



WORLD HEALTH ORGANIZATION  
ORGANISATION MONDIALE DE LA SANTÉ

SMALLPOX ERADICATION SEMINAR

Kinshasa, 19-26 November 1968



STATUS OF SMALLPOX ERADICATION ACTIVITIES

COUNTRY R D CONGO

(Kinshasa)

1. Demographic data

1.1 Estimated population (1967)

<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
0-4	<u>1 800 000</u>	<u>1 800 000</u>	<u>3 600 000</u>
5-14	<u>2 200 000</u>	<u>2 200 000</u>	<u>4 400 000</u>
15 and over	<u>4 000 000</u>	<u>4 000 000</u>	<u>8 000 000</u>
TOTAL	<u>8 000 000</u>	<u>8 000 000</u>	<u>16 000 000</u>

1.2 Proportion of population which is nomadic Negligible

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 0%  
1968 0%

3.2 Freeze-dried vaccine

Sources (producers) - 1968

Amount

USSR/WHO

To date 3 000 000 doses

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:

4.1.1	Vaccinators . . . . .	<u>38</u>
	Other field staff, including recorders, drivers, etc. . .	<u>82</u>
	Supervisory personnel (paramedical) . . . . .	<u>4</u>
	Supervisory personnel (medical officers) . . . . .	<u>3</u>

4.1.2 Organization of vaccination effort

House to house;  Collecting points  
 Vaccinators working alone;  
 Vaccinators working in teams  
 Other \_\_\_\_\_

4.1.3 Number of vaccinators directly supervised by one supervisor 9 - 10

4.1.4 Average number of vaccinations performed daily by each vaccinator or team . . . . . 700 to 1 000

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) . . . . .	<u>50%</u>
Ped-O-Jet . . . . .	<u>50%</u>
Other (specify) _____	<u>-</u>
4.2.2 Usual preparation of skin before performing vaccination, (i.e. water, nothing, etc.)	<u>Nothing</u>
4.2.3 Method of sterilization of vaccination instrument	
<input type="checkbox"/> Boiling <input checked="" type="checkbox"/> Flaming for the <input type="checkbox"/> None	
<b>needles.</b>	

Iodine solution for the Ped-O-Jets.

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)

3 age groups: 0-11 months, 1-14 years, 15+ years. Vaccinees recorded by age &

Yes

No  vaccination status only.

Other registry system (specify) \_\_\_\_\_

4.5 Youngest age for beginning vaccination

Birth \_\_\_\_\_

Three months Two months

Other \_\_\_\_\_

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 . . . . . 90 %

(b) By staff at Regional/Provincial level . . . . . - %

(c) By staff at National level . . . . . 20 %

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

Reprimanded then dismissed.

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 . . . . . 10 to 20 %

Steps taken when the proportion of successful primary vaccinations falls below 95% Revaccination of the entire population concerned.

(This has not occurred since March 1968).

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:

Revaccination of the village and search for absentees

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) . . . . .

(b) Number which report at least every two weeks whether or not smallpox cases were observed . . . . .

(c) Other specialized programmes which report cases (e.g. malaria, yaws, etc. - specify) \_\_\_\_\_

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

5.3.1.2 Proportion of cases for which age, sex and vaccination status are recorded . . . . . 0 %

5.3.1.3 Best estimate of the percentage of cases which are reported

More than 90% \_\_\_\_\_

75-90% \_\_\_\_\_

50-75% \_\_\_\_\_

Less than 50% x

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 5 - 10 %

Proportion of cases routinely investigated to determine the origin of infection . . . . . 0 %

5.4 Legislative provisions

Vaccination compulsory: Yes  No

Enforcement of compulsory vaccination is carried out:

at the time of birth (if born in hospital) Non

at the time of school entry Oui

at the time of hospital admission Non

Other (specify) Systematic campaign

Isolation of cases enforced through the time when all scabs have separated

Yes  No

Variolation prohibited by law

Yes  No  but not practised

6. Year in which the last endemic cases of smallpox are expected to occur           ?

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.)

The programme is being carried out by a specially established service: "The National Smallpox Eradication Campaign".

This service is directed by a Congolese doctor of medicine and financed from Congolese funds. It is given assistance by WHO, in the form of staff, (three physicians, soon five; one statistician, one administrator), vehicles (some 40 vehicles are already in use) and vaccine (more than 2 000 000 doses of smallpox vaccine have already been supplied as well as inoculation equipment, bifurcated needles and Ped-O-Jets).

The working budget for 1968, supplied by the Congolese Government, is 220 000 Zaïres (US\$ 440 000).

The Plan of Operations provided for pilot projects to be carried out in 1967 in three separate areas and for the attack phase to take place from 1968 to 1970 inclusive.

In actual fact, the pilot projects commenced only in March 1968 and at present only two groups are active. A third will be created shortly and we hope to set up a fourth at the beginning of 1969.

