



# GLOBAL HEALTH SUPPLY CHAIN PROGRAM – TECHNICAL ASSISTANCE SOUTH AFRICA

## YEAR 6 QUARTER 2, Quarterly Report

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## ACRONYMS

AG	Auditor General
AIDS	Acquired Immune Deficiency Syndrome
AMD	Affordable Medicines Directorate
API	Application Program Interface
APP	Annual Performance Plan
ARC	Africa Resource Centre
ARV	Antiretroviral
CCMDD	Centralized Chronic Medicine Dispensing and Distribution
CFO	Chief Financial Officer
CHCs	Community health centers
CMU	Contract Management Unit
DTG	Dolutegravir
EDP	Essential Drugs Program
EML	Essential Medicines List
ERC	Expert Review Committee
FY	Financial Year
GHSC-TA	Global Health Supply Chain Program – Technical Assistance
GoSA	Government of South Africa
HIV	Human Immunodeficiency Virus
HTA	Health Technology Assessment
ICDF	In-Contract Demand Forecast
IMAT	Improved Medicine Availability Team
IT	Information Technology
KPI	Key Performance Indicator
MAC	Ministerial Advisory Committee
MAC-AMR	Ministerial Advisory Committee - Antimicrobial Resistance
MHPL	Master Health Product List
MMD	Multi-Month Dispensing
MMDS	Medicine Master Data System
NDoH	National Department of Health
NEMLC	National Essential Medicines List Committee
NHI	National Health Insurance
NSC	National Surveillance Center
PDoH	Provincial Departments of health
PHC	Primary Health Care
PoC	Proof of Concept
PPE	Personal Protective Equipment
PrEP	Pre-exposure Prophylaxis
PS	Pharmaceutical Services
PST	Provincial Support Team
PTC	Pharmaceutical and Therapeutics Committee
Q2	Quarter 2
RDM	Remote Demander Module
RFI	Request for Information
RMU	Rational Medicine Use
SIMA	Strategy to Improve Medicine Availability
SITA	State Information Technology Agency
SOP	Standard Operating Procedures
SRCC	Special Requirements and Conditions of Contract
STGs	Standard Treatment Guidelines

SVS	Stock Visibility System
TB	Tuberculosis
TEE	Tenofovir/Emtricitabine/Efavirenz
TLD	Tenofovir/Lamivudine/Dolutegravir
TLART	Third-Line Antiretroviral Treatment
TOR	Terms of Reference
TROA	Total Remaining on Antiretroviral Therapy
USAID	United States Agency for International Development



# 1. EXECUTIVE SUMMARY

## INTRODUCTION

South Africa remains at the center of the global AIDS epidemic and has one of the highest burdens of tuberculosis (TB) in the world. An efficient and effective health supply chain that improves medicine availability is critical to addressing that disease burden. With this in mind, the United States Agency for International Development (USAID) launched the Global Health Supply Chain Program – Technical Assistance (GHSC-TA) in South Africa in September 2016. The program provides technical assistance (TA) to the South African government to strengthen public health systems and supply chains to advance an AIDS-free generation and contribute to the achievement of universal health coverage.

GHSC-TA provides TA directly to the Affordable Medicines Directorate (AMD) of the National Department of Health (NDoH), as well as to the Pharmaceutical Services (PS) directorates of the Provincial Departments of Health (PDoH). The overall aim of the program is to assist the government with improving access to, and availability of, the medicines and related commodities needed to prevent and treat HIV/AIDS, TB, and associated conditions and disorders.

## PURPOSE OF THIS DOCUMENT

This quarterly report details GHSC-TA program activities and achievements by objective and, where possible, provides results for each of the six objectives against key performance indicators (KPIs).

## YEAR 6 QUARTER 2 ACTIVITIES AND ACHIEVEMENTS

Year 6 Quarter 2 (Q2) activities continued to focus on strengthening the health supply chain at the national and provincial levels. At the provincial level, GHSC-TA continued to provide support through the provincial support team (PST), which facilitates the implementation and institutionalization of supply chain reforms in the provinces. In addition, the team continued with efforts to support the Government of South Africa (GoSA) in the national response to the COVID-19 pandemic.

The program is segmented into nine main activities, representing capacity-building interventions across multiple functional areas. These activities align with the six program objectives. A high-level overview of Q2 activities and accomplishments for each objective follows.

### OBJECTIVE 1: IMPROVE SELECTION AND USE OF MEDICINES

GHSC-TA continued to work with the Essential Drugs Program (EDP) of the AMD to strengthen the selection and use of medicines. Program support focused on convening and strengthening the current medicine selection structures and processes, including the National Essential Medicines List Committee (NEMLC) and the Ministerial Advisory Committee on Antimicrobial Resistance (MAC-AMR). Specific achievements included drafting the NEMLC Bulletins, updating the terms of reference (TOR) of the NEMLC, and assistance with the development of an Interim Health Technology Assessment (HTA) Strategy.

### OBJECTIVE 2: SUPPORT OPTIMIZATION OF THE SUPPLY CHAIN

GHSC-TA completed the demand forecasting initiation phase in two new provinces, Limpopo and Mpumalanga, and supported both provinces in their first demand reviews. The GHSC-TA team also completed the annual pharmaceutical budget reviews for provinces. Provincial heads of departments

and Chief Financial Officers (CFOs) signed off on budgets. The team continued to provide ongoing support to update the COVID-19 forecast, tender forecasting, and in contract demand forecasting.

GHSC-TA, together with provincial teams, reviewed and finalized the finance dashboard on the National Surveillance Center (NSC). This dashboard will function as a central repository for reporting information as well as monitoring and summarizing key metrics. The tool will enable relevant stakeholders to monitor and assess medicine spend against budget. GHSC-TA also presented finance dashboards to the provincial CFOs and made arrangements to assist the provinces to review the pharmaceutical budget on a quarterly basis.

### **OBJECTIVE 3: STRENGTHEN GOVERNANCE**

GHSC-TA continued to support AMD and the provinces to strengthen governance. The team supported AMD with revising the three sets of regulations relating to practice, registration, and education of pharmacy support personnel. GHSC-TA also developed contracting and contract management standard operating procedures (SOPs). Finally, the team revised the barcoding discussion paper to align to the World Health Organization policy paper on pharmaceutical traceability and the GSI traceability implementation roadmap for medicinal products.

### **OBJECTIVE 4: IMPROVE WORKFORCE MANAGEMENT**

GHSC-TA provides technical assistance to strengthen the workforce and organizational structures within the AMD to perform the functions necessary to improve medicine availability and support the implementation of the Strategy for Improved Medicine Availability (SIMA). GHSC-TA supported the training and mentorship of the TLD Champions, Pharmaceutical Services and the HAST managers, as many of the transition activities were moved from provinces to districts. Provincial task teams were established to oversee and identify bottlenecks, and to provide additional support and training where needed. GHSC-TA worked closely with the AMD central demand planning team, providing support on initiating a province into the demand forecasting process.

### **OBJECTIVE 5: STRENGTHEN INFORMATION SYSTEMS AND INFORMATION MANAGEMENT**

GHSC-TA continued to assist AMD and the service provider to develop and roll-out the Medicine Master Data System (MMDS) and Stock Visibility System (SVS). The integration of MMDS and SVS medicine data, started in previous quarters was completed.

SVS system development continued to focus on integration with MEDSAS, the most widely used warehouse management system, to allow seamless passing of orders from SVS to MEDSAS via the Remote Demander Module (RDM).

GHSC-TA transitioned the maintenance and support functions of the NSC to Mezzanine, as the approved NSC hosting and maintenance service provider. GHSC-TA also completed and published enhancements to the integrated view dashboard, supplier dashboards, Annual Performance Plan (APP) target dashboard, and the personal protective equipment (PPE) reporting compliance view. The program further assisted AMD in the NSC business process audit by the Auditor General (AG).

### **OBJECTIVE 6: IMPROVE FINANCIAL MANAGEMENT**

Due to the close linkages with Objective 2, work in this area has been collapsed into the Demand Planning and Financial Management stream.

## 2. INTRODUCTION

South Africa remains at the center of the worldwide AIDS epidemic, with an estimated 7.9 million<sup>1</sup> people living with the disease. In addition, the country has the third-highest burden of TB internationally.<sup>2</sup> An efficient and effective health supply chain that improves medicine availability is critical to addressing that burden. With this in mind, USAID launched GHSC-TA in South Africa in September 2016. The program provides TA to the South African government to strengthen public health systems and supply chains to advance an AIDS-free generation and contribute to the achievement of universal health coverage.

The availability of medicine directly impacts health outcomes for the South African people. When health establishments do not have adequate medicine stock-on-hand to meet patient needs, not only is the health of patients jeopardized, but patients must return to the health establishment, at considerable personal expense and inconvenience, to collect their medicines. Addressing constraints and improving medicine availability is a core objective of South Africa's NDoH. GHSC-TA works with the NDoH to design and implement innovative solutions to transform the South African public health supply chain. Simultaneously, the program is working with PDoH to increase medicine availability nationwide. By improving health supply chain visibility, the program also supports public health establishments' efforts to anticipate patients' needs more accurately and position enough stocks of medicines where and when they are needed.

GHSC-TA provides TA directly to the AMD of the NDoH and the PS directorates of the provinces. The program's overall aim is to assist the government in improving access to, and availability of, the medicines and related commodities needed to prevent and treat HIV/AIDS, TB, and associated conditions and disorders. In addition, since the COVID-19 outbreak in South Africa in March 2020, GHSC-TA has supported the GoSA in the national COVID-19 response, including the roll-out of the vaccination program.

The GHSC-TA implementing team is led by Guidehouse LLP and includes PricewaterhouseCoopers South Africa, Imperial LLP, 4Africa Abaluleki (Pty) Ltd, and Banyan Global.

### PROGRAM OBJECTIVES

To this end, the program is tasked with the following six objectives:

- Objective 1: Improve Selection and Use of Medicines
- Objective 2: Support Optimization of the Supply Chain
- Objective 3: Strengthen Governance
- Objective 4: Improve Workforce Management
- Objective 5: Strengthen Information Systems and Information Management
- Objective 6: Improve Financial Management

GHSC-TA activities that support the six objectives outlined above are segmented into nine main activities, representing capacity-building interventions across multiple functional areas (refer to Table I below).

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<sup>1</sup> South African National AIDS Council, Annual Performance Plan 2019-2020. August 2019. Available at <https://sanac.org.za/wp-content/uploads/2019/08/Annual-Performance-Plan-201920.pdf>.

<sup>2</sup> USAID Where We Work, South Africa, Global Health. October 19, 2020. Available at <https://www.usaid.gov/south-africa/global-health>.

**Table 1: Activities and Descriptions**

<b>Activity</b>	<b>Description</b>	<b>Objective</b>
1. Medicine Master Data System	Assist AMD in designing (in collaboration with the contracted service provider responsible for development) and implementing the MMDS. This system incorporates the Master Health Product List (MHPL), Location Hierarchy, and Formulary Management Tool.	Objective 5
2. National Surveillance Center	Support the operationalization and optimization of the NSC at the national and provincial levels to improve visibility into the performance of the supply chain and strengthen analytics to inform decision making.	Objective 5
3. Supply Chain Systems	Design, implement, transition, and promote the provincial, district, and health establishment utilization of supply chain systems and applications, including advising on the design and implementation of enhancements to the SVS.	Objective 5
4. Demand Planning and Budgeting	Develop and implement appropriate processes, tools, and human resource capabilities at national and provincial levels to implement demand planning. Strengthen both national and provincial structures and processes for budgeting and financial reporting for medicines.	Objective 2
5. Strengthen Medicine Selection and Use	Develop and implement policies, guidelines, tools, and approaches to support evidence-based selection and use of medicines.	Objective 1
6. Governance and Legislation	Support good governance by implementing or strengthening relevant structures within the AMD and PDoH (supported by the necessary TORs), and develop and/or review legislation, policies, guidelines, processes, and procedures. Advise AMD on contracting with medicine suppliers and associated post-award contract management.	Objective 3
7. Tenofovir / lamivudine /dolutegravir (TLD) Transition	Provide supply chain and clinical-related support for the transition of eligible patients living with HIV to tenofovir/lamivudine/dolutegravir (TLD) or dolutegravir (DTG) containing products, as appropriate.	Objective 2
8. Replenishment Planning	Design and implement activities leveraging medicine supply management best practices to ensure that essential medicines are available at health establishments through the standardization of medicine master data, strengthening of formulary management, the use of minimum/maximum (min-max) stock levels, and introduction of an advised-pull approach to replenishment planning.	Objective 2
9. Provincial Support	Support supply chain optimization at the provincial level through implementing and institutionalizing supply chain reforms.	All objectives

GHSC-TA assists the AMD with implementing the SIMA (2016—2021), which encompasses five core functions: selection of medicine and technologies, contracting of suppliers, management of the supply chain, contract management per the applicable requirements and conditions of the contract, and promotion of RMU. These functions are supported by five enabling functions: governance, workforce management, information systems and management, financial management, and education and research. Interventions aim to strengthen both core and enabling functions with a view to continuous improvement.

This work directly supports the USAID/South Africa Country Development Cooperation Strategy results framework by supporting Development Objective 1 - Health outcomes for South Africans improved, the NDoH SIMA and the NDoH APP.

## YEAR 6 QUARTER 2 OVERVIEW

GHSC-TA activities in Q2 of Year 6 continued to focus on strengthening the health supply chain from both a national and a provincial perspective. GHSC-TA also continued to support the GoSA in managing the outbreak of COVID-19 with respect to the medicines and PPE needed by staff and patients and the roll-out of COVID-19 vaccines.

The response to COVID-19 has allowed the program, AMD, and the provinces to continue monitoring the robustness of processes and tools previously developed. Lessons learned from the pandemic have continued to provide opportunities to strengthen processes, enhance and expand the NSC, and institutionalize its use.

Despite COVID-19, GHSC-TA has managed to maintain most planned activities with minimal interruptions or delays. In the case of some activities, it has been necessary to adjust timelines and reallocate resources. The roll-out of the COVID-19 vaccine has created an opportunity for the GHSC-TA team to work closely with NDoH and provincial and private sector stakeholders to plan and implement the supply chain activities in support of the national vaccination program.

## YEAR 6 QUARTER 2 ACHIEVEMENTS

Table 2 provides a high-level overview of Year 6 Q2 projects and their key achievements.

*Table 2: Key Year 6 Q2 Achievements*

<b>OBJECTIVE 1: IMPROVE SELECTION AND USE OF MEDICINES</b>
1. Updated the NEMLC TORs and developed the NEMLC Bulletins to communicate decisions made at meetings.
2. Assisted NDoH to develop an Interim Health Technology Assessment (HTA) Strategy.
3. Provided ongoing secretariat support to the MAC on COVID-19, including assistance with the development and communication of advisories to the Minister of Health on management of the COVID-19 response.
<b>OBJECTIVE 2: SUPPORT OPTIMIZATION OF THE SUPPLY CHAIN</b>
4. Initiated demand forecasting reviews in Limpopo and Mpumalanga.
5. Completed min-max stock level upload onto the SVS platform in Thabo Mofutsanyane district in the Free State.

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6. Calculated min-max levels for five districts in KwaZulu-Natal and Sarah Baartman District in the Eastern Cape.

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  7. Deployed advised pull in the entire Fezile Dabi District in the Free State.

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  8. Commenced roll out of replenishment planning in two pilot sites in Mpumalanga.

### **OBJECTIVE 3: STRENGTHEN GOVERNANCE**

9. Reviewed public comment received on the three sets of regulations relating to practice, education, and registration of pharmacy support personnel.

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10. Revised the draft discussion paper for product identification and capturing implementation.

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11. Developed and reviewed SOPs for contracting and contract management.

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12. Commenced development of the contracting guideline.

### **OBJECTIVE 4: IMPROVE WORKFORCE MANAGEMENT**

13. Supported the training and mentorship of the TLD Champions and the HAST managers.

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14. Worked closely with the AMD central demand planning team, on initiating a province into the demand forecasting process.

### **OBJECTIVE 5: STRENGTHEN IT SYSTEMS AND INFORMATION MANAGEMENT**

15. Supported system development efforts for MMDS / SVS medicine level integration with all medicines now linked.

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16. Formulary Tool roll-out related engagements now underway in five provinces (Free State, North West, Eastern Cape, Mpumalanga and KwaZulu-Natal).

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17. Loaded 374 Mpumalanga health establishments onto the MMDS Location Tool in preparation for loading formularies for these establishments.

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18. Transitioned the maintenance and support functions of the NSC to Mezzanine, the approved service provider.

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19. Completed and implemented enhancements on the integrated view dashboard, supplier dashboards, APP target dashboard, and the PPE reporting compliance view on the NSC.

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20. Supported AMD in the NSC business process audit by the AG, and supported the response to the AG RFI.

### **OBJECTIVE 6: IMPROVE FINANCIAL MANAGEMENT**

21. Completed the FY2022 / 2023 pharmaceutical budget reviews with the Heads of Pharmaceutical Services for all nine provinces and provincial CFOs. The budgets have been approved by the Heads of Pharmaceutical Services (HOPS).

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  22. Northern Cape, Free State and KwaZulu-Natal provinces were selected as pilot sides for the budget dashboard.
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## **PROGRESS TOWARDS GOAL – INCREASED MEDICINE AVAILABILITY**

The overall aim of the program is to assist in improving access to, and availability of, the medicines and related commodities needed to prevent and treat HIV/AIDS, TB, and associated conditions and disorders. Progress in this regard is monitored nationally at all levels of care and is reported via the NSC.

