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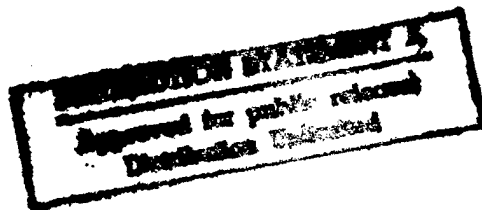
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# Worldwide Report

EPIDEMIOLOGY

No. 286



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WORLDWIDE REPORT

EPIDEMIOLOGY

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## HEALTH CARE CRISIS HITS DARWIN, NT AS FUNDS RUN OUT

Canberra THE AUSTRALIAN in English 10 May 82 p 3

[Article by Nicholas Rothwell]

[Text]

THE only fully-equipped modern hospital serving the largest towns of the Northern Territory, Darwin Hospital, is threatened with immediate closure and has already begun standing down staff because of delays by the Federal Government in providing funds.

The hospital, which is the hub of medical care for the entire northern belt of Australia, employs more than 1000 doctors, nurses and other professionals — more than one-third of the total staff of the Northern Territory Health Department.

But the Territory Government's health budget is already exhausted, with almost two months to run before the start of the new financial year, and all payments to the staff of the hospital have been cut indefinitely.

The Northern Territory is now facing a health care crisis, since it has been forced to stop all checks on Aboriginal health among tribes ravaged by the crippling eye disease, trachoma — also because of a shortage of Federal Government funds.

The Territory's Minister for Health, Mr Tuxworth, yesterday told *The Australian* that

part of the blame should be shouldered by the health funds operating in the Territory, which had been slow to repay medical expenses to the hospital.

The health funds are widely believed by Northern Territory Health Department planners to be unnecessarily slow in the turn-around time for their claims, and the department has been forced to stop many other health care services in remote regions to help meet the payroll at the Darwin central hospital.

At present, Darwin Hospital is owed more than \$750,000 by the funds — more than enough to keep the hospital going until the new financial year.

"The health funds are acting within the letter of the law, which gives them up to two months to pay their claims, but I question their morality — it is jeopardising the hospital," Mr Tuxworth said.

The hospital's workers are paid fortnightly, and will receive no more money for the rest of the financial year. Already scores of staff have been sent temporary stand-down letters, with more likely to follow unless some solution to the crisis is found.

The welfare of more than 300 patients in the hospital's beds is at stake because of the funding shortage.

BELIZE

BRIEFS

DENGUE EPIDEMIC--Belmopan, 16 Jun (ACAN-EFE)--According to health authorities, 200 cases of dengue have been discovered during the last few days in Belize city. Health authorities have sent volunteer brigades to train the people to detect the symptoms of the disease and to eliminate the breeding grounds of *aedes aegypti*, the mosquito which spreads dengue fever. [PA210144 Panama City ACAN in Spanish 2309 GMT 16 Jun 82]

CSO: 5400/2175

## MALARIA EPIDEMIC IN NORTHERN GOIAS SAID UNDER CONTROL

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 9 Jun 82 p 12

[Text] The Health Ministry registered 1,050 malaria cases in northern Goias in the region around Araguatins and Sao Sebastiao municipios. Of this total, 8 people have died and 32, including 8 children, are under intensive care, but the epidemic is now under control. The information came yesterday from Health Minister Waldyre Arcoverde, on his return from a tour of inspection in the areas attacked by malaria, which is normally limited to 450 cases in that area.

According to Arcoverde, the largest number of patients--30--are concentrated in Buriti district, Araguatins Municipio, not because it is the area with the greatest incidence of the disease but because the whole infrastructure for treatment of patients brought in from the jungle is established in this district. The minister reported that 15 care tents have been set up. While Arcoverde acknowledged that the treatment offered was not ideal, he said the best service possible was being provided for the region, in a joint operation of SUCAM [Superintendency for Public Health Campaigns], the SESP Foundation [Special Public Health Service] and the state government of Goias. The minister added that the two most serious cases are being treated in Mulato District, Sao Sebastiao Municipio.

Arcoverde assured that by the end of the week SUCAM expects to have 100 people (it now has 58) treating dwellings with DDT and that within a month, at most, the region will have total coverage in terms of assistance. According to the minister, the malaria epidemic was more intense this year because of the "unusual winter weather." The various periods of severe rains and droughts had resulted in several cycles of the transmitting mosquito. These cycles normally occur only once following the rainy season. The epidemic was confirmed in early May, when SUCAM and the SESP Foundation collected and examined about 2,300 blood samples.

6362  
CSO: 5400/2172

## CONTROL OF POLIO REDUCES INAMPS EXPENSES

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 5 Jun 82 p 13

[Text] The sharp drop in polio cases in the country after the second year of mass vaccination, begun in 1979 by the Health Ministry, has enabled INAMPS [National Institute for Social Security Medical Assistance] to save almost half the amount previously spent on treatment of the effects of the disease. It is estimated that, in 1980 and 1981 alone, Social Security saved more than 2 million cruzeiros on medicines and rehabilitation of children afflicted with infantile paralysis.

The information comes from Luiz Felipe Moreira Lima, INAMPS physician in Brasilia, who compared INAMPS expenditures on polio treatment with the cost of the vaccination campaigns. He concluded that total costs have been dropping sharply since 1980. In 1979 the Health Ministry spent more than 150 million cruzeiros on polio vaccines, while INAMPS spent 500 million cruzeiros on treatment. In 1980, 430 million cruzeiros were spent on vaccines and 365 million cruzeiros on treatment. In 1981, 365 million cruzeiros went for vaccines and 233 million cruzeiros for treatment. This year, 440 million cruzeiros will be used to purchase 83 million units of vaccine, and the cost of treatment will remain below 150 million, i.e., the amount spent on vaccines in 1979. This confirms the advantages of mass vaccination, the physician said.

According to Health Ministry statistics, the number of polio cases decreased from 2,541 in 1979 to 120 in 1981, so it can be said that the disease is virtually under control in the country. However, although 83 percent of those who contracted the disease were saved, they were left with its effects, and not all of them are receiving adequate treatment in the rehabilitation centers maintained by Social Security.

According to Luis Filipe the Social Security trend is to spend more and more on illnesses, a situation that could easily be turned around, as in the example of polio, if the government were willing to use vaccination programs and programs of other types to control the various contagious diseases, such as malaria, Chagas disease and schistosomiasis, which even today are affecting thousands of people, incapacitating them for employment.

The physician also claimed that INAMPS savings with the drop in treatment of polio victims after the mass vaccination campaigns have been thrown down the

'sewer hole' of medical assistance, including sophisticated and unnecessary treatment, the purpose of which is to enrich those who make money on illness in this country." He made an appeal: let the resources INAMPS no longer spends on polio be transferred to the Health Ministry to strengthen its vaccination programs.

#### Campaign

Health Minister Waldyr Arcoverde reported yesterday in Sao Paulo that the government has completed distribution of 36 million doses of Sabin vaccine for this year's national polio vaccination campaign. For the first phase, next Saturday, 13 June, some 450 persons have been mobilized to inoculate about 19 million children from birth to 4 years of age, the same number as last year.

According to Arcoverde, the last two campaigns practically eradicated the disease in the country and only one case was reported in the first months of this year. He noted the need to repeat the vaccination in children who have already been immunized, assuring that "there are enough doses for this purpose." He also noted the government's "very happy" idea of using Brazil's star soccer players to publicize the vaccination campaign. The minister said he was in Sao Paulo on "personal business" and should return to Brasilia early today.

In addition to announcements through the media, the Health Ministry is distributing leaflets announcing the national polio vaccination day. "Your child must kick out against infantile paralysis. Offense is the best defense," says the leaflet, with an illustration of several children playing soccer.

In the Federal District, Health Secretariat statistics confirm the effectiveness of vaccination: 15 polio cases were reported in 1980, as against only 3 in 1981, and these 3 cases were in children who had not been vaccinated, according to Secretary Jofram Frejat. Last year the Federal District Secretariat vaccinated 98 percent of the children up to 4 years of age, and this year to date, not a single case of infantile paralysis has been reported or suspected in the capital. Frejat urged all the people to take their children to the vaccination stations on 12 June.

6362

CSO: 5400/2172

## REPORT DISCUSSES TB PREVENTION, TREATMENT COSTS, OTHER DATA

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 6 Jun 82 p 38

## [Excerpts] Expenditures

The ministries of Health and Social Security will spend 2.5 billion cruzeiros this year just on medicines for prevention and treatment of tuberculosis, while INAMPS [National Institute for Social Security Medical Assistance] should spend 5.4 billion cruzeiros throughout 1982 for treatment in the private system. It is estimated that 35 million people in Brazil today are infected with the Koch bacillus, with an average of 100,000 new cases per year and a prevalence of 200,000 patients. Although the health statistics are still a long way from what is needed to design good prevention programs, a summary evaluation of tuberculosis in Brazil by the Health Ministry shows that 5 million children, or 72 percent of the annual average, were vaccinated against the disease last year. This vaccination and the programs for early diagnosis and treatment are being conducted by 4,617 health units. There are 4,090 posts conducting diagnoses alone, and 3,440 posts treating tuberculosis, providing coverage for 85 percent of the population, according to the technicians.

According to the same status report, a record number of tuberculosis cases were registered in 1981: 85,136 cases, as against 71,000 cases in 1980. The specialists say this occurred because the health programs are not adequate, despite the care offered by the health posts and centers, and since the disease occurs more in low income groups as a result of poor living conditions and lack of proper nutrition, it is an indication that the standard of living is declining more and more.

The report also indicates that 197 cases of tubercular meningitis in children under 4 years of age were registered in 1981, 23.6 percent of the expected number. This means that the BCG vaccine, the effectiveness of which is being debated again throughout the world, is working in young children. Although BCG is still officially recommended by the Health Ministry because the country has no other vaccine or prevention method, BCG could soon be replaced by more effective drugs, according to studies sponsored by the WHO.

Last year 16,229 tuberculosis patients were hospitalized, or 10 percent of the new cases reported, and 10,071 people returned for treatment.

Regarding the results of the treatments, specialists in health pneumology conducted a survey in 11 capitals, studying 6,183 tuberculosis cases. According to their findings, the cure rate was 77.4 percent, and 13 percent discontinued treatment. According to Health Minister Waldyr Arcoverde, there has been an improvement in the cure rate for tuberculosis in recent years since the patient cure rate has been a "good average" of 30 percent. In the interior, the area of activity of the FSESP [Special Public Health Service Foundation], of 830 patients surveyed, 86.4 percent were cured and 3.7 percent discontinued treatment. The death rate in the capitals was 0.9 percent.

6362

CSO: 5400/2172

## BRIEFS

HEPATITIS EPIDEMIC HIGH IN ANDRADINA--Aracatuba--Although physicians have not reported the number of people infected with hepatitis, nurses and pharmacists in Andradina admit they are concerned about the large number of hepatitis cases confirmed in that city in recent months. They believe there is some problem with the local water supply. Pharmacist Joao Miguel, one of the oldest in the city, reports that "a relatively large number of people are showing up at the pharmacy with hepatitis, mainly children from the outskirts of the city." He added: "I don't believe the infection is due to hypodermic injections, but the improper use of materials in the home, such as vegetables that are poorly washed or washed in contaminated water." In Andradina, hundreds of families still use water from wells dug at the rear of the farmhouse, without maintaining the required distance from the cess pool. Meanwhile, in Santa Casa, Dr Carlos Guedes says it is impossible to provide information on the number of people being treated for hepatitis, although several nurses said that about 30 cases were reported a few days ago. At the Andrade Gutierrez construction firm, responsible for building the Tres Irmaos dam, a physician was surprised to verify the fifth case of hepatitis among the workers within the last few days. [Text] [Sao Paulo O ESTADO DE SAO PAULO in Portuguese 5 Jun 82 p 13] 6362

CSO: 5400/2172

ANTI-VENEREAL DISEASE CENTERS

Bogota EL TIEMPO in Spanish 8 May 82 p 16-A

[Article: "Bogota Needs a Vigorous Anti-Venereal Disease Campaign"]

[Text] The capital of the republic was counting on a decrease in the number of cases of venereal disease in its jurisdiction; but that was not exactly the situation. Registrations were going poorly, or not at all, and the people did not make use of a suitable place for treatment without increasing risks, said Secretary of Health Luis Villamizar Herrera at the opening of the country's first venereal disease center, established at an approximate cost of 5 million pesos.

The new center, created for the control of sexually transmissible diseases, located at No 22A-26, on highway 23, was opened Thursday by Mayor Hernando Duran Dusan, who introduced Villamizar Herrera as "one of the best executives of the department of health in the entire history of the city."

The equipment of the laboratory, where 150-300 persons are already being treated daily, cost 1.5 million, while the remodeling of the Samper Mendoza health center building cost 3.5 million pesos.

The district will be provided with a neighboring health center, the construction of which will be completed prior to the end of the present administration.

The capital will have five satellite venereal disease centers, located at Kennedy, in the south, at Lourdes, Servita, and another location still to be determined. The satellites will send their samples to the center when their equipment cannot adequately diagnose the samples.

Villamizar Herrera said that there was a great void in that regard in the city and emphasized that last year a new venereal disease was detected here that had not been identified in the country, "candiloma acriminada."

He reported that the predominant venereal diseases in Bogota are: lymphogranuloma, which appeared in 1969; inguinal granuloma, discovered in 1972; and syphilis and blennorrhagia, that date back to the time of the conquerors.

"Everything indicates," said the official, "that there is such an active range of venereal diseases that vigorous impetus and quick action are needed to combat them." He said that there is now an advantage because that problem will be completely understood in Bogota.

8255

CSO: 5400/2171

RESULTS OF VACCINATION PROGRAMS EXAMINED

Havana REVISTA CUBANA DE HIGIENE Y EPIDEMIOLOGIA in Spanish Oct-Dec 81  
pp 378-386

[Article by Drs Leonardo J. Werthein\* and Raul Riveron Corteguera\*\*]

[Text] The establishment of a health services organization in Cuba, in the nature of a system, is a recent event, a product of the changes which occurred when the government was taken over by the socialist revolution.

The unification of all the services as part of the Ministry of Public Health [MSP] has put the advances of science within reach of the entire population and made it possible to use the funds in a rational manner, with well-defined objectives which are making it possible to offer care and prevention at no cost and with gradually increasing coverage.

Direct participation in the health sector by the organized masses, basically from the aspects of education and effective support for the various programs which narrow and strengthen service-community and doctor-patient relations have made the development of overall medicine a reality.

Through the National Health System, established in Cuba, the medical practice has been given a preventive-curative content, and various programs have been carried out as a result of an epidemiological analysis, and it has been ascertained that there are no health problems caused by diseases which are preventable through vaccines.

One of the basic elements in the analysis and true knowledge of the health problem is that of gradually increasing the coverage through qualified personnel who will assure the adequate collection of primary data.

In the report on the quality and coverage of vital statistics, prepared by Ruth Puffer in 1974, reference is made to efforts spent "to achieve total coverage and high quality in the vital statistics system."

