



METHODOLOGY FOR PREPARATION OF APPROPRIATE DATA  
FOR THE 31 COUNTRIES REMAINING TO BE CERTIFIED FREE OF SMALLPOX<sup>1</sup>

Preamble

Nearly seven months have elapsed with reported nil incidence of smallpox throughout the world and the global programme has now been reoriented to conduct the certification of smallpox eradication. Since 1973, 46 countries in South America, Asia and Africa have already been certified and an additional 31 countries remain to be certified for eradication of smallpox.

Different methodologies have been used for these certification activities in the 46 countries, considering the epidemiology of smallpox, the type of eradication programme developed, surveillance sensitivities and resources available at country level. Based on these experiences this document is intended to present a summary of what method can be employed when certification activities take place in the remaining 31 countries.

The methods proposed have already been partly implemented in some countries. Also, in some countries the methods are being modified to provide further convincing evidence of the freedom from the disease. It is believed that if the methods described here are properly implemented, the results will meet with the requirements of the Global Commission.

The 31 countries

In the "Recommendations of the Consultation on Worldwide Certification of Smallpox Eradication" the 31 countries concerned were divided into three categories as follows:

Group I: Countries requiring formal certification by an international commission

Ethiopia	Angola	South Africa
Kenya	Botswana	Namibia
Somalia	Lesotho	Southern Rhodesia
Democratic Yemen	Swaziland	
Djibouti	Sudan	
Yemen	Uganda	

Group II: Countries requiring visits by Global Commission members

Iran	Syria	China
Iraq	Thailand	

Group III: Countries required to submit detailed reports

Democratic Kampuchea	Bahrain	Qatar
Laos	Kuwait	Saudi Arabia
Viet Nam	Oman	United Arab Emirates
Taiwan		
Madagascar		

<sup>1</sup> Prepared by SME unit, headquarters, Geneva.

Preparation for certification

To assist in the preparation of reports appropriate to the varying requirements for certification and to the different past epidemiological situations and current surveillance systems, three basic methods are suggested as follows:

Method A: Compilation of "Minimum Information" report

All countries will be asked to submit a report containing the following minimum information (detailed in Annex 1):

- Basic demographic data
- Administrative units
- Health system
- Reporting system for notifiable communicable diseases
- Smallpox data
- Smallpox vaccination data
- Chickenpox data
- Laboratory data (see also Annex 4)

Method B: "Minimum Information" report

In addition: Pock mark surveys in priority areas (Annex 2) and special surveys in certain instances (Fig. 1).

Method C: "Minimum Information" reports

In addition: Extensive field surveys as outlined in Annex 3.

The methodology applicable to each country is indicated in Fig. 1. It is noted that in Ethiopia, Kenya, Somalia and Sudan special programmes are in progress which will provide more detailed information than the methods outlined above.

Points to be emphasized

In all countries particular attention should be paid to:

- investigation of chickenpox deaths
- collection of laboratory specimens

according to the indications outlined in the annexes.

It is likely that particular attention will be paid to pock mark surveys in countries where variola major was once prevalent and to chickenpox surveys in other countries.

FIG. 1. METHODOLOGY APPLICABLE AND FIELD ACTIVITIES FOR THE 31 COUNTRIES  
PREPARING FOR CERTIFICATION OF SMALLPOX ERADICATION

Country	Method -ology Applicable			Field Activities/Surveys						
				Pock Mark Surveys		Specimen Collection		Smallpox Enquiry Surveys		
	A	B	C	Selected Sites	Priority Areas Only <u>a</u>	Selected Chicken -pox Cases <u>b</u>	Suspected Smallpox Cases <u>c</u>	Selected Health Units	Selected Schools	Other Local -ities
GROUP I										
Angola Botswana Lesotho Swaziland Namibia S. Rhodesia Uganda										
Sudan Ethiopia Kenya Somalia				FULL	SCALE	SMALLPOX	ERADICATION	PROGRAMMES		
Dem. Yemen Djibouti Yemen					<u>d</u>			<u>e</u>	<u>d</u>	<u>f</u>
GROUP II										
China						TO BE DETERMINED				
Iran Iraq Syria Thailand										
GROUP III										
Dem. Kampuchea Laos Taiwan Vietnam Madagascar Bahrain Kuwait Oman Qatar Saudi Arabia U.A.E										

a as defined in Annex 2

b refers to routine collection of specimens  
from all chickenpox outbreaks

c as defined in Annex 1, explanatory note H

d including all schools

e including all health units

f border posts

ANNEX 1

MINIMUM INFORMATION REPORT  
(required from all countries)

A. BASIC DEMOGRAPHIC DATA

1. Population (year)
2. Area
3. Population density
4. Urban population (% of total)
5. Rural population (% of total)
6. Nomadic population (% of total)
7. Total number of towns and villages

B. ADMINISTRATIVE UNITS

Table, for example:

Type of division/subdivision*	Total number in country

\* List by name only the largest divisions and indicate on a map.

