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CQUIN M&E Systems Vulnerability Assessment – Zambia Pilot Experience

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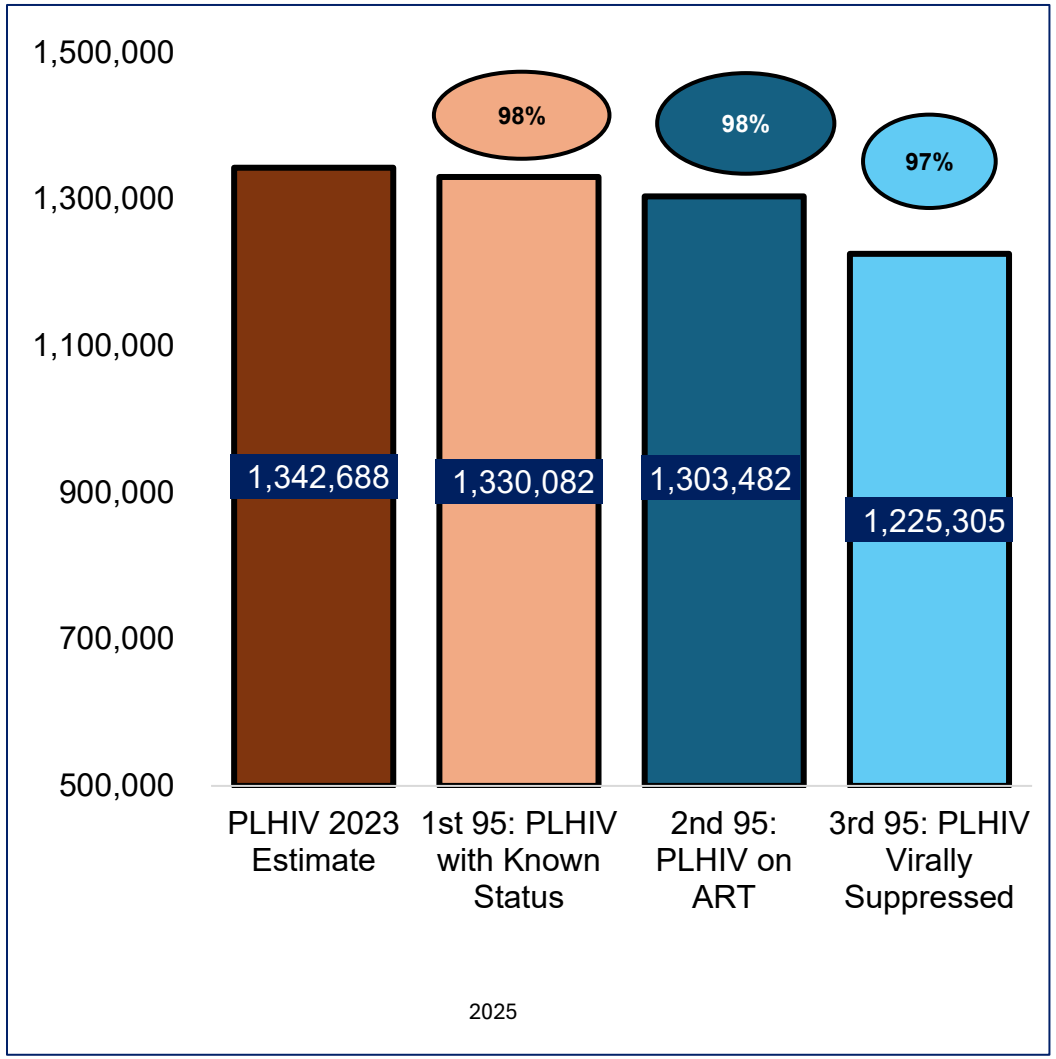
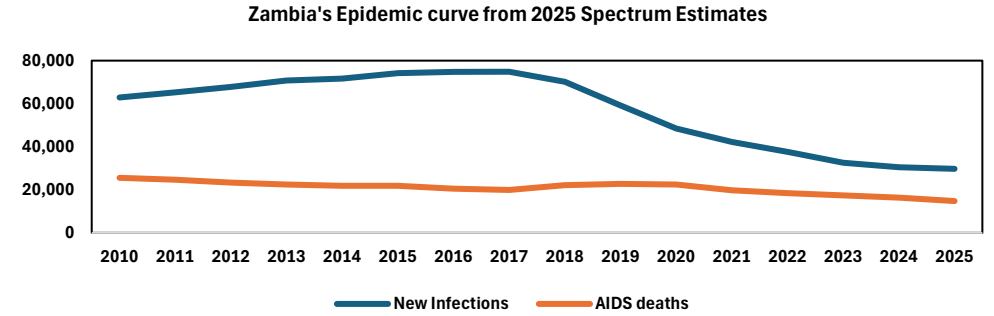
CQUIN 9th Annual Meeting | Delivering Differently: Prioritize. Adapt. Sustain

