



**GLOBAL  
STRATEGY ON  
COMPREHENSIVE  
VACCINE-  
PREVENTABLE  
DISEASE  
SURVEILLANCE**

# OVERVIEW

This document is a global strategy for comprehensive vaccine-preventable disease (VPD) surveillance. It promotes the development of high-functioning surveillance systems that are:



Comprehensive, encompassing all vaccine-preventable disease threats faced by a country, in all geographic areas and populations, using all laboratory and other methodologies required to detect diseases reliably; and



Integrated, wherever possible, taking advantage of shared infrastructure for components of surveillance such as data management and laboratory systems.

Such surveillance systems will generate high quality, usable data to strengthen national immunization programmes, inform vaccine introduction decision-making, and fortify timely and effective detection and response to VPD and other infectious disease outbreaks, safeguarding national and global health security.

## Immunization Agenda 2030

This document complements and extends the high-level global immunization strategy, *Immunization Agenda 2030 (IA2030): A Global Strategy to Leave No One Behind*. It summarizes a strategy for VPD surveillance for the period 2021–2030 and is of relevance to the following IA2030 Strategic Priorities:

**Strategic Priority 1:** Immunization Programmes for Primary Health Care / Universal Health Coverage

Key area of focus: Vaccine-preventable disease surveillance

**Strategic Priority 5:** Outbreaks & Emergencies

Key area of focus: Integrated surveillance

# INTRODUCTION

## What is surveillance for vaccine-preventable diseases?

Surveillance for vaccine-preventable diseases forms part of wider infectious and non-infectious public health surveillance – the continuous and systematic collection, analysis and interpretation of health-related data needed for the planning, implementation and evaluation of public health practice. Surveillance for VPDs provides critical, long-term data for timely detection of and response to VPDs to guide optimal use of vaccines and other disease control measures.

VPDs include all diseases for which vaccination is recommended for use by national immunization programmes, as well as those diseases for which baseline surveillance data are required to define disease burdens before vaccine introduction, diseases with vaccines in clinical development (e.g., respiratory syncytial virus (RSV), group B *Streptococcus* and *Shigella*) and diseases with vaccines primarily used for outbreak response (e.g., cholera).

Surveillance systems, including those for VPDs, have a critical role to play in detecting and triggering responses to emerging and re-emerging infections. As such they are a core capacity of International Health Regulations (IHR) and an integral component of mechanisms to secure national and global health security.

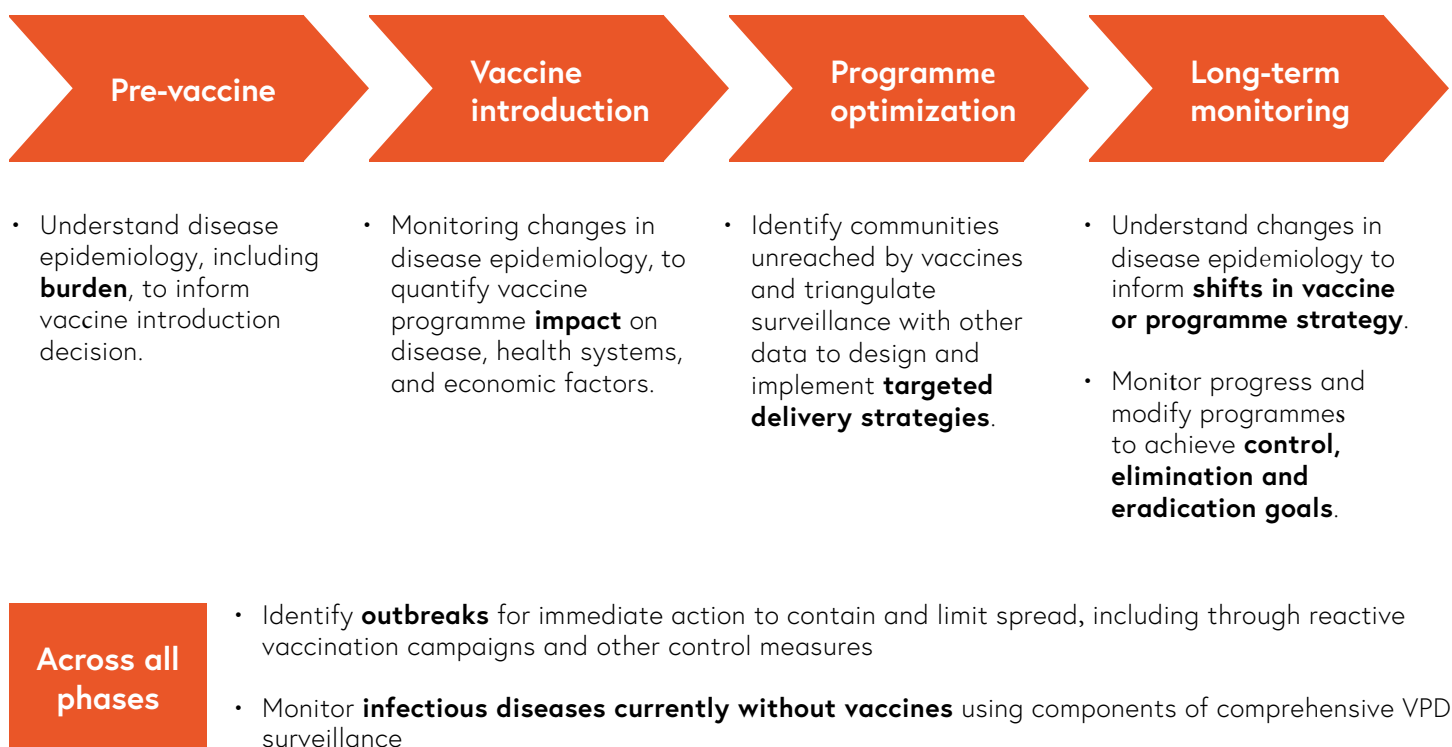
## What is the value of VPD surveillance?

