningitis	43	3.0
10. Tuberculosis	34	2.4
		62.7

Source: Ministère de la Santé Publique. Togo

Here it must be noted that the large percentage of unknown causes indicates that the diagnosis are somewhat unreliable.

Causes of morbidity in [illegible] - 1976

Cause of morbidity	Number of Consultations	Per 1000 Inhabitants
Intestinal helminthiasis	300,000	215
Malaria	170,000	122
Entheritis and diarrhoea	66,000	47
Diseases of the digestive system	45,000	32
Bronchitis	38,000	27
Influenza	35,000	25
Skin infections	30,000	21
Respiratory infections	29,000	21
Eye inflammation	25,000	18
Iron deficiency anemia	23,000	16

Source: Ministère de la Santé.

The five principle causes of mortality in the three general hospitals in the country in 1976 were:

Cause of mortality	Number of deaths		
	0-14 years	Adults	Total
Measles	529	-	529
Entheritis & diarrhoea	268	87	355
Anemia	243	51	294
Avitaminoses and other deficiency diseases	279	8	287
Tetanus	122	61	183

Source: Ministère de la Santé.

Centre for Health Statistics

Ministry of Health

P.O. Box 2848

Accra

3rd Jan. 1979

In case of reply the number and date of this letter should be quoted.

My Ref. No BY1

Your Ref. No

REPUBLIC OF GHANA

OUT PATIENTS MORBIDITY STATISTICS
1973 - 1977

These Statistics cover approximately 80% of all Government Clinics in Ghana; and are within an error of ± 15%.

SPECIALIST-IN-CHARGE
CENTRE FOR HEALTH STATISTICS
(DR. K. SAAKWA-MANTE)

THE CONSULTANTS FOR TRADE AND INDUSTRY
S:T GORANSGATAN 84 . S-112 38 STOCKHOLM
SWEDEN

520-529	Diseases of the Teeth and Periodont	17041	12962	18857	21514	19784
535	Gastritis and Duodenitis	27682	37119	41466	48575	44439
530-537	Other Diseases of the Digestive system					
580-629	Diseases of the Genitourinasy System	32966	29675	48570	47618	43699
680-686	Infection of skin and Subcut. Tissue	14959	29180	32580	27579	28085
690-709	Other Diseases of the skin and Subcut. Tissue	28063	24981	31020	31918	28906
714	Rheumatoid Arthritis					
721	Spondolysis and all Disorders.	5253	5904	7190	7415	6688
470-478	Other Diseases of Upper Resp. Tract	-	-	-	-	-
487	Influenza		-	-	-	-
490	Bronchitis	4991	3153	1133	2211	2049
490-519	Other Diseases of Resp. System	61299	51364	69213	65177	61789
		2713	1546	2794	2476	2975

		1973	1974	1975	1976	1977
00[illegible]	Amoebiasis	8570	6039	12090	39216	17074
	Entheritis and Diarrhoea					
010-018	Tuberculosis	835	1371	2500	2278	8025
030	Leprosy	880	62	551	531	264
033	Whooping Cough	3390	5795	6146	2529	9080
034	Streptococcal Sore Throat and Scarlating					
036	Meningococcal Infection	1419	3237	4672	1270	1532
037	Tetanus	246	100	494	209	234
052	Chickenpox	7867	11737	8069	17844	9126
055	Measles	21387	32023	40910	41089	37113
072	Mumps	310	391	780	353	198
076	Trachoma	3219	3704	5357	6820	3379
070-079	Other Diseases Dueto Viruses					
084	Malaria	318746	266081	252725	443310	413319
[illegible]91	Syphilis	33	185	325	233	124
098	Gonococcal Infection	-	-	-	-	-
102	Yaws	4218	1098	6391	5560	7337
120	Schistosomasis Bilharziasis	6883	2571	6898	7066	5513
125	Filarial Infection	644	133	876	1030	411
126	Ancylostomiasis and N Necatoriasis	8524	7270	11424	10142	9693
127	Other Intestinal Helminthiasis	30346	20895	28508	37249	27999
128-136	All Other Infect/Parasit Diseases					
260-269	Avitaminoses	5277	2202	4363	3482	2711
280	Iron Deficiency Anemia	16722	3361	7943	8195	8128
281-289	Other Diseases of Blood					
360-379	Inflammation of the Eye	17222	18248	22013	20748	15708
[illegible]81-382	Otitis Media	11805	11803	12306	13812	12901
390-392	Acute Rheumatic Fever	-	-	-	-	-
401-405	Hypertension	2738	3061	4686	5393	5376
460-466	Acute Respiratory Infection					