C. HEALTH SYSTEM

1. Number of urban hospitals: clinics:
2. Number of rural hospitals: clinics:
3. Number of infectious diseases hospitals: wards:
4. Health system structure relevant to communicable disease control

Diagram, for example:

Level	Responsible health officer or health worker	
	Designation	Total number in country
National Provincial District etc.		

D. REPORTING SYSTEM FOR NOTIFIABLE COMMUNICABLE DISEASES

Brief description of reporting system at each level. To include:

- frequency of reporting
- regularity of reporting
- whether chickenpox (cases and/or deaths) are notified
- whether reports are sent even if no disease is reported (i.e. "NIL" reports)
- what action is taken in the case of suspected smallpox

## E. SMALLPOX DATA

1. Cases and deaths reported by year 1950-1978.
2. Brief description of the last major epidemic. To include:
  - period
  - number of cases/deaths
  - locations which were heavily infected
3. Detailed description of the last smallpox outbreak/focus. To include:
  - period
  - number of cases/deaths
  - source of infection (importation)
  - exact location (with map if possible)
  - measures taken
4. Details of all reported suspected smallpox cases since the last outbreak. To include:
  - dates
  - locations
  - field investigations
  - final diagnoses
  - laboratory test results

## F. SMALLPOX VACCINATION DATA

1. Brief description of vaccination system employed since the last reported smallpox.
2. Vaccinations performed 1950-1978.

Table, for example:

Year	Primary vaccinations	Revaccinations

3. Vaccination coverage assessment.

Any existing data on percentage vaccination coverage of the population as assessed by vaccination scar survey.

## G. CHICKENPOX DATA

1. Reported chickenpox cases and deaths 1976-1978  
Table, by month if possible.
2. Summary of investigation findings for all chickenpox deaths 1976-1978.

## H. LABORATORY DATA

Summary of laboratory investigation for all specimens tested for pox viruses 1976-1978.

Annex 1

EXPLANATORY NOTES

- SECTIONS A-C: Self-explanatory
- SECTION D: Regularity of reporting may be expressed as the percentage of reports received within a specified period from the expected date of receipt.
- SECTIONS E and F: As much data as is readily available should be compiled.
- SECTION F: Item 3: If no recent data available on vaccination coverage it will be proposed that sample surveys are conducted. Results should be recorded by age-group (e.g. 0-4, 5-19, 20+).
- SECTION G: Item 2: If not already available full investigation reports of all chickenpox deaths 1976-1978 should be prepared.
- SECTION H: It is recommended that in the coming months specimens for laboratory testing are taken from patients with chickenpox or other rash with fever in which:
- (a) the patient has no smallpox vaccination scar
  - (b) there has been a death in the associated outbreak
  - (c) there is any doubt at all concerning the differentiation from smallpox.

#### SMALLPOX POCK MARK SURVEYS IN PRIORITY AREAS

This type of survey is useful for assessing the extent of past outbreaks or to confirm the absence of smallpox during recent years.

In the priority areas selected, a significant sample of children should be examined for facial pock marks. If any child is found with five or more concentric depressed facial scars of greater than 1 mm diameter at the base, it must be considered suggestive of smallpox; a full history and investigation are indicated. If initial inquiries reveal that a particular case can be attributed to a known smallpox outbreak only the place of attack and the year need be recorded. Any pock marked person claiming that the pock marks were caused by a disease occurring since the last known smallpox or in a location not previously recognized as the site of a smallpox outbreak, requires full investigation.

Areas for pock mark surveys in order of priority are:

- the area surrounding the last known smallpox outbreak
- the sites of reported chickenpox deaths
- the sites of reported suspected smallpox cases
- remote and border areas.

Attached are the three forms (PMS1,2,3) which are suggested for use in conducting pock mark surveys. Countries<sup>1</sup> already utilizing survey forms different from those attached should, however, continue to do so.

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<sup>1</sup> These countries include those in the African Region and Iran.

Annex 2

POCK MARK SURVEY - FIELD WORK SHEET

Name of locality: \_\_\_\_\_  
(school, clinic, market, village, etc.)

Date: \_\_\_\_\_

Age-group	Total persons examined	Pock marked persons				Place Year
		Place and year of attack <sup>a</sup> One box for one person				
0-X <sup>b</sup> years						
						Total
Over X years <sup>b</sup>						
						Total
Summary		Pock marked persons by year of attack				
		1978	1977	1976	1975	1974
		1973	1972	1971	Before 1971 <sup>c</sup>	Total
All ages						

<sup>a</sup> All cases in which pock marks have resulted from disease occurring since the last known smallpox in the country must be fully investigated (Form PMS3).

