

SMALLPOX ERADICATION IN ANGOLA
STATUS REPORT - 9 NOVEMBER 1978 ^a

1. Brief Description of the History of Smallpox Eradication Activities

Neither since Angola achieved independence in 1975, nor while still under Portuguese administration, has a separate programme for the eradication of smallpox existed, with its own budget, personnel and organization. Smallpox eradication was the responsibility of the health services as a whole, with vaccinations being performed by fixed and mobile units under the direction of the Head of Epidemiology. The objective was to vaccinate one third of the population yearly, with newborns, school children, international travellers and workers treated as priority groups. However, no information exists about the vaccination coverage rates at any stage.

Mobile groups for leprosy (9), trypanosomiasis (7), and BCG (10) moved through the country on an established schedule, also administering smallpox vaccine in the course of their other activities. In the cities, fixed health installations provided vaccination which was compulsory for all school children, military personnel, and in most industries. There was no separate administration for the smallpox programme. The Head of Epidemiology was also responsible for endemic disease control, activities concerning the environment, administration of public health activities and special programmes.

Some rural areas of the country were not accessible at times due to unsettled conditions, a situation that still exists in some parts of the country.

2. Basic Demographic Data

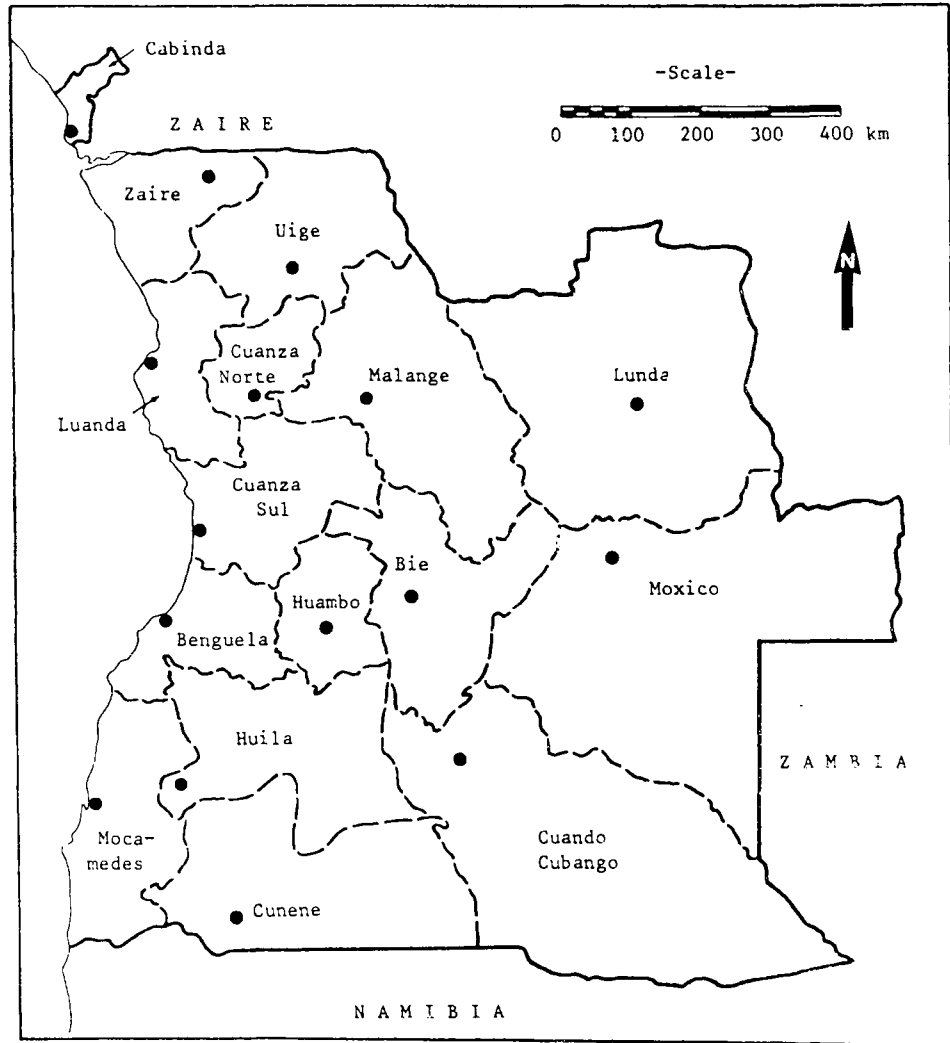
Population	6,768 000 (1978 estimate)
Area	1,246 700 km ²
Population density	5.43 inhabitants/km ² (maximum of 29.25 inhabitants/km ² in Huambo Province and minimum of 0.67 inhabitants/km ² in Cuando Cubango)
Percentage urban population	15%
Percentage rural population	85%
Percentage nomadic population	Nomads are present in the south of the country, but data on their exact population is not available.