MORBIDITE/MORTALITE ET NOMBRE DE VACCINATIONS EN COTE D'IVOIRE - 1977

		Rougeole	Diphtérie	Tétanos	Coqueluche	Polio	Tubercul.	Choléra	Rage	F. Jaune	Variole	Rubéole
0 - 1 an	C	18.695	6	824	6.438	123	27	1	1	1		5
	D	863		305	74	4	2	1	1	1		
1 - 4 ans	C	35.351	17	553	10.141	212	53	23	3	3		55
	D	942		49	122	36	6	2	3	1		
5 - 14 ans	C	18.524	56	730	6.270	68	462	68	6	16		85
	D	224	2	52	20	2	20	3	6			
15 ans +	C	4.050	77	601	521	63	1.465	148	3			125
	D	20		58			78	4	3			
Ages Inc.	C	4.129	18	367	352	23	1.920	90	6	36		41
	D	96		96	2		120	3	6	7		
Totals	C	83.202	175	3.060	24.442	489	4.032	362	19	56		311
	D	2.013	2	580	218	42	226	23	19	9		
	%	2,4	1,1	20,7	0,9	8,6	5,6	6,3	106,0	16,4		
Nbre Vacci.		397.342	68.795	83.243	58.288	43.310	187.286	196.786	5.669	59.346	89.594	

All these problems combine to lower the health status of the Ghanaian population. In the next two sections, the prevailing diseases and the existing health care facilities will be reviewed.

5.3.2 Disease pattern

There are two important aspects of the disease pattern. The first is the number of cases occurring in the country (morbidity). Secondly, as one sign of the severity of the respective diseases, the number of deaths (mortality) in each disease is important. In this section, the Consultants have endeavoured to include both these aspects. However, in the case of morbidity statistics, these are still unavailable to us but we intend to include them in the final report, thus forming a firmer basis for our suggestions. The only morbidity statistics yet available are the WHO statistics covering reported cases of a limited number of endemic diseases. As in all statistical material, there are large possible errors. For example, in remote areas the possibilties of reporting even serious diseases may be limited. These statistics, however, shed some light over the disease pattern.

Reported cases of selected endemic diseases in Ghana 1975

Disease	No. of reported cases	% of total reported
Measles	140,300	54.2
Chicken pox	72,400	27.9
Whooping cough	22,000	8.5
Infectious hepatitis	14,400	5.5
Tuberculosis, respiratory system	6,100	2.5
Typhoid fever	2,100	0.8
Meningococcal infections	500	0.2
Leprosy	400	0.1
Polio myelitis, acute	300	0.1
Tetanus	200	0.1
		99.9%

Source: WHO statistics.

Footnote: Malaria is not reported by Ghana.

In case of reply the number and date of this letter should be quoted.

My Ref. No. BYT

Your Ref. No.

REPUBLIC OF GHANA

Centre for Health Statistics

Ministry of Health

P.O. Box 2848

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THE CONSULTANTS FOR TRADE AND INDUSTRY
S:T GORANSGATAN 84 . S-112 38 STOCKHOLM
SWEDEN

		1973	1974	1975	1976	1977
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	Entheritis and Diarrhoea					
010-018	Tuberculosis	835	1371	2500	2278	8025
030	Leprosy	880	62	551	531	264
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072	Mumps	310	391	780	353	198
076	Trachoma	3219	3704	5357	6820	3379
070-079	Other Diseases Dueto Viruses					
084	Malaria	318746	266081	252725	443310	413319
091	Syphilis	33	185	325	233	124
098	Gonococcal Infection	-	-	-	-	-
102	Yaws	4218	1098	6391	5560	7337
120	Schistosomasis Bilharziasis	6883	2571	6898	7066	5513
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128-136	All Other Infect/Parasit Diseases					
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280	Iron Deficiency Anemia	16722	3361	7943	8195	8128
281-289	Other Diseases of Blood					
360-379	Inflammation of the Eye	17222	18248	22013	20748	15708
381-382	Otitis Media	11805	11803	12306	13812	12901
390-392	Acute Rheumatic Fever	-	-	-	-	-
401-405	Hypertension	2738	3061	4686	5393	5376
460-466	Acute Respiratary Infection	-	-	-	-	-
470-478	Other Diseases of Upper Resp. Tract	-	-	-	-	-
487	Influenza	4991	3153	1133	2211	2049
490	Bronchitis	61299	51364	69213	65177	61789
490-519	Other Diseases of Resp. System		1546	2794	2476	2975

520-529	Diseases of the Teeth and. Periodont	17041	12962	18857	21514	19784
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580-629	Diseases of the Genitourinasy System	32966	29675	48570	47618	43699
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690-709	Other Diseases of the skin and Subcut. Tissue	28063	24981	31020	31918	28906
714	Rheumatoid Arthritis					
721	Spondolysis and all Disorders.	5253	5904	7190	7415	6688

