

A new global framework for immunization monitoring and surveillance

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Each year, despite the availability of low-cost interventions such as vaccines that could prevent millions of deaths, nearly 11 million children worldwide die before the age of five.^{1–3} Failure to reach the Millennium Development Goal 4 (MDG 4) for child survival will result in an estimated 40 million children's lives lost by 2015.⁴ As nearly a quarter of global under-five mortality is attributable to vaccine-preventable diseases (VPD), vaccination can contribute significantly to attaining the MDG 4.² An unprecedented array of life-saving vaccines is now available or in late stages of development. However, the decision to invest in vaccine introduction must be evidence-based and requires reliable data. Vaccine-preventable disease surveillance and programme monitoring provide the scientific and factual database essential for informed decision-making and appropriate public health action.

In 2005, WHO and UNICEF published the Global Immunization Vision and Strategy 2006–2015 (GIVS),^{5,6} which defines the strategies and goals that will maximize the impact of immunization. One of the key components of achieving the GIVS goals is the need for strong systems for disease surveillance and programme monitoring. Recent developments, such as the availability and accessibility of new vaccines for the world's poorest countries, the need to achieve and sustain the global polio eradication goal, the new goal of reducing measles mortality by 90% by 2010, the new International Health Regulations and the threat of emerging or pandemic diseases, make a renewed and more comprehensive approach to surveillance and programme monitoring a necessity.⁷ To address this need, WHO, together with its global immunization partners, developed a Global Framework for Immunization Monitoring and Surveillance (GFIMS).

The GFIMS outlines two key strategic areas that require ongoing

support and expansion; VPD surveillance and immunization programme monitoring.

This framework describes the main components of a functioning system and its basic requirements in each strategic area. It recognizes the need to develop disease surveillance systems to meet varying objectives and proposes a system that combines the use of country-wide active surveillance, passive aggregate disease reporting, sentinel site surveillance, prospective time-limited surveillance projects and serosurveys to generate comprehensive epidemiological data to guide immunization programmes.

GFIMS highlights five guiding principles when building and/or strengthening VPD surveillance and programme monitoring:

- (1) a health system-based approach where surveillance and programme monitoring are an integral and critical component of the national public health system;
- (2) local capacity-building at both the district and health facility level to help alleviate a key system-wide barrier of limited human resources;
- (3) data quality and the need for continued monitoring of the performance and the quality of the systems;
- (4) the need to link with and expand existing surveillance and monitoring systems and, in particular, the capitalization of the 20-year international investment for poliomyelitis surveillance;^{8,9}
- (5) sustainable financing.

The global Polio Eradication Initiative demonstrates that it is possible to build an efficient global surveillance system in resource-poor countries at relatively minimal cost compared to the cost of the intervention itself. The poliomyelitis surveillance network currently provides a structure for rapidly detecting and responding to diseases of national and

international importance, particularly in resource-poor countries. Where appropriate, this network could serve as the platform for an integrated disease surveillance system that provides epidemiological data on other communicable diseases, as well as for the detection and response to emerging infectious disease threats.

Although financial support for immunization programme monitoring and VPD surveillance should be primarily the responsibility of national governments, external support is needed for global and regional coordination.

This will ensure that data are collected and reported in a standardized manner, are of high quality and are collated and analysed at national, regional and global levels allowing better understanding of geographic differences. Resources required for adequate surveillance and programme monitoring are minimal compared to programme costs. These small investments make the public health system more effective and efficient, resulting in cost savings. For example, the timely detection of outbreaks allows early control measures, reducing costs and preventing a larger number of cases and deaths. Monitoring can identify problem areas and reduce vaccine wastage.

Current funding for disease surveillance is generally disease-specific and time-limited. In the presence of weak national systems, donors may create parallel systems to generate data suited to their needs. Although this may be sufficient for the short term, such parallel systems and uncoordinated efforts can create imbalances and are not sustainable. The GFIMS calls for immunization partners and donors to work towards a coordinated strategy to ensure sustainable funding for surveillance and programme monitoring. ■

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