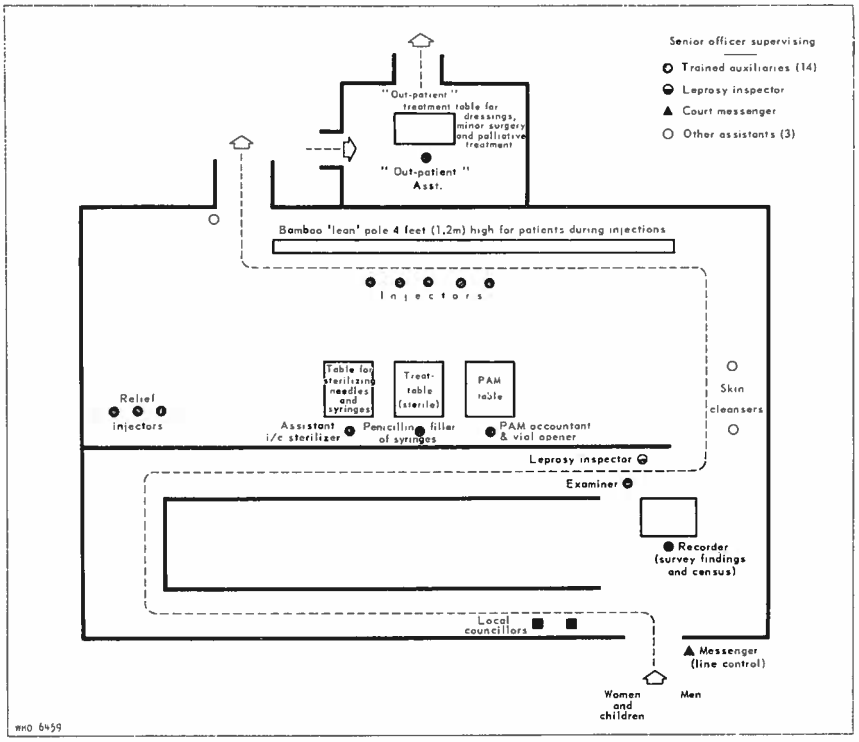
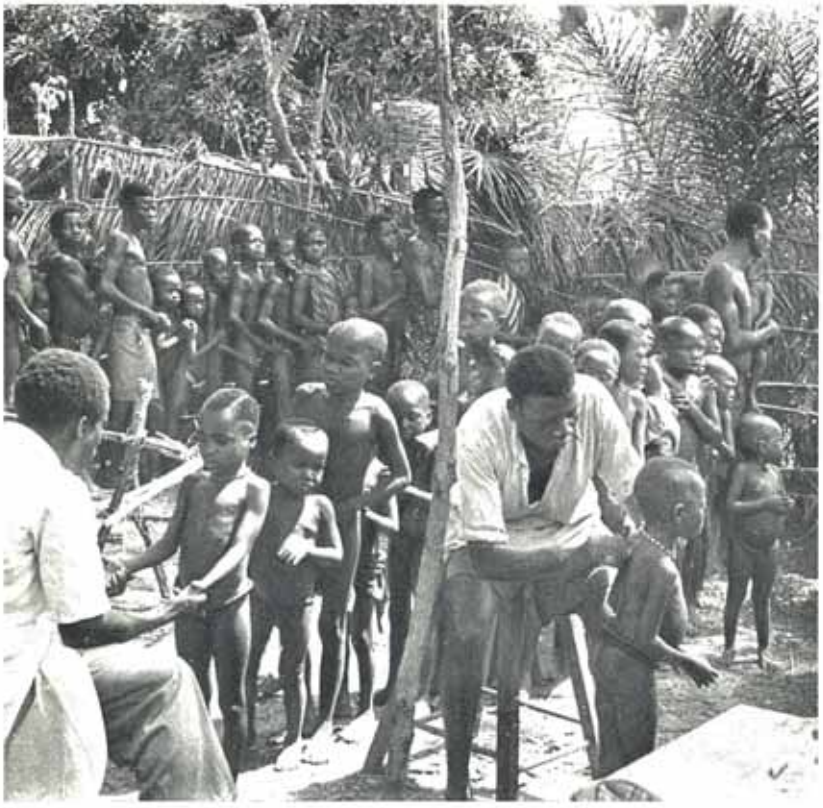
THE ORGANIZATION OF A YAWS ERADICATION CAMPAIGN

An illustrated feature based on experience in WHO-assisted campaigns in Africa



Campaigns for the eradication of yaws are now in progress in various parts of the world. Their efficacy can be greatly improved by attention to minor details of organization which may well be overlooked when the broad plan is drawn up. The accompanying diagram, originally devised by Dr A. Zahra to show the method he employed in Eastern Nigeria, may form a valuable basis for planning the layout and teamwork of similar projects elsewhere.

