

THE MEASLES CONTROL PROGRAMME IN DAKAR, SENEGAL

M. Seck¹ & R. C. Helmholtz²

The measles vaccination campaign in Dakar was made up of three successive operations. During the first, which lasted from September 1967 to the middle of January 1968, 63,500 children of 84,600 (75%) between the ages of six months and four years were vaccinated. Two months later, a sample survey in a suburb with a high population turnover showed a coverage of 71% for this group. Eight months after the campaign, another sample survey was conducted which showed a coverage of 40% to 60% in the same group. The success of the first mass vaccination programme was attributed to the use of all medical posts as assembly points and vaccination centres and good publicity provided by the radio, the press and by lorries equipped with loudspeakers.

The second operation was begun six months after the end of the first and lasted 2-1/2 months. The number of vaccinations performed was 35,600. Vaccine was given to all children who were said not to have been vaccinated before and had not experienced measles. Coverage was estimated to be about 90%. This improvement in coverage was attributed to the provision of an increased number of vaccination centres, some of which were outside the medical centres. Initially three vaccination teams were employed but later only two. Publicity by radio was increased with announcements being made every day. The lorries equipped with loudspeakers were not used.

The third operation was begun on 1 April 1969, six months after the end of the second. Between 10,000 and 15,000 children will be vaccinated. The same media as before are being used to publicize the campaign (radio, posters, newspapers).

EFFECT OF THE CAMPAIGNS ON MEASLES MORBIDITY

A comparison of morbidity data at one centre in Dakar, Caisse de Compensation, for a 10 month period before and after the first operation shows a 58% decrease in cases seen. Five weeks after the beginning of the first campaign, the monthly incidence of measles fell to, and remained for eight months at, a level of 70-75% below the monthly levels observed before the vaccination campaign. The most striking decrease in morbidity occurred a full month after the inauguration of the campaign but persisted for six months only.

The second campaign began about ten months after the beginning of the first. A retrospective assessment showed that the second campaign had begun two months after the monthly incidence of measles cases had increased to the same levels observed before the first campaign. A sharp decrease in the number of measles cases again occurred about one month after the beginning of the second campaign.

The third campaign began, on 1 April 1969, 8-1/2 months after the beginning of the second operation, 6 months after it was concluded. Investigations have now shown that the third campaign was begun two months too late as measles incidence had already begun to increase.

¹Directeur du Service des Grandes Endemies, Dakar

²Operations Officer, Senegal Adviser, NCD/USAID, Dakar

A total of 194 cases believed to have occurred among vaccinated children were seen at the Caisse de Compensation. Investigation showed that 78% were very probably either cases of measles contracted immediately before or shortly after vaccination, or of post-vaccination reactions. The remaining 22% (41 cases) were presumably due to unsuccessful vaccination. Compared to the total number of vaccinated children, this figure is considered to be insignificant.

DISCUSSION

As far as maintenance of effective measles control in Dakar is concerned, we have observed that:

- (1) The campaigns must be carried out in such a way that the period between the commencement of each successive campaign does not exceed six months;
- (2) Despite vaccination of more than 100,000 of 130,000 children between the ages of 6 months and 4 years over a period of 20 months, we have not achieved a decrease of more than about 50 to 60% in the monthly measles morbidity. We feel that it is necessary to evaluate the coverage more precisely and to relate the levels of coverage achieved by the campaigns to their frequency;
- (3) With only three vaccination teams, a reduction in the incidence of measles was achieved only after one month following the beginning of each vaccination campaign.

We must either change our method of work so as to achieve more quickly a higher percentage coverage of those at risk, or devise ways to carry out the campaigns at shorter intervals.