		Congo	Togo	Ghana
006	Amoebiasis	3,4		
	Entheritis and diarrhoea	66	147	
010 - 018	Tuberculosis	1 - 2	0,5	6,4
030	Leprosy	15	0,5	0,5
033	Whooping cough	6,7	5,5	12 - 22
034	Streptococcal sore throat and scarlatina	6,3		
036	Meningococcal infection	0,5	0,8	0,5
037	Tetanus		0,4	
052	Chickenpox	5	9	48 - 72
055	Measles	16,5	20,4	91 - 141
072	Mumps	4,1		
076	Trachoma	0,3		
070 - 079	Other diseases due to viruses		8,4	
084	Malaria	170	292	
091	Syphilis	0,3	0,6	
098	Gonococcal infections	17	10,8	
102	Yaws	0,5 - 2		
120	Schistosomiasis (bilharziasis)	9,7	6,2	
125	Filarial infection	9,6	12,2	
126	Ancylostomiasis and necatoriasis	50	14,5	
127	Other intestinal helminthiases	230	56,3	
128 - 136	All other infect./parasit. diseases		12,9	
260 - 269	Avitaminoses	18	8,6	
280	Iron deficiency anemia	23	24,1	
281 - 289	Other diseases of blood	13,5		

		Congo	Togo	Ghana
360 - 379	Inflammation of the eye	25		
381 - 382	Otitis media	15		
390 - 392	Acute rheumatic fever	16		
401 - 405	Hypertension	9,8		
460 - 466	Acute respiratory infections	29	199	
470 - 478	Other diseases of upper resp. tract	20		
487	Influenza	35	4	
490	Bronchitis	38		
490 - 519	Other diseases of resp. system		6,1	
520 - 529	Diseases of the teeth and periodont.	12	34,5	
535	Gastritis and duodenitis	11		
530 - 537	Other diseases of the digestive system	34	136	
580 - 629	Diseases of the genitourinary system	20	20	
680 - 686	Infections of skin and subcut. tissue	30	3,6	
690 - 709	Other diseases of the skin and subcut. tissue	20		
714	Rheumatoid arthritis	18		
721	Spondolysis and all. disorders	18,7		

M:-läkemedelsfabrik för exempelvis Togo

Frågan gäller om det är alls möjligt att organisera en läkemedelsfabrik så att priserna inte blir högre än vad som betalas i Europa (+ transporten) då man köper från "generica"-tillverkare med hygglig kvalité.

Tillverkningsprogrammet skulle vara exempelvis detta:

Tabletter (miljoner)	
Klorokin	75
Acetylsalicylsyra	60
Vitaminer (multi)	15
Ftalylsulfatiazol	10
Järnsulfat	10
Diuretikum	7
Antacidum	7
Penicillin V	5
Tetracyclin (ev)	5
Kloramfenikol (ev)	5
Dapsone	5
Dietylkarbamazin	5
Resorberbart sulfa	5 (ev)

Siraper (fl. à 100 ml)	
Hostsirap	150.000
Piperazin	150.000
Promatazin	50.000
"Påsar"	
Rehydreringssalter ??	
Befenium à 5 g	25.000
Ögondroppar	25.000
Ögonsalva	25.000
Hudsalva	50.000

Injektionsmedicin (1000)	
Askorbinsyra	250
Fenemal 0,2 g	200
Klorpromazin 25 mg	100
50 mg	100
Promatazin	100
Diazepam	100
Ampicillin	100
Penicillin G procain	100
" kalium + prokain	100
Penicillin benzatin	100

1978-12-20 GT

Liberia

NOTIFIED EPIDEMIC DISEASE BY COUNTIES
DURING THE PERIOD JANUARY 1 - SEPTEMBER 30, 1976

APPENDIX VI

E	TOTAL		MONT. COUNTY		BASSA COUNTY		SINOE COUNTY		MARY-LAND COUNTY		GRAND CAPE MT COUNTY		LOFA COUNTY		NIMBA COUNTY		BONG COUNTY		GRAND GEDEH COUNTY	
	CASES	DTHS	CASES	DTHS	CASES	DTHS	CASES	DTHS	CASES	DTHS	CASES	DTHS	CASES	DTHS	CASES	DTHS	CASES	DTHS	CASES	DTHS
a	42032	70	14409	67	4607	-	2251	-	1098	-	3009	-	4542	-	4369	1	3465	2	4202	-
ono-	1077	-	103	-	-	-	16	-	-	-	-	-	347	-	335	-	191	-	85	-
nia	3149	151	1781	144	93	4	35	-	57	-	266	-	145	-	157	-	87	3	[illegible]	-
s	1420	55	617	52	70	-	45	-	15	1	108	1	193	-	42	-	46	1	[illegible]	-
ery/ y Sis	3425	-	1390	-	134	-	151	-	45	-	235	-	35	-	493	-	28	-	51[illegible]	-
a	508	8	507	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
[illegible]	15[illegible]	75	7564	61	1361	6	614	-	334	3	530	-	1393	3	1132	-	151[illegible]	2	[illegible]	-
ll-pox	200	-	67	-	9	-	3	-	6	-	4	-	20	-	42	-	8	-	41	-
co- Men s	24	-	11	-	-	-	-	-	2	-	-	-	4	-	3	-	1	-	3	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ex	2303	-	264	-	-	-	313	-	320	-	11	-	328	-	509	-	455	-	32	-
nye-	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
[illegible]	446	49	354	45	1	1	12	-	5	1	19	1	20	-	10	-	[illegible]	1	[illegible]	-
culo- ulmo-	726	22	620	20	14	-	12	-	2	2	19	-	44	-	8	-	5	-	[illegible]	-
s	8	-	-	-	-	-	-	-	1	-	3	-	-	-	1	-	-	-	-	-
nis pir.e ch)	1161	1	343	1	30	-	107	-	25	-	13	-	256	-	103	-	127	-	157	-
tious ition	226	-	141	-	-	-	15	-	3	-	19	-	1	-	5	-	1	-	41	-
pox	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
e	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ger-	109[illegible]	-	370	-	21	-	4	-	-	-	-	-	336	-	319	[illegible]	[illegible]	-	-	-
Typhoid	26	-	23	-	10	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-

