

WORLD HEALTH
ORGANIZATION

EXECUTIVE BOARD

Thirteenth SessionORGANISATION MONDIALE
DE LA SANTÉEB13/50 ✓
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CAMPAIGN AGAINST SMALLPOX

1. At its twelfth session the Executive Board requested the Director-General - in pursuance of resolution WHA6.18 - to consult with Member States, regional committees and members of the relevant expert advisory panels in order to obtain suggestions and information on which to base a study of the means of implementing a campaign against smallpox; and to report on the results of such consultation to the Board at its thirteenth session.

The present document includes the outcome of such consultations, together with some other material related to the subject.

2. Regional Committees

A campaign against smallpox was discussed by the regional committees for Africa, the Americas, Europe, South-East Asia, and the Western Pacific. The conclusions reached are embodied in the resolutions and decisions recorded below.

2.1 Regional Committee for Africa (Document EB13/25, page 4)

"The Regional Committee noted the resolutions EB11.R58 and WHA6.18. With regard to resolution EB12.R13, the Regional Committee adopted the following resolution.

The Regional Committee for Africa

CONSIDERS that, subject to information which might be furnished by the Expert Committees and subject to new measures which they might recommend, anti-smallpox campaigns are being and should continue to be undertaken with the greatest possible intensity.

REQUESTS the Regional Director to consult the Health Administrations within the Region as to whether any additional assistance can be given by the World Health Organization with regard to such campaigns."

2.2 Regional Committee for the Americas (Document EB13/26, page 22)

"The Directing Council,

Having considered the inquiry submitted by the Director-General of the World Health Organization on instruction from the Executive Board (resolution EB12.R13), requesting suggestions and data from the Regional Committee to serve as the basis of a study of the measures that should be taken to carry out a world-wide campaign against smallpox,

RESOLVES to apprise the Director-General of the World Health Organization, for the information of the Executive Board, of the following:

1. That since 1950 the Pan American Sanitary Organization has considered as one of its basic programmes the execution of campaigns for the eradication of smallpox throughout the Americas.

2. That the World Health Organization promote inter-governmental agreements, which have given most satisfactory results in the Region of the Americas, with a view to preventing border epidemics.

3. That the quality of the vaccine to be used and the conditions under which it is kept are of fundamental importance, especially wherever the vaccine is exposed to high temperatures, either in storage or in transit.

4. That the World Health Organization provide equipment and/or technical advice, in one or more of the usual ways, to promote the production of glycerinated or dry vaccine, according to the needs of the countries.

5. That it is recognized that each country applies the anti-smallpox campaign methods it deems best suited to its own conditions, but that it is advisable to utilize the administrative experience that experts acquire while carrying out such campaigns. In view of this fact, the World Health Organization should provide advisory service of this kind to the countries desiring to intensify or reorganize their programmes.

6. That the World Health Organization recommend to the countries that, as far as possible, the anti-smallpox campaigns be an integral part of permanent, over-all public-health programmes or the starting point for such programmes."

2.3 Regional Committee for Europe (Document EB13/27, page 3)

"Having studied and discussed the various resolutions and documents which formed the background to this subject, the Committee noted that the Director-General of WHO had been instructed to secure the views of Regional Committees and all Member Governments of the Organization on the question of a world-wide campaign against smallpox.

The Regional Committee as such did not feel in a position to express a precise opinion at this stage on the lines of a study to be carried out by the Executive Board. The Committee decided nevertheless to place on record some opinions expressed in the discussion and which could be taken into consideration in the above study, such as: the value of mass vaccination, the question of post-vaccinal encephalitis and the importance of studying the causes which maintain smallpox in an endemic state in some parts of the world."

2.4 Regional Committee for South-East Asia (Document EB13/28, page 4)

"The Regional Committee

Taking note of resolution EB12.R13 on the subject of a world-wide campaign against smallpox wherein suggestions are invited from the Regional Committees;

Realizing that in the South-East Asia region effective control of the disease is not at present feasible through a world-wide campaign;

SUGGESTS to the Executive Board that the role of WHO at the present time for a world-wide mass campaign is not likely to be of a substantial enough nature to produce significant results in the region;

HOPES that member-countries of the South-East Asia Region will continue to receive WHO assistance as and when needed for national efforts to control smallpox in the same way as other WHO assisted programmes."

2.5 Regional Committee for the Western Pacific (Document EB13/29, page 8)

"The Regional Committee

NOTES the resolutions of the Sixth World Health Assembly (WHA6.18) and the twelfth session of the Executive Board (EB12.R13) regarding smallpox

REAFFIRMS the desirability of undertaking the regional survey authorized by the third session of the Regional Committee

INSTRUCTS the Regional Director to proceed with the survey with the greatest expedition possible, and

REQUESTS the Secretary to inform the Director-General that the Committee considers that it will not be in a position to furnish suggestions and information to the Executive Board in any complete manner before the conclusion of the regional survey."