### **KPI I. OVERALL PERCENTAGE MEDICINE AVAILABILITY**

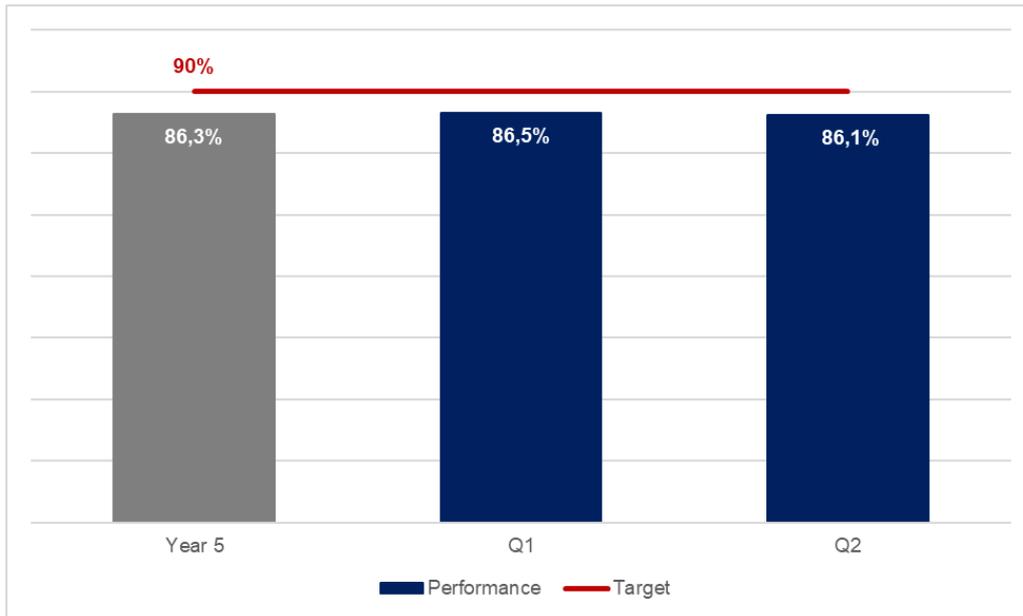
This indicator measures the availability of medicine at all health establishments (PHC clinics, community health centers (CHCs), hospitals, dispensing service providers of the Centralized Chronic Medicine Dispensing and Distribution program (CCMDD) and private sector health establishments providing health care services on behalf of the public sector). Overall medicine availability is defined as the percentage of active line items that appear on the health establishment's formulary (for data from RxSolution), or customised formulary based on the Ideal Clinic tracer list (for data from SVS), with stock available in the bulk medicine storage area(s), medicine room(s), or dispensary.

During the quarter under review, overall performance against this indicator was 86 percent against the target of 90 percent (shown in Figure 1). Two of the nine provinces achieved the target of 90 percent availability, namely Gauteng and KwaZulu-Natal (shown in Figure 2).

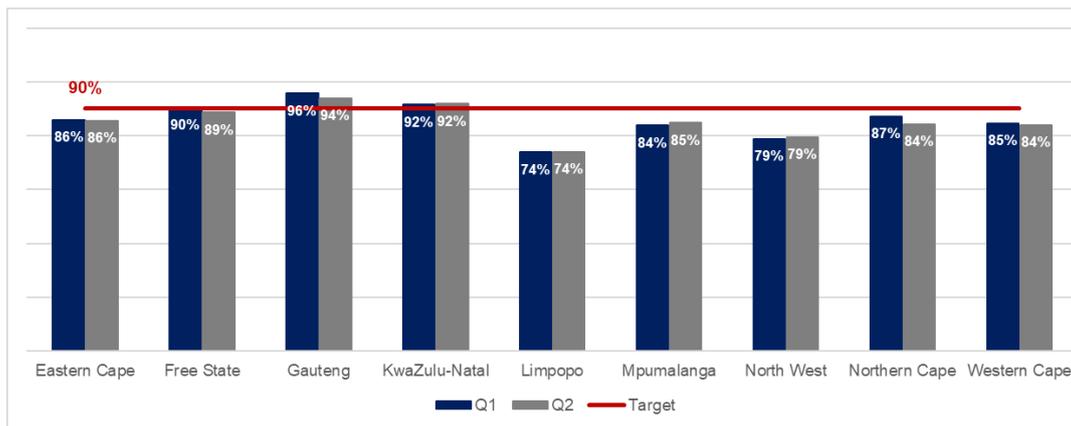
The previously reported challenges around the availability of several medicine lines still remain, with many items affected by supplier related constraints, particularly, TB therapy (shown in Figure 3), and various other medicine categories. There was a one percent decline on antiretrovirals over this reporting period, as most health establishments would have issued more than one month's supply to patients during the festive season and in some provinces, due to supply constraints and high demand (higher than contractual volumes), suppliers were not able to supply orders in full.

GHSC-TA continued to work with NDoH to understand challenges experienced. Investigations through the Improved Medicine Availability Team (IMAT) process have shown that active pharmaceutical ingredient shortages, production-related challenges, and delays in shipping have been the biggest constraints faced by suppliers. Given these challenges it might be difficult to achieve national availability above the 90 percent target.

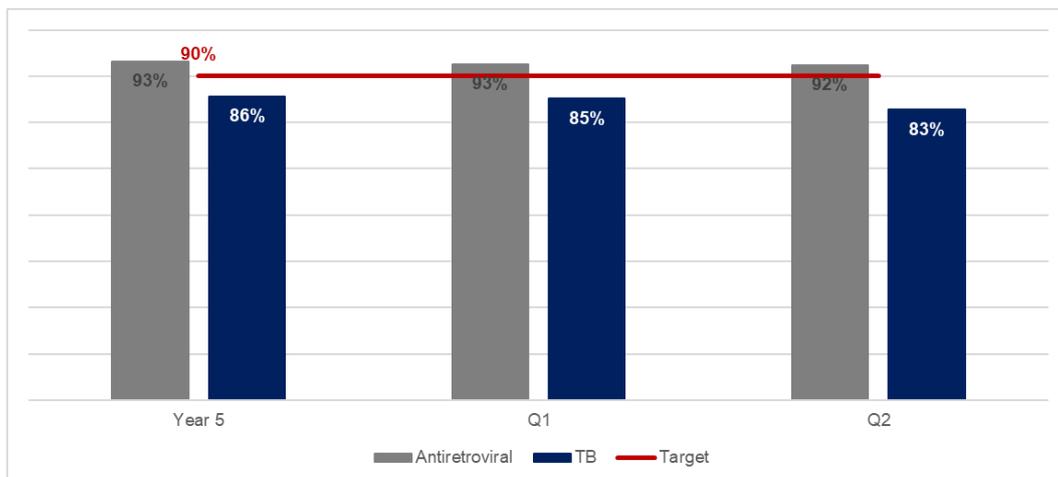
**Figure 1 Overall Percentage Medicine Availability in Year 6 Q2**



**Figure 2 Disaggregation by province in Year 6 Q1 and Q2**



**Figure 3 Disaggregation by Medicine category in Year 6 Q2**



Other factors that continue to impact medicine availability include provincial accounts being placed on hold due to non-payment of suppliers, demanders not placing orders in a timely manner or at all, and the lack of customized formularies, particularly at warehouses and hospitals. GHSC-TA continues to address these challenges with the work underway to improve formulary management and strengthen replenishment planning. In addition GHSC-TA continues to provide tailored assistance to provincial and district pharmaceutical services through the PST, flagging items with low availability and sites with sub-optimal medicine availability through generating bespoke reports and supporting provinces and districts in addressing issues identified.



### **3. IMPROVE SELECTION AND USE OF MEDICINES**

South Africa's unique disease burden shapes its national health priorities, health system design, and health funding structures. As with most health care systems globally, the country has limited funds available for servicing the population's health care needs, including medicines and medical-related health technologies. Limited funds must be allocated according to an evidence-based approach to provide the best quality health care to all South Africans.

In addition, South Africa's public health care system must match the medicine available to meet patients' needs. Through the relevant governance bodies such as the NEMLC, the AMD is responsible for supporting the selection and use of medicines for patients nationally and making sure these medicines are accessible and available when and where required.

#### **ACTIVITIES AND ACHIEVEMENTS**

##### **STRENGTHEN MEDICINE SELECTION AND USE**

GHSC-TA is working with the AMD to strengthen medicine selection and rational medicine use (RMU) to provide an accountable mechanism to support decision making related to the funding, cost, and use of medicines and health technologies in South Africa. GHSC-TA continued assisting the NDoH to

strengthen the selection and use of medicines to support the attainment of universal health coverage as the country moves towards National Health Insurance (NHI).

**Medicines Selection Support.** GHSC-TA assisted the EDP of the AMD with convening the NEMLC. The team drafted the NEMLC Bulletins following meetings held on December 9, 2021 and February 24, 2022, to communicate decisions made at its meetings. GHSC-TA presented the NEMLC TORs and updated them multiple times following NEMLC review and comment.

GHSC-TA assisted with the development of an Interim HTA Strategy, to provide a practical solution for setting up an interim HTA Unit, outlining a three-year strategy for strengthening HTA capabilities of the NDoH in preparation for NHI reforms.

**RMU Support.** GHSC-TA assisted with convening and documenting the MAC-AMR meeting on March 31, 2022, with the purpose of assisting with coordination of inter-sectoral efforts on AMR using the “One Health” approach inclusive of human, animal and environmental health relating to antimicrobials. GHSC-TA also developed a scoping document to get agreement from stakeholders at NDoH on the purpose and content of a guideline on medicine supply chain pandemic preparedness and response. The purpose of the document is to use lessons learnt from the COVID-19 pandemic to provide guidance on how to effectively prepare for, respond to, and maintain the medicine supply chain in future public health emergencies.

## OUTCOME LEVEL RESULTS

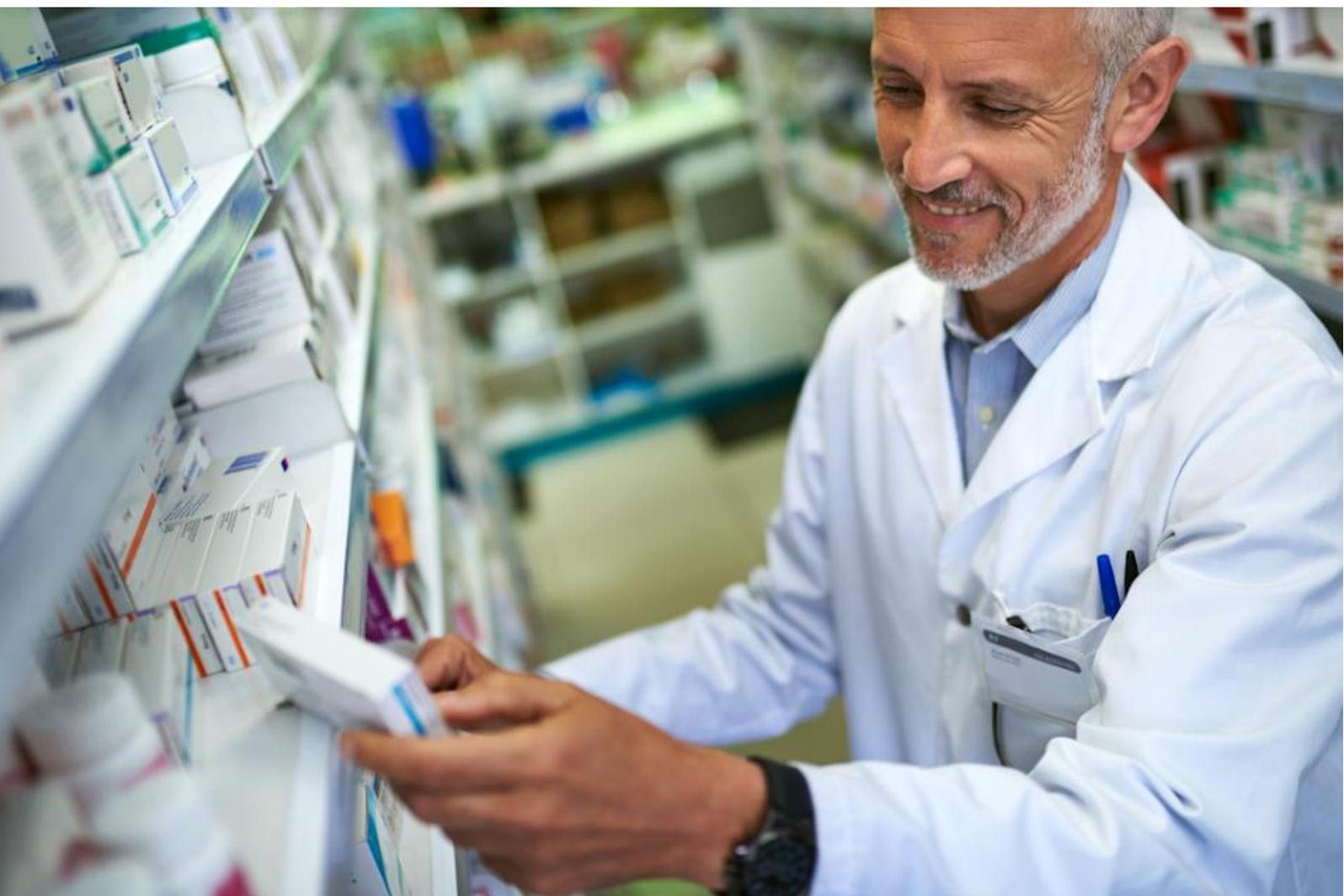
The program’s theory of change hypothesizes that by supporting AMD efforts to conduct HTAs and leverage their outputs, the GoSA will demonstrate improvements in the selection and use of medicines. To test these assumptions, GHSC-TA monitors two KPIs. This section provides an overview of the progress against these KPIs through the end of Year 6 Q2.

### KPI 2. NUMBER OF MEDICINE SELECTION DECISIONS MADE UTILIZING HEALTH TECHNOLOGY ASSESSMENT PROCESSES

This KPI measures the extent to which HTA processes inform decision making by the NEMLC and other relevant committees. Improved decision making is key to determining the medicines and other health technologies funded under NHI. There was no change in this indicator during the period under review, with the life of program performance remaining at four. During Year 4, AMD placed HTA activities on hold, pending the finalization of legislation needed to implement NHI. In Year 6, GHSC-TA supported AMD with activities in preparation for implementing HTA. In addition, GHSC-TA assisted with the development of an Interim HTA strategy, to provide a practical solution for setting up an interim HTA Unit to improve HTA capabilities.

### KPI 3. PERCENTAGE OF ASSISTED PHARMACEUTICAL AND THERAPEUTICS COMMITTEES (PTCS) WITH IMPROVED OPERATIONAL CAPACITY

This indicator measures the total number of assisted PTCs, which demonstrate improved levels of operational capacity as compared to the total number of assisted PTCs. This is an end line KPI, as a number of interventions must be completed before the final measurement is done. Additionally, activities that contribute to this KPI were deprioritized by the NDoH.



#### **4. SUPPORT OPTIMIZATION OF THE SUPPLY CHAIN**

The current supply chain processes within the NDoH form a foundation for enabling medicine availability across the different health establishments in the country. More than 80 percent of the South African population is dependent on public sector health care provision, making the effective supply of medicine a life-saving requirement for many. Medicine availability is also the cornerstone for achieving 95-95-95 in the fight against HIV. Optimizing the supply chain starts with creating visibility and then improving supply chain processes. This optimization will generate savings, ensure more effective execution of key processes, and ultimately increase medicine availability. GHSC-TA has been assisting the NDoH with optimizing the supply chain through several initiatives related to improving accuracy of demand forecasts, strengthening financial management, and supporting the TLD transition.

#### **ACTIVITIES AND ACHIEVEMENTS**

##### **DEMAND PLANNING**

GHSC-TA works with the NDoH to produce innovative processes, tools, and workforce training that result in more accurate demand forecasts. The forecasts are established through a centralized demand planning team based at NDoH. As part of the process, GHSC-TA also collaborates with the HIV and

TB Programs, the Expanded Program on Immunization and PDoHs to enrich the demand forecast and enable the best demand plans possible.

**Tender Forecasting.** GHSC-TA continued to support NDoH to utilize the provincial demand forecasts to calculate future projections for the next tender cycle. The approach of determining and utilizing a single number across operations (including determining patient needs, forecasting requirements, tendering, contracting and contract management) has enabled alignment across the various functions. GHSC-TA supported the finalization of the contraceptive, small volume parenterals and antiretrovirals (ARV) forecast for the upcoming bid specification meetings, which form part of the contracting cycle.

**In-contract Demand Planning.** GHSC-TA continued to support the Contract Management Unit (CMU) by publishing the in-contract demand forecast (ICDF) monthly, ICDF is used in supplier engagement, provincial engagement and general stock management nationally.

**Provincial Demand Planning.** During this quarter, GHSC-TA completed the initiation phase (demand forecasting data collection and cleaning) for Limpopo, Mpumalanga and Northern Cape in preparation for implementing the monthly demand forecasting review processes. Limpopo and Mpumalanga went further into the implementation phase and held the first demand review meetings. The first demand review meeting in the Northern Cape was delayed due to the annual stock-take process. SCTA worked closely with the NDoH central demand planning team, providing on the job training on how to initiate a province into the demand forecasting process. Limpopo and Northern Cape provinces were handed over to the central demand planning team. This team will manage both provinces going forward with GHSC-TA providing assistance, support and oversight.

## FINANCIAL MANAGEMENT

GHSC-TA works with the NDoH and PDoH to develop pharmaceutical budgets using the demand forecasting process. The final approved demand forecast is cashed up using the cost prices for the new financial year and submitted to NDoH for consolidation. GHSC-TA also helps with budget reporting and monitoring using dashboards.

**Budget Planning.** GHSC-TA completed the FY 2022 / 2023 pharmaceutical budget reviews with all nine provinces, and provincial Heads of Pharmaceutical Services approved the budgets. GHSC-TA also arranged meetings with provincial CFOs to review and approve the budgets. Only two provinces, Gauteng and Western Cape, are yet to meet with their respective CFOs. Pharmaceutical budget reviews use demand forecasting to review all pharmaceutical items in the provinces and monetize the forecast.

**Budget Reporting and Monitoring.** GHSC-TA worked with the provinces to finalize the budget dashboard views on the NSC. Northern Cape, Free State and KwaZulu-Natal provinces were selected for the pilot. GHSC-TA presented dashboards to provincial CFOs during the pharmaceutical budget review meetings and requested receipt of dashboard data on a monthly basis. Eight provinces have agreed to review pharmaceutical budgets quarterly using dashboards for FY 2022 / 2023.

## TLD TRANSITION

The tenofovir/lamivudine/dolutegravir (TLD) transition has crossed the two-year mark, with the ratio of eligible patients for transition to TLD from Tenofovir/Emtricitabine/Efavirenz (TEE) reaching 76:24

as of March 2022. Some concerning trends were noted and again included anecdotal reports of patients being switched back to TEE, after being transitioned to TLD.

The TLD transition team continued tracking the distribution of TLD and TEE from suppliers to provinces, together with stock levels at depots, hospitals and PHC facilities. The numbers are used to estimate how much TLD and TEE are being used. In 2021, the average usage over three and six months appeared to have dropped. This trend could be attributed to the fact that provinces were running out of donation stock. In 2020, the combined usage was over five million packs per month, dropping to between four and four and a half million in July 2021. There has been some recovery in recent months, but not yet to the levels of 2021. Suppliers of TLD and TEE have also raised concerns on lower-than-expected orders signifying fewer patients. This has been raised with provincial stakeholders and is currently under investigation by the National TLD Task team.