VPD surveillance has several key purposes as shown in Figure 1:

- To identify **outbreaks** quickly for immediate action, such as reactive vaccination campaigns and other interventions. Epidemic- and outbreak-prone VPDs include polio, measles, rubella, meningococcus, cholera, typhoid, yellow fever, diphtheria, pertussis, and Ebola.
- To identify **unreached and underimmunized populations** through triangulation of surveillance, vaccine coverage, vaccine supply, clinical administrative, and other relevant data to inform targeted vaccine delivery strategies and programme improvement. For example, the vaccination status of suspected cases can enable a national immunization programme to identify gaps in its coverage for diseases like measles.
- To monitor progress towards global and regional **disease elimination and eradication** goals, namely for polio, measles, rubella, and neonatal tetanus.

- To determine disease burden and epidemiology to inform decision-making about **vaccine introductions** (e.g., pneumococcus, rotavirus, and future vaccines such as against RSV) and geographic usage for regional vaccines (e.g., typhoid, Japanese encephalitis, and yellow fever).
- To identify circulating strains of vaccine-preventable pathogens and changes in those circulating strains after vaccines are introduced, to **guide choice and development of vaccines**, such as for meningococcus, pneumococcus, and influenza.
- To generate evidence on **vaccine impact**, which surveillance has shown for routine use of rotavirus and meningococcal vaccines among other VPDs.
- To guide **optimal use of vaccines**, such as defining high-risk groups or modifying vaccine schedules for VPDs including pertussis, meningococcus, pneumococcus, diphtheria, tetanus, and influenza, especially as the disease epidemiology changes with vaccine programme implementation.

**Figure 1.** Why do countries conduct vaccine preventable-disease surveillance? Adapted from Cohen, A. *et al.* (2018)<sup>1</sup>



1. Cohen, A. *et al.* Using surveillance and economic data to make informed decisions about rotavirus vaccine introduction. *Vaccine*. 2018. 36 (51): 7755-7758.

## What is comprehensive VPD surveillance?

**Comprehensive VPD surveillance is defined as the country, regional and global systems that meet the World Health Organization (WHO)-recommended standards for surveillance of priority VPDs (as defined by each country), with integration of surveillance functions across VPDs and other diseases wherever possible.**

The word "**comprehensive**" is used to indicate that surveillance for all priority VPDs, whatever form surveillance takes, should be considered an integral part of a country's overall surveillance and vaccine programme strategy. This may require more robust implementation and potentially adding VPDs and geographic areas not currently included in national or sentinel VPD surveillance systems. Within a comprehensive VPD surveillance strategy, emphasis is placed on laboratory confirmation of disease, case-based data collection and reporting, epidemiological investigation, data management and analysis, and the visualization and use of VPD surveillance data for routine programme monitoring, optimization, decision-making and response.