3. Expert Advisory Panels

Members of the relevant WHO Expert Advisory Panels were consulted, in order to obtain suggestions and information on which to base a detailed study of the means of implementing a campaign against smallpox. The consolidated opinions expressed by the experts may be summarized as follows:

3.1 It was unanimously agreed that the free availability of a reliable dried smallpox vaccine that has been shown to be resistant to high temperatures was one of the most urgent needs in countries with a hot climate and a high incidence of smallpox.

The action already taken by WHO in sponsoring laboratory tests of dried vaccines should be extended to include other types of vaccine, such as that prepared in the chick embryo, followed by carefully designed field trials. It was thought probable that dried vaccines prepared by different methods will vary considerably in potency and heat resistance (this is confirmed by the preliminary results of the above tests).

It was generally agreed that satisfactory lymph vaccines are being produced by well-tried methods; nevertheless, new vaccines under development, including "egg"

vaccines, appeared to offer certain potential advantages, one of the principal ones being that of reduced cost. It was recommended that further developments in this field should be encouraged.

3.2 Standardization of production and testing techniques

This was considered to be highly desirable, but further research on a number of points is needed before such techniques could be laid down. In addition, field trials are needed to relate the results of laboratory potency tests to protection in man. It was suggested that a Central Reference Laboratory should be designated for the study of strains of vaccinia virus and to co-ordinate the necessary research.

Nevertheless, it was felt that interim regulations might ensure the use of better vaccines in some areas.

3.3 Methods of use

It was pointed out that although the methods of vaccination are well known, errors of application are responsible for many failures in practice. Very careful training of vaccinators is essential.

In assessing the results of vaccination it was emphasized that the immediate reaction does not indicate immunity. It can be produced by a totally inactive vaccine. Vesiculation is the only sure sign of success. Persons showing an immune reaction should be revaccinated with a known active vaccine at least once.

The frequency of revaccination necessary to control the disease depends upon the epidemiological conditions. In highly endemic areas annual revaccination is considered necessary until the disease is brought under control. When this is effected vaccination of all infants and revaccination every five years should suffice. However, it was emphasized that this assumes the proper use of a potent vaccine. Persistence of smallpox in certain areas, where a high vaccination rate at yearly intervals is claimed, is thought to be due to the use of low titre or inactive vaccine, to classification of non-specific reactions as successful, or to a failure to assess the results of vaccination. Whenever annual revaccination has been properly carried out on a sufficient proportion of the population using a potent vaccine, smallpox has been controlled.

3.4 The prevention of transmission of smallpox in international travel

Since many outbreaks of smallpox in countries free from the disease have been started by vaccinated travellers suffering from a typical disease which is difficult or impossible to diagnose clinically, it was felt that much wider use should be made of laboratory diagnosis. It is believed that the presence of a network of laboratories able to undertake these tests, distributed throughout the world, would materially reduce the chances of introduction of smallpox into a country from outside. It is considered that the publication by WHO of a manual on the laboratory diagnosis of smallpox would be a useful contribution.

3.5 The therapy of smallpox

It was emphasized that the generally hopeless attitude towards therapy that pervades many infectious diseases hospitals is not justified. Advances in the use of antibiotics, fluid and electrolytic therapy should be made widely known, and the development of new methods such as the use of hyperimmune gamma globulin should be encouraged.

Observations and conclusions

4. The Director-General draws attention to the "Study of smallpox endemicity in the world during 1936-1950" published in the Epidemiological and Vital Statistics Report of the World Health Organization in September 1953 (Vol. VI, No. 9, page 227).¹ By the use of a simple endemicity index this study demarcates various zones and areas. The study and its associated tables and maps are a useful means for examining the world prevalence and distribution of smallpox and the suitability of international action.

5. The Director-General wishes to point out several matters arising from the material assembled above.

¹ Available on request; (copies distributed to members of the Board only).

5.1 There is evidence that, in some WHO Regions at least, there is need for assistance to governments in campaigns against smallpox. The tone of some of the regional committee resolutions is such as to suggest that stress be laid on national rather than regional or world-wide campaigns. WHO assistance can, of course, be given to requesting governments in the usual way, as for example by provision of consultants. Certain regional committees and offices will desire to keep the subject in view, and to offer assistance where appropriate.

5.2 There is obviously a need for technical guidance in several laboratory aspects of smallpox concerning:

(a) Preparation and assay of vaccine.

With regard to the preparation and heat resistance of dried vaccine, the Director-General wishes to point out that, under sponsorship of WHO, comparative tests are now being made of smallpox vaccines, dried by divergent techniques, to assess the influence on their potency of varying periods of exposure to different temperatures.

(b) Laboratory diagnostic procedures.

The use of modern laboratory diagnostic methods could be stimulated by WHO making available recommended techniques. In this connexion, it might be pointed out that the demand for international guidance in laboratory techniques is becoming general, not only as concerns bacteriological diagnosis of disease but also, as the Executive Board will recall, with reference to food.¹ The Director-General has commenced a study of the general question.

¹ Resolution WHA6.16