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## **Deficiencies in immunization campaigns highlighted in new UNICEF report**

Despite considerable progress in recent years, immunization programmes aimed at eradicating diphtheria, pertussis, tetanus and poliomyelitis are still failing to reach millions of children, leaving many at risk of catching these killer diseases.

A United Nations Children's Fund (UNICEF) report into children's welfare published in July warns that despite the success of worldwide vaccination drives, much work remains to be done. In particular, the *Progress of Nations* report says that the widespread use of diphtheria–tetanus–pertussis vaccine (DTP) is still lagging behind the organization's goals in dozens of developing countries, many of them in Africa.

Among its efforts, UNICEF has set about an ambitious agenda to eradicate poliomyelitis by the end of this year and obtain final certification to confirm elimination by 2005. Despite the organization's programmes, the report makes clear that these and similar tasks will not be easily achieved.

For example, there are still 30 million infants in the developing world who are not immunized before their first birthday, according to the report. Annually, 370 000 children under the age of five years die from whooping cough and another 50 000 die from tuberculosis. More than half of all pregnant women are not immunized against maternal tetanus, which kills 30 000 women every year.

The report says that half of the infants born in developing countries are unprotected against tetanus and 200 000 die from the disease each year because their mothers have not been immunized with tetanus toxoid. Whooping cough still afflicts 20–40 million people every year, primarily in developing countries, although a pertussis vaccine has been available for more than 70 years.

A large part of the problem is related to inadequate funding. While DTP can be easily prevented by immunizing women of child-bearing age, the vaccine is still not available in some countries. In the Democratic Republic of Congo, only one child in ten receives the necessary three doses of DTP. According to the report, there are 17 countries in which there is no state funding for any common childhood vaccines. Overall, UNICEF said that more low-income countries are spending more money on immunization but it is still not enough.

UNICEF has set a goal of immunizing 90% of children in all countries for DTP by the end of 2000. So far, 40 developing countries and many industrialized countries have done extremely well, attaining or exceeding the 90% coverage goal. In addition, three countries in sub-Saharan Africa have also attained the 90% goal. On average, however, only about half of the children in sub-Saharan Africa are protected.

The report points to the worldwide drive to eradicate poliomyelitis as an example of how coordinated immunization efforts can yield enormous success. In 1988, when the programme was launched, there were 35 000 cases of this disabling disease worldwide. Last year there were 7000 cases, and there are many new countries in which the disease appears to have been eradicated.

One problem, particularly in the case of DTP, is that people fail to complete the full course of vaccination. In the case of DTP, children must receive three doses of the

vaccine to be fully protected, and it should be administered at the ages of one month, one month and a half and three months. In five countries, more than 50% of families did not return for the second or third booster injection. In another 24 countries, between 20% and 50% likewise failed to complete the three-dose regimen. This suggests that caregivers either were dissatisfied with the services or were not even made aware that a course of DTP was needed, the report said.

Like DTP, another obstacle to more widespread use of all vaccines has been the high cost of initiating broad-based programmes. A vaccine now offers protection from hepatitis B, for example, and more than 60 countries have added it to their routine immunization programmes. But at a cost of US\$ 1.50 per child to administer the three necessary doses, the vaccine does not reach many of those who need the protection most, according to the report. About US\$ 20 million would make the vaccine available in sub-Saharan Africa.

Similarly, a new vaccine against *Haemophilus influenzae* type b (Hib), which causes bacterial pneumonia and meningitis, has been introduced in 24 developing countries. But it would cost US\$ 80 million to provide the vaccine to all children in developing countries, where at least 400 000 die every year from the infections Hib causes.

While the report widely credits UNICEF with promoting vaccination efforts in developing countries, it also points to several private, and public-private efforts, including the commitment of US\$ 750 by the Bill and Melinda Gates Foundation for the development of the Global Alliance for Vaccines and Immunization.

"The chasm between what we are capable of and what we actually do to protect all children everywhere needs to be bridged before it grows any wider," the report states. "It is, of course, possible to extend the proven power of immunization to all the world's children, and the resources needed to do so can be found." ■

Scott Gottlieb, *New York*