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APPRAISAL OF THE STATUS AND EVOLUTION
OF THE HEALTH SECTOR
OF THE YEMEN ARAB REPUBLIC

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Scope of Work:

- (1) Engage dialogue with the Ministry of Health and other organizations to appraise the status and evolution of the YAR health sector.
- (2) Consult with the Ministry of Health, the A.I.D. Mission, and Catholic Relief Service on development of a comprehensive primary health care delivery project for the Hodeidah Mohafazat, as Phase I of action memorandum to Mr. J. Wheeler (AA/NE) from Ms. Emily Leonard (NE/TECH/HPN) 13 September, 1978.
- (3) Render any assistance desired by A.I.D. Mission in interpretation of (1) and (2) above.

Visits:

Useful information was obtained from 81 persons from the following organizational entities:

USAID/Sana'a
YAR Central Ministry of Health
Health Manpower Institute
Sana'a-El Safia & (Park) Maternal-Child Health Centers
Hodeidah mohafazat Health Office; El Olofy Hospital: 4 Hodeidah City
Health Center - El Tahrir (main center), Harat Al Yemen, Al Shararia,
Al Howak (TB)
Zaidiya Center
Bajil Hospital
Zabid Center
Dhahi Unit
YAR Central Planning Office
Radio Sana'a
Catholic Relief Service
World Health Organization; UNICEF
Peace Corps; British Volunteer Service
British, Norwegian, & Swedish Save the Children Funds
Communicable Disease Center, Cornell University, including:
(USAID) R. Huesmann, Director; H. Johnson, Program Officer;
P. Ross, Health Officer
(MOH) Dr. Ahmend Ali Al-Khedur, Deputy Minister; Khaled Saqqaf,
International Affairs; Dr. Abdul Majid Said Al Khuleidi,
Director General of Medical and Health Services; Dr. Junayd,
Director, Hodeidah Health Services.
(CRS) J. Klink, Acting Director; Sister Louise Benecke, Health of
CRS in Hodeidah.

Findings and Conclusions:

- (1) I corroborate the judgements of Emily Leonard in 13 IX 78 memo
- (2) All persons mentioned above agreed that development of a primary health care system in Hodeidah mohafazat by CRS working in close conjunction with the Ministry of Health is a high priority, feasible health sector project, with large potential benefits to the rural poor of Yemen. The YARG 5-year Plan indicates that development of such a primary health care system is the first priority of the Ministry of Health, but there is little capacity in the MOH to design, organize, train, implement, manage, trouble-shoot, and assess such a system without the additional technical assistance under discussion by CRS, YARG MOH, and USAID Mission.
- (3) There is a paucity of Yemeni nurses and doctors. Most of the latter were trained in the USSR, view health problems curatively and simplistically, and doubt that non-doctors should provide primary health services, or that they would be accepted by the currently starkly underserved population. This, despite the Plan Priority professed for primary health care based on a primary health care worker at the village and a medical assistant at the subcenter levels, makes creation of a well trained, supervised and discussed auxiliary-based rural health care system in some area within the government health services an important proximal objective for the eventual development of generally available health services for the rural poor of Yemen.
- (4) Although mortality and fertility rates are very high, they are known only imprecisely due to lack of vital registration. Mortality and morbidity are known primarily through analysis of admissions to the hospitals at Hodeidah and Taiz. There are virtually no population-based statistics. The pending CDC nutrition survey will be the first health status prevalence estimation based on a representative sample of the entire YAR population.
- (5) Voluntary agencies in YAR play an especially important role in development of health and nutrition services due to the paucity of trained Yemeni health personnel and weak funding and organization of YAR health services. The two dozen volags there began to meet to coordinate efforts in maternal and child health in 1977, and are now continuing collaboration on nutrition. Catholic Relief Services enjoys an especially good reputation in the Ministry of Health and with other agencies because of its local record of working in close conjunction with Yemeni officials, of cooperation with other volags and assisting agencies, for the quality of its staff, for the work accomplished in its projects (particularly the unprecedented public graduation in Hodeidah of 200 veiled mothers who had completed a course in the hygiene and nutrition of infants). Its past experience and demonstrated ability to operate in the physically taxing and administratively frustrating governorate of Hodeidah indicate a rare organizational competence to undertake a complex development project in this area.