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\*First-grade specialist in epidemiology subordinate to the MSP.

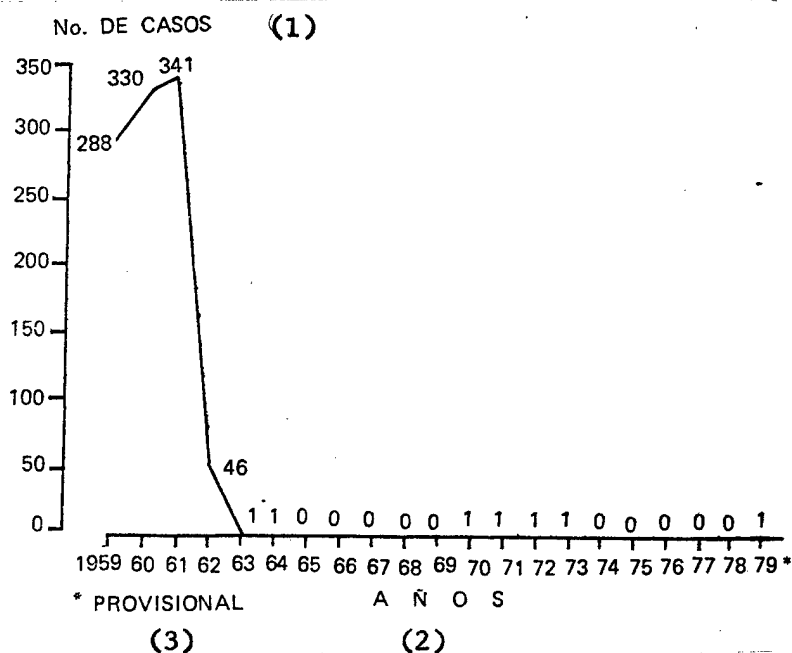
\*\*Second-grade specialist in public health administration and organization and first-grade specialist in pediatrics subordinate to the MSP.

The system of notification of illnesses through mandatory declaration, its stability and coverage, permits us to assert that there is less than 1 per cent of cases not reported where the diseases are covered by programs of vaccination and control.

### Poliomyelitis

Given the endemic characteristics with which poliomyelitis appeared in our country, the epidemiological analysis of the frequency (outbreaks every 3 to 5 years and an annual average of 300 cases) was the basic element in the decision to conduct a massive antipoliomyelitis campaign (Graph 1).

Graph 1. Cases of Acute Poliomyelitis, Cuba 1959-1979



Key:

1. Number of cases
2. Years
3. Provisional

With the administration of the Sabin-Shumakov vaccine orally in the form of a caramel, the planned objective was achieved in that, during that year, only 46 cases were reported which were related to dates prior to the beginning of the campaign.

In 1960, there were 32 deaths, and in 1961, 26. Beginning in 1962, poliomyelitis disappeared as a cause of death in our country, even though seven deaths were reported that year.

From that time on, one case per year was reported for nonvaccinated children for 1963, 1964, 1970, 1971, 1972, 1973 and 1979.

Considering the extent of the coverage and the time it took to achieve that coverage, the following strategy was followed in obtaining success health-wise: In 1962 and 1963, the caramel vaccine was administered to every child 4 years old and under; in 1964 and 1965, the same was administered to children 6 years old and under; in 1966, it was again the 4-year-olds and under; in 1967, it was administered to children 3 years old and under; in 1968, it was again 4-year-olds and under; and from 1969 to-date, it has been 3 years old and under. In recent years, a booster dose has been administered to the 9-year-olds, based on the results of the annual serological survey which is made to determine the levels of antibodies in circulation and the ages of those who will need the next vaccination.

In these surveys we have observed that in the 9-year-old group there is a decline in the antibody, specifically in that of the polio virus type 11, and, for this reason, a dose of trivalent vaccine is administered.

We believe it important to stress, as an experience of high yield and effectiveness, the speed with which the vaccine is administered and the coverage obtained, since it now exceeds 95 percent of the total population in the various age groups.

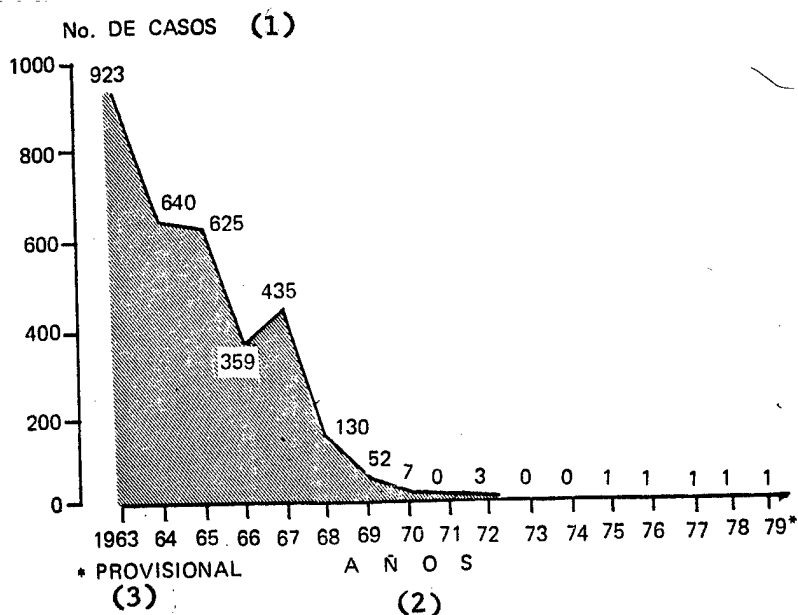
In view of these factors, which were pointed out as indicative at a seminar in Rio de Janeiro, and the failure in the control of poliomyelitis in certain countries despite the use of the same vaccine, we believe that emphasis should be placed on group selection and sufficient coverage.

In Cuba, medical coverage and direct participation by mass organizations--Committees for the Defense of the Revolution, Federation of Cuban Women and National Association of Small Farmers--with technical advice from the MSP, have guaranteed the successful administration of the vaccination program, and this means that the scourge of poliomyelitis has come to be a matter of history in Cuba.

#### Diphtheria

During the first few years of the 1960's, there was an increase in diphtheria-related illness; by 1962, it had reached its maximum rate: 20.2 per 100,000 inhabitants, resulting in 1,469 cases. In 1961, the death rate was at its highest--1.1 per 100,000 inhabitants, or 82 deaths (Graph 2).

Graph 2. Cases of Diphtheria. Cuba 1963-1979



Key:

1. Number of cases
2. Years
3. Provisional

That is to say, our country was faced with a situation which is considered common in underdeveloped countries.

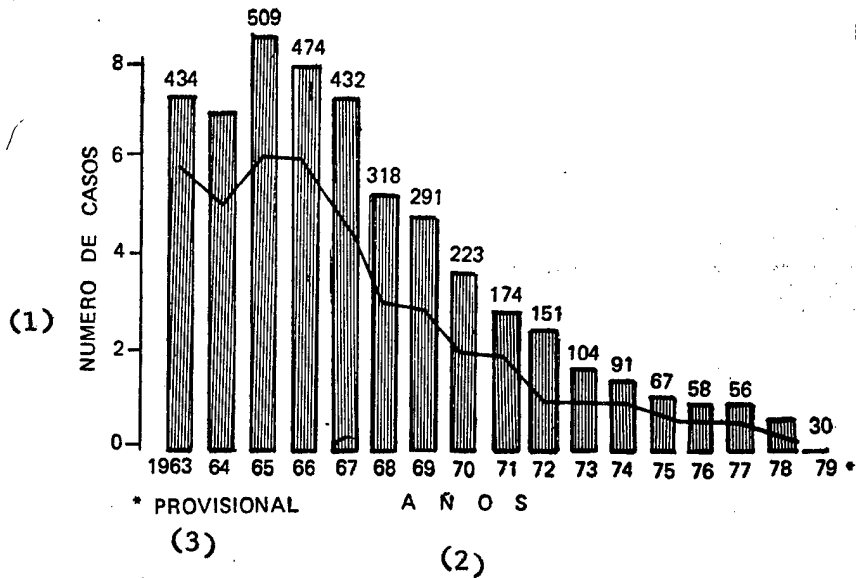
The systematic development of the immunization program, begun in the first month of life with the administration of the triple vaccine and continued with the diphtherial-tetanic toxoid in the 6 to 9-year age group, has assured that--since 1970, when there was one death--diphtheria is no longer among the diseases which kill; and the maintenance of adequate levels of protection have guaranteed that from 1970 on, only three cases were reported in 1972 and 1 case per year in 1975, 1976, 1977, 1978 and 1979.

One factor which should be pointed out is that the vaccination programs are being carried out with strict control in that the techniques of preservation, handling and application of the vaccine are designed to maintain a high degree of coverage against this disease.

## Tetanus

Tetanus, a disease which everyone is in constant danger of contracting, is much more frequent in underdeveloped areas; it is directly affected by inadequate administration of the vaccination program and by inadequate health coverage (Graph 3).

Graph 3. Cases of Tetanus. Cuba 1963-1979.



### Key:

1. Number of cases
2. Years
3. Provisional

However, tetanus among the newborn is a frequent cause of infant mortality in [Latin] American and Third World countries; generally speaking, it is a direct reflection of the low degree of development of mother-child health programs. Inadequate development of educational programs and inadequate care of the pregnant woman are directly expressed by tetanus through abortion.

As effective vaccination programs are developed, it becomes evident that there are high-risk groups which require constant epidemiological analysis; this type of analysis will serve to direct the funds properly and thus achieve maximum results with the program.

In an article published by Dr Augusto Vera Martinez, in which he examines 2,337 tetanus patients interned in the Asuncion hospital for infectious and tropical diseases, in Paraguay, the situation of a nonprotected people is reflected pathetically. A total of 31.66 percent of the cases reported were

umbilical tetanus; and of 55 cases of postsurgical tetanus, 25.4 percent were postapendectomy; 16.3 percent were postcaesarian, and 14.5 percent were non-strangled postsurgical intervention for hernias.

In Cuba, the risk situation encountered at the time of the triumph of the revolution was one of complete lack of attention to the protection of the people. The maximum expression of this situation is the rate of 8.9 per 100,000 inhabitants reported in 1962, amounting to 645 cases in all age groups.

As for tetanus among the newborn, the situation was not less serious: 94 cases in 1959 for a rate of 4.9 per 10,000 live births.

Prior to this epidemiological situation, intensive immunization programs were begun which were reflected in a constant decline in the number of cases year by year until, in 1979, we had an illness rate of 0.3 per 100,000 inhabitants, or 30 cases, and 16 deaths, representing a morality rate of 0.2 per 100,000 inhabitants.

With regard to tetanus among the newborn, one case was reported in 1970, two in 1971, one in 1972, and no more cases of tetanus among the newborn in Cuba after 1972.

We believe it necessary to emphasize the need for a systematic epidemiological analysis of the results of a given program to achieve proper effectiveness and neutralize the law of useful decline in preventable diseases through vaccines, especially when the vaccine available is as effective as the tetanus toxoid.

Although it is feasible to diminish a disease beginning with a high number of cases, this becomes more difficult if the activities are not accompanied by a thorough epidemiological analysis.

In our program for reducing tetanus, we can give two examples of the positive results of this constant analysis:

1. The eradication of tetanus among the newborn, brought about essentially by prenatal care, which means 10 doctor visits per pregnant woman and institutional delivery which now benefits 98.3 percent of the Cuban women.
2. The percentages of decrease maintained in the last 5-year period, beginning with 153 cases or a rate of 5.3 per 100,000 inhabitants under 15 years of age.

Tetanus is a disease which is presently reduced to a minimum, and this shows a health awareness acquired by a Third World people, a result of the technical activities of the MSP (Table 1).

Table 1. Incidence of Tetanus in Children Under 15 Years of Age. Cuba 1965-1979

Year	Cases Reported		Variations Vs. Previous Year	
	Total	Rate*	No. of Cases	Percentage
1965	153	5.34	00	--
1966	145	5.01	- 8	- 5.3
1967	124	4.15	-21	-14.5
1968	95	3.12	-29	-23.4
1969	90	2.91	- 5	- 5.3
1970	48	1.52	-42	-46.7
1971	36	1.12	-12	-25.0
1972	22	0.67	-14	-38.9
1973	25	0.74	+ 3	+13.6
1974	21	0.62	- 4	-16.0
1975	20	0.58	- 1	- 4.8
1976	20	0.57	--	--
1977	14	0.40	- 6	-30.0
1978	6	0.18	- 8	-57.1
1979	6	0.18	--	--

\*Rate per 100,000 inhabitants.

Source: National Statistics Directorate subordinate to the MSP.

#### BCG

The BCG [Calmette-Guerin bacillus] vaccine has been produced in the country since 1943; but despite that fact, vaccination with that medication has been limited.

Not until 1963 did we begin systematically to vaccinate every newborn child in our institutions, with booster shots at 5 and 10 years of age. In 1970, on the basis of studies made in 1969 by Sevy and Werner on school children 6 to 14 years of age not vaccinated with BCG and relating to the degree of

natural tuberculosis infection, it is decided to eliminate the booster shot in the 5-year-old group and continue it in the 10-year-old group.

In Table 2, we can see the percentage of vaccination reached in newborn children less than 45 days old in institutions during the period 1965 to 1979.

Table 2. Percentage of Newborn Children Vaccinated With BCG. Cuba 1965-1979

Year	Live Births in Institutions	45 Days Old and Under Vaccinated	Percentage Vaccinated
1965	194,172	175,488	90.4
1966	204,260	175,325	85.8
1967	202,021	168,626	83.5
1968	213,342	170,657	80.0
1969	219,722	166,088	75.6
1970	216,926	174,422	80.4
1971	245,188	221,043	90.2
1972	242,078	230,195	95.1
1973	221,522	215,661	97.4
1974	198,256	189,319	95.5
1975	190,356	178,494	93.8
1976	183,932	162,412	88.3
1977	163,832	153,289	93.6
1978	145,557	141,017	96.9
1979	141,098	140,062	99.3

Source: MSP annual report for 1979.

Table 3 shows children 45 days old and under vaccinated with BCG as well as those older than 45 days (first-time vaccinated and booster shots); we note a marked increase in the figures, based on better data collection throughout the land and on child-care consultations.

Table 3. Total Vaccination With BCG. Cuba 1965-1979.

Year	Vaccinated With BCG			
	-45 Days	+45 Days		Total
		First-time	Booster	
1965	175,488	128,180	64,699	368,367
1966	175,325	97,521	65,261	338,107
1967	168,626	97,245	104,622	370,493
1968	170,657	81,884	147,371	399,912
1969	166,088	376,968	106,240	649,296
1970	174,422	240,693	71,560	486,675
1971	221,043	78,955	56,281	356,279
1972	230,195	45,907	31,850	307,952
1973	215,661	29,184	57,113	301,958
1974	189,319	37,680	70,175	297,174
1975	178,494	13,920	58,239	250,653
1976	162,412	11,487	131,107	305,006
1977	153,289	4,033	168,965	326,287
1978	141,017	2,597	141,475	285,089
1979	140,062	1,569	141,631	328,253

Source: National Statistics Directorate subordinate to the MSP, 1979.

