

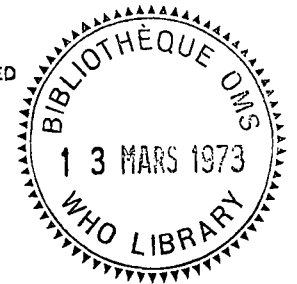


A NATIONAL REPORTING SYSTEM IN BRAZIL

INDEXED

by

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Background information

Following a resolution presented at the Eleventh World Health Assembly, in 1958, the urgency and necessity of a global smallpox eradication programme were unanimously agreed upon. Each subsequent Assembly continued to approve that idea until 1965, when, during the Eighteenth Assembly, it was stated unanimously that "the world-wide eradication of smallpox is to be one of the main objectives of the Organization".

In 1960, Brazil was the most heavily endemic South American country. In 1963, the number of cases increased by 87.6% whereas it decreased in the rest of Latin America. North and Central America, including the Caribbean, by that time were already free from smallpox. From 1968 to 1969, Brazil claimed 99.9% of all cases notified in the Americas.

In August 1966, by Government decree, the "Smallpox Eradication Campaign" was created in Brazil "with the purpose of intensifying in all the national territory the public and private activities for the prevention of and fight against smallpox, in all clinical forms, with the final objective of achieving the eradication of that disease".

Assistance was provided by WHO in the form of technical assistance and material aid, including equipment for the production of freeze-dried vaccine by local laboratories (Oswaldo Cruz, Butantan and I.P.B.), and for the diagnosis of smallpox (Belem, Rio de Janeiro and São Paulo). Provision was made by WHO for testing of the Brazilian-produced vaccine at the University of Toronto, Canada. An agreement was signed by the government with the FSESP, to transfer medical and auxiliary personnel necessary to the organization and implementation of the campaign. After organization and training of field personnel, including a specialized course for physicians, operations began.

The programme began in the north-east in November 1966. Systematic vaccination programmes spread progressively throughout the states until 16 October 1971 when in the State of Guanabara (City of Rio de Janeiro), the systematic vaccination phase of the campaign was officially concluded. In all, 81 741 290 vaccinations were administered, 84% of the country's population.

Surveillance

In addition to mass vaccination, it was felt necessary to resort to more refined methods in order to insure the eradication of smallpox as well as the control of other communicable diseases - in brief, to develop a surveillance programme.

Several factors were considered important: (1) reporting of the disease occurrence; (2) investigation of suspect and confirmed cases and subsequent discovery of new cases; (3) facilities for prompt laboratory confirmation; (4) knowledge of the vector and its geographical distribution; (5) evaluation of population migration patterns and the effects of new industrial projects and changes in trends of commercial trade, and (8) information on immunity levels of population groups.

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At a recent World Health Assembly, epidemiological surveillance was the subject of technical discussions and was defined as:

"The epidemiological study of a disease as a dynamic process which encompasses the ecology of the infecting agent, the host, the reservoir and the vectors as the complex mechanisms which take part in the dissemination of diseases and the degree in which these may occur". The purpose of epidemiological surveillance is to utilize all epidemiological methods and other appropriate ones as a guide for the control of disease.

Reporting

Reporting is undoubtedly one of the most important procedures for weighing in a concrete way, the true epidemiological situation of a given communicable disease. Unfortunately, despite the high incidence of some communicable diseases and despite the fact that notification is compulsory, outdated health structures afford them a secondary priority. Because of the lack of reliable data, adequate funds are not provided for programmes to cope with the needs in endemic areas.

Certainly an awareness of the need for reporting should be stimulated among health authorities, medical and paramedical personnel, and all those intending to engage in activities of community medicine beginning with medical schools and schools of public health.

In Brazil, the Fundação Serviço de Saúde Pública is perhaps the only agency which has organized a relatively precise communicable disease reporting system which meets the operational needs of a health programme. All its units have full-time staff duly qualified for these activities. Although the reporting system of FSESP may be one of the most efficient ones, it is limited by its operational nature, being restricted in the areas of the município (county) where it operates. Recently, FSESP has tried to give the reporting system more amplitude by creating the Centre for Epidemiological Investigation, an agency designed to collect, tabulate and analyse and disseminate data on communicable diseases from all over the country.

In the north-east, through an agreement with the Superintendencia de Desenvolvimento do Nordeste (SUDENE), a similar agency was initiated with the same purpose. Both are operating, although without having achieved their real objectives due to the limitations of the infrastructure at the state level.

It is urgent that more attention be given to this activity in order that it may meet the needs of health planning.

Smallpox epidemiological surveillance phase in Brazil

In Brazil the programme of epidemiological surveillance for smallpox began simultaneously with the attack phase of the campaign. In the period 1967-1969, CEV officials promoted courses in epidemiology, smallpox diagnosis and laboratory techniques especially designed for physicians. Later, intensive courses were conducted for auxiliary technical personnel (auxiliary epidemiology officers).