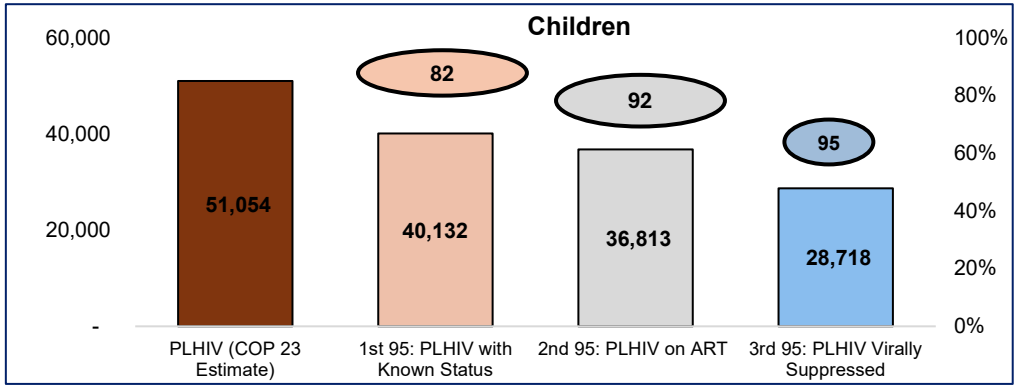
Outline

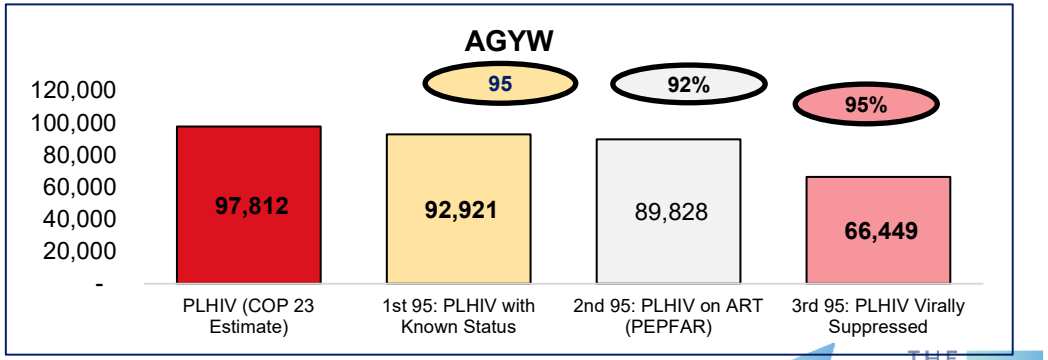
- Country Epidemic Overview
- M&E and Information Systems Overview
- Data Flow Diagram
- Objectives of the National HIV M&E Vulnerability Assessment
- Methodology (Pilot)
- Summary Findings
- Lessons Learned
- Recommendations
- From Planning to Practice:
- Next Steps

Country Epidemic Overview









M&E and Information Systems Overview

- Paper and DHIS2 operational in 100% of public and faith-based health facilities and captures aggregated health data
- SmartCare EMR: Covers 92% of Tx current with currently at only 46% coverage facility coverage
- eLMIS: Covers 51% of facilities (facility edition) and 87% centrally; used for commodity tracking
- Digital HRH System: Operational and covers 100% of hospitals (levels 1–3)
- Community Health MIS (CHMIS): Piloted in 5 provinces, national rollout in progress
- National Data Warehouse: Operational for centralized data storage and system integration

Methodology (Pilot)

- **Stakeholder Sensitization:** CQUIN SI team oriented the MOH on tool objectives, domains, and completion process
- **National Pilot**: National SI team piloted all 7 M&E system domains of the tool after reviewing instructions and definitions
- Assistant Director, SM&E, SIO were present; community input deferred to full assessment phase due to short timelines
- **Results Review:** Preliminary findings synthesized and validated with key stakeholders
- **Submission:** Finalized tool submitted to CQUIN for technical review and feedback
- **Next Steps:** Key vulnerabilities and strengths prioritized; action plan development scheduled for during the upcoming M&E pre-meeting

Summary Findings- HMIS subdomains

Domain	Sub-domain	Score
1. HMIS – Paper / Aggregate data		
	1.1. Paper-based tools design and updates	
	1.2. Paper-based M&E tools availability	
	1.3. Design, updating, and maintenance of national aggregate database systems (eg, DHIS2)	
	1.4. Aggregation and digitization of individual-level paper-based data for routine reporting	
	1.5. Data transmission and validation	
	1.6. System interoperability with national aggregate database	
	1.7. Management, archival and retrieval of paper-based records	
	1.8. Capacity to collect and manage key population (KP) data	
2. HMIS - EMR		
	2.1 Leadership and governance	
	2.2. EMR design and update	
	2.3. Aggregation and reporting of individual-level EMR data for routine reporting	
	2.4. Data validation checks in DHIS2/EMR	
	2.5. Infrastructure	
	2.6. Interoperability & standards of data systems	
	2.7. Retention monitoring and follow-up	
	2.8. Commodity tracking systems	
	2.9. Lab specimen tracking systems	
	2. 10. Documenting key populations	
	2.11. Data confidentiality and security (including unique identifiers)	