<sup>b</sup> Where X = the number of years since the last known smallpox in the country.

<sup>c</sup> To be adapted for countries where the last smallpox occurred before 1971.





Annex 2

Form FMS3

INVESTIGATION OF PERSON WITH FACIAL POCK MARKS

This form should be filled in for the following:

- Any child 0-X<sup>a</sup> years old (identified on Form FMS1) with facial pock marks.
- Any older person whose facial pock marks have resulted from a disease occurring since \_\_\_\_\_<sub>b</sub>
- Any person whose facial pock marks have resulted from a disease in \_\_\_\_\_<sup>c</sup> but at a locality not previously recognized as the site of a smallpox outbreak.

Information obtained from:

Hospital  Dispensary  Clinic  School  Other

Specify name: \_\_\_\_\_

Name of person under investigation: \_\_\_\_\_

Name of father: \_\_\_\_\_

Name of mother: \_\_\_\_\_

Address: Village: \_\_\_\_\_

District: \_\_\_\_\_

Region/province: \_\_\_\_\_

Age: \_\_\_\_\_

Sex: Male  Female

Month (if possible date)/year  
of onset of rash: \_\_\_\_\_

Diagnosis made at the time of illness:  
By whom: \_\_\_\_\_

Locality of disease onset: \_\_\_\_\_

Number of facial pock marks: 5-10  10-20  More than 20

Vaccination history: Yes  No  If "yes", when? \_\_\_\_\_

Vaccination scar: Yes  No

Rash - distributed more face and limbs: Yes  No

Were there any deaths from similar disease in the locality? Yes  No

If "yes", how many? \_\_\_\_\_

Team's diagnosis: Smallpox  Other  Specify: \_\_\_\_\_

Was a specimen taken for laboratory diagnosis: Yes  No  Sent to: \_\_\_\_\_

Date: \_\_\_\_\_ Name of Team Leader \_\_\_\_\_ Signature \_\_\_\_\_

Note: Further investigation including source of infection must be conducted if team's observation indicates smallpox or smallpox strongly suspected.

<sup>a</sup> Where X = the number of years since the last known smallpox in the country.

<sup>b</sup> The month and year of the last known smallpox.

<sup>c</sup> Year of last known smallpox.

GUIDELINES FOR COUNTRIES REQUIRED TO CONDUCT EXTENSIVE  
FIELD SURVEYS PRIOR TO CERTIFICATION OF SMALLPOX ERADICATION

CONTENTS

	<u>Page</u>
1. CHICKENPOX SURVEY . . . . .	11
2. FIELD SURVEYS	
2.1 Selection of localities . . . . .	12
2.2 Planning . . . . .	13
2.3 Implementation of field survey . . . . .	14
2.4 Supervision . . . . .	14
2.5 Recording and reporting . . . . .	15
2.6 Final report . . . . .	15
3. REPORTING AND INVESTIGATION FORMS	
Form 1. Field visit itinerary . . . . .	16
Form 2. Primary school facial pock mark survey . . . . .	17
Form 3. Smallpox inquiry and pock mark survey in health units and other places . . . . .	18
Form 4. Investigation of child with smallpox pock marks or smallpox suspect . . . . .	19
Form 5. Monthly summary form . . . . .	20
Form 6. Patient and his family investigation . . . . .	21
Form 7. Line listing of patients . . . . .	22
Form 8. Information on patient for smallpox laboratory tests . . . . .	23

This method of preparation for certification has been used in western, central and, more recently, south-east African countries. It is proposed for use in those countries of the African Region remaining to be certified free of smallpox except Ethiopia, Somalia, Kenya and Sudan where full-scale smallpox eradication or surveillance programmes are still in operation.

1. CHICKENPOX SURVEY

This will consist of regular collection of scabs from patients clinically diagnosed as chickenpox. It will be essential that all fixed health units and, whenever feasible, mobile teams must participate in this collection of specimens. This programme should become operational as soon as possible.

Cases from which to collect specimens

- One single specimen from each chickenpox outbreak whether death has occurred or not.
- Chickenpox cases without a vaccination scar.
- All hospitalized chickenpox cases.

For details of specimen collection technique and dispatch see Annex 4.

Annex 3

2. FIELD SURVEYS

2.1 Selection of localities

Areas in which field surveys will be conducted by special mobile teams will be determined as soon as possible on the basis of epidemiological and demographic criteria.

2.1.1 Special investigations: These will be conducted in areas and localities where the risk of hidden smallpox foci is greatest; this should include localities:

- notifying the last two smallpox outbreaks;
- reporting suspected smallpox cases since the last known smallpox outbreak;
- reporting deaths due to chickenpox from the beginning of 1975 to date;
- with poor health coverage and communication facilities, bordering countries which have been recently endemic or with extensive population movements across the border.

