

Gambia, Morocco and Ghana: Expanding immunization services and saving children's lives

Vaccinating children against *Haemophilus influenzae* type b (Hib) meningitis in the Gambia:

Experience in the Gambia disproves the notion that integrated approaches must struggle to function in resource-poor countries with weak health systems. In spite of its very limited health and physical infrastructure – the country had only 19 telephone lines per 100 people in 2005, and only 11 doctors for every 100,000 people in 2004 – and frequent breakdowns in the vaccination supply chain, the Gambia managed to improve its Hib vaccine cold chain with the use of solar power, decentralized vaccine storage, and health-care management to provide vaccines where and when they are needed. Compared with the children who received no vaccine, the Hib-immunized group had 95 per cent fewer cases of invasive Hib disease, confirming that the vaccine was as highly protective as it is in industrialized countries. The trial also helped reduce all types of pneumonia in Gambian infants by 21 per cent.

Immunization as a key to enhancing child survival in Morocco: Steady advances in immunization coverage have been the key to Morocco's success in reducing its under-five mortality rate by 58 per cent between 1990 and 2006 – from 89 to 37 per 1,000 live births, for an average annual reduction rate of 5.5 per cent.

Morocco's immunization rates for five of the six preventable childhood diseases have risen impressively since 1990. In 2006, more than 95 per cent of Moroccan children were immunized against the six major vaccine-preventable diseases by age one. High rates of coverage for the third dose of the combined diphtheria-pertussis-tetanus (DPT3) vaccine have been found to be representative of a country's capacity to succeed with its immunization programme, as well as an indicator of the effectiveness of health-service delivery overall. Since 1990, Morocco's national coverage rates for DPT3 have improved from 81 per cent to 97 per cent, according to WHO-UNICEF estimates recorded in 2006.

Dissemination of the third dose of hepatitis B vaccine rose even more sharply, from 43 per cent to 84 per cent between 2000 and 2001, and has continued to improve, with estimated coverage of 95 per cent in 2006.

Morocco's advancement towards polio eradication has been commendable, with vaccination rates reaching 97 per cent, while rates for the measles-containing vaccine stand at 95 per cent. In 2002, Morocco became the first country in WHO's Eastern Mediterranean Region to demonstrate attainment of neonatal tetanus elimination. In 2006, the Ministry of Health budget devoted to the acquisition of vaccines was doubled, and inoculation against *Haemophilus influenzae* type b was introduced into the national vaccination calendar.

Near-universal immunization coverage for Morocco's children is attainable. Many of the remaining

gaps can be targeted through disparities in vaccination rates correlated to the disadvantages of infants born in rural versus urban areas, levels of maternal education and economic status.

Bringing immunization services closer to children in Ghana's rural communities: An immunization campaign in rural Ghana demonstrates that comprehensive and inclusive local-level planning can lead to positive results for children's health – even in remote communities where resources are scarce. The Reaching Every District campaign delivers integrated services in remote communities hindered by weak health infrastructure and inadequate understanding of immunization by families and communities.

Adopted in 2003, Reaching Every District empowers local districts to plan, implement and monitor activities through on-site training by supervisors, regular meetings between community and health staff, and community monitoring systems. By 2004, half of the 10 participating districts recorded an increase in the number of children immunized over previous years, representing a 12 per cent increase. Community involvement is crucial to the success of the programme – particularly the participation of local religious leaders. The decision to conduct immunization campaigns close to markets on active days ensures that children taken to the market by their mothers do not have to miss out on vaccination.

See References, page 51.