

CONCURRENT ASSESSMENT OF THE SMALLPOX ERADICATION PROGRAMME IN

MID-WEST STATE, NIGERIA

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I. INTRODUCTION

The Mid-West State of Nigeria, with its capital, Benin City, extends over an area of 15,000 square miles and has a population of 2.5 million people, mostly farmers. It consists of 14 administrative Divisions, and, because of its multiple languages, it is sometimes described as a "mini Nigeria."

The state was invaded by the rebels from the East Central State in August 1967 and, although they have long been driven from the Mid-West, there are still attempts at sporadic infiltration, especially at the eastern boundary.

The Smallpox Eradication and Measles Control Programme (SMP) was launched in July, 1967. Although it has been functioning since, the Civil War, which was experienced more in the Mid-West than in most other states, has slowed down the project. The project started with three teams and a fourth was later added.

The role of the assessment team in the programme in the Mid-West is to evaluate by random sampling the percentage of coverage and the vaccination 'take' rate. The team provides, in a sense, an audit of the programme. For example, areas of poor coverage (below 80%) revealed by the assessment team are identified and revisited by a follow-up team. Where the take rates are below 90% something must be done to check the potency of the vaccine or to improve on field vaccination techniques.

II. THE ASSESSMENT TEAM AND HOW IT WAS DEVELOPED

The selection of an assessment team depends on the availability of suitable personnel. An assessment team may consist of two or more persons or of just one man. The Mid-West has tried both methods. During the pilot project of the SMP, there was a reserve of personnel and the assessment team was staffed by trainee Medical Field Unit Assistants with Class IV Secondary School Certificates. The team of four with an appointed leader was independent of the vaccination team and a motor vehicle was allocated to it. The team was first required to assess the pilot project area over a one month period. Morale was high at the onset, but by degrees, individual enthusiasm began to decline, and they came to regard their job with less satisfaction than that of their counterparts on the vaccination team. To them the job was monotonous and without sufficient satisfaction, such as seeing in practical terms the results of their efforts. However, the team worked fast and village after village, no matter how large, was completed in record time, sometimes leaving the assessors idle after a couple of hours of work. Normally an assessor could examine between 300 to 500 persons per day and with four assessors working in, say a village of a thousand people or less, the law of diminishing returns soon came into play.

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During the attack phase, there was an acute shortage of personnel, and the programme was forced to use one man for the assessment. This man was supplied with a motorcycle instead of a motor car. He was directed to assess three of the four functioning teams, moving at weekly intervals from one team to the other. Whereas a team of four assessors inspected an average of 700 persons per day, the single assessor has been inspecting about 500 persons per day and is fully occupied each working day. The morale of the assessor is very high and he appears to take personal interest in the quality of the work performed. He concentrates more on his job without distraction from team mates. He is directly supervised by the Medical Field Unit Superintendent, who pays him surprise visits.

With a single assessor, the cost of assessment has been considerably reduced. We have concluded that, given the right type of person with dedication and honesty, it is more economical and effective to work with a one-man assessor in a programme such as ours. An assessor could be attached to each team instead of having one assessor for three or more teams. They could rotate from one team to another.

III. ASSESSMENT PROCEDURE

Not all the villages vaccinated during the project are assessed. Each week, a number of villages are scheduled for the assessor by the Medical Field Unit Superintendent. These villages vary in size but they are representative of a given area. Assessment is planned to commence a week after vaccination. The itinerary is arranged so that the assessor inspects an average of about 400 persons per day.

On arriving at the village, the assessor meets the village Head and his Chiefs and explains the object of his visit. Even though this part of the programme had been previously explained in the plan of operation for the area, it must be emphasized to the village leaders that the visit has nothing to do with tax assessment, as the ordinary village man is very sensitive to this sort of head-count. The assessor then proceeds from house to house, armed with his assessment sheet (Annex 1). The householder assembles his dependents. The assessor then inspects the age group of 0-4 years for rate of coverage and for vaccination takes and then proceeds to examine the other age groups (5-14; 15-44; and 45 years and above) for the coverage rate only. It is quite easy to see the vaccination scars, but it is sometimes difficult to elicit facts from the householder regarding the number of children he has. Some regard this information as sacred and in some cases it is against local tradition to reveal the number of children one has. The number of persons actually seen by the assessor is more reliable. To obtain a more complete sample, villages are visited very early in the morning before the farmers go to the farms or late in the evening when they return.

The assessment in the Mid-West is based on housing units. For villages below 1,000 in population, every house is inspected; for villages between 1,000 and 2,000, every other household; for villages between 2,000 and 3,000, every third household, and so on in accordance with the WHO sampling formula. After the data are assembled according to number of houses, a village summary is prepared to show the total number in the houses, the number vaccinated and the percentage coverage for all age groups combined. The other section of the same record shows the number inspected for primary vaccination, the number of vaccination takes and the take rates for children 0-4 years of age (Annex II). This record which is known as the "Village Assessment Result" is forwarded with the house-to-house assessment sheets to the

Operations Officer. A sketch route map of the village assessed is shown at the beginning of the assessment sheet for each village to direct whoever wishes to cross-check the assessment results.