GHSC-TA, in collaboration with Africa Resource Centre (ARC), worked closely with the PDoH, the HIV Program, and other implementing partners to support the TLD transition. By the end of Year 6, Q2, the provinces had transitioned 78 percent of the total remaining on antiretroviral therapy (TROA), as seen through the implied dispensing numbers. The TLD team used implied dispensing data (based on the number of packs issued) in the absence of TIER.Net data (patient data). The team subsequently received the last updated TIER.Net report for December 2021. A comparison of the data found that the number of patients on TLD as per Tier.Net was significantly lower than the number based on implied dispensing and CCMDD data. Possible factors contributing to the data discrepancies could include that the Tier.Net data is only available on a quarterly basis, capturing of data lagging behind in some facilities, as well as old ART regimens being captured instead of new data.

Interventions to address data related challenges at facility level and assist underperforming facilities to reach targets include:

- Supporting the Top 10 struggling facilities based on TROA per province;
- Identifying facilities that are supported by district support partners (DSPs), with the TLD task team focussing on facilities that do not have DSP support;
- Correcting stock levels of TLD / TEE at depot / CCMDD and facility level;
- Identifying interventions required to assist clinicians with transitioning patients to TLD;
- Setting targets and monitoring tools for tracking and reporting purposes;
- Identifying interventions required to assist with capturing/training, etc.

A detailed plan with areas of responsibilities will be developed. On-going monitoring will continue and performance against targets tracked on a monthly basis.

**Communication.** GHSC-TA assisted the NDoH and PDoH in strengthening communication between stakeholders by establishing key stakeholder groups in each province to disseminate circulars and memos from NDoH. The team continued to share information and receive feedback on issues related to the transition through the provincial WhatsApp groups established. Improved communication is informing clinicians of changes and updates on the clinical guidelines. GHSC-TA assisted the HIV Program with the update and distribution of the current TLD training material. GHSC-TA also supported and facilitated the update of communication materials for effective engagement with stakeholders and beneficiaries.

**TLD Dashboard.** During Q2, the TLD project team continued to use information from the TLD dashboard, developed in 2019, to determine the implied dispensing numbers. The TLD dashboard not only tracks the TLD transition but enables visibility of the availability of TB medicines and

contraceptives, crucial in ART treatment regimens. The dashboard enabled stakeholders to manage stock levels down to district and health establishment levels and supported stock movement where needed. Where national stock challenges were identified, these were referred to, and addressed by IMAT.

**Demand Model.** Through the national demand model, GHSC-TA updates the provincial forecasts on a quarterly basis. The forecasts inform the transition's pace provincially and assist the TLD project team in monitoring progress nationally. The updated forecast data informs the national and provincial supply plan to facilitate the availability of TLD, TEE, and other items related to the transition. GHSC-TA is in the process of assisting the HIV Program to set revised TLD / TROA targets that will be finalized and implemented by the end of April 2022. GHSC-TA will update finalized targets for the national and provincial forecasts. This will determine the balance of eligible patients to be switched to TLD as well as phasing over the next nine months. ARC uses this input to develop the supply plan, shared with suppliers to secure the volumes required. GHSC-TA, in collaboration with ARC, continued to work closely with suppliers and provinces to avoid stock-outs of TEE and TLD.

**Ongoing Collaboration.** GHSC-TA continued to hold weekly sales and operations meetings with provincial Pharmaceutical Services and the Strategic Health Program. In addition, GHSC-TA provided ongoing support to the provincial depots to improve the availability of TLD and TEE and avoid potential stock-outs. There are continued engagements with the CMU at AMD to discuss supply challenges on selected contraceptives, TB medicines, and pre-exposure prophylaxis (PrEP). GHSC-TA also assisted the HIV Program and support partners to secure PrEP for the national roll-out.

**Preparing for National Scale Up of Second Line Switching.** In preparation for the national scale up to transition all eligible second line patients, GHSC-TA, in collaboration with the Demand Planning unit at NDoH, is in the process of developing a demand model to assist the provinces with switching. In the absence of accurate second line data, the model development has temporarily been suspended but KPIs will be developed for inclusion in the monitoring and evaluation tracking tools.

GHSC-TA assisted the HIV Program with updating the TLD training module to include second line switching and viral load management. In addition, GHSC-TA supported development of a new algorithm to assist clinicians when switching patients from the lopinavir/ritonavir combination. The updated transition algorithm, training material and pamphlets were shared with stakeholders.

**Additional Interventions.** GHSC-TA also provided ongoing support to:

- Provincial TLD steering committee meetings with support shared between GHSC-TA and ARC;
- The HIV Program at national and provincial levels with feedback provided in the weekly Phuthuma meetings and bi-monthly TLD task team meetings; and
- Scale up and implementation of MMD6.

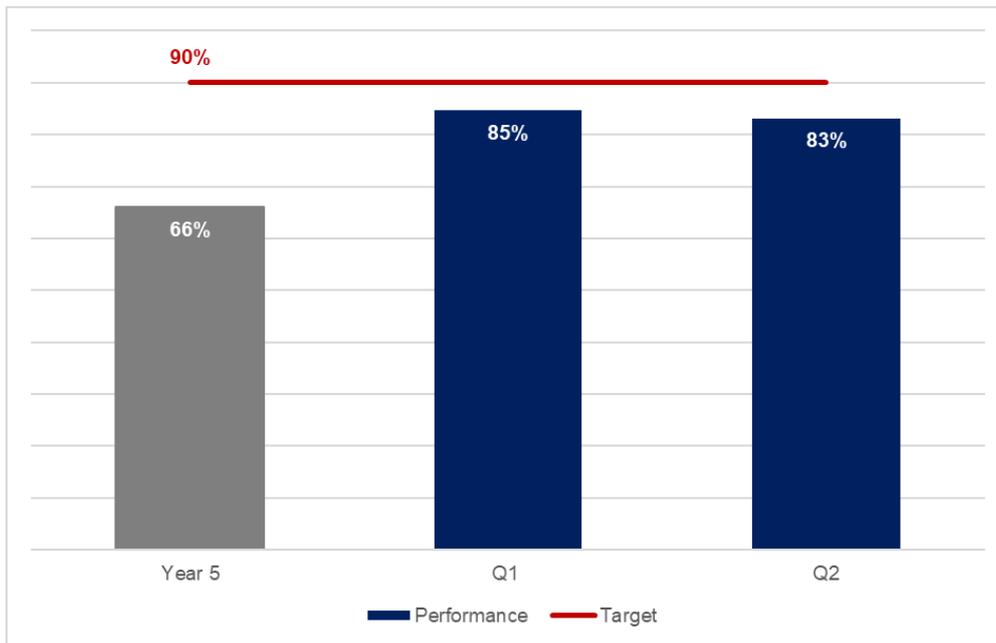
## OUTCOME LEVEL RESULTS

GHSC-TA hypothesizes that by supporting activities to improve the security of medicine and strengthen demand planning and inventory management and working with the AMD to improve visibility and analytics to strengthen planning processes, the GoSA will demonstrate improvements in the level of optimization of the supply chain. In efforts to evaluate this hypothesis, GHSC-TA monitors nine KPIs. This section provides an overview of the progress and results observed against these KPIs through the end of Year 6 Q2.

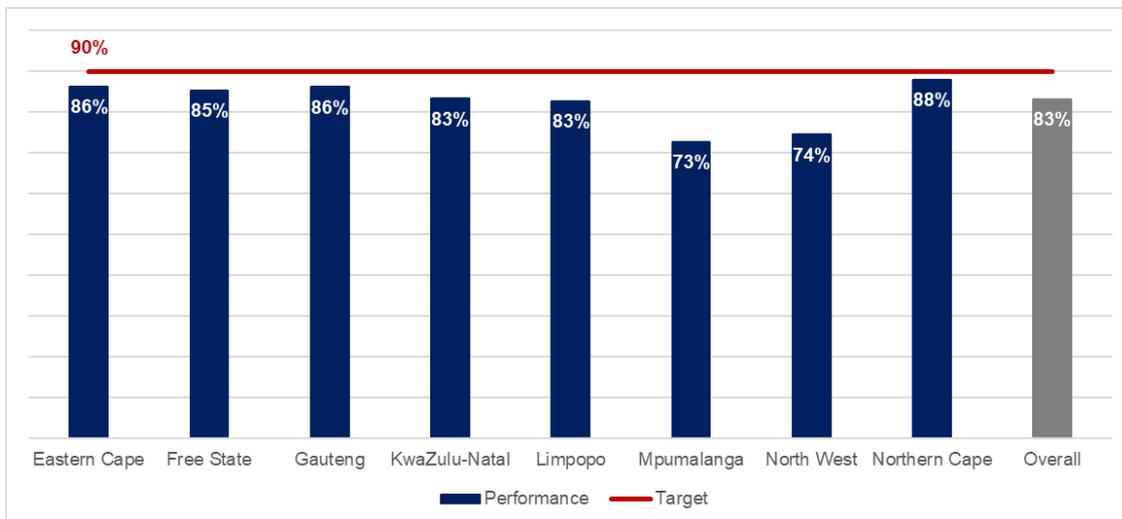
#### KPI 4. PERCENTAGE OF ANTIRETROVIRAL UNITS DELIVERED BY SUPPLIERS WITHIN CONTRACTUAL LEAD-TIME (SUPPLIER PERFORMANCE RELIABILITY – ON TIME)

This indicator measures supplier adherence to fulfilling orders for antiretroviral units received from demanders within the contractually agreed time. At the end of Q2, 83 percent of ARVs were delivered by suppliers within the contractual lead time of 14 days. The performance demonstrated an improvement from year 5 and a decrease from the 85 percent reported at the end of Q1, as shown in Figure 4. Performance remained below the target of 90 percent. In some provinces, suppliers do not deliver on time due to non-payment. Figure 5 provides a disaggregation by province.

**Figure 4 Percentage of Anti-retroviral Units Delivered by Suppliers within Contractual Lead-time (Supplier Performance Reliability - On Time) in Year 6 Q2**



**Figure 5 Supplier Performance Reliability - On Time - Disaggregation by Province in Year 6 Q2**

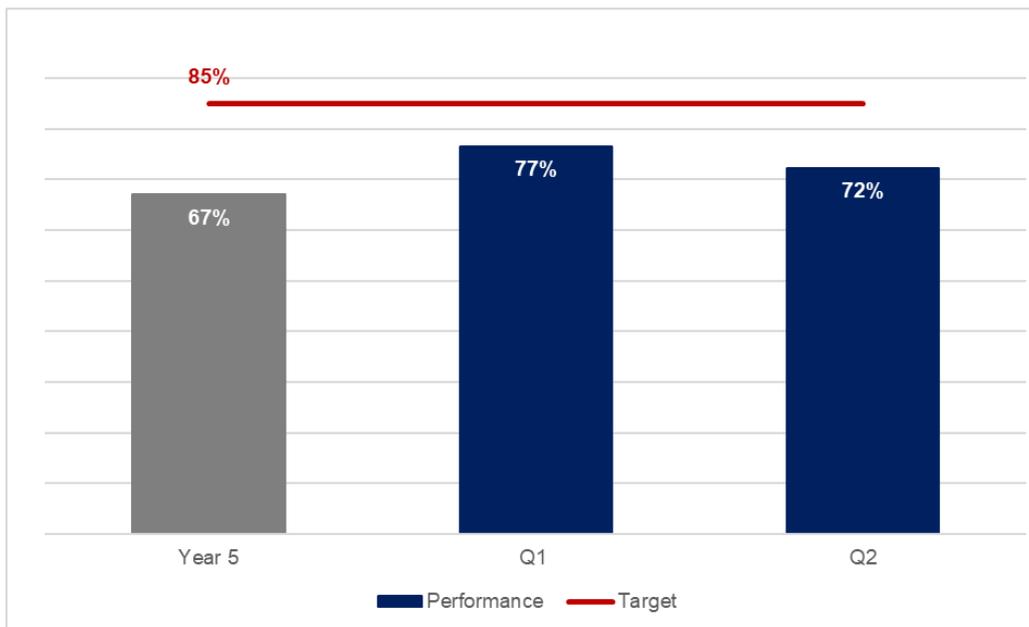


**KPI 5. PERCENTAGE OF MASTER HEALTH PRODUCT LIST ITEMS ON TRANSVERSAL CONTRACTS (EXCLUDING ANTIRETROVIRAL) UNITS DELIVERED BY SUPPLIERS WITHIN CONTRACTUAL LEAD TIME (SUPPLIER PERFORMANCE RELIABILITY – ON TIME)**

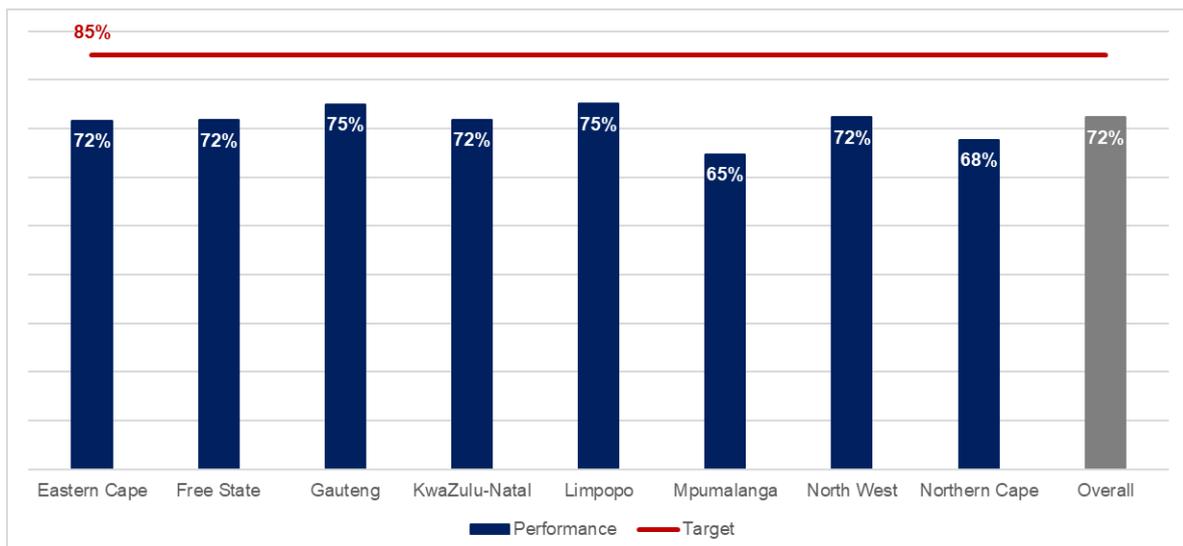
This indicator measures supplier adherence to fulfilling orders for MHPL items on national transversal contracts (excluding antiretroviral units), received from demanders within the contractually agreed time. In Q2, 72 percent of MHPL items (excluding ARVs) were delivered by suppliers within the contractual lead-time, an improvement from 67 percent reported in year 5 and a slight decline from

77 percent at the end of Q1, as shown in Figure 6. Although there has been an improvement, the performance is still below target as a number of items are currently on the ‘hotlist’ due to supplier constraints. GHSC-TA continued to support AMD in identifying interventions to resolve medicine supply challenges. Figure 7 presents the disaggregation by province.

**Figure 6 Percentage of MHPL Items on Transversal Contracts Excluding Antiretroviral Units Delivered by Suppliers within Contractual Lead-Time (Supplier Performance Reliability - On Time) in Year 6 Q2**



**Figure 7 Disaggregation by Province in Year 6 Q2**

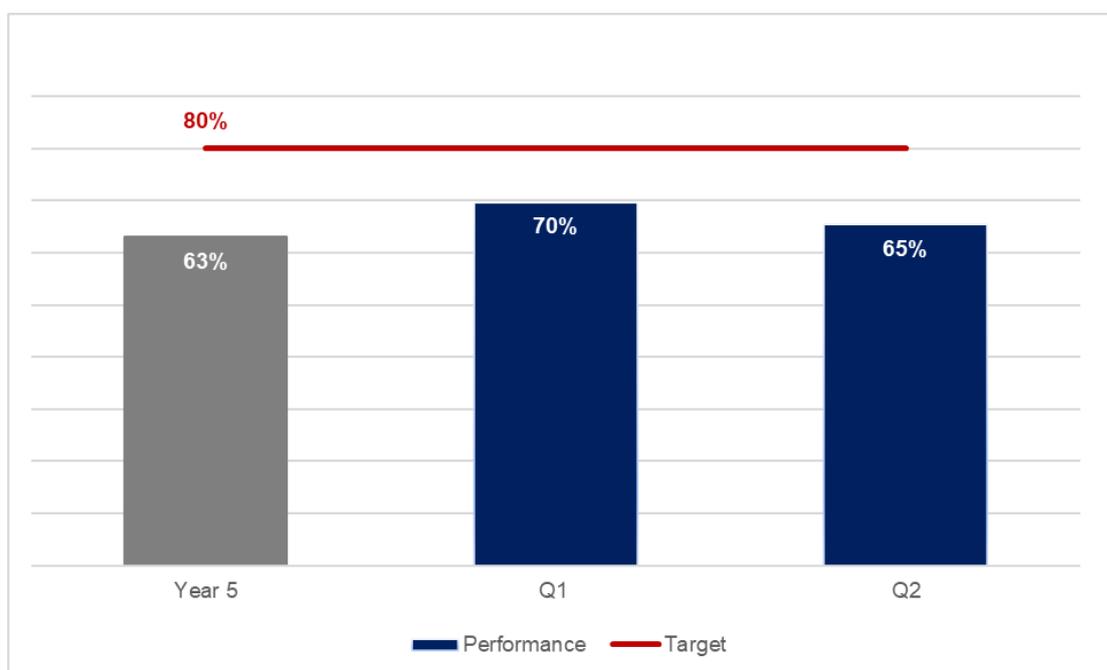


## KPI 6. SUPPLIER PERFORMANCE RELIABILITY – PERFECT ORDER FULFILLMENT FOR ORDERS PLACED ON SUPPLIERS (ON-TIME AND IN-FULL)

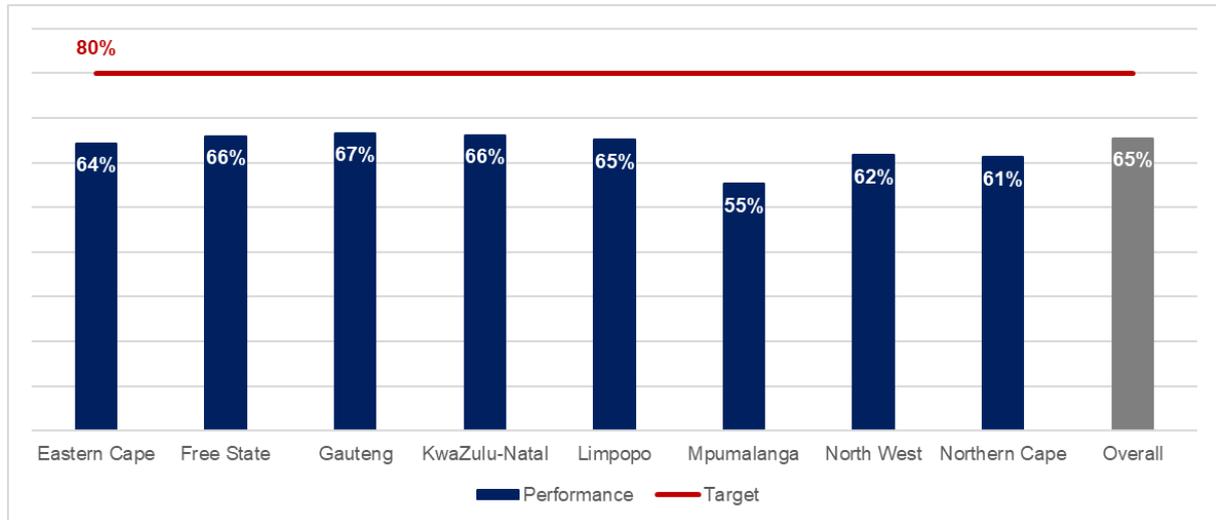
This indicator measures supplier adherence to fulfilling orders from demanders on time and in full and drives supply chain reliability and responsiveness. It applies only to items for which a transversal contract has been awarded and does not include items procured on quotation and/or using section 21 of the Medicines and Related Substances Act 101 of 1965.