APPENDIX VII

NUMBER OF QUALIFIED & EMPLOYED PHYSICIANS
(DOCTORS & DENTISTS IN LIBERIA
JANUARY - SEPTEMBER 1976

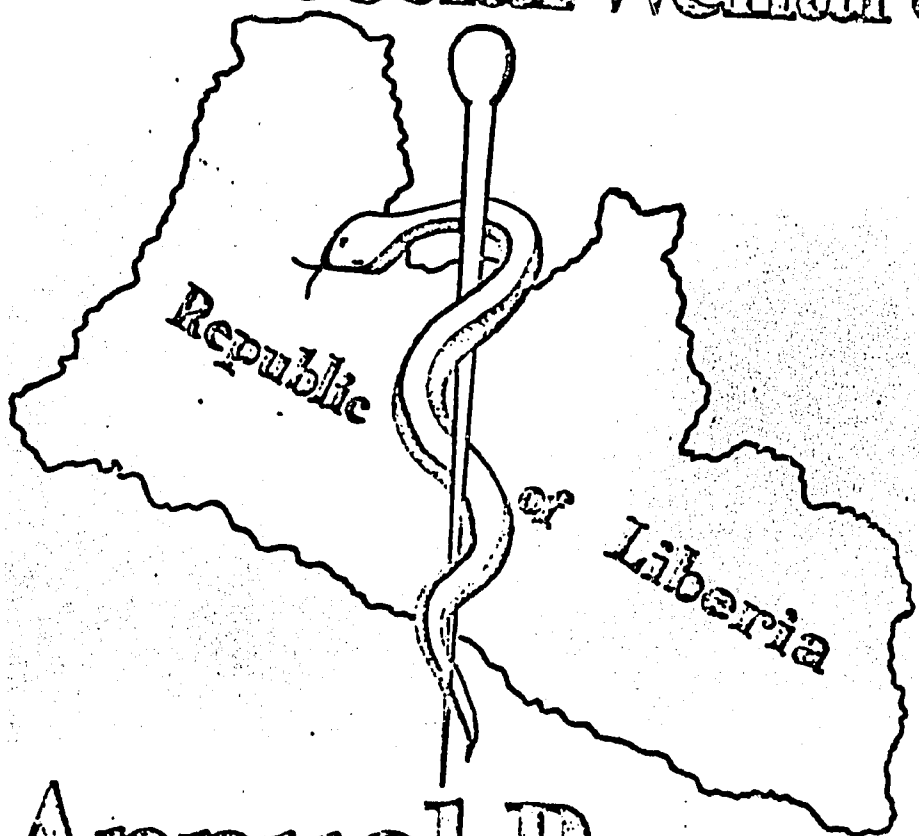
DISTRIBUTION OF PHYSICIANS BY COUNTY AND SECTOR
OF EMPLOYMENT

COUNTY	NO. OF DOCTORS BY SECTOR					NO. OF DENTISTS BY SECTOR				TOTAL NO. OF PHYSICIANS
	1974 POP.[2]	GOVT.	CON.	MISSION & OTHERS	TOTAL	GOVT.	CON.	MISSION & OTHERS	TOTAL	
Montserrado	411,693	58	14	37	109	-	-	7	14	123
Grand Bassa	154,914	2	7	-	9	1	-	-	1	10
Sinoe	69,620	2	1	-	3	1	-	-	1	4
Maryland	97,354	4	1	-	5	1	-	-	1	6
Grand Cape Mt.	130,121	2	2	-	4	1	-	-	1	5
Bong	206,748	2	8	3	13	1	1	-	2	14
Nimba	268,428	3	7	4	14	-	-	-	-	14
Lofa	192,052	4	-	2	6	-	-	-	-	6
Grand Gedeh	74,120	2	-	-	2	-	-	-	-	2
TOTAL	1,604,050	79	40	44	165	12	1	7	20	185

SOURCES: 1) Ministry of Health & Social Welfare's List of Physicians in Liberia

2) Adjusted Tentative Figures for 1976 based on 1974 Liberian Population Census. (30% Growth Rate) Planning & Economic Affairs, Monrovia

Ministry of Health and Social Welfare



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IV. BUREAU OF PREVENTIVE SERVICES

The Divisions of the Bureau of Preventive Services, (Communicable Disease Control, Family Health, Environmental Health & Health Education), during this reporting period made all efforts, despite several constraints, to strengthen the out-reach activities of the Public Health Programs: In the Development Budget, three new programs - Tuberculosis, Public Health Laboratory and Malaria Control - were approved and the projects begun. These programs cover a 25 mile radius outside Monrovia.