With qualified staff, epidemiological surveillance was intensified, not only in the states where the vaccination programme had already finished, but also in the other federal units where vaccination was in progress. Not surprisingly, smallpox incidence increased, reaching its highest peak during the third quarter of 1969. Subsequently, the incidence progressively declined in the states where vaccination had been concluded, whereas it increased gradually in areas being vaccinated and in unvaccinated areas as a result of an aggressive surveillance policy.

The number of reported cases declined from 7407 in 1969 to 1770 in 1970, and to 19 cases

in 1971, all of which were reported from a residual focus in the State of Guanabara (City of Rio de Janeiro). From April 1971 until the present, no cases whatsoever have been detected.

Structure of epidemiological surveillance at CEV

At central level the headquarters of the Smallpox Eradication Campaign (CEV) has designated personnel to deal with epidemiological surveillance and statistics, including responsibility for technical norms for reporting, investigation and surveys, collection, tabulation, analyses and publication of data.

An epidemiological "Bulletin" has been published bi-weekly since 1967, in which all statistical data from the campaign are systematically presented. This is sent to all health agencies in Brazil, PAHO/WHO and other agencies.

At state level the Epidemiological Surveillance Units (UVE) and the Secretarias de Saúde are responsible for the implementation of all activities and measures related to epidemiological surveillance, including weekly reporting, investigation, containment vaccination, surveys and the collection and delivery of data to CEV headquarters.

Sources of data include:

- (a) Epidemiological Surveillance Units (UVE's)
- (b) Reporting Posts (PN's)
- (c) Information sources (health services, hospitals, health centres and others)
- (d) Collaboration sources (schools, social rural assistance, community leaders, etc.)

The functions of the Surveillance Unit are integrated with the state's Secretaria de Saúde to which it belongs and where it is housed.

The UVE's are structured as follows:

- (a) One or more full-time medical officer with training in epidemiology
- (b) One or more epidemiology auxiliary
- (c) One team of vaccinators, duly equipped and trained
- (d) In a few cases, one or more nurse
- (e) One or more administrative clerk
- (f) One or more driver

A travelling team of health educators develop specific community activities.

The first UVE to be installed in Brazil was that for the Federal District in 1967, at the end of the vaccination programme there. By September 1969, 21 UVE's distributed throughout almost every state were operating, with the exception of Amazonas and Acre and the Federal Territories. A network of about 1800 notification posts had been installed covering the greater part of the state municipios. In 1972, the country had 22 UVE's and 5 sub-UVE's, in addition to an extensive network of notification post distributed throughout almost all of the 3951 municipios of Brazil for a coverage index of 87.0%.

Operation

The main objective of a Surveillance Unit is the investigation of all suspect cases of smallpox reported through any source.

Since 1967, the reporting system adopted by CEV has conformed to a weekly pattern. For that purpose a calendar by weeks is prepared every year which is distributed to all Surveillance Units and Reporting Posts. In addition, there are weekly reporting forms CEV-E-1 and CEV-E-2 adopted for use at the notification posts and UVE's respectively.

It is the responsibility of the Surveillance Units to report weekly all suspect smallpox cases to CEV headquarters in Rio. Each Unit is also responsible for the good functioning of the notification posts under its jurisdiction.

When the notification post receives information about a suspect case, through "collaboration sources" (hospitals, health service, community leaders, etc.), it completes a form CEV-E-1 in three copies, sending one immediately to the corresponding UVE which takes necessary measures. At the end of the week it fills out form CEV-E-2, listing all cases, if any, and sends it to the corresponding UVE. The UVE in turn collects the reports of all notification posts under its jurisdiction and fills out another form CEV-E-2, summarizing the information, and sends it to CEV headquarters in Rio within the first three days of the following week. This process is repeated systematically in all UVE's.

Taking into account difficulties of transportation and communication, it was decided not to await receipt of form CEV-E-2 from all notification posts prior to sending the weekly notification to CEV headquarters. It was recommended that reports which came in late be included in the following week's form with the necessary footnote.

It was also recommended that weekly notifications originating from the UVE's and sub-UVE's be made by telegram without detriment to the regular form reporting to CEV headquarters. Should there be a suspect case notification, this must of course be immediately notified to CEV.

CEV headquarters in Rio, upon receipt of weekly reports from the various UVE's, sorts, tabulates, analyses and publishes bi-weekly all pertinent data in its "Boletim".

As a first step in development of a surveillance programme, reporting must be made immediately, using the fastest means of communication possible so as to reach the investigator as soon as possible. All necessary information about location and identification of the patient must be clear and succinct. Immediate notification is a key factor for prompt investigation and discovery of new cases and adoption of subsequent measures for protection and control in the community.

Thanks to the structure established by CEV, by virtue of which almost 90% of Brazilian municipalities have at least one notification post in operation, notifications arrive quickly at the local UVE's and subsequently at CEV headquarters, with a punctuality index that exceeds 80% in some Federal Units.

This type of activity has played a major role in the two years of epidemiological silence and this, corroborated by the failure to detect cases during active search studies, suggests that smallpox transmission has been interrupted in Brazil.

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