The incidence of tuberculosis in Cuba has gradually declined in the past 14 months, resulting from carrying out a national program for the control of this disease. This is also shown by the reduction in the number of cases of tuberculosis reported for children under 15 years of age, as seen in Table 4.

Table 4. Cases of Tuberculosis in Children Under 15 Years of Age. Cuba  
1965-1979

Year	Age Groups			Total -15 Years	Rate per 100,000 Inhabitants
	-1 Year	-1-4 Years	-5-15 Years		
1965	25	181	286	492	17.2
1966	10	83	131	224	7.7
1967	15	102	178	295	9.9
1968	10	65	155	230	7.6
1969	2	54	93	149	4.8
1970	5	33	47	85	2.7
1971	2	23	30	55	1.7
1972	6	14	24	44	1.3
1973	3	15	19	37	1.1
1974	3	14	13	30	0.9
1975	--	13	24	37	1.1
1976	4	17	20	41	1.2
1977	--	19	24	43	1.2
1978	3	7	29	37	1.1
1979	2	9	11	22	0.7

Source: National Statistics Directorate subordinate to the MSP.

Death from tuberculosis also decreased considerably during this period, and the same showed up to an even greater extent in children 15 years of age to the point where the mortality rates, as reported, were reduced to insignificant figures.

Table 5 shows the deaths from tuberculosis in children under 15 years of age during the period 1965 to 1979.

Table 5. Deaths From Tuberculosis in Children Under 15 Years of Age by Age Groups. Cuba 1965-1979.

Year	1-Year-Olds		1-4-Year-Olds		5-14-Year-Olds		-15 Years of Age	
	Dec.	Rate*	Dec.	Rate**	Dec.	Rate***	Dec.	Rate****
1965	4	0.02	7	0.08	4	0.22	15	0.52
1966	10	0.04	4	0.05	4	0.22	18	0.62
1967	3	0.01	4	0.04	4	0.21	11	0.37
1968	4	0.02	2	0.02	3	0.16	9	0.30
1969	1	0.01	6	0.06	2	0.10	9	0.29
1970	2	0.01	1	0.01	2	0.10	5	0.16
1971	--	0.00	--	0.00	--	0.00	--	0.00
1972	--	0.00	3	0.03	2	0.09	5	0.15
1973	1	0.01	2	0.02	1	0.04	4	0.12
1974	1	0.01	2	0.02	--	0.00	3	0.09
1975	1	0.01	1	0.01	1	0.04	3	0.09
1976	--	0.00	--	0.00	--	0.00	--	0.00
1977	--	0.00	--	0.00	--	0.00	--	0.00
1978	--	0.00	2	0.03	--	0.00	1	0.06
1979	--	0.00	--	0.00	3	0.12	3	0.09

\*Rate per each 1,000 live births.

\*\*Rate per each 10,000 inhabitants 1 to 4 years old.

\*\*\*Rate per each 100,000 inhabitants 5 to 14 years old.

\*\*\*\*Rate per each 100,000 inhabitants under 15 years of age.

We believe that the reduction in illness and death from tuberculosis is due to the high percentage of vaccination with BCG within the framework of a national program of tuberculosis control and that it also closely reflects the political and socioeconomic changes which resulted in improvement in the standard of living of our people.

8568

CSO: 5400/2174

CZECHOSLOVAKIA

BRIEFS

NO MEASLES REPORTED--Czech medical science has scored another important success in combating infectious diseases. During the first quarter of 1982 not one case of measles had been reported in the Czech Socialist Republic (CSR). This success has not been matched by any other country. After eradicating polio, diphtheria and successful treatment of scarlet fever with antibiotics, measles presented in the CSR the most serious "childhood" disease causing numerous complications and up to 163 deaths annually. Finally, the 12-year-long program of systematic vaccination has actively disrupted the natural transmission process of measles. Any future cases of measles should be limited to single occurrences in unvaccinated persons or unsuccessfully vaccinated persons who would contract the disease abroad. [Prague LIDOVA DEMOKRACIE in Czech 19 Jun 82 p 4]

CSO: 5400/3007

ETHIOPIA

BRIEFS

MENINGITIS UNDER CONTROL--BAHIR DAR (ENA)--A meningitis epidemic which was reported to have spread in certain kebeles of Dangla district, Gojjam region, has now been placed fully under control, according to the district's Health Office. An eight-member team led by Comrade Gebeyehu Tamrat, Health Officer of Dangla town, had been giving medical treatment to affected persons from May 13 to May 22. Through the efforts of the health team and the cooperation of governmental departments and mass organizations, the disease has been put properly under control, the district Health Office revealed. The office noted that 137 persons had recovered from the disease after receiving medical treatment.  
[Text] [Addis Ababa THE ETHIOPIAN HERALD in English 1 Jun 82 p 8]

CSO: 5400/5639

CLEAN-UP CAMPAIGN INITIATED TO FIGHT GASTROENTERITIS

St Georges FREE WEST INDIAN in English 15 May 82 p 1

[Text] With better organisation and greater mass participation, the anti-gastro-enteritis clean-up campaign will be held in most communities throughout the island tomorrow.

Speaking after a meeting yesterday with representatives from mass organisations, Parish Co-ordinating Bodies, the Central Water Commission (CWC) and various Ministries, Deputy Health Minister Chris De Riggs disclosed that some 200 public workers have agreed to lead the campaign, dubbed "the health manoeuvre."

The meeting was the second such held during the past week, as the Ministry of Health intensifies its efforts to prevent the spread of gastro-enteritis, which has already caused the deaths of four persons.

The Ministry of Construction and Agriculture, Bro. De Riggs said, has agreed to provide a total of 19 trucks to be used for transporting people and carrying "garbage and stuff to be dumped in authorised dumping sites."

Tomorrow's campaign will take two forms, he revealed.

One will be the physical cleaning of the environment, which involves the collection and removal of garbage, the cleaning of clogged drains and rivers and cutlassing the road-sides.

The other is public education, in which members of mass organisations will be distributing two pamphlets on gastro enteritis. One lists a number of anti-gastro preventive measures.

Members of the People's Revolutionary Armed Forces are expected to turn out in massive numbers for this campaign, and their assistance will be sought in all parishes, for removing derelict vehicles from the roadsides.

The clean-up campaign will also focus on the need to conserve water and "the immediate surroundings and environment around standpipes will also be cleaned up," according to Bro. De Riggs.

He said that "there is a much more serious response" from the mass organisations and disclosed that the Technical and Allied Workers (TAWU) has formally pledged its support to the campaign.

Coming out of the meeting was a unanimous decision by all representatives to formalise a "committee for the mobilisation of the people to protect the environment." This committee will include representatives from the Health and other ministries and the mass organisations.

Such a committee, Bro. De Riggs said, will be seeking co-operation from the Ministry of Education for instituting a school sanitation drive, that will promote cleaning of schools environments and toilets.

"In the future, we intend to mobilise the masses for periodical clean-up drives that will lay the basis for the elimination of such diseases," he said.

Meanwhile, there has been no dramatic change in the gastro situation in the country over the last two weeks. Statistics from the Ministry indicate that between January and the first week in this month, some 700 cases have been reported.

Unlike before the Revolution, rehydration fluids can now be received free at all health clinics throughout the island, including the General Hospital. Rehydration fluid, taken through the mouth, restores fluid to the body that is lost as a result of a gastro-attack.

CSO: 5400/7560

HONDURAS

HEMORRHAGIC DENGUE SEEN AS 'NATIONAL EMERGENCY'

PA252241 Tegucigalpa Televisora Hondurena in Spanish 0130 GMT 25 Jun 82

[Excerpts] The health secretariat views the presence of hemorrhagic dengue in the country as a national emergency. At a news conference this morning, Carlos Pineda, chief of the vector control office, criticized the Finance Secretariat for not recognizing the danger that the presence of hemorrhagic dengue represents to the health of the Honduras. The active sectors were not present at the meeting that was called to confront this epidemic which could also have serious effects on the economy. Here is his report:

[Begin recording] The lives of more than 120,000 people affected by simple dengue in 1979 are in danger, since they could easily become infected by hemorrhagic dengue, which could spread in Honduras if the necessary preventive measures are not taken, according to Carlos Pineda, chief of the vector control division, the 120,000 people infected in 1979 are more susceptible to the disease as a result; thus, their lives are in danger if they are infected by this new type of dengue, which is more deadly. According to the doctor, the dengue epidemic could greatly affect Honduran economic activities, as patients would be unable to work for a very long time.

The Health Secretariat has asked all mass, business and organized groups in the country to join the preventive campaign that will be conducted nationwide. It was reported that the disease, which is present in neighboring countries like Belize, could be eradicated in Honduras at a cost of 2 million lempiras. However, the Health Secretariat does not have this amount due to the budget restrictions imposed by the financial analysts at the Finance Secretariat, who disregard the gravity of the disease and who feel that public health is an expenditure rather than an investment. [end recording]

CSO: 5400/2176

## COMMUNICABLE DISEASE REMAINS COMMUNITY HEALTH PROBLEM

Jakarta KOMPAS in Indonesian 29 Apr 82 p 3

[Text] Jakarta, KOMPAS--The results of research carried out in 1980 show that at any given time about 11.4 percent of the population of Indonesia is suffering from illness. Of that total about 57.2 percent of them are suffering from communicable disease. This statement was made by the director general for the prevention and elimination of communicable disease in the Ministry of Health, Dr Adhyatma, during the program "Television Platform" last Tuesday evening [27 April].

Dr Adhyatma said that it is clear that communicable disease is still a community health problem in Indonesia. This is because the most common diseases people suffer from in Indonesia are communicable illness, while cancer, diseases of old age, heart disease, injuries, and other medical conditions are just starting to appear. However, communicable disease is still the major problem in Indonesia as a developing country. There is also the fact that communicable disease causes repeated illness such as infection of the upper and lower respiratory system, including influenza, bronchitis, inflammation of the lungs, skin diseases, diarrhea, tuberculosis, eye diseases, malaria, and other parasitological infections. However, the most serious communicable diseases which cause death are infections of the upper and lower respiratory passages, such as inflammation of the lungs, diarrhea, tuberculosis, tetanus, and typhus affecting the intestines.

According to Dr Adhyatma, in order to prevent and eradicate communicable disease effectively, it is necessary to break the chain of infection. Among other things this includes improvement of health conditions in the neighborhood, killing insects or livestock suffering from disease, treatment of sick people who are the source of infection, and immunizing community groups which may be affected by communicable diseases. Usually, these efforts at preventing and eradicating the spread of disease are carried out as a combination of several of the forms of activity mentioned previously.

Communicable disease which can be prevented by immunization includes diphtheria, whooping cough, tetanus, poliomyelitis, and so forth. The object of preventing and eradicating communicable disease is to lower mortality and illness figures and reduce the impact of other consequences of communicable disease.

Dr Adhyatma said that as a result of efforts to prevent and wipe out communicable disease, illnesses like the plague, which were once the greatest health problem affecting Java, have been effectively eradicated. Indeed, in a gradual way the plague has been completely overcome or confined to a single location, that is, Boyolali [Central Java]. Since 1972 Indonesia has had no additional cases of the plague affecting human beings. Smallpox has also been successfully wiped out. Previously, small pox was once major community health problem. However, since 1972 there have been no reports of smallpox in Indonesia. The last case of smallpox was reported from Tangerang [West Java] in 1972. In 1974 Indonesia was declared free of smallpox, and the whole world was declared free of smallpox in 1980.

There are other communicable diseases which have been successfully eradicated or whose incidence and seriousness as a cause of death have been reduced, according to Dr Adhyatma, including yaws, which has been eradicated. The seriousness of malaria has been reduced, the death statistics due to cholera have been reduced, and the death statistics due to dengue fever have been reduced. In 1968 the incidence of death among those suffering from dengue fever was still 48 percent; presently, the figure was dropped to 3-4 percent.

Meanwhile, he admitted that other diseases have not yet been eradicated, but the program to deal with them is spreading wider and reaching farther out. The immunization program now reaches, 2,099 Community Health Centers, and the program for the eradication of tuberculosis now reaches 1,320 Community Health Centers.

5170

CSO: 4213/56

## BRIEFS

CHICKEN POX IN EAST JAKARTA--Dozens of persons in Klender Ward, East Jakarta, have had chicken pox, most of whom were children under 5 years of age. Initially the victim had a fever which was followed by generalized itching and subsequently blisters broke out over his entire body. Yesterday [12 April] several children were encountered at the Klender PUSKESMAS [Public Health Center] who were suffering from the same disease that originated in Kampung Baru and Kampung Kapuk in the Klender Ward. Mrs Bonar Pangarihuan, a resident of Kampung Kapuk who brought her child to the PUSKESMAS for treatment, said five out of six children there had chicken pox. A mother from Kampung Baru who also brought her child in for treatment said chicken pox had been going around there for the past 2 months. On that occasion, when asked for information about the disease, Mrs Dr Sulistiowati, a doctor at the Klender PUSKESMAS, apparently was not prepared to comment, but she confirmed that chicken pox was present. She did not want to say how many persons had the disease, but members of the community estimated that about 40 now had chicken pox which reportedly is very contagious. [Excerpts] [Jakarta HARIAN UMUM AB in Indonesian 13 Apr 82 p 2] 6804

DENGUE FEVER IN JAKARTA--To date it has not been possible to control dengue fever, and it still haunts five regions of the DKI [Special Capital Region] of Jakarta. This is due, among other reasons, to the lack of concern on the part of the community toward this disease. A source from several hospitals in Jakarta commented that, for the most part, dengue (hemorrhagic fever) attacked children between 1 and 14 years of age. Its symptoms are similar to those for flue, occasional bloody vomitus, a rash particularly on the face, and a fever that cannot be reduced. Dr Sudarso, chief of the regional office of the Department of Health in Jakarta, who was contacted by AB, admitted that dengue fever had attacked five regions of DKI Jakarta. It has not spread but rather is endemic. The Department of Health is planning to spray with abate insecticide in August to kill the mosquito larvae. However, the doctor denied that dengue fever had spread in the five regions of DKI. It remained in a number of specific locales and thus no single area is considered critical because of this disease. [Excerpts] [Jakarta HARIAN UMUM AB in Indonesian 13 Apr 82 p 2] 6804