Key:
1 No vulnerability
2 Partial vulnerability
3 High vulnerability
4 Existing M&E gap

Summary Findings- Data Quality, DDU, HRH Capacity

Domain	Sub-domain	Score
3. Data Quality		
	3.1. Availability, quality, and use of national and subnational aggregate data outputs	
	3.2. Supportive supervision	
	3.3. Completeness of reporting	
	3.4. Timeliness/Reporting frequency	
	3.5. Routine data quality review meetings (subnational, health facility etc.)	
	3.6. Protocols/SOPs/tools for regular data quality assurance.	
4. Data Dissemination and Use		
	4.1. Availability, quality, and use of national and subnational aggregate data outputs	
	4.2. Availability, quality, and use of data outputs from facility-level information systems	
	4.3. SOPs, protocols, tools, and job aids for dissemination and data use	
	4.4 Access to data analysis and dissemination tools	
	4.5. Data review meetings and feedback loops	
	4.6. Use of surveys, surveillance, and complementary data sources (non-HMIS)	
5. HRH Capacity		
	5.1. Adequate staffing across all M&E functions	
	5.2. M&E capacity building through trainings	
	5.3. M&E capacity building through supervision and mentorship	
	5.4. Effective M&E human resources management	

Key:
1 No vulnerability
2 Partial vulnerability
3 High vulnerability
4 Existing M&E gap

Summary-M&E of community-based HIV services & CLM

Domain	Sub-domain	Score
6. M&E of community-based HIV services		
	6.1. HMIS - Paper-based and Aggregate database for Community-based Services Data	
	6.2. HMIS - EMR for Community-based Services Data	
	6.3. Data Quality Assurance for Community-based Services Data	
	6.4. Data Dissemination and Use of Community-based Services Data	
	6.5. Adequate staffing across all community M&E functions	
7. Community-led monitoring and Community Engagement in M&E		
	7.1. Policy and Governance for CE/CLM	
	7.2 CE involvement in design of paper based and electronic M&E tools at HF, subnational and national levels	
	7.3 Routine collection of CLM data on critical indicators (prevention, HTS, retention?)	
	7.4 CLM data use (subnational, national)	
	7.5. CE involvement in data reviews and data quality checks (HF, subnational, national)	
	7.6. CLM data for KP services	