At the end of Q2, supplier performance reliability was reported at 65 percent, a decline from 70 percent at the end of Q1 as shown in Figure 8. Performance remained below the target of 80 percent. Due to supply constraints and high demand (higher than contractual volumes), suppliers were not able to supply orders in full. GHSC-TA is working with AMD to strengthen in-contract demand forecasting so that AMD can engage suppliers to increase production as needed. Figure 9 presents the disaggregation by province.

**Figure 8 Supplier Performance Reliability--Perfect Order Fulfilment for Orders Placed on Suppliers (On-Time and In-Full) in Year 6 Q2**



**Figure 9 Disaggregation by Province in Year 6 Q2**



**KPI 7. PERCENTAGE OF MASTER HEALTH PRODUCT LIST ITEMS ON TRANSVERSAL CONTRACTS DELIVERED VIA DIRECT DELIVERY TO THE HOSPITALS DESIGNATED BY THE PROVINCE TO RECEIVE DIRECT DELIVERY ORDERS**

This indicator measures the percentage of MHPL items on transversal contracts delivered directly to hospitals designated by the province to receive direct delivery orders. This activity is no longer included in the scope of GHSC-TA.

**KPI 9. DEMAND FORECAST ACCURACY FOR PROVINCES USING THE DEMAND FORECASTING PROCESS**

This indicator measures the accuracy of forecast demand of line items relative to actual volume of item supplied over a three-month period. This KPI is applied in provinces where the standard demand planning process has been implemented. It is critical to have high forecast accuracy to avoid stock-outs and maintain appropriate levels of inventory.

At the end of the reporting period, demand forecast accuracy for provinces using the demand forecasting process was reported at 52 percent, an improvement from the 47 percent reported at the end of Q1. All provinces except North West achieved an improved forecast accuracy compared to last reporting period. Performance remained below the target of 55 percent, as shown in Figure 10.

Eastern Cape is still the province with the highest forecast accuracy, finishing the quarter at 58 percent, with the target achieved. All categories for the province achieved forecast accuracy above 56 percent except for vaccines which ended the quarter with a forecast accuracy of 32.5 percent.

Gauteng was the province with the most improved forecast accuracy at the end of Q2, an improvement of 13 percent from last quarter. Gauteng achieved a forecast accuracy of 53.3 percent for the quarter under review, TB medicines forecast for the quarter is 29.5 percent which is lower than the other categories.

In KwaZulu-Natal the overall result improved by 2 percent compared to Q1. TB medicines were the worst performing category, with a forecast accuracy of 5 percent, reducing the overall forecast accuracy for the entire province. This is one of the provinces that has been handed over to the NDoH central demanding team.

North West achieved 25.6 percent, with TB as the worst performing category. All other categories achieved a forecast accuracy below 30 percent. NW province have been handed over the central demand planning team and have not had demand review as yet this year.

**Figure 10 Overall Demand Forecast Accuracy in Year 6 Q2**

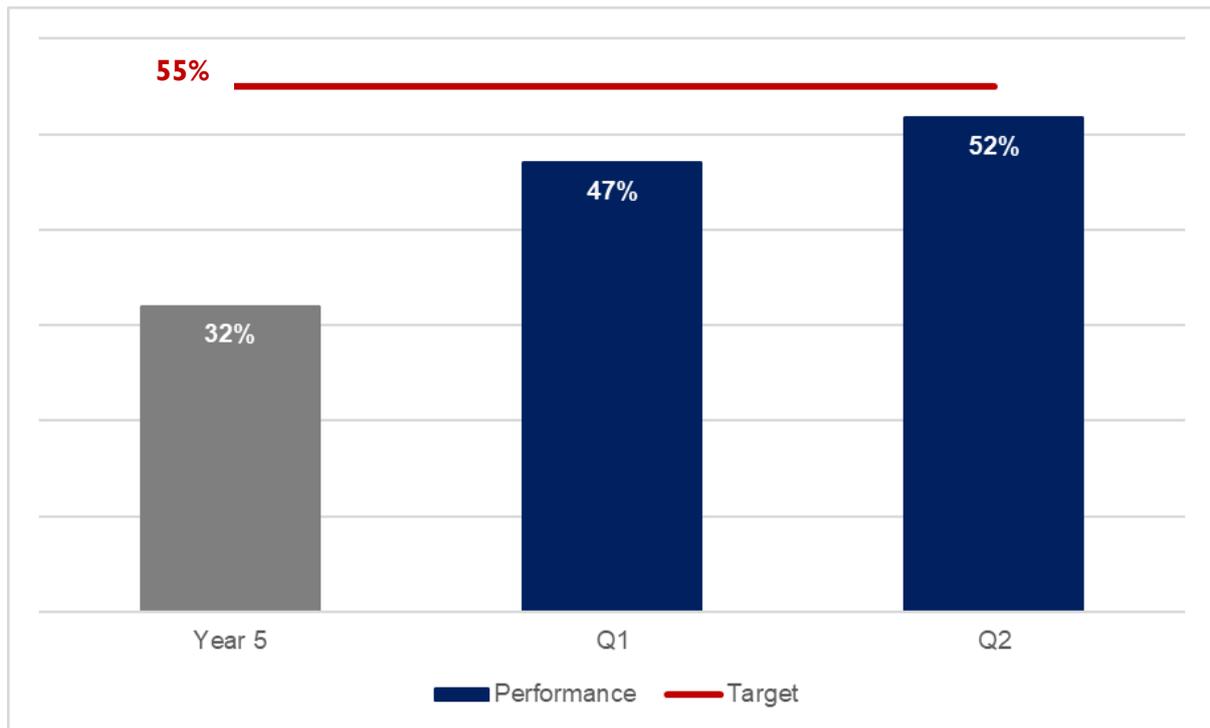


Figure 11 Disaggregation by Province in Year 6 Q1 and Q2

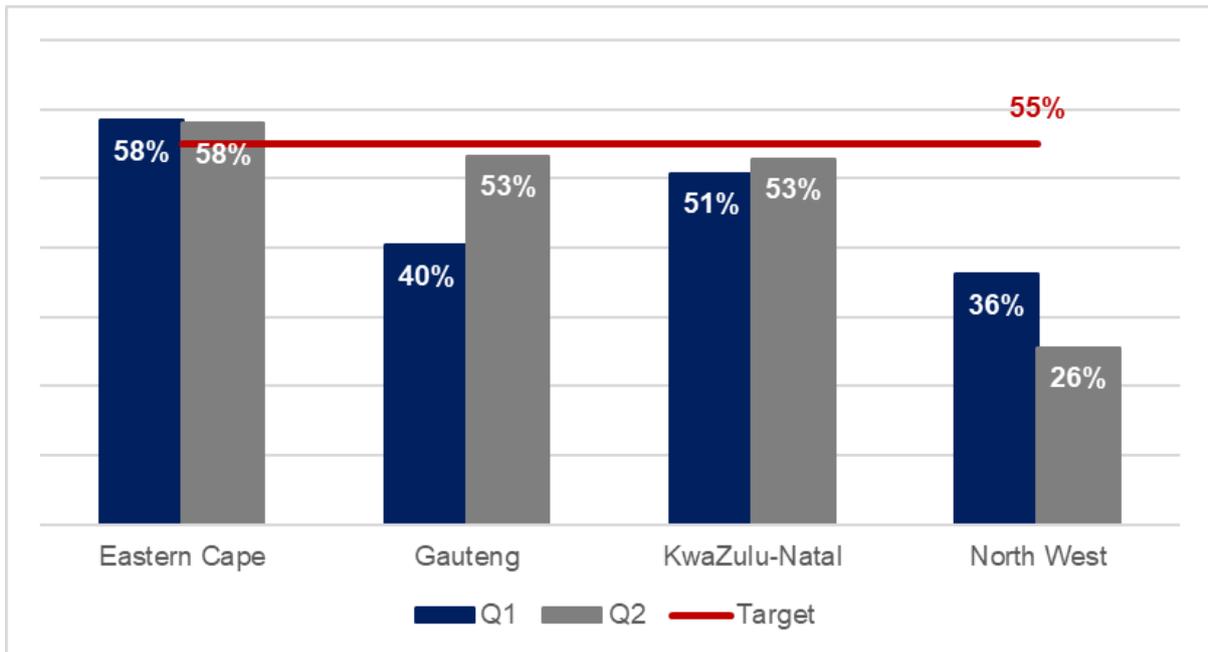
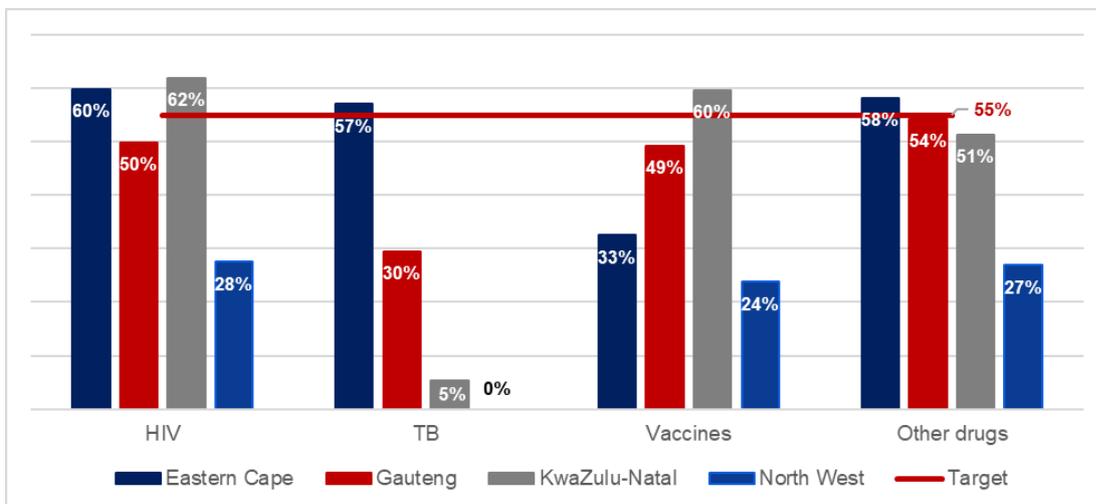


Figure 12 Disaggregation by HIV, TB, Vaccines and other drugs in provinces in Year 6 Q2



### KPI 10. FORECAST BIAS FOR PHARMACEUTICAL FORECASTS IN PROVINCES

Forecast bias measures the tendency for actuals to be over or under the forecasted amounts on a consistent basis. The presence of a tendency in either direction requires investigation and corrective action. Forecast bias is measured as a variance between forecasted demand of item and actual volume of item supplied to provinces, either positive or negative, expressed as a percentage of actual volume of item supplied over three consecutive months.

At the end of the reporting period, demand forecast bias for pharmaceuticals in all provinces was reported at one percent, an improvement from the four percent reported at the end of Q1. Performance was within the target of +/-15 percent, as shown in Figure 13.

KZN achieved the target and ended the quarter with bias of 6.3 percent, the worse performing category was TB followed by other drugs. Eastern Cape ended the quarter with the bias of -6.4 percent, HIV and other medicines were within the target. North West achieved a bias of 12.7 percent for the quarter, the TB drugs contract was the worst category and had a huge negative impact on the overall result. HIV drugs also missed the target due to the TEE/TLD transition and the fact that the province is not having demand reviews.

**Figure 13 Forecast Bias for Pharmaceutical Forecasts in Year 6 Q2**

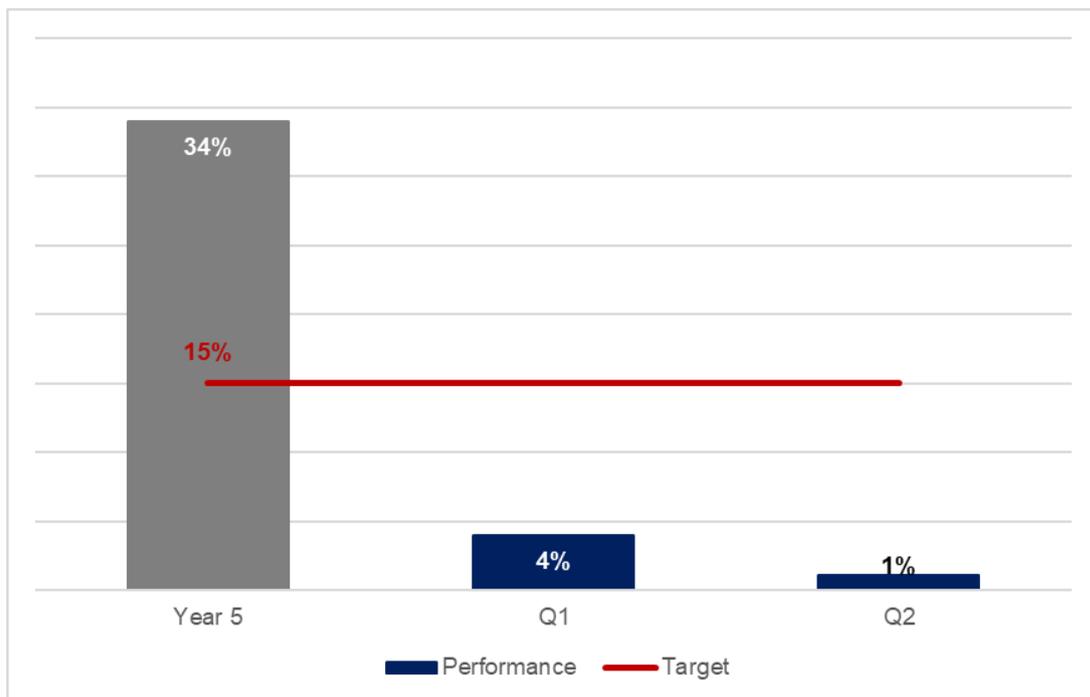
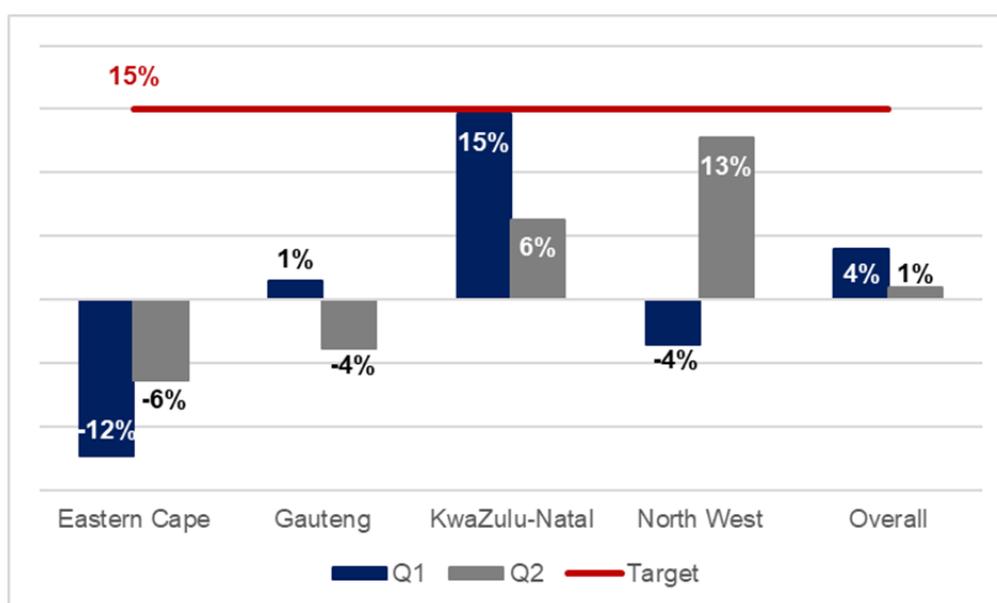


Figure 14 Disaggregation by Provinces in Year 6 in Q1 and Q2

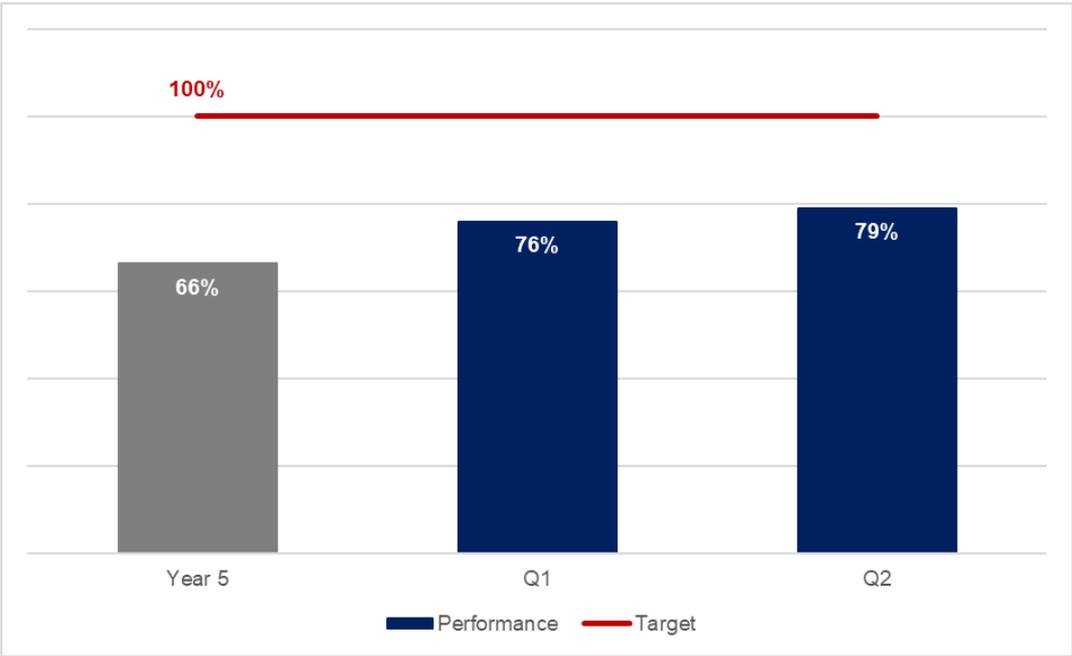


### KPI 1.1. PERCENTAGE OF ELIGIBLE PATIENTS TRANSITIONED FROM TEE TO TLD

This indicator measures GHSC-TA’s support of the phase-out of TEE and roll out of TLD nationally. As Figure 15 shows, at the end of Q2, 79 percent of eligible patients transitioned from TEE to TLD, below the target of 100 percent. Trends noted include an apparent decline in usage of TLD and TEE, and anecdotal reports of patients being switched back to TEE.