## Why is a global comprehensive VPD surveillance strategy needed?

Over time, an increasing number of diseases become vaccine-preventable, new and improved laboratory tests to confirm VPDs cases are developed, and the need for high-quality surveillance data grows. Timely outbreak detection and response results in fewer lives lost and lower societal costs. Data on the distribution of disease allows immunization programmes to identify under-served populations, smartly deploy resources to improve the programme most selectively, and achieve more equitable vaccine coverage. Long-term surveillance data provides the evidence governments need on the impact of vaccines to prioritize and fund essential immunization programmes. The critical role VPD surveillance plays is clear, but until now there has been no global strategy to inform the structure, benefits and integration of VPD surveillance so the pathway to ever stronger, more effective, impactful and resilient systems can be invested in.

Currently, most countries have national case-based VPD surveillance systems for polio, measles and neonatal tetanus. Many countries also have sentinel case-based surveillance for one or more other VPDs. In parallel, most countries have national notifiable disease reporting from health facilities, and some also have event-based surveillance to capture reports from the community and media for selected pathogens. However, current VPD surveillance in a given country is often fragmented, may not include all VPDs of importance to a given country, and may not meet all the surveillance objectives in a given country. Laboratory capacity for confirming and characterizing bacterial diseases is

very limited in many countries. The global comprehensive VPD surveillance strategy provides a framework to bring together all types of surveillance for both viral and bacterial pathogens.

In many low-income countries, the Global Polio Eradication Initiative (GPEI) resources support much of the VPD surveillance infrastructure beyond polio surveillance. There is a risk of losing that surveillance capacity and workforce as GPEI funding and other external donor funds to countries declines. This strategy suggests tailored approaches for comprehensive VPD surveillance and identifies the need for external financing based on country capacity and income level.

Country level VPD surveillance often does not meet the minimum recommended standards for many diseases<sup>2</sup>, which limits the ability of countries and stakeholders to make evidence-based decisions. The Strategic Advisory Group of Experts on Immunization (SAGE) Global Vaccine Action Plan (GVAP) assessment reports in 2013 and 2014 stated that poor data quality, including for VPD surveillance, was impeding programme management and recommended that improving data quality should be the top priority for national immunization programmes. In 2019, SAGE recommended strengthening governance and generation of information systems; building capacity and capability of the health workforce for data generation and use; aligning information systems and technologic innovations with local context and programme needs; and improving data sharing and use for continuous quality improvement.<sup>3</sup> This strategy highlights the critical components of VPD surveillance needed to generate surveillance data to drive decision-making and policy.

The purpose of a global strategy for comprehensive VPD surveillance is to address the current gaps and limitations of VPD surveillance in all countries. It does this by providing guiding principles for countries (1) to establish, maintain and strengthen VPD surveillance, (2) to use surveillance data for public health action, and (3) to provide a monitoring and evaluation framework that countries and other stakeholders can use to assess the overall performance of VPD surveillance to further invest in strengthening it.

---

2. World Health Organization. JRF Supplementary Questionnaire on Surveillance. 2017. Available at [https://www.who.int/immunization/monitoring\\_surveillance/burden/vpd/JRF\\_Supplementary\\_Questionnaire\\_Surveillance\\_18Mar.pdf?ua=1](https://www.who.int/immunization/monitoring_surveillance/burden/vpd/JRF_Supplementary_Questionnaire_Surveillance_18Mar.pdf?ua=1)

3. World Health Organization. Report of the SAGE Working Group on Quality and Use of Immunization and Surveillance Data October 2019. [https://www.who.int/immunization/sage/meetings/2019/october/5\\_SAGE\\_report-revSept2019.pdf?ua=1](https://www.who.int/immunization/sage/meetings/2019/october/5_SAGE_report-revSept2019.pdf?ua=1)

# THE STRATEGY

## Vision

All countries have comprehensive, high-quality, sustainable VPD surveillance systems, supported by strong laboratory systems, that detect and confirm cases and outbreaks and generate usable information to guide outbreak prevention and response, immunization programme optimization, and vaccination policymaking to decrease the burden of VPDs as efficiently, effectively, and equitably as possible.

## Overall Aim and Objectives

The overall aim of the Global Strategy on Comprehensive Vaccine-Preventable Disease Surveillance is to secure and accelerate the development of country-led and -owned comprehensive VPD surveillance systems, including integration of support functions and resourcing across diseases.