- (6) Public health nurse, Sister Louise Benecke, who is head of the CRS projects in the Hodeidah Governorate, has had experience as a community organizer, developer of service systems, and trainer of service personnel. In several large meetings I attended she demonstrated great skill in collaborating with sometimes contentious representatives of other organizations, and in coopting resources to her program. She was keenly interested in financing mechanisms for health services, especially in getting recipients and local communities to pay as full a share as feasible. In several months she had won the confidence of the Yemeni Head of health services for Hodeidah Governorate, Dr. Junayd.

Recommendations:

- (1) Development of a primary health care project in Hodeidah Governorate would advance the first priority program of the MOH. It would probably be the most useful action to gain acceptance of adequate non-physician-based basic health services in Yemen. It should be realized before the country is saddled with a medical school.
- (2) As CRS is uniquely qualified to carry out such a project, A.I.D. should facilitate the processing of a submitted grant request. The process should be hastened, if possible: the YAR MOH must submit by March its request for additional funds for approval by the Central Planning Office and Ministry of Finance for their fiscal year beginning June.
- (3) A study tour should be arranged as soon as possible for Dr. Junayd, Assistant Director General of Health Services for Hodeidah Governorate, and two or three other key officials of the YAR MOH for them to visit and review operating details of several primary health care programs in operation in developing countries.
- (4) MEDEX should be asked to hold a seminar in YAR before May to facilitate definition of the roles and needed competencies of the primary health care worker in YAR, and his supervision by the medical assistant and other personnel. This is under discussion by a special committee at the Health Manpower Institute, involving a number of different agencies. All of them would welcome the assistance of MEDEX in accomplishing these tasks in the context of an analysis of the organization of the primary health program in YAR, especially before these definitions are embodied in a manual scheduled for completion in May 1979.
- (5) The Communicable Disease Center, Atlanta, should be asked to consider performing a modest disease prevalence survey in Hodeidah Mohafazat in conjunction with the National Nutrition Survey, and taking advantage of its population sample. This would provide a basis for development of health services strategy in the Tihama region, and a baseline to assist evaluation of the basic health services project.

Actions Taken:

- (1) The Under-Secretary of Health, Dr. A. Al-Khader, together with the Director General of Medical and Health Services, Dr. A. M. Al-Khuleidi; Director General of Hodeidah Health Department, Dr. Junayd; International Affairs Secretary, Khaled Saqqaf; USAID Director, R. Huesmann; CRS Director J. Klink; CRS project manager, L. Benecke; and I, on 24 January, 1979, reviewed, with common concord, the items of the attached agenda. The Under-Secretary said that the Ministry attaches high priority to this project to prevention and to training of Yemeni health personnel. He said that the MOH is prepared to request additional YAR budget for items 3A-3D.
- (2) I worked with Sister Louise Benecke intensively 10-25 January on the initial design of a primary health care worker-based rural health services system whose principal training, supervision, and referral centers would be in Zaidiyah, Bajil, and Hodeidah Towns. It would cover about 250,000 population directly. The system would conform generally to the pattern elaborated in the MOH Basic Health Services/Primary Health Care Project document, with appropriate modifications, simplifications, and economies. Local financing, candidate selection, and community mobilization would be organized through and done by the local Development Boards. I contacted Mr. Robert Walsh, Assistant Regional Director, CRS, New York, on 14 February to informally share with him my favorable impressions of the initial project outline and the personnel involved.
- (3) Donald Ferguson, DS/HEA, was contacted (2/23) for advice on appropriate countries to be visited in a study tour of Yemeni Ministry of Health officials in preparation for a primary health care project. Southern Sudan seems one likely area.
- (4) Dr. Richard Smith, Director of MEDEX, and Jean Pease DS/HEA Project Manager for MEDEX, were contacted (2/15) regarding holding a seminar in YAR. They are considering a two day seminar o/a 16 April, 1979.
- (5) Dr. Donald Hopkins, Epidemiology Section, CDC was contacted (2/16), reacted favorably, and is discussing with his colleagues the possibility of conducting a disease prevalence survey in Hodeidah Governorate.