The objective of these special investigations is to determine whether or not reported outbreaks were due to smallpox infections and/or if some cases might have gone undetected. These investigations will include visits to the affected households and families to exclude any evidence of undetected smallpox transmission. Special attention should be given to the interview of the family, examination for facial pock marks and vaccination scars, and to outbreaks or deaths due to a vesicular disease. If justified on epidemiological grounds, neighbouring households and families, primary schools and markets may be visited. Special brief reports should be prepared.

2.1.2 Determination of localities based on population size: Persistence of undetected smallpox foci in small and remote villages for several years is unlikely. Despite the fact that cities, towns and big villages may not be truly representative of the entire population, it is probable that continuing smallpox transmission in remote areas, if it exists, will eventually be reflected in larger villages.

Thus facial pock mark and health unit inquiry surveys will be conducted in the primary schools, health units and other places within the larger villages, towns and cities (selected in collaboration with WHO staff where appropriate). It will not be difficult to determine cities and towns (tentatively defined as localities with over 10 000 population). To select major villages, the following procedures are suggested:

- (i) collect as much information as possible on individual localities from all available demographic data, including census reports;
- (ii) prepare a table as indicated below (as an example, the table has been completed for a country with a population of five million).

With regard to the first column, data available or collected may not provide the same population range for individual localities, in which case the breakdown should be adjusted according to the particular situation. The purpose of preparing this table is to observe how many localities have a population of more than a certain size - say 1000, 2000 or 5000 - and are thus determined as "major villages".

Population of locality	Number of localities	Total population of localities	Percentage of country's population
More than 10 000	14	549 001	11
8 000-9 999	6	53 000	1
6 000-7 999	10	69 000	1.5
4 000-5 999	25	125 000	2.5
2 000-3 999	68	204 000	4
1 000-1 999	212	350 000	7
Less than 1 000	36 804	3 650 000	73
Total	37 139	5 000 000	100

- (iii) Determine which minimum population size will be selected to cover at least 25-30% of the total population. It must be noted that in selected localities only primary schools, health units and other places (e.g. kindergartens, markets, festivals, nomad groups, etc.) will be visited by the teams and not the total population of selected localities. (In the above example if localities with a population of more than 1000 are selected, they will represent about 27% of the entire population and 335 localities will be visited.)
- (iv) Plot these localities on a map. If no locality is selected in some large administrative areas, it will be necessary to include one or two principal villages in such areas, irrespective of size.
- (v) Select a few localities situated in remote rural areas of each major administrative division.

## 2.2 Planning of surveys

The size, composition and the number of survey teams required for the survey depend on several factors - size of the country, population and its density, population movement, distribution of health units and communication facilities. In addition, epidemiological criteria must be taken into account. It is extremely important that survey teams are trained (with WHO collaboration where appropriate) as soon as possible. Such training should include:

- (a) Complete background information on the status of smallpox eradication in the country including details of last outbreaks, suspected cases and deaths due to chickenpox. A list of selected localities for special investigations and field surveys should be made available.
- (b) Distinguishing features of facial pock marks caused by smallpox infection and scars due to other conditions should be clarified. Only persons with facial pock marks caused by or strongly suspected to be due to smallpox infection will be investigated and documented. Use of WHO cards (Pictorial Guide and photos of pock marks) should be made.
- (c) Epidemiological investigations of suspected cases including collection of specimens: isolation and containment should be reviewed with the team.
- (d) Preparation of itinerary for field visits, recording, reporting and presentation of data and of regular reports.

### Annex 3

Based on the list of selected localities, the teams must be assisted in the preparation of their itinerary (Form 1). The teams should also prepare sketch maps on which localities selected for the survey are plotted. The local administrative authorities should be informed well in advance about these visits in order to ensure full community participation. Close collaboration with the education department will be necessary, as due attention has to be given to the periods of vacations and examinations in the schools.

#### 2.3 Implementation of field surveys

These surveys are an important part of the preparation for certification of smallpox eradication. They require skill and devotion from specially trained teams. The teams should collect information from primary schools, health units, markets, kindergartens and nomadic camps in the localities selected on the basis of their population size. The surveys will consist of facial pock marks and smallpox inquiry surveys and should start as soon as possible.

##### 2.3.1 Smallpox pock mark surveys

This type of survey is useful for assessing the extent of past outbreaks or to confirm the absence of smallpox during recent years.

In the areas selected, a significant sample of children should be examined for facial pock marks.

Surveys will be conducted in the primary schools and for pre-school age-groups, in the markets, health units and other places. Forms 2, 3 and 4 will be completed accordingly and kept in the files at the national headquarters to be reviewed by the International Commission.