The Global Strategy has five main objectives:

- To develop a **workforce** appropriately trained in surveillance core competencies, including data analysis and interpretation
- To strengthen and expand public health **laboratory** networks
- To develop sustainable, interoperable VPD surveillance **information systems** to support collection, analysis, sharing and programmatic use of data
- To conduct **applied research** to enhance and monitor the quality of surveillance systems and their ability to adapt to new data needs, such as for new vaccines
- To promote **sustainable financing** and increase domestic government support for core surveillance activities

## Guiding principles

Implementation of comprehensive VPD surveillance systems should be shaped by the Four Core Principles of IA2030:

**People-focused:** Surveillance is understood by, embedded in and supported by communities and healthcare workers.

**Country-owned:** Surveillance activities are driven by individual country needs and managed and sustained by countries.

**Partnership-based:** Surveillance is underpinned by public and private collaborations across sectors and disease programmes, nationally and globally.

**Data-guided:** Surveillance and laboratory data are accessible and fit-for-purpose to drive national decision-making and programmatic action.

## Who is this strategy for?

- Member States, including Ministries of Health and Essential Programme on Immunization (EPI) managers, Ministries of Finance, National and Regional Immunization Technical Advisory Groups (NITAGs and RITAGs), and emergency task forces
- WHO global, regional, and country offices
- Global vaccine policymakers and other IA2030 global stakeholders
- International and domestic donors
- Surveillance and laboratory technical and implementing partners
- Civil society and non-governmental organizations
- Private sector, including vaccine and diagnostic test manufacturers

## Components of comprehensive VPD surveillance

- Comprehensive VPD surveillance should include, at a minimum, all VPDs with global surveillance mandates (currently polio, measles and neonatal tetanus), International Health Regulation-targeted diseases<sup>4</sup>, and other VPDs that are regional and country priorities. It would encompass the continued ability to detect circulating vaccine-derived poliovirus (cVDPV), environmental polio surveillance, and surveillance for antimicrobial resistance for relevant VPDs. Table 1 provides a summary of minimum WHO-recommended VPD surveillance standards, while strongly encouraging countries to go beyond minimum standards. Further technical information on surveillance, including descriptions and definitions of surveillance systems, can be found in the WHO Vaccine Preventable Diseases Surveillance Standards<sup>5</sup>.

---

4. VPDs that are always notifiable through IHR include smallpox, poliomyelitis due to wild-type poliovirus, and human influenza caused by a new subtype. Other VPDs that are potentially notifiable through IHR include cholera, yellow fever, and Ebola.

5. World Health Organization. Surveillance standards for Vaccine Preventable Diseases. Available at [https://www.who.int/immunization/monitoring\\_surveillance/burden/vpd/standards/en/](https://www.who.int/immunization/monitoring_surveillance/burden/vpd/standards/en/)



**Table 1.** Summary of minimum World Health Organization-recommended surveillance standards for vaccine-preventable diseases

		Type of surveillance and reporting			
		Nationwide, case-based with laboratory confirmation of every case	Nationwide, aggregate with laboratory confirmation of outbreaks	Sentinel, case-based with laboratory confirmation of every case	Other surveillance type
Country Commitment	All countries	<ul style="list-style-type: none"> <li>• Measles</li> <li>• Polio</li> </ul>	-	-	<ul style="list-style-type: none"> <li>• Neonatal tetanus</li> </ul>
	Some countries	<ul style="list-style-type: none"> <li>• Diphtheria</li> <li>• Meningococcus</li> <li>• Rubella</li> <li>• Yellow fever</li> </ul>	<ul style="list-style-type: none"> <li>• Hepatitis A</li> <li>• Hepatitis B</li> <li>• Mumps</li> </ul>	<ul style="list-style-type: none"> <li>• Congenital rubella syndrome</li> <li>• <i>Haemophilus influenzae</i></li> <li>• Influenza</li> <li>• Japanese encephalitis</li> <li>• Pertussis</li> <li>• Pneumococcus</li> <li>• Rotavirus</li> <li>• Typhoid</li> </ul>	<ul style="list-style-type: none"> <li>• Cholera</li> <li>• Human papillomavirus</li> <li>• Non-neonatal Tetanus</li> <li>• Varicella</li> </ul>

Comprehensive VPD surveillance should be able to provide:

