

# Building Data Capacity through Mentorship:

## Key considerations for governments, donors and implementers

### Background

The generation, analysis and use of high-quality data is essential for effective public health programmes and evidence-based decision-making. Countries are steadfastly moving away from siloed disease approaches – a positive development that also requires managing and merging multiple data sets. Interoperability between different information systems is increasingly important to achieve multiple health outcomes. Emerging technologies such as digital data and artificial intelligence (AI) pose both opportunities and risks, including data ownership, confidentiality and equity. Having a trained, local workforce to manage these and other data complexities under government leadership is critical.

Timely, quality data help focus investments for specific services, populations and geographical areas, enhancing programme impact. Yet persistent gaps in data capacity

have constrained progress in many regions, including Eastern and Southern Africa (ESA). As the global health architecture shifts and resources tighten, building locally anchored, resilient data systems has become essential for achieving ambitious public health targets. This document presents the lessons learned from a data mentorship programme and offers key considerations for government policy makers, donors, and programme implementers who aim to strengthen local data management capacity within a systems strengthening framework.

Sub-Saharan Africa faces three inter-related public health crises. Nearly 86 per cent of children living with HIV globally live in sub-Saharan Africa.<sup>1</sup> Progress also lags in the other disease areas: African countries account for 60 per cent of global congenital syphilis cases<sup>2,3</sup>, and sub-Saharan Africa bears a significant burden of

1 <https://www.unaids.org/en/UNAIDS-global-AIDS-update-2025>

2 World Health Organization. *Syphilis Fact Sheet*. WHO, 2025. <https://www.who.int/news-room/fact-sheets/detail/syphilis>

3 *Pathogens* 2024, 13(6), 481; <https://doi.org/10.3390/pathogens13060481>

hepatitis B (up to 25 per cent of the global burden), with approximately 81–82 million people chronically infected, yet less than 2 per cent of infections are diagnosed and less than 0.1 per cent are treated<sup>4,5</sup>. While much progress has been made, achieving the triple elimination of vertical transmission of HIV, syphilis and hepatitis B requires the continuous use of quality data to sharpen planning, budgeting, service delivery and monitoring.

Against this background, UNICEF and partners under the joint UN regional 2gether 4 SRHR programme<sup>6</sup> launched the Data Mentorship Programme<sup>7</sup> in 2021. The initiative moves beyond short-term fixes to strengthen national capacity for data-driven decision-making. It equips health professionals with practical skills to analyse, interpret, and apply data for evidence-based policy and programme action. Since inception, 57 health professionals from 14 countries in sub-Saharan Africa (primarily from ESA) have completed the programme, strengthening the use of data in national health systems.

Initially implemented in collaboration with UNICEF, IQVIA, and the University of Zambia, the programme promotes an integrated standards-based approach to strengthening data analysis and use. Mentorship between junior and senior staff, as well as by faculty, is a deliberate component of the curriculum. Mentees attend a 14-week blended learning model that combined virtual modules and faculty and Ministry of Health mentorship. Participants gain practical skills as they produce reports based on analyzing country data and develop operational plans that consider the current state of data and how to measure progress, close data gaps and achieve milestones. Alumni mentees make themselves available for future cohorts, offering insights into the commitments required for the programme and how best to apply their new skills and knowledge. A virtual South-South and triangular learning approach

supported participants from different countries to learn from the experiences of their colleagues and mentors from global north and south.

Working with an accredited academic institution to adopt the programme modules as part of their curriculum was a deliberate effort to expand and sustain capacity within the region. Since the initial delivery of the model, the University of Zambia has incorporated the course into its post-graduate public health curriculum. Health professionals will also be able to enroll in the course as part of ongoing professional development, gaining continued learning credits.

Following three successful cohorts, an independent light review<sup>8</sup> confirmed the effectiveness, efficiency, and strategic relevance of the Data Mentorship Programme. The review noted that the programme resulted in increased data collection, analysis, and use. It highlighted the programme's potential for scalability and sustainability through integration into academic curricula, government systems, and regional frameworks. Recommendations included investing in digital infrastructure to deliver the course more cost-efficiently and embedding professional development costs into national health budgets.

As countries intensify efforts toward triple elimination and Sustainable Development Goal 3<sup>9</sup> more broadly, the Data Mentorship Programme stands out as a proven, adaptable model for strengthening health systems and institutionalizing data capacity — a critical investment for resilient, evidence-driven public health. Crystallized from the 2025 Data Mentorship Programme review, the following Key Considerations offer insight in how to strengthen national data capacity through a mentorship approach, establish a regional network of data experts, and build sustainability.

