

SUMMARY

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The preceding papers provide some clarification of issues which have bothered us from the beginning of the programme.

- a. Fetishism - it is now quite clear that while this is an interesting phenomenon, worthy of study, it is probably not a significant factor in obstructing the progress of smallpox eradication.
- b. Variolation - this well documented, fascinating, and exotic practice is not a serious deterrent to eradication. In all probability the disappearance of smallpox itself will lead naturally to the disappearance of variolation.
- c. Purdah - it is of interest that the question of purdah has not even been raised today. Purdah was thought to be of great concern as recently as two years ago, but the coverage rates achieved in Moslem areas of Northern Nigeria and in the rest of the sahael indicate that practices of purdah do not seriously deter mass campaigns.
- d. Nomads - the role of the nomad in smallpox transmission is beginning to be clarified. It appears that while nomads represent a poor reservoir for smallpox, (which is expected because of their relatively small numbers, their patterns of moving in small groups, and the minimum population density in areas they occupy), they can for the same reasons be excellent vectors of smallpox transmission when once infected. This is principally due to their remarkable mobility. Several outbreaks have been reported in which migratory people, of one sort or another have introduced smallpox. While nomads must be borne in mind in conducting mass campaigns, and reasonable efforts must be taken to insure high coverage among them, their primary threat is that of transmitting smallpox from one infected sedentary group to one or more other susceptible groups.

A significant portion of today's discussion has centered on the spread of smallpox. While smallpox is obviously not as explosive in its spread as measles or influenza, it appears that the rate of spread can be quite variable. Outbreaks can be indolent or relatively rapid in development depending on the particular combination of source, the type of exposure, and the number of susceptibles in the environment of the patient. If for instance, the source is a highly infective patient with severe smallpox, and there are many susceptibles in intimate contact in the environment, a rapid spread of smallpox will result with a relatively large number of patients in the second generation. On the other hand, if the patient is less infective, the contact more casual and the number of susceptibles limited, the spread of the disease may be slow indeed.

The fact that slow transmission can occur, however, has two serious implications for smallpox eradication in West Africa: (a) chains of transmission of smallpox can continue for long periods without coming to the attention of the appropriate authorities and (b) the capability to spread slowly suggests that unattended outbreaks are not as likely to "burn out" as we had thought. The existence of a slow spread of the disease thus suggests that smallpox can be relatively tenacious.

This makes it imperative to consider outbreak control the ultimate weapon by which to eliminate smallpox. No matter how well a mass campaign may be conducted, gaps in coverage will remain. Slow transmission of smallpox can occur in these small groups. Only by identification and control of such outbreaks can the interruption of smallpox transmission be assured. The epitome of results with this approach can be clearly seen in the aggressive success of the "eradication escalation" campaign carried out in those countries which still had smallpox in September 1968. This campaign, based on

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identification of cases and outbreaks, and their rapid control, has resulted in the elimination of smallpox from all but one area in West Africa. However, its primary method of operation was the active search for smallpox cases.

For the future, the secret of success will devolve upon our ability to improve routine reporting of smallpox cases with resulting rapid outbreak control. Active case detection cannot last forever no matter how successful it is. Routine reporting using the constituted reporting channels, must be improved to a level of sensitivity and efficiency which will permit the identification of all suspected cases and rapid action to contain them.