- Routine reporting of surveillance data even in the absence of cases, i.e., zero case reporting, where applicable
- Representative and complete detection of disease among the intended populations and geographic areas
- Reliable laboratory confirmation of disease
- Efficient and timely collection of the relevant data needed for decision making, including
  - Case-based data on age and vaccination status, where indicated
  - Pinpointing specific diseases by geographic location and affected groups to allow for risk assessment and evidence-based vaccine use

- Identification of cases and outbreaks for epidemic-prone VPDs to support timely responses
- Monitoring significant changes in disease epidemiology, including disease burden and the strains of pathogens, to guide vaccine development and use
- Monitoring progress towards country, regional and global control, elimination and eradication goals

## Country comprehensive VPD surveillance strategies

When deciding whether to conduct surveillance for a particular VPD, countries should consider whether surveillance will inform policy and immunization strategy decisions and whether resources and capacity are available. Criteria for prioritization of VPD surveillance are as follows<sup>6</sup>:

- Epidemic potential
- International reporting regulations, such as IHR
- Prevention and control, elimination and eradication potential
- Disease burden and endemicity
- Severity and case fatality ratio
- Potential for emergence of virulence or changing pattern of disease
- Social and economic impact
- Public perception of risk
- Logistical feasibility

Comprehensive VPD surveillance strategies differ by country according to the maturity of their current systems and surveillance needs as outlined in Table 2.

---

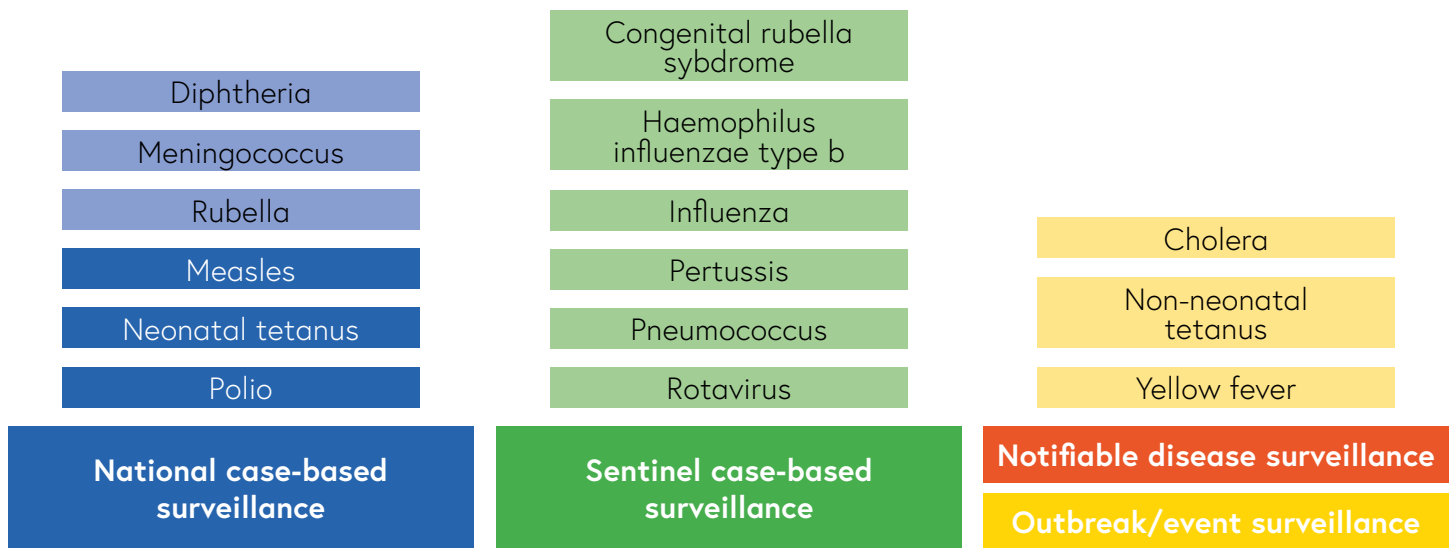
6. Adapted from World Health Organization. Setting priorities in communicable disease surveillance. 2006. Available at [https://www.who.int/csr/resources/publications/surveillance/WHO\\_CDS\\_EPR\\_LYO\\_2006\\_3.pdf](https://www.who.int/csr/resources/publications/surveillance/WHO_CDS_EPR_LYO_2006_3.pdf)