^a Prepared by SME Unit, Geneva.

3. Administrative Units

Angola is divided into 16 provinces, shown on the map below.

ANGOLA: ADMINISTRATIVE PROVINCES AND LOCATION OF PROVINCIAL CAPITALS



Provincial boundaries are approximate.

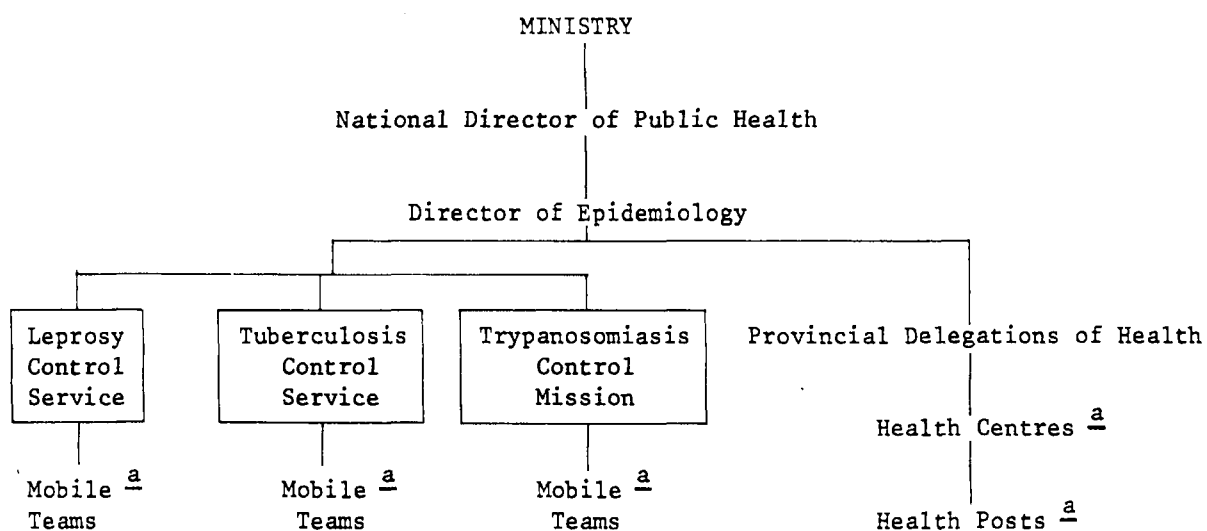
4. Health System

4.1 Health Institutions

Urban hospitals	19
Rural hospitals	87
Rural clinics	618

The number of health institutions, by province, is shown in Annex 1.

4.2 Diagram of the Health Structure Relevant to Smallpox Vaccination Administration After 1975



^a Also responsible for smallpox vaccination.

