

"We should have access to information at our fingertips" – results of a mixed methods study of data availability and use by decision-makers for HIV programs in Blantyre, Malawi

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Background

The Blantyre Prevention Strategy (BPS) aims to identify effective HIV prevention delivery systems and embed them into existing health structures that are critical for sustaining long-term epidemic control in the Blantyre District of Malawi. It facilitates a locally led, contextually tailored, and data-driven systems-based approach to HIV prevention. While developing the BPS project concepts, several questions came to light: What information is used to make HIV prevention related decisions in Blantyre? How are those data collected? What are the key decisions being made by health leadership in the district? How do the data collected align with those decisions?

Timely and high-quality data are key to maximizing the efficiency of HIV programmes. Decision-makers need the right data at the right time to make informed decisions, yet investments in data systems are at times fragmented and not well coordinated. Further, data use for decision-making in HIV programmes is poorly understood. We conducted a Data User Study (DUS) that identifies the decisions, data indicators, systems, and users involved in HIV prevention in Blantyre District. The DUS focuses on how data are collected, transmitted, stored, analyzed, and used to highlight opportunities to increase access to data use for decision-making. The DUS also mapped service delivery channels in Malawi with a focus on specific gaps, opportunities, and key relationships to improve data use and ultimately the delivery of HIV prevention services.

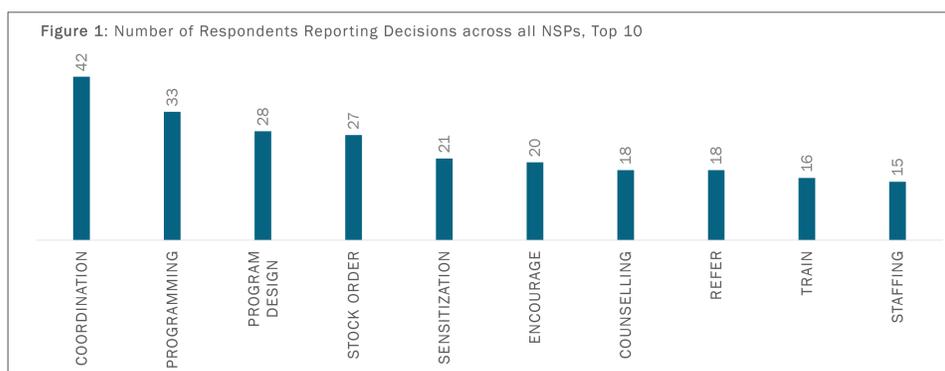
Methods

We drew a sample of 150 respondents from across all levels of the health system. Respondents were categorized as a decision-maker or data handler. Decision-makers are individuals responsible for making decisions, such as a director. Data handlers are individuals responsible for collecting and aggregating data, such as a community health worker or a monitoring and evaluation officer. We developed a sampling stratification method to ensure a representative sample at each level of the health system (national, district, city, facility, and community) and across sectors (government, civil society, and private).

Primary data collection took place using mixed methods questionnaires: a decision-maker interview guide and a data handler interview guide. The decision-maker questionnaire asked respondents about the decisions they made related to the national strategic priorities (NSP) outlined in the 2020-2025 Malawi National Strategic Plan for HIV and AIDS, and the indicators and systems they used to support these decisions. Decision-makers were also asked which supply chain delivery channels are used for each NSP. Data handlers were asked about which indicators they collected across the NSP, where they stored these data, the frequency of collection and its collection and its use. The interviews were electronically captured using CommCare. The quantitative data from the surveys were analyzed using Excel and Tableau, leveraging basic and descriptive statistics. The qualitative data was thematically coded using a codebook from previous DUS's. Second order analysis of the open-ended qualitative data was conducted to identify recurrent themes and patterns.

Findings & Discussion

The top three decisions for decision-makers are: coordination, programming, and program design (Figure 1). The top 10 decisions account for 36% of all decisions made. When disaggregated by NSP, there was significant variation regarding the top decisions. For some NSPs we would expect certain programmatic areas to make decisions regarding service delivery. For example, for VMMC, no decision-makers reported making decisions on programming or program design, while only two decision-makers reported making decisions on targeting services. For key populations, no respondent mentioned working on targeting or programming. Only one respondent mentioned making decisions on stigma, service access, and hotspots. Limited programmatic-related decision-making could affect policies, access, and service delivery.