The TLD task team is working closely with provincial stakeholders with the aim of transitioning 80 percent of existing TROA to TLD by March 2022. The Top 10 under-performing facilities in each of the nine provinces have been identified. Key measures will be implemented by the TLD task team to accelerate the rate of transition included updating training modules and algorithms used by clinicians when switching patients, and providing refresher training. The National TLD task team has set up an advisory team to assist the HIV Program to address the issues raised as a matter of urgency. Provincial task teams will oversee all activities related to the transition and assist with monitoring targets on a weekly basis.

**Figure 15 Percentage of Eligible Patients Transitioned from TEE to TLD in Year 6 Q2**



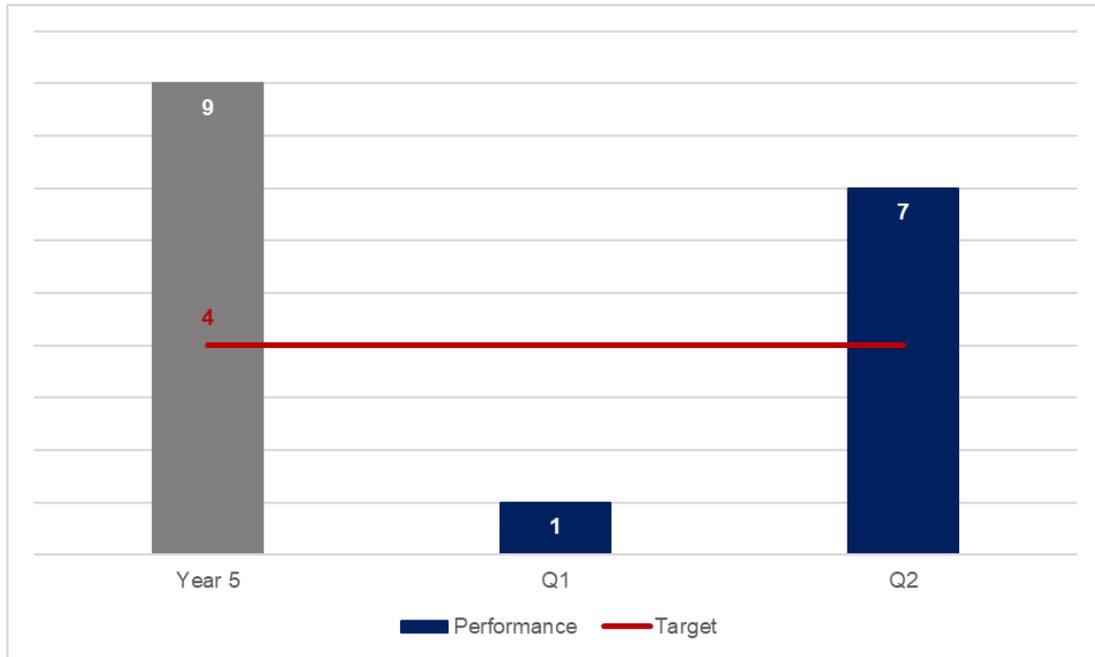
**KPI 16. NUMBER OF PROVINCES WHO REVIEW THEIR BUDGET VS. ACTUAL AS DEFINED IN THE NEW BUDGETING PROCESS TO SUPPORT THE RING-FENCED BUDGET**

This indicator, shown in Figure 16, measures the effectiveness of GHSC-TA support to develop and implement provincial budgeting and financial management processes. The demand planning tool and process, developed by GHSC-TA, support PDoH in establishing an accurate forecast to inform the annual pharmaceutical budget.

At the end of Q2, GHSC-TA is able to confirm that seven of the nine provinces reviewed and approved pharmaceutical budgets with provincial CFOs. Once the budgets are approved they are loaded on the dashboard and expenditure reviewed against the budget. The Northern Cape has

started reviewing its budget against expenditure, with the process now incorporated into the demand forecasting review.

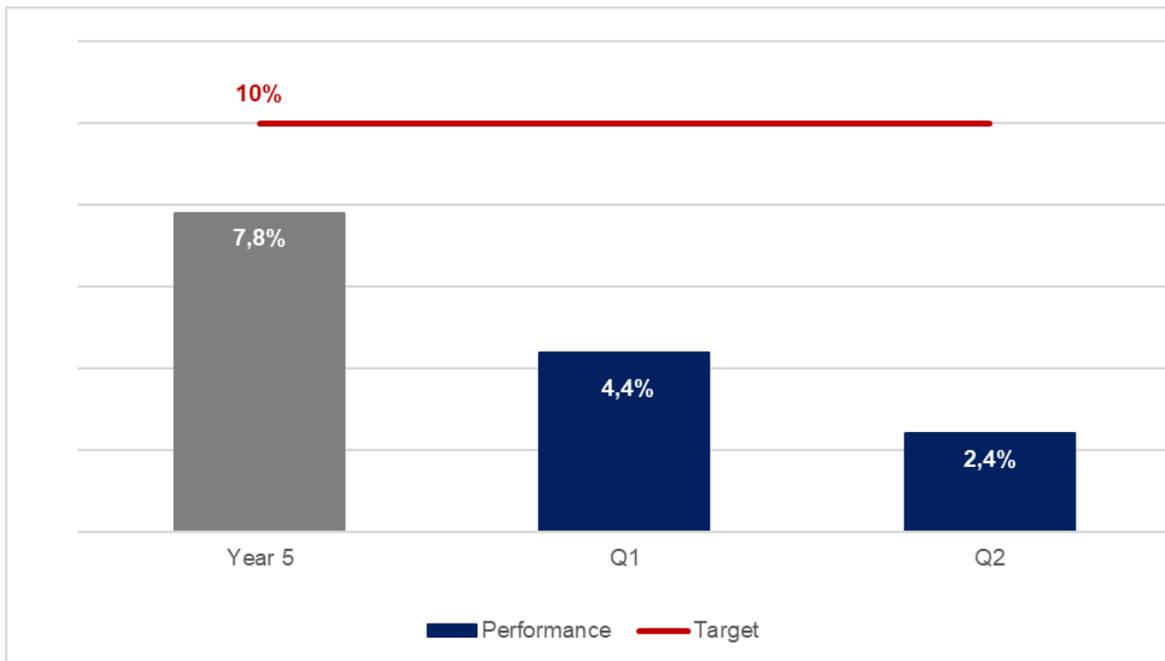
**Figure 16 Number of Provinces Who Review their Budget vs. Actual as Defined in the New Budgeting Process to Support the Ring-Fenced Budget in Year 6 Q2**



### KPI 17. PERCENTAGE OF EXPENDITURE ON NON-ESSENTIAL MEDICINE LIST ITEMS

This indicator measures the percentage of expenditure on non-EML items as compared to total expenditure on medicine at the provincial level. Non-EML items describe medicines that do not appear on the national EML as determined by the NEMLC. Medicines which do not appear on the EML can, however, be approved for use through provincial, district or institutional PTCs. Q2 finished well under target 10 percent as shown in Figure 17.

**Figure 17 EML vs Non-EML Spend on Medicine List Items in Year 6 Q2**





## **5. STRENGTHEN GOVERNANCE**

One of the AMD functions is to provide oversight and set policy with respect to PS provided in South Africa. Support provided by GHSC-TA includes assisting the AMD and provincial PS with improving governance by strengthening the policy and legislative framework, establishing appropriate governance structures, and building capacity to provide the necessary oversight. A key role of GHSC-TA is to provide technical assistance in the development of relevant policies and legislation necessary for implementation of strategic priorities and interventions.

### **ACTIVITIES AND ACHIEVEMENTS**

#### **GOVERNANCE AND LEGISLATION**

GHSC-TA conducted several activities in Y6 Q2 to strengthen governance by developing and revising policies as an enabler for medicine availability. Most notably, the program supported activities in the areas of contracting, and contract management.

## CONTRACTING AND CONTRACT MANAGEMENT

Procurement of medicines for use in South African government hospitals and clinics takes place following a competitive tendering process. The resultant contracts are, therefore, extremely important for medicine availability. Once contracts have been awarded, AMD plays a critical role in monitoring and managing supplier performance. In addition to the management of contracted suppliers, it is important that the performance of all parties, including participating authorities and demanders, are also monitored and managed. Support provided by GHSC-TA is focused on strengthening contracting and contract management processes.

**Pharmacy support personnel regulations.** GHSC-TA continued to support AMD and the South African Pharmacy Council (SAPC) in revising the three sets of regulations published in terms of the Pharmacy Act 53 of 1974 to govern the practice, education and registration of pharmacy personnel. The purpose of the amendment to the regulations is to establish a new category of pharmacy support personnel (pharmacy technicians) and to align scopes of practice to service delivery needs. The scope of work for all categories was reviewed to ensure that there is clear distinction across the categories and indicate progression from one category to another.

**Product Identification and Capturing (Barcoding).** GHSC-TA revised and updated the discussion paper for product identification for all medicines registered in South Africa, to align to the “WHO policy paper on pharmaceutical traceability” and the “GSI implementation roadmap for medicinal products”. The purpose of the discussion paper is to outline the requirements and phased approach for implementing unique product identification and data capture, enabling end-to-end data visibility, improving supply chain efficiencies, ensuring supply chain security, and improving patient safety.

**Contracting guideline.** GHSC-TA has commenced developing the contracting guideline. The purpose of the guideline is to outline the roles and responsibilities of stakeholders involved in contracting and the communication flows for each stage of the contracts. The guideline scope has been discussed and agreed with AMD.

**Contracting SOPs.** GHSC-TA continued to identify SOPs to be drafted and reviewed for the contracting unit. In this reporting period, GHSC-TA developed the SOP for conducting and managing the Bid Specification Committee (BSC) meetings, including policy principles that are aligned to what is stated in the BSC TORs and SRCC.

**Contract management processes and SOPs.** GHSC-TA reviewed the existing contract management processes and SOPs. There were five SOPs that were developed and reviewed, the SOP for supplier reporting, for re-negotiating estimates with suppliers during the contract period, sourcing quotations for non-awarded items, and query escalation protocol for provinces to raise and supply issues. Additionally, the SOP for managing supplier non-compliance was updated based on comments received from the AMD Director and the SOP was then signed off. The non-compliance letter template was also updated to align to the revised SOP.

## OUTCOME LEVEL RESULTS

GHSC-TA hypothesizes that through increasing the capacity of the AMD to develop and institutionalize effective policies and legislation and implement good governance practices in coordination and engagement with key stakeholders, the AMD will demonstrate an increased application of good governance principles embodied in policies, implementation plans, processes, and SOPs. There are no outcome level KPIs reported under this objective.



## 6. IMPROVE WORKFORCE MANAGEMENT

GHSC-TA continued to support the AMD with workforce strengthening and building organizational structures within AMD and in the provinces to perform the functions necessary to improve medicine availability.

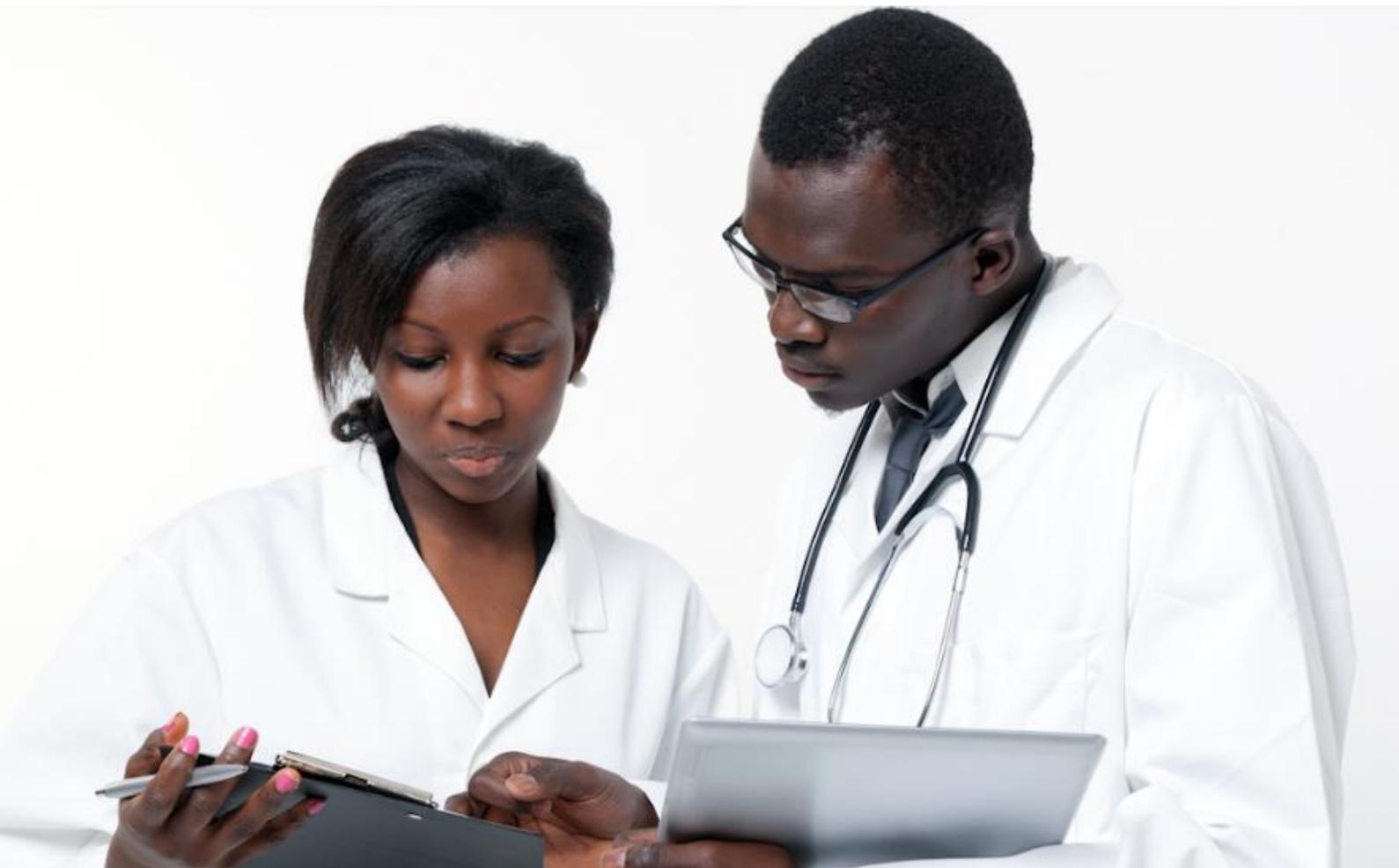
### ACTIVITIES AND ACHIEVEMENTS

GHSC-TA supported the training and mentorship of the TLD Champions, Pharmaceutical Services personnel and the HAST managers, as many of the transition activities were moved from provincial to the district level. Provincial task teams were established to oversee and identify bottlenecks, and to provide additional support and training where needed. GHSC-TA strengthened collaboration and communication structures between internal and external stakeholders by reinstating the bi-monthly National TLD Task team meetings to identify, track and provide feedback on key issues related to the transition in real-time.

**Centralized Demand Planning Unit.** During Q2, GHSC-TA worked closely with the AMD central demand planning team, providing them with on the job training on how to initiate a province into the demand forecasting process. The GHSC-TA team handed over the management of Limpopo and Northern Cape to AMD. They will manage both provinces going forward and GHSC-TA will provide assistance and support as needed.

## **OUTCOME LEVEL RESULTS**

GHSC-TA hypothesizes that by supporting the AMD to develop a set of standardized structures, roles, competencies, and performance management practices, along with institutionalization of a change management program in collaboration with the upskilling and mentoring of staff, the AMD will foster an improved culture aligned with proactive patient-centric decision-making and enhanced leadership management and technical skills, thus improving workforce management practices. There are no outcome level KPIs reported under this objective.



## **7. STRENGTHEN INFORMATION SYSTEMS AND INFORMATION MANAGEMENT**

Information systems are critical to support the health product supply chain. Beyond organizational governance, GHSC-TA supports data governance and management of master data elements crucial to enable interoperability of information systems. Further, the team supports and recommends enhancements to existing systems, analytical processes, and dashboards used by AMD and provincial PS for daily transactions and to inform decision making and continuous improvement.

### **ACTIVITIES AND ACHIEVEMENTS**

#### **MASTER MEDICINE DATA SYSTEM**

A core element of the AMD systems strategy involves working towards ensuring that medicine master data can be exchanged and processed between different devices and systems and across networks within the medicine supply chain. The MMDS, which is under development, will provide a centralized, uniform set of master data relating to medicine. The goal is for information systems to read medicine master data from this central repository via system interfaces to achieve seamless interoperability. The availability of a set of uniform master data will support improved transacting between systems and aggregation of data drawn across systems and facilitate visibility via the NSC, ultimately contributing to medicine availability improvements.

GHSC-TA provides support to elicit system requirements and agree on definitions of master data-related elements, documenting requirements, preparing conceptual data designs, and system testing once these requirements are implemented. During the quarter under review, GHSC-TA continued to provide technical assistance in the development of specifications and implementation of modules of the MMDS, which consists of four components: Medicine Data, Contract Data, a Formulary Management Tool, and Location Master Tool.

**Development.** GHSC-TA continues to provide assistance for the development and roll-out of the MMDS and Stock Visibility System (SVS). Previously new code had been deployed to facilitate integration of MMDS medicine data with SVS medicine data, rollout of this functionality during Q2 involved careful and protracted linking of existing data between the systems in small batches so as not to overwhelm SVS handsets by changing large amounts of data.

