CHAD, ETHIOPIA, IVORY COAST, CYPRUS AND WORLDWIDE

Cholera Epidemics

More than 50 countries affected with cholera in 1970-71. Exact number of cases and deaths unknown. In Africa alone, deaths exceeded 6,800.

Value of US Assistance $605,728

This report provides a general description of the 1970-71 world cholera emergency, describes briefly its spread from Asia to Africa and Europe, gives specific information on four countries in which American Ambassadors declared cholera disasters, and describes AID's support (cash grants—material aid) of the World Health Organization in worldwide cholera control through the establishment of a U S Cholera Task Force

The Disease

Cholera is man's most virulent diarrheal disease. The acutely ill may lose 50 percent of their total body water through diarrhea and vomiting within 24 to 36 hours. Fatalities among untreated patients are sometimes as high as 75 percent. It can kill in as little as four hours. Proper treatment, started soon after onset of the disease, can reduce fatalities to less than 5 percent.

Treatment and Control

Contrary to popular belief, timely treatment of cholera, through replacement of body fluids customarily done intravenously, is very effective A new method of oral administration, developed in Pakistan by the SEATO Cholera Institute, greatly reduces the need for intravenous administration. This treatment was of great significance in Africa because of the lesser requirement for professional care and the greater ease with which oral fluids could be produced locally.

Methods of controlling cholera are immunization of populations under risk, identification and isolation of those infected, and proper sanitation to prevent the organisms' spread. Trust in currently available vaccine, however, can be too great since the effectiveness of vaccine is variously estimated from 35% to 70%. Its effectiveness is limited to about 6 months. Vaccination does not prevent the vaccinated from acting as carriers for months. Given the facts that world travel is at an all time high, that cholera bacteria multiply rapidly, that the disease can recur repeatedly, and that vaccination of total populations every six months is not feasible, efforts to combat the disease necessarily take on the characteristics of a fire-fighting operation. Rapid identification of the disease enables vaccination efforts to be focused on people presumed by epidemiologists to be threatened in the relatively near future. It is important to prevent panic, thereby avoiding demands for vaccination of large numbers of people with little danger of exposure to the disease.

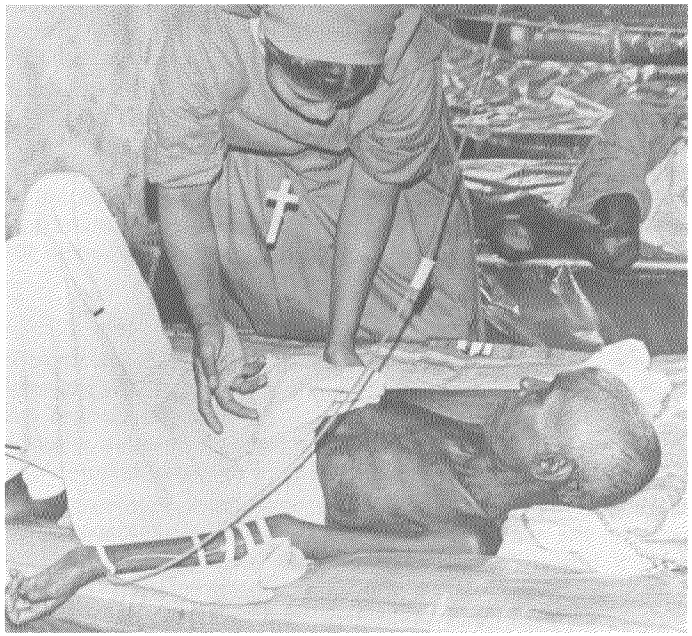
Background Seventh Cholera Pandemic

It was a mistake to think that because of the great advances in medicine and public health in recent years, there was little risk of cholera spreading far beyond the delta of the Ganges and Brahmaputra Rivers in eastern India and East Pakistan where it has been endemic since the beginning of recorded history

There are no records of cholera epidemics involving other parts of the world prior to 1817. Between 1817 and 1923, cholera broke out of its traditional area in six pandemics, spreading over most of the globe along established trade routes The sixth pandemic lasted from 1889 to 1923, thereafter retreating to its endemic homeland in Asia. For almost 40 years, until 1961, there were only sporadic new outbreaks, except for the disastrous epidemic in Egypt in 1947.

