



Vaccine Preventable Disease Surveillance systems in **Lesotho**

Assessment of the implementation and use of VPD surveillance systems in Africa.

July 2025

KEY FINDINGS

- VPD systems in use: Epi Info transitioning to DHIS2
- Dual entry on paper-based and digital tools
- Case-based surveillance

Analysis Overview

The vaccine-preventable disease (VPD) surveillance system in Lesotho operates through a combination of paper-based and digital tools, with four systems in use and a dedicated national focal point for VPD surveillance. Data is expected to be reported weekly to the national level and WHO AFRO, although reporting timeliness is an issue. The country has a formal governing body and a national HMIS strategy but lacks a costed work plan and dedicated funding for system maintenance, infrastructure, and hardware. While the Ministry of Health (MOH) has a technical team responsible for monitoring and server management, regular training and capacity-building efforts are lacking. The system produces the necessary reports and dashboards and supports planning, but data quality and timeliness issues persist in both case-based and aggregated surveillance systems.

The surveillance system is in use across 67 rural and 123 urban health facilities. However, infrastructure disparities, particularly in power, internet connectivity, and staffing, limit consistent data entry and submission, especially in rural areas. While 80% of end users use mobile devices for data entry, only 20% use computers, and mobile data is not provided to users. Differences in mobile device use, staffing levels, and infrastructure stability between rural and urban areas contribute to inequities in system effectiveness. No policies are currently in place to address these disparities. The system is integrated with one other health system as well as WHO AFRO, though not using international data exchange standards like HL7 FHIR or ADX.

While some integration and interoperability exist, the MOH technical team has limited skills and training in maintaining these workflows, and no national interoperability framework is in place. Regular assessments of training effectiveness are not conducted. Despite these challenges, stakeholders report being somewhat satisfied with the system. The long-term vision for Lesotho's VPD surveillance system includes comprehensive disease tracking, integrated digital systems, and enhanced global collaboration to improve overall system effectiveness and sustainability.

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Foundational	Developing	Established	Not Applicable or No Data
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Domain/Theme	Sub-domain	Maturity Level
Governance and Strategic Alignment	Existence of a formal governing body	2
	Existence of a Digital Health Strategy	2
	Sustainable funding	1
	Equity infrastructure	0
	Equity policies (rural/urban)	0
	Submission to WHO AFRO regional system	2
Workforce/Technical Capacity	Dedicated VPD surveillance officer	2
	Admin/monitoring team in place	2
	Availability of monitoring tools/SOPs	2
	Software maintenance team in place	0
	Integration/interoperability tech capacity	0
End-user Readiness	End-user satisfaction	0
	End-user training	1
Infrastructure Readiness	Availability of computers	0
	Mobile devices and mobile data access	1
	Stable power/internet infrastructure	1
	Capacity to maintain infrastructure	0
	Infrastructure disparities	0
System Lifecycle and Localization	Length of time system has been in use	2
	Multilingual software maturity	2
	VPD surveillance system transition	0
	User support during system transition	0

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Domain/Theme	Sub-domain	Maturity Level
Interoperability	Integration with WHO AFRO system	2
	Integration with national HIS	1
	Interoperability standards use (FHIR, ADX)	0
	Existence of national interoperability framework	0
Data Standards and Data Quality	Metadata dictionary	1
	Org units structure	2
	Compliance with WHO AFRO standardized indicators	2
	Data quality governance	1
	Data entry/management training	0
Data Use and Reporting	Data reporting needs	2
	Data sharing practices	2
	Timeliness and quality of CBS data	0
	Timeliness and quality of aggregate data	0
	Case-based data security compliance	2

Use and limitations of the maturity model

The maturity model provides a framework for identifying strengths and gaps in Lesotho's VPD surveillance system. It covers key domains like governance, data quality, and infrastructure. However, it simplifies complex realities and may overlook regional variation or the interplay between paper based and digital tools. Results should be interpreted with field insights and stakeholder input.