5. Reporting System

5.1 Health Units Providing Monthly Epidemiological Reports

Province	Number of Reporting Units	Percentage of Reports Actually Received in Luanda in 1977
Benguela	8	64
Bie	9	78
Cabinda	4	^a
Cuando Cubango	9	14
Cuanza Norte	11	^a
Cuanza Sul	12	^a
Cunene	3	15
Huambo	11	67
Huila	11	^a
Luanda	8	60
Lunda	11	^a
Malange	14	^a
Moçamedes	4	^a
Moxico	9	10
Uige	14	7
Zaire	6	^a
Total	144	35%

^a Data not available

5.2 Method of Reporting

Until 1976 a weekly bulletin was sent directly to the Department of Epidemiology in Luanda by each reporting unit. In January 1977 a daily telegram was introduced, to report any case of cholera, smallpox, yellow fever, lice epidemic typhus, recurring fever or rabies, again directly from the reporting unit to the Department of Epidemiology. A monthly bulletin, with a copy to the provincial health director, is also sent. Compilation of individual reports is done only at the central level.

5.3 Regularity of Reporting

A survey of monthly reports received at the Central Epidemiology section for 1977 showed that only 35% of the expected 1 728 reports were received.

5.4 Action Taken in Case of Suspected Smallpox Report

Suspect cases are generally investigated by personnel of the provincial or central level. However, insufficient coordination and communication between various levels of the surveillance system has brought about the registration of suspect smallpox cases, with insufficient documentation, at the central level, while the full summary and investigation report may be present at the periphery.

6. Smallpox Data

6.1 Smallpox Cases and Deaths Reported by Year, 1950 - 1978

Year	Cases	Deaths	Year	Cases	Deaths
1950	621	9	1960	0	0
1951	236	4	1961	0	0
1952	191	0	1962	23	3
1953	138	1	1963	50	1
1954	135	3	1964	1	0
1955	122	3	1965	0	0
1956	113	0	1966	3	0
1957	11	0	1967	0	0
1958	138	3	1968 -	0	0
1959	7	0	1978		

6.2 Information on Last Smallpox Outbreaks^a

Month - Year of Outbreak	Number of Cases	Locality	Province
August - 1964	1	Nova Chaves	LUNDA
April - 1966	1	Forte Republica	MALANGE
May - 1966	1	Amboin	CUANZA SUL
May - 1966	1	Seles	CUANZA SUL

^a Further information presently unavailable.

6.3 Suspect Smallpox Cases Reported, 1977 - 1978

One suspect case of smallpox was reported on 4 February 1977 from Chitembo village, Bie province, and investigated on 5 February. The patient, Pedro Antonio Celestino, a 45-year-old male, vaccinated in 1972, developed a rash on 21 January 1977 and was later hospitalized at the Regional Hospital in Bie. A laboratory specimen was taken on 5 February 1977 and sent to a WHO Collaborating Centre for analysis. Herpes-varicella virus was revealed under electron microscopy confirming the clinical diagnosis of chickenpox. During containment measures, before the laboratory results were known, the inhabitants of Chitembo village were vaccinated.

7. Smallpox Vaccination Data

7.1 Vaccinations Performed 1967 - 1977

<u>Year</u>	<u>Number of Primary and Revaccinations</u>
1967	2 722 400
1968	2 877 787
1969	2 409 147
1970	1 945 425
1971	1 581 369
1972	2 860 015
1973	2 051 969
1974	1 094 078
1975	59 087 ^a
1976	89 415 ^a
1977	348 621

^a Data incomplete.

7.2 Vaccination Coverage Assessment

No records of vaccination scar surveys are currently available.

7.3 Vaccine Used

Freeze dried vaccine has been used since before 1972, with supplies coming from the USSR, Switzerland, France and Portugal.

8. Chickenpox Data

Reported Chickenpox Cases and Deaths, 1972 - 1977

Year	Cases	Deaths	Locality Death Occurred	Month
1972	1 892	2	Chitato-Diamang	November
1973	1 873	3	Chitato-Diamang	April and September
1974	1 705	0	-	-
1975	749	2	Uige	April
1976	1 759	0	-	-
1977	Chickenpox not a reportable disease.			

No records as presently available about investigation of the chickenpox deaths.

9. Laboratory Data

From the beginning of 1977 to 9 November 1978 sixty-nine laboratory specimens have been reported collected and forwarded to a WHO Collaborating Centre for analysis. All were negative for smallpox.