Prior to 1960, virtually all of the epidemics of cholera were caused by the "classical" cholera organism, the endemic home of which is the delta area of the Ganges River

The organism mainly responsible for the seventh and current pandemic is the El Tor strain—much hardier and more infectious—first isolated at the El Tor Quarantine Station in Egypt in about 1905. For years, it was considered merely a bacteriological curiosity. The first El Tor Epidemic occurred in the Celebes Island of Indonesia in 1935, with a fatality rate of about 70 percent In 1961 it broke out of its epidemic foci in the Celebes to spread throughout Southeast Asia and the Far East; then in rapid succession it moved into all of the countries of the Middle and Near East, several countries of Southern Europe and widely separated areas on the African Continent—



roughly two-thirds of the world. In 1970 for the first time in history, cholera spread south of the Sahara, with its heaviest concentration in West Africa It is predicted that it will advance to the Caribbean Islands and South America in the early future.

Following are 1970-71 cholera statistics Data were obtained from official reports by governments, the World Health Organization and press reports In many instances these figures are probably understated. Countries sometimes conceal the existence of a cholera outbreak or its extent, since it can seriously affect their economies Cholera-free countries often impose embargoes on commodities from cholera affected countries and prohibit their ships from visiting such areas These restrictions are many times in excess of the International Sanitary Regulations and are beyond reason of necessity. Tourism is also affected.

Region	Cases * Not Available	Deaths
Africa		
Cameroon	343	60
Chad	7,476	2,312
Dahomey	1,685	251
Ethiopia	4,000	500
Ghana	16,377	829
Guinea	2,000	60
Ivory Coast	1,500	120
Kenya	* 92+	92
Liberia	201	45
Libya	28	*
Mali	3,491	1,335
Mauritania	900	41
Niger	1,913	336
Nigeria	3,709	647
Sierra Leone	340	47
Somalia	Hundreds	2
Togo	437	25
Tunisia	25	*
Upper Volta	222	102
Algeria	*	*
Afars and Issas	*	*
Malagasy (imported case only)	1	—
Sudan	*	*
Uganda	*	*
United Arab Republic	*	*
	44,740+	6,804+
Total African Countries Affected: 26		
Europe		
Czechoslovakia	10	1
Russia	720	*
France, United Kingdom (1 each imported case only)	2	—
Yugoslavia	1	—
Bulgaria, Hungary	*	*
	733	1
Total European Countries Affected. 7		

Region	Cases * Not Available	Deaths
East Asia		
Burma	632	*
Indonesia	886	133
Korea	427	20
Malaysia	*	*
Philippines	138	*
Vietnam	1,119	*
	3,202	153

Total East Asia Countries Affected. 6

Near East/South Asia		
India (1970 only) **	3,995	*
Israel	243	2
Jordan	3	—
Lebanon	39	*
Nepal	320	22
East Bengal (1970 only) **	1,422	537
Iraq	45	*
Saudi Arabia	500	65
Turkey	2,000	40
Cyprus	*	*
Muscat and Oman	*	*
Kuwait	*	*
Qatar	*	*
Trucial Oman	*	*
West Pakistan	*	*
	8,567	666

Total NESA countries affected: 16

** Cholera is endemic in East Bengal and India. Following the civil strife in East Bengal in March of 1971, there was only a small increase in cholera cases over normal among the displaced people However, the situation was different for the Bengal refugees who fled to India During the summer of 1971 there were 44,130 cases and 5,560 deaths. This situation is covered in the separate case study for India on the refugees.

ACTIONS TAKEN BY GOVERNMENTS AND LOCAL ORGANIZATIONS (IN GENERAL)

In many instances travellers were not allowed to move across borders without proof of anti-cholera immunization. Immunization campaigns were initiated in countries affected or threatened by cholera, and the World Health Organization received requests from most of the countries listed for vaccines, ped-o-jets and treatment supplies. Most countries waged clean-up campaigns and warned the population on the importance of sanitation measures.