Communicable Disease Control

Surveillance of Communicable Diseases of Public Health importance was maintained and immediate epidemiological investigations and containment measures were undertaken whenever epidemics occured. Immunizations against communicable diseases that can be prevented were carried out throughout the Country, depending upon available mobile equipment and other resources.

Smallpox Eradication

Smallpox has been completely eradicated from Liberia. This was achieved only because of sustained and determined efforts of the Ministry in maintaining a successful vaccination program over the past six years. The World

Health Organization International Commission for Certification of Smallpox Eradication came to Liberia in April, 1976.

The Commission's team members visited remote areas of Nimba, Bong and Grand Cape Mount Counties to study our epidemiological surveillance activities. Later, the World Health Organization declared that smallpox transmission has been interrupted in Liberia. However, in an effort to maintain a relatively immuned population, 215,876 vaccinations were given during the period under review by both static and mobile units throughout Liberia. Of the total population vaccinated, (73%) seventy-three per cent represents vaccinations while 27% twenty-seven per cent represents vaccinations of new susceptibles in the population).

Tuberculosis Control

We continue to administer B.C.G. vaccinations to the young susceptible population in order to prevent tuberculosis. 138,128 vaccinations were administered during the reporting period. In order to implement a comprehensive control program, the Development Budget has provided funds for diagnosis, follow up and treatment of tuberculosis cases in all counties.

Formerly the facilities were limited to Monrovia. Fifteen nurses have been recruited and are undergoing intensive

training in tuberculosis control. Upon completing their training, they will be deployed to the county hospitals from where they will operate within the structure of the Community Health Department. The patients diagnosed will receive treatment at clinics nearest their homes and will be monitored until they have completed their treatment. There are 701 cases receiving regular treatment throughout Liberia. These patients are distributed as follows: 432 in Monrovia, Montserrado County, 133 in Harper, Maryland County, 137 in Zorzor, Lofa County and 19 in Suakoko, Bong County. It is expected that after the first year of operation of the Multi-Purpose Epidemiological Services Project, the number of diagnosed tuberculosis cases receiving regular treatment will be increased by more than two hundred per cent (200%).

Measles

Measles continues to be a major health problem among children with high morbidity and mortality. During this period under review over 1,400 cases were reported inspite of the usual under reporting. We were able to administer only 74,968 measles vaccinations due to the lack of adequate transportation, support and cold chain. This resulted in a relatively poor coverage of many populated and accessible areas.

Cholera

Cholera is endemic in Monrovia and Harper. Sporadic outbreaks were reported from other areas, however, from January to September, 1976. 1,253 diarrhoeal cases were investigated at the Cholera Laboratory. Of this number, 575 were positive for cholera and 9 deaths occured. Unless proper potable water supply is introduced in congested areas where susceptible people reside, cholera will continue to be a problem. A total of 17,695 cholera vaccinations were administered throughout the Country, during this reporting period. The majority, approximately 80% of vaccinations administered, were to international travellers. It is imperative that measures be undertaken to have all dug wells closed in urban centers where potable water is available. The most logical area to [illegible] Monrovia. About 90% of all reported [illegible] from areas where shallow wells and pit latrines are utilized. Despite efforts to chlorinate these wells, there is a high percentage of reinfected cases.

Lassa Fever

During this period one unconfirmed case of Lassa Fever was reported from the Gisi Chiefdom, Lofa County. Plans are envisioned to conduct in the near future, an ongoing epidemiological survey in Lofa County from where sporadic

cases occur. This survey will be conducted in collaboration with the Liberian Institute for Biomedical Research.

Leprosy

There are 2,303 active leprosy cases under treatment at present and 648 cases were discharged from receiving treatment, after being cured last year. More efforts are directed now towards case finding, treatment and health education pertaining to leprosy.

With the assistance of German Leprosy Relief Association, a major contributor to the Leprosy Control Program, a colour 16m movie on Leprosy was produced in Liberia. This film will be extensively used around the Country for educating the public, providing for them facts about the disease. Emphasis is placed on how easily Leprosy can be cured without producing the commonly seen deformities, when treatment is sought early.

