

INTERNATIONAL RESEARCH CENTER ON DISASTERS EPIDEMIOLOGY

MEDICO-NUTRITIONAL INFORMATION ON DISASTER PRONE COUNTRIES

GLOSSARY OF COMMON ILLNESSES

Published as part of "The Country Fact Sheets" issued by the
Licross/Volags Steering Committee for
Disasters.

Unit of Epidemiology
School of Public Health
University of Louvain
B - 1200 Brussels
Belgium

September 1979

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FOREWORD

In 1978, the Licross/Volags Steering Committee for Disasters, consisting of the following Organizations : Catholic Relief Services, the League of Red Cross Societies, the Lutheran World Federation, OXFAM and the World Council of Churches, published the Second Edition of its Country Fact Sheets, "A Guide to climate - topography - population food habits - clothing - housing in disaster prone areas".

The present document includes only the medico-nutritional parts of the Country Fact Sheets together with " a Glossary of Common Illnesses" written in simple terms for non-medical administrators.

The complete Country Fact Sheets can be obtained from the Licross/Volags Steering Committee for Disasters, and the address given below :

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September 1979

I N T R O D U C T I O N

The second edition of the Country Fact Sheets, the first being in 1973, is another publication of the Licross/Volags Steering Committee for Disasters, our previous ones being National Disaster Preparedness Plans, Handbook, and Glossary of Abbreviations and Emergency Key Words.

The Committee is comprised of the following organizations :

Catholic Relief Services
League of Red Cross Societies
Lutheran World Federation
OXFAM
World Council of Churches

The Committee was established in 1972 to share information in disaster situations between agencies and to develop disaster preparedness studies.

In time of disaster, it is of the utmost importance that effective assistance be given to assist a stricken population. Experience has shown that too often unsuitable food, clothing, medicaments and other supplies have arrived in a disaster stricken country, creating problems and often waste.

A better knowledge of disaster prone countries will assist in a better selection of types of assistance that will be acceptable. To improve their own knowledge and preparedness for disaster assistance the enclosed fact sheets on disaster prone countries have been developed.

Bearing in mind the greater importance of medico-nutritional information of the sheets, the Committee asked Professor M.F. Lechat of the University of Louvain, in Brussels, to prepare them. We are grateful to Professor Lechat and his collaborators, Dr. (Geogr) A. Coles, Mrs C.B. Misson, and Dr. C. Dricot for the excellent work done. As will be noted, for some countries, it was impossible to obtain accurate information and for some European countries, it was not found necessary. The annex, on a Glossary of Common Illnesses, has also been prepared by Professor Lechat. We are grateful to CIDA (the Canadian International Development Agency) for financial support to prepare this section.

Although every effort has been made to ensure accuracy, the Committee and the authors must decline any liability for the information contained in this book, because changes can occur. Users of the publication are therefore advised to check locally information on the country concerned before acting on same. The Committee would nonetheless welcome any suggestions for improvement or corrections of information available to local users of the publication to facilitate amending subsequent editions.

It is hoped that the appropriate fact sheets will be helpful to potential donors when planning to assist a particular country in time of disaster.

Licross/Volags Steering Committee for Disasters

Geneva, December, 1978

MEDICO-NUTRITIONAL INFORMATION

39. Diet: Staple food: wheat eaten as wholemeal bread, maize and rice increasing in importance especially in irrigation areas and in towns.
Staples consumed daily with pulses and various vegetables, according to regional availability (vegetables and fruits most abundant in Kandahar district). Some animal fats.
Very low consumption of meat; fish near rivers.
Daily beverage: tea.
Pork not acceptable by Moslems.
40. Nutritional deficiencies: PEM ++ worst in winter and before winter harvest; infants, toddlers.
Goiter + in Hindu Kush valley.
Rickets and anaemia are reported.
41. Medical supplies: Importation, storage, distribution of medicaments through: Avicenna Pharmaceutical Institute, P.O. Box 4039, Kabul. Importation through private channels limited to licensed firms; in practice however the frontiers are said to be highly porous to "free trade".
Ministry of Health has a standardized reference (National Formulary) list of medical supplies.
Direction written in Farsi (Iranian) and English.
Distribution through government facilities and 577 pharmacies (1974); unofficial channels many.
42. Health Services: The structure of health services is in principle highly centralized, many non integrated services, little delegation of authority and responsibility. Total hospitals 68 (1974) approximately 1 bed to 10,000 people (60% of beds in capital) little specialization of care. Health centres 101, with 60 secondary health centres in principle 1 health centre per district (I.E. 50,000 people); about 1/3 of them operational. Special services for malaria, TB, immunization.
Primary health care on experimental scale only (village health workers, trained traditional midwives). Nomads (3 million) represent over 15% of total population. Part-time private practice by Government doctors widespread.
Traditional medicine (religious).
43. Capacity for handling refrigerated drugs: Cold storage facilities in capital: child health institute (+ 10 m³).
In the periphery: wherever electricity is always available day and night (4 provincial centres have large-scale refrigerators for storing vaccines).

MEDICO-NUTRITIONAL INFORMATION (Cont'd)

44. Common illnesses:

Diarrhoeal diseases highly prevalent, especially in summer time; parasitic diseases include ascariis but hookworm almost none. Tuberculosis high priority for government. Venereal diseases +. Risk of poliomyelitis persists. Diphtheria still a problem.

Malaria endemic in lowlands (below 2000 m), in irrigation areas, and along rivers, epidemics do occur, (Jalalabad 1975); transmission May-November; half population at risk, including towns, some areas are free; control measures in progress; insect-resistance to common insecticides in limited areas only. Trachoma still prevalent. Foci of dracunculiasis. Foci of typhus. Leishmaniasis prevalent. Permanent foci of plague along eastern borders. Smallpox declared eradicated.