UNIDENTIFIED ILLNESS IN YOGYAKARTA--The intestinal disease of unknown origin which raged through Argomulyo Village, Bantul Regency, Yogyakarta, has been curbed successfully. As of Tuesday [4 May] only three patients were being

treated at the local PUSKESMAS. Sardjo, health supervisor at the Argomulyo PUSKESMAS, commented that the three victims had the same disease. Each had a queasy stomach, a headache, and a rising temperature. These symptoms are similar to those complained of by hundreds of other victims who had been examined and treated at the Argomulyo PUSKESMAS. According to the records, 81 were treated while more than 700 others were examined for the same complaints during the month of April. Sardjo said the disease, which heavily attacks women and children, is known to have raged through Argomulyo since the beginning of March. So far the source of the illness remains unknown. The attack reached its peak in April. "We were at our wit's end in handling patients and therefore we sent some to the Bantul Regency, Bethesda, and Sardito Hospitals in Yogyakarta," Sardjo said. While the illness ran rampant a junior high school student, Tugiyaningsih (14 years old), is known to have died. [Text] [Jakarta KOMPAS in Indonesian 5 May 82 p 2] 6804

MORBIDITY IN TIMOR--According to data of the Nusa Tenggara Health Department Regional Office for the two regencies of Timor Tengah Utara and Belu, which border East Timor Province, three groups of primary diseases are recorded, namely those caused by poor sanitation, contagious diseases, and malnutrition. The first two groups are dominant there, accounting for 45 percent and 46 percent of all illness while malnutrition accounts for 9 percent. The Belu and Timor Tengah Utara Regency Health Services recorded 112,880 patients (from 11 subdistricts) who were treated at the PUSKESMAS in 1980. Of that total 51,329 had illnesses resulting from poor sanitation (including worms, cholera, and eye, skin and intestinal diseases), 51,905 had contagious diseases such as malaria, and 9,646 had illnesses caused by malnutrition (vitamin A deficiency, endemic goiter, and anemia). [Excerpts] [Jakarta AKOMPAS in Indonesian 11 May 82 p 8] 6804

GOSTROENTERITIS IN EAST JAVA--The gastroenteritis epidemic is spreading in the Lumajang area particularly to Sumberwuluh Village, Candipuro Subdistrict, where three persons died and 65 were treated. After receiving a report, Dr Andreas, head of the Candipuro PUSKESMAS, accompanied by several members of the subdistrict staff, immediately went to the village to investigate. They investigated the disease which had attacked 68 persons including the three, two minors and one adult, who had died. Ultimately the 65 persons who still could be helped were given a medication which rid them of the disease. Dr Andreas appealed to all communities in the Lumajang area to take care of environmental sanitation because good sanitation was the primary requisite for preventing the spread of germs which caused gastroenteritis. [Excerpts] [Jakarta MERDEKA in Indonesian 20 Apr 82 p 4] 6804

UNIDENTIFIED ILLNESS IN CENTRAL JAVA--A "fever-chills" disease is attacking children under the age of 5 in several villages in the Boyolali Regency area of Central Java. Moreover, several adults also were attacked by the disease according to an Antara reporter from the Boyolali area as reported on Monday [3 May]. It was also reported that children attacked by the disease, whose type is still unknown, generally have a rather high fever which alternates with chills. Thus the local people in the affected area call the disease the "fever-chills" disease. While in the fever stage, the hands of the children attacked by the disease twitch, their eyes are reddened, and have

headaches. Mothers who have no experience with the disease try to cure them by giving them raw jackfruit. Mothers experienced with the disease immediately take a child attacked by the "fever-chills" disease to the doctor.

[Text] [Jakarta MERDEKA in Indonesian 7 May 82 p 4] 6804

GASTROENTERITIS IN EAST NUSA TENGGARA--Mohammad Suri, chief of the Department of Information Office in Alor Regency, East Nusa Tenggara, told SINAR HARAPAN on Saturday evening, 17 April, that a number of the residents of the Mali region, Northwest Alor Subdistrict were stricken by a gastroenteritis epidemic (vomiting and diarrhea--editor). It is still not known for certain how many residents were attacked although it was estimated that they numbered in the dozens, and it has not yet been possible to determine how many victims it claimed. It is believed that Alor Regency is frequently stricken by epidemics of gastroenteritis, dengue fever as well as measles because, in general, those who reside in the interior rarely take any care of environmental sanitation because of their generally low level of education. According to Mohammad Suri, as long as little care is given to health and environmental education, epidemics will continue in the Alor Regency.

[Excerpts] [Jakarta SINAR HARAPAN in Indonesian 22 Apr 82 p 3] 6804

BANDA ACEH ELIMINATION OF YAWS--Banda Aceh, June 25 (ANTARA)--Yaws is expected to be eliminated from Indonesian soil at the end of the Third Five-Year Plan (in 1984), even if the contagious skin disease may still be prevalent in several parts of the country. The prediction was made by Dr Burhanuddin Jusuf, head of the Aceh Health Service Contagious Diseases Eradication Section, in a talk with ANTARA here Thursday [24 June]. In most of Aceh, the disease has disappeared, but it is still in evidence in several districts along the coast and in mountain areas, especially in such parts where the sense for sanitary living is low, he said. Burhanuddin called on the public to immediately report the incidence of yaws to the nearest public health clinic to help the government in bringing closer the day when the disease can be declared eradicated in the country. [Jakarta ANTARA in English 0746 GMT 2 Jun 82 BK]

CSO: 5400/2176

ISLAND-WIDE ANTIPOLIO IMMUNIZATION CAMPAIGN UNDER WAY

Ministry of Health Action

Kingston THE DAILY GLEANER in English 3 Jun 82 p 1

[Text] Jamaica was placed yesterday on the alert against an outbreak of poliomyelitis as the Ministry of Health put its machinery into action for a mass immunization campaign against the disease.

The Ministry of Health announced that the programme "is well under way". It began yesterday in the wake of four confirmed cases of polio in St. James, the first to be recorded in Jamaica since 1964.

In July 1954 there was a serious outbreak of polio here. However, it was brought under control in December of that year. By then there were 94 deaths of the 759 cases reported.

The Ministry said yesterday that the first phase of the programme is being concentrated on infants and children in the pre-school and school-age groups, and was being extended today to Kingston and St. Andrew, Portland and St. Thomas.

The Ministry statement said:

"The Immunization programme is well underway. The public is reminded that the first phase of this programme is being concentrated on infants and children in the pre-school and school-age groups.

"Adults are asked to wait until all the susceptible children have received immunization.

"General Practitioners are being supplied with vaccine from the Government Medical Stores. A meeting will be held with representatives of the Medical Association of Jamaica, Paediatrician Association, General Practitioners Association, Junior Doctors Association and Nurses and Pharmacists Association to discuss their involvement in the programme.

"Doctors in need of vaccine supplies are asked to contact the Command Post at the Ministry of Health. General Practitioners in other parishes can contact the Parish Health Offices.

"All General Practitioners are asked to keep records of the people they immunize and their immunization status and to report these to the Command Post at the Ministry of Health on a daily basis,

"The Ministry has secured adequate supplies of vaccines and deliveries are being staggered to avoid storage problems."

#### Centres Opened

"The following is the programme for Kingston and St. Andrew:

"Children attending schools, including Basic Schools will be immunized in their schools so there is no need for them to attend the Health Centres. This programme will begin on Thursday, the 3rd June, 1982.

In addition the following immunization centres will be opened from 8:30 a.m. to 4.30 p.m. daily as of Thursday, 3rd June, 1982. The following are the centres in Kingston & St. Andrew.

(Editor's note: Please see list of centres, published separately),

"Mothers are asked to note that babies, and children not attending schools, should go to the nearest immunization Centre with immunization cards if they have any.

"Tomorrow, the programme in Trelawny and Hanover will be concentrated on the schools. The opening of immunization centres for other children and adults will be announced.

"The schedules for immunization in other parishes will be announced as soon as they are available".

#### Vaccine Shortage

Kingston THE DAILY GLEANER in English 3 Jun 82 p 1

[Text] Several clinics and immunization centres in Montego Bay ran out of poliomyelitis vaccine yesterday as thousands of residents in the western parishes converged on these centres to be immunized against the crippling poliomyelitis.

It is understood that arrangements are being made for more vaccine to be flown into Montego Bay by this morning to continue the Polio immunization drive throughout the island.

Up to late yesterday evening officials of the St. James Public Health Department were unable to say how many people were immunised, but according to a spokesman "thousands have been treated."

At 3 p.m. yesterday the Church Street, Cornwall Regional Hospital and Flanker clinics had to be closed as the vaccines were depleted, the spokesman said.

"However, priority was being given to the schools in the initial stage of the programme.

From early yesterday, medical teams were deployed to most schools in Montego Bay. Among the schools where immunization has been completed are Cornwall College, Montego Bay High School, Mt. Alvernia, Montego Bay Infant, Corinaldi Primary and Barracks Road Primary.

The programme is to continue today depending on the availability of the vaccine.

Reports from the Cornwall Regional Hospital are that four children, suspected polio cases, were admitted there yesterday. A hospital source said they were not considered to be serious cases.

#### Gilmour, Manley Statements

Kingston THE DAILY GLEANER in English 3 Jun 82 p 1

[Text] APPEALS FOR CO-OPERATION with the Health Minister's polio immunization campaign were made yesterday by the Minister of Education, Dr. Mavis Gilmour, and by the Leader of the Opposition, Mr. Michael Manley.

The following statement was issued by the Minister of Education:

"It will not be necessary to close schools except those which have been selected as immunization centres. School children and teachers will be among the first groups to receive immunization.

"All students will be required to produce their immunization cards on entering school at the beginning of the school year, 1982.

"All physical and cultural activities which require any degree of exertion should be abandoned until further notified.

"In our efforts to assist with the programme, any school building, premises or equipment required by the Ministry of Health should be made available immediately on request". The Ministry of Health will also seek the assistance of a number of teachers in administering the vaccine, which is simply taken by mouth.

"Since the health and welfare of our children are the concern of all our teachers, I look forward to your fullest co-operation in this exercise."

The following statement was issued by the Leader of the Opposition:

"The People's National Party has noted with distress the sudden increase in the number of cases of poliomyelitis.

"At this stage, the Party is calling on all Jamaicans not to panic. Jamaicans are being asked to follow the professional advice that has been given with

respect to crowded places, exercise and otherwise. It is imperative that everyone co-operate and go as quickly as possible to the various centers and be immunised.

"The Party has already asked for certain information from the Government and is conducting its own investigation into the events leading up to the present crisis. We will have more to say on that in due course.

"In the meantime, however, we wish to stress that our first concern is that everyone should assist in stopping the spread of this disease which can maim and even kill people. We urge everyone to give their fullest co-operation in order to stop the spread of the disease."

#### Incidence in St James

Kingston THE DAILY GLEANER in English 4 Jun 82 p 1

[Text] Since the outbreak of poliomyelitis in St. James, there has been one death, and eight confirmed and 27 suspected cases reported there, the Minister of Health, Dr. Kenneth Baugh, said yesterday.

There have been no confirmed cases outside of St. James, but the Gleaner understands that there are two suspected cases at the Kingston Public Hospital and that tests are being carried out.

Dr. Baugh told a news conference at the Ministry in Kingston that up to yesterday morning there were 27 suspected cases in the Cornwall Regional Hospital and that eight of the cases investigated had been confirmed as polio.

In addition, two persons had been discharged, one of whom was confirmed as a polio case; one refused to be admitted to the hospital; and one had died.

The cause of the outbreak is still being investigated and there are some ideas being followed up.

The Ministry is receiving assistance in its diagnosis from a scientist from the U.S. National Centre for Disease Control, in Atlanta, Georgia, who arrived in Jamaica last week Thursday.

Dr. Baugh said the suspected and confirmed cases were not from one area, but from scattered districts in St. James. He said the poliomyelitis virus in the island now was of the type present in 1954 and 1957.

In July, 1954, there was a serious outbreak of polio here. However, it was brought under control in December of that year. By then there were 94 deaths of the 759 cases reported. However, the last reported cases of polio in Jamaica before the current outbreak was in 1964. It was the 1954 outbreak that led to the establishment of the Mona Rehabilitation Centre in St. Andrew.

DR. BAUGH SAID THAT SO FAR the immunisation programme was on target and was effective and that there were "ample supplies of the vaccine available". Some

5000,000 doses will arrive in Jamaica from Canada today, with another million coming early next week. This, the Minister said, should be able to take care of the first phase of the programme in the entire island.

All parish immunization centres had been supplied with the vaccines and where electrical problems could likely develop, stand-by generators had been supplied to ensure the proper refrigerated storage of the vaccine. About 14 new generators had been bought to ensure electricity supply.

There would be investigation as soon as there were illnesses resembling poliomyelitis. Whenever there were reports, investigations would be carried out. In fact, there was one such disease that could be confused with polio--namely Guillian Barre disease, which can cause paralysis.

Most of the cases so far have been in the one to 8-year-old age group, and, in particular, the one-year to 3-year-old group; a few adolescents and one young adult. The first patient to be confirmed in May was a child.

Signs of the disease are fever, influenza-like symptoms--cold and headache--which are followed by weakness in the limbs which may be on both sides.

Polio--or infantile paralysis, as it used to be called--is a virus infection of the motor nerves--the nerves of movement--at the point where they leave the spinal cord. In some countries, it is almost as common in adults now as in children. It often seems to strike at fairly normal healthy people. The reason is not that healthy people are specially prone as such, but that those living under less hygienic conditions are more likely to have developed immunity to it.

DR. BAUGH APPEALED to the public to allow the Ministry to immunize children first and to follow the guidelines and instructions issued. He said that General Practitioners (doctors) would also be supplied with the vaccine. They in turn would make it available free to their patients.

He asked that the public co-operate by recognizing why the priority should be given to persons under 30 years. Persons under 30 years, he said, would be more susceptible to the virus as they would not have been previously exposed to the outbreaks in 1954, 1957 and 1964.

Dr. Baugh is to visit St. James over the week-end to review the programme being carried out there.

#### Aid from UK

Kingston THE DAILY GLEANER in English 5 Jun 82 p 1

[Text] ONE MILLION DOSES of polio vaccine, valued at one million Jamaican dollars, has been given to Jamaica by the Wellcome Foundation, of England, through the British Government.

This Foundation is the British associate of the leading pharmaceutical firm of Burroughs Wellcome Inc., of Canada. It is a philanthropic organisation devoted to medicinal causes.

There is a worldwide shortage of polio vaccine and although some supplies have already come in from Canada and the United States, there is a need for many more doses to be made available here to combat the outbreak of the diseases.

CONTACT WAS made with the Wellcome Foundation at the request of the local Ministry of Health by Lascelles Laboratories, of Kingston, through its Managing Director, Mr. Ian Murphy.

Diplomatic channels were used to bring about a speedy handling of the request and the British High Commission in Jamaica made the necessary contact with the British Government in the matter.

Supplies of the gift vaccine from the Wellcome Foundation, described yesterday as "a most generous offer", are due to come by the middle of next week.

#### Immunization Situation

Kingston THE DAILY GLEANER in English 5 Jun 82 pp 1, 17

[Text] THE MINISTRY OF HEALTH said yesterday that all the suspected and confirmed cases of poliomyelitis are confined to St. James, but the GLEANER understands that a few suspected cases are being investigated in the Corporate Area.

