

PROBLEMS OF BORDER AREAS IN WEST AFRICA
(Prepared from data submitted by the various Ministries of Health
within the West and Central Africa
Smallpox Eradication Programme area)

by

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Introduction

The 20 countries involved in the regional smallpox eradication programme in West and Central Africa share thousands of miles of border area. Consequently disease outbreaks frequently involve two countries directly or result in importation from one country to another. Border coordination activities are essential in at least three situations:

(a) Routine intercountry notification of disease. A reliable system for notifying adjacent countries in the event of a smallpox outbreak is necessary if they are to improve and intensify surveillance activities in adjacent areas. Several examples will be given to indicate the importance of this activity. Within a country, where different political divisions report directly to national headquarters, the same principle applies. States, regions, or other administrative units can react more appropriately and more promptly if they have immediate information of smallpox outbreaks in adjacent administrative units.

(b) Border coordination is essential when a smallpox outbreak occurs near a border or actually straddles a border. Both the delineation of the outbreak and control activities must be coordinated.

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(c) While the coordination of vaccination activities is always desirable, it is mandatory in two situations. First, if the smallpox pattern is such that a highly endemic smallpox area involves adjacent administrative units. In this case, elimination of part of the focus would allow the remaining portion of the focus to serve as a continuing source of importations. Second, if social patterns are such that people are likely to cross the border to avoid vaccination, concurrent programmes on both sides of the border will increase the vaccination coverage.

Examples of border coordination

Example No. 1

In July 1967, a child was seen in Navrongo, Ghana, with smallpox (Fig. 1). Investigation revealed the child had travelled with her family from Shaki, Nigeria, several days prior to the onset of illness. The information was relayed to the Nigerian Ministry of Health. Shortly thereafter another child with smallpox was seen by a doctor in Gbaravo, Dahomey. Again, the history indicated the family had recently arrived from Shaki, Nigeria, and the information was forwarded to Nigerian health authorities. Reports from Shaki had been consistently negative, but because of the above reports an investigation team was sent to Shaki on 9 August. The team was initially told no smallpox had been seen in the area but before the end of the day the team had identified 12 current or recent cases of smallpox.

In this case, although the outbreak was not on a country border, routine inter-country notification permitted the identification of a previously unsuspected smallpox focus in Nigeria.

Example No. 2

A second example is taken from Tessaoua, Niger, which was vaccinated in November and December 1967.

In early May 1968, a 35-year-old unvaccinated male travelled from Dagouege, Niger, to Dankoma, Nigeria, to attend a wedding (Fig. 2). While returning home he became ill and stopped in Dambago. His illness was recognized as smallpox, the village was vaccinated, and he was placed in isolation. However, he escaped isolation and returned home via N'Gowa, Tambari. Subsequently, a total of 18 persons developed smallpox as the result of this importation from Nigeria.

As the result of this outbreak and other similar episodes, the vaccination strategy in Northern Nigeria called for vaccinating along the northern border of the country to reduce the chances of exportation from Nigeria. This example not only required coordination of two countries for investigation and control but also influenced vaccination strategy for the vaccination campaign.

Example No. 3

A third example involves outbreaks in Mali near the Upper Volta border. In February and March 1968, two outbreaks were detected. A total of 40 cases of smallpox were investigated in Koula and Berekan. Both towns are market towns with large weekly markets attracting agricultural products from Upper Volta. Upper Voltan health officials were notified and surveillance activities were instituted in Upper Volta to guard against smallpox importation. Again, routine inter-country notification permitted a country to reduce the possibility of importation by being prepared.

Example No. 4

A fourth example involves a smallpox outbreak in Dahomey in July-October 1969. The first knowledge of this outbreak occurred when a mother took her small child across the border to a dispensary in Togo. The dispenser recognized the child had smallpox, vaccinated other persons at the dispensary, and went from his dispensary in Togo to the mother's village in Dahomey to vaccinate close contacts.

He reported the outbreak to Togolese authorities who in turn reported the information to Dahomey and control procedures were instituted.