Each group includes a varying number of teams of vaccinators, depending on local recruitment possibilities and requirements (governed by the population density). For the time being, group one has eight teams of vaccinators and group four has five such teams. Furthermore, each group has a propaganda team (which precedes the vaccination teams, explains the results hoped for by the vaccinators six to eight days after their passage and checks the percentage of successful vaccinations and the vaccinal coverage in one village out of five).

At the outset a population census was envisaged (by a door to door survey) the day before vaccination. This method was applied in March and April but dropped in May and June, resumed in July and August and again dropped as from the beginning of September. Several different census techniques were employed, the first being the more complicated ones. As the trials proceeded it was realized:

1. that the available personnel was not capable of carrying out a correct census; in fact, without exception, the population vaccinated on the day after the census was always larger than the census population, which is quite paradoxical;
2. that the census operations considerably slowed down the course of the programme (in practice, the census takes half the personnel and half the time so that dropping the census should double the output of each team);

7. (continuation)

3. that the best way to determine the precise vaccinal coverage was to increase the post-vaccinal checks. The first check, carried out six to eight days after vaccination, indicates the percentage of successful vaccinations (by examination of primary vaccinees) and gives an initial estimate of the coverage rate. During this first check all late-comers are systematically vaccinated (in general, two to five percent of the figures for vaccinees a week previously). A second check made two to three months after vaccination yields a new estimate following an examination for scars and in general leads to a few more late-comers being vaccinated.

Finally, it should be pointed out that the smallpox eradication programme in the Democratic Republic of the Congo is combined with an indiscriminate BCG vaccination campaign (without tuberculin testing) for all children under 15 years of age. Smallpox vaccination is administered in the shoulder while the BCG vaccination is carried out simultaneously by intradermal injection on the middle third of the palmar surface of the left forearm, in order to make it easy to distinguish between the scars produced by both types of vaccination.

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									
	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
Kinshasa						( 955	599	129	47	0
Kongo - Central						( -	-	-	-	26
Bandundu						( -	-	-	-	145
Equateur						622	84	8	27	61
Prov. Orientale						13	135	667	57	25
Kivu						133	71	63	144	228
Katanga						391	781	2 072	755	390
Kasai - Oriental						(3 322	521	854	883	302
Kasai - Occident.						( -	-	-	-	302
TOTAL	1 298	2 471	?	?	?	5 436	2 191	3 793	1 913	1 479

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														
1966	76	24	128	137	132	170	45	122	319	205	169	264	122	1 913
1967	87	71	257	138	178	71	48	101	81	158	105	109	75	1 479
1968	245	227	62	323	234	644	247	403	290	519				
TOTAL														

\* 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				
5-14				
15+				
Unknown Age inconnu			1 479	1 479
TOTAL			1 479	1 479

Number vaccinated before exposure Nombre de vaccinés avant l'exposition		
Vac. Vaccinés	Not vac. Non vaccinés	Unknown Antécédents vaccinaux inconnus
		1 479

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<sup>(1)</sup> : VACCINATIONS PRATIQUEES<sup>(1)</sup>

Province (or major administrative area)  Province (ou autre grande subdivision administrative)	Population (estimate for 1966)  Nombre d'habitants (chiffre estimatif pour 1966)	1966			1967			1968 <sup>(2)</sup> Jusqu'à août inclus		
		Primary vaccination  Primovaccination	Revaccination  Revaccination	Total  Total	Primary vaccination  Primovaccination	Revaccination  Revaccination	Total  Total	Primary vaccination  Primovaccination	Revaccination  Revaccination	Total  Total
Kinshasa										
Kongo Central										
Bandundu										
Equateur										493 294
Province Orient.										
Kivu										
Katanga										
Kasai-Oriental										727 084
Kasai-Occident.										
TOTAL										1 220 378

(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.

NB: Nous n'avons inscrit que les vaccinations pratiquées par les équipes de la CNEV, car nous n'avons aucun renseignements précis sur celles effectuées par d'autres organismes. We have noted only those vaccinations performed by the teams the SEP, as we have no precise information on those performed by other groups.

4.1.5

TABLE 5 : TABLEAU 5

VACCINATION TARGETS : VACCINATIONS PREVUES

Province/Region	Number of vaccinations planned - Nombre de vaccinations prévues						1970 Total
	1968 Total	1969				Total	
		Jan.-Mar. Jan.-Mars	April-June Avril-Juin	July-Sept. Juil-Sept.	Oct.-Dec. Oct.-Déc.		
Kinshasa						800 000	
Kongo-Central						605 000	613 000
Bandundu						80 000	2 400 000
Equateur	655 000					1 227 000	223 000
Province Orientale							
Kivu							814 000
Katanga						800 000	1 165 000
Kasai-Oriental	1 746 000						
Kasai Occidental						1 857 000	
TOTAL	2 401 000					5 369 000	5 215 000