Key:
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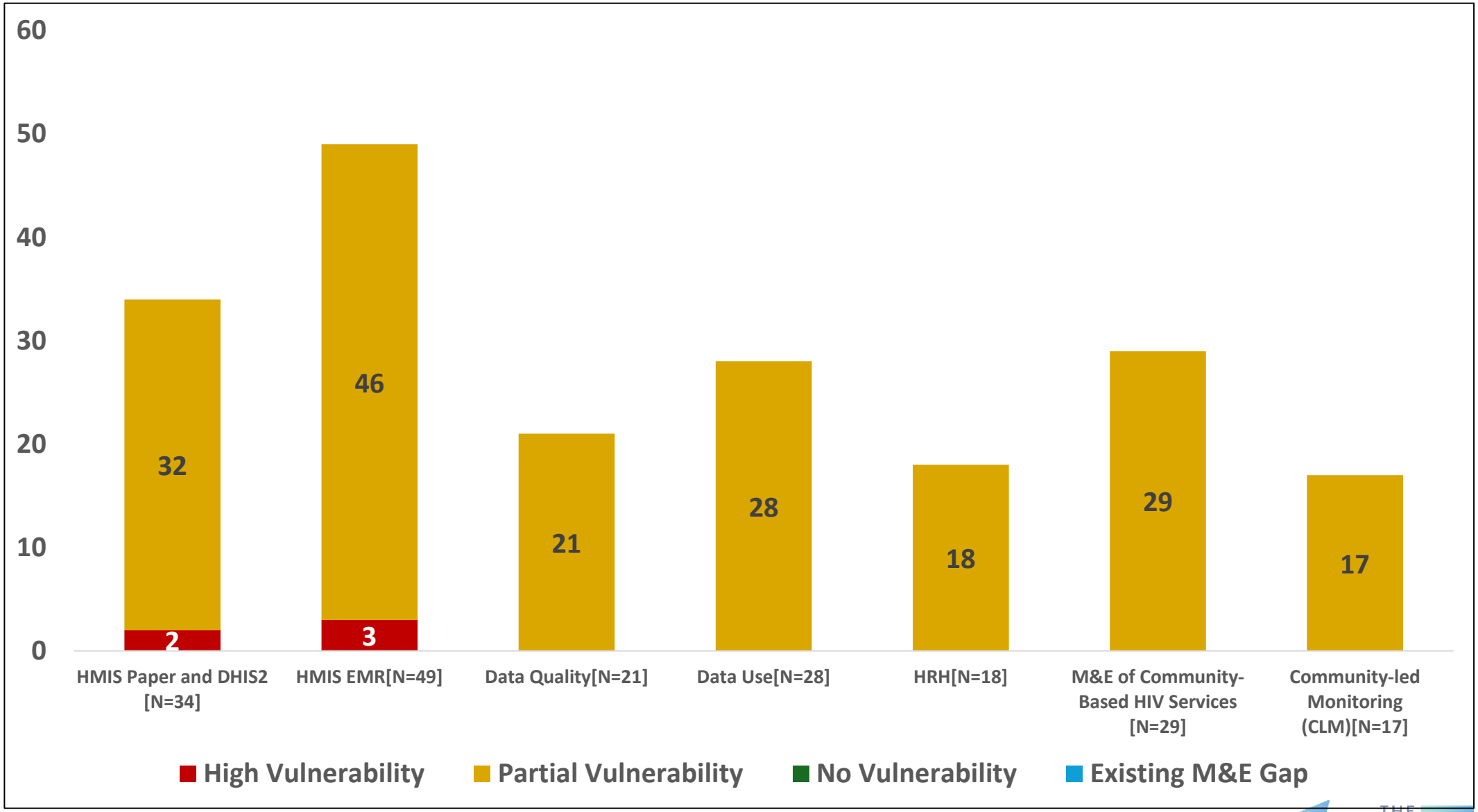
