



REPORT OF THE INTERNATIONAL COMMISSION
FOR PRELIMINARY ASSESSMENT OF SMALLPOX
ERADICATION IN ETHIOPIA
3-18 APRIL 1979



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INTRODUCTION

The last case of smallpox was recorded in Ethiopia in August 1976. According to the 1971 WHO Expert Committee on Smallpox Eradication two years of intensive surveillance should elapse after the last case before a country may be declared smallpox free.

The Smallpox Eradication Programme was started in Ethiopia in 1971 and by July of that year activities of some sort were in progress throughout the country, however, the principal efforts were focused on the south-western regions which bordered smallpox-free Kenya and virtually smallpox-free Sudan, on Addis Ababa which as an urban centre could be expected to serve as a source of spread of smallpox throughout the country and on Eritrea where the health services were more plentiful and the transportation network was better developed. During 1971, 25 999 smallpox cases were documented, a figure considered to be only one-tenth of all cases which actually occurred in that year. From that time, the programme was continuously expanded and the annual incidence of smallpox has steadily declined. The number of cases recorded in 1972 was 16 916, transmission being interrupted in four regions. The number of cases recorded in 1973 was 5 284 with 4 439 in 1974, 3 935 in 1975 and 915 in 1976, with the last case in Bale region in August 1976.

After the discovery of the last case, the programme shifted to a maintenance phase. In the year 1977, 80% of the 23 670 farmers' associations registered in the country were visited. Special search campaigns were conducted in the Blue Nile Gorge, in all districts sharing a common border with the Ogaden Desert, in areas of Gojjam, Wollega and Illubabor Regions adjoining international borders, and in areas around the last known outbreaks in highland Sidamo and in Northern Tigre.

A total of 9 991 rumours were recorded in 1977, of which 3 774 were diagnosed as chickenpox and 6 217 as other skin diseases. A total of 620 specimens were collected out of which 29% came from the Ogaden Desert regions of Hararghe, Bale and Sidamo in the six months before the civil disturbance started in that area; all proved to be negative for variola virus.

In 1977 alone, 1 843 700 primary vaccinations were performed bringing the total number of vaccination done throughout the country since the beginning of the programme to 15 396 154 which represents about 54% of the population.

Although the programme in the Ogaden Desert area had to be discontinued because of the war, after the last case in August 1976 there were 10 full months of extensive surveillance covering the whole area. Some 500 people were deployed and the assistance of helicopters was provided. During this time a number of rumours were checked and 180 specimens were collected, all were negative for smallpox.

In order to work out appropriate surveillance methods in the year preceding certification of smallpox eradication two members of the Global Commission (Professor K. Dumbell and Dr. P. Shrestha) visited Ethiopia in June 1978. They recommended a single round of search in all towns populated by 1 000 and more people, a round of search in all Farmers Associations approachable by the programme staff and an approach to the population of "closed" areas through markets. They also advised that the highland areas of the country may be assessed at the end of this round of surveillance, in April - May 1979, i.e. two and half years after the last smallpox case in the country. The assessment by an International

Commission of seven members including four members of the Global Commission (Annex 1) was organized in April 1979 according to this recommendation, with the following objective:

to make a preliminary assessment of the Smallpox Eradication Programme (S.E.P.) in Ethiopia prior to the final visit of the International Commission.

COMMISSION ACTIVITIES

The Commission worked in Ethiopia from the 3rd to the 18th April, 1979. On arrival, a courtesy call was paid on Dr. Tefera Wonde, Minister of Health of Ethiopia on 3rd April 1979.

At the first meeting on 3rd April the Commission unanimously decided to appoint Prof. J. Kostrzewski as chairman and Dr K. Dumbell as rapporteur of the Commission.

A preliminary report on smallpox eradication in Ethiopia was available to the Commission on their arrival as basic briefing material.

The Commission members were also briefed on WHO projects in the country by Dr. Haile Mariam Kassay, WHO Programme Coordinator, and about the Smallpox Eradication Programme in Ethiopia by SEP Headquarters staff, on the 3rd and 4th April 1979. The Commission agreed to assess the highland areas as well as some lowland areas and areas bordering unapproachable parts of the country in order to recommend activities to be carried out before the visit of the final Commission. This was followed by the field visits from 5th to 16th April during which they were accompanied by national and WHO staff (Annex 2). Areas visited by the Commission are shown in Annex 3.

On 16th and 17th April the Commission members discussed their field observations and worked out a joint report which was presented to the programme staff and to the national authorities on 18th April 1979.

FINDINGS

The Commission examined all aspects of the S.E.P. in Ethiopia with special emphasis on activities since the last known case of smallpox.

1. Rural Search

Smallpox workers had searched almost all localities visited by the Commission in the rural areas and which had been scheduled to be searched. Supervision had been effective, as shown by evidence of visits paid by S.O.s and R.C.s to these localities.*

2. Urban Search

The urban search had proved very effective in all the towns visited. Urban dwellers had a high level of awareness of programme activities and most houses were marked as having been visited by smallpox staff.