The Gleaner learnt that one suspected case was admitted to the Kingston Public Hospital yesterday, in addition to two suspected cases the day before, and that a case had been referred to the K.P.H. from the Cornwall Regional Hospital.

The Ministry said yesterday, however, that there had been no new cases other than the eight confirmed and 27 suspected cases reported in St. James up to Thursday.

Yesterday, chaos reigned at some Corporate Area Health Centres as people went to be immunized. Police had to be called in when people began tearing down doors. Fights broke out among some people seeking to be inoculated.

THE MINISTRY SAID YESTERDAY it had so far issued over 700,000 doses of the vaccine and the programme has already covered some 400 schools and 130 health centres. The programme is now in operation in all parishes.

Dr. Peter Figueroa, Acting Senior medical Officer of Health for Kingston said that 60 per cent of the school-children in the Corporate Area had been vaccinated against poliomyelitis in the mass immunisation programme.

By Tuesday of next week, he said, 90 per cent of the school-children in the Corporate Area will have been covered.

Dr. Figueroa also stated that up to yesterday immunisation had been carried out in one third of the 50 health centres in the Corporate Area with 25,000

doses of the polio vaccine given. The programme in the Corporate Area is continuing.

Meanwhile, the GLEANER, understands that some doctors are charging people for administering the vaccine, even though the Ministry of Health has stated that it is to be done free.

So far, there have been no problem with supplies of vaccine. By next week, the Ministry will receive one million doses of the vaccine from Britain. Some 250,000 doses are expected to arrive in the island today.

A MINISTRY STATEMENT said it was asking the public to co-operate by allowing the estimated 500,000 children in the 0-12 age group to be immunised first. The other age groups are being asked to await the expansion of the programme next week.

"The public is being asked to co-operate with the staff at the centres so that the programme can be quickly and smoothly implemented. If this is done everyone can be quickly and smoothly implemented. If this is done everyone can be immunised by next weekend. The large influx of the adult population on the health centres is causing concern," the statement said.

According to the Ministry, the on going programme of immunisation which was recently started in primary schools in the Corporate Area had up to the time of the outbreak in St. James, provided some 65 per cent of the children in the age group 5-10 with protection.

Another statement by the Ministry last night said: "The Health Ministry understands that there are people who are going from one immunization centre to another and are taking more than one dose.

"This can be harmful and persons doing so should desist. Each person must have only one dose at this time and this will if necessary be repeated six weeks later.

"Some people, however, do not need more than one dose in which case the nurse will inform them when they visit the centre.

"Do not listen to rumours. Your nurse or doctor at your Immunization Centre are the best persons to whom you should direct your questions."

#### Immunization Totals

Kingston THE DAILY GLEANER in English 9 Jun 82 p 1

[Text] AS THE ISLANDWIDE anti-polio campaign continued to move in high gear, the Ministry of Health yesterday reported that over 600,000 persons, mostly children, had been immunized under the first phase of the programme.

Up to Monday, about 60 per cent of the children and young adults, or 86,000 persons most susceptible to the disease in St. James, where it had been confined, had been immunized, the Health Ministry said.

Medical Officer of Health for Cornwall, Dr. Barry Wint, said by today all the schools in the parish should be completed under the programme.

The Public Health Department of the K.S.A.C. has appealed to parents in the Corporate Area to allow their children to be immunized at their schools and not elsewhere to avoid crowding and unnecessary duplication.

The Health Ministry is asking for volunteers to assist in the immunization programme in St. Catherine, and for them to attend briefings at the St. Catherine Health Department, adjacent to the Spanish Town Hospital, tomorrow at 2 p.m. and on Friday at 9 a.m.

CSO: 5400/7562

## SENIOR MEDICAL OFFICIAL DESCRIBES HEALTH CARE PROBLEMS

Kingston THE DAILY GLEANER in English 3 Jun 82 p 6

[Text] Dr. Peter Figueroa, acting Senior Medical Officer of Health for Kingston, has stated that the development of primary health care in the Corporate Area requires the injection of new resources to build on the foundation laid and the increase coverage of the population.

Over the past six years significant progress has been made in terms of the organisation and approach to developing primary health care not only in the Corporate Area but also in other parts of the island. However, full coverage of the population with basic health care was not possible at the present time, given the limited resources available to the Public Health Department.

Dr. Figueroa was giving his report at the annual Public Health Conference of the Kingston and St. Andrew Corporation held at the Bank of Jamaica auditorium, May 27. He said that achieving the target of "Health for All by the Year 2000" would require treating Health as a real priority and allocating resources accordingly.

#### Difficult Year

The present resources, manpower and materials "simply cannot stretch further" he said. For example, the number of midwives had not changed over the past 20 years but remained at 40. The increase in population had outstripped the number of health workers employed to meet the needs of the population.

Last year was a difficult one for the Department, with the health needs of the people continuing to grow and the resources available, declining. Despite the difficulties, however there were some achievements, including the increase in health committees, increase in immunization, and the "massive" mosquito control programme which was undertaken. Some 14 Health Committees were formed, making a total of 23. Dr. Figueroa said that primary health care required the active mobilisation and involvement of the people in determining their health needs and care. In light of this, it was important to strengthen the present Health Committees by forming more and giving them more responsibility for the health needs of their communities.

He also spoke of the Department's efforts to utilise the resources available and to secure others through the efforts of members of staff and with the support of patients. Health Committees and civic-minded organisations. He noted the work of the Pharmacy Section in saving the Department some \$12,530 by manufacturing a range of items which were more expensive on the commercial market.

Among the problems he listed were shortage of staff, resources, inadequate solid-waste collection and disposal system, outdated legislation and poor facilities. He said that the attitude of the Courts to breaches of the Public Health Law was less than satisfactory. Legislation must be brought in line to provide support for the development of primary health care, he said.

Despite the problems, the health workers "have shown themselves equal to the task". Achieving the goal of health for all would require the full support of the political directorate, administrative and technical staff, the involvement of the people, and the creative efforts of the health staff.

CSO: 5400/7562

KENYA

BRIEFS

CHOLERA CASES REPORTED--Fifteen cholera cases have been treated at Ombo district hospital in Migori town in south Nyanza district. This was confirmed yesterday by the hospital's medical officer of health, Dr Teven Chris. He said that the victims, all from Muhoro Bay location, in Macalder division, and (Bugumbe) location in Kinhancha division, were admitted in the hospital in the last 2 weeks complaining of active diarrhoea and vomiting. Meanwhile, reports from Isebania rural health center indicate that a cholera case has been admitted, while another case has been identified at Macalder health center. [Text] [EA120554 Nairobi Domestic Service in English 0400 GMT 11 Jun 82]

CHOLERA EPIDEMIC--At least 25 people died of cholera in South Nyanza District and several others were admitted to hospitals during the past six days. A team of doctors from Kendu mission hospital and Homa Bay district hospital have been rushed to the area to fight the killer disease. A source at the Kendu mission hospital told THE STANDARD last night that some of the victims died at home and others in hospitals. [Nairobi THE STANDARD in English 22 Jun 82 p 1 EA]

CSO: 5400/2176

## MALARIA CONFERENCE REPORTS ON CADRE TRAINING

Vientiane SIANG PASASON in Lao 9 Apr 82 pp 1, 3

[Article: Closing of Malaria Control Training]

[Text] On the afternoon of 30 March 1982 the Malaria and Tropical Disease Institute, Ministry of Public Health, completed its successful training of malaria control cadres who are medical officers from the northern provinces of Luang Prabang, Xieng Khouang, Oudomsai, Houa Phan, Louang Nam Tha, Sayaboury, and Vientiane, and the Malaria Center. There were 29 trainees, including 8 women.

According to a report by the chief of the Malaria and Tropical Disease Institute, in the period 1981-1982 the institute had opened 2 training sessions. The first which is now coming to a close is for medical cadres from the northern provinces. The second, which is now going on in Champassak Province, is for cadres from 4 southern provinces. Each training period lasts 6 full months. Each trainee studies political theory and specialized tasks, especially parasites, disease carriers (mosquitos), and epidemics of epidemiology. At the same time, they practiced with actual situations. This helps the trainees to more fully understand techniques for approaching the people, teaching and mobilizing the people to be aware of the danger of malaria, helping them to understand the blood testing project, and ways to assess what was done in the past. In his report the chief added that the specialized task in malaria training for the public health cadres from northern provinces in particular is the most important in the improvement of the public health network. This is because the northern provinces have widespread malaria, and malaria occurs every year. The institute gives the training to provide the provinces with efficient malaria control cadres in order to maintain good health for the people, especially the workers. This group of malaria suppression cadres will apply what they have learned to lead the provincial malaria control units in carrying out their work to stop and eliminate malaria, to improve and guide public health bases, to mobilize the people to organize mobile malaria control units, and also to organize malaria control stations in each province.

On this occasion each trainee expressed his happiness that he had succeeded in his courses, and pledged his efforts to apply what was learned successfully in actual practice in each one's locality.

9884

CSO: 5400/5611

PEDIATRICS CHIEF DISCUSSES COMMUNICABLE DISEASES, TREATMENT

Vientiane NOUM LAO in Lao 1-15 Feb 82 p 13

[Interview with Dr Phonthep Phonsena, Pediatrics Chief of Mahasot Hospital, Graduate and Expert in Pediatrics, and Member of the Lao People's Revolutionary Youth Union; date and place not given]

[Text] NOUM LAO: What kinds of disease occur in children nowadays?

Dr Phonthep: One disease is dysentery. I would like to add that there is a new strain of dysentery that spreads once in a while. Generally speaking, of diseases that occur in children, the most common one is malaria, and next come diarrhea, pneumonia, and meningitis.

NOUM LAO: Can you give us some example and statistics?

Dr Phonthep: This month in particular there were 300 cases. There was especially a lot at the end of this month. I refer only to those who were brought in for treatment in Mahasot Hospital. These children are between 6 months and 2 years of age.

NOUM LAO: Can you discuss our doctors' (especially in Mahasot Hospital) ability to combat this new strain of dysentery?

Dr Phonthep: Taking the month when there were 300 cases, we were able to treat them and save their lives. We can say that the cure rate was 100 percent. However, there were some cases where the patients delayed several days as they tried to treat it on their own before they were brought to the hospital, but for these it was too late.

NOUM LAO: How can you manage to treat it so successfully?

Dr Phonthep: First, because we understand the disease very well. We had observed it before, and it is only this year that we have reached a real understanding of it. Second, we have enough medicine, especially for dysentery. Third, we had a seminar earlier and in the seminar there was a talk about the new strain of dysentery.

NOUM LAO: What is the cause of the new strain of dysentery?

Dr Phonthep: The health problem arises because we have not followed the "three clean" sanitation principles well enough, especially sanitary practices in eating and drinking. There are many kinds of bacteria in the winter, and the ["lotawilui"] kind can cause the dysentery. This disease was discovered in Australia in 1973, and 50 percent of dysentery cases occur in children.

NOUM LAO: Can you explain clearly what the unsanitary eating and drinking practices are?

Dr Phonthep: Unsanitary practices include eating unclean food that contains diseases from the intestinal tract. The disease can get into food by flies or by touching it without washing the hands first. The disease can be caused by eating and drinking unclean food and water.

NOUM LAO: How can the disease be treated?

Dr Phonthep: If treatment is not given in time and properly, the patient will die in a few days. Before discussing the treatment, I would like to talk about the actual situation brought about by dysentery. When bacteria from the intestinal tract enter the body, the child will have diarrhea and at the same time he will throw up frighteningly. These symptoms cause the child to lose water along with electrolyte, such as sodium, potassium, and chlorine and bicarbonate ( $\text{HCO}_3$ ).

Death in children is caused by the loss of fluid and electrolyte from the body. Therefore, the primary treatment is to replace the fluids and electrolyte lost.

The old-fashioned way of using medicine which is followed by our people and our doctors is a mistake.

The traditional treatment should be to let a child drink a mixture of salt and water, for example, 1 liter of water mixed with 2 pinches of salt and 2 handfuls of sugar. If there is no sugar, use 2 cakes of cane sugar, green coconut juice, juice from ripe bananas, or crushed sugar cane. One thing we should know is to let the child continue breast feeding and eating soft food, such as boiled rice with beef broth, and avoid pickled and spicy hot food. Otherwise, the child would be really weak, lack resistance, and suffer malnutrition.

As for medicine, there is none that can kill the bacteria. Antibiotics such as "tifo" should not be used because they harm intestinal resistant agents, and bone marrow, and it is dangerous for blood cell production. Tetracycline damages intestinal resistant agents, and causes bones to be brittle. Neomycin damages the small intestine and keeps it from absorbing any food, and poisons the kidneys. Opium used to stop bowel movement (alexia medicine, etc) can endanger the life of a dysenteric child. These medicines should not be given unless in the case of certain diseases when they can be given by a doctor for a special purpose.

NOUM LAO: If that is so, what are the ways to prevent the disease?

Dr Phonthep: We must observe the "three clean" sanitation principles well with children, especially in eating and drinking. Let them drink boiled water, and wash their hands before touching and eating food. Wash the breasts and nipples very well. Give the children warm fresh food, and keep the food from infestation.

Researchers are looking to find a way to produce an injection to be used against this disease, which may be available in the future.

9884

CSO: 5400/6511

## BRIEFS

NEW STRAIN OF DYSENTERY TREATED--(Kh. P. L.) Early this year dysentery was found to occur among small children in Vientiane City and Province. This strain was different from the dysentery found earlier, and the treatment that was used in the past was not effective. Doctors then did some research, and with knowledge, capability, and high responsibility the revolutionary doctors were able to find this disease and a way to treat it effectively. In January 1982 the Mahasot Hospital was able to treat and save 300 children from this disease. According to Dr Phonthep Phonsena, Chief of Pediatrics at Mahasot Hospital, following the treatment our doctors were able to collect information and come up with an effective technique for treating the disease which best guarantees saving patients' lives. One thing we should pay more attention to is that whenever we see children or adults with dysentery symptoms, we should immediately send them to the hospital, otherwise the patients' lives could be in immediate danger. To prevent this disease it is important to maintain sanitary living and eating habits, and avoid raw food which is dirty and infested with flies. What we should keep in mind is that because the dysentery patients have diarrhea and lose a great deal of body fluids, the traditional treatment is to have the patient drink water mixed with salt and sugar in a mixture of 1 liter of water to 2 pinches of salt and 2 [handfuls] of sugar. If no sugar is available then cane sugar or fresh sugar cane juice can be used. Let the child continue nursing, and drink juice from boiled rice and juice from boiled meat. Pickled and spicy food should not be eaten. [Text]  
[Vientiane KHAOSAN PATHET LAO in Lao 17 Feb 82 p A5] 9884

CSO: 5400/5611

MEDICAL SERVICES DIRECTOR TURAYSH DISCUSSES MEDICAL CARE

Tripoli AL-MUWAZZAF in Arabic 15 Apr 82 p 9

[Interview with General Director of Medical Services Dr 'Abd-al-Razzaq Turaysh by AL-MUWAZZAF; date and place not specified]

[Text] AL-MUWAZZAF sent one of its representatives to the General People's Committee for Health to interview the director of the general administration of health services, which is a vital component of these services. The director is Dr 'Abd-al-Razzaq Turaysh. We met in his office.