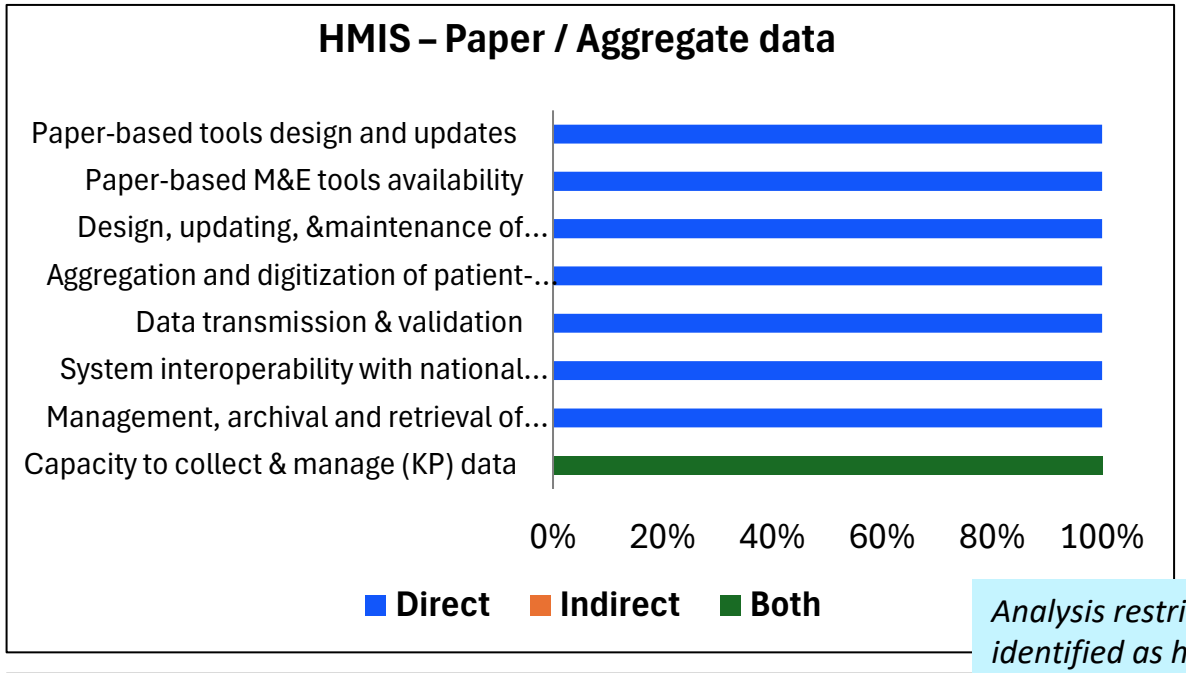
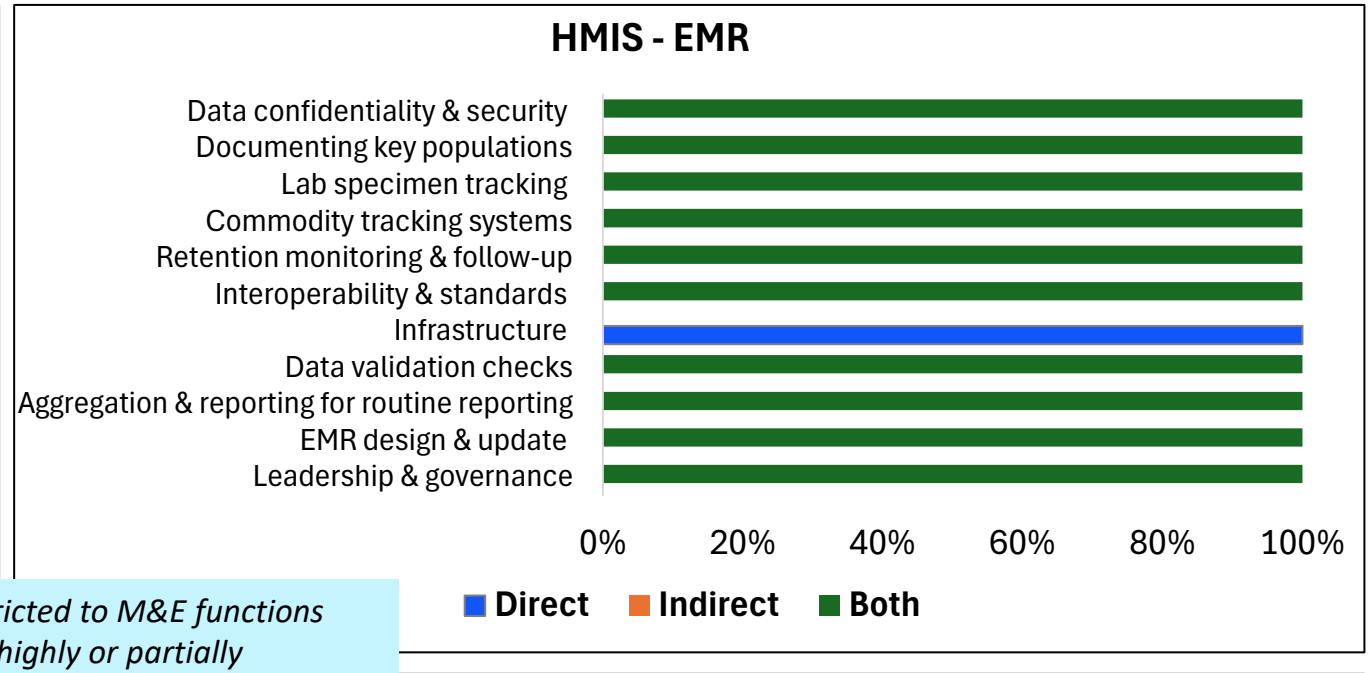
Distribution of Vulnerability Across M&E Domain