For medicines linked across the MMDS and SVS, changes effected on the MMDS automatically reflect on the SVS, supporting the objective that a unified set of medicine identifiers be used across the system landscape. Given that by the close of the period, data from the MMDS is now reflected on all regular SVS devices, master data is now being consumed at facilities that rely on SVS for stock management with GHSC-TA estimating that 2450 facilities are now relying on this integrated master data.

### NATIONAL SURVEILLANCE CENTER

GHSC-TA activities over this reporting period continued to focus on the ongoing support of the monitoring function as relevant to health establishment reporting compliance and medicine availability as well as enhancements, and optimization of the NSC views and manual database, and supporting the transition of maintenance activities to Mezzanine.

**Enhancement of the NSC.** During January 2022, GHSC-TA continued managing the daily consolidation and execution of the NSC data flows for daily data submissions from RxSolution (manual submissions and application program interface (API) submissions), warehouse management systems, CCMDD service providers, and PPE data. From February 2022, all NSC maintenance and NSC refresh functions were formally transitioned to Mezzanine, the approved service provider to the AMD who was contracted to perform hosting and maintenance functions. GHSC-TA provided support to AMD in the review and update to the scope of the RT-15 contract that included details of the NSC hosting requirements and maintenance needs for the NSC. Support functions and maintenance activities related to the NSC are thus done through Mezzanine, while GHSC-TA still does new dashboard developments and enhancements, which will be transitioned to Mezzanine prior to the conclusion of the NSC activities later this year.

The NSC experienced two separate technical challenges in this quarter. Firstly, the auto emailing and certain flow applications driven through Alteryx were temporarily unavailable due to license renewals. This challenge was resolved and functionality was fully restored on 25 January 2022 with no impact experienced on the NSC or by NSC users. Secondly, the NSC server hosted by Mezzanine experienced downtime on 15 March 2022 due to a corrupted JAVA library. GHSC-TA supported the communication and management of this downtime between AMD and Mezzanine for the duration of the outage. The NSC server was restored on the same day.

Following a meeting with the NDoH Information Technology team and the Council for Scientific and Industrial Research (CSIR) development team held in November 2021, the CSIR decided that the PPERT system would continue to be used for Depot PPE stock reporting. The database would be migrated to a different platform to facilitate support and maintenance. The CSIR team completed the required dataset and made it available to the NSC in December 2021, and finalized the approvals for

the NSC team login credentials in January 2022. This enhancement does not affect the NSC update process or visuals but rather streamlines the resourcing requirements by the CSIR to maintain this process moving forward. The CSIR team completed the setup and configuration for the download of PPERT depot PPE data in January 2022. As from February 2022, the GHSC-TA team downloads the PPERT depot data from this updated platform, with the legacy platform at CSIR retired for data access purposes.

Optimization of data processes feeding into the NSC continued and included the following:

- A “minimum basket” filter was developed for the integrated medicine availability views to allow provinces that are busy with advised pull (e-ordering) as part of the replenishment planning project to view their medicine availability in line with their historical SVS Ideal Clinic formulary, and not the expanded formulary required for the e-ordering process. This addition to the integrated view dashboard was completed and published to the NSC in February 2022.
- The finalized draft finance dashboard views were reviewed internally by the GHSC-TA team and adjusted as needed. These views have been submitted to the national and provincial teams for review. Feedback from this review is pending.
- Updates to the supplier dashboard views were completed at the end of January 2022 and published to the internal GHSC-TA review folder in February 2022 for further review by the respective GHSC-TA team and specified AMD CMU team members. This review remains in progress.
- Development work on the transition of the NSC to use the MMDS as the product master linkage table rather than the MPC is complete and tested, with deployment to the live environment expected in the next period.
- The APP Dashboard was updated, accepted and published to the NSC in March 2022.
- A request was made by the Replenishment Planning team to incorporate a view into the min-max views that shows the percentage of medicine availability against the percentage of items below the minimum stock level for those items. Development work is underway and is planned for completion in April 2022.
- A request to support the contract supplier supply chain mapping process was received in March 2022. GHSC-TA has initiated the review of available data to determine the needs to restore the PPE supply chain mapping dashboard, as well as to develop updated Supply Chain Mapping dashboards for medicines on national contract. Initial draft views are under development.
- The changes to the PPE reporting compliance workflows and calculation as agreed with AMD were completed and published to the NSC in March 2022.

**Institutionalization of the NSC.** GHSC-TA continued to drive institutionalization of the NSC in the quarter by supporting the compiling of reporting compliance of health establishments to the NSC, and reviews of medicine availability at health establishments reports during the quarter. The program submitted these reviews to AMD weekly and presented them to AMD and the provinces in the weekly COVID-19 response meetings and the monthly IMAT meeting. In addition to this, the program also supported compiling and submitting a weekly COVID-19 Vaccine reporting compliance report to AMD.

GHSC-TA supported AMD with the AG NSC business process walkthrough audit held in March, 2022, and compiled the response to the AG RFI.

GHSC-TA also completed a navigation guide to aid NSC users on the updated supplier dashboards. This navigation guide was submitted to the CMU support team for review and acceptance in February 2022.

**Technical and Function Specifications.** During the period under review, the program continued with reviewing and updating the NSC data dictionary for all the data sources that feed information into the NSC. This review will continue to be work in progress. The NSC technical documents detailing the workflow image, statistics and possible challenges, process inputs and outputs, workflow steps and tools were updated as changes to views and workflows were completed during this reporting quarter.

## SUPPLY CHAIN SYSTEMS

Technology and information systems are critical enablers of health supply chain performance. Key activities performed in support of this objective during Q2, include supporting the development and deployment of information systems, including SVS.

**Implementation and Development of SVS.** GHSC-TA continued to support the roll-out of the SVS COVID-19 instance as part of the national COVID-19 vaccination program. GHSC-TA continued to identify areas of improvements on the COVID-19 instance with smaller functionality enhancements underway to improve system usability such as "Stock transfer-in" and "Stock returned" fields, a "Stock Loss Reasons Report" to report on history of reasons for stock loss at facilities, and a delete warning to avoid deleting vaccination sites accidentally. To improve data quality, a "Variance Flagger" is under development and an enhancement to the deactivation functionality to avoid the deactivation of sites with stock-on-hand of COVID-19 vaccines greater than zero.

As described under MMDS above, an important milestone was achieved when the medicine master data linking between the MMDS and SVS was completed such that medicine master data changes on the MMDS will automatically reflect on SVS at 2450 facilities.

During implementation of the replenishment planning project, it was found that sites using SVS to report to the NSC are reporting on a 'customized' formulary per site, based largely on the ideal clinic tracer medicine list. The addition of the entire formulary onto SVS for a clinic results in the facility having to report on all items on the formulary, with personnel having to capture data for a larger basket of items and the possibility of the percentage medicine availability being negatively affected. To address this challenge, GHSC-TA developed a filter to differentiate between the total formulary and the 'minimum' basket in the integrated view of the NSC. It was subsequently learned that the minimum basket is facility, district or province specific and thus cannot be set at national level. Business rules have been developed to enable this functionality on SVS.

SVS development continued to focus on integration with MEDSAS, the most widely implemented warehouse management system to allow seamless passing of orders from SVS to MEDSAS via the RDM. To date, the data structures, front-end changes and basic reporting have been built and are currently in testing, with final text file output in the development pipeline. This development will enable e-Ordering for sites that transmit orders to MEDSAS via the RDM.

A continuing challenge with the RxSolution automated reporting API relates to a server in North West where the provincial health system technicians are struggling to restore service. GHSC-TA is working with the DSP to assist with server installation and configuration.

## OUTCOME LEVEL RESULTS

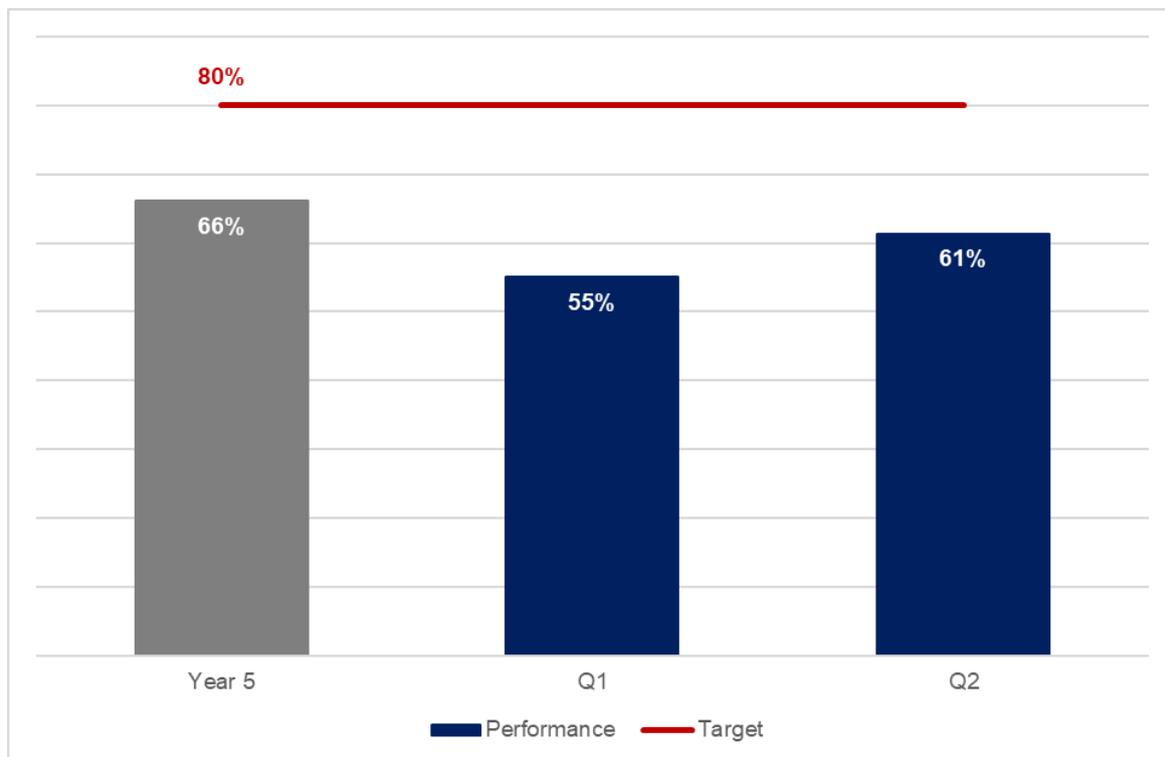
GHSC-TA hypothesizes that, by supporting the AMD in the design and implementation of IT systems and the NSC, the AMD will be empowered to deploy systems that enable evidence-based decision making, leading to improved medicine availability.

### KPI 12. PERCENTAGE OF USERS UTILIZING THE NSC TO REVIEW MEDICINE AVAILABILITY TRENDS AND REPORTS

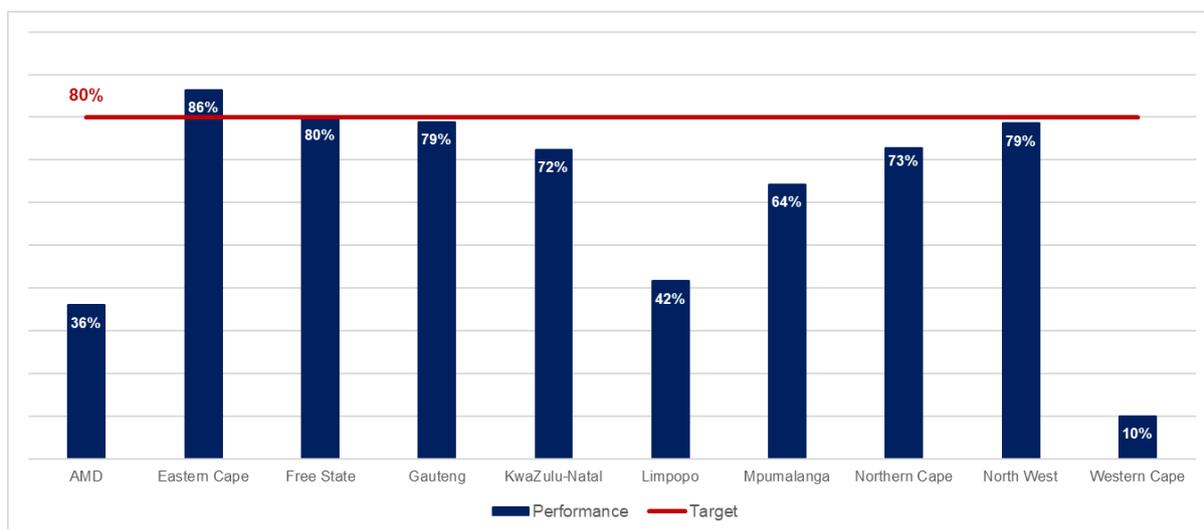
This indicator measures the frequency with which licensed users access the data available on the NSC dashboards, including medicine availability trends and other reports. GHSC-TA has defined utilization as logging on to the NSC at least once a month to review data.

During Q2, 61 percent of licensed users logged on to the NSC at least once a month, an increase from the 55 percent of users in the previous quarter, but below the target of 80 percent. An increase occurred in Eastern Cape and Gauteng, despite some Gauteng users being unable to access the NSC during January due to IT restrictions on the internal network. Eastern Cape and Free State are the only provinces meeting the target. It must be noted that low usage in Limpopo, Mpumalanga, and Western Cape, and AMD, continue to have a negative impact on overall performance of this KPI shown in Figure 18. This is an ongoing challenge that GHSC-TA is addressing by monitoring usage and engaging with users to identify and address challenges. In the Eastern Cape and Gauteng, activities that resulted in these improvements included reallocation of licenses of inactive users and targeted stakeholder engagements focusing on users with low utilization.

**Figure 18 Percentage of Users Utilizing the NSC to Review Medicine Availability Trends and Reports in Year 6 Q2**



**Figure 19 Percentage of Users Utilizing the NSC to Review Medicine Availability Trends and Reports in Year 6 Q2**



**KPI 13. NUMBER OF HEALTH ESTABLISHMENTS AND WAREHOUSES UTILIZING MEDICINE MASTER DATA SYSTEM AS A SOURCE OF MASTER DATA**

This indicator measures the number of health establishments (including hospitals and clinics) and provincial warehouses, utilizing MMDS as a source of master data. Two of the core functions of the MMDS are the MHPL and the formulary tool. Utilization is defined as either drawing information from the MHPL to inform practices or creating a formulary.

GHSC-TA provided technical support to the MMDS developers to integrate MMDS data into SVS via system-to-system integration and extending RxSolution to call medicine master data from the MMDS via system-to-system calls.

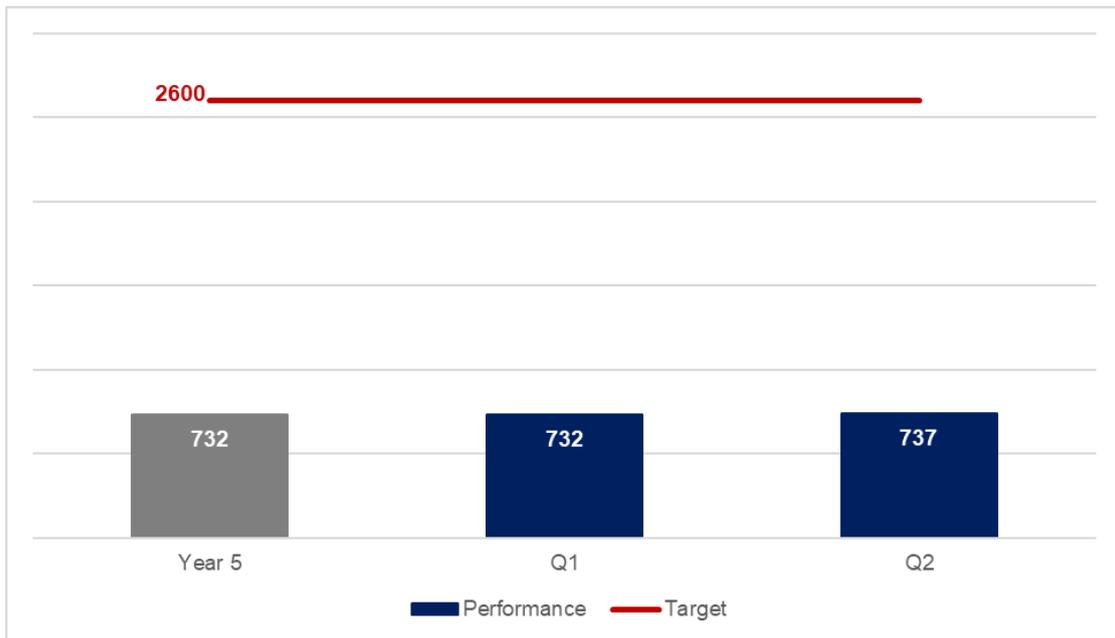
While the functionality that allows integration between SVS and the MMDS went live in the prior period, rollout of this functionality during the quarter under review involved protracted linking of existing data between the systems in small batches as described above.

With the rollout of this functionality completed at quarter end, GH-SCTA estimates the number of health establishments utilizing data originating on the MMDS via SVS at 2,450 with systematic and detailed reporting to follow in the next period.