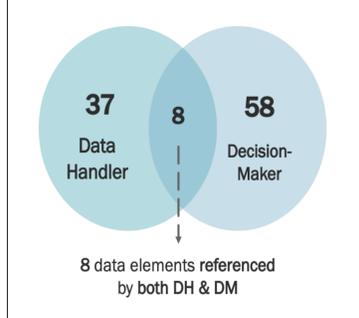


Decision-makers may not have access to the data indicators they need to make decisions. There was little overlap between the indicators decision-makers mentioned as being used for decision-making and the indicators data handlers reported collecting. As such, it is likely data handlers are collecting data that is not deemed useful or important for decision-makers. This pattern is seen across all NSPs. For example, for Resilient Systems, data handlers and decision-makers did not reference a similar indicator in common. Even for NSPs that have more overlap, like elimination of mother-to-child transmission of HIV/AIDS, it is still minimal with only 10 indicators referenced by both groups.

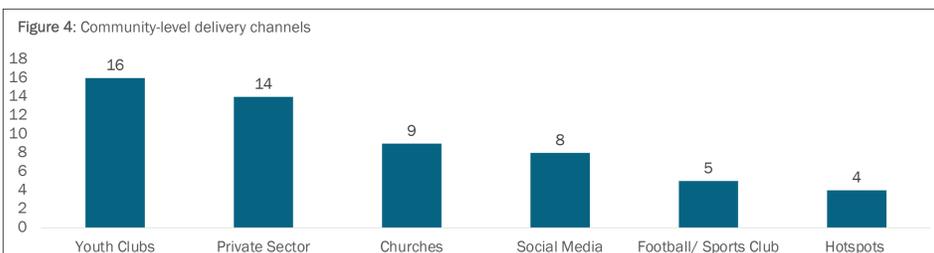
Table 1: Data indicators referenced by data handlers and decision-makers by NSP

NSP	DH Unique Elements	DM Unique Elements	Elements Referenced by Both
AGYW	37	58	8
Condoms	39	40	9
Differentiated HIV Testing	41	23	6
E-MTCT	67	16	10
Human Rights	18	24	2
Key Populations	73	32	4
Lead, Coord. & Resp	35	53	2
PrEP	39	14	5
SBCC	29	58	3
STIs	42	52	8
TB HIV	83	18	6
Vulnerable Children	25	39	2
TCS	59	44	5
VMMC	19	19	2
Wellness & Workplace	27	24	1
Resilient Systems	18	33	0

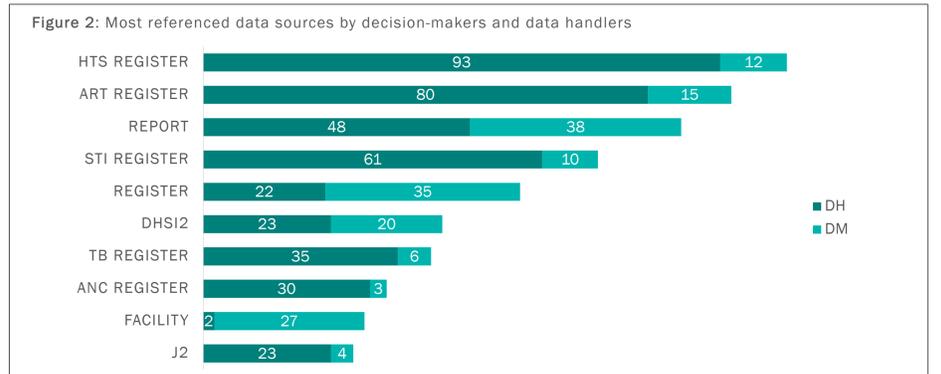
Figure 3: Adolescent girls and young women data indicators for decision-makers and data handlers



Alongside decision-making and data use, respondents were asked about the channels used to deliver services. This revealed that the community is an important mechanism for HIV prevention service delivery, particularly for condom distribution, social and behavior change communication, and services for key populations and adolescent girls and young women. Although community delivery channels are the most cited current delivery channels, many respondents felt there are still community platforms that are not being fully leveraged, such as schools, youth clubs, and churches. The private sector was also cited as a delivery channel that should be strengthened across all NSPs.



Decision-makers and data handlers do not access and input data, respectively, into the same data sources. There is also significant variation in the sources decision-makers consult across NSPs and organization type. This may highlight that decision-makers do not know where to access the data they need for decision-making. Respondents referenced a total of 471 data sources. Of those 471 data sources, only 43 were referenced by both data handlers and decision-makers (Figure 2). The most commonly used data sources varies by sector. For example, all sectors referenced reports, registers, the community, and DHIS2. The private sector has fewer data sources. CSOs rely on facilities, meetings, and communities to provide data. Civil society organizations (CSOs) that are not networked with a health facility may not have access to the data that they need for decision-making. There is a lack of alignment amongst decision-makers as to which data sources are most important for each NSP, including within the same sector. For example, sixteen decision-makers focus on VMMC, however, they all use different data sources for VMMC regardless of the sector they work in. If decision-makers are not consulting the same sources they may be getting different information. Hence, they may be making different decisions than their peers based on disparate data. Another possibility is that decision-makers do not have access to all the data available to them, likely also influencing the decisions they make.