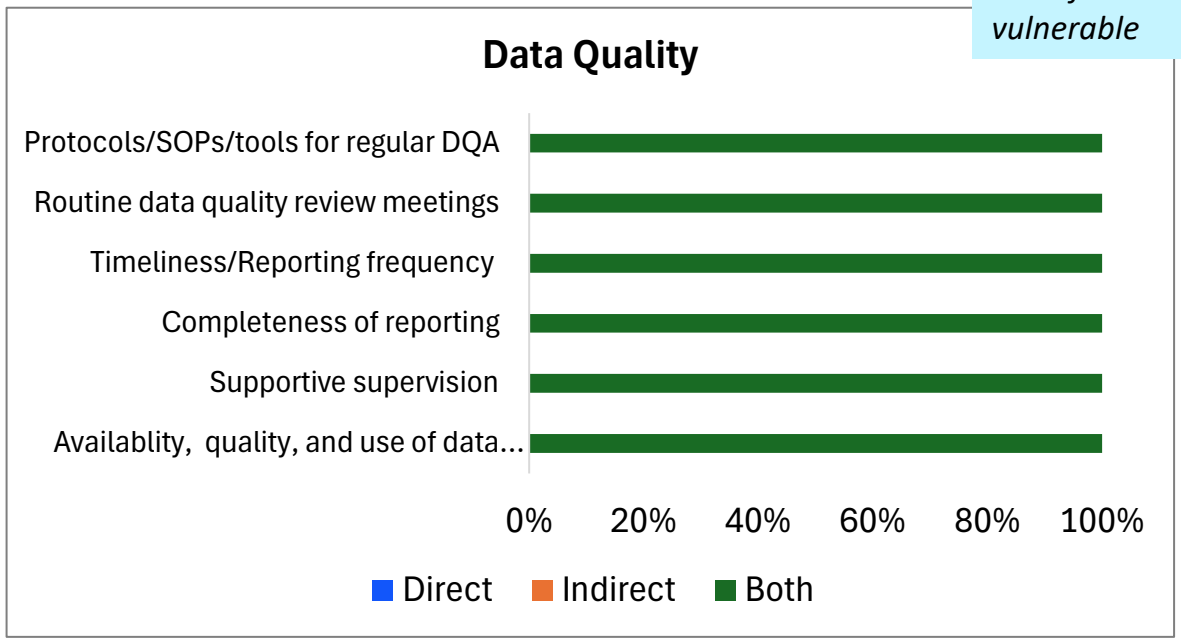


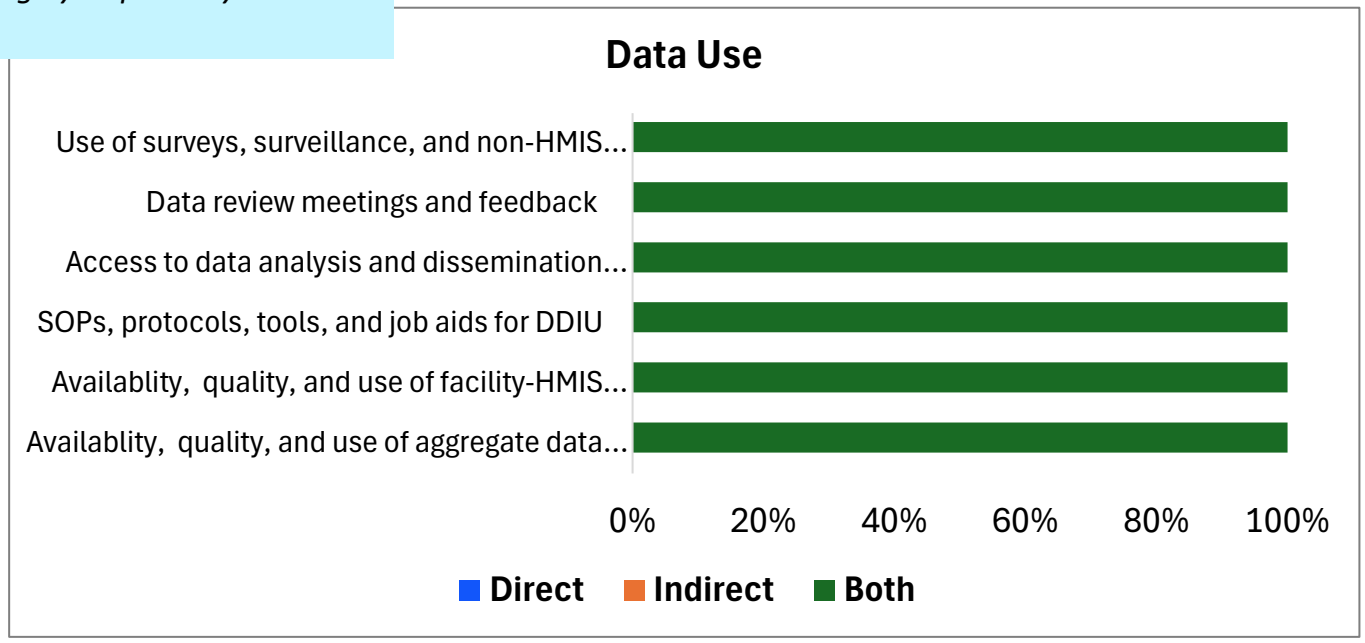
Distribution of External Support for High and Partial Vulnerability Functionalities by Sub-Domain: Direct, Indirect, or Both





Analysis restricted to M&E functions identified as highly or partially vulnerable





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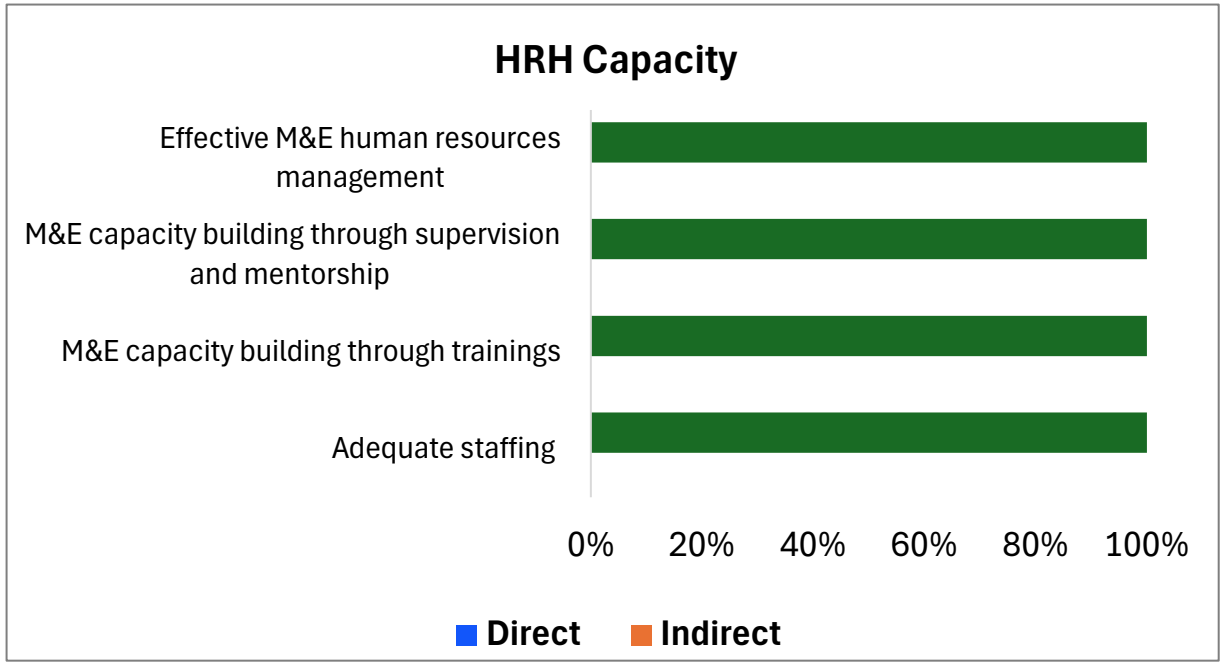