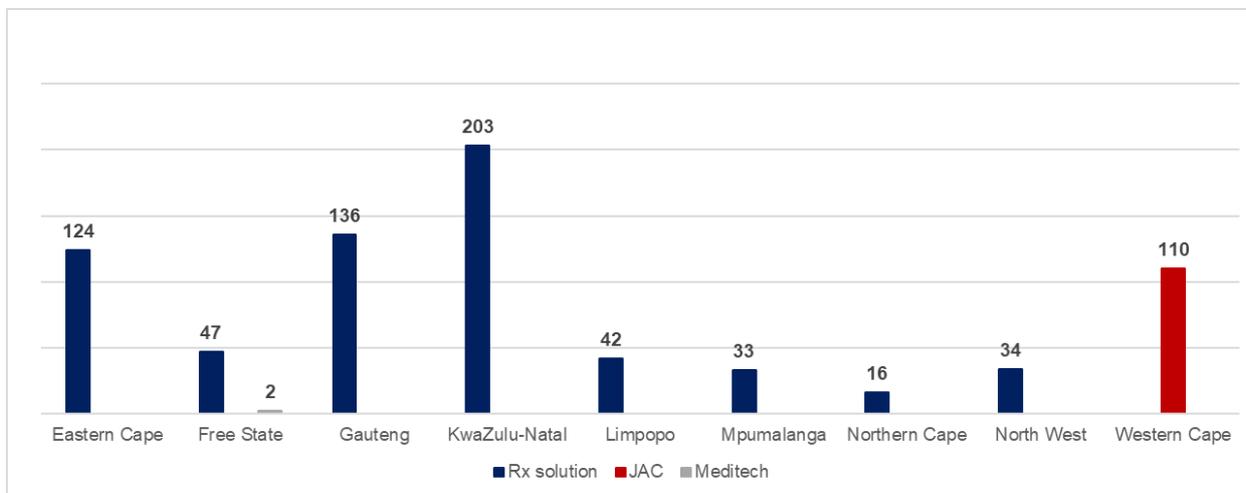
#### **KPI 14. NUMBER OF HEALTH ESTABLISHMENTS USING CORE SUPPLY CHAIN INFORMATION SYSTEMS TO ORDER AND/OR RECEIVE STOCK**

This indicator measures GHSC-TA's support for the expansion of core supply chain information systems including SVS and RxSolution across health establishments. During Q2, the total number of health establishments using information systems for order management remained static at 737 as shown in Figure 20. Notably, performance remains below the target of 2,600. A total of 625 health establishments are using RxSolution, 110 are using JAC, and two are using Meditech shown in Figure 21. Previously, growth in this metric had come from RxSolution as a core medicine inventory management system for hospitals and CHCs. There is a reduction in the expansion of RxSolution as saturation increases for the available sites. Further growth is expected to come from the new SVS eOrdering functionality as part of the advised pull replenishment approach that is being rolled out. RxSolution, JAC and Meditech are able to support both ordering and receiving, while the SVS eOrdering functionality will support only ordering.

**Figure 20 Number of Facilities Using Core Supply Chain Information Systems to Order and/or Receive Stock in Year 6 Q2**



**Figure 21 Disaggregation by Province and Stock Management System in Year 6 Q2**



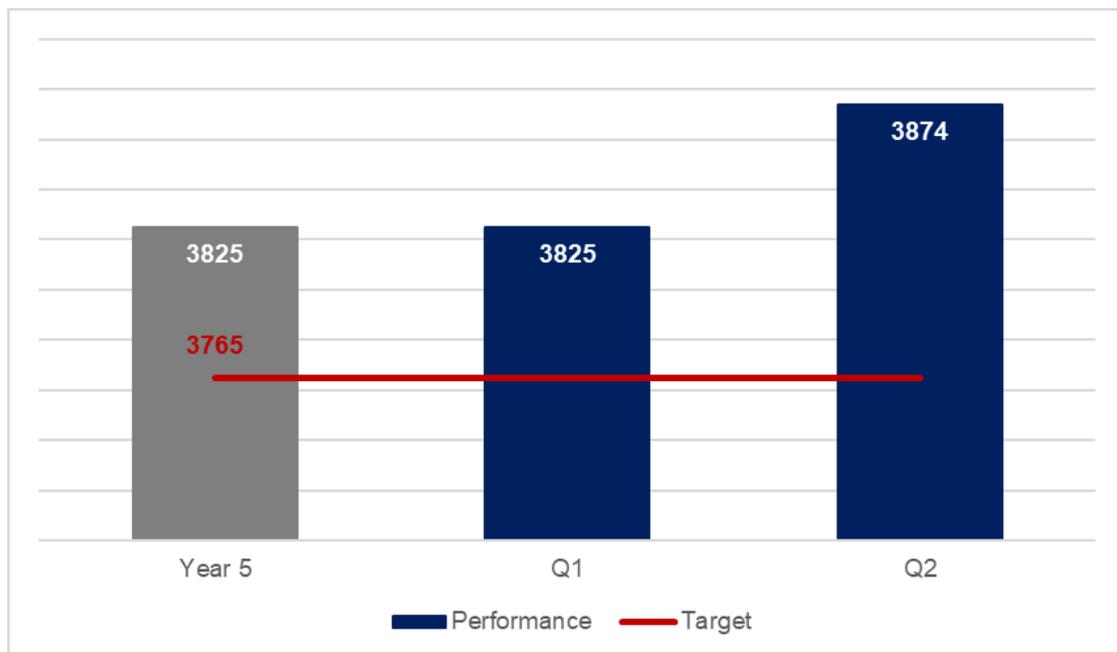
### KPI 15. REPORTING COMPLIANCE – NUMBER OF HEALTH ESTABLISHMENTS REPORTING STOCK AVAILABILITY TO THE NSC

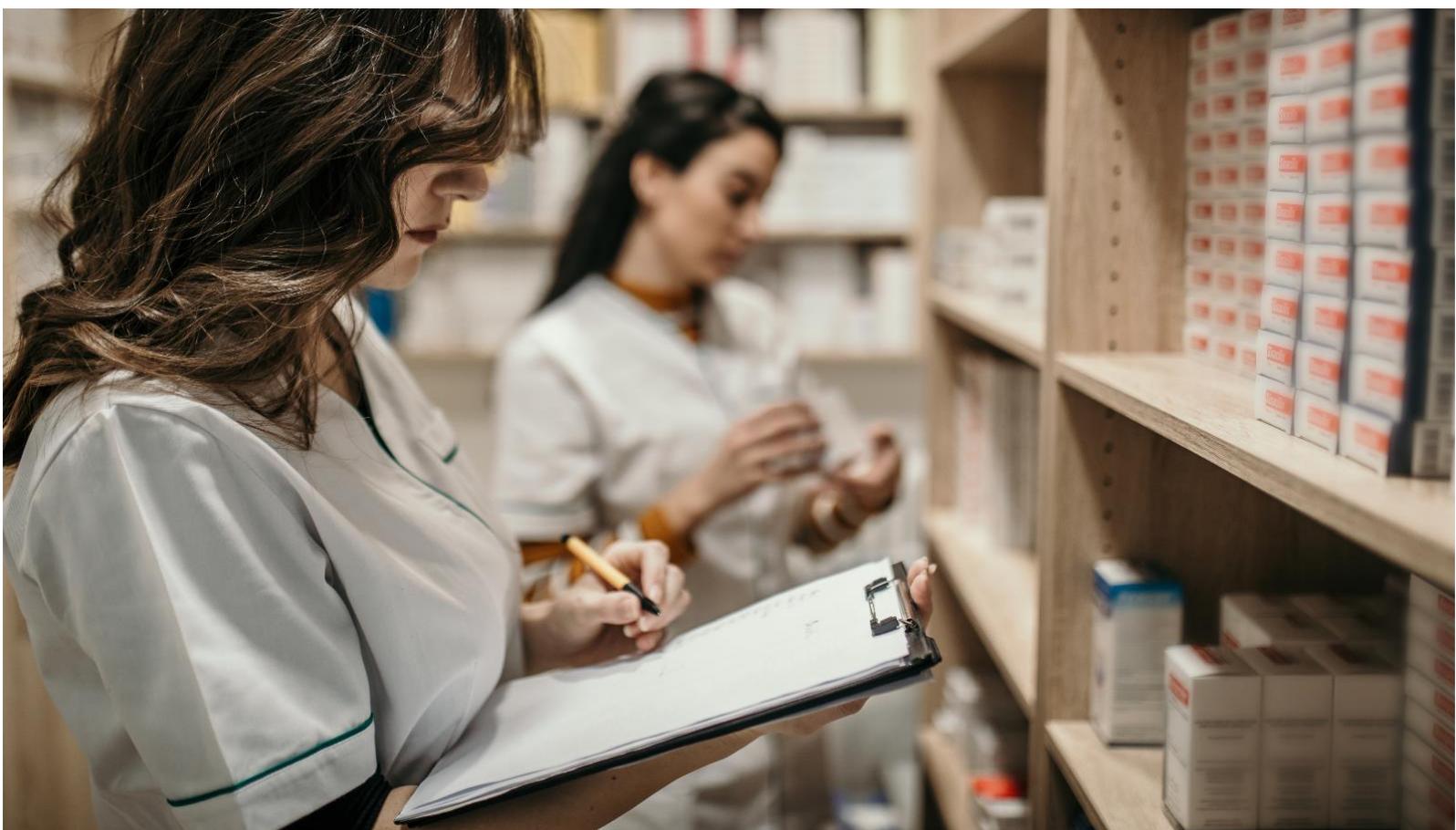
The reporting compliance KPI shown in Figure 22 below measures the number of health establishments reporting stock availability to the NSC. During Quarter 2, 49 additional health establishments began reporting stock availability to the NSC, bring the total number to 3,874, three percent over the target of 3,765. The main contributing factors to this success have been the increased need and reliance on medicine availability data by the provinces and AMD, the high-level of interest in good performance on this KPI, and the ongoing support provided by the GHSC-TA program towards ensuring sustained reporting by health establishments.

During this reporting period, GHSC-TA consolidated the details of health establishments reporting stock availability to the NSC from the medicines, PPE and COVID-19 vaccines reporting instances, into a single health establishment master list which was then applied to the APP dashboard view. A filter was developed that allows the relevant NSC users to exclude or include reporting health establishments based on the type of stock commodities that those establishments report on. This feature is useful in an instance where reporting to the APP target needs to be done within a specific context, such as reporting on the health establishments that report on medicines only, or on health establishments that report on all types of commodities.

In addition, GHSC-TA continues to monitor reporting to the NSC via provincial API servers, provide technical assistance and flag health establishments where reporting has not been successful.

**Figure 22 Number of Health Establishments Reporting Stock Availability to the NSC in Year 6**





## **8. PROVINCIAL SUPPORT AND REPLENISHMENT PLANNING**

This work aims to streamline, and support coordinated implementation of activities across the various GHSC-TA program work streams in the provinces and to ensure coordination, alignment, and successful implementation of the various supported supply chain reforms.

### **ACTIVITIES AND ACHIEVEMENTS**

During this reporting period, the team continues to support the activities of the nationwide COVID-19 vaccination program. This meant that not all GHSC-TA's province-facing activities were implemented as planned.

### **INSTITUTIONALIZATION OF THE NSC**

The PST continued activities to drive NSC institutionalization, including the preparation and circulation of reporting compliance and bespoke medicine availability reports for provinces, flagging areas of focus, and continuous monitoring of performance on a weekly basis. The PST provides direct support to, and engages with, provincial and district counterparts to highlight challenges and devise solutions as needed, with the Eastern Cape instituting monthly feedback sessions during this reporting period.

After a decline during Quarter I which included the holiday period, national reporting compliance continues to recover, remaining above the target of 80 percent during February and March. All

provinces showed an increase in reporting compliance since the start of the period under review, with the Eastern Cape and Northern Cape remaining below target. Free State, Mpumalanga and North West achieved an average of over 90 percent at the end of March. Eastern Cape has commenced an undertaking to load facilities with no connectivity to the API for automated reporting and escalating facilities with poor mobile network to the service provider. In the Free State, reporting compliance reflects a lower percentage due to a larger basket of items on its clinics' formularies at facilities participating in the replenishment planning project.

A key event occurred during March when the Head of Pharmaceutical Services in KwaZulu-Natal did a presentation at the annual conference of the South African Association of Hospital and Institutional Pharmacists (SAAHIP) indicating the impact of the use of the NSC on medicine availability in the province.

Through engagement with GHSC-TA, the Mpumalanga Depot noted the benefits of having access to the NSC through the min-max dashboards and discussions on reallocation of inactive licenses to the Depot Management have commenced. The Free State is using the min-max dashboards on a weekly basis to monitor trends and improve their ordering quantities. In the North West and Free State, NSC utilization remained above target for February and March and an increase in this performance indicator was noted for the Eastern Cape and Gauteng provinces. In provinces where the NSC usage is below target, root cause analysis continues to be performed, and continuous improvements initiatives undertaken.

Overall medicine availability improved in the Eastern Cape, Free State, KwaZulu-Natal, Limpopo, Mpumalanga, North West and Northern Cape, with Gauteng remaining above target. Collaborative efforts with provincial IT, pharmaceutical and district counterparts/teams have contributed to the positive medicine availability observed through maintenance of formularies, reviews and editing of medicine supply management SOPs, resolving technical challenges, and providing bespoke reports to avoid stock-outs.

## REPLENISHMENT PLANNING

Replenishment planning refers to all planning and supporting activities aimed at leveraging medicine supply management best practices to ensure that essential medicines are available at health establishments. This is achieved through standardization of medicine master data, strengthening of formulary management processes, and optimizing the use of proven supply planning principles to inform replenishment that includes the use of min-max stock levels, and the introduction of an advised-pull approach. This process is enabled by the use of information systems supported by the relevant policy, guidelines and SOPs.

**MMDS and Formulary Tool.** Formularies are essential tools supporting RMU and informing medicine supply management activities. They provide the details of which medicines should be stocked at each health establishment and assist to ensure that these medicines are aligned with the EML and STGs.

GHSC-TA is supporting AMD with Formulary Tool adoption across five provinces, namely Free State, North West, Eastern Cape, Mpumalanga and KwaZulu-Natal, mostly with activities preliminary to loading formularies onto the Formulary Tool. To finalize formularies in North West, data analysis was conducted to determine the current extent of misalignment between provincial, district and facility

level formularies. Recommendations for data adjustments have been made and pending provincial approval, data changes will be effected on SVS and formulary loading once completed on the MMDS.

In Mpumalanga, 374 facilities were loaded onto the Location Tool in preparation for loading formularies for these establishments while data analysis work to align the Mpumalanga depot stock catalogue with the master data held on the MMDS is underway.

**Optimization of Minimum and Maximum Stock Levels.** For the period under review, the GHSC-TA Team continued to provide support to provinces to implement and operationalize the optimized min-max stock levels on stock management systems.

**Free State:** Updated the min-max levels and the average monthly consumption for Fezile Dabi District. Furthermore, the district requested the roll-out of advised pull in the entire district. As soon as the updated min-max levels are approved and uploaded, these sites will be activated for eOrdering. Completed the min-max calculations for Thabo Mofutsanyane District which is currently under review by the district pharmacists.

**Eastern Cape:** GHSC-TA supported the completion of the min-max levels for Alfred Nzo District, but due to technology issues the output has not been uploaded onto SVS. The team implemented advised pull in one facility in Alfred Nzo District (Paballong) as a pilot. During the implementation, the team did a site visit to do all the necessary training (in collaboration with Mezzanine) with the facility and district pharmacist (see success story). The site went live during the last week of March 2022. Since then the team has provided extensive support to the district pharmacist and the facility. Its first order cycle will be during the first week of May 2022.

The team had their initial engagement with Sarah Baartman District and will continue to roll-out min-max levels in the district. The process is still in early stages. Approval has been granted by the province to roll-out in the Joe Gqabi District.

**KwaZulu-Natal:** After three meetings with Provincial Pharmaceutical Services; buy-in for min-max optimization was obtained from district pharmacy managers. Min-max optimization will be rolled out in five districts Ugu, Uthukela, Zululand, Ilembe, and Umzinyathi. Since PHCs are receiving specific medicines from mother hospitals and depots, RxSolution issue data is currently being obtained from 'mother' facilities. The team has already received demand planning data for all the clinics. In addition, meetings were held with Pharmaceutical Service Supply Officers (PSSOs) to discuss the project and their role in providing RxSolution data.

**Mpumalanga:** The Head of Pharmaceutical Services approved the roll-out of min-max in two pilot sites in Nkangala District. Currently the province is waiting for a letter of approval to implement the solution before the team can continue this work.

**North West:** Both the Ngaka Modiri Molema and Dr Ruth Mompati District agreed to implement the solution. Currently the team is sourcing the RxSolution data before further implementation can take place.

### **Performance Monitoring and Visibility**

The min-max dashboards on the NSC provide visibility on the stockholding position of health establishments and facilitate stock monitoring activities that empower managers to proactively manage the supply and use of medicines. In the period under review, the GHSC-TA team finalized the design

and development of the min-max dashboards. The next phase is to facilitate user testing before rolling out the dashboards to supported provinces.

## OUTCOME LEVEL RESULTS

### KPI 8. NUMBER OF HEALTH ESTABLISHMENTS AND WAREHOUSES WITH CONFIGURED MINIMUM AND MAXIMUM (MIN-MAX) STOCK LEVELS FOR STOCKED MEDICINES BEING REPORTED TO THE NATIONAL SURVEILLANCE CENTER

This indicator measures GHSC-TA activities that contribute to the configuration of min-max stock levels. These basic stock usage parameters are used to inform replenishment management processes.

At the end of Q2, data from 1,600 clinics and 239 hospitals indicated a setup of min-max stock levels on SVS (for clinics) and RxSolution system (for hospitals), bringing the total to 1,811 facilities against a target of 1,500 as shown in Figure 23. This showed a decline from 1,826 obtained in Q1. Moreover, the numbers show a regression from 1,630 to 1,600 for SVS sites and an increase from 231 to 239 for RxSolution sites. Notably 21 sites used both the SVS and RxSolution systems.