POINTS FOR DISCUSSION WITH DR. H. R. KRADDER, DEPUTY MINISTER OF HEALTH

1. Proposed Hodeida Governorate Project

Create a rural health services network focused on population needs:

Primary Health Care Units: 48	Health Sub- Centers:9	Health Centers:	Referral Hospital:
---	---	Zaidiyah	A/O Hospital
--- (to be ident.)	---	Rajil	Referral Service
---	---		
---	---		

- Train at potential level Asst. Midwives - Local Birth Attendants (LBA)
- Train Community Practical Nurse (CPN)
- Train Public Health Care Workers (PHCW)
- Train Medical Assistants/Certification
- Develop local financing mechanisms for health care with local development boards
- Create referral system with appropriate components at each level
- Create simplified, adequate patient, services and referral documents
- Develop modular teaching units and mastery training methods for certification at appropriate competence levels
- Make cost accounting analysis of costs of rural/urban supervision, medicines, etc. services
- Create simplified, organized continually replenished medicines supply system for rural units and subcenters.

2. Imminent Prospects

A. Medex Consultation -A curricula Development of LBA-CPN-MED ASST.

- Modular teaching units
- Systems processing algorithms

B. Disease Prevalence Mini-Survey - in selected Tihman Aréas

- CDS Epidemiologist piggy
- Backed onto natl. Nutrition Survey

C. Study Tour

- Dr. Junayd
- Other MOH/Hodeidan Physicians
- MOH Designee

3. Problems/Issues

- A. Salaries and financing of health services
- B. MOH Contribution and Maintenance:
 - Housing Maintenance; Subsidies = Admin. Contributions
- C. Community service skills necessary to Primary Health Care
 - Recognition of them
 - Training for them
 - Accreditation Issue
 - Paucity of mechanisms for outreach/community work in MS, PHC document
- D. Posting of Yemeni Counterparts - with salaries, etc.
- E. Transport support assistance (UNICEF)
- F. Supplies and medicines -? Local preparation and packaging
- G. Sister University arrangement.

YEMEN ARAB REPUBLIC MINISTRY OF HEALTH

DEPARTMENT OF HEALTH STATISTICS

INDICATORS ON HEALTH SITUATION

A. Demographic and Socio-Economic Indicators

1. Population as per census of February 1975

Population within the country: 5,237,893

Population outside the country: 1,234,000

Total Population 6,471,893

2. Age Structure of Population as Per Census 1975:

Population below 5 years of age: 17.1% of total

Population 5 years - less than 15 years: 29.2% of total

Population of ages between 15 - less than 20 years: 7.9% of total

Population of ages 20 - less than 60 years: 39.7% of total

Population of ages 60 years and above: 6.1% of total

3. Sex distribution of Population (inside the country) as per Census 1975:

90.9% (Males/Females)

4. Average of Household:

5.25 persons

5. Rural vs. Urban Population:

Rural population: 90% of total

73% of the rural population work in agriculture

Urban population: 10% of total

6. Population density:

34.23 persons per 1 sq.km.

7. National income:

It increases annually at a rate of 7%. However it is expected that the rate of annual increase would reach about 8.2% following the implementation of the 5-year development plan.