ASSISTANCE PROVIDED BY THE U. S. GOVERNMENT (IN GENERAL):

A Cholera Task Force was established in the AID Technical Assistance Bureau on September 9, 1970, on a temporary basis. The AID Administrator authorized a two-year extension for the Task Force on August 30, 1971. It became the focal point within the Agency for all matters pertaining to cholera and assisted WHO and other multilateral organizations in implementing actions needed to reduce the immediate threat. It is also assigned the task of stimulating long-range planning for the prevention of future cholera pandemics

During 1970-71, the task force established a close relationship with WHO Geneva, through personal visits, frequent telephone communications and the exchange of consultants. In cooperation with AID Disaster Relief Coordinator, the Task Force made contributions to WHO in the form of cash, vaccines and related supplies for cholera control activities. They were sent to WHO/GENEVA without being earmarked for a particular country AID contingency funds used for providing 10 million doses of vaccines and other supplies in addition to cash grants to WHO amounted to $436,000

Comment—Resources which WHO can make available in cholera emergencies depend to a large extent on voluntary contributions from member states Demands created by the continued spread of cholera required constant priority reassessment It was impossible for WHO to satisfy the demands of all petitioners, some of which tended to be unreasonable USG bilateral emergency assistance is not considered to be a

desirable alternative to this arrangement except under extraordinary circumstances (During the reporting period, bilateral aid was given on only four occasions, described below) There are also policy limitations on the use of AID funds available through the worldwide Disaster Relief Account, and the U S, largely for technical reasons, does not maintain significant stockpiles of supplies Therefore, U.S Missions have been instructed to refer requests for assistance to WHO.

ASSISTANCE PROVIDED BY U. S. VOLUNTARY AGENCIES: (IN GENERAL)

Catholic Relief Services, OXFAM and the Catholic Medical Mission Board provided for the Turkey cholera epidemic 500,000 doses of vaccine and 8,000 pounds of antibiotics.

Value of these supplies and airlift $49,000

ASSISTANCE PROVIDED BY OTHER NATIONS AND INTERNATIONAL ORGANIZATIONS: (IN GENERAL)

World Health Organization

WHO accepted the leadership role in combatting the current spread of cholera. It established a WHO-controlled pool of vaccines, rehydration fluid, antibiotics, equipment, laboratory supplies and funds to which member countries were asked to contribute WHO makes continuous assessments of the spread of the disease, the amount of vaccine, treatment and other supplies required. For example, a January 1971 WHO assessment indicated 20 million doses of vaccine would be needed but later doubled the estimate due to a rapid increase in disease transmission

Between August 1970 and April 1971, the World Health Organization received and distributed 47,995,350 doses of vaccine donated by 19 countries. 10 million doses came from the USG. Breakdown by country and value follows:

Canada—255,350 doses	$ 49,067
China—300,000 doses	1,800
Denmark—50,000 doses	15,000
Federal Republic of Germany—200,000 doses	16,394
France—1.5 million doses	113,719
Malaysia—200,000 doses	4,000
Hungary—200,000 doses	2,667
Pakistan—250,000 doses	5,000
India—1 million doses	15,000
Iran—2 million doses	131,148
Philippines—50,000 doses	750
Sweden—325,000 doses	32,000
Switzerland—2 million doses	92,592
Thailand—300,000 doses	4,500
United Arab Republic—28.4 million doses	568,000
Swiss Serum Institute—925,000 doses	42,823
Japan—tetracycline capsules, TCBS	7,140
	$1,101,600

Cash contributions to WHO by other nations are not available.

CHAD—Cholera:

Cholera first appeared in Chad in mid-May, 1971, with a few scattered cases. It reached epidemic proportions quickly, all but wiping out a number of small villages to the south and to the east of Lake Chad. In the first week of June, the death toll had reached 1,200 and by the end of the month was 2,263. The disease spread to Mandelia, 40 miles south of Fort Lamy and also along the southern border of Chad. The total number of cases reported was 7,476 with 2,312 deaths.