If any child is found with five or more concentric depressed facial scars of greater than 1 mm diameter at the base, it must be considered suggestive of smallpox; a full history and investigation are indicated. If initial inquiries reveal that a particular case can be attributed to a known smallpox outbreak only the place of attack and the year need be recorded. Any pock marked person claiming that the pock marks were caused by a disease occurring since the last known smallpox in the locality or in a location not previously recognized as the site of a smallpox outbreak, requires full investigation.

##### 2.3.2 Smallpox inquiry

A smallpox inquiry survey should be conducted simultaneously with other activities to identify rumours of outbreaks of smallpox, suspected cases or deaths due to chickenpox during the previous two years and to check them through appropriate investigations in order to confirm or refute the existence of undetected smallpox transmission. Scrutiny of the registers in the health units is necessary to know whether or not any patients were suspected to be cases of smallpox or treated without notification. Form 3 is used for this purpose and forms 4 and 6 will be completed if the team's observation indicates smallpox or smallpox strongly suspected.

#### 2.4 Supervision

The national health authorities (with WHO collaboration where appropriate) will be responsible for all the activities.

In order to monitor the progress and sensitivity of the field survey and performance of the mobile teams, a central evaluation team should regularly visit at least 10% of the localities visited by the survey teams during each month. Such visits should include primary schools (where some younger children should be re-examined), fixed health units (for verifying

survey team's observations) and examination of as many chickenpox cases as possible from whom laboratory specimens had been collected. Brief reports should be prepared by the evaluation team.

## 2.5 Recording and reporting

### 2.5.1 Survey reports

A full documentary proof of all aspects of planning and implementation of the survey will be required by the members of the International Commission in addition to all the results of field investigations. Therefore, all the forms proposed to be used during this programme must be available at the national survey headquarters for review by members of the Commission.

- Form 1. Field visit itinerary
- Form 2. Primary school facial pock mark survey
- Form 3. Smallpox inquiry and pock mark survey in health units and other places
- Form 4. Investigation of child with smallpox pock marks or smallpox suspect
- Form 5. Monthly summary form

In addition to the above forms, forms 6 and 7 are to be used for all suspected smallpox case(s). Form 8 must accompany all specimens sent to WHO for forwarding on to reference laboratories.

In order to facilitate the monitoring of the sensitivity and progress of field activities, one copy of Form 5 (monthly summary form) should be sent to Smallpox unit, World Health Organization, 1211 Geneva 27, Switzerland, and one copy to the WHO Regional Office.

### 2.5.2 Reports on suspected cases

Any smallpox outbreak or suspected outbreak which has occurred since the last known smallpox in any of these countries has serious implications and must lead to most meticulous and exhaustive epidemiological investigations and completion of forms 6, 7 and 8.

## 2.6 Final report

This document to be presented to the members of the International Commission will describe in detail the criteria and methods used in the selection of localities for special investigation and field survey, qualifications, training, the number of survey teams, and the supervisory system. The report will include the final results of field surveys and other documents related to smallpox assessment activities. The report should be submitted to WHO at least one month before the scheduled date for certification of smallpox eradication in the country concerned.

Annex 3

3. REPORTING AND INVESTIGATION FORMS

FORM 1

Country \_\_\_\_\_  
 Region \_\_\_\_\_

Province \_\_\_\_\_  
 District \_\_\_\_\_

FIELD VISIT ITINERARY

Locality name	Population (estimated for 1976)	Date of		Number of			
		Visit planned	Actual visit	Primary schools		Health units	
				Present	Visited	Present	Visited

Date \_\_\_\_\_ Name of Team Leader \_\_\_\_\_ (signature) \_\_\_\_\_



Country \_\_\_\_\_

Province \_\_\_\_\_

Region \_\_\_\_\_

District \_\_\_\_\_

PRIMARY SCHOOL FACIAL POCK MARK SURVEY

Localities (est. pop.)	Date of visit	Primary schools		Number of children with smallpox pock marks <sup>a</sup>			
		Name or address	No. of children examined	Suffered in <u>  </u> <sub>b</sub> or before	Suffered after <u>  </u> <sub>b</sub>	Total	Remarks

Date \_\_\_\_\_ Name of Team Leader \_\_\_\_\_ (signature) \_\_\_\_\_

<sup>a</sup> Form 4 must be completed.

<sub>b</sub> Enter the month and year of the last known smallpox outbreak.

