



Vaccine Preventable Disease Surveillance systems in Gambia

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 Gambia's VPD surveillance system includes both paper-based and digital components, supported by two digital systems currently in use. The country reports surveillance data daily to the national level and consistently meets reporting timelines, while also contributing to the WHO AFRO regional system. There is a dedicated national-level official managing the system, and governance is supported by a formal body and alignment with the national digital strategy. While the system is primarily funded by multiple donors, there is no costed work plan or earmarked funding for software maintenance or infrastructure, which may affect long-term sustainability. Nevertheless, technical capacity is relatively strong: the Ministry of Health (MOH) has a team in place to manage system monitoring and server operations, and tools exist for monitoring system uptime and performance.

Despite this solid foundation, some challenges remain. Training for technical staff is not routinely assessed or updated. However, the use of standardized indicators and mostly up-to-date organizational hierarchies support consistent data reporting. While a formal data quality assurance framework is absent, there is a dedicated person overseeing data quality, and annual training is conducted for data entry staff. The system produces useful dashboards at both national and sub-national levels and supports data-driven planning. Though data sharing agreements are lacking, VPD surveillance data is shared with other partners. Case-based surveillance is operational and compliant with data security standards, although some data quality issues exist.

The Gambia's VPD surveillance system demonstrates strong national coverage and equity, with no significant infrastructure or staffing disparities between rural and urban areas. All sites use computers for data entry, and 65% of end users also use mobile devices, although they are not provided with mobile devices or mobile data. Infrastructure is generally stable, allowing timely data submission. The MOH has some staff capable of maintaining hardware and connectivity, but staffing levels are not fully sufficient. The system is not yet connected with other national health information systems. Interoperability is constrained by the absence of data exchange standards (like HL7 FHIR or ADX) and the lack of a national interoperability framework. System integration capabilities present notable gaps. Although a technical team exists with some integration skills, they report limitations and lack formal training assessments to improve capacity. Despite these challenges, satisfaction with the system is high, and there is a clear long-term vision to improve data quality and timeliness. The country's use of Epi Info for nearly two decades, alongside DHIS2 for weekly reporting and a pilot for electronic case-based surveillance, reflects a commitment to strengthening digital VPD surveillance.

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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	2
	Equity infrastructure	2
	Equity policies (rural/urban)	2
	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	1
	Software maintenance team in place	0
	Integration/interoperability tech capacity	0
End-user Readiness	End-user satisfaction	0
	End-user training	2
Infrastructure Readiness	Availability of computers	0
	Mobile devices and mobile data access	0
	Stable power/internet infrastructure	2
	Capacity to maintain infrastructure	1
	Infrastructure disparities	2
System Lifecycle and Localization	Length of time system has been in use	2
	Multilingual software maturity	
	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	0
	Interoperability standards use (FHIR, ADX)	0
	Existence of national interoperability framework	0
Data Standards and Data Quality	Metadata dictionary	2
	Org units structure	2
	Compliance with WHO AFRO standardized indicators	2
	Data quality governance	1
	Data entry/management training	1
Data Use and Reporting	Data reporting needs	2
	Data sharing practices	1
	Timeliness and quality of CBS data	2
	Timeliness and quality of aggregate data	
	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 Gambia'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.