



Leveraging the Quantification Analytics Tool (QAT) for Enhanced Forecasting and Supply Planning for Malaria Commodities in Malawi

AUTHORS: DANIEL TADDESSE¹, FIKADU BATU¹, CHARLES NZAWA¹, ELIAS MWALABU¹, LUMBANI MUNTHALI², ALICE MICHENI³
¹USAID GLOBAL HEALTH SUPPLY CHAIN PROGRAM-PROCUREMENT AND SUPPLY MANAGEMENT (GHSC-PSM) PROJECT; ²MINISTRY OF HEALTH-NATIONAL MALARIA CONTROL PROGRAM (MOH-NMCP), MALAWI; ³USAID/MALAWI

BACKGROUND

Malaria remains a public health challenge in Malawi, requiring effective forecasting and supply planning (FASP) to contribute to the availability of essential antimalarial health commodities. Historically, the Ministry of Health (MOH) used standalone tools such as Quantimed and PipeLine, to do forecasting and supply planning for anti-malarial and other health commodities, respectively, but lacked an integrated tool for conducting national FASP, affecting its ability to standardize the process and ensure visibility into shipments and stock levels of commodities for malaria and other health areas.

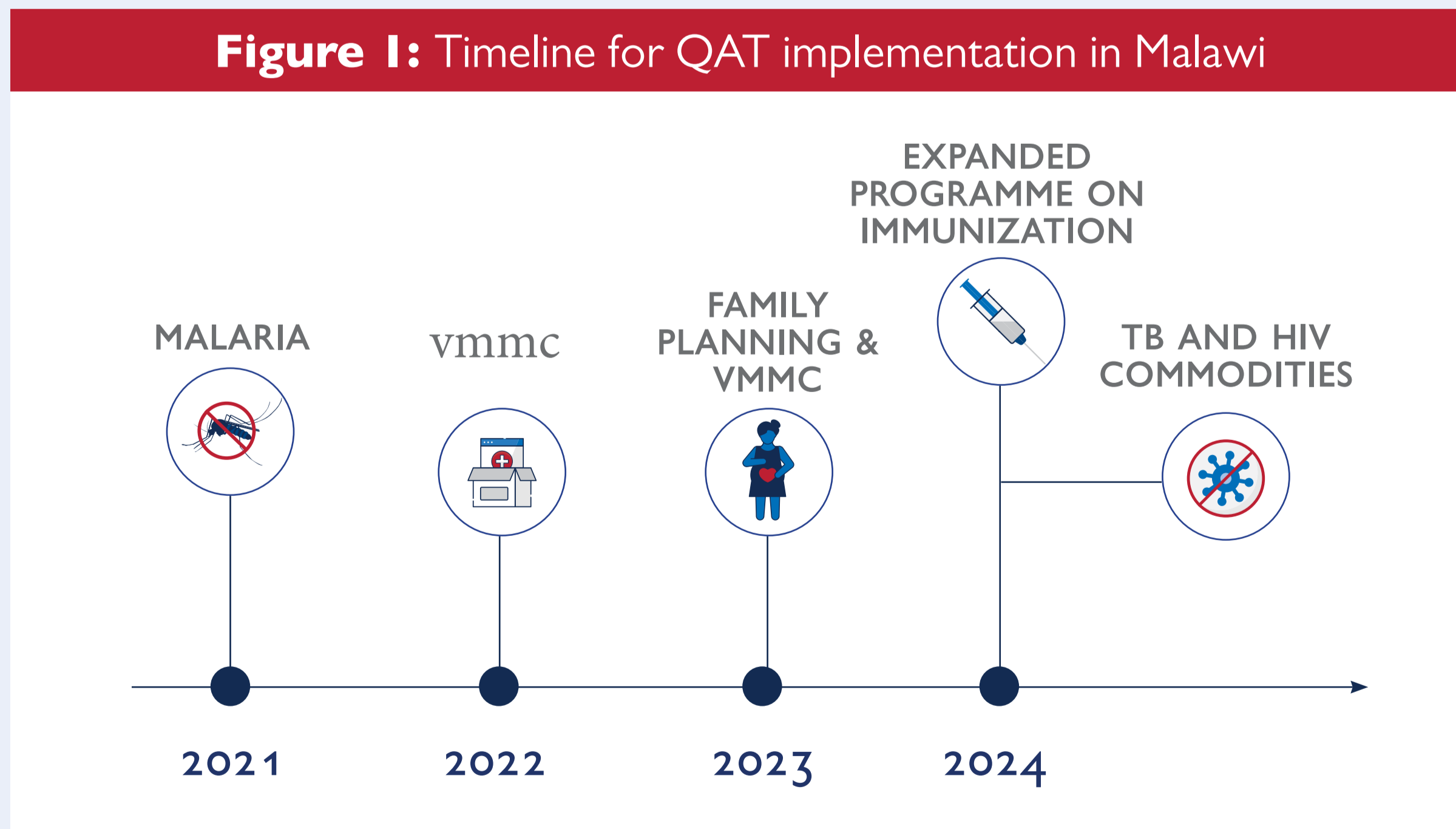
To address the challenges above, in 2021, the MOH introduced the Quantification Analytics Tool (QAT) developed by the USAID Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM) project, as a standard tool for forecasting and supply planning of malaria commodities. The MOH also plans to extend QAT to other types of commodities (Figure 1).