Annex 3

FORM 3

Country \_\_\_\_\_  
Region \_\_\_\_\_

Province \_\_\_\_\_  
District \_\_\_\_\_

SMALLPOX INQUIRY AND POCK MARK SURVEY IN HEALTH UNITS AND OTHER PLACES

Locality	Date of visit	Name of health units or other places <sup>a</sup>	Number of smallpox or rumours or chickenpox death suspected in 1975 or after <sup>b</sup>	Number of persons seen																			
				Under 5 years			5-14 years			Adults													
				Number seen	No. with smallpox pock marks <sup>c</sup>		Number seen	No. with smallpox pock marks <sup>c</sup>		Number seen	No. with smallpox pock marks <sup>c</sup>												
					In ___ <sup>d</sup> or before	After ___ <sup>d</sup>		In ___ <sup>d</sup> or before	After ___ <sup>d</sup>		In ___ <sup>d</sup> or before	After ___ <sup>d</sup>											
Total																							

Date \_\_\_\_\_ Name of Team Leader \_\_\_\_\_ (signature) \_\_\_\_\_

<sup>a</sup> Markets, kindergartens, festivals, etc.  
<sup>b</sup> Form 4 must be completed. If team's observation indicates smallpox or smallpox strongly suspected, forms 6 and 7 also must be completed.  
<sup>c</sup> Form 4 must be completed.  
<sup>d</sup> Month and year of last known smallpox outbreak.

Country \_\_\_\_\_

Province \_\_\_\_\_

Region \_\_\_\_\_

District \_\_\_\_\_

INVESTIGATION OF CHILD WITH SMALLPOX POCK MARKS OR SMALLPOX SUSPECT

Name

Information obtained from:	Hospital	<input type="checkbox"/>	_____
	Dispensary	<input type="checkbox"/>	_____
	MCH	<input type="checkbox"/>	_____
	School	<input type="checkbox"/>	_____
	Other	<input type="checkbox"/>	_____

Name of person under investigation \_\_\_\_\_

Name of father \_\_\_\_\_

Name of mother \_\_\_\_\_

Address: Village \_\_\_\_\_

District \_\_\_\_\_

State \_\_\_\_\_

Age: \_\_\_\_\_ years

Sex: Male  Female

Month (if possible date)/year  
of onset of rash: \_\_\_\_\_

Outcome: Died  Recovered

Locality of disease onset \_\_\_\_\_

Facial pock marks: Yes  No

If "yes", how many? \_\_\_\_\_

Vaccination history: Yes  No

If "yes", when? \_\_\_\_\_

Vaccination scar: Yes  No

Rash - distributed more face and limbs Yes  No

Rash - same stage of evolution Yes  No

Have there been any deaths from similar disease in the locality? Yes  No  If "yes", how many? \_\_\_\_\_

Team's diagnosis: Smallpox  Other  Specify \_\_\_\_\_

Specimen taken for laboratory diagnosis Yes  No  Sent to: \_\_\_\_\_

Date \_\_\_\_\_ Name of Team Leader \_\_\_\_\_ (signature) \_\_\_\_\_

Note: Further investigation including source of infection must be conducted if team's observation indicates smallpox or smallpox strongly suspected.

MONTHLY SUMMARY FORM

Country \_\_\_\_\_

Province \_\_\_\_\_

Region \_\_\_\_\_

District \_\_\_\_\_

1. COVERAGE BY SURVEY TEAMS

Number of localities		Number of primary schools			Number of		
Selected	Visited	Present	Visited	Children examined	Health units		Other places <sup>a</sup> visited
					Present	Visited	

2. RESULTS OF POCK MARK SURVEY

Group of persons	Number of persons seen	Persons with facial pock marks by year of smallpox attack			
		<u>  </u> <sup>b</sup> or before	Investigated	After <u>  </u> <sup>b</sup>	Investigated
Pre-school					
Primary school					
Adults					
Total					

3. RESULTS OF SMALLPOX INQUIRY

Number of places <sup>c</sup> where		Number of suspected smallpox cases	
Inquiries made	Suspected cases were informed	Investigated <sup>d</sup>	Occurring after 1975

4. RESULTS OF CHICKENPOX SURVEY

Number of specimens collected by		Number of laboratory results			
Fixed units	Mobile teams	Smallpox +	Varicella +	No virus	Others (specify)

Date \_\_\_\_\_ Name of Team Leader \_\_\_\_\_ (signature) \_\_\_\_\_

<sup>a</sup> Markets, kindergartens, festivals, nomads, etc.

<sup>b</sup> Month and year of last known smallpox.

<sup>c</sup> Schools, health units and other places.