Algeria 1978

MEDICO-NUTRITIONAL INFORMATION

39. Diet: Staple food is mainly wheat eaten as couscous and pasta, with a sauce prepared from tubers, chick peas, lentils, carrots, onions, tomatoes **and beans**. Meat is regularly consumed in the North, especially in towns, but rarely in the South.
In the South pastoral area diet is based on milk and milk products, dates and rye pancakes/flat bread.
Pork not admissible
40. Nutritional deficiencies: PEM +; especially in children, especially area of Oued Rirsouf. Rickets reported.
Anaemia (iron deficiency) frequent.
Goiter is reported in Constantinois area and around Tlemcen.
41. Medical supplies. Importation of drugs through "Pharmacie Centrale d'Algérie", Dar El Beida, Alger. Distribution through "Pharmacie Centrale d'Algérie" and also through some private pharmacies.

List of drugs in common use available at the Pharmacie Centrale d'Alger.
Directions should be written in French.
42. Health Services: The public sector has hospitals, health centres and dispensaries; there is also a private sector which is declining. There are 15 health areas (Wilaya) each headed by a doctor, divided into sub-districts (Daira) which are under the authority of the director of the principal hospital of the Wilaya. There are about 150 hospitals (some 40,000 beds) at the Wilaya level with surgery, maternity, X-ray and some laboratory facilities.
Rural health centres and dispensaries are headed by nurses, midwives or health auxiliaries, supervised by physicians.

University hospitals in Oran, Alger and Constantine

Mobile teams for detection of communicable diseases
43. Capacity for handling refrigerated drugs: Refrigerated storage available at Pasteur Institute, Algiers. Also in cities, both in health service facilities and, on arrangement, in private facilities. In the countryside, storage is available in domestic refrigerators only where there is electricity (apparently little use of kerosene refrigerators). Cold chain reported to have breakdowns.

MEDICO-NUTRITIONAL INFORMATION (Cont'd)

44. Common
illnesses:

Enteric diseases are the most important communicable diseases (hepatitis, bacillary dysentery and amoebiasis. Typhoid is endemic and also occurs in major outbreaks in cities following occasional breakdowns of water supplies). Occasional cases of poliomyelitis. ~~Some~~ tetanus is still prevalent. Diphtheria still transmitted. Cerebrospinal meningitis endemic. Cases of human rabies.

Malaria, most of the country including urban areas without risk, limited risk in Wilayas (district) of Blida, el Asnam, Médéa, Tieret. Cholera introduced in recent years.

MEDICO-NUTRITIONAL INFORMATION

39. **Diet:** Wheat is the most important cereal (with its products bread, pasta, etc.). Small amounts of rice, sorghum, oats, barley, and rye are used together with maize (dried corn is the staple in the dry atacama). Meat is widely available and is of great and unusual importance in the diet (except among urban slum dwellers and isolated Andean communities). Mainly beef, but mutton predominates in South in Patagonia. Often served with breads and salad. Starchy roots: mainly potatoes but also sweet potatoes with casseva important in North-East. Animal products (fresh milk, cheese, eggs) widely used. Vegetable oil, animal fats and butter widely used. Large variety of vegetables (tomatoes, pumpkins, onions), temperate and tropical fruit, nuts and pulses. Pulses constitute an important food in Salta and Jujuy provinces. "Yerba mate" a mixture of plants, is a widely consumed beverage.
40. **Nutritional deficiencies:** Huge food resources. Overweight a problem in a significant fraction of the urban population. Pockets of malnutrition however remain (city slums, remote region of Patagonia, eastern slopes of the Andes and Atacama desert). Goiter ++ everywhere except central region. Salt is now iodized.
41. **Medical supplies:** Import of medical supplies through "Secretaria de Estado de Salud Publica de la Nacion", Defensa 120, Buenos Aires. Private channels are also authorized and products of most of the North American, French, English and German pharmaceutical companies are found of the market. No list of common drugs available. Direction written in Spanish.
42. **Health Services:** Health sector is decentralized and made up of (a) national health sector, consisting of the department of Public Health under the Ministry of Social Welfare, the provincial health departments and the municipal health agencies; (b) the social service sector under which the National Institute of Social Services provides medical care to contributors and beneficiaries and (c) the private sector, which includes some voluntarily affiliated mutual insurance companies and some private establishments. The Country is divided into 21 provinces. Most of the hospitals belong to the municipalities of the large towns. (In Buenos Aires, 17 Municipal hospitals, 112 private clinics and 8 belonging to other agencies). There are municipal hospitals in Cordoba, Rosario, Mendoza, Salta, Tucuman, Santa Fé, Parana, Santa Rosa. Universities and "Secretaria de Estado de Salud Publica" maintain hospitals with all specialities.

MEDICO-NUTRITIONAL INFORMATION (Cont'd)

Health facilities at provincial and rural levels consist of health centres.

Non-governmental services are more important than public services in towns and in rural areas, except in the Andean region and the city slums.

Malaria, Leprosy and Tuberculosis have special services.

Most of the Nation's 40,000 physicians are private.

43. Capacity for handling refrigerated drugs: Cold storage facilities in the airports. Every laboratory and pharmacy has cold storage facilities. Dry ice available at the cold storage facilities which are found in towns (even small towns) but not in rural dispensaries.

44. Common illnesses: With respect to risk of enteric disease, a large part of the population is supplied with piped water: 80% in cities (which contain well over one half of the population, with one-third of country living in capital city) and 30% in rural areas. Typhoid fever reported. Measles still a problem in children in spite of vaccination over recent years. Tetanus of the newborn still reported and apparently a persisting problem; Tuberculosis mortality strongly decreasing except in Northern provinces. Brucellosis reported. Echinococcosis (hydatidosis) shows high rate of infection in North.

Malaria continuing to decline, residual foci in Salta and Jujuy provinces; transmission September till May; no risk above 2,000 m.; no risk in urban areas. Meningococcal meningitis endemic, with major outbreak in 1976; predominately in subtropical Northern region and in Metropolitan Buenos Aires. Chagas disease endemic over 70% of national territory, especially Western part. Periodic outbreaks of Western Equine Encephalitis (an arthropod-borne fever). Leishmaniasis North-East.

Patterns of morbidity and mortality in cities are increasingly similar to those in developed countries.