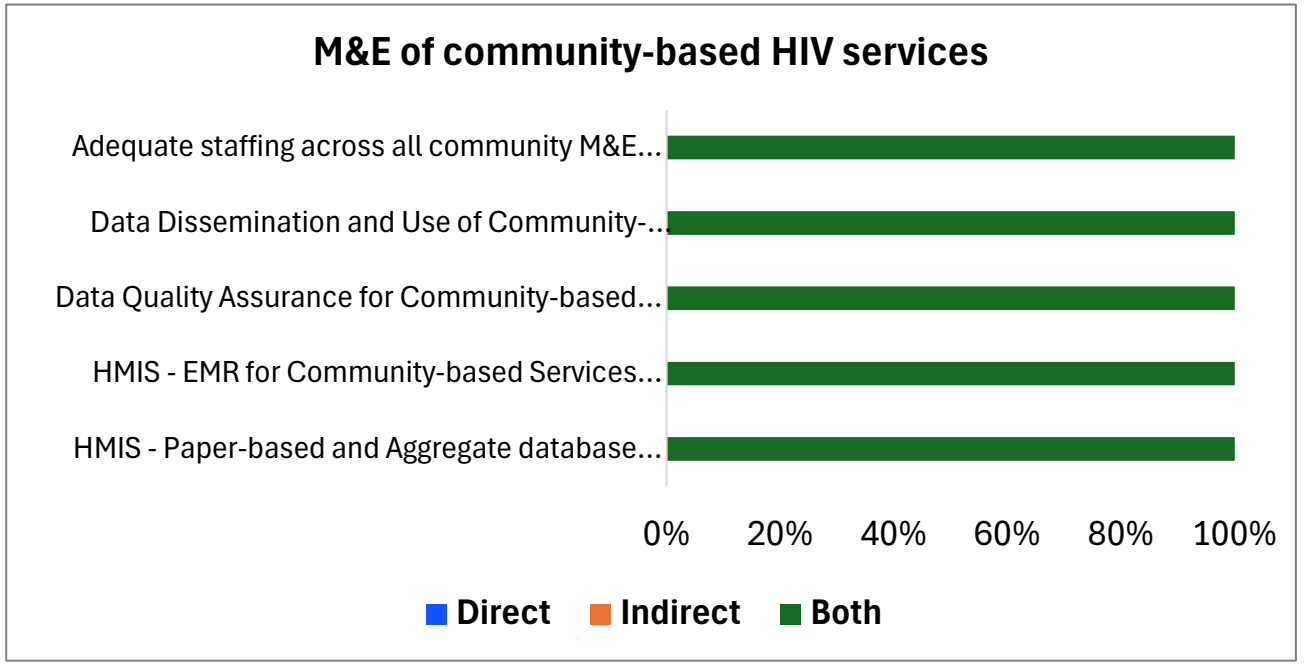

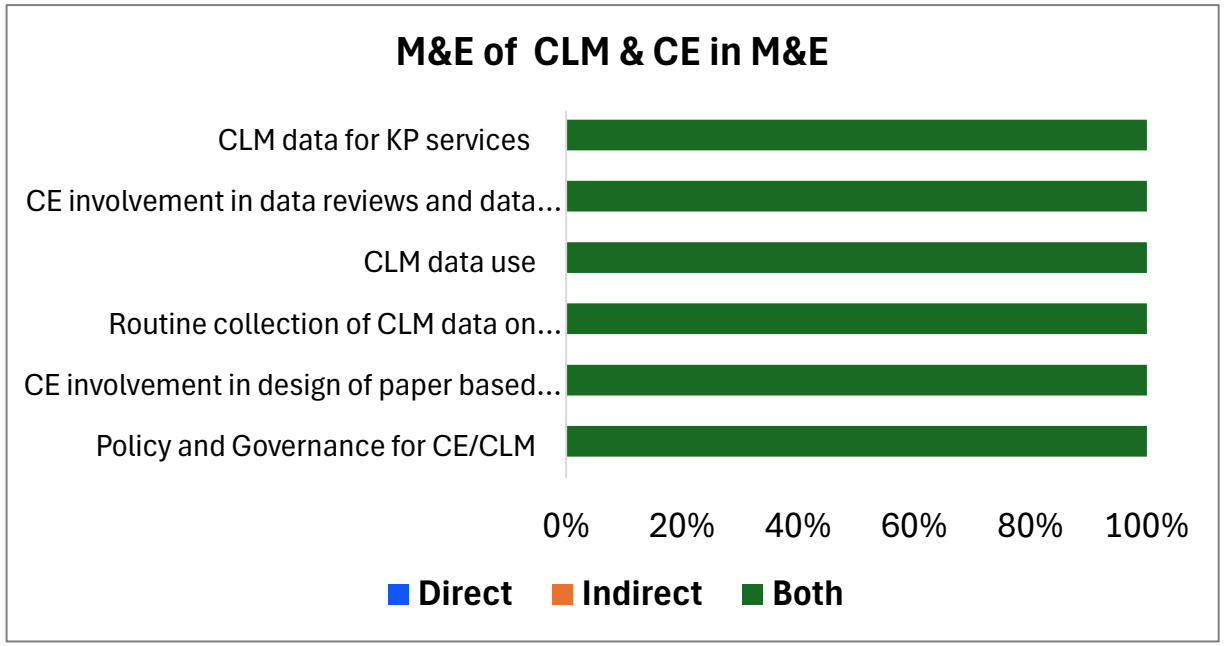

Analysis restricted to M&E functions identified as highly or partially vulnerable

Key Findings HMIS [paper-based/aggregate]

Paper-Based System:

- Registers were primarily procured through external funding, with some produced by the Government of Zambia
- Paper-based tools design and updates are also partly funded by partners
- Capacity to collect and manage key population (KP) data funded mainly by partners

DHIS2 System:

- System interoperability with national aggregate database also supported by partners
- Several reporting tools used within DHIS2 are donor-funded, resulting in fragmentation and duplication
- Design, updating, and maintenance of national DHIS2 also had external funding

Key Findings HMIS [EMR]

- Ownership of existing IT infrastructure is retained by government ; however, replacement and maintenance remain a challenge as is donor funded
- The expansion of SmartCare EMR coverage (currently at 46%) and efforts to enable interoperability with DHIS2 and other national platforms have been supported by donor funding
- The integration of systems such as eLMIS and **Warehouse Management System (**WMS) to enhance end-to-end visibility for commodity tracking and supply chain automation has also been donor-funded
- Surveillance and M&E systems (e.g., IDSR and WHO tools) developed to streamline data flows and eliminate parallel structures are supported by donors
- Data entry for electronic systems is largely performed by implementing partners; in some cases, MoH staff lacked access credentials, limiting system ownership

Key Findings -Data Quality Assurance, Data Dissemination and Use HRH

Data Quality and Review:

- Data quality services, review meetings, and Service Quality Assessments were primarily funded by development partners
- Key investments in data validation tools e.g., WHO DQA, DHIS2 enhancements risk stalling without continued donor support

HRH Capacity :

- Capacity building for M&E was mainly supported through donor funding
- The withdrawal of USG support has resulted in the loss of donor-funded data managers and M&E officers, significantly affecting HIV program reporting