The man gave us a hearty welcome. He immediately understood our mission, which was to inquire into the plan followed by this administration for providing outstanding services to citizens. After some brief conversation the interview began.

[Question] Can you give us an idea of the medical services administration's organizational structure for taking the services to the villages?

[Answer] The administration is composed of the following parts:

- (1) the division of hospitals and communal clinics.
- (2) the human services division, including prevention and treatment.
- (3) manufacturing branches.
- (4) medical treatment abroad.

As for the administrative functions of the medical services administration, they include:

- (1) analysis of reports of various health-related activities and facilities.
- (2) supplying the technical work force to the various facilities providing services to the citizens of the republic.

The administration meets the needs and standards demanded of it.

[Question] How do you obtain the technical work force in the field of health?

[Answer] Prior to 1974, or more precisely, up until the end of 1973, the method followed was to negotiate contracts individually with doctors and technicians. This was done by providing applicants with application forms which were then reviewed with the purpose of selecting the appropriate applicant for the desired specialty. But at the beginning of 1974 we found that this method was too slow, since it involved the customary correspondence, entry visas and travel tickets. It was difficult to obtain specialists in the number and of the caliber required. So we started with a new procedure to obtain a complete series of doctors and specialists to run the modern hospitals, which number 11 altogether. We concluded an agreement with a team from Yugoslavia that meets our standards. This team is running the following hospitals:

- (1) al-Zawiyah
- (2) Darnah
- (3) Zuwarah
- (4) Misratah

Second: After that a contract was signed with the Bulgarians for acquiring teams of complete proficiency for the running of the following hospitals:

- (1) Ajdabiya
- (2) al-Khums
- (3) division of pre-mature births (and stunted growth) in the pediatrics hospital in Tripoli.

Third: We have concluded an agreement with Hungary to obtain a complete team for operating the hospital at Tajura' and running the maternity, pediatrics, and artificial kidney wards.

We have also made a deal with Bulgaria for teams to run the hospitals at Sabha and Tarhunah and two communal clinics at Abu-Sulaym and Ghawt al-Sha'al. We have also contracted with them for a team of specialists to run the clinics at Al-Khums and Ajdabiya.

We have contracted with Poland for the operation of the hospital at Zulaytin.

Dr Turaysh added: Since we don't have enough specialists, we have contracted with the Czechs to run the clinic at Misratah. There had been a contract with Yugoslavia for this purpose, but they never executed their part of the deal.

The Czechs are also running the communal clinic at Quriji.

Since the Yugoslavs didn't fulfill their commitment to supply us with the required elements that we requested of them, we substituted them with elements from Poland. They are used to run the communal clinic at Darnah. A short time after this it was confirmed to us that the Yugoslav elements would not continue to be working with us. So we found it necessary to do without them and substitute them with other foreign elements. Therefore we obtained teams from Poland to run the hospitals at Darnah, Tobruk, al-Zawiyah, and Surt, and the artificial kidney unit at Misratah.

We also acquired complete teams to work at hospitals in:

- (1) Ghadamis
- (2) Nalut
- (3) Jada
- (4) Murzuq
- (5) Awbari

9945

CSO: 5400/5013

MALAYSIA

BRIEFS

SARAWAK CHOLERA CASES--Two more cholera cases and 18 carriers were confirmed in Sarawak today. This brings the total number of confirmed cases to 25 with one death and that of carriers to 65 since the outbreak of the disease in the state this year. One of the latest cases is a 46-year old woman from Dalat in Sibiu. The case is the first report from the area. [Kuala Lumpur International Service in English 1130 GMT 24 May 82]

CSO: 5400/5643

BRIEFS

DYSENTERY IN MALDIVES--An epidemic of dysentery which has spread in Male threatens the lives of people. It has affected about 14 Islands according to the Voice of Maldives. The Minister of Health Mr. Mohamed Mustafa Hussain has appealed to the public to support the programme to control the epidemic , by chlorination of water and taking care of personal hygiene. It is understood that children are most susceptible to this infection and it is reliably understood by the Medical sources that the death toll has exceeded 100. [Text]  
[Colombo THE ISLAND in English 14 Jun 82 p 3]

CSO: 5400/5648

## BRIEFS

DENGUE FEVER BLOCKADE--Mexico City, 23 Jun (AFP)--It was reported here today that the Mexican Health and Assistance Secretariat has imposed a health cordon at the southern border to prevent the entry of hemorrhagic dengue fever, which has been detected in Belize and Guatemala. The secretariat has deployed 362 inspectors in the states of Quintana Roo, Chiapas, Yucatan, and Campeche. Within 2 to 8 weeks, the experts hope to control the possible transmission of dengue fever, an epidemic disease produced by a virus which develops in the blood and the spinal fluid. It is transmitted by a mosquito. The Health and Assistance Secretariat has ordered the application of 28,500 liters of malathion at 96-percent strength, 157,000 kg of larvicide, and 35,000 kg of DDT powder at 75 percent, in the 635 homes located in 7,451 manzanas in these states. [all figures as received] It was also reported that during the duration of the health cordon, there will be strict surveillance of all persons crossing the border from Guatemala and Belize. Other measures include the study of patients suffering from the fever and the establishment of epidemic vigilance measures for early clinical diagnosis in health centers. [Text] [PA321900 Paris AFP in Spanish 1559 GMT 23 Jun 82]

CSO: 5400/2176

## MALARIA REACHING ALARMING PROPORTIONS IN NORTH

Windhoek THE WINDHOEK ADVERTISER in English 9 Jun 82 pp 1-2

[Text]

**WHILE one of Namibia's worst malaria epidemics is on the wane due to encroaching winter, National Health is preparing itself for an epidemic of even greater proportions during next summer's rainy season.**

Commenting on the highest malaria incidence in the north in at least the past two decades, Secretary of National Health and Welfare Dr JA Oosthuysen told The Advertiser malaria was currently at its worst south of the Red Line in the Territory's history according to his information.

The war in the north coupled with the increased freedom of movement of people from the north, are the main factors responsible for the critical spread of malaria this year.

The elimination of malaria-bearing mosquitoes in the north was limited to one-fifth of the infected area because of the war, Dr Oosthuysen said.

"We can only handle 20 percent of the area. In the rest they breed just as they want."

Dr Oosthuysen said there was a real danger malaria-bearing larvae could mature in the southern districts once the first rains fall next summer.

"We fear that with the new year coming and the continued freedom of movement, the risks are higher," he added.

Deputy Director of National Health and Welfare, Dr Albert Hitzeroth has been quoted as saying "the situation is alarming but there is little we can do with the war as it is in the north," and confirmed the incidence of malaria in the south is on the increase.

The Windhoek State hospital has confirmed 144 positive malaria cases analysed from only a proportion of malaria patients treated in April.

Because the bush war has considerably restricted the movement of Health officers in the north, growing numbers of malaria sufferers can only be treated in the main centres.

One of the largest mission hospitals in Owambo is the St Martins Catholic Hospital at Oshikuku where the number of patients treated for malaria shot up from between five

and 35 per month in 1980 to 2 505 in April this year. In one week alone in April 930 cases were treated, official figures state.

According to Dr Hitzeroth, Government clinics and hospitals reported 250 laboratory-tested cases in Owambo last year, which jumped to 204 in March and close to 400 in April this year alone.

#### REGULAR

Until 1966 when the Health authorities took control measures in Owambo and Kanvango where disease is endemic, malaria epidemics were a regular feature.

Largescale blood tests in

the two regions showed an incidence of roughly 27 percent in Kavango and 16 percent in the drier Owambo that year.

After four years, only some three or four percent of the Kavango people suffered from malaria and the official incidence in Owambo was given as zero.

The intensified war brought attacks against inoculation teams from the Health Department, against a background of increasing malaria brought from Angola by thousands of refugees entering Owambo, however.

Dr Hitzeroth said medical teams had to use

military protection of which there was a shortage, and the local population became scared to come forward for treatment.

A further problem has arisen, in that the northern population has become more prone to malaria infection because the control measures over the years has lowered their resistance to the disease.

In the short term therefore, the incidence will be naturally higher, until the general level of immunity is raised by renewed preventative measures.

CSO: 5400/5641

## BRIEFS

MALARIA PATIENTS INCREASING--Janakpurdham, June 12--The number of malaria patients are reported to be increasing in Janakpurdham and northern Dhanusha, reports RSS. The number of malaria patients at Janakpurdham at present is eslimated at 12 whereas their number in northern Dhanusha including Tintale, Chisapani, Sakhubani, Madhubasa, Bishrampur Charghariya, Jarayotar and Kebalpur village panchayat is put at 247. According to the local office of Nepal Malaria Eradication Association, the number of malaria patients in Dhanusha district has reached 544 over the last five months. Bulk of the malaria patients happened to be children and women. No death from the disease was recorded during that period, it is learnt. [Text] [Kathmandu THE RISING NEPAL in English 13 Jun 82 p 4]

ENCEPHALITIS DEATH REPORTED--Kalaiya, June 6--Ram Chandra Tharu, 30, of Pipara village of Tetariya village panchayat died of encephalitis at Kalaiya Hospital, it was learnt from the hospital, reports RSS. Mr. Tharu died within three hours of admission at the hospital. [Text] [Kathmandu THE RISING NEPAL in English 7 Jun 82 p 6]

CSO: 5400/5640

GOVERNMENT, VOLUNTARY EFFORTS AGAINST TUBERCULOSIS SAID TO BE INADEQUATE

Islamabad THE MUSLIM in English 22 Jun 82 p 5

[Article by Rahimullah]

[Text]

#### ISLAMABAD

Pakistan's health planners are worried about the ineffectiveness of its anti-tuberculosis programme.

From the President down to the lowest rung of health officials, everybody is harping on the same tune: coordinate efforts of all agencies concerned and integrate programmes. But enthusiasm peters out on the implementation stage, which in turn, is described as highly unsatisfactory.

Officials admit that Pakistan has fairly lagged behind in its fight against TB even compared with other developing countries. Tuberculosis control is described as "mid-way through," which probably means a 50 per cent success.

A preventable and curable disease, TB remains a major killer in Pakistan. It is still the fourth major health problem and about half the country's 80 million Pakistanis are feared infected with TB.

To date, only two national TB prevalence surveys have been made. The first was conducted in 1960-62, the second in 1974-77. The latest survey showed that 1.9 per cent of the population suffered from TB. Only in one age group, the 5-9, was a decrease from 23 per cent to 13 per cent recorded. Adult groups have the same level of infection two decades earlier.

Both surveys showed that 7 out of 10 Pakistanis, at 20 years old and above, are already infected with TB, some of them becoming infectious cases in five years. Clearly, the national TB control programme drawn up in 1965 has

failed to make much headway. Critics say the national programme was haphazardly planned and badly organised. For instance, while TB control was initially planned in four phases, lack of progress in the first phase disillusioned all involved.

BCG vaccination, the main weapon currently used in preventing the disease, covered 34 million people in the last 30 years. Critics say the figure is not impressive enough. Among the country's 33 million children, for instance, yearly BCG vaccination covers only one million. At this rate, critics say it will be impossible to reach the desired target of vaccinating 70-90 per cent of the people.

Training of medical manpower, which was zealously undertaken in the last decade, is now a forgotten affair. The programme still drags on but without proper supervision. Doctors are reluctant to become TB control officers, calling the position "unattractive."

Even doctors and health planners are unable to agree on the most effective and economical method of new case-finding - a controversy over the years. An elite group of the National Tuberculosis Association, called the Chest Specialists' Panel, advocates mass miniature radiography (MMR) for early case finding. Its supporters say many more cases could be detected at the shortest possible time by using MMR.

However, critics say it is expensive, needing frequent repairs and an additional vehicle to transport the instrument. They believe TB could not be identified with certainty through X-rays. They point

out that the World Health Organisation (WHO) recommends sputum-smear microscopy for case finding.

Sputum-smear microscopy involves the collection of sputum from suspected patients, smearing it with chemicals, and culturing it in a laboratory where TB infections are detected by the microscope. It is described as the quickest and the cheapest method, although sputum culture also requires trained technicians and special laboratories. MMR, on the other hand, is costly and requires specialist interpretation, besides giving wrong conclusions in certain cases.

Another major impediment is lack of funds. Money is needed to set up dispensaries, pay health care personnel and, above all, to buy drugs. Deployment of meagre funds available is also a problem, more so in a country where priorities are not fixed and corruption is deeply rooted, even in the health services.

Presently, there are 108 chest clinics and 4,500 hospital beds for TB patients. This includes six sanatoria, built in hills and city outskirts with better surroundings and clean air. Although some places still lack TB clinics, all major general hospitals now have TB wards.

However, the quality of services at the sanatoria has hopelessly deteriorated, due mainly to lack of specialists and funds. Hospital beds are often vacant, because of misconception that hospitalisation, special diet and complete rest offer no advantage, nor do they shorten the duration of treatment. In fact, considerable psychological advantages are attributed to home treatment in familiar sur-

roundings, besides being less expensive. Thus, the sanatoria keep losing patients and their earlier importance.

If the TB control programme were to be effectively integrated into the general health services, it could count on the available facilities of 548 hospitals, 715 maternal and child health clinics, 137 rural health centres, along with 369 sub-centres and 3,000 dispensaries.

However, despite the large number and diversity of these health outlets, their role in the TB control programme is doubtful. Integration remains a mere wish. District health officers complain they are so busy with a host of responsibilities that they could not devote any time to the anti-TB campaign. As reporting of fresh cases in the district and basic work is the responsibility of the overburdened district health officers, the programme is grounded before the take-off. There is also hardly any coordination even among various concerned departments.

Compared to inadequate government effort, the voluntary agencies have fared no better, except making their presence felt with occasional lashes in the press. Too many tuberculosis seminars and conferences are held, where planners and doctors share the limelight and pharmaceutical firms display their new products. Recommendations, too, keep coming in, often depicting different viewpoints.

However, nobody bothers to throw light on the implementation aspects of tuberculosis control. "Better not touch the weakest link" seems to be the general consensus.

A national tuberculosis association, with branches in almost all

the districts, is running 35 chest clinics. Majority of these centres are under-staffed and need to be developed properly. The association, run by doctors and social workers, nevertheless keeps the issue alive through its off and on "national conferences." Its office-bearers, strangely enough, never change and the same faces replace each other in the coveted positions year after year.

Recommendations regarding tuberculosis control are aplenty. Almost all of them stress health education, increased BCG vaccination, free treatment of patients, availability of locally-manufactured cheap drugs, proper training of doctors and technicians and incentives for serving in remote areas. Almost everyone involved with tuberculosis control is convinced that health education plays a significant role.

Lack of health education gives rise to the misconception that TB is not a disease but a social stigma. It is stressed that at least half the fight against TB - starting from case-finding right down to the last does - could be fought and won with one single weapon: health education.