1. NUTRITIONAL INFORMATION

1. Diet: Rice (600 g per day resources permitting) preferred food, generally consumed three times a day, cooked in water, with vegetable curry (potatoes or beans), or with lentils. Also wheat cakes. Fish (large variety) and eggs when available. Meat (mutton, goat, poultry) exceptional. Mustard oil and soybean oil. Shellfish not consumed. Preserved meat not acceptable. Specific usual religious diet restrictions (Moslems and Hindus) strictly respected.
2. Nutritional deficiencies: PEM ++ : countrywide, especially children, maximum dry season and midseason. Anemia ++: everywhere. Vitamin A deficiency + everywhere; children: distribution of capsules twice yearly. Goiter: rare but foci in Northern part of the country.
3. Medical Supplies: Importation through 'Central Medical Stores', Ministry of Health and Population Control, Dacca, Phone: 258865. Private channels authorized. A list of common drugs in use has been proposed but not yet approved. Directions written in Bengali and English. Existence of private pharmacies in cities and rural areas.
4. Health services: Health Services are centralized. Country is divided in 18 districts, each under the charge of a "civil surgeon" (Population of district about 4 millions). 83 public hospitals, general and specialized (bed capacity over 8,500). Special services are integrated in general services. Development of primary health care is major priority. Private health sector serve urban areas mostly (Private hospital beds 2,470). Traditional healers provide the bulk of medical care in rural areas. Laboratory facilities rudimentary except Cholera Research Laboratory in Dacca.
5. Capacity for handling refrigerated drugs: 2 refrigerators (domestic sizes) in national airport. Some cold storage facilities for perishable food items in Dacca. Refrigerators are available in most health centres in the provinces.
6. Common illnesses: Diarrheal diseases, mostly of undefined origin, but including cholera (endemic) and bacillary dysentery (recent outbreaks and resistant to multiple treatment) the most immediate causes of death, with malnutrition as an underlying factor in children. Typhoid present. Other major causes of death include tuberculosis (mention has been made of 100,000 deaths per year) and measles (in children). Tetanus in newborn. + . High maternal mortality at childbirth.

MEDICO-NUTRITIONAL INFORMATION (Cont'd)

Entero-parasitic diseases widespread (an estimated 90% of children are affected). Human cases of brucellosis are reported. Diphtheria, poliomyelitis, visceral leishmaniasis, yaws, dengue reported as present but no precise information available. Rabies endemic. Cases of echinococcosis reported.

Malaria: half of population live in malarious areas; disease especially prevalent in Chittagong Hill Tract and border areas; transmission year round in Chittagong Hill Tract, monsoon season elsewhere; incidence had declined over last decade due to control measures, but strong risk of resurgence; some resistance of parasite to chloroquine, transmission free areas include Dacca, Filariasis endemic in Northern Bengal.

Last case of smallpox in 1975.

Cholera endemic in Delta, definite seasonal pattern in various parts of the country (North: September, Dacca: November - December, South: March to May).

Benin 1978

MEDICO-NUTRITIONAL INFORMATION:

39. Diet North: staple foods are millet, sorghum, fonio prepared as paste or thick pancakes. Yams and taro used if food shortage. Corn in North West. Sauce prepared with groundnuts, shea butter, voandzou. Locust beans and niebe beans additional foods. Little consumption of meat. Local beer chapalo. Chronic food shortage North West.
- Centre: staple is cassava, yams and sweet potatoes, to lesser extent millet and sorghum. Sauce prepared with groundnuts, beans and green leafy vegetables.
- South: staple is cassava, yams, also corn and in moderate quantities rice. Beans and vegetables, including green leaves, more widely consumed. Sauce is palm oil with chillies. Fish often consumed. Occasional meat and poultry. Diet better balanced with higher caloric value.
40. Nutritional deficiencies: PEM ++ important, everywhere but especially in North and rural areas (Kwashiorkor). Vitamin A deficiency ++ especially in North. Anaemia ++ frequent, especially in North. Goiter ++ foci in Centre and Northern provinces.
41. Medical supplies: Import through "Office National de Pharmacie du Bénin", Ministry of Public Health. Private channels sometimes authorized. List of medicaments in common use is available at the Ministry of Public Health. Directions written in French, also in English. Private pharmacies in cities and rural areas.
42. Health Services: Health facilities include: 6 provincial hospitals headed by physicians (specialized services, maternity, X-ray in main hospitals); 31 health centres in each district, headed by a physician or nurse; health units with some medical facilities, maternity beds in towns and some villages. Total about 3,400 beds (including 1,000 in maternities). Special services for leprosy in the 6 provinces, for onchocerciasis in the North. Non governmental services: 3 hospitals (2 in Atacora, 1 in Mono). Some private clinics in Cotonou and Porto Novo. Health manpower include (1974) 95 doctors, about 400 nurses, midwives, and 700 auxiliaries. Traditional medicine very important especially in rural areas.
43. Capacity for handling refrigerated drugs: Cold storage facilities in Cotonou at "Office National de Pharmacie". Dry-ice available in Cotonou at "Air liquide". Refrigerated storage facilities very limited in provincial hospitals.

MEDICO-NUTRITIONAL INFORMATION (Cont'd)

4. Common illnesses:

Enteric diseases first concern for primary health care on national scale; amebiasis prevalent all over country (especially Atacora Borgou provinces). Measles high incidence in children with significant letality. A significant number of cases of poliomyelitis (about 100) reported each year. Tetanus +. Trachoma prevalent. Tuberculosis largely underdetected, but increasingly under control. Leprosy highly prevalent. Yaws reappearing.

Cerebrospinal meningitis + in Borgou and Atacora, less or nil in other provinces.

Malaria whole population at risk, including urban areas, transmission year round. Onchocerciasis in the North; Dracuntiasis in the North West. Trypanosomiasis, foci with current transmission. Schistosomiasis (mostly but not exclusively vesical) prevalent in all provinces.