Key Findings Community M&E

- The community e-CHIS platform, which facilitates seamless integration of community-level data into national systems, is donor-funded
- CLM and M&E for community-based HIV services are also mainly supported through donor funding

Lessons Learned

- High dependence on donors and partners for key M&E functions (tool printing, EMR maintenance, DQA funding, capacity building) creates vulnerabilities
- Limited MOH access to partner-managed digital platforms constrains national ownership, data interoperability, and accountability
- Integration gaps across reporting systems (DHIS2, SmartCare, community HMIS) lead to parallel reporting, inefficiencies, and hindered data use
- MOH capacity gaps in tool design, digital data management, and DQA reduce the sustainability of M&E gains
- Locally hosted systems and clear digital governance (e.g. SmartCare) significantly enhance data ownership, accountability, and long-term sustainability when effectively implemented
- High-level coordination and leadership is crucial to harmonize activities, avoid duplication, and ensure strategic oversight across national and subnational levels

Recommendations

- Increase domestic investment to reduce reliance on donor funding for critical M&E functions
- Expand MOH ownership and control of M&E systems by granting full access credentials, transitioning responsibilities from partners to MOH staff
- Strengthen system integration across DHIS2, SmartCare, and community HMIS to improve interoperability and data flow
- Institutionalize MOH capacity-building programs for DQA, data analytics, and tool design to maintain skills independently of donor support
- Formalize data governance frameworks under Smart Zambia to regulate approval, hosting, maintenance, and harmonization
- Map donor and partner support and align efforts from national to facility/community levels to ensure coherence, continuity, and sustainability
- Map out the indirect support and assess how it can be prioritized by GoZ

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