

MEASLES IMMUNIZATION IN CITY  
KINSHASA, ZAIRE

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## SHORT-TERM CONSULTATION REPORT

Consultant: Logan H. Roots, M.D.

Place: Kinshasa, Zaire

Purpose: Measles Immunization in City

### I. Available Measles Data-Background:

In 1973 the city of Kinshasa reported 9,441 cases of measles with 6 deaths, in a population of 1.8 million. Local authorities placed the estimated real count at probably 45,000 cases, with a 6% (2,700 deaths) mortality. They further state that hospitalized measles cases yield a 20% mortality.

Furthermore, measles is among the 5 leading causes of death in children under age five, the others being gastroenteritis, malaria, malnutrition, and broncho pneumonitis.

The dry season (June to October) in Kinshasa sees a peak of reported cases of respiratory viruses, but as in other large cities, measles transmission thereafter does not fall to low levels, but continues only somewhat abated.

### II. City-wide Campaign-Kinshasa:

In November 1973 250,000 doses of measles vaccine were ordered from the U.S. (Merck, Sharpe & Dome). This was expected to amply cover the number of children in the target age group. The vaccine arrived in April 1974, when a cable was sent to AID/Wash requesting aid of a physician to supervise the program.

The campaign was to be a cooperative effort between curative medicine (Mama Yemo Hospital) and preventive medicine fields, (Ministry of Health). The vaccine purchase was a gift to the city from FOMECO which supports the chief city hospital, the Mama Yemo.

Measles vaccinations in previous years had apparently not detracted from the number of cases presenting at the hospital. Hence a properly run mass campaign would benefit all parties concerned - the people, the hospital and MOH.

### III. Numbers and Methods

Zaire has 24.17 million people in 1974. 4.409 million or 18.2% are under age five.\* This percentage of 1.9 million people in Kinshasa equals 345,800 children under five. Take away roughly a third that number because of restricting the vaccination age between 6 mos and 48 mos, and the target population becomes approximately 230,000 children.

One further subtraction is made for those in the above age group who have already had measles. According to some door-to-door sampling done in April 1974 in the city, about half had had measles. This brings the final target population to approximately 115,000.

Mobile teams for mass vaccination were based at HQ for the Campagne Nationale de l'Eradication de la Variole, (C.N.E.V.) in the Ministry of Health. The C.N.E.V. is supervised by a French WHO operations officer and runs a country wide program against smallpox and tuberculosis (BCG vaccine). This 15-team operation uses Ped-O-Jet guns but was occupied with its usual business, hence unavailable for this measles campaign.

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\*Perspectives Demographiques Provisoires pour la Republique du Zaire, 1970-80. Avril 1972. Service de l'Hygiene.

Personnel available for this campaign were drawn from other parts of the M.O.H. (the Service de l'Hygiene, the Quatrieme Direction, and a few from C.N.E.V.) and were sufficient to create twelve temporary, mobile teams. Jet guns for a smallpox program had been introduced to the country in 1968 and number 144, of which 119 are currently usable. Enough of these were still at HQ to provide each of the 12 temporary teams with two guns, one for backup use. Vehicles and other materials were provided by the M.O.H., while gas was given by FOMECO.

The supervisors of C.N.E.V. decided on twelve centers of vaccination to cover the city, and many secondary centers for use later in the campaign. A Zairois counterpart to the WHO supervisor did the planning, using his knowledge of dispensaries and social centers to good advantage.

A second Zairois supervisor was trained on the spot to help the first. He had been trained in public health, holds the rank of "assistant sanitaire" and degree of "infirmier diplome," and is on loan from the Mama Yemo Hospital for the duration of the campaign. He should prove capable in future mass campaigns.

IV. Publicity: Following my arrival a meeting of all interested parties was held and a starting date for the following Monday decided on. This was short notice for previously unorganized publicity, but over the weekend radio and television began daily broadcasts describing the campaign and listing the twelve centers.

A second publicity gimmick was decided on, a leaflet drop from airplane over the markets of the city. FOMECO again provided printing and funds, and before the second week of the campaign, 100,000 leaflets were scattered over the city.

#### V. Duration and Initial Results:

A 4-6 week campaign was decided on, depending on the turnout. It was recognized that word-of-mouth communication would play an important part in determining the total turnout, hence the long duration. The first week averaged 1,080 vaccinations per day, but the second week began with 2,200/day. At this rate it will take eight weeks (six working days each) to vaccinate most of the 115,000 susceptible children. Perhaps half that time will suffice if the people's interest is captivated. Indeed, a second leaflet drop is planned shortly. And it was further suggested that the M.P.R. (the political party) be encouraged through its organization to demand the people's participation. In any case, disease statistics will tell next month.

#### Program Assets

- Trained supervisors, including one expatriate.
- Daily control of vaccine vials.
- Continual supervision, ensuring adequate cold chain.
- Population who is
  1. accepting of vaccination.
  2. aware of measles' ravages.
- Full support from the pertinent authorities.
- Adequate publicity.

#### Liabilities

- Some inexperienced personnel on teams.
- Expatriate supervisor planning home leave after 3 campaign weeks.
- Responsible FOMECO liaison going on home leave after 4 campaign weeks.

Recommendations- Yearly mass campaign in Kinshasa, preferably at beginning of the dry season May-June.