MEDICO-NUTRITIONAL INFORMATION

39. Diet: Diet varies according to region: High plateaux (Altiplano) valleys (Yuncas) and lowlands. In high plateaux, basic staples are potatoes (eaten boiled or in thick soup), fresh or dried frozen ("chuno"), wheat, "Quinca" and barley (eaten as gruel), also local tubers such as oca and ullucos. In valleys, staples include maize, some potatoes (fresh), yams and sweet potatoes. In low lands, rice, cassava ("yuca"), bananas (cooked), yams and some processed wheat (pasta).
40. Nutritional deficiencies: PEM throughout the country, affects 45% of the children less than 5 years old. Endemic goiter highly prevalent in circumscribed areas in the Andean Valleys and Southern lowlands, with mental retardation as a result; a major problem; (plans are under way to distribute iodized salt). Vitamin A deficiency reported in Cochabamba and Oruro.
41. Medical supplies: Importation of drugs through Ministerio de Prevision Social y Salud Publica, Direccion Nacional Administrativa, La Paz, tel.: 26905. Importation through private channels can be authorized by the Ministry. There is a list of approved medical supplies available at the Direccion de Farmacia, Ministerio de Prevision Social y Salud Publica, La Paz.
42. Health Services: Health care is the responsibility of the Ministry of Health and of 23 other institutions. Ministry of Health mostly responsible for rural population. Health structure is divided in 11 Regional Health Units ("Departamentos"). Each Regional Health Unit headed by a medical officer responsible for preventive and medical care has hospitals, health centres and medical posts.
- Most hospitals are grossly underoccupied. National Centre for Tropical Diseases (CENETROP) in Santa Cruz; training, laboratory and service facilities: POB 2474, Santa Cruz. Total estimated number of doctors is around 2,000, with over one half involved in specialized practice. There are 8 times more doctors in urban areas than in rural areas, although the urban population is less than a quarter of the total national population. There is a critical shortage of auxiliary personnel.
- In general, primary health care is extremely deficient, covering no more than half of the country; urban areas have far more intensive coverage of curative services than rural areas.
- Traditional healers ("brujos", "curanderos", "callahuayes") are important in the highlands and valleys; often the sole providers of medical care to scattered populations.

MEDICO-NUTRITIONAL INFORMATION (Cont'd)

43. Capacity for handling refrigerated drugs: Very limited facilities for refrigerated storage at international (La Paz, Cochabamba, Santa Cruz) and local airports. Cold storage (medium-size freezers) available in health departments in La Paz, Cochabamba, Santa Cruz and Sucre. Domestic refrigerators in health centres in small towns. Dry-ice available only in La Paz and Cochabamba. Cold chain system presently being implemented.
44. Common illnesses: Patterns of disease depend on geography. Tropical diseases prevalent in lowlands (Santa Cruz, Beni, Pando). Here enteric diseases are a major cause of mortality in children (reported infant mortality is extremely high) and enteroparasitic diseases, especially amebiasis, are widespread; less than 5% of rural population has improved water supply. acute respiratory diseases widespread in the Andean region and also on lowlands (from May to July); first cause of mortality, chiefly through tuberculosis (active cases estimated at 80,000). Diseases preventable by vaccination still exert high death toll; measles an important cause of mortality in children, as is whooping cough; tetanus a persistent cause of mortality in newborn children; diphtheria not infrequent. Leprosy in Eastern part of country, with foci of high prevalence (Vallegrande Province and Cochabamba Department). Localized outbreaks of poliomyelitis in recent years (increasing vaccination under way). Cerebrospinal meningitis (Beni). Risk of rabies, especially in Cordillera Province (Santa Cruz Department); rabies vaccine is produced locally. Scabies a special problem in mountain communities. Venereal diseases apparently a problem, especially in cities. Brucellosis a potential hazard.

Malaria upsurge, an increasingly severe problem; transmission high in lowlands (Santa Cruz, Chuquisaca and especially Tarija, also Beni and Pando); transmission year round, no risk in highlands above 2,000 m. Cutaneous leishmaniasis ("espundia") typical of lowlands. Chagas disease widespread; an apparently huge problem in lowlands and valleys; especially increasing in areas of intense colonization and rapid urbanisation. Leptospirosis reported mainly in inhabitants of Japanese origin. Louse-borne typhus foci in Andean Provinces (mainly Chuquisaca, La Paz, Oruro, Potosi). Sporadic cases of jungle yellow fever in several places (North of La Paz Department and South-East of country). Haemorrhagic fever (the typical Bolivian type) a risk in recent years, especially in Beni. Persisting foci of plague (Chuquisaca, Tarija and North of La Paz Department).

Silicosis a hazard in mine-workers. Occupational accidents an increasingly important problem.

MEDICO-NUTRITIONAL INFORMATION

39. Diet: Diet based on corn, sorghum and maize when sorghum not available. In rainy season (January-February), diet includes many wild plants. Beans also eaten. Few vegetables: potatoes, tomatoes, cabbage and onions. Meat mostly goat, eaten especially at end of dry season when starving animals slaughtered. Meat from wild animals (game) in rural areas. Dried fish eaten in North-west of country. Milk is consumed more by children than by adults.
40. Nutritional deficiencies: PEM in urban areas (no classical cases of marasmus or kwashiorkor reported). Anaemia: only reported as present in babies under 18 months.
41. Medical Supplies: All medical supplies purchased through Central Medical Stores, annually, with possible rupture of stocks as a result. Central Medical Stores supplies all government facilities and also mission hospitals. Also import through private channels (mostly missions). Private pharmacies order medicines from Central Medical Stores.

List of essential drugs established by Ministry (Standing Committee on Drugs) for hospitals and health centres.
42. Health Services: Government and private (mostly missions) facilities coexist. Existing facilities include 12 general hospitals (7 government ones in Gaborone, Lobatse, Maun, Mahalapye, Serowe, Francistown and Selebi-Pikwe, with total of 1,106 beds and 4 mission ones at Ramotswa, Molepolole, Mochudi and Kanye, with total of 565 beds. All have surgery, laboratory and at least one staff physician); also 2 company hospitals (at Drapa and Selebi-Pikwe mines, with total of 70 beds); 8 health centres (nurse in charge, some beds); 37 clinics and 160 health posts (periodically visited by physician or nurse).
National referral laboratory at Princess Marina Hospital in Gaborone.

A tuberculosis unit attached to the Gaborone Hospital.

Health manpower include 60 doctors, around 500 nurses of various levels and 130 others.

Traditional medicine widespread (herbalists and faith healers), especially called on for malnutrition in infants, gastro-enteritis and skin diseases.