*
S.O. - Surveillance Officer, R.C. - Regional Coordinator

3. Schools Search

The school searches had been equally effective. The 5 - 15 years age group, which had accounted for 45% of smallpox cases recorded during the endemic period, showed a particularly high level of knowledge about the need to report any suspect case. The teachers proved themselves to be cooperative and well motivated. Although only 19% of eligible children attend primary school, knowledge of smallpox activities was also widespread among children in rural areas.

4. Special Area Searches

For various reasons certain areas of the country had been designated as needing a search apart from the routine countrywide searches. The evidence suggested that these campaigns had been well designed and implemented.

5. Market Search

In those areas submitted to them, market searches proved to be good centres for the dissemination of information and for contacting many people from less accessible adjacent areas. In particular, a market in an accessible town had proved to be a valuable source of information about an inaccessible surrounding rural area.

6. Shelter Camps

In Bale and Sidamo Regions, shelter camps exist which accommodate a significant proportion of people who had moved from areas with security problems. Surveillance in these shelters provided useful information on the situation in closed areas.

7. Assessment

Especially during the previous twelve months, all surveillance activities have been submitted to meaningful assessment. This has shown that the programme has achieved a high level of competence in its activities.

8. Almost all FA and UDA chairmen who were interviewed had satisfactory * knowledge of the S.E.P. and the need to report suspect smallpox in their area.

The reports from FA chairmen of the last case known to occur in their FA, provide a massive body of evidence that smallpox has not occurred during the last two years.

9. It was found that the lay public and especially the health staff were aware of the difference between smallpox and chickenpox and the latter were generally competent to make a satisfactory diagnosis. Civil Administrators also were aware of the activities of the programme.

10. Some areas had not been recently searched. Frequently these were areas that had not experienced smallpox for several years and where there were considerable difficulties in carrying out the kind of search required, but where surveillance activities had been undertaken on previous occasions.

* FA - Farmers' Association, UDA - Urban Dwellers' Association

11. It was found that variolation had previously been practised in many areas, apparently, mostly on a direct person to person basis; however, in some areas material had been stored. Specimens of such material had all proved inactive in laboratory tests. No evidence was discovered that any variolation had been done since May 1976.

12. Documentation at Regional and Awraja level was found to be very well done.

13. Some reports of rash and fever cases submitted either to FA chairmen or to health authorities had not been investigated.

14. Reporting from health facilities was, with some exception, rather ineffective. Health facility personnel were aware of programme activities, but with some exceptions they generally left these entirely to the S.E.P. workers.

15. Insufficient numbers of specimens have been submitted from the Ogaden area and Eritrea, to provide worthwhile data.

16. Pock mark surveys conducted by Commission members failed to reveal pock marks in any child under eight years of age.

CONCLUSIONS

1. The Commission recognized the outstanding results achieved by the relatively small number of programme staff. Every searcher, assistant surveillance officer surveillance officer, regional coordinator as well as all staff at headquarters deserve the highest praise for their courage, dedication and hard work.

2. The results of searches conducted by programme staff during the past year have been particularly outstanding.

3. In those woredas included in the urban and rural search programme, 1978/79, high levels of surveillance competence were achieved. The Commission was satisfied that it was not possible for smallpox transmission to have remained undetected in those areas.

4. The Commission decided that, in a few areas not searched during the previous year, further evidence was desirable in order to document the interruption of smallpox transmission.

5. In other areas not searched during the past year, there was convincing evidence that previous surveillance had been sufficient to show that smallpox transmission was not continuing in these areas.

RECOMMENDATIONS

As a result of the findings and conclusions made by its members, the Commission recommends that programme activities to be performed before the final meeting of the Commission might be considered under three main headings:

1. In relation to the preparation of the country document, a provisional version of which was available to this Commission.