**Table 2.** Comprehensive Vaccine-preventable Disease (VPD) surveillance strategy by country maturity level

Country characteristics	Recommended strategy for country comprehensive VPD surveillance	Need for external financing and technical assistance
<b>Tier 1</b> <ul style="list-style-type: none"> <li>• Limited surveillance capacity</li> <li>• High communicable disease burden and risk, including polio</li> <li>• Low and lower middle income</li> <li>• Fragile</li> </ul>	Minimum surveillance standards for at least 5 VPDs (including polio, measles and neonatal tetanus)	High
<b>Tier 2</b> <ul style="list-style-type: none"> <li>• Some surveillance capacity</li> <li>• High communicable disease burden and risk</li> <li>• Lower middle income</li> </ul>	Minimum surveillance standards for at least 7 VPDs	Moderate
<b>Tier 3</b> <ul style="list-style-type: none"> <li>• Stronger surveillance capacity</li> <li>• Moderate communicable disease burden and risk with support needed for specific VPDs</li> <li>• Upper middle income</li> </ul>	Minimum or enhanced surveillance standards for all priority VPDs (at least 10 VPDs)	Low
<b>Tier 4</b> <ul style="list-style-type: none"> <li>• High surveillance capacity</li> <li>• Low communicable disease burden and risk</li> <li>• High income</li> </ul>	National system beyond minimum VPD surveillance standards (at least 15 VPDs) that coordinates with other communicable disease and supranational entities	Minimal or none

The specific scope and design of comprehensive VPD surveillance systems will differ across countries, encompassing different VPDs and using varying methodologies, including national case-based, sentinel case-based, aggregate notifiable disease, and event-based, according to specific surveillance objectives. Countries should decide which VPDs to include in their surveillance strategies based on national priorities. For example, a comprehensive VPD surveillance system in a middle income, Tier 3 country with strong surveillance capacity and moderate communicable disease burden and risk might include the VPDs as shown in Figure 2.

**Figure 2.** Example of comprehensive vaccine-preventable disease surveillance in a Tier 3 country. Adapted from Polio Transition Independent Monitoring Board report, 2018.<sup>7</sup>



## Integration

A comprehensive VPD surveillance strategy builds on existing, high-quality surveillance systems, many of which already integrate some surveillance functions. The intent of integration as part of this strategy is to provide a means to strengthen and broaden such systems rather than replace or duplicate them. Within this comprehensive approach, **integration** of specific surveillance functions can result in streamlined processes and deliver efficiencies across multiple diseases. VPD surveillance systems can be integrated with each other and into other existing infectious and non-infectious disease surveillance systems through the surveillance support functions listed in Table 3. A common example is integrating measles and rubella surveillance since both diseases have similar clinical presentations and require the same specimen for testing.

7. Polio Transition Independent Monitoring Board. A Debt of Honour: Delivering Polio's Legacy for those who Have Suffered and Those who have Died. Third Report, December 2018

**Table 3.** Potential areas of integration among surveillance support functions

Surveillance support functions	Potential areas for integration
<b>Governance</b>	Standards and guidelines development, policy, laws/mandates, roles and responsibilities (including for private sector), funding
<b>Programme management</b>	Budget creation, resource mobilization, financial management, sustainability, infrastructure/equipment management, human resources, external surveillance assessments and reviews
<b>Workforce capacity</b>	Training/capacity building at all levels; staff for core functions including case detection, notification, investigation, reporting, and response; epidemic preparedness
<b>Laboratory</b>	Specimen collection kits, reagents and supplies, equipment, physical space, and training; personnel; expansion and diversification of regional and global networks; shared procurement processes; quality management systems
<b>Field logistics and communication</b>	Airtime and internet for notification and reporting, specimen collection and transport; feedback of results
<b>Supervision</b>	Supportive supervisory visits, workplans, checklists
<b>Data management and use</b>	Information system development; data harmonization, implementation, and use for performance improvement
<b>Coordination</b>	Linking surveillance programme to relevant stakeholders (e.g., EPI) for data review, dissemination and use; improvement planning; surveillance strengthening as core function of IHR implementation framework, including rapid response teams and Emergency Operations Centers

# ACTION PLAN AT GLOBAL, REGIONAL, AND COUNTRY LEVELS

Countries should establish a coordinating body to bring together different surveillance systems and optimize support functions. This coordinating body would evaluate whether current surveillance systems meet the objectives of the country and identify development needs.