8. Illiteracy (population of ages 10 years + Census 1975)

Males - 74.4%

Females 97.6%

General Illiteracy Rate: 87%

9. Population Project:

(a) Population at Mid 1978 is estimated as follows:

Population inside the country: 5,584,000

Total Population: 6,900,000

(b) Population at Mid 1981- (Estimates):

Population inside the country: 5,915,000

Total Population: 7,308,000

10. Population distribution as to Social status (Ages 10 years +)

<u>Social Status</u>	<u>Males</u>	<u>Females</u>
Single	37.1%	23.2%
Married	58.4%	62.3%
Divorced	1.3%	2.1%
Widowed	3.2%	12.4%

11. Vital Indicators -(Estimates for 1978)

Crude birth rate:	45.8 per 1000 population
Crude death rate:	26.9 per 1000 population
Natural rate of population increase:	18.9 per 1000 population
Infant mortality rate:	159 per 1000 live births
Average life expectancy at birth:	43 years.

12. Social Status (Population 10 years and above):

<u>Social Status</u>	<u>Percentage</u>	
	<u>Male</u>	<u>Females</u>
Single	37.1	23.2
Married	58.4	62.3
Divorced	1.3	2.1
Widowed	3.2	12.4

13. Health Information

1. Health Establishments:

Table (a)

Governorate	Hospitals		Dispensaries		Total Beds	No. of Health Centers
	No.	Beds	No.	Beds		
Sana'a	6	970	5	125	1,095	6
Taiz	7	1,074	4	110	1,184	2
Ibb	4	193	3	70	263	2
Hodeida	3	341	5	160	501	2
Dhamar	1	60	-	-	60	-
Hajja	1	70	2	40	110	2
Al-Mahwit	-	-	1	30	30	1
Al-Beida	2	91	-	-	91	-
Saada	1	22	-	-	22	-
Marib	-	-	-	-	-	1
	25	2,821	20	532	3,356	16

Table (b)

Governorate	Health Sub-Centers	Rural Health Units	Pharmacies	Drug Stores
Taiz	6	20	5	65
Ibb	2	12	-	14
Hodeida	9	16	4	35
Dhmar	-	6	-	7
Hajja	1	18	-	2
Mahwit	-	4	-	-
Baida	-	5	-	6
Saada	-	6	-	3
Marib	-	4	-	-
Total	18	106	18	178

2. Population Per Bed:

Governorate	Population	% of Pop. to total	Beds	% to total Beds	Pop. Per Bed
Sana'a	844,672	17.8	1,095	32.6	771
Taiz	914,365	19.3	1,184	35.3	772
Ibb	826,098	17.4	263	7.8	3,141
Hodeida	708,046	14.9	501	14.9	1,413
Dhamar	476,719	10.1	60	1.8	7,945
Hajja	414,952	8.8	110	3.3	3,772
Mahwit	182,730	3.9	30	0.9	6,091
Baida	165,074	3.4	91	2.7	1,814
Saada	161,513	3.4	22	0.7	7,342
Marib	42,791	1.0	00	0.0	0 000
Total	4,736,960	100	3,356	100	1,411

4. Distribution of Certain Categories of Health Manpower by Governorate and Ratios to Population

<u>Governorates</u>	<u>Physicians</u>		<u>Nursing and Midwifery</u>			<u>Total</u>	<u>Ratio of Pop</u>
	<u>No.</u>	<u>Ratio to Pop.</u>	<u>Q. Nurses</u>	<u>Q. Midwives</u>	<u>Asst.Nurses</u>		
Sana'a	183	4,616	241	27	182	450	1,877
Taiz	97	9,426	75	8	185	260	3,413
Ibb	24	34,420	37	7	78	122	6,771
Hodeida	64	11,063	54	12	113	179	3,956
Dhamar	17	28,042	10	3	45	58	8,219
Hajja	7	58,042	12	3	44	59	7,033
Al-Mahwit	1	1,82,730	3	0	9	12	15,227
Al Baida	2	82,537	3	1	13	17	9,716
Saada	3	53,838	5	3	7	15	10,767
Marib	1	42,791	1	-	2	3	14,264
Total	299	11,871	441	64	678	1,183	4004

