All out for eradication?

Global Disease Eradication: The Race for the Last Child

by Cynthia A Needham and Richard Canning

ASM Press, 2003
196 pp. hardcover, \$39.95
ISBN 1555812252

Reviewed by Norman Noah

Eradication, like death, is absolute. Once a disease has been eradicated, it's gone, never to come back. In theory, therefore, eradication must be worthwhile. The cost of eradicating smallpox was high, but if it was truly eradicated, meaning that it had disappeared forever, that should be payment enough—eventually—for the time, cost and effort the process took. No more vaccinations with their inherent dangers, no more death, disfigurement or illness, and no more expense and effort controlling outbreaks.

In practice, however, eradication has proved much more difficult, although we have had some modest success in controlling many infections. As this book explains with some clarity, our efforts have been met more often with failure than with success. In most cases, we just do not have the methods available. In others, the good planning, motivation and political and social commitment needed from many different countries is never fulfilled. On occasion, we think we have the means to achieve eradication, but we clearly don't, as illustrated by the Malaria Eradication Programme (MEP) of 1955–1969.

Sometimes the health care infrastructure required to deliver eradication measures is absent. Even if a disease is a considerable burden, it is also often difficult to divert resources from other priorities. This has been one of the problems with the guinea-worm eradication program. Guinea worm being mainly a rural disease, health ministers in urban centers were apparently unaware of its toll—political will is also essential.

Although a clear strategic plan is crucial for eradication, the plan must strike a balance between rigidity and flexibility. One of the criticisms of the MEP was that it was far too rigid in its planning and execution—at least for a disease like malaria. In the end, nature's insects proved far wiler than man's chemicals (and intelligence).

In general, once a program for eradication has begun, it must succeed. Costs rise logarithmically as one gets closer to the target, and failure could mean that all the cost and effort will have been in vain when the disease strikes back—as is what happened with malaria. Any left-

over pockets of disease have the potential to spring back like a Jack-in-the-box on a population more vulnerable than before.

For instance, not all stocks of smallpox were destroyed and, even though what was left was said to be secure, the effects if smallpox is used as a terrorist weapon on a largely nonimmune and unimmunized population could be devastating. Indeed, its impact now would be far greater than if terrorists had struck in the days when the disease was endemic. Another side effect of failure is the loss of confidence in agencies like the World Health Organization, and in national health authorities. One of the lessons learned from the MEP was that the campaign tried to 'take over' the existing health systems rather than strengthen them. So when eradication failed, the health systems collapsed.

This book provides valuable insights into the history, present status and problems of disease eradication. It reads well, and the discussion is nice and balanced. Eradication efforts for malaria, polio and smallpox are dealt with in some detail. Together, these three topics form the bulk of the book. They are followed by a discussion of the future of disease eradication in terms of biological feasibility, financial resources, political will and social benefit. The book ends with an epilogue in which "Voices from the Eradication Campaigns" provide interesting commentaries from the field.

I have a few quibbles. The campaign for the eradication of guinea worm is generally given short shrift, whereas by affording it the same consideration as the other three diseases, it would surely have brought further insights and perspectives to the subject. Also, I could not really understand why "the race for the last child" had to be the excuse for writing the book. Eradication is not just or even mainly for children—it is for everyone.

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