

IN 1969

## Three Vaccination Campaigns

We all know the danger of epidemic diseases in countries where the population is undergoing the ordeal of war. Hence the ICRC was concerned at the perilous situation which arose in the secessionist zone of Nigeria (Biafra).

Even in peacetime the mortality rate among children stricken with measles in West Africa may reach as high as 30 %. It is an endemic disease but every three years, towards the end of the year, an epidemic causes havoc. Such an epidemic was expected in the secessionist zone towards the end of 1968 and indeed in November of that year the ICRC was warned by its doctors on the spot, Dr. Ifekwunigwe and Dr. Gans, of the risk of such a situation, aggravated by the consequences of the war.

The Committee had a special study of the problem carried out by a specialist Dr. Nicole Grasset of the Institut Pasteur and on 28 December 1968 it began, under the responsibility of the local authorities, a vaccination campaign. This action could only be undertaken and carried out by the ICRC thanks to the considerable support which it received from such organizations as UNICEF, OXFAM, USAID, the World Council of Churches, Caritas Internationalis, local Red Cross sections, the local authorities, the Ministry of Health and the University Hospital. The vaccines, the refrigerators, the ped-o-jets,<sup>1</sup> and the syringes were supplied by UNICEF and USAID whilst the ICRC, the Swedish Red Cross, the World Council of Churches, USAID and Caritas provided Land Rovers and other vehicles necessary for the transport of teams and material in the field.

Smallpox was also a serious threat to the local population in 1968. Through its delegates the ICRC was aware of the situation

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<sup>1</sup> A pistol-like injector permitting vaccination of many people in a short time.



ICRC vehicles arrive in a village with personnel and equipment...

*In 1969*

...for vaccination of the inhabitants.





ICRC team vaccinating with "ped-o-jet" appliance.

and organized a smallpox vaccination campaign at the same time as the measles vaccination campaign. A few figures will give an idea of the scope of the programme:

By April 1969 more than 1,400,000 children and adults had been vaccinated against smallpox. Later, when the airlift by night had ceased, the ICRC organized an emergency flight on 4-5 August, when 80,000 measles vaccines and 500,000 smallpox vaccines were flown into the secessionist zone. At the beginning of November 1969, 2,300,000 children and adults had been vaccinated against smallpox and 850,000 children aged six months to four years against measles.

The same reasons which induced the ICRC, in association with other relief organizations, to undertake these vaccination campaigns later appeared to apply also to tuberculosis, another threat to the undernourished populations of war stricken countries. A tuberculosis vaccination campaign began in August 1969. In that month Dr. Nicole Grasset, together with another doctor sent by the ICRC, Dr. Vigouroux, returned to the secessionist zone, bringing with her, from Dakar, 500,000 BCG vaccines and two precision balances for preparing the vaccines. All the material was provided by UNICEF.

The ICRC was able to count on the active support of the organizations already mentioned, particularly USAID, and on the competent advice of the World Health Organization, the International Union against Tuberculosis and the Institut Pasteur in Dakar. The campaign continued in September and October. By the beginning of November 180,000 persons, from new born children to 20 year olds had been vaccinated against tuberculosis.

We give below some extracts of the report, covering August and September, drawn up by Dr. Nicole Grasset on this campaign. A description of some aspects will show the scope and the difficulties encountered.<sup>1</sup>

*Vaccine* — The vaccine used—lyophilised, thermostable BCG—was prepared by the Institut Pasteur in Dakar. The solvent was contained in phials adapted to the ped-o-jet. It satisfied WHO requirements according to controls carried out in the WHO laboratories in Copenhagen.

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<sup>1</sup> *Plate*: Vaccinations in a village.

## INTERNATIONAL COMMITTEE

A million injections have been ordered by UNICEF and it is estimated that at least three million will be required for the full campaign.

Unlike the measles vaccine, which is unstable and had to be transported in refrigerated chambers, the BCG vaccine can, if necessary, withstand a temperature of 37°C for a month. It is preserved in refrigerators at Ibi where sufficient room is available (UNICEF recently supplied seven refrigerators which may be run either on petrol or on electricity). The two precision balances, however, must have electric current and had therefore to be installed at Ubulu due to the absence of electricity at Ibi. Sufficient heat-insulated boxes for storing the vaccine are available.

*Equipment* — There are sufficient ped-o-jets (65) and intradermic injection nozzles (177) for changing those clogged up by the BCG.

The World Council of Churches has lent the Executive Committee conducting the campaign 500 needles and 5 ml. syringes. Telex messages have been sent to Dakar requesting the despatch with the next consignment of vaccines of 1,000 syringes and to Geneva requesting 3,000 syringes.

*Personnel* — The Executive Committee conducting the campaign meets twice a month to assess progress of work and to reach the decisions necessary for the continuation of operations. This Committee comprises doctors, an administrator and representatives of the ICRC, the WCC, Caritas, the Ministry of Health and the University Hospital:

- Doctors: 4
- Administrator: 1
- Nurses and office staff: 8
- Members of vaccination teams in various places: 57
- Technicians for maintenance and repair of ped-o-jets: 5.

The 57 members of the teams have been convened twice and Drs. Grasset and Vigouroux briefed them on the vaccinations. The techniques adopted and the operation of the ped-o-jet were demonstrated. Teams received their first practical training by

vaccinating the children at the Ibi relief distribution centre. Five teams were then sent to the provinces of Onitsha and Awka. Written instructions on the simultaneous BCG and smallpox vaccinations were distributed to the members of all the teams.

*Planning* — It appeared necessary for Dr. Vigouroux, assisted by doctors from the secessionist zone, to organise a system of control and daily training for the teams, vaccination by BCG being more delicate than smallpox vaccination. At the second meeting of the Executive Committee Dr. Grasset laid stress on this fact and proposed that if control could not be secured the number of teams would have to be reduced. The primary difficulty is the provision of vehicles and fuel to enable the doctor "inspectors" to visit all teams each day. Although there are ten vehicles, these are frequently subject to mechanical difficulties due to the shortage of spare parts and the fact that maintenance facilities are inadequate.

In addition the heavy rains in this season make roads difficult to negotiate and equipment deteriorates rapidly. During the first working week, three vehicles broke down and a new one had to be provided by the ICRC for the vaccination campaign. This lack of transport (breakdowns, shortages of spares and fuel) is likely to hinder the programme and aggravate the dangers threatening not only the population in the secessionist zone but in the surrounding territories as well.

An inventory of equipment required has been drawn up: aluminium foil to protect vaccines against light during vaccination, spare-parts for the ped-o-jets, etc. As a new syringe and needle has to be used to form solutions after each phial of 100 doses, consumption of syringes which can be used only once would be far too high. With the agreement of the Executive Committee, therefore, Dr. Grasset ordered 3,000 nylon syringes and 6,000 needles and several small petrol-heated sterilizers. In the meantime, 3,000 single-use syringes and needles have been sent so that the vaccination campaign may be continued without interruption.