We are confident that with the continued assistance from the German Leprosy Relief Association, the Sovereign Military Order of Malta, American Leprosy Association, and other agencies, Leprosy may be controlled in the near future.

Environmental Health

Basic Sanitation:- 9,901 inspections were conducted on residences, hotels/motels, eating and drinking places, markets, industries, prisons, hospitals/clinics, schools, cinemas, recreation centers, wells, latrines, et cetera. Out of 9,901 inspections, 9,431 nuisances were corrected. Approximately 96,230 pounds of foodstuff were inspected and passed for human consumption, while 122 Certificates of Clearance were issued. 9,024 pounds of foodstuff were inspected, condemned and disposed of under supervision and twenty-nine Certificates of Destruction were issued. 157 Certificates of Standards were issued to eating establishments and 95 Certificates of Clearance were issued for the importation of Used Clothing in Liberia.

Vector/Malaria Control

With respect to Larviciding, a total of 16,753 breeding habitats were treated using 8,600 gallons of Baytex and 750 gallons Abate emulsified formulations. In the area of source reduction, 3,801 small artificial water containers were emptied or destroyed while 31 drains and laterals, approximately 1,000 feet in length, were cleared.

In residual spraying, a total of 334 houses containing 4,488 rooms were treated, using 151.6 gallons of DDT, 25% emulsified concentrate, 62.3 gallons malathion, 50%

emulsified concentrate, and 5 pints vapona 48% emulsified concentrate, consequently protecting 3,347 inhabitants.

Entomology

In treated areas, 76 rooms were examined from which 4 female A.gambiae, 173 female and 97 male culicine mosquitoes were recorded, giving 0.05 and 2.27 average room densities respectively. In the untreated areas, 38 rooms were also examined from which 6 males and 55 females A. gambiae, 22 males and 85 female culicine mosquitoes were collected, giving 1.44 and 2.23 average room densities respectively.

Larval Collections

Random larval collections were carried out in both treated and untreated areas. 685 breeding places were examined in the treated areas with 98 (15.2%) positive for mosquito larvae. A total of 4,923 dips were made, 199 A. gambiae and 701 culicine larvae collected thus giving 0.04 and 0.34 average densities/dip respectively. From the untreated areas, only 199 breeding places were examined, of which 34 (28.5%) were positive for larvae. 15 A. gambiae larvae were recorded from 932 dips thus giving 0.01 A. gambiae and 0.56 culicine densities/dip.

Parasitology

During March a malariometric survey was conducted with the assistance of the WHO Malariologist of the Malaria Consultant Team (ICPMPD-02) in collaboration with the National Staff of this Section in 16 randomly selected localities, (8 in Monrovia proper where active larviciding is going on, 4 in Sinkor where larviciding activities were discontinued in 1974 and 4 in Vuaheos Island with no larviciding activity). Out of 2,590 blood slides collected (67.1% of this number were from children 0 - 9 years of age), 739 were found positive giving overall parasite rate of 28.5. The infant parasite rate and fametocyts rate were 17.8 and 1.1 respectively. There were 98.2% of P. faliciparum, 3.4% of P. malariae and 0.4% P. Ovale and among the age group of 2-9, the parasite rate found was 31.8, with spleen involvement 9.7, the gametocyts rate of that age group was 1.3.

Comparing the situation in treated areas with those of untreated areas, the results were as follows:

	MONROVIA PROPER (TREATED)	SINKOR UNTREATED	BUSHROD ISLAND UNTREATED
Infant parasite rate	8.8	29.5	14.2
Parasite rate (2 - 9 age group)	23.3	45.0	28.5
Spleen rate (2 - 9 age group)	5.8	12.8	11.0

It is apparent that the prevalence rate is much lower in the treated areas than in the untreated areas.

A total of 687 blood specimens were taken from patients who reported to the Malaria Control Laboratory, of this number 487 (70.9%) were found positive. The gametocyte rate was 1.8.

Entomology Operation In Bentol City

Entomological surveys were conducted during the month of June in eight localities selected as capture stations. Results obtained therefrom were as follows:

Spray Sheet Collections: Spray sheet collections were carried out during the early hours of the morning in each locality and a total of 20 males and 475 females anopheles mosquitoes were recorded from a total of 47 rooms examined. The results were:

1. A. gambiae 20 males and 196 females with average room density of 6.29

2. A. hancochi 1 female giving a room density of 0.02. Overall average anopheline density/room (AAD) was 10.10 an average Vector density/room (AVD) was 10.08. The blood fed/gravid ratio as determined from 169 A. gambiae and 7 A. funestus examined were 7.4.1 and 2.3.1 respectively. A. funestus 178 female with average room density of 3.78.

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Activities and Accomplishments

Manpower

The Liberian Medical Board which has the responsibility for regulating the practice of Medicine in Liberia registered one hundred sixty-three (163) physicians, dentists and veterinarians during the period under review. Of this number, one hundred forty-one (141) are registered to practice medicine and surgery, nineteen (19) Dentistry and three (3) Veterinary medicine.