5. Hospital Statistics

(a) Hospital Activities

<u>Governorates</u>	<u>Out-Patients</u>	<u>Surgical Operations</u>	<u>Admissions</u>	<u>Discharges</u>		<u>Total</u>
				<u>Alive</u>	<u>Dead</u>	
Sana'a	369,840	6,502	16,263	15,633	474	16,113
Taiz	110,564	2,692	8,392	7,958	448	8,406
Ibb	150,620	2,619	5,567	5,312	254	5,566
Hodeida	99,809	1,485	7,062	6,546	508	7,054
Dhamar	48,467	588	832	758	69	827
Hajja	10,881	252	688	676	9	685
Baida	53,411	400	908	857	44	901
Saada	34,068	1,107	315	280	33	313
Total	877,660	15,645	40,027	38,020	1,839	39,865

6. Hospital Services Indicators

<u>Governorate</u>	<u>No. of Beds</u>	<u>% To Total</u>	<u>Patient Days</u>	<u>Average Bed Occupancy</u>	<u>Average Lenght of Stay</u>	<u>Bed turn Over</u>	<u>Death Rate in Hospital</u>
Sana'a	970	34.4	294,453	83.2	18.3	16.6	2.9
Taiz	1,074	38.1	283,653	72.4	33.7	7.8	5.3
Ibb	193	6.8	32,361	74.3	9.4	28.8	4.6
Al Hodeida	341	12.1	87,463	70.3	12.4	20.4	7.2
Dhamar	60	2.1	16,644	76	20.1	13.8	8.3
Hajja	70	2.5	11,919	46.7	17.4	9.8	1.3
Al Baida	91	3.2	14,867	44.8	16.5	9.9	4.9
Saada	22	0.8	2,160	27	6.9	14.2	10.5
TOTAL	2,821	100	743,520	74.1	19.1	14.1	4.6

7. Health Centers and Sub-Centers

Governorate	Children Visits	Antenatal & Post Natal Visits	Other O.P.	Home visits	Home Deliveries
Sana'a	129,874	15,716	54,511	1,021	112
Taiz	65,102	15,039	25,953	769	168
Ibb	15,025	1,361	6,343	470	39
Al-Hdoeida	23,635	6,912	26,852	506	420
Hajja	13,110	2,261	16,634	662	16
Al-Baida	9,767	846	6,644	197	32
Saada	4,862	883	28,322	43	0
Total	261,375	43,018	165,259	3,668	787

8. Incidence of Infectious Diseases as Reported by Health Centers and Sub-Centers

<u>Diseases</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
Measles	801	2,654	9,983
Chicken-Pox	79	88	112
Mumps	119	358	1,247
Poliomyelitis	30	32	18
Whooping cough	1,888	2,904	5,971
Typhoid & Para-typhoid	36	253	1,094
Gastro enteritis	17,909	29,028	33,226
Ameobic dysentery	6,289	3,053	2,512
Infectious Hepatitis	537	1,988	2,369
C.S. Meningitis	47	27	117
T.B. all forms	2,705	4,540	7,714
Schistosomiasis	3,932	4,706	4,245
Tetanus	10	13	40
Malaria	8,118	15,078	22,542
Puerperal fever	5	24	6
Rabies	2	5	21
Leprosy	53	161	179
Leishmaniasis	6	17	57
Syphilis	130	170	165
Genorrhoea	15	37	15

9. Government Health Expenditures in 000 Riyals

<u>Year</u>	<u>Recurrent</u>	<u>Capital</u>	<u>Total</u>
75/76	22,225	3,410	25,635
76/77	29,656	8,118	37,772
77/78			
78/79			