Priority activities for each of the five main objectives of the global comprehensive VPD surveillance strategy--workforce, laboratory, information systems, applied research, and sustainable financing-- include the following:

## Workforce

- Countries should assess workforce competencies to identify gaps and ensure that there are adequate staff and that staff are adequately trained.
- Countries should improve workforce capacity through laboratory and data management training and Field Epidemiology Training Programmes, among other needs.
- Countries with a skilled workforce that has been developed through polio surveillance activities should leverage that workforce for comprehensive VPD surveillance activities.
- Countries should assess if person-time is sufficiently allocated for core functions of surveillance at all levels.
- Capacity development should encompass pre-service training, continuous and competency-based in-service training, supportive supervision, and new technological opportunities (e.g., distance and electronic learning).

## Laboratory

- Laboratory confirmation of disease is critical; thus, all countries should ensure access to high-quality bacterial, viral and other laboratory testing either in country or through national, regional, or global reference laboratories. Wherever possible, laboratory functions and funding should be transferred from partners such as WHO to national public health laboratories managed by the respective governments.
- Existing core laboratory capacities across current VPD surveillance networks and other laboratory services involved in IHR should be mapped to identify opportunities for integration, including sample transport systems and testing platforms.

- Assessment of laboratory performance for the diagnosis of priority pathogens should be available, such as through globally or regionally coordinated accreditation and External Quality Assurance and Quality Control (EQA and QC) programmes.
- Centers of excellence (e.g., disease-specific regional reference laboratories or WHO Collaborating Centers) should assist countries in testing for pathogens and in building capacities at country level wherever needed.

## Information systems

- Surveillance data should be linked to health and immunization programme decision-making at global, regional, national and subnational levels.
- Countries should ensure that there is interoperability between epidemiological and laboratory data information systems.
- Countries should evaluate and improve surveillance data quality and triangulate surveillance and other immunization data sources to guide programme planning and action.
- Political and technical barriers to sharing, dissemination, and open access to surveillance data should be addressed at all levels.
- The WHO Immunization Information System (WIISE), a global immunization programme and surveillance data management system, should be implemented to support and connect global, regional and country WHO offices, by providing key data on VPD surveillance, coverage and other immunization indicators.

## Applied research

- Research should be undertaken at global, regional and country levels to identify and document best practices and the use of innovative laboratory tests and diagnostics, new digital and mobile technologies for case detection and reporting, and novel procurement methods for laboratory reagents.
- While traditional laboratory techniques such as microbial culture and polymerase chain reaction-based approaches are essential to maintain, new laboratory techniques such as genomic sequencing, rapid point-of-care testing (e.g., for measles and diphtheria), multiplex testing for more than one pathogen and antimicrobial resistance simultaneously should be considered wherever feasible.

## Sustainable financing

- Costing analyses of VPD surveillance systems should be conducted to identify the resources needed to support surveillance development plans at the country, regional and global level and to inform the development of national plans to identify adequate resourcing across all surveillance support functions.
- At regional and country levels, funding streams supporting surveillance for all infectious and non-infectious diseases should be unified to reduce administrative tendencies toward fragmentation.
- Global donors should continue to support VPD surveillance by funding global and regional coordination, market shaping, and direct country support for surveillance activities, when countries are not able to fully finance their comprehensive VPD surveillance strategies.
- Donors should seek to avoid siloed funding that impedes integration of surveillance across VPDs, recognizing that strengthening comprehensive VPD surveillance functions benefits all VPD surveillance programmes.



# MONITORING AND EVALUATION

Development and implementation of comprehensive VPD surveillance systems should be monitored at a country, regional, and global level. At country level, the national EPI, the National Disease Control programme in the Ministry of Health, and other governmental entities involved in VPD surveillance or response should be accountable for developing, implementing, monitoring, and financing a comprehensive VPD surveillance strategy, with input from NITAGs where relevant. At regional and global levels, WHO should be accountable for ensuring that countries have the necessary technical assistance to develop, implement, and monitor comprehensive VPD surveillance plans, with input and support from technical partners, including WHO Collaborating Centers. The following measurable, action-oriented global indicators should be used to monitor progress toward the goals of this strategy.