Country \_\_\_\_\_

Province \_\_\_\_\_

Region \_\_\_\_\_

District \_\_\_\_\_

PATIENT AND HIS FAMILY INVESTIGATION

Patient's name: \_\_\_\_\_ Age: \_\_\_\_\_ Sex: \_\_\_\_\_

Address \_\_\_\_\_

Vaccination status: Vaccination scar Yes  No

Date of onset of rash: \_\_\_\_\_ Outcome: Died  Survived  Date \_\_\_\_\_

Source of infection:

Family contact  Other  Specify: \_\_\_\_\_

Exposure to other patient in the locality

Had patient travelled outside village during three weeks before onset of rash: Yes  No

If "yes" where? \_\_\_\_\_

Did anyone with a smallpox-like illness visit the home or village during three weeks before onset of rash: Yes  No

If "yes", from where? \_\_\_\_\_

Had patient travelled during illness (from date of onset to date when scabs fell off, 3 weeks)? Yes  No

If "yes" where? \_\_\_\_\_

Family including patient, when smallpox occurred

Name	Age	Sex	Vaccination scar (yes/no)	Smallpox (yes/no)	Left during outbreak (yes/no)	For where *

\* Use reverse side of this sheet for details.

Date \_\_\_\_\_ Name of Team Leader \_\_\_\_\_ (signature) \_\_\_\_\_

Annex 3

FORM 7

Country \_\_\_\_\_

Province \_\_\_\_\_

Region \_\_\_\_\_

District \_\_\_\_\_

LINE LISTING OF PATIENTS

Locality	Name	Age	Sex	Father's name	Vaccination scar:		Date onset of rash	Outcome: Died/ Recovered	Source of infection
					Yes	No			

Date \_\_\_\_\_

Name of Team Leader \_\_\_\_\_

Title \_\_\_\_\_

Signature \_\_\_\_\_

INFORMATION ON PATIENT FOR SMALLPOX LABORATORY TESTS

Personal Data	Country		Patient No.		
	Name		Age	Sex	
	Full address				
Present Illness	Date of onset of fever.....	Status of patient : Recovering <input type="checkbox"/>	Hospitalized : No <input type="checkbox"/> Yes <input type="checkbox"/>		
	Date of onset of rash.....	Uncertain <input type="checkbox"/> Dead <input type="checkbox"/>	Name and location of hospital .....		
	Type of rash-Confluent <input type="checkbox"/> Discrete <input type="checkbox"/>	Date.....			
	Distribution of rash typical for smallpox		Yes <input type="checkbox"/>	No <input type="checkbox"/>	Uncertain <input type="checkbox"/>
History	Year of earliest vaccination.....		Vaccination scar:		
	Date of most recent vaccination.....		No <input type="checkbox"/>	Yes <input type="checkbox"/>	
	Has patient ever had: Smallpox:		No <input type="checkbox"/>	Yes <input type="checkbox"/>	Year.....
	Chickenpox:		No <input type="checkbox"/>	Yes <input type="checkbox"/>	Year.....
Contact History	Was patient recently exposed to:				
	A case of smallpox: Yes <input type="checkbox"/>		..... days ago.		No <input type="checkbox"/>
	A case of chickenpox: Yes <input type="checkbox"/>		..... days ago.		No <input type="checkbox"/>
Clinical/Epidemiological diagnosis	Smallpox <input type="checkbox"/>	Suspected smallpox <input type="checkbox"/>	Vaccinia <input type="checkbox"/>	Chickenpox <input type="checkbox"/>	Other (specify)
	Date of collection.....				
Type of Specimen	Date of collection.....				
	Smear from maculo-papular lesions <input type="checkbox"/>	Vesicular fluid or pus <input type="checkbox"/>	Crusts <input type="checkbox"/>	Serum <input type="checkbox"/>	Other (specify)
Specimen submitted by:					
Name .....					
Address .....					
Testing results to be notified to:					
Name .....			Telegraphic address .....		
Address .....			Telephone .....		
<u>To be completed by testing laboratory</u>					
Date specimen received at laboratory:.....					
Date results notified:.....					
Diagnostic Tests	Electron microscopy:				
	Variola or vaccinia viruses seen:		Yes <input type="checkbox"/>	No <input type="checkbox"/>	Uncertain <input type="checkbox"/>
	Varicella or herpes simplex virus seen:		Yes <input type="checkbox"/>	No <input type="checkbox"/>	Uncertain <input type="checkbox"/>
	Precipitation in gel. Positive with anti-vaccinia serum:		Yes <input type="checkbox"/>	No <input type="checkbox"/>	Uncertain <input type="checkbox"/>
	Virus isolation. Variola virus isolated:		Yes <input type="checkbox"/>	No <input type="checkbox"/>	Uncertain <input type="checkbox"/>
Other tests (specify) .....					
Comments.					
Testing Laboratory:					
Name .....					
Address .....					

GUIDELINES FOR COLLECTION OF SPECIMENS FOR  
LABORATORY EXAMINATION

Collection of specimens

- To prevent any contamination, unclean needles or bifurcated needles must not be used. Scabs should be detached using blood lancets only.
- At least six scabs from each case must be collected in each small plastic tube supplied for this purpose.