9.1 Breakdown of 58 Specimens Collected by Province^a

Province	Number of Specimens	Province	Number of Specimens
Benguela	3	Moçamedes	2
Bie	4	Moxico	2
Huila	7	Uige	5
Luanda	16	Zaire	7
Malange	12		

^a Information available for only 58 specimens

Age and Sex Distribution of 60 Cases from whom Laboratory Specimens were Collected

Age Group	Male	Female	Total
0 - 4	6	6	12
5 - 14	9	15	24
15 and over	20	3	23
unknown	1	-	1
Total	36	24	60

Laboratory analysis of specimens was previously performed in Luanda. Approximately five specimens from suspected smallpox cases were received each year before 1972 and inoculated on CAM. There was no record of variola virus having been isolated since the last recorded case in 1966.

10. Status of Field Surveys10.1 Specimen Collection

Specimen collection at chickenpox outbreaks has been encouraged since July 1978, and will continue until the arrival of the International Commission.

10.2 Countrywide Pockmark and Smallpox Enquiry Surveys

Pockmark surveys are taking place in the provinces of Cabinda, Cuanza Sul and Zaire at the same time as a national census, with a goal of reaching the entire population for 0 - 10 years.

In the remaining 13 provinces, an extensive pockmark survey and search for rash with fever reports is planned in the capital towns, covering all schools, markets and health units. Further surveys will take place in from two to ten municipalities per province, covering a minimum of 30% of the population.

10.3 Training for Surveys

Training was completed in 14 of 16 provinces from 18 - 30 September, and in the remaining two provinces in October. Each province has been visited by national supervisors and WHO staff.

In each province, seven to thirteen health personnel were briefed on rash with fever enquiry techniques, rumor investigation and how to carry out the extensive pockmark survey.

10.4 Vaccination Scar Survey

A sample group of 600 people per province (200 people in each age group 0 - 5, 6 - 14 and 15 and older) is being checked for vaccination scars to determine the percent of coverage.

10.5 Chickenpox and Smallpox Enquiry Surveys in "High Risk" Groups

Extensive surveys will be carried out in high risk areas including refugee camps, nomadic groups, areas around old smallpox outbreaks, areas where chickenpox deaths occurred and areas where suspect smallpox cases have been reported.

One chickenpox outbreak in a nomadic group, in the south of the country, was investigated by a team consisting of a national supervisor and WHO officer. They collected one specimen and diagnosed the outbreak as chickenpox.

10.6 Supervision

A schedule for supervision has been prepared so that national supervisors visit all provinces during the pockmark and smallpox rumor surveys.

10.7 Special Teams

Three teams, each with two members, have been formed to investigate rash with fever rumors.

10.8 Results of Surveys

Results had not reached WHO SME HQ as of 9 November 1978.

11. Future Programme

October - Completion of surveys

1 - 15 November - Compilation and evaluation of results of surveys

16 - 30 November - Compilation of final report

5 - 18 February 1979 - Visit of International Commission

NUMBER OF HEALTH UNITS BY PROVINCE

Health Units	Total	PROVINCES															
		Benguela	Bie	Cabinda	Cuando Cubango	Cuanza Norte	Cuanza Sul	Cunene	Huambo	Huíla	Luanda	Lunda	Malange	Moçamedes	Moxico	Uíge	Zaire
Central Hospitals	4	1							1	1	1						
Regional Hospitals	12		1	1	1	1	1	1				1	1	1	1	1	1
Sub-regional Hospitals	3	1					2										
Rural Hospitals	87	4	4	2	6	7	5	4	6	8	6	5	7	2	7	10	4
Health Headquarters	157	9	9	4	9	13	12	6	11	13	8	12	15	5	9	16	6
Sanitarian's Stations	340	18	30	8	18	26	24	14	26	23	22	23	30	10	21	31	16
Rural Dispensaries	618	11	51	62	77	38	28	26	82	30	6	37	69	4	38	51	8
Total	1 221	44	95	77	111	85	72	51	126	75	43	78	122	22	76	109	35