With so many people in the lake villages affected by the disease, a secondary disaster resulted—serious shortages of food and water supplies

ACTION TAKEN BY THE GOVERNMENT OF CHAD AND LOCAL ORGANIZATIONS:

The Government organization was quick and efficient in initiating control measures. Within a matter almost of hours after

the cholera was identified, treatment centers were constructed throughout the afflicted region, with wards made of straw matting on wooden frames, each housing around 50 patients. The Chad army was fully mobilized for the operation and sent its trucks combing the area to bring victims to the treatment centers. *A cordon sanitaire* was established around the stricken region, restricting all movement in and out

The Government of Chad made appeals to the international community for vaccine and treatment supplies.

ASSISTANCE PROVIDED BY THE U. S. GOVERNMENT:

The American Ambassador declared a disaster situation warranting USG assistance and authorized the expenditure of AID contingency funds for the local purchase of food and for purchase and air delivery of four ped-o-jets and accessories from the US Following this, the Ambassador requested that AID/DRC raise the funding level beyond this $25,000 authorization to pay for airlift cost from London of rehydration fluids donated by OXFAM. Additionally, the U S. Mission had determined that biscuits excess to U.S. Civil Defense needs and offered free of charge, except for transportation costs, would be well received, and AID/DRC arranged for the delivery of 50 tons of these biscuits to Fort Lamy from the United States.

Breakdown of USG Contingency Fund Expenditures	**FY 1971**	**FY 1972**
4 ped-o-jets, parts and airlift costs	$ 6,720	
Local purchase of food, supplies by USAID	18,000	
Inland US transport costs, ocean freight charges to Nigeria, overland transport costs Nigeria to Chad for 50 tons Civil Defense biscuits	13,780	$ 4,308
USAF airlift of 15 tons cholera rehydration fluids		$ 13,030
	$38,500	$ 17,338
Value of Civil Defense donated biscuits	$55,838 40,000	
Total USG Assistance	$95,838	

ASSISTANCE PROVIDED BY U. S. VOLUNTARY AGENCIES—None Reported

ASSISTANCE PROVIDED BY OTHER NATIONS AND INTERNATIONAL ORGANIZATIONS:

Organization of African Unity—Medical supplies .	$ 50,000
WHO—medical supplies valued at $50,000 but it is believed this has been credited above under Worldwide Cholera.	
France—rehydration fluids and vaccines, value not reported	
Libya—sent 3 doctors and provided medicines valued at	108,000
People's Republic of China—200,000 doses of vaccine and a cash donation of	400,000
	$558,000

ETHIOPIA—Cholera 1970

On October 29, 1970, an apparently large-scale outbreak of disease bearing clinical resemblance to cholera was reported Existence of cholera in Ethiopia was confirmed early in November. Cholera continued to spread with 4,000 cases and 500 deaths eventually being reported

ACTION TAKEN BY THE GOVERNMENT OF ETHIOPIA AND LOCAL ORGANIZATIONS:

Due to reports of cholera in the Sudan, UAR, Libya and the

Persian Gulf area during the summer months, the Imperial Ethiopian Government became concerned with the possibility of its first cholera epidemic. The Ministry of Public Health requested vaccine and ped-o-jet guns from the U.S. Mission to carry out an immunization program. A committee for Prevention of Cholera which met daily was established; public hygiene programs were begun; city water supplies and food handling were investigated; and an embargo was placed on certain foods and beverages from infected countries.

Despite these measures, cholera spread into Ethiopia. WHO was called upon by the Government to coordinate donor actions, and assistance was requested from the USA, Sweden, and Japan. The Ethiopian RC donated $20,000 to the Ministry of Public Health and vaccinated 12,600 people in Addis Ababa. The Ethiopian and Swedish RC took responsibility for Illubabur Province. On Nov. 21, the IEG announced that the cholera outbreak was under control.

ASSISTANCE PROVIDED BY THE U. S. GOVERNMENT:

On November 3, 1970, the American Ambassador declared a disaster situation warranting USG assistance and authorized the expenditure of AID contingency funds to assist the Government of Ethiopia. Assistance consisted of purchase by AID/DRC of 10 jet injectors, nozzles and parts, needles, intravenous sets, tubing, syringes and other medical supplies from the U.S. Military and USPHS, plus air lift. Estimated total costs $15,000

Also 500 bottles of tetracycline, needles and syringes valued at $31,865 were provided through the AID Cholera Task Force. However, this is presumably included in the total expenditure by the Task Force of $436,000.