One WHO expert, who has stayed for a long time in Pakistan, noticed the prejudice against giving sputum for examination. He traces this to lack of health education, saying the public aversion to sputum tests is one of the greatest snags in TB control.

Public response to TB control has certainly improved. Now more Pakistanis are aware of the dangers of TB. It is a dreaded disease today, striking mostly the poor and leaving scars of its ravages for many years. And Pakistan badly needs a shot in the arm for a more effective control of tuberculosis. -Depthnews Science.

## COMPREHENSIVE IMMUNIZATION PLANNED

Karachi DAWN in English 22 Jun 82 p 4

[Article by Asad Yosuf]

[Text]

**HYDERABAD, June 21:** The Sind Minister for Health and Information, Syed Ahad Yousuf, said that Government has decided to immunise each and every child in the province during the next two years so that they could be protected from the various communicable disease like polio, measles, whopping cough, diphtheria and tetanus.

Presiding over a high-level meeting of Health Department and other related agencies held here on Sunday afternoon to discuss and evaluate the ways and means to accelerate the extended programme of immunisation in the province.

He said that under the instructions of President of Pakistan, Gen. Muhammad Zia-ul-Haq a crash programme was being started for immunisation of children, having the age between 10 to 5 years with the help of UNICEF.

The Sind Health Minister instructed, the Director Health Services, Sind, to submit a detailed action programme for implementation of the immunisation programme in view of the proposals and suggestions made at the meeting by

the representatives of the various social welfare agencies within shortest possible time so that a comprehensive drive could be launched in this respect.

The Minister disclosed that at present 164 Immunisation Centres were working all over the province, but Government has decided to further streamlining this programme, particularly in rural areas. The Minister added that this purpose could only be achieved by the active co-operation of the social welfare agencies and Local Bodies institutions.

He said that Local Bodies should also be associated with this programme and these can play a vital role in educating the people of their respective areas for the purpose.

The chairman Divisional Co-ordination Committee, Qazi Abdul Majeed Abid, who is also the Chairman of District Immunisation Council, Hyderabad, also underlined the need for effective and continuous publicity of the immunisation programme through radio and TV.

## NATIONWIDE MEASLES IMMUNIZATION DRIVE SET

Manila BULLETIN TODAY in English 9 Jun 82 pp 1, 14

[Text]

The Ministry of Health (MOH) will launch a nationwide program of immunization for children against measles to avert any epidemic of the disease during the rainy months.

According to the MOH disease intelligence center, 113 cases were reported last week at the San Lazaro Hospital, which is much higher than the five-year median of 71.

The target of the immunization program will be children between nine and 14 months who have not had any history of measles.

Some 35 per cent of the infant population in areas with health centers will be covered initially. The program will be expanded after six months to cover 70 per cent.

The bureau of health services of the MOH has included measles immunization as part of the expanded program on immunization against communicable

diseases such as diphtheria, pertussis, tetanus, tuberculosis, and poliomyelitis.

Measles is considered one of the most common viral diseases in the country with 23,478 cases and 934 deaths in 1980.

Clinical observations show that measles infection can lead to complications such as bronchopneumonia and encephalitis, two leading causes of infant deaths.

Measles ranks seventh as a cause of morbidity and ninth as a cause of infant deaths.

The disease, DIC reports further revealed, is almost confined to infants and children, with 95.7 per cent of cases and 98.9 per cent of deaths in the age group below four years old.

The highest morbidity rate is among those under one year, with a rate of 286.6 per 100,000 population.

## WORLD BANK GRANTS FUNDS FOR HEALTH CENTERS

Manila PHILIPPINES DAILY EXPRESS in English 15 Jun 82 p 2

[Text]

**THE WORLD BANK** will release P35 million for the simultaneous construction of 345 health centers scheduled to start this month to boost the country's primary health care program, Health Minister Jesus Azurin said yesterday.

The amount is part of the \$22-million WB loan intended for the nationwide implementation of the PHC program. A total of 75 main health centers and 915 barrio health centers will be built in key areas within a 5-year period under the civil works component of the loan.

\* \* \*

**AZURIN** said the bank, however, turned down a ministry proposal to reduce the civil works component which comprises 55 percent of the entire loan in favor of actual PHC implementation through community organization.

Instead, he said, the Bank suggested granting another loan to finance PHC implementation. The

loan, he said, allots a meager sum of \$3 million of the \$22 million for this component.

"Our hope of getting funding for PHC from this source (World Bank) has not materialized," he said. "We have to get funding from existing budgetary appropriations and adjusting existing programs."

\* \* \*

**AZURIN** said there is no allocation for PHC in the ministry's budget so that the ministry has already been forced among other things, to cut down on office and field supplies, travelling expenses, and to use a portion of the loan's allotment intended for management, training, information, education, and communication components.

The \$22-million PHC loan is part of a \$40 million loan package to finance the PHC and family planning programs of the government for five years which began last year.

CSO: 5400/5648

## RESPIRATORY CASES RISE IN METRO MANILA

Manila PHILIPPINES DAILY EXPRESS in English 9 Jun 82 p 3

[Text]

THE MINISTRY of Health advised yesterday the public to take safeguards against respiratory diseases after it noted a slight increase of their occurrence in Metro Manila, particularly among children.

The ministry said the prevalence of respiratory diseases was due to the sudden change of weather.

The Disease Intelligence Center said the three common respiratory diseases are diarrhea, typhoid fever and diphtheria.

DIARRHEA \* \* \* cases increased slightly the past week. Cases totalled 115, or seven more from the previous week's 108. Diphtheria also rose from 23 to 28 cases while typhoid fever increased to 19 cases as against last week's 17 based on admission at the

San Lazaro General Hospital.

Of the 115 diarrhea cases, 104 were registered in Metro Manila while 11 were in neighboring areas. But the DIC said incidence remained way below the five-year median of 227.

All but one of the 19 typhoid fever cases came from Manila. The figure is higher than the five-year median of nine. Also, diphtheria cases are over the five-year median of 21.

The weekly report noted decreases in the occurrence of measles, which went down from 127 to 113, while H-fever also dropped from 13 to only nine.

Measles remained much higher than the five-year mark of 71 and H-fever, five more in the median mark of four.

CSO: 5400/5640

SADF PURCHASES NEW DRUG TO KILL BILHARZIA WORM

Johannesburg RAND DAILY MAIL in English 2 Jun 82 p 3

[Article by Ada Stuijt]

[Text]

A MAJOR step towards eradicating bilharzia is being claimed by tropical disease experts all over Africa.

This follows field tests of a new drug, Biltricide, which was recently registered with the Medicines Control Council in Pretoria.

The SA Defence Force was the first to snap it up, even before it became available on the open market, to treat soldiers returning with the parasite from counter-insurgency border excursions.

However, a South African medical expert in tropical diseases warned that one drug could never completely eradicate bilharzia — although Biltricide represented a major advance, he said.

While Biltricide's results were good news for all one-time bilharzia sufferers, such as whites taking part in water sports for instance — it was a different story for rural blacks.

"Bilharzia can only be beaten permanently if the entire population of South Africa has permanent access to chlorinated water supplies," he said.

Three million people, 95% of them rural blacks, suffer from the bilharzia parasite in the North-Eastern Transvaal, Natal and the Eastern Cape — and millions more run the daily risk of getting it because they only have access to bilharzia-infested water, a Department of Health and Welfare spokesman said yesterday.

Until recently, treatment against bilharzia was an often dangerous business.

Patients had to be treated with drugs which often were so toxic that they could only be given under close supervision in hospitals.

The new drug, Biltricide, cannot kill the eggs which cause so much human agony, but it is an important major

advance because only one oral dosage kills the (egg-laying) worms without dangerous side-effects to the patient.

The eggs laid by the bilharzia worm, a tenacious parasite, often cause a lifetime of agonising liver, bladder and even brain diseases and is the result of a vicious link between the human host, filthy water and certain kinds of snails.

Once a female and male adult worm are nestled together inside their human host, they produce 3 000 eggs each day — and these eggs cause vicious infections in vital organs.

"We are delighted with our field tests on Biltricide," the doctor said yesterday.

"However, until all rural blacks have regular and routine access to reticulated water supplies, bilharzia will not be eradicated completely, even with this very promising new drug."

CSO: 5400/5647

BRIEFS

MALARIA, FILARIA ON COAST--The increasing mosquito population has become a menace to the residents of Chilaw. Of late the situation assumed alarming proportions as most of the surface drains are not flushed while cess pits and stagnant pools have become ideal breeding ground for these vicious insects. Malaria which was almost eradicated from the town sometime ago is rearing its ugly head once more while filaria--a new threat--has also begun to spread in the town. As in the past there is no spraying of D.D.T. or Malathion by the local U.C. authorities or by any public health personnel. [Text] [Colombo THE ISLAND in English 4 Jun 82 p 3]

CSO: 5400/5648

## WARNING GIVEN ON FOOT-AND-MOUTH DISEASE

Rangoon THE WORKING PEOPLE'S DAILY in English 6 Jun 82 p 4

[Editorial]

[Text]

**F**OOT-and-mouth disease is a dreaded virus infection that affects millions of animals world-wide every year. It causes blisters on the mouth, on the nose and on the top of the hoofs of cattle, swine, goats and sheep. It is highly contagious and affects the fertility of cows thus posing a serious threat to the drive for increasing the domestic cattle population. It is capable of exacting a high toll of draught and meat cattle as well as other hoofed animals costing huge sums of money to the cultivators and livestock farmers.

This country saw the worst outbreak of foot-and-mouth disease in 1978-79 when more than 88,000 head of cattle were affected. That year it spread through all States and Divisions with the exception of only Tenasserim Division. In the succeeding years the incidence was about 25,000 cases every year. The equivalent in lost working hours of the animal force and the shortfall in meat production caused by the disease would have been enormous sums of money suffered by our cultivators and livestock breeders.

The Veterinary and Animal Husbandry Department has come up with a timely warning on the possible outbreak of the disease on an epidemic scale this year again and offered a series of measures for containing the epidemic and minimizing its impact on our cattle population. As sporadic

outbreaks have been detected in Pyu Township of Pegu Division, Lewe Township of Mandalay Division, Htantabin and Twante Townships of Rangoon Division, and Mingin Township of Sagaing Division earlier this year, the VAHD advises the farmers against releasing the affected cattle on the pastures, and to confine them to usual enclosures which are to be properly disinfected. The warning also provides tips for attending to the sick animals.

Out of 25.49 million acres of cultivated land in 1981-82, only 2.42 million acres were tilled by tractors while the remainder, more than 23 million acres, were tilled by 2.98 million yokes of draught cattle. There were more than eight million cows and nearly two million water buffalos in addition to 830,000 goats and sheep and 2.1 million pigs at the same time. Animals are therefore our principal work force on the farms and the source of meat supply. The farmers and the State, co-operative and private livestock breeders should pay close attention to the VAHD warning and take preventive measures diligently with the help of the Party organs and People's Councils to minimize the chances of loss of their animals to the foot-and-mouth epidemic and avert setbacks to their economic ventures.

CSO: 5400/5640

## BRIEFS

FOOT-AND-MOUTH DISEASE IN VIENTIANE--Starting in the middle of February the veterinarian unit of Sisattanak District, Vientiane City and Province, has carefully treated and given shots for protection against disease to animals owned by the people in various production bases. At the present time they have been able to treat over 50 very sick animals, mostly with hoof and mouth disease. These include 30 buffalos and over 20 oxen and pigs. The injections were given to over 480 oxen and buffalos and a number of other kinds of domestic animals. The district veterinarians are now actively continuing their treatment and injections against diseases for domestic animals. [Text] [Vientiane SIANG PASASON in Lao 6 Mar 82 p 1] 9884

CSO: 5400/5611

SOFALA ESTABLISHES PROGRAM AGAINST SLEEPING SICKNESS

Beira DIARIO DE MOCAMBIQUE in Portuguese 28 May 82 p 3

[Excerpt] An extensive program against trypanosomiasis [sleeping sickness] is being established in some districts of Sofala Province as a means of eliminating one of the diseases which affect livestock in this area of the country. In a joint effort between the Veterinary Laboratory in Sofala and the local cattle enterprise, the program against this disease is to be carried out in the Caia, Buzi and Nhamalanda districts, where laboratory investigations carried out for 3 years have made possible the detection of this and other diseases.

"Inoculation based on the knowledge of each region's epizootic conditions," said Dr Sos Postoin, head of the Provincial Veterinary Laboratory in Sofala, referring to the importance of this work, "make it possible to save foreign exchange and efficiently organize available human and technical resources."

Annual Program

Combating sleeping sickness in Sofala is a part of a more extensive plan for improving livestock herds. For this purpose, they have established an annual-pilot program which they have distributed to stockraising units, where they have established the chemical-prophylactic period (vaccinations) and preliminary treatment of infected animals, as well as preventive measures to be taken according to conditions in each zone.

In statements to DIARIO DE MOZAMBIQUE Sos Postoin explained that this is an experimental program; its results will make it possible to apply it in other Mozambican regions so that sleeping sickness does not cause increased economic losses to the country, through the animals' loss of vitality and subsequent death.

In this context, the Veterinary Laboratory in Sofala has divided the affected zones according to their level of infestation. For highly infected zones, they have recommended three inoculations per year. In the others, only two are to be given.

8870

CSO: 5400/5633

PERU

BRIEFS

FOOT-AND-MOUTH OUTBREAK--An outbreak of infectious foot-and-mouth disease around (Alamor), Ecuador, which borders San Jacinto district, Tumbes Department, has mobilized the members of the Regional Agricultural Board to prevent the spread of the disease among the country's cattle. [Lima Radio Union in Spanish 1130 GMT 22 Jun 82 PY]

CSO: 5400/2176

## MEASURES AGAINST FOOT-AND-MOUTH, CORRIDOR DISEASE NOTED

Lusaka TIMES OF ZAMBIA in English 9 Jun 82 p 5

[Text]

THE Government might lift the ban on cattle movement from Southern Province if no new cases of the foot and mouth disease are reported after a six-week observation period following a massive vaccination exercise in the area.

Minister of State for Agriculture and Water Development Mr Noah Dilamonu said Mumowa, parts of Choma and Mazabuka have already been covered in the vaccination which involved 140,000 doses ordered from Kenya last month.

Final vaccination campaign would be completed when another 200,000 doses of vaccines arrive.

He was commenting on the call by the Commercial Farmers Bureau for the State to lift the restriction of cattle movements in the area to alleviate a beef shortage in the country.

But Choma Party officials

have been blamed for failing to inform the district council on the outbreak of corridor disease which has claimed the lives of more than 100 head of cattle.

Acting governor Mr Alfred Lumbwe said it was wrong for Party officials to wait until a Member of Parliament visited their area to act on the deadly disease.

Mr Lumbwe was commenting on revelation by Mbabala

MP Mr Edward Nyanga that corridor disease had broken out in Chief Mapanza's area where cattle were dying every day.