**Figure 23 Number of Health Establishments and Warehouses with Configured Minimum and Maximum (Min-Max) Stock Levels for Stocked Medicines Being Reported to the NSC in Year 6 Q2**

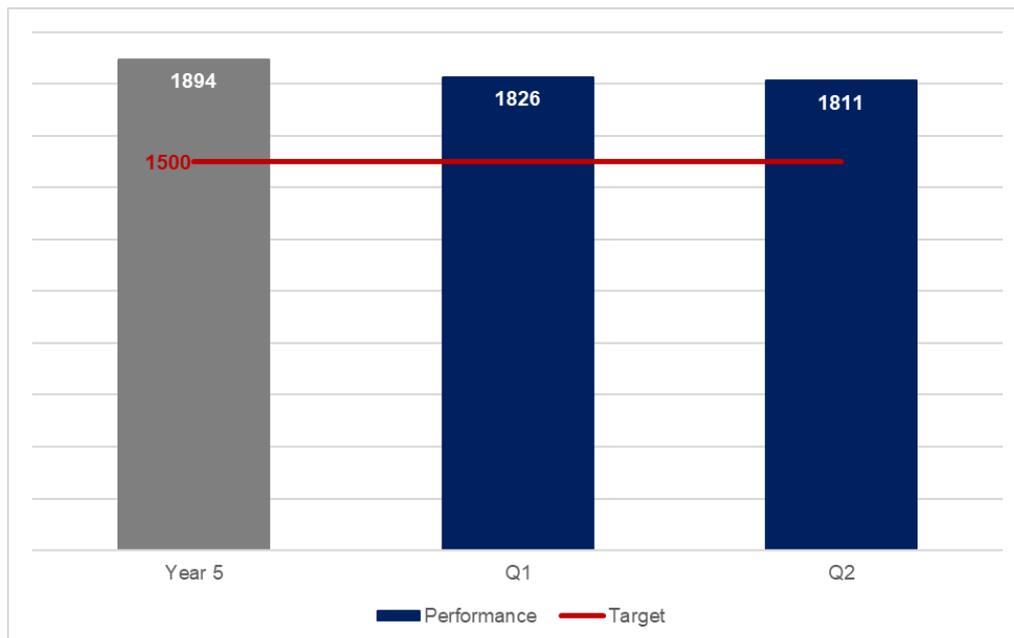
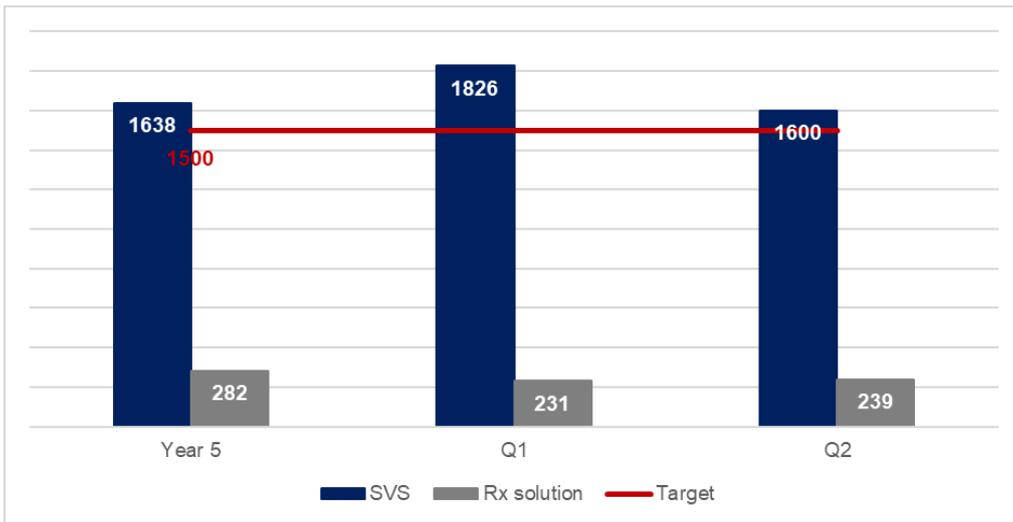


Figure 24 Disaggregation by systems





## **9. SUPPORTING THE GOVERNMENT OF SOUTH AFRICA IN THE RESPONSE TO COVID-19**

An effective supply chain is key to a consistent and uninterrupted supply of medicines to meet patient demand. Supply and demand planning is aimed at forecasting potential disruptions to the supply chain. However, rapidly evolving global pandemics make it difficult to forecast, with the potential of a negative impact on health outcomes, quality of life, and a nation's economy. South Africa detected its first case of COVID-19 on 5 March 2020. By the end of March 2022, a total of 3, 3 718 953 confirmed cases of COVID-19 had been recorded in South Africa, with a recovery rate of 96.9 percent.

### **OBJECTIVES**

The global COVID-19 pandemic has the ongoing potential to cause challenges in the availability of medicines used to fight HIV/AIDS, TB, and other diseases as countries periodically go into lockdown interrupting supply chains. Over and above medicines, it is critical to limit the spread of the disease and protect both patients and health care workers. To this end, the need for a reliable supply of PPE is also of paramount importance.

A key response to the COVID-19 pandemic is the global roll-out of effective vaccines. In South Africa, GHSC-TA is providing comprehensive TA to the NDoH, the provinces, the private sector and other stakeholders in the planning and implementation of the roll-out of the COVID-19 vaccination program.

## APPROACH AND KEY ACTIVITIES

GHSC-TA has continued to assist the NDoH in mitigating the impact of the COVID-19 outbreak in South Africa on the medicine and related medical products supply chain and assisting in responding to the demand for medicines, PPE and vaccines to manage the disease.

**Support for the MAC on COVID-19.** GHSC-TA continued to provide secretariat support to the MAC on COVID-19, a non-statutory advisory committee appointed by the Minister of Health to provide high-level strategic advice to the Minister and the Director-General of Health on the management of the COVID-19 outbreak in South Africa. The program has assisted with drafting 150 advisories to the Minister of Health on the management of the COVID-19 pandemic. During the quarter under review, the program worked with AMD to provide continued support to the MAC on COVID-19 in convening meetings, providing technical support on ministerial advisories, responding to stakeholder queries, and communicating decisions to the Incident Management Team of the NDoH. In addition, GHSC-TA assisted preparing for, and convening an in-person MAC on COVID-19 workshop held on 11 and 12 February 2022 to review the work of the MAC and advise on a way forward for the management of the pandemic. Assistance was provided with drafting a position paper on mitigating COVID-19 going forward.

**COVID-19 Response Team.** AMD assembled a national and provincial COVID-19 response team in response to the pandemic. During this period, GHSC-TA continued to support AMD in scheduled bi-weekly meetings (the AMD preparatory meeting and the provincial stakeholders meeting), reviewing the demand and supply of COVID-19 medicines and the roll-out of COVID-19 vaccines.

GHSC-TA continued to support AMD with the COVID-19 medicine forecast. This quarter, the demand planning team updated demand forecasts using medicine usage and enriched the forecast with information based on expected waves.

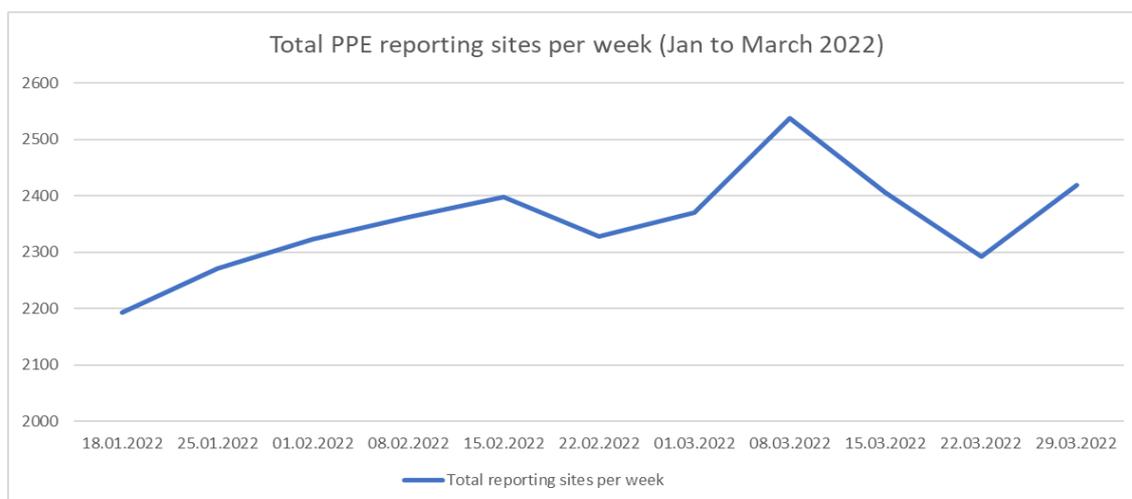
GHSC-TA continued to support the NDoH and PDoH with the daily refreshing of the COVID-19 dashboards. The COVID-19 dashboards provide medicine availability and reporting compliance information using product categorization determined by the COVID-19 response team. The program assisted with query resolution and the monitoring of NSC reporting compliance and medicine availability, which was presented to provincial and national stakeholders weekly during the quarter.

## PERSONAL PROTECTIVE EQUIPMENT

GHSC-TA continued to provide ongoing dedicated support to overcome PPE supply, distribution and payment challenges, acting as a link between the NDoH, National Treasury, contracted PPE suppliers and provinces to reduce supply challenges and improve PPE availability.

During this reporting period, GHSC-TA continued to support monitoring of the availability of PPE at health establishments. Since the last quarter, PPE reporting compliance shows that many health establishments had a very slow start to PPE reporting on the NSC. For this reporting period an average of only 2,55 of 3,486 submitted data weekly to the NSC. Reporting compliance was 68 percent, down from 85 percent in Q1. North West recorded 93 percent reporting compliance. Free State, Mpumalanga, and Limpopo compliance was above 83 percent, while Eastern Cape, Northern Cape, and KwaZulu-Natal recorded PPE reporting compliance of above 61 percent. Western Cape recorded PPE reporting compliance below 20 percent, due to the province's slow adoption of SVS reporting. Gauteng who switched their reporting platform to SVS in the last quarter only manage to gain a 36 percent PPE reporting compliance level. GHSC-TA continued to support the NDoH to improve performance by working with provincial PPE appointed coordinators and other key stakeholders.

**Figure 25: Total PPE reporting sites per week**



Following a request from AMD in February 2022, GHSC-TA conducted a review of the PPE reporting sites denominator which historically used the DHIS list as the facility list. An evaluation of the denominator was conducted using the DHIS facility master, the updated Master Facility List (MFL), and the total of facilities that have the PPE instance loaded on their SVS devices, have access to PPERT, or manually submit data for PPE reporting (Western Cape only). This assessment was presented to AMD and the HOPS in the weekly Provincial COVID-19 meeting held on March 9 and 23, 2022. The meeting agreed to use the total of facilities that have the PPE instance loaded, PPERT and the manual submissions as the denominator for PPE moving forward. A facility is considered to have submitted a compliant stock-on-hand report if that facility reported on at least 80 percent of the active line items loaded on the PPE SVS instance.

GHSC-TA compiles a monthly presentation for provinces and the NDoH, providing an overview of PPE availability, highlighting gaps in supply, and providing information on actions to mitigate items out of stock at the depot and health establishment levels in the provinces for review and action by the NDoH Project Management Office.

## ROLL OUT OF COVID-19 VACCINES

During the quarter, comprehensive support was provided to the NDoH in coordinating the COVID-19 vaccine program in both the public and the private sectors.

**Supply and distribution.** GHSC-TA continued to improve vaccine supply and distribution and accounting processes for the public and private sectors. Tools and refined SOPs have been implemented to streamline and make the process effective and efficient, including:

- **Vaccine distributor performance management.** In line with the contract conditions, monthly KPI sessions were chaired by GHSC-TA with each of the vaccine distributors, all reporting on a standard set of KPIs using templates developed by GHSC-TA developed templates. These sessions allow for the review of the distributors' performance and assist in developing improvement plans where necessary.
- **Purchase Order Control.** An enhanced specification was developed for the NHPVS that collates sector-wide purchase order requisitions from sector-wide delivery sites and collates

orders for submission to distributors. The new features will enhance governance and reporting. Development is planned for completion in the next quarter.

- **Dashboards.** Dashboards continue to be refined to enable the GHSC-TA supply, allocation and distribution team to have greater insight into the supply pipeline and the demand and supply capacity to sub-district levels across public and private vaccination sites.
- **Inbound vaccine supply.** GHSC-TA continued to coordinate the timing of Pfizer inbound vaccine shipments with the vaccine supplier and the volume split according to distributor stock on hand and storage capacity. The last Pfizer shipments of the bilateral procurement were received in February 2022.
- **Export of donated vaccines.** GHSC-TA assisted with the coordination of a donation of vaccine to Namibia.
- **Reporting.** The review of reporting compliance of COVID-19 vaccination sites to the NSC was initiated in May 2021. GHSC-TA continued supporting the review of vaccine availability at vaccination sites. A review of COVID-19 vaccine availability was undertaken in February and March 2022 and submitted to AMD. These reviews are updated weekly for stakeholder review.

**Table 3: Supply and distribution statistics**

Month	January	February	March	Total
Number of inbound vaccine shipments coordinated	5	3	0	8
Volume of inbound vaccine shipments coordinated (doses)	4,650,750	2,792,790	0	9,616,230
Number of orders vetted and processed	315	314	655	1,284
Volume of vaccine orders processes (doses)	1,163,220	1,096,530	2,492,450	4,753,200

**Forecasting and procurement.** Following the 2022 vaccine forecast submitted by GHSC-TA to the Vaccine Ministerial Advisory Committee, additional doses, booster doses, and timing intervals between doses were updated. Accordingly, the procurement and supply plan for COVID-19 vaccines for 2022 was revised, and supplier delivery schedules adjusted to mitigate the risk of the expiry of vaccines.

**Vaccine redistribution.** COVID-19 vaccines have diminishing a shelf life as they move through the various cold chain temperature ranges. GHSC-TA continued to assist both public and private sector sites with the redistribution of vaccines to mitigate the risk of wastage.

**Vaccine ancillary items.** GHSC-TA continued to provide support in resolving logistical and payment challenges relating to the supply and distribution of the ancillary items required to administer the vaccines. The program functioned as a problem solver between the contracted suppliers, and provinces.

**Export of diluent.** GHSC-TA assisted with coordinating the procurement, payment and distribution of the diluent as requested from Rwanda, Botswana and Eswatini Ministry of Health

**Vaccine storage and monitoring equipment.** GHSC-TA assist the NDoH and provinces with the end to end coordination of the Vodacom donation of freezers, refrigerators, vaccine cooler boxes

and cold chain electronic monitoring devices. This assistance included facility mapping, asset recording, installation planning and quality control coordination.

**COVID-19 Vaccine Toolkit.** To support the roll-out and implementation of the COVID-19 vaccine, and as new data, information and lessons learned become available, GHSC-TA continued to provide support to NDoH in developing, reviewing and finalizing the COVID-19 vaccination guide and toolkit, which includes SOPS and job aids that support good practice and governance in the handling and management of COVID-19 vaccines at sites.

**COVID-19 Vaccine Circulars, Standard Operating Procedures and Documents.** GHSC-TA has provided technical assistance in drafting, contributing to and reviewing multiple documents related to the COVID-19 vaccine program.

**Multisectoral Engagements.** GHSC-TA has led the public and private sector logistics workstreams and has played an integral role in multisectoral engagements as it pertains to vaccine distribution, site readiness, and coordination with other government departments and institutions. This has included, amongst others, the Department of Basic Education, the South African Military Health Services (SAMHS) and the Department of Correctional Services. GHSC-TA was an active participant at the Joint Special Operations Command (JSOC) meetings attended by labor, government and the private sector.

## SVS COVID-19 VACCINES

In response to the COVID-19 vaccine roll-out program, GHSC-TA continued to provide extensive support to the NDoH with the use of SVS COVID-19 to monitor vaccines, ancillary items and diluents at vaccination sites in both the public and the private sector, allowing for rapid access to data. GHSC-TA has also played a key role in improving the availability of quality data through variance checks and targeted SVS COVID-19 refresher training sessions and engagements. During this quarter, GHSC-TA collaborated closely with the service provider and advised on system issues that enabled timeous rectification and proposed system enhancements, including the expiry date functionality of COVID-19 vaccines on SVS Covid-19.

**On the ground SVS support.** GHSC-TA continued to provide ongoing support to ensure that new sites were uploaded on SVS COVID-19. Existing sites were appropriately equipped to report on SVS COVID-19 and assisted with technical challenges. Check-in sessions were provided to empower site staff and champions on reporting on SVS COVID-19 throughout the private and public sectors as requested. A follow up training session was held with the largest group in the private sector, accounting for about 49.8 percent of the private sites and engagements were held with additional private sector groups. During these sessions, the basic principles of SVS reporting and the importance of adhering to reporting requirements were presented.

To improve data quality and reporting compliance, the PST also continued with targeted group sessions during which discrepancies on SVS COVID-19 data and overall reporting compliance were flagged. GHSC-TA enhanced the Variance Finder Tool during this period, which aids in identifying data variances at specific sites on specific days leading to poor data quality.

## LESSONS LEARNED

**Planning and communication are key in ensuring effective mitigation of risk and transition of the NSC project** - The proposed NSC structure could not be implemented at AMD given that resources (human and financial) are not available. GHSC-TA determined and proposed an alternative plan to AMD where functions that were earmarked to be performed by AMD resources could potentially be outsourced to an approved service provider to the AMD, Mezzanine. This transition has reduced the risk to the continuity of the NSC beyond the lifespan of GHSC-TA. The lesson learned was that planning and communication is key when it becomes apparent that the initial proposal is not feasible, ensure that a backup plan is determined and communicated timeously to the client and to allow for time to process the requisite approvals.

**Data access and availability to Tier.net TROA Data/CHEZA** - Access to Tier.net TROA Data/CHEZA has been a challenge hence affecting data quality. The data received by the TIER.net team was three months old and discrepancies were noted. The TLD task team opted to use the 'implied dispensing' data as a proxy in the absence of accurate patient level data. However, implied dispensing data does not translate to actual patient numbers, affecting supply and demand planning. GHSC-TA facilitated various engagements between AMD and the HIV Program to get access to the Tier.net TROA data/CHEZA. USAID, through the Care and Treatment team. The matter was escalated and a task team established to address all data related activities. The lesson learned was that the availability and access to updated patient data (TROA) plays a vital role in the management of HIV in South-Africa. The TROA data informs both the supply and demand plan at national, provincial, depot and facility level. The quality of the decision making vastly depends on the quality and availability of the data. Complex decisions may fail because the data is inaccurate or inaccessible.

**A clear SOP is critical to guide stakeholders on how to navigate a specific activity** - In the COVID-19 vaccine project it was observed that the private and public sector sites required assistance to move stock between them. The Vaccine Control Tower intervened by developing an SOP stating how transfers of vaccines must be made between public and private sector vaccination sites. No such SOP existed before, and it was critical to develop one quickly. This SOP assisted all transfers to be made successfully and minimized the number of vaccines being thrown away due to expiry. The lesson learned was that having a clear SOP in place is critical to guide stakeholders on how to navigate a specific activity.

**Inaccessible finance data access affecting reporting** - The finance data being requested is extremely sensitive and confidential and requires a high level of clearance to be shared with the team. As such, it has been very difficult for the finance team to receive this data on a regular basis. Provincial CFOs approval is needed before the data can be shared. This is challenging as this requires a request from the National CFOs to the Provincial CFO to give this approval (via a letter and a meeting). Scheduling these meetings has proved to be an obstacle, often taking weeks to schedule. GHSC-TA intervened through asking the National CFO to write letters to the provincial CFOs, requesting meetings for the GHSC-TA team. Additionally, GHSC-TA has used the pharmaceutical budget review sessions with the provincial CFOs to discuss and reiterate the purpose of the dashboards and request access to the data. GHSC-TA has put together letters to the Director General and the provincial CFOs for their sign-off for GHSC-TA to receive this data on a monthly basis and publish it on the NSC. The lesson learned was that due to the sensitive and confidential nature of the information, we are required to follow a more formal process (with each province) when it comes to requesting the data. Formal permission is needed before publishing this data on the NSC.

**Transparency improves public buy-in and trust in policy decisions made** - Transparency and accountability are key to ensure buy-in and trust of the public in policy and regulatory decisions made by the NDoH. MