



WORLD HEALTH ORGANIZATION
ORGANISATION MONDIALE DE LA SANTÉ

INDEXED

SMALLPOX ERADICATION SEMINAR

Kinshasa, 19-26 November 1968



STATUS OF SMALLPOX ERADICATION ACTIVITIES

COUNTRY SUDAN

1. Demographic data

1.1 Estimated population (1967)

<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
0-4	<u>1 365 000</u>	<u>1 331 000</u>	<u>2 696 000 (19.05%)</u>
5-14	<u>1 988 000</u>	<u>1 938 000</u>	<u>3 926 000 (27.75%)</u>
15 and over	<u>3 799 000</u>	<u>3 727 000</u>	<u>7 526 000 (53.19%)</u>
TOTAL	<u>7 152 000</u>	<u>6 996 000</u>	<u>14 148 000 (59.99%)</u>

1.2 Proportion of population which is nomadic 14 %

2. Smallpox incidence and vaccination data

2.1 Annual smallpox incidence by Province/Region (1958-1967) - (Table 1)

2.2 Monthly smallpox incidence (1964-1968) - (Table 2)

2.3 Smallpox cases by age, sex and vaccination status - 1967 - (Table 3)

2.4 Vaccinations performed by Province/Region (1966-1968) - Table 4)

3. Vaccine

3.1 Liquid vaccine

Amount of liquid vaccine still being used (% of total) - 1967 27 500
1968 11 500

3.2 Freeze-dried vaccine

<u>Sources (producers) - 1968</u>	<u>Amount</u>
<u>WHO</u>	<u>3 697 600</u>
_____	_____
_____	_____

3.3 Vaccine storage

- 3.3.1 All vaccine at the central depot continuously stored at less than 10°C
Yes No
- 3.3.2 Adequate refrigeration facilities in the interior of the country to permit storage at less than 10°C
Yes No
- 3.3.3 All vaccine used less than 30 days after removal from refrigerated storage
Yes No

4. Vaccination

4.1 Personnel engaged in vaccinations:

(No permanent staff - only temporary vaccinators appointed during emergencies)

- 4.1.1 Vaccinators _____
Other field staff, including recorders, drivers, etc. . . _____
Supervisory personnel (paramedical) _____
Supervisory personnel (medical officers) _____
- 4.1.2 Organization of vaccination effort
 House to house; Collecting points
 Vaccinators working alone;
 Vaccinators working in teams
 Other Vaccination being carried out by existing Health staff
- 4.1.3 Number of vaccinators directly supervised by one supervisor N/A
- 4.1.4 Average number of vaccinations performed daily by each vaccinator or team About 100 during emergencies
- 4.1.5 Vaccination targets by Province/Region, 1968-1970 - (Table 5)

4.2 Technique of vaccination used now:

- | | <u>Percentage performed
by this method</u> |
|--|--|
| 4.2.1 Multipuncture (bifurcated needle) | _____ |
| Ped-O-Jet | _____ |
| Other (specify) _____ | <u>Scratch</u> |
| 4.2.2 Usual preparation of skin before performing vaccination, (i.e. water, nothing, etc.) _____ | <u>Water if necessary</u> |
| 4.2.3 Method of sterilization of vaccination instrument | |
| <input type="checkbox"/> Boiling <input type="checkbox"/> Flaming <input type="checkbox"/> None | |

4.3 Reconstituted vaccine used only on the day on which it is reconstituted

Yes No

4.4 Method for recording of vaccinations (please attach sample of sheets used for recording of vaccinations)

Tally sheet (vaccinees recorded only by age, sex, vaccination status)

Yes No

Other registry system (specify) _____

4.5 Youngest age for beginning vaccination

Birth _____

Three months _____

Other Usually 2 years and above

4.6 Contra-indications to vaccination other than severe, acute illness

No Yes - specify _____

5. Programme

5.1 Supervision

5.1.1 Proportion of time spent in field by supervisory staff checking directly on the work of vaccinators and lower level supervisors

- (a) By staff at Territory/District level %
- (b) By staff at Regional/Provincial level %
- (c) By staff at National level %

5.1.2 Measures taken when vaccinator performance is unsatisfactory (e.g. reprimand, suspension, dismissal) _____

5.2 Assessment

5.2.1 Vaccine "take rates"

Proportion of primary vaccinations in 0-4 year-old children which are checked after seven days to determine takes %

Steps taken when the proportion of successful primary vaccinations falls below 95% _____

Not yet applicable

5.2.2 Vaccination coverage

5.2.2.1 Vaccinations performed in each village or area are compared with population estimated to be in area (e.g. village register, census data, other)

Yes No

5.2.2.2 Assessment of coverage regularly performed in a sample of the population

Yes

No

When coverage in the 0-4 or 5-14 year age-group is less than 85%, the following steps are taken:

5.3 Surveillance

5.3.1 Notification of smallpox cases

5.3.1.1 Notification sites

(a) Number of sites which may notify cases of smallpox (e.g. hospitals, health centres, health posts, dispensaries) 606

(b) Number which report at least every two weeks whether or not smallpox cases were observed None

(c) Other specialized programmes which report cases (e.g. malaria, yaws, etc. - specify) None

(d) Other persons or groups who have been requested to notify cases (e.g. teachers, village headmen, etc. - specify)

Village headmen

5.3.1.2 Proportion of cases for which age, sex and vaccination status are recorded None %

5.3.1.3 Best estimate of the percentage of cases which are reported

More than 90% _____
75-90% _____
50-75% _____
Less than 50% _____

5.3.2 Case investigation and containment measures

Case investigation - containment teams ("fire-fighting" teams) have been established in each Province/Region

Yes

No

Proportion of cases in which containment action (verification, vaccination, isolation, etc.) taken within 48 hours after notification 100 %

Proportion of cases routinely investigated to determine the origin of infection 90 %

7. Describe briefly (two pages) the administrative organization and method of execution of the programme with organizational chart. Discuss specifically with reference to component activities in Table 6. (Attach samples of posters and pamphlets being used in programme.)

2.1 Annual Smallpox Incidence
Incidence annuelle de la variole

TABLE 1
(1958-1967 annual figures)

TABLEAU 1
(1958-1967 chiffres annuels)

Province (or major administrative area) Province (ou autre grande subdivision administrative)	Number of cases Nombre de cas									
	57/ 1958	58/ 1959	59/ 1960	60/ 1961	61/ 1962	62/ 1963	63/ 1964	64/ 1965	65/ 1966	66/ 1967
Bahr el Ghazal	1	-	-	-	-	-	-	-	-	-
Blue Nile	46	243	205	135	8	95	-	2	-	-
Darfur	-	15	20	1	-	-	-	67	-	-
Equatoria	-	-	1	-	-	-	-	-	-	-
Kassala	60	45	65	-	-	-	-	-	-	-
Khartoum	-	13	1	3	-	-	-	-	-	9
Kordofan	2	37	2	-	-	-	-	-	-	-
Northern	17	10	4	12	-	-	-	-	-	-
Upper Nile	5	-	-	-	-	-	-	-	-	-
TOTAL	131	363	298	151	8	95	-	69	-	9

1
∞
1

2.2

TABLE 2 - Smallpox Incidence by month or four week period

TABLEAU 2 - Incidence de la variole par mois ou période de quatre semaines

YEAR ANNEE	Jan. Jan.	Feb. Fév.	Mar. Mars	April Avril	May Mai	June Juin	*	July Juil.	Aug. Août	Sept. Sept.	Oct. Oct.	Nov. Nov.	Dec. Déc.	Total
Weeks Semaines	1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	33-36	37-40	41-44	45-48	49-52	
1964	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1965	-	-	-	-	4	58		2	-	-	-	5	-	69
1966	-	-	-	-	-	-		-	-	-	-	-	-	-
1967	-	-	-	-	-	-	-	4	-	-	-	-	5	9
1968	-	-	-	18	79	5	-	-	-	-				102
TOTAL	-	-	-	18	83	63	-	6	-	-	-	5	5	180

* Use this column only if reporting by four week periods

* N'utiliser cette colonne que si les chiffres correspondent à des périodes de quatre semaines

2.3

TABLE 3. CASES BY AGE, SEX AND VACCINATION STATUS - 1967
TABLEAU 3. CAS DE VARIOLE PAR AGE ET SEXE, ET PAR ETAT DE VACCINATION - 1967

I. Check this box if there were no smallpox cases during 1967.
 Cocher cette case s'il n'y a pas eu de cas de variole en 1967.

II. SMALLPOX CASES BY AGE AND SEX, AND VACCINATION STATUS
 CAS DE VARIOLE PAR AGE ET SEXE, ET PAR ETAT DE VACCINATION

Age Group Groupe d'âge	Number of cases - Nombre de cas			
	Male Sexe Masculin	Female Sexe Féminin	Unknown Sexe non précisé	Total
< 1	-	-	-	-
1-4	1	-	-	1
5-14	7	1	-	8
15+	-	-	-	-
Unknown Age inconnu	-	-	-	-
TOTAL	8	1	-	9

Number vaccinated before exposure Nombre de vaccinés avant l'exposition		
Vac. Vaccinés	Not vac. Non vaccinés	Unknown Antécédents vaccinaux inconnus

If detailed information is not available for all cases, complete as far as possible.

En l'absence de renseignements détaillés sur tous les cas, remplir la formule dans toute la mesure du possible.

TABLE 4 : TABLEAU 4

VACCINATIONS PERFORMED⁽¹⁾ : VACCINATIONS PRATIQUÉES⁽¹⁾

Province (or major administrative area)	Population (estimate for 1966) Nombre d'habitants (chiffre estimatif pour 1966)	1966			1967			1968 ⁽²⁾		
		Primary vaccination	Revaccination	Total	Primary vaccination	Revaccination	Total	Primary vaccination	Revaccination	Total
		Primovaccination	Revaccination	Total	Primovaccination	Revaccination	Total	Primovaccination	Revaccination	Total
BAHR EL GHAZAL				4 061	20 438	-	20 438	67 035	45 387	112 422
BLUE NILE				121 302	38 658	-	38 658	149 863	559 450	709 313
DARFUR				14 419	4 380	-	4 380	12 452	30 975	43 427
EQUATORIA		N O T		14 474	27	-	27	36 829	10 823	47 652
KASSALA				3 269	5 453	-	5 453	19 463	18 938	38 401
KHARTOUM				4 398	6 759	717 904	724 663	9 090	-	9 090
KORDOFAN		A V A I L A B L E		112 749	1 453	-	1 453	177 082	208 137	385 219
NORTHERN				9 324	181	28	209	1 457	928	2 385
UPPER NILE				2 485	29 565	-	29 565	414 296	205 265	619 561
TOTAL				286 481	106 914	717 932	824 846	887 567	1 079 903	1 967 470

(1) If data regarding primary and revaccinations are not specifically available, please provide information as to total vaccinations performed.

Si l'on ne possède pas de renseignements précis concernant les primovaccinations et les revaccinations, indiquer le chiffre total des vaccinations pratiquées.

(2) January through June - janvier à fin juin.

4.1.5

TABLE 5 : TABLEAU 5

VACCINATION TARGETS : VACCINATIONS PREVUES

Province/Region	Number of vaccinations planned - Nombre de vaccinations prévues						
	1968 Total	1969					1970 Total
		Jan.-Mar. Jan.-Mars	April-June Avril-Juin	July-Sept. Juil-Sept.	Oct.-Dec. Oct.-Déc.	Total	
BLUE NILE (NORTH)	131 247	300 000	300 000	300 000	300 000	1 200 000	775 000
BLUE NILE (SOUTH)	508 525	300 000	300 000	300 000	300 000	1 200 000	775 000
KORDOFAN	33 279	360 000	360 000	360 000	360 000	1 440 000	102 000
DARFUR	4 708	480 000	480 000	480 000	480 000	1 920 000	1 185 000
KHARTOUM	5 108	4 000	3 000	1 000	-	8 000	180 000
KASSALA	10 423	10 000	10 000	-	-	20 000	700 000
NORTHERN	2 444	-	2 000	3 000	-	5 000	500 000
EQUATORIA	1 668	1 000	1 000	300	-	2 300	108 000
BAHR EL GHAZAL	50 652	-	50 000	-	-	50 000	-
UPPER NILE	52 553	30 000	110 000	55 000	-	195 000	-
	121 257	70 000		9 000	-	79 000	
TOTAL	921 864	1 555 000	1 616 000	1 508 300	1 440 000	6 119 300	4 325 000

TABLE 6

	ATTACK PHASE (PHASE 1)	CONSOLIDATION PHASE (PHASE 2)	MAINTENANCE PHASE (PHASE 3)	
DEFINITION	Endemic areas with an incidence of smallpox of five or more cases per 100 000 population per year and with less than 80% of all segments of the population showing scars of primary vaccination.	Areas with an incidence of smallpox of less than five cases per 100 000 and in which over 80% of all segments of the population show scars of primary vaccination.	Areas free from endemic smallpox for more than two years but geographically situated in an endemic continental area, presently Africa, Asia or South America.	
ACTIVITIES	VACCINATION	Systematic mass vaccination.	Continuing maintenance vaccination.	
	SURVEILLANCE	<p><u>Reporting</u> Establish prompt and regular reporting of smallpox by existing health facilities.</p> <p><u>Field investigation</u> Investigation of major outbreaks or outbreaks occurring in smallpox-free areas.</p>	<p><u>Reporting</u> Extension of case detection system to assure reporting of all suspect smallpox in all segments of the population.</p> <p><u>Field investigation</u> All cases and outbreaks promptly investigated epidemiologically to establish source of infection and unreported cases. Investigation forms submitted for every case.</p>	<p><u>Reporting</u> Extension of case detection system to assure reporting of all suspect smallpox in all segments of the population</p> <p><u>Field investigation</u> Each case investigated promptly as an emergency by a competent epidemiologist.</p>
	LABORATORY	Establish techniques and methods for the submission and examination of specimens for confirmation of diagnosis.	Specimens studied from all isolated cases and representative samples from each outbreak.	Specimens studied from every suspect case.
	CONTAINMENT	Localized, intensive vaccination in community where cases or outbreaks occur. Isolation of cases if feasible.	Vaccination and observation of case contacts. Isolation of cases and appropriate disinfection. Localized, intensive vaccination in community.	Vaccination and observation of case contacts. Isolation of cases and appropriate disinfection. Localized, intensive vaccination in community.