This particular scheme allowed one supervisor with 12 or 14 trained auxiliaries to handle some 1000-1500 people a day in a continuous working-period of 5-6 hours. If the work is to go through smoothly and without delay there must be a regular passage of people past the team. It is essential that those waiting to come in should be in orderly rows. When the examination area is entered (1) the line is maintained by a light hand-rail. The messenger helps in all this and explains what co-operation is needed when each person comes for examination. The supervisor—who happened to be a European in the team at work here—moves about the whole area, carefully but unobtrusively observing and assisting where necessary, and at the same time encouraging the interest of the team members in their work.



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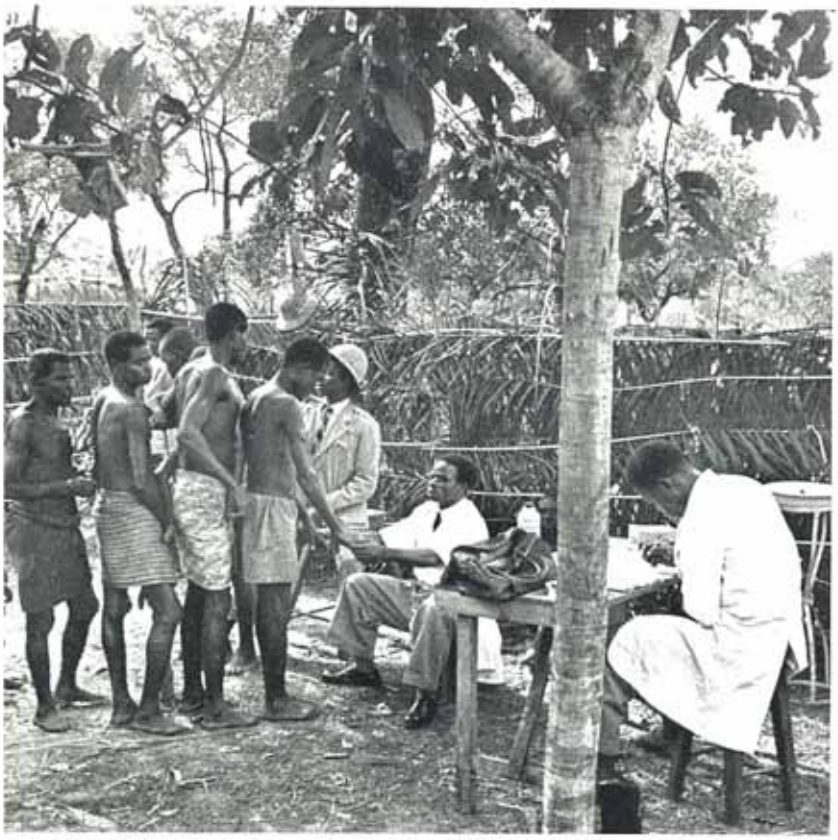