MEDICO-NUTRITIONAL INFORMATION (Cont'd)

43. Capacity
for handling
refrigerated
drugs:

Cold storage available in Central Medical Stores.
Ministry of Health, POB 639, Gaborone. Since there
are no cold storage facilities in Gaborone Airport,
notify Ministry of Health of time of arrival

Domestic kerosene refrigerators in the interior of
country

No dry ice available

Transport of refrigerated drugs and vaccines by air or
land in cold boxes; efficiency depends on time and distance
involved

44. Common
illnesses:

Diseases pattern is mostly non-tropical. Tuberculosis
is highly prevalent and a major cause of death.
Respiratory and intestinal ailments most frequent
causes of morbidity. Venereal diseases extremely
prevalent.

Malaria non-existent in larger part of country; only 30%
of population live in areas of malaria transmission
(North and North-east). Focus of trypanosomiasis (Moun
area). Schistosomiasis widespread but little precise
information. High mobility of population a risk for
transmission of communicable diseases.

MEDICO-NUTRITIONAL INFORMATION

39. Diet: The two basic staples are maize and rice. Wheat is very commonly eaten especially in urban areas. Yam is a basic staple in the North East. Plantains and sweet potatoes are also widely consumed.
40. Nutritional deficiencies: PEM++; especially amongst under-fives; particularly high incidence in North East Bahia, Espirito Santo, Sao Paulo and Rio Grande do Sul areas; severe forms particularly high in the North East. Vitamin A deficiency an important problem especially in regions of Espirito Santo, Maranhao and Sao Paulo. Rickets a problem; reportedly high incidence in Maranhao State. Anaemia due to iron deficiency important in Maranhao, Rio de Janeiro and Sao Paulo areas. Goiter an important problem in Para, Maranhao and Sao Paulo. Salt is iodized in Sao Paulo.
41. Medical supplies: Approximately three quarters of drug consumption is nationally produced, most of it by private industries. Vaccines (tetanus, BCG, cholera, yellow fever, typhoid and meningitis) are locally produced by Ministry of Health; measles and polio vaccines are imported. Importation of drugs from abroad can be authorized by Ministry of Health and Ministry of Finance. A tax, raising to several times their cost (up to 300%) is imposed on Foreign importation of drugs nationally produced. "Central de Medicamentos" in Ministry of Health is responsible for pharmaceutical matters. Drugs in governmental health facilities are freely distributed to population by welfare services large network of private pharmacies.
42. Health Services: Health structure is divided into 2 levels a) at the national level, there are the Ministry of Health and the "Ministerio de Previdencia e Assistencia Social" (INAMPS). The "Conselho de Desenvolvimento Social" coordinates the national plans for development; b) at the federal level, each state has a "Secretaria de Saude" which is an executive organism. The Health infrastructure is divided into a) "Mini posto" headed by a nurse or a health auxiliary visited weekly by a supervisor, is the primary health care facility; b) "Centro de Saude with a doctor, some minor laboratory facilities and X-ray; some maternity wards; c) "Hospital Geral" with medical assistance more specialized; surgery, X-ray and hospitalization facilities; d) "Hospital Escola": very specialized level. There are 4,207 hospitals with 379,447 beds or 3.4 beds for 1,000 inhabitants.
43. Capacity for handling refrigerated drugs: Refrigeration facilities including dry ice can be found in main cities. State health services equipped with refrigerator facilities. Also refrigerators in principle in all health centres. Facilities in villages not served by health centres are questionable.

"Original en mal estado"

MEDICO-NUTRITIONAL INFORMATION (Cont'd)

44. Common illnesses:

Patterns of morbidity and mortality differ widely according to residence (urban or rural), income group and geography. Better-off population groups in main cities have disease patterns similar to those of industrial countries. Enteroparasitic diseases widespread; up to 100% of population affected in North East.

Tuberculosis is still a huge although declining problem; recently accounted for 5% of total deaths (systematic BCG vaccination of children). Leprosy irregularly distributed throughout the country and an unchanging problem; over 100,000 cases. Measles and whooping-cough a significant cause of mortality in children, especially in South and North East; Indian children apparently particularly susceptible. Rabies in humans; transmitted by dogs; a number of cases reported each year. Among preventible diseases, tetanus is widespread, as are diphtheria and poliomyelitis. Hydatosis mostly in the South (Rio Grande do Sur).

Malaria: 43 million persons living in areas where there is still active transmission (81% of total country).

Schistosomiasis: (intestinal) estimated 8,000,000 infected in some 1,000 municipalities, most affected states are Pernambuco, Alagoas, Sergipe and Bahia. Chagas disease widely distributed and apparently highly prevalent. Plague endemic; largely rural; foci in Ceara, Pernambuco, Bahia, Rio Grande do Norte, Paraiba, Alagoas, Minas Geraes and Rio de Janeiro. Sporadic cases of jungle yellow fever persistently reported over the years. No more risk of yellow fever in urban areas. Onchocerciasis mostly among Amazonian population (Roraima territories). Leishmaniasis (the Brazilian form) probably a severe hazard in Western Amazonian areas but importance not ascertained. Dramatic, explosive outbreaks of cerebrospinal meningitis with many thousands of cases in 1975-76; all over the country but especially in large cities; (massive vaccination of 80 million people).