ASSISTANCE PROVIDED BY U. S. VOLUNTARY AGENCIES:

None reported.

ASSISTANCE PROVIDED BY OTHER NATIONS AND INTERNATIONAL ORGANIZATIONS:

World Health Organization

WHO provided 8.9 million doses of vaccine; 5,516 litres of fluid and 2 pounds of TCBS media.

League of Red Cross Societies

The following Red Cross Societies provided cash and supplies in response to a LICROSS appeal:

Canada—cash	$3,500
Finland—30,000 disposable plastic syringes w/needles and 10,000 capsules tetracycline and medical assistance	1,700
United Kingdom—tetracycline, other supplies valued at	1,110
Norway—cash contribution	1,400
Yugoslavia—medical supplies	1,330
	$9,040

IVORY COAST—Cholera

On September 4, 1970, the Ministry of Health indicated no cases had occurred in the Ivory Coast, but that precautionary measures were being planned to prevent its introduction. On October 20, 1970, 15 cases of cholera and 3 deaths were unofficially reported in Abidjan; by October 30, 390 cases; by November 3, 1,476 cases. New cases were reported after that, but on a diminishing scale. As of April 1971, 1500 cases and 120 deaths had been reported.

ACTION TAKEN BY THE GOVERNMENT OF IVORY COAST AND LOCAL ORGANIZATIONS:

Strict border control was instituted with neighboring countries,

and the population was warned to take necessary sanitary measures. Discussions were held with the World Health Organization concerning a mass vaccination program along the Guinea border, in areas near ports, airfields and transportation facilities Requests were made for outside assistance in providing vaccine, jet injectors, rehydration fluids, and other supplies Water supplies were analyzed daily. Over 600,000 people were immunized in Abidjan 26 vaccination teams were immunizing people in the entire South East Lagoon area from Sous Prefecture Fresco to the Ghanian border by October 30. The major towns along the coast west of Fresco had previously been vaccinated as well as areas near the Liberian and Guinean borders. Reports of new cases of cholera began diminishing in January 1971.

ASSISTANCE PROVIDED BY THE U. S. GOVERNMENT:

On November 5, the American Ambassador declared a disaster warranting USG assistance and authorized the expenditure of AID contingency funds from the worldwide disaster relief account to provide 20 foot pump injectors, 20 vaccine cylinder pumps, 20 intramuscular nozzles and 20 intradermal nozzles at a total cost of $9,040

ASSISTANCE PROVIDED BY U. S. VOLUNTARY AGENCIES:

None reported

ASSISTANCE PROVIDED BY OTHER NATIONS AND INTERNATIONAL ORGANIZATIONS.

None except contributions reported under WHO (General) above.

CYPRUS—Cholera

No actual cholera cases were officially reported in Cyprus, but the threat of cholera moving into Cyprus was very real The cholera situation in nearby countries was prominently reported in the Cyprus news media during the latter part of August.

ACTION TAKEN BY THE GOVERNMENT OF CYPRUS AND LOCAL ORGANIZATIONS

Concerned over the reports that the E1 Tor strain of cholera had broken out in nearby countries, the Government of Cyprus approached the U.S. Embassy on August 22 with the request that the USG contribute cholera vaccine for its inoculation campaign. At the time of the request there were only 8,000 doses on hand in Cyprus and no capacity to manufacture locally.

ASSISTANCE PROVIDED BY THE U S. GOVERNMENT:

The American Ambassador exercised his disaster relief authority on August 25, and requested a supply of vaccine from the United States Accordingly AID/DRC arranged with the US Public Health Service to package and air ship 2,500 vials of vaccine, which arrived August 29. Total cost to the AID contingency fund worldwide disaster relief account $850

ASSISTANCE PROVIDED BY U S. VOLUNTARY AGENCIES

None reported.

ASSISTANCE PROVIDED BY OTHER NATIONS:

United Arab Republic—30,000 doses of vaccine with an estimated value of $800