Delivery channels like pharmacies, mobile, pop-ups, and workplaces are not widely used across NSPs. Table 2 displays the current delivery channels mentioned by respondents by NSP. Respondents identified two delivery channels that are highly underutilized currently – mobile clinics and the community – as delivery channels that can be expanded in the future. Additionally, certain NSPs, such as differential HIV testing, key populations, and STIs currently have diversified delivery channels, with potential for improving these channels and enhancing service delivery. Other NSPs, like pre-exposure prophylaxis, VMMC, and vulnerable children, span fewer delivery channels, meaning there are opportunities for further expansion.

Table 2: Current delivery channels by NSP

NSP	AGYW	Condom	DHIS2	MTCT	Human Rights	KeyPop	PrEP	SBCC	STIs	TB/HIV	TCS	VMMC	Vulnerable Children	Wellness
ANC Clinic	6	8	8	14	1	3	3	3	10	4	6	0	0	2
ART Clinic	8	12	5	12	4	6	3	3	12	8	17	1	5	1
FP Clinic	8	11	4	3	1	4	1	3	10	3	6	0	0	1
HTS Clinic	5	13	9	8	1	6	0	4	10	7	7	2	2	2
Mobile Clinic	4	8	2	4	1	4	0	2	1	2	1	4	1	1
STI Clinic	6	10	4	2	1	5	2	3	13	3	7	2	0	2
US Clinic	1	3	3	7	0	5	0	2	1	3	5	0	0	1
VMMC Clinic	1	7	5	0	1	2	1	2	1	1	2	7	0	1
Other Clinic	2	6	3	2	4	1	6	3	6	6	9	4	3	2
Community	20	21	7	2	8	10	2	21	10	7	8	4	8	1
PHO	2	4	2	1	2	3	0	1	1	1	2	0	1	1
Government	4	4	3	1	1	2	2	5	4	4	2	0	1	1
Mobile	0	0	1	0	0	1	0	1	1	0	0	1	0	0
Pharmacy	0	2	2	0	0	1	0	0	1	1	1	0	0	1
Pop Up	3	11	5	1	0	4	1	1	3	2	2	3	0	0
Workplace	1	10	3	0	1	1	0	3	1	1	2	0	2	7
Other	15	20	6	2	10	9	5	18	14	9	11	7	8	6

Table 3: PrEP delivery locations by sector

Level	Public	Private	CBO	NGO
City	1	2	1	0
Community	1	0	0	0
District	1	1	1	1
Facility	3	0	0	0
National	2	2	3	2
Total	8	5	5	3

There are opportunities for private sector engagement, particularly at the community and facility levels. When asked which sectors are involved in HIV prevention service delivery by NSP, respondents were less likely to mention the private sector (72 responses) when compared to other sectors such as community-based organizations (CBO) (162 responses), the public sector (171 responses), and non-governmental organizations (NGO) (164 responses). At the city, district, and national level, private sector service delivery is similar to public, CBO and/or NGO service delivery. However, at the community and facility levels, the private sector delivers services for very few NSPs. When focusing on specific NSPs, such as PrEP, there are opportunities to expand service delivery across all sectors (Table 3).

Conclusion

The Data User Study highlighted opportunities for improving access to data for decision-making and the delivery of HIV prevention services. The Data User Study revealed a need to reach a consensus on which indicators are needed for decision-making to ensure they are being collected and stored in a location that is accessible to decision-makers. Future refinement of routine data collection should focus on improving alignment of data needs of decision-makers with available indicators. Data sources need to be streamlined to avoid duplication and improve information access. Data sources should also be made available across sectors, particularly for the private sector and community-level to have access to government sources, to ensure that decision-makers are not making different decisions based on disparate data from varying data sources. Through the Blantyre Prevention Strategy, a Prevention Adaptive Learning Management System and Data Pipeline has been built that pulls data from multiple data sources and visualizes HIV prevention indicators on a user-friendly dashboard – allowing stakeholders to access information at their fingertips to inform their decision-making.

Delivery channels should be strengthened and expanded where there are opportunities, particularly for NSPs with few delivery channels. Mobile clinics, pharmacies, and community-level delivery channels show promise across all NSPs and should be explored and expanded to meet service delivery needs. As community level engagement increases, capacity building for data collection and data use should also prioritize stakeholders at the community level. The private sector should also be engaged to provide other services, for example PrEP, to further complement the services provided by other sectors.