MEDICO-NUTRITIONAL INFORMATION

39. Diet: A mostly vegetarian diet, generally inadequate both as to quality and quantity. Staple food: essentially rice (boiled as pilau or as cakes) wheat, millet (eaten by non-Burmese such as Indians, Pakistanis). Some maize, potatoes, sweet potatoes and cassava consumed. Meals eaten with fish, shrimp sauce or a spicy sauce with vegetables (boiled or sometimes cooked with vegetable oil). Occasional foods: lentils, peas, groundnuts, tropical fruits. Very little milk consumed, except by Indians and Nepalese. Very low consumption of meat, which is roasted in small slices with sauce. Areca nuts with betel very widely consumed.
40. Nutritional deficiencies: PEM widespread. Vitamin A deficiency with blindness frequent in children (control measures being taken). Vitamin B1 deficiency reported to be still prevalent due to consumption of polished rice. Foci of goiter, with especially high prevalence in Chin Hills (Iodized salt is used with good results for prevention). Iron-deficiency anaemia widespread.
41. Medical supplies: All drugs and medical equipment are supplied to the whole country and to all medical institutions by the central medical stores depot (CMSD) situated in Rangoon. There is also a sub-depot situated in upper Burma. All drugs imported from foreign countries and those manufactured by the Burma Pharmaceutical Industry are stored in CMSD and distributed from it. Each health institution is entitled to submit one annual indent and one supplementary indent according to the budget allocated to them. In case of epidemic outbreaks, the emergency indent can be submitted and will be issued immediately.
42. Health Services: Central Health Directorate (under Director General) with special Directorate for public Health (in charge of rural maternal and child, school, and occupational health) and for Disease Control (with subdirections for malaria, tuberculosis, leprosy, and also epidemiological surveillance - the Central Epidemiological Unit -). Fourteen regional directorates (divisions headed by Divisional Health Director) with regional officers for TB, Malaria and Leprosy and also Mobile Epidemiological Teams (10 in whole country) under Deputy Divisional Health Director. Local structure, facilities and type of referrals vary according to importance of district. Type I Townships have 150/200 bed hospitals with a senior medical officer and 5/8 assistants, X-ray and limited laboratory facilities.

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Preventive medicine is under the Township Health Officer assisted by medical officers responsible for various diseases. Type II Townships have 32-50 bed hospitals, limited facilities, and a junior medical officer in charge of both curative and preventive work.

Rural health centres are the core of the health care system, health assistants supervised by a Township Health Officer are in charge; work is basically preventive, with midwives and vaccinators; primary health care is also assured with referral system to township hospital. About 1 health centre for 7 villages, approximately 1,050 for whole country.

New system of primary health care is largely implemented and is aimed at covering 26,000 villages.

No non-governmental services allowed. Private practitioners in capital city and divisional towns only. Traditional medicine used in some parts of the country. Well equipped specialized hospitals in Rangoon, Mandalay, Moulmain, Bassein and Taunggyi.

43. Capacity for handling refrigerated drugs:

One walk-in freezer in Rangoon airport restaurant (about 10°C). Capacity about 1,500 litres, but normally full. Cold storage facilities in Capital: Central Medical Supplies Department, capacity 4,000 litres, Union Tuberculosis Institute, capacity 2,000 litres, Rangoon General Hospital, capacity 2,000 litres (under construction in early 1978). In periphery: cold room in Mandalay Tuberculosis Institute, capacity 2,000 litres (not yet operating in early 1978), most township hospitals have an upright refrigerator capacity 200 litres and most of these are working, very few small towns or health centres have any cold storage capacity for storing drugs. Most effective cold chain is run by Union Tuberculosis Institute (Operating temperature about 10° to 15°C). Best cold chain in the country is run by the "People's Pearl and Fisher Corporation". Veterinary services also have cold chain.

44. Common illnesses:

Typhoid fever present. Poliomyelitis still common in cities. Immunization programmes implemented for diphtheria, pertussis and tetanus, which are still prevalent. Also tetanus immunization of pregnant women. Snake-bites not a minor problem.

Malaria still endemic, especially Shan Plateau and Chin Hills and among coast. Some control measures in central plains but recurrence likely if control measures relaxed. Season is April/November. Not a risk in most urban areas including Rangoon and suburbs and Mandalay. Filariasis +. Trachoma prevalent in dry zones (Central Burma), control project programme under way. Yaws not unusual. Leprosy highly prevalent. Cholera endemic in Irrawady Delta and mouth of River Salween, frequent epidemics northward at monsoon time; 2,700 cases reported in 1977. Extensive outbreaks of acute haemorrhagic conjunctivitis (a highly contagious and dramatic but self-limiting eye disease) in recent years. Smallpox eradicated (last reported case 1969), vaccination programme still enforced. Plague endemic in Upper and Central Burma (More than half the cases notified in the world in 1976). Dengue haemorrhagic fever an increasing problem in cities since 1970, maximum incidence in Rangoon, July-August, spreading to provincial towns, high fatality in children.

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39. Diet: Staple food: mainly sweet potatoes and dry beans, to a lesser extent plantains and cassava. The main cereals consumed are rice, maize and wheat as bread in cities. Cereals not consumed every day (average 3 times a week). Diet poor in fat: some palm oil and butter in sauces, with green vegetables and onions. Meat is occasionally eaten, mainly in towns. Fish consumed fresh around the lake, dried in the other regions. considerable consumption of beer (also made from bananas).
40. Nutritional deficiencies: PEM ++ everywhere but particularly in urban areas and Kayanza-Ngozi region. Anaemia +. Goiter + in the hills.
41. Medical supplies: "Central Pharmaceutical Depot" responsible for distribution of drugs. Drugs also imported through private channels but governmental office soon to be created to rationalize this. List of standard medicines not yet available. Local firms pack imported drugs (list available at the Ministry of Health)
42. Health Services: Country divided in 11 medical districts. Each region has a hospital with specialized services, X-Ray and laboratory facilities. 15 governmental and 4 mission hospitals, 130 health centres and dispensaries (86 governmental). Resources in health centres are limited. Specialized services for leprosy (well staffed and covering whole country with mobile clinics), trypanosomiasis, TB, Schistosomiasis. Ration doctor/population is 1 per 50,000 inhabitants. Private practitioners in Bujumbura. Traditional medicine important and active everywhere. Army has a separate health service.
43. Capacity for handling refrigerated drugs: Cold storage facilities limited. Many hospitals, health centres and dispensaries have refrigerators (kerosene) but often not in working conditions. vaccines transported in containers with ice (distance from capital to regional hospitals are small).
44. Common illnesses: Enteric diseases: ++ everywhere. Viral hepatitis: large number of cases reported over recent years. Measles: ++. TB: everywhere a problem (ECG Vaccination programme.). Malaria ++, not transmitted everywhere (25% of the population at risk) but present everywhere due to high mobility of

MEDICO-NUTRITIONAL INFORMATION (Cont'd)

population, Schistosomiasis (mansoni) +, Imbo region. Louse-borne typhus endemic in mountains, a major problem (7,000 cases reported in 1976, 87% of world total); main foci Muramvya, Ngozi, Kitega. Mwaro Kibumbu; Kayanza. No seasonal variation. Tick-borne typhus in Kitega and Kibumbu areas.

Cholera not reported but introduction across Eastern borders a recurring potential threat.

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39. Diet: Staple food is maize and rice as cereals. Also some beans, tubers, sweet potatoes and mandioque. The national dish "cachupa" is made up of maize, beans, pork fat and sometimes meat or fish and mandioque or sweet potatoes. Vegetables commonly used are onion, garlic and pili-pili.
40. Nutritional deficiencies: PEM ++ a major problem for school children, children till six years old and lactating women. Vitamin A, C and D deficiencies especially in school children. Anaemia of pregnant women reported significant.
41. Medical Supplies: Importation of drugs through Directora Geral de Farmacia Caixa Postal 112, Praia, Cabo Verde; Tel.: 437; Telex 102 BAMCV. Private channel is temporarily authorized. Existence of private pharmacies in cities. There is a list of drugs in common use available at the "Directora Geral de Farmacia".
42. Health Services: The structure is centralized by the Ministry of Health with two regional directions. At the periphery level, there are hospitals, health centres ("enfermerie regional") headed by a physician, health posts headed by a nurse. The primary health care is under the responsibility of a sanitary worker. One health service for 5,398 inhabitants (excluding primary health care) and 20.4 beds for 10,000 inhabitants. Lack of specialists and nurses; there is a doctor for 13,613 inhabitants and 1 nurse for 1,642 inhabitants.
43. Capacity for handling refrigerated drugs: Cold storage facility in the capital: 1,700 liters, at the periphery, limited capacity. Dry ice is not available. Cold chain available at the Ministry of Health ("Directora Geral de Farmacia").
44. Common illnesses: Diarrheal diseases: a major problem for the children. Tuberculosis ++. Leprosy highly prevalent in islands of Fogo, Brava, S. Antao, S. Vicente and Santiago. Venereal diseases +. Reintroduction of malaria in the Santiago Island. Measles + ; upsurges of poliomyelitis. Outbreak of cholera in 1976.

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39. Diet: Diet differs according to region: South (farming population): staple food based on millet or sorghum; prepared as sort of porridge cooked with groundnut oil and served with milk or with sauce made from groundnuts, vegetables and meat or fish (Lake Chad) when available. In Lake area, maize is preferred. Rice used primarily in towns. Cassava and sweet potatoes consumed mainly in extreme South West. Cowpeas, pumpkins, beans and peanuts provide additional nutrients. North: (nomadic population): dependence on milk supplement by meat, dates and cereals (millet and maize).
40. Nutritional deficiencies: PEM +: predominant in South West. Vitamin A deficiency: predominant in South West. Presence of endemic goiter in various villages. South of Moundou.
41. Medical supplies: Central pharmaceutical agency PNA (Pharmacie Nationale d'Approvisionnement) has monopoly of imports; it supplies health facilities and private pharmacies. Not infrequently out of stock. Voluntary agencies may import supplies directly provided they obtain authorization from health ministry. Directions should be written in French.
42. Health Services: Health matters centralized in "Ministère de la Santé", du Travail et des Affaires Sociales". Facilities include 4 main hospitals in N'djamena (jumbo-size) and Sarh, both adequately staffed and with full range of services. Abeche and Moundou; 42 clinics (Centres médicaux) and 104 dispensaries (infirmières) in smaller prefectures and villages, mostly in South (where most of the population lives), few in North. Mobile teams (services des Grandes Endémies) for detection of endemic diseases, also in charge of vaccinations, based on N'djamena, Abeche, Am Timan, Ati, Bongor, Moundou and Sarh. Health manpower in 1974 included some 58 doctors (26 of them nationals) and some 800 auxiliaries of various levels.
43. Capacity for handling refrigerated drugs: Cold storage on arrival in PNA, N'djamena. Storage and transport of refrigerated biologicals materials only possible at present through "services des Grandes Endémies" (mobile teams); no refrigeration at present in clinics and dispensaries.
44. Common illnesses: Diarrhea the first cause of death. Specific intestinal diseases include amebiasis, (extremely prevalent) and bacillary dysentery. Infectious hepatitis important and a major risk for travellers; especially in South and West (Moyen-Chari, Logone Occidental, Logone Oriental, Tandjile, and also N'djamena).

Tetanus ++. Measles highly lethal in children; peak March to May at the beginning of rainy season; large vaccination campaigns are been carried out. Tuberculosis apparently a problem but no significant control. Leprosy a problem:

MEDICO-NUTRITIONAL INFORMATION (Cont'd)

about 1% of population affected. Venereal diseases highly prevalent; both syphilis and gonorrhea; foci of endemic syphilis in North and North-East (Kanem, Batha, Biltine, Ouaddai). Residual foci of yaws (Salamat, Mayo-Kebbi, Moyen-Chari and Chari Baguirmi), but no recent data. Trachoma in Northern part of country. Human rabies (transmitted by dogs) far from infrequent and underestimated. Annual outbreaks of cerebrospinal meningitis; March - April; with major epidemics each 4 or 5 years; fatality around 10%. Occasional outbreaks of anthrax in humans (N'djamena).

Malaria widespread; hyperendemic in South, sporadic cases in Sahara; peak July-November; no significant control measures. Schistosomiasis both vesical and intestinal; vesical more prevalent, up to 30% of population infected in some villages; intestinal 1-2 %, but exceeds 40% in some foci. Onchocerciasis widespread in South (Logone Valley). Foci of trypanosomiasis in Southern part of the country (Chari-Baguirmi, Logone Occidental, Logone Oriental). Sporadic cases of viral encephalitis diagnosed. Isolated cases of louse-borne typhus in Lac Prefecture. Relapsing fever identified. Last case of smallpox 1968. Cholera: last reported outbreak 1974 (around 350 cases) in Lake Chad area. No cases of yellow fever reported for a number of years but a risk; vaccination programme exists.