QAT leverages new technologies and existing tools to enable supply planners to easily build and compare multiple forecasts, optimize commodity procurement and delivery schedules, monitor the stock status of products, and share data with external platforms and key stakeholders.

METHODOLOGY

- GHSC-PSM conducted QAT trainings for several modules, including forecasting, supply planning, and Training of Trainers. These trainings involved 61 health workers from MOH and the Central Medical Stores Trust, along with development partners such as CHAI, WFP, and iTech.
- GHSC-PSM provided technical assistance to the MOH's Supply Chain Management (SCM) technical team and national FASP team to commence the use of QAT for regular malaria supply plans from 2021 and to conduct the 2023 national malaria commodity forecast.
- GHSC-PSM provided continuous technical support to the MOH to extend the use of QAT for conducting annual commodity forecasting and regularly updating the supply plans for Essential medicines in 2022 and Family planning and VMMC in 2023.

Figure 1: Timeline for QAT implementation in Malawi



AL: all artemether/lumefantrine presentations; mRDT: malaria rapid diagnostic test; SP: sulfadoxine-pyrimethamine; CHAI: Clinton Health Access Initiative; WFP: World Food Programme; VMMC: voluntary medical male circumcision; TB: tuberculosis; HIV: human immunodeficiency virus

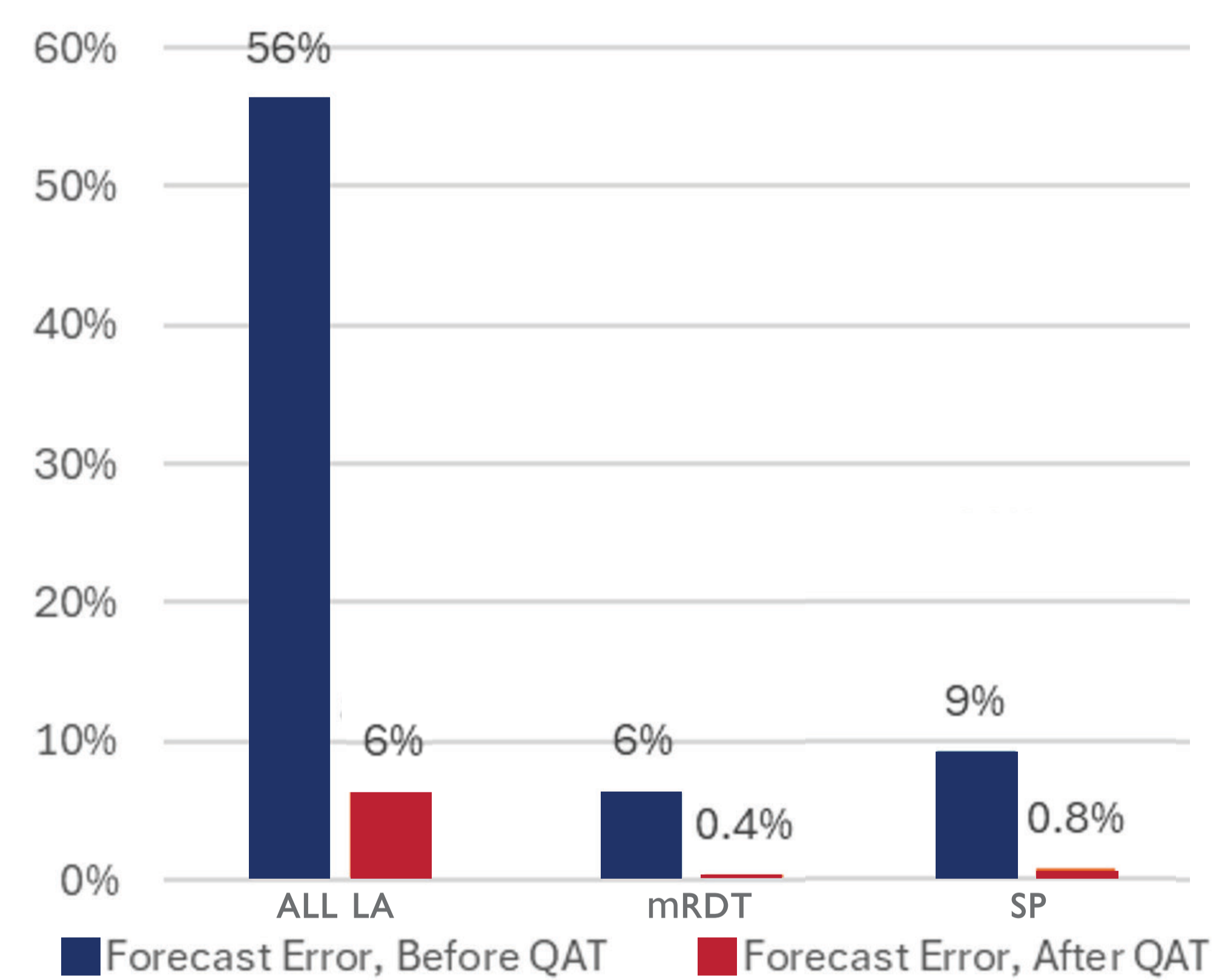
The USAID Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM) project is funded under USAID Contract No. AID-OAA-I-15-0004. GHSC-PSM connects technical solutions and proven commercial processes to promote efficient and cost-effective health supply chains worldwide. Our goal is to ensure uninterrupted supplies of health commodities to save lives and create a healthier future for all. The project purchases and delivers health commodities, offers comprehensive technical assistance to strengthen