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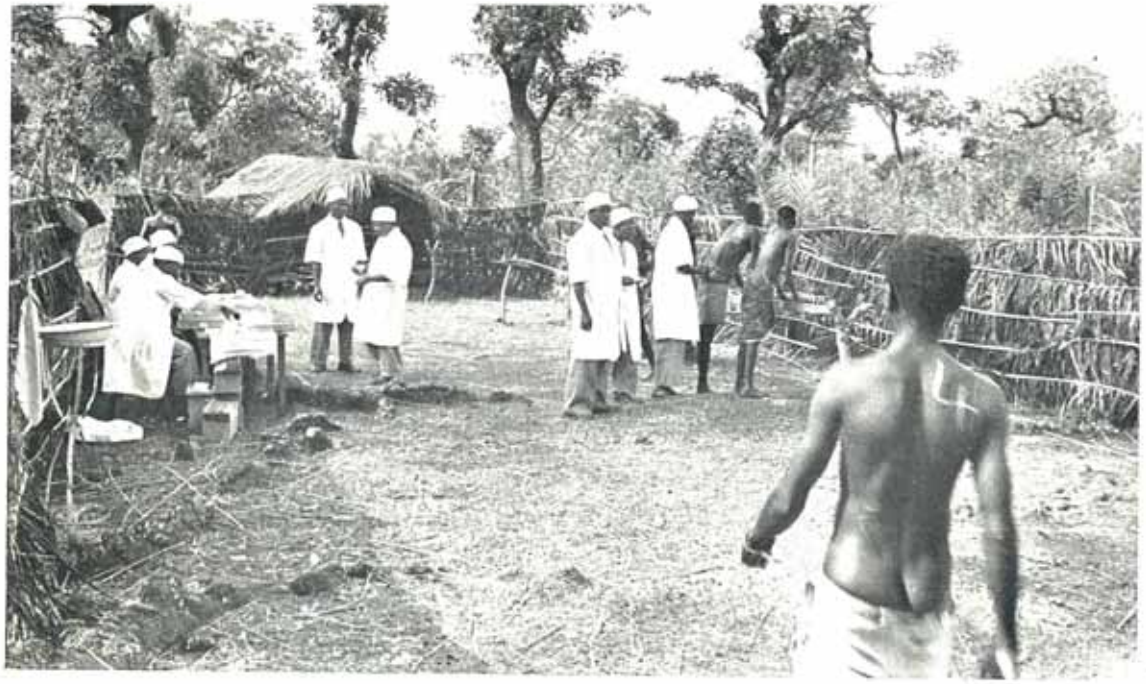
Each person comes before the examiner (2) who is seated on a low chair to facilitate his work. A brief, but thorough, inspection is made of the limbs and exposed parts of the body; the last varies, of course, with the age of the person, for no offence must be given. The examiner calls out his diagnosis (simplified to a few important and easily recognized groups), the age of the person, and the dose of the procaine penicillin in aluminium monostearate (PAM) to be given. The dose is written in damp, white chalk on the upper part of the back of each individual where it can be easily seen later by the injector. This is done by an assistant who may be either a literate villager or, preferably, a member of the leprosy survey staff (3) who, in addition, looks for evidence of leprosy. In Eastern Nigeria, during the survey and treatment for yaws of a population of 383 700, these trained leprosy inspectors found 1760 new cases of leprosy, of which 10% were lepromatous. The post between the two team-members (2) is for adults to support themselves while they raise each foot in turn for inspection of the sole.

The recorder (3, on the right) has before him a simple ruled chart on which he enters the examiner's findings by marks in the relevant spaces under various headings. From this chart are drawn data of the work done and the prevalence of yaws found.

Each person then passes through the gap in the central partition of the enclosure, where the upper and outer part of the right buttock is scrubbed with soap and water and a nail-brush and prepared for injection. He then enters the area where the penicillin is given (4). (Once the work is in full operation the numbers of people passing through obstruct a clear view of what is taking place.) On the right is the injection hand-rail, and on the left the auxiliaries are preparing syringes for use. They "scrub up" in the basin seen near by, and are provided with clean caps and gowns each day. The first man from the right, seated at the table (5) keeps a count of the number of 10-ml vials of PAM used; after shaking each vial and cleaning the top he removes the cap. The next man pours the contents into the barrel of a 10-ml syringe to which a needle is already attached, and then replaces the plunger. The loaded syringes are placed before him on a sterile towel ready for use. When the syringes are filled by pouring, 11 ml or more may be obtained from each 10-ml vial. Empty vials are also drained into one another to reduce waste of PAM as much as possible. The auxiliaries giving the injections return to the table after each injection and replace the needle by a sterile one. The syringes are sterilized before and after the day's work and also if they become contaminated at any time. The third auxiliary at the table takes the used needles, cleans them inside and out, and boils them for 20 minutes in the sterilizer on his right. About ten 10-ml syringes and 100 needles are in use for each thousand persons treated.

The people stand along the hand-rail or "lean"-pole facing away from the injectors (4); the dose of PAM he is to be given is clearly visible on the back of each person. Babies and small children are held in the arms of one of the auxiliaries to facilitate the injection, which is always given into the right buttock to assist in the recognition of those who may try to get another the next day.

After his injection the recipient leaves by a gap in the back wall of the enclosure. Near this exit is the "Out-patients' Department" where any dressing or other treatment ordered by the examiner or supervisor is carried out. Thus the more obvious complaints are not neglected, and very sick people, if they are willing, may be taken into the hospital at the end of the day's work. In this way the people realize that the team is more broadly interested in their well-being than in the treatment of yaws



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alone. No effort must be spared to develop the mutual respect of both groups, and thus to earn the continued co-operation of the people.

An important factor in gaining their confidence and in particular that of their leaders is that from the very beginning they should know what the campaign has to offer them and what help they will be required to give. After each day's work the medical officer or superintendent meets the village chief and his council, who are largely responsible for actively ensuring that everyone presents himself for examination. In Eastern Nigeria, for example, the average coverage has been over 95%, based upon census estimates and field inquiries. To carry out the resurveys, local youths who can read and write are simply but adequately trained for one or two months to make house-to-house surveys and to recognize active yaws lesions. All patients with active yaws, their immediate contacts, and persons who have missed the previous treatment survey are asked to come to some suitable place on a nearby road on a definite day and time when a supervisor or medical officer meets them, checks diagnoses and gives treatment. One "yaws scout" can screen about 200 persons per day, and resurveys can be made roughly every six months.

The councillors help the scouts in their work, and thorough control resurveys after the scout has been through a village have shown that, with periodic unexpected visits from the supervisor or medical officer, the method is effective.

Groups of patients and their contacts called together by yaws scouts were brought to a local health centre for the more ready observation by participants in the Second International Conference on Yaws Control held at Enugu in November 1955. The construction, maintenance and staffing of these health centres are financed by funds voted by the local council, and much free labour was given by the villagers as a further community contribution.

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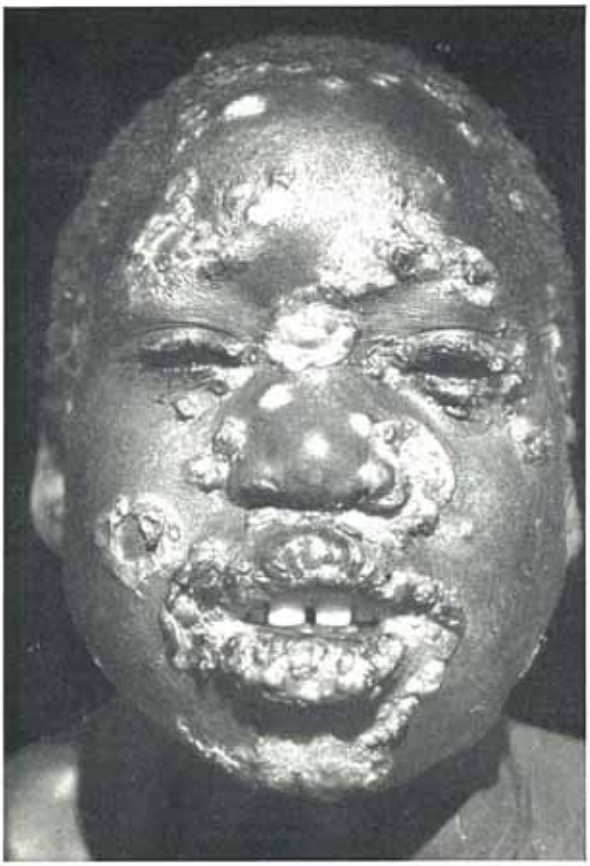

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The immediate effect of this campaign on the average prevalence of yaws in the area was a reduction of all cases of yaws from about 15% to about 1%, and of infectious cases from an average of 5% to 0.1% at six months (first resurvey) and 0.05% at 12 months (second resurvey). Such satisfactory results, while greatly to the credit of the team and the village people, also reflect the careful planning behind the operation.

Yaws is a communicable disease of childhood. In communities where it is highly endemic, few adults are seen with early lesions, because most of them will have had the disease in youth. The characteristic lesion is the papilloma (6), an inflammation accompanied by marked hyperplasia of the epithelium and oedema. These lesions start as papules, and later may develop into various types such as the annular form on the right cheek of this child.

The effect of penicillin, and particularly of a single injection of PAM, on active lesions is dramatic. Within a week (7) remarkable improvement takes place. Infectious lesions cease to be so a day or two after the injection, and transmission is thus arrested. Two or three weeks later there is little or no evidence of the manifestations (8); since the papillomata are not ulcerative, scarring is slight or absent.

An important result of PAM treatment is that for two years or more after a dose of 1.2 megaunits (4 ml)—that is, of the magnitude suitable for adults—relapses are rare; thus treatment is as valuable to the community as to the individual sufferer.

There are several other skin lesions which are mainly modifications of the papillomatous response, some of which may resemble those seen during healing (7). Other early lesions may involve the bones (accompanied by considerable pain), and the palms and soles. The late lesions may affect the same tissues, but are, on the whole, more destructive.