Pharmacy Board

The Pharmacy Board continued its efforts to upgrade the practice of Pharmacists and regulate the importation and sale of drugs in the Country, during the period under review. Accomplishments were made in the following areas:

1. Progress towards the establishment of a National Drug Registry.

2. Setting standards which necessitated improvements in the physical conditions of pharmacies and drug stores.

3. Curriculum plans were made with the aim of commencing training of dispensers during the

next reporting period

4: Procedures for licensing of pharmacies, drug stores and medicine stores were standardized.

In our effort to increase the productivity of the Board, it is recommended that its membership be increased from five to a maximum of twelve. It is expected that this larger Board will have greater accomplishments during the next reporting period.

West African Pharmaceutical Federation (WAPF)

The Pharmaceutical Association of Liberia hosted the inaugural meeting of the West African Pharmaceutical Federation. Mrs. Clavenda Bright-Parker was elected the first President of the Federation.

Member Countries represented were:

a. The Republic of Ghana
b. The Peoples Republic of Benin
c. The Republic of the Ivory Coast
d. The Federal Republic of Nigeria
e. The Republic of Senegal
f. The Republic of Sierra Leone and
g. The Republic of Liberia

The basic aims and objectives of the WAPF are:

1) To maintain close contact and cooperation with Member States

2) To coordinate the activities of Member States

3) To promote exchange of information among various West African Association through conferences, seminars, symposia, etc.

4) To encourage the advancement and standardization of pharmaceutical education in the region.

Nursing Board

The Liberian Board of Nurse Examiners and the Education Committee of the Midwifery Council became formally amalgamated in February, 1976. The present Board is called The Liberian Board for Nursing and Midwifery and has the responsibility for regulating and setting the standards of Nursing and Midwifery practices in Liberia. Specifically, the Board:

1. Registers all nurses and midwives practicing in Liberia

2. Accredits all Nursing and Midwifery Schools in Liberia

3. Prepares and administers Annual State Board Examinations to nurses and midwives completing accredited schools

4. Determines basic curricula content for Nursing and Midwifery schools in Liberia

5. Determines conditions for practice of nursing and midwifery in Liberia

6. Plans for further development in the practice of nursing and midwifery in Liberia

7. Recommends disciplinary action for malpractitioners of nursing and midwifery

8. Cooperates with other Boards in order to set standards for improving health care delivery in Liberia

It is anticipated that as the volume of work increases, Government will give consideration to providing additional financial assistance in order to assure that the accomplishments of this Institution be maximized. In this regard, it may be necessary to plan the strategy whereby the law governing the paying of nurses license fee into Government revenue be enforced.

2. Central Drug Depot

Since the establishment of the Medical Depot two (2) years ago, it has made available drugs, medical supplies and equipment to ten (10) county hospitals, two hundred and twenty (220) clinics, twenty (20) health centers, the JFK Medical Hospital Complex, Phebe Hospital, the Ministry of Defense as well as Homes and Institutions for Indigents Children.

Demands on the services of the depot outstrips its capacity to deliver. This inadequacy may be attributed to the following factors:

a. Shortage of trained manpower

b. Inadequate funding of the depot's operations

c. Inadequate storage space

It is expected that solutions to these problems will be forthcoming during the next reporting period.

Radio Communications

The radio network system which has been established in all counties, continues to improve communications between Central Administration and the County Hospitals, as well as inter county communications. The number of radios in the system has increased by one - the additional radio being installed at the Mamba Point Clinic.

Liberia

NOTIFIED EPIDEMIC DISEASES BY COUNTIES
DURING THE PERIOD JANUARY 1 – [illegible]