4 WHO. *Global Hepatitis Report 2024*. World Health Organization. <https://www.who.int/publications/b/6851>

5 Spearman CW et al. *A new approach to prevent, diagnose, and treat hepatitis B in Africa*. BMC Global and Public Health, 2023. <https://link.springer.com/article/10.1186/s44263-023-00026-1>

6 2gether 4 SRHR is a joint United Nations Regional Programme that brings together the combined efforts of UNAIDS, UNFPA, UNICEF and WHO, to improve the sexual and reproductive health and rights (SRHR) of all people in Eastern and Southern Africa. <https://esaro.unfpa.org/en/2gether-4-srhr>

7 *Strengthening capacity in translating...* | 2gether 4 SRHR Knowledge Hub

8 *Data Mentorship Programme Light Review* | 2gether 4 SRHR Knowledge Hub

9 Sustainable Development Goal (SDG) 3 is to "Ensure healthy lives and promote well-being for all at all ages". It addresses major global health priorities, from reproductive, maternal, and child health to communicable and non-communicable diseases and environmental health issues.

# Key Considerations

**Effectiveness and Quality:** Governments are encouraged to continue to consistently embed quality improvement of data collection, analysis and use into core processes such as indicator development and programme reviews. Staff should be supported to develop and implement operational plans that address gaps in data quality and use. Embedding these plans into national systems will require sustained and deliberate effort to ensure continuity and impact. Improving the quality of mentorship and maintaining structured post-training follow-up and support mechanisms for mentees will reinforce skills and institutionalize data use over time.

**Efficiency:** Achieving programme efficiency requires using affordable, scalable platforms, leveraging other data quality improvement efforts, and strong integration into national systems. Strategies for country-led financing include integrating programme costs into national and subnational health budgets and advocating for domestic investment in data strengthening as part of health system strengthening priorities. Exploring cost-sharing strategies with governments, academic institutions, and the private sector may help to diversify funding sources. At the programme level, cost efficiency can be achieved by shifting from in-person delivery to a blended model that uses live online sessions, an online learning platform with individual modules, and virtual mentorship. Further cost efficiencies will depend on adopting more affordable digital platforms for course delivery.

**Sustainability:** To ensure lasting impact, a data mentorship programme needs to be institutionalized and scaled through deliberate planning, innovation and integration. Delivering the course through accredited academic institutions is a critical step toward institutionalisation. It provides mentees with respected credentials and increases the likelihood of the programme enrolling new cohorts. Securing

government ownership from the start is crucial. Operational plans that are integrated into national, district and departmental workplans will ensure alignment with country priorities and funding frameworks. This approach both strengthens immediate programmatic decision-making and promotes long-term sustainability by embedding data-driven practices within government structures.

**Scale:** Implementing at scale should start with developing a clear roadmap, aligned with national priorities and financing mechanisms. For example, the Data Mentorship Programme model is adaptable across other health domains, such as maternal health and sexual and reproductive health and rights. Ensuring a low mentor-mentee ratio, engaging alumni as new mentors, fostering peer learning through Communities of Practice and building digital infrastructure will facilitate expansion. Expanding the use of affordable online platforms and exploring artificial intelligence (AI) enabled tools for adaptive adult learning and translation will further support scale up.

**Replicability:** A modular, flexible design and structured, competency-based learning can be adapted across contexts and countries to strengthen data systems. For example, the Data Mentorship Programme curriculum is composed of self-contained modules that can be adapted or restructured to address regional needs or thematic focus areas. A modular design supports replication without the need for redeveloping modules.

In addition, key approaches such as embedding training into national and academic frameworks, leveraging alumni networks for mentorship, and adopting cost-efficient digital platforms can be replicated in other health domains and sectors to institutionalize data use. Similarly, the operational plans developed by mentees are easily replicable as they address specific contexts and needs.

## Conclusion

The current public health landscape faces profound data challenges, alongside tightening fiscal constraints. As this brief illustrates, a carefully designed data mentorship programme that fosters collaboration between universities, governments, and regional

organisations is efficient, effective, sustainable, scalable and replicable. The result is evidence-based decision-making embedded into public health programming, contributing to better public health results.

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