Mr Lumbwe said if the council had been informed it would have drawn up plans on how to fight the disease.

In Mazabuka, district governor Mr Shadrack Mwiimbwa said villagers constructed 14 dip tanks on self-help basis to combat corridor disease.

CSO: 5400/5638

ZAMBIA

BRIEFS

ARRIVAL OF RABIES VACCINE--Meanwhile, about 100,000 doses of rabies vaccines ordered by the Department of Veterinary and Tsetse Control from France have arrived in the country. [Text] [Lusaka TIMES OF ZAMBIA in English 9 Jun 82 p 5]

CSO: 5400/5638

IVORY COAST

PROLIFERATION OF HARMFUL MOTHS REPORTED

Abidjan FRATERNITE-MATIN in French 19 Apr 82 pp 20-21

[Interview with Paul Cochereau, research director at ORSTOM (Overseas Scientific and Technical Research Office), by Hoppe Benoit Honest; date and place not specified]

[Text] The Center department--particularly Bouake and Yamoussoukro--has experienced a very disturbing and disagreeable swarming of noctuids, a sort of black moth with speckled wings. This marked noctuid swarming brought on the temporary closing of the girls' high school and some commercial establishments in Yamoussoukro. In Bouake, they have invaded all rooms, sometimes even causing work stoppages in some services. One wonders therefore about the causes of this **pullulation**, the nature of these moths, their frequency of recurrence, the dangers they may present, and the means that must be used to combat them. To obtain precise answers to all these questions, we turned to an entomologist, in this case Paul Cochereau, research director at ORSTOM [Overseas Scientific and Technical Research Office]. We also questioned local farmers to give us their views.

Question: Mr Cochereau, you are an entomologist, head of research at ORSTOM. You have had to study the life and reproduction of fruit piercing moths and their commensals, as well as several other species. Can you explain to us this marked **pullulation** of the moths in our area? Does it present a danger?

Cochereau: I must tell you first of all that these noctuids or moths **currently pullulating in t h e** Center department and even in many places in national territory do not represent any great danger. In the present case, we are dealing with two species of noctuids, which are the following: *Achaea Lienardi* and *Achaea Ophismoides*; the male and the female have very dissimilar wing markings. These moths swarm at regular intervals. In Bouake in 1977 a **pullulation** was observed that was no doubt less considerable than in 1982. Between these two dates, these moths have not attracted attention. The causes of this **pullulation**? It seems to be brought on by special climatic conditions (for example, a severe drought followed by early heavy rains or mango rains.) The very polyphagous larvae develop in large numbers on savanna plants like acacias, numerous spurge. These plants are completely defoliated. Moreover, it is interesting that observers of these concentrations of larvae in the bush are able to bring them to the attention of specialists in time.

Question: How do you explain the proliferation in such great numbers of these larvae in certain years?

P. Cochereau: It may be supposed that the natural enemies of these species were subject to unfavorable climatic conditions, and these allowed for the survival of a large number of moth larvae. It is known that the natural enemies of these moths are, for example, birds which eat their larvae, other insects which develop in the eggs or larvae of the moth, diseases (bacilli, viruses). Swarming occurs when a female's laying (e.g. 400 eggs) gives birth to more than one female in the following generation.

If this laying of 400 eggs produces two females, the population doubles. If one supposes that there are as many males as females, then in that case one will have two surviving females and males, i.e., out of the 400 eggs, 396 eggs will not have produced moths at the end of the development of the species. So the enemies of the eggs destroy a large number of eggs, then the enemies of the larvae (wasps, praying mantises, spiders, etc.) another segment, and finally the enemies of the chrysalids destroy the rest. Despite this very substantial mortality rate, the moth population will nevertheless double. In the present case, one may conjecture that the population has been multiplied by 100 in a single generation, i.e., only 200 out of 400 eggs have not produced moths.

Question: We are talking about Lepidoptera with perforative proboscises; I would like to specify the following Ophidera: *Othreis Fullonia*, *Othreis Materna* and *Eumaen*. Do you think these noctuids are all crop destroyers?

P. Cochereau: In the course of our nature studies, we have observed many other noctuids on various types of fruit, mainly oranges, mandarins and guavas. However, it is necessary at this point to make some reservations on the ability some of them may have to pierce the skin of the fruit as as to feed on their juice. As a matter of fact, it seems clear that not all are capable of such an achievement; nevertheless, as commensals, they take advantage of the holes already made by the primary crops destroyers and introduce their proboscises into the openings made by the latter. In this respect, they participate secondarily in the depredations on fruit since they feed on their juice, but they are also vehicles, agents of fruit decay.

As primary crop destroyers with respect to their ability to pierce the thick, resistant skin of many fruit varieties, like that of plums or melons, two related species that must be placed on the same level as *Othreis Fullonia* must be mentioned: *Othreis Materna* L. and *Eumaenas Salaminia* Cramer. Then there is a second group of species that could be capable of piercing the relatively nonresistant skin of various other types of fruit, such as guavas, tomatoes, mangoes. Nevertheless, they can also be found on plums as secondary destroyers, coming after the *Othreis* and *Eumaenas*, i.e., they take advantage of the holes already made by these species in the oranges to draw off their food.

Question: Are these noctuids responsible for fruit decay, and how?

P. Cochereau: As primary destroyers, yes, because they pierce the fruit to such the juice, and the others, as secondary destroyers, take advantage of these perforations to feed themselves and in this way to transmit the fungus saprophyte *Osphora Citri Aurantii* Ferraris, which, moreover, is the cause of decay in fruit pierced by *Othreis*.

Question: So it can be maintained that these noctuids now swarming in our area are all vehicles for these fungi, agents of fruit decay?

P. Cochereau: Undoubtedly.

Question: In your view, what are the primary climatological reasons for the swarming of *Othreis Fullonia*? Give us a biological understanding of these destroyers and their presence in West Africa, and finally a succinct insight on this species.

Cochereau: The primary climatological reasons of swarming? I must say that the larvae of these destroyers develop on arborescent Leguminosae of the *Erythrina* variety, planted in large numbers to shade the coffee shrubs. Moreover, it has been observed that *Othreis Fullonia* is attracted in large numbers by electric lights. *Othreis Fullonia* is seen to be one of the most prolific moths piercing plums, cashew nuts, mangoes, etc. *Othreis Fullonia* is also one of the most prolific fruit piercing moths. An *Othreis* female can produce 300 eggs at her first laying and generations develop in 35 to 40 days. It must be pointed out that in black Africa, not far from us even, in Ghana, researchers had detected several species of fruit piercing moths, of which about 100 have been identified. These researchers had also succeeded in identifying more than 132 host plants representing 31 botanical families.

Question: Do these butterflies present a very significant economic problem because of the ability they have in the adult state to pierce the skin of the most diverse types of fruit and to feed on their juice? And also because their very polyphagous larvae defoliate plants? What has been considered for warding off the danger? Why do these noctuids migrate?

P Cochereau: As a matter of fact, these depredators are considered to be very harmful to fruit plantations because of the ability they have in the adult state to pierce the skin of the most diverse types of fruit and to feed on their juice, as you say. Besides, these species are subject to sudden swarmings and seem to be characterized by large-scale migrations whose goal is the search for their food. As regards *Othreis Fullonia*, for example, and the various other species of these moths that pierce fruit or are agents transmitting decay-inducing fungi in fruit, researchers have already taken note of this problem and various measures have been taken to keep these depredators in check. Moreover, it must be noted that significant studies have been conducted by these researchers to deal with the danger. For example, in Sierra-Leone 46 species of these harmful moths have been catalogued, and in Ghana, 115 species have been catalogued, and in Nigeria 24 species.

Question: In Africa, which is the most significant species of these moths? Could you also tell us which species are frequently found on fruit?

P. Cochereau: Othreis is the most significant genus of these depreddators in black Africa, as is Achaea and above all the Catocaloides Gn species. However, mention must be made of the following species which are frequently found on fruit: Anua, Serrodes, Anomis, Dermaleipa, Hypocals, Sphingomorpha, and Tolna. These numerous species of moth are found in various areas of the world, not only in Africa but also in other continents. As primary destroyers with respect to their ability to pierce the thick, resistant skin of many types of fruit, the following species must be mentioned and placed on a par with Othreis Fullonia: Othreis Materna and Eumaenas Salamina Gramer.

Question: It is said that Achaia Catocoloide is a not insignificant species. What do you think?

P. Cochereau: Yes, indeed. In Uganda, attention has been called to the fierce onslaught of severe swarmings of Achaea Catocoloides. The same phenomenon occurred in Zaire. Achaea Catocoloides is one of the most significant citrus fruit destroying moths in West Africa, and particularly in Sierra-Leone. Moreover, it must be noted that this species produces two generations a year (May and June) while the larvae populations develop on the regrowth of Euphorbiaceae and Linaceae.

Question: Could you discuss with us the biology of the population fluctuations of this species and their larvae.

P. Cochereau: The hatching of the young larva occurs 2 or 3 days after the egg is laid. The development of the larva takes 18 to 20 days; pupation lasts 7 to 8 days and the maturation period of the female moth 4 to 5 days. The life span of these noctuids varies according to the species: 1 day, 15 days, 3 months. The larvae of these noctuids (Achaea, Lienardi, Achaea Ophismoides, Othreis Achaea Catacoloides Fullonia, and many other species as well) are polyphagous and are very destructive to crops. They develop on arborescent Leguminosae above all. In general terms, it must be said that it is the moths themselves that are harmful.

Question: It is known that these moths have, in fact, a hard and rigid proboscis, capable of piercing the skin of the most diverse types of fruit. Explain to us how these destroyers operate.

P. Cochereau: The moth sinks its proboscis into the fruit, sucks out the juice, and the hole from this puncture constitutes a way of entry for numerous saprophyte fungi, one of which is Oospora Citri Aurantii Ferraris, which rapidly brings about the decay and fall of the fruit. Thus oranges, mandarins, guavas, pineapples, papayas, custard apples, tomatoes, bananas, coffee berries, all succulent fruit in general, are pierced during the night particularly by the Othreis, and generally speaking by all these primary noctuid destroyers.

Question: In conclusion, what should be kept in mind?

P Cochereau: In conclusion, it must be kept in mind that these noctuids are harmful because of their larvae which develop at the expense of the vegetal or reproductive system of cultivated plants. They are also harmful as commensals, primary destroyers piercing fruits to such the juice, and the

others as secondary destroyers which take advantage of these perforations made in the fruit to feed themselves and in this way to transmit the fungus saprophyte *Oosphora Citri Aurantii Ferraris*, which is the cause of decay in pierced fruit.

This was the information we obtained from Pierre Cochereau, entomologist, head of research at ORSTOM, about noctuids (night moths) which are now swarming in our country. We also questioned the local farmers who are familiar with the life, frequency of recurrence and the various harmful species of moth. All of them told us that these noctuids swarm in our area nearly every 5 years, that they are frequently to be found in smaller numbers, a fact that draws no attention whatever except when swarming occurs. Whatever their number, each year they herald the beginning of the crops. As soon as they appear, it is time to go to the fields.

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CSO: 5400/5990

## RICE BUG INFESTS PALAWAN FIELDS

Manila PHILIPPINES DAILY EXPRESS in English 9 Jun 82 p 3

[Text]

**SOME 750** hectares of rice lands in seven Palawan towns have been infested with rice black bug since last month, according to the Bureau of Plant Industry.

On account of the infestation, BPI Director Domingo Panganiban said rice production in the province is projected to decrease by 30 percent against the last harvest season's yield.

However, Panganiban said the decrease in the palay output will not affect the rice supply in the province as Palawan has enough stocks to fill the needs of the people in the area.

He has directed some BPI personnel to spray pesticides in the affected areas to control the spread of the rice black bug.

In addition, Panganiban has assigned two quarantine officials in Brooke's Point and Puerto Princesa ports to prevent the transfer or the carrying of Palawan rice plants to other provinces.

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**EARLIER**, Agriculture Minister Arturo Tanco Jr. declared the Palawan group of islands under quarantine to check the spread of the bug.

Tanco also banned "the movement, transfer or carrying of rice plants and other plants belonging to family graminiae and other known host plants from the islands," including Cagayan de Tawi-Tawi.

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**THE MINISTRY** of agriculture banned yesterday the entry into the Philippines of coconuts and mangoes infested with crop diseases.

Tanco said that the importation of coconuts from certain Caribbean and West African nations has been prohibited due to the occurrence in these countries of a lethal yellowing disease.

The coconut malady causes the yellowing and shedding off of the leaves, premature nutfall and eventual rotting of the tree.

The countries include Jamaica, Dominican Republic, Haiti, Cuba, Florida, Cameroon, Togo and Ghana.

Tanco also banned the importation of mangoes from India, Pakistan, Bangladesh and Egypt, where two mango diseases - mango malformation or bunchy-top disease, and mango woody gall and scaly bark disease have been reported.

## SOCORRO WILT PLAGUES MINDORO COCONUTS

Manila PHILIPPINES DAILY EXPRESS IN English 17 Jun 82 p 2

[Text]

**THE PHILIPPINE** Coconut Authority said yesterday it will send a team to Oriental Mindoro Saturday to verify the extent of damage of the Socorro Wilt disease plaguing coconuts there.

The PCA said the move will clear conflicting reports of damaged portions of the province.

The PCA earlier said it has the disease "under control" in one portion of the province, Socorro, from which the disease derives its name.

However, the latest report from the Ministry of Agriculture said that the wilt has spread even to Mindoro's neighbors, Palawan and Cebu.

**THIS** has prompted the MA to declare a "coconut blockade" in the area. Previous to this, the MA also quarantined Mindoro Oriental and Occidental, and prevented the coconut palms from being brought

out of the provinces.

The PCA reported that about 6,000 palms have been destroyed by the wilt. The figures may have gone higher however, the MA said.

Both agencies agreed that there has yet to be found an effective way of controlling the disease, whose cause up to the present is still undetermined.

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**THE PCA** said that the disease was first reported in the early 1960s by natives of Socorro. The wilt generally affects trees below 25 years old, and kills them within four to six months.

The wilt is characterized by the drying of the leaves, from the oldest to the youngest foliage, premature nutfall, and rotting of the roots.

As an immediate measure, the PCA has burned all trees affected to prevent the spread.

CSO: 5400/5648

BRIEFS

SOCORRO WILT IN CEBU, PALAWAN--A mysterious plant disease which has devastated coconut crops on Mindoro island has spread to two other islands, agriculture officials said. A Ministry of Agriculture spokesman said research teams have been sent to the islands of Cebu and Palawan following the discovery of the disease in local coconut plantations. The movement of coconut products from all three islands has been banned, officials said. The disease, called Socorro Wilt, kills a coconut tree in just a few days. There are an estimated 1.5 million coconut trees on Mindoro, which produced \$3.2 million worth of copra last year. [Text] [Manila PHILIPPINES DAILY EXPRESS in English 21 Jun 82 p 26]

CSO: 5400/5648

END