The final two examples illustrate the importance of coordinating vaccination activities, in one case because of social patterns; in the other case because of the smallpox pattern.

Example No. 5

A social pattern requiring vaccination coordination is seen in Mali (Fig. 3). Each year nomadic cattle herders concentrate in Mopti in Central Mali to find water for their cattle during the dry season. Late in the dry season, as many as one million persons may be concentrated in this area, many of them from the northern regions of Upper Volta. Since certain members of the family are left behind, it would be difficult to vaccinate entire families in either country. Therefore, coordination of vaccination activities was developed to vaccinate the men concentrated in a small area of Mali while at the same time Upper Voltan teams vaccinated the remainder of the families still residing in Upper Volta.

Example No. 6

A final illustration is given of vaccination coordination resulting from smallpox patterns. The initiation of vaccination activities in Guinea and Sierra Leone revealed a great deal of smallpox activity along the border which they shared. It was decided by the two countries that initial efforts should concentrate on vaccinating both sides of the border. In Guinea, initial vaccination activities were conducted from West to East along the border while in Sierra Leone, because of the high endemicity of smallpox in eastern areas of the country, vaccination activities were conducted from East to West.

Summary

Examples have been given of routine inter-country notifications of smallpox leading to discoveries of outbreaks in other countries, of border coordination in delineating and controlling outbreaks, and of border coordination in conducting vaccination campaigns. With a decrease in smallpox incidence and the subsequent increased importance of individual cases, coordination of activities on both sides of borders becomes not only desirable, but essential.

FIGURE 1. DISTRIBUTION OF A SMALLPOX OUTBREAK
ACROSS INTERNATIONAL BOUNDARIES, 1967

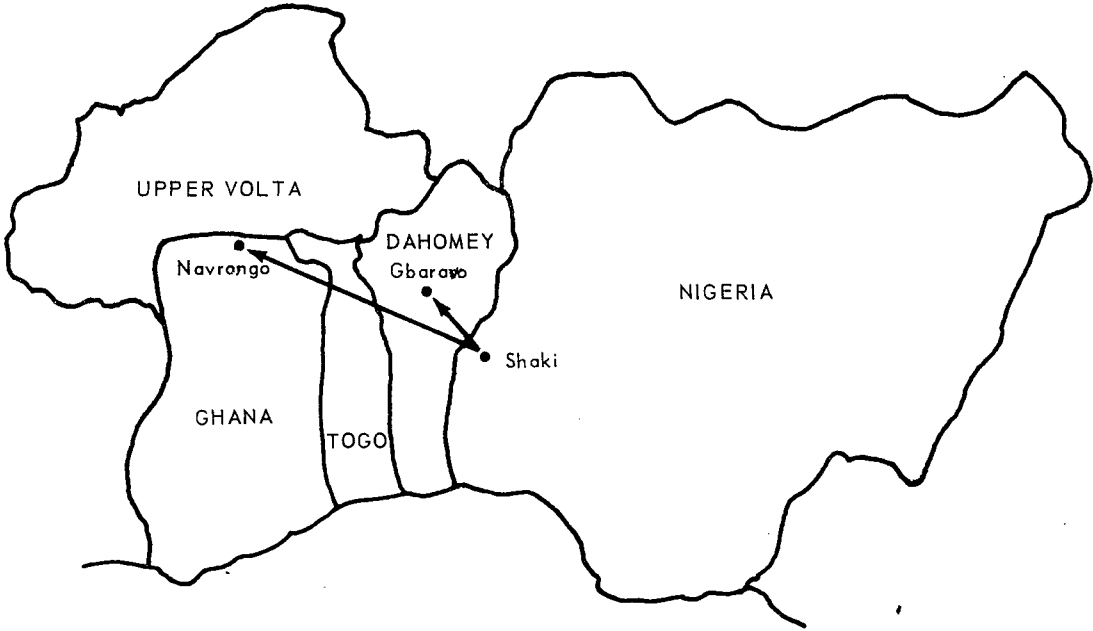


FIGURE 2. MAP OF DISEASE SPREAD, TESSAOUA OUTBREAK, NIGER