## Global indicators of comprehensive VPD surveillance

- % of districts reporting any suspected VPDs in a 12-month period
- % of countries with access to laboratory capacity to test for at least one bacterial VPD
- % of countries achieving the non-measles/non-rubella discard rate of  $\geq 2/100,000$  persons and the non-polio acute flaccid paralysis rate of  $>1/100,000$  among  $<15$  years population in a 12-month period

# CONCLUSIONS

History shows us the value of VPD surveillance: it has been critical for the eradication of smallpox, ongoing efforts to eradicate polio, eliminate measles, detect and respond to VPD outbreaks, and document the full impact of vaccination programmes on child mortality. However, VPD surveillance has not garnered the level of investment and advocacy that it deserves. There is an urgent need to maintain and strengthen VPD surveillance in all countries in a comprehensive and integrated way. This strategy provides a structure for countries and stakeholders to plan for and implement comprehensive VPD surveillance by training workforces, strengthening laboratories, better analysing and using data, innovating, and ensuring sustainability.

# REFERENCES

Mulders, MN, et al. (2017) Expansion of Surveillance for Vaccine-preventable Diseases: Building on the Global Polio Laboratory Network and the Global Measles and Rubella Laboratory Network Platforms. *Journal of Infectious Diseases*. [https://academic.oup.com/jid/article/216/suppl\\_1/S324/3935068](https://academic.oup.com/jid/article/216/suppl_1/S324/3935068)

World Health Organization. (2017) Global Framework for Immunization Monitoring and Surveillance. <https://apps.who.int/iris/handle/10665/69685>

World Health Organization. (2014). Early detection, assessment and response to acute public health events: implementation of early warning and response with a focus on event-based surveillance: interim version. World Health Organization. <https://apps.who.int/iris/handle/10665/112667>

World Health Organization. (2016) International Health Regulations, Third edition. 2016. <https://www.who.int/ihr/publications/9789241580496/en/>

World Health Organization. (2018) Surveillance standards for Vaccine Preventable Diseases. [http://www.who.int/immunization/monitoring\\_surveillance/burden/vpd/standards/en/](http://www.who.int/immunization/monitoring_surveillance/burden/vpd/standards/en/)

World Health Organization Regional Office for Africa. (2019) Investment case for vaccine-preventable diseases surveillance in the African Region 2020-2030 VPD surveillance business case. <https://www.afro.who.int/publications/investment-case-vaccine-preventable-diseases-surveillance-african-region-2020-2030>

World Health Organization, UNICEF and U.S. Centers for Disease Control and Prevention. (2019) Public Health Data Triangulation for Immunization and Vaccine-Preventable Disease Surveillance Programmes: Framework (draft). <https://www.learning.foundation/vpd-triangulation-draft>

# LINKAGES TO OTHER REGIONAL AND GLOBAL STRATEGIES AND PLANS

The global comprehensive VPD surveillance strategy is coordinated with other regional and global strategies and plans. Examples include the following:

## Regional activities

- Investment case for vaccine-preventable diseases surveillance in the African Region 2020-2030 ([https://www.afro.who.int/sites/default/files/2019-11/VPD\\_Surv\\_Brochure\\_Final\\_20190918\\_WEB.pdf](https://www.afro.who.int/sites/default/files/2019-11/VPD_Surv_Brochure_Final_20190918_WEB.pdf))
- Better labs for better health to provide sustainable improvements to the quality of all laboratories that deal with health in the WHO European Region (<http://www.euro.who.int/en/health-topics/Health-systems/laboratory-services/better-labs-for-better-health>)

## Global activities

- Immunization Agenda 2030 (IA2030): A Global Strategy to Leave No One Behind
- Sustainable Development Goals
  - Goal 3.2. By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births
  - Goal 3. Target 3.d. Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks
- WHO General Programme of Work (GPW13): "Promote health, Keep the world safe, Serve the vulnerable"
- Universal Health Coverage (UHC): VPD surveillance contributes to UHC by identifying the populations that still need to receive vaccines to protect them against VPDs and providing a measure of the quality of immunization services in their main goal – preventing VPDs.
- Global Health Security: Improved surveillance will lead to improved capacity to detect emerging health threats and other non-VPDs in line with the global health security agenda and improve the capacity of countries to fulfil their IHR commitments
- Integrated Disease Surveillance and Response (IDSR) Framework and Strategy
- Gavi 5.0 Strategy

## Disease-specific activities

- Global Polio Eradication Initiative and Strategic Action Plan on Polio Transition
- Measles-Rubella Strategic Framework 2021-2030
- Defeating Meningitis by 2030
- Eliminating Yellow Fever Epidemics (EYE) strategy
- Maternal and neonatal tetanus elimination
- Global Task Force for Cholera Control
- Global Action Plan on Antimicrobial Resistance