Labelling of specimens

Additional self-adhesive labels provided with the tubes should include patient's name and reference number corresponding to the reference number on the form (Information on patients for smallpox laboratory tests) attached. Appropriate sections of the form must be completed in full.

Dispatch of specimens

(a) From field to central level: If it is not possible to dispatch the specimens to the central level as and when collected, they may be stored in a cool place until a sufficient number accumulate for dispatch.

If the rigid plastic tube with red cap is removed from the aluminium tube of the WHO specimen collection kit, about 10 plastic tubes can be put in this tube instead. The patient information forms should be wrapped outside the tube containing the 10 specimen tubes. Under no circumstances should specimens be dispatched without completed forms.

(b) At central level: All the specimens and forms received from the field should be carefully checked in order to ascertain that specimens, labels and the patient information forms are all in order.

A register should be maintained to record all chickenpox specimens received from the field for follow-up purposes; it should mention inter alia the national specimen number if different from the field number. The national specimen number should be marked both on the specimen container and the patient form (attached).

Whenever a reasonable number of specimens have been received, or at regular intervals, specimens and forms must be securely packed in a carton and sent by air freight to the Smallpox Eradication unit, World Health Organization, Avenue Appia, 1211 Geneva 27, Switzerland (telephone 34 60 61). A telegram should be sent to UNISANTE, Geneva, for the Smallpox Eradication unit informing them about the airway bill number and the flight by which specimens will arrive in Geneva. This system will ensure their rapid collection and facilitate their search if lost during transport.

The laboratory results received from WHO should be promptly communicated by national headquarters to all the field units submitting the specimens to sustain their interest in laboratory surveillance of chickenpox.



INFORMATION ON PATIENT FOR SMALLPOX LABORATORY TESTS

Personal Data	Country		Patient No.		
	Name		Age	Sex	
	Full address				
Present Illness	Date of onset of fever .....	Status of patient : Recovering <input type="checkbox"/>	Hospitalized : No <input type="checkbox"/> Yes <input type="checkbox"/>		
	Date of onset of rash .....	Uncertain <input type="checkbox"/>	Name and location of hospital .....		
	Type of rash-Confluent <input type="checkbox"/> Discrete <input type="checkbox"/>	Dead <input type="checkbox"/>	Date .....		
Distribution of rash typical for smallpox		Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain <input type="checkbox"/>			
History	Year of earliest vaccination .....		Vaccination scar:		
	Date of most recent vaccination .....		No <input type="checkbox"/> Yes <input type="checkbox"/>		
	Has patient ever had: Smallpox: No <input type="checkbox"/> Yes <input type="checkbox"/>		Year .....		
		Chickenpox: No <input type="checkbox"/> Yes <input type="checkbox"/>		Year .....	
Contact History	Was patient recently exposed to:				
	A case of smallpox: Yes <input type="checkbox"/> .....		days ago.		No <input type="checkbox"/>
		A case of chickenpox: Yes <input type="checkbox"/> .....		days ago.	No <input type="checkbox"/>
Clinical/Epidemiological diagnosis	Smallpox <input type="checkbox"/>	Suspected smallpox <input type="checkbox"/>	Vaccinia <input type="checkbox"/>	Chickenpox <input type="checkbox"/>	Other (specify)
	Date of collection .....				
Type of Specimen	Smear from maculo-papular lesions <input type="checkbox"/>		Vesicular fluid or pus <input type="checkbox"/>	Crusts <input type="checkbox"/>	Serum <input type="checkbox"/>
	Other (specify)				
Specimen submitted by:					
Name .....					
Address .....					
Testing results to be notified to:					
Name .....			Telegraphic address .....		
Address .....			Telephone .....		
<u>To be completed by testing laboratory</u>					
Date specimen received at laboratory: .....					
Date results notified: .....					
Diagnostic Tests	Electron microscopy:				
	Variola or vaccinia viruses seen:		Yes <input type="checkbox"/>	No <input type="checkbox"/>	Uncertain <input type="checkbox"/>
	Varicella or herpes simplex virus seen:		Yes <input type="checkbox"/>	No <input type="checkbox"/>	Uncertain <input type="checkbox"/>
	Precipitation in gel. Positive with anti-vaccinia serum:		Yes <input type="checkbox"/>	No <input type="checkbox"/>	Uncertain <input type="checkbox"/>
	Virus isolation. Variola virus isolated:		Yes <input type="checkbox"/>	No <input type="checkbox"/>	Uncertain <input type="checkbox"/>
Other tests .....					
(specify) .....					
Comments.					
Testing Laboratory:					
Name .....					
Address .....					