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39. Diet: Staple food is mainly wheat eaten as bread or paste. Some maize and rice. Large consumption of potatoes and some of sweet potatoes. For high income groups, regular consumption of meat, especially beef, also poultry, pork, mutton and less often goat. A variety of oil seeds and olive oil; some animal fats and butter. A large variety of green vegetables, also onions, tomatoes, cabbages, carrots and green beans. Consumption of fruit in summer. Soup or stew is made with a variety of pulses (dried beans, dried peas, chick peas and lentils). Unassimilated groups (Mapuche Indians, Atacama Indians) have different diet: more maize and very little fruit and vegetables. Staple food for Andean groups is based on maize, potatoes and beans with little meat and animal products.
40. Nutritional Deficiencies: PEM: pockets of malnutrition among lower income groups on outskirts of towns and among people in remote areas. The most seriously affected group is infants between 6 and 24 months. Some vitamin (A and B complex) deficiencies are reported. A number of foci of goiter.
41. Medical Supplies List of standard drugs for use in hospitals and dispensaries, available from National Health Service (Mac-Iver 541, Santiago). Private import of drugs is authorized. Distribution through large private sector (pharmacies). Directions and labelling should be in Spanish.
42. Health Services: Country divided into 12 health regions plus the metropolitan area of Santiago. Each region is divided into hospital areas with 1 general hospital, 1 or more specialized hospitals and dispensaries for outpatients. In the rural areas, there are sanitary posts with 1 or more auxiliary workers. Health is the responsibility of various services, among which Ministry of Public Health, Armed Forces, Social Security, Railways, Police, etc. Also a large private sector. Most health resources concentrated in cities (mainly Santiago, Valparaiso, Concepcion, Temuco, Antofagasta, Arica, Talca). Hospital San Juan de Dios with full range of specialized services in Santiago. Health manpower include some 5,000 physicians, and half as many graduate nurses only. Great shortage of health personnel in rural areas.

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43. Capacity
for handling
refrigerated
drugs Facilities for cold storage in all hospitals and most of the urban dispensaries. Facilities for cold storage in rural areas are poor. Cold chain not operating properly within Ministry of Health, but facilities available in other administrative services, to be identified locally
44. Common
illnesses: Patterns of death and diseases approaching those of industrialized countries. Enteric diseases however, are still a significant problem. Communicable diseases as a whole decreasing in importance due to immunization programmes. High incidence of typhoid fever, especially in Santiago, Valparaiso, with apparently high prevalence of carriers. Hepatitis an important problem. Rabies persisting in some foci only, Santiago, South of the country, and at the Chilean-Peruvian border, with no human cases over the recent years. Brucellosis prevalent. Hydatidosis widespread and a hazard in humans. Venereal diseases highly prevalent. Tuberculosis still a significant but declining problem.
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MEDICO-NUTRITIONAL INFORMATION

39. Diet: Diet varies considerably both quantitatively and qualitatively according to area. Staple food is everywhere maize. Less important cereal are rice (mostly in the plains) wheat, barley and some oats and millet. Plantain consumed everywhere, cassava in many forms; potatoes very popular in the mountains, sweet potatoes, yams and other local tubers in Andean region.
- Staple food is prepared as soup or stew with dry beans and dry peas (especially important in the Andean diet). Coconuts products consumed on Caribbean and Pacific coasts. Vegetable oils from sesame seeds, cotton seeds and soybeans. Generally low consumption of meat and animal products in the rural areas of the Caribbean region, Pacific coast and plains of Amazonia, higher consumption in Eastern plains and Eastern slopes of the Andes and in cities.
- Fish eaten almost exclusively on the coasts or near rivers (Magdalena river, rivers of Amazonia, etc.) Some vegetables (tomatoes, onions and leafy vegetable). a variety of fruits. High consumption of sugar cane everywhere.
40. Nutritional deficiencies: PEM: two-third of children under 5 years have some degree of malnutrition, 20% suffer from severe degrees. Adult population is reported to consume only 85% of the daily calorie requirement and 78% of the necessary protein. One-third of the general population is reported to show symptoms of iron deficiency anaemia. Goiter located in the Andean region, especially Cauca Valley. Continuous iodine prophylaxis for 21 years has not eradicated goiter
41. Health Services: The public health programme is organized at national, regional and local levels; at national level, Ministry of Public Health is responsible for general programme planning; at regional level, the country is divided into politico-administrative divisions created to decentralize public health services; at local level are the various hospitals, health centres, subsidiary health posts and other installations.
- Medical care and hospital services for 15% of the population are provided by the private sector and for 10% by social security institutions. Ministry of Public Health and its agencies have to provide services for the remaining 75% but at present time its services cover only some 40%.

MEDICO-NUTRITIONAL INFORMATION (Cont'd)

The country has about 47,025 hospital beds. There are 12,000 physicians (one for every 2,000 inhabitants) but they have an unsatisfactory geographical distribution, three quarters of them are concentrated in the provincial capital whose population represents 35% of the total.

Shortage of nursing staff.

Supplementing the hospitals there are nearly 1,000 health centres, health posts, dispensaries and mobile health units scattered about the country, the majority in rural localities.

42. Medical supplies:

For importation of drugs, apply to Ministerio de Salud, 723 Calle 17, Bogota. Distribution of drugs through a large network of private pharmacies, also in rural areas. No standard list of medicaments, but a vade-mecum for internal use has been issued by the Instituto Colombiano de Seguro Social.

Directions should be written in Spanish.

43. Capacity for handling refrigerated drugs:

Refrigeration available in most localities. Hospitals and main health facilities have refrigerators. Dry-ice available on commercial basis in main cities. Check feasibility of in-country shipment of refrigerated drugs with Ministry of Health first. Also facilities for storage and transportation available with firms importing vaccines.

44. Common illnesses:

Water-borne diseases a major cause of death, especially in children. Typhoid fever present in rural areas, occasional outbreaks in cities. Measles mortality in children apparently decreasing through vaccination.

Poliomyelitis still a problem with several hundred cases in the last few years.

Malaria transmitted year round; especially prevalent in Magdalena River Valley and parts of Cundinamarca, Huila and Tolima departments; not above 1,500 m. no risk in urban areas. Dengue a problem and spreading.

Outbreaks of jungle yellow fever reported almost every year; occasional reappearance of urban yellow fever.