RESULTS AND INTERPRETATION

Figure 2: Results and interpretation from QAT training and participants survey

Results	Interpretation
Improved output quality: Abated forecast error (the difference between forecast demand and the actual demand).	<ul style="list-style-type: none"> Forecast error for first-line treatment Artemether/Lumefantrine (AL) reduced from 35% in 2021 and 56% in 2022, to 6% in 2023 (Figure 3). Forecast error for mRDTs dropped from 6% in 2021 to 4% in 2022, and finally to 0.4% in 2023 (Figure 3).
Strengthened capacity of the MOH's Supply Chain Management (SCM) technical team and national FASP team in commodity forecasting.	<ul style="list-style-type: none"> QAT training pass scores ranging from 70-100%. Users' feedback indicates a high level of satisfaction (95%) with QAT's user interface and functionality.
Improved informed decisions for procurement and enhanced efficiency in resource allocation.	<ul style="list-style-type: none"> Contributing to sustaining availability of commodities.

Figure 3: Forecast Error (Before and After QAT)



CONCLUSION

Institutionalization and sustainability of the QAT intervention based on enhanced MOH capacity will contribute to:

- MOH's independence to conduct quantifications effectively without external support.
- Improved visibility into shipments and stock levels of malaria and other program commodities.
- Reducing wastage and improving the efficient use of available resources.
- Aiding stock status monitoring and decision-making across multiple programs and accessibility by multiple stakeholders.



Use your phone camera to scan the QR code and access GHSC-PSM conference material.



Ministry of Health
Malawi