APPENDIX VI

DISEASE	TOTAL CASES	TOTAL DTHS	MONT. COUNTY CASES	MONT. COUNTY DTHS	BASSA COUNTY CASES	BASSA COUNTY DTHS	SINOE COUNTY CASES	SINOE COUNTY DTHS	[illegible] CASES	[illegible] DTHS	[illegible] CASES	[illegible] DTHS	[illegible] CASES	[illegible] DTHS	BIMBA COUNTY CASES	BIMBA COUNTY DTHS	[illegible] CASES	[illegible] DTHS	[illegible] CASES	[illegible] DTHS
Malaria	42032	70	14409	67	4607	–	2253	–	[illegible]	–	[illegible]	[illegible]	[illegible]	–	4369	[illegible]	[illegible]	[illegible]	4202	[illegible]
Schistosomias	1077	–	103	–	–	–	16	–	–	–	–	–	327	–	339	–	[illegible]	[illegible]	85	–
Pneumonia	3149	151	1781	144	93	4	[illegible]	–	[illegible]	–	[illegible]	[illegible]	[illegible]	–	157	–	[illegible]	[illegible]	[illegible]	–
Measles	1429	55	617	52	79	–	[illegible]	–	[illegible]	1	[illegible]	[illegible]	[illegible]	–	43	[illegible]	[illegible]	[illegible]	284	–
Dysentery/ Bacilliary Amoebic	3425	–	1390	–	134	–	151	–	[illegible]	–	[illegible]	–	35	–	493	–	[illegible]	–	514	–
Cholera	508	8	507	8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Diarrhoea	15379	75	7564	61	1361	6	614	–	[illegible]	3	[illegible]	[illegible]	1593	–	1132	–	[illegible]	[illegible]	938	–
Chicken-pox	200	–	67	–	9	–	[illegible]	–	[illegible]	–	[illegible]	–	20	–	42	–	[illegible]	–	411	–
Cerebro-Spinal Men ingitis	24	–	11	–	–	–	–	–	2	–	–	–	4	–	3	–	[illegible]	–	3	–
Yellow Fever	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Leprosy	2303	–	264	–	–	–	313	–	[illegible]	–	11	–	328	–	589	–	[illegible]	–	32	–
Poliomyelitis	2	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Tetanus	446	49	354	45	1	1	12	–	5	1	19	1	29	–	10	–	2	1	23	1
Tuberculosis Pulmonary	726	22	620	20	14	–	12	–	2	2	19	–	44	–	8	–	5	–	2	
Rabies	8	–	–	–	–	–	–	–	[illegible]	–	3	–	–	–	1	–	–	–	–	–
Pertunis (whooping cough)	1161	1	343	1	30	–	107	–	25	–	13	–	256	–	103	–	127	–	157	–
Infectious Hepatitis	226	–	141	–	–	–	15	–	3	–	19	–	1	–	5	–	1	–	41	–
Smallpox	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Plague	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Onchocerciasis	1082	–	370	–	21	–	4	–	–	–	–	–	336	–	319	6	2	–	–	–
Enteric Fever Typhoid & Para	36	–	23	–	10	–	–	–	–	–	–	–	3	–	–	–	–	–	–	–

APPENDIX 10

NAME OF CONSULTANTS: DR. WAYNE EVANS
DR. DAVID FRENCH
DR. MAIFUTIE N'DIKAM

LENGTH AND DATES OF CONSULTING ASSIGNMENT: 10-28 JANUARY 1979

CONSULTATION SITES: ABIDJAN
LOME
LAGOS
IFE
DAKAR
SINE-SALOUM

PROJECT CONTACTS: WHO COORDINATOR - IVORY COAST
" NIGERIA
" TOGO
" SENEGAL
RELEVANT GOVERNMENT AND PROGRAM OFFICIALS AND APPROPRIATE EDUCATIONAL INSTITUTIONS.

ASSIGNMENT OBJECTIVES: 1. TO VISIT AND ASSESS THE ON-GOING PHARMACEUTICAL PROGRAMS IN THE IVORY COAST, NIGERIA, TOGO AND SENEGAL WHICH ARE DEVELOPING SYSTEMS AND TRAINING FOR DRUG SUPPLY SYSTEMS AND DISTRIBUTION CENTERS, I.E. VILLAGE PHARMACIES.

2. TO GATHER INFORMATION FROM THESE VISITS CONCERNING:

A. THE CURRENT PHARMACEUTICAL DELIVERY SYSTEMS THAT EXIST AND THEIR PROBLEMS.

B. COUNTRIES' SUGGESTIONS FOR WAYS TO STRENGTHEN THEIR PROGRAMS

C. LOCAL PHARMACEUTICAL PRODUCTION AND TRAINING NEEDS.

D. ESTABLISH BASIC LIST OF NECESSARY DRUGS AND THE EQUIVALENCY BETWEEN AMERICAN PHARMACEUTICALS AND THOSE MANUFACTURED BY OTHER COUNTRIES SERVING WEST AND CENTRAL AFRICA.

E. IN COLLABORATION WITH APPROPRIATE WHO REGIONAL AND COUNTRY PERSONNEL TO DEVELOP PLANS FOR POSSIBLE SHDS PHASE II PROJECTS IN THE AREA OF DRUG PURCHASE, STORAGE, DISTRIBUTION, COMPOUNDING, MANUFACTURE AND TRAINING OF NECESSARY PERSONNEL. SPECIAL EMPHASIS TO BE PLACED ON THE SITE MOST SUITABLE FOR THE DEVELOPMENT OF A REGIONAL PHARMACEUTICAL CAPABILITY.

HARVEY+++

DR FRENCH BSN
[illegible]
FOR INTL TELEX DIAL 710-599-3535

TWX NUMBER 0301
[illegible] DEC 1978
[illegible] MASS.

ATTN: SHDS ABIDJAN

RE: YOUR TELEX NO. 1142, MONTAGUE WILL BE TALKING TO VITALE ON THURSDAY AND ATTEMPTING TO FIND WAY TO TRANSMIT GAMBIA MESSAGE FRIDAY.

[illegible]
[illegible]

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