- 1.1 This should be updated to include results of recent and proposed surveillance activities, but should be completed, if possible, by early August, so that the Commission Members can receive copies before arrival in this country.
 - 1.2 This document should also include as much relevant information as possible obtained from smallpox eradication programmes in neighbouring countries.
 - 1.3 For those parts of the country not covered by the excellent search activities of 1978/79, special reports should be prepared, documenting all aspects of smallpox eradication and surveillance and including relevant information from adjoining areas. Four separate sections should be prepared for
 - 1.3.1 Eritrea
 - 1.3.2 The Ogaden Desert
 - 1.3.3 Certain woredas in Gondar, Gojjam and Kaffa adjacent to the border with Sudan.
 - 1.3.4 The Simien awraja of Gondar, the Awsa awraja of Wollo and Tembien awraja of Tigre
2. In relation to field activities up to September 1979
- 2.1 Some epidemiological surveillance should continue and in Eritrea, the Ogaden and Simien awraja this should be expanded wherever possible. Where surveillance in a particular area is not possible as much indirect evidence as possible should be obtained from intensifying surveillance in adjacent areas, by questioning travellers and at shelter camps and markets.
 - 2.2 In areas difficult to access, public awareness of the S.E.P. might be increased by the use of radio and striking poster displays at markets.
 - 2.3 Constant contact should be maintained with the administrators of areas with a security risk, so that any relaxation of security problems may immediately be utilized to the benefit of the programme.
 - 2.4 R.C.s and S.O.s might attend meetings of woreda F.A. chairmen in order to explain to them the certification procedure.
 - 2.5 The working of the International Commission in October would be facilitated by the updating of information available on wall charts at regional and awraja level and the removal of inconsistencies in the data displayed. It would also be helpful if HQ could enable the specimen books to be kept up to date by improving the level of feedback of information.
3. In relation to the future of S.E.P. Staff
- The staff of the S.E.P. have developed a high level of competence in surveillance and epidemic containment. They have developed skills in working at the community level and an organization capable of carrying a preventive medicine programme to all the people and of supervising, controlling and monitoring its effectiveness.

We recommend that this organization be preserved and redirected to expand the scope and competence of the preventive health programme in Ethiopia, particularly in communicable disease control.

The present staff should be retrained, possibly with the assistance of the WHO in order to widen its experience in preventive health programmes. Specifically their future activities might include:

- training and supervision of Kebele health workers,
- epidemiological surveillance and the collection of basic health statistics,
- control of epidemic disease.

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SUMMARY OF THE FIELD VISITS OF THE ASSESSMENT TEAMS

| | Regions Visited | Awrajas Visited | Woredas Visited | Towns Visited | F.A.s Visited | Schools Visited | Health Facilities Visited | Localities Visited | Markets Visited | Other Places | Persons Examined or Interviewed | Houses Visited |
|-------------------|-----------------|-----------------|-----------------|---------------|---------------|-----------------|---------------------------|--------------------|-----------------|--------------|---------------------------------|----------------|
| Dr R.N. Basu | Wollo | 7 | 13 | 13 | 8 | 6 | 9 | 19 | 3 | 1 | 1146 | 160 |
| Dr C.Do Amaral | Tigre | 4 | 11 | 12 | 11 | 3 | 5 | 12 | 0 | 0 | | 120 |
| Dr Z.M. Dlamini | Addis Ababa | 1 | 3 | 1 | 0 | 3 | 0 | 3 | 3 | 0 | 1185 | 0 |
| Dr A. Gromyko | North Shoa | 5 | 15 | N.C. | 27 | 2 | 12 | 32 | 3 | 0 | 1013 | 125 |
| Ato Wassihun | Wollega | 5 | 10 | N.C. | 17 | 1 | 7 | 19 | 1 | 0 | 1045 | 75 |
| Ato Teferra | Gondar | | | | | | | | | | | |
| Dr K. Dumbell | Gojjam | 12 | N.C. | 4 | 4 | 6 | N.C. | 58 | 3 | 0 | 794 | 168 |
| Ato Tamiru | | | | | | | | | | | | |
| Dr J. Kostrzewski | Bale | | | | | | | | | | | |
| Ato Ashagne | Arussi | 9 | 31 | 9 | 45 | 2 | 8 | 146 | 1 | 1 | 2000 approx. | 228 |
| Dr P. Arbani | South Shoa | | | | | | | | | | | |
| Ato Wassihun | | | | | | | | | | | | |
| Dr H. Lundbeck | Illubabor | 3 | 8 | 1 | 7 | 2 | 5 | 10 | N.C. | 0 | N.C. | N.C. |
| Ato Temesgen | Kaffa | 4 | 12 | N.C. | 5 | 1 | 15 | 10 | 1 | 0 | N.C. | |
| Ato Michael | | | | | | | | | | | | |
| Dr T. Olakowski | Eritrea | 6 | 6 | 6 | 0 | 0 | 6 | 0 | 5 | 0 | 1000 | 133 |
| Dr L. Khodakevich | | | | | | | | | | | | |
| Ato Temsegen | Hararghe | 5 | 10 | 1 | 9 | 0 | 3 | 5 | 10 | 0 | 2550 | 85 |
| Ato Tesfaye | | | | | | | | | | | | |
| Dr N.A. Ward | Sidamo | 5 | 13 | 11 | 18 | 1 | 5 | 29 | 2 | 4 | N.C. | N.C. |
| Ato Worku | Gamo Gofa | 4 | 11 | 4 | 26 | 1 | 7 | 30 | 1 | 0 | N.C. | N.C. |
| | Total | 70 | 143+ | 62+ | 177 | 28 | 82+ | 277 | 33+ | 6 | 9939+ | 1094+ |

N.C. - Not counted

AWRAJAS VISITED BY THE INTERNATIONAL COMMISSION

5th to 16th APRIL 1979