IV. USING THE ASSESSMENT DATA

As mentioned previously, assessment data may be used in two ways; to identify areas of poor coverage and to assure adequate take rates. Our problem does not seem to be with the latter but with the former. Areas of poor coverage, i.e., below 80%, have been found by the assessment team. Poor coverage has been felt to be due to poor health education and publicity, the Civil War, the general attitude towards vaccination, a previous unpopular campaign, or logistical problems caused by unreliable land and river transport. Some of these problems have been difficult to overcome and should be noted in more detail.

A. Health Education

The State's Health Education Unit is not specifically assigned to the SMP. This Unit has therefore to share its services with other units in the State. Apart from this, the Health Education Unit has no cinema or loud-speaker vans to make their work more effective. The radio which is a popular medium of information is a public corporation outside the control of the State Government. The day-to-day activities of the state-owned newspaper, which is of less importance because of its limited readership amongst the ordinary villagers, are not directed by the State Ministry of Information. Materials for publicity are therefore not usually given the priority they deserve.

B. Attitude Towards Vaccination

The people in many areas are apathetic to vaccination because smallpox has long ceased to be a major health problem and most of them have yet to see a case of smallpox or its aftermath. This is more noticeable in the southern than in the northern parts of the Mid-West, since, in the north, there had been sporadic outbreaks of the disease prior to the project. Most farmers are averse to vaccination because of the reaction, which hampers their work during the farming season.

C. The Civil War

The Mid-West Programme was launched shortly before the commencement of hostilities. The unsettled situation which followed has affected good coverage especially in the eastern and the southern parts of the state. Public gatherings were discouraged and people panicked at the sight of war planes or on hearing rumours of enemy approach. Most of the villages in the war zones have been evacuated and the inhabitants have fled to areas not accessible to or safe for the vaccinators.

D. Previous Medical Campaign

In one area, adverse reactions following BCG inoculations scared away many people who thought we were conducting the same project.

V. FOLLOW-UP TEAM

During the pilot project, the team of assessors was used also as a follow-up team to vaccinate absentees as they did the assessment. The vaccinations performed, however, were limited because they did not visit every village. When we were forced to use one man as an assessor due to shortage of personnel, follow-up vaccinations devolved on the Health Scouts.

The District Council Health Scouts are not under the direct control of the Medical Field Unit, and some District Councils would not allow their Scouts to be used in areas other than their own. The success of follow-up under these circumstances depended on the number and quality of Health Scouts, most of whom work for only three days in the week and whose wages are usually in arrears owing to the poor financial condition of most of the District Councils. Consequently, the vaccination teams have been employed for follow-up six months after the initial mass vaccination. The itinerary is drawn up to show the village, date of the initial programme, number vaccinated, 1963 census population and the percentage coverage. Also shown are the number of absentees during the attack phase. This number is obtained by subtracting the number vaccinated from the 1963 census figures. Added to this is the 4% estimated increase since the 1963 census. This is the number which the team is expected to vaccinate (Annex III). By this system, we hope to improve coverage.

VI. GENERAL OBSERVATION

From the map showing the assessment results on a Divisional basis (Annex IV), it will be seen that there was a decrease in the coverage as the campaign progressed from the north to the south. This could be due to the following reasons:

The Campaign was launched in the north with all the favourable forces at our command. The publicity media gave us full cooperation because the project was new; it was a national programme. After over a decade on the yaws campaign, the Medical Field Unit personnel wanted a change; hence, the staff received the new assignment with enthusiasm. In addition, the people of the area had been experiencing cases of smallpox and there were well-organized health education committees covering one Division in particular. As the campaign progressed towards the south, the enthusiasm became less, first among those concerned with publicity and then with the teams. The Civil War later set in. Further, the riverine areas in the south are not easily accessible, and lack of river transport made health education work difficult.

ANNEX I
ASSESSMENT SHEET
SMALLPOX ERADICATION/MEASLES CONTROL PROGRAMME

VILLAGE OR TOWN

DATE OF SURVEY

HOUSE NO.	AGE GROUP 0-4 YEARS				5-14 YEARS		15-44 YEARS		45+ YEARS	
	NO. IN HOUSE	NO. VACC.	NO. INSP.	NO. TAKES	NO. IN HOUSE	NO. VACC.	NO. IN HOUSE	NO. VACC.	NO. IN HOUSE	NO. VACC.

TOTAL:

ANNEX II
VILLAGE ASSESSMENT RESULT
SMALLPOX ERADICATION/MEASLES CONTROL PROGRAMME

DATE

DISTRICT	VILLAGE	NO. IN HOUSE	NO. VACC.	% COVERAGE	INSPECTION 0-4 YEARS		
					PRIMARY VACC.	NO. TAKES	% TAKES

TOTAL:

ANNEX III
MAINTENANCE PHASE ITINERARY
SMALLPOX ERADICATION/MEASLES CONTROL PROGRAMME

VILLAGE	ATTACK PHASE DATE	1963 POP. CENSUS	NO. VACC. ATTACK PHASE	% COVERAGE	ABSENTEES +4% 1963 CENSUS	DATE FOR MAINTENANCE VACCINATION
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ANNEX IV
ASSESSMENT RESULTS BY DIVISION
MID-WESTERN NIGERIA

