Editorial

Holger Lundbeck

Ten years without smallpox

This year marks the tenth anniversary of the eradication of smallpox. The activities that made such a health milestone possible provide food for thought for the future.

Scholars tell us that smallpox probably appeared for the first time some six thousand years ago in south-east Asia. This is, of course, speculation and we will never know the true story of where and how it made its entry into the world. By contrast, we know exactly where and how it left the scene. When the history of our century is written, the annihilation of smallpox will be included along with the other major events such as world wars and moon excursions. Indeed, our generation is the first to witness how man, by his own efforts, got rid of one of his many heavy burdens of disease.

I have been told that historians in China hold the view that the implications of such “recent” historical events as the French Revolution in 1789 cannot be assessed objectively, as more than 200 years of perspective are required before one can draw definite conclusions. This might well prove true also for the eradication of smallpox. Nevertheless we know already, ten years after the cessation of smallpox pandemicty, that:

- smallpox has been eradicated;
- no other pox virus has replaced it;
- Two million deaths, a few hundred thousand cases of blindness, and 10-15 million cases of the disease per year have been prevented;
- some US$ 1000-2000 million, desperately needed for other health purposes, have been saved each year as a result of eradication.

The implications stretch much further: the fact that one disease was successfully eradicated will in the future act as a stimulus to other programmes. There is no clearer objective for a programme than eradication as it removes the distressing feeling that the fight will be everlasting.

Professor Lundbeck was a Member of the Global Commission for the Eradication of Smallpox; his address is Edsviksvagen 38, 18233 Danderyd, Sweden.
In his classic novel written 120 years ago, with the impressive title *The idiot*, Dostoevsky’s young hero is seriously ill with tuberculosis and well aware that he is going to die in a few weeks. While philosophizing over his life he makes an interesting statement, full of wisdom: “Columbus was not happy when he had discovered America but he was happy while he was discovering it.” Similarly, WHO did not seem to be happy when it had eradicated smallpox: it had to find a new goal as challenging as smallpox eradication.

The question that quickly arose was: which is the next disease to be attacked? Candidates, among others, were polio, measles and yaws; out of the many discussions that ensued, the Expanded Programme on Immunization was born.

Over the last ten years it has become increasingly obvious that the strategy that was used to conquer smallpox cannot be copied for any other disease. Every disease, like every human being, is unique. However, all infectious diseases share one basic characteristic: they are transmissible. Where the chain of transmission can be broken by existing means — vaccination, containment, treatment, improved hygiene, change of human behaviour — the theoretical possibility of local and ultimately global eradication also exists. However, so far no strategy for global eradication of any other disease has been developed and none is in sight. On the contrary, the view that the difficulties are insurmountable seems to be gaining ground.

In the present situation, therefore, another question seems to be more appropriate: were there elements in the smallpox programme that could be applied to other programmes without the ultimate aim of eradication? Indeed, there were. I shall restrict myself to mentioning a few, which are essential to any programme of similar magnitude.

— The objective was clear, expressed beautifully in two words, “target zero”.

— Competent and dedicated people with the right ethical attitude to international work were recruited for the programme.

— There was a coordinating team capable of motivating and encouraging all levels of workers and sharing their difficulties, also in the field.

— The strategy was flexible and adaptable to local conditions and to the influx of results of research in the course of the programme.

— The surveillance was persistent enough to continue to the utmost limit.

— The system of public information was simple and capable of reaching 80–90% of the population even in the most remote areas without access to telephones, television, or other means of modern mass communication. Any politician could envy the programme in this respect.

The smallpox programme is one of very few projects on a global scale — probably the only one — that was brought to a completely successful conclusion. This was done in spite of obstacles such as ethnic and cultural differences, political disagreements and even active hostilities, conflicting religious beliefs, prejudices, indifference, individual craving for power, and a number of other human weaknesses. The overcoming of such obstacles is perhaps the most hopeful and most important lesson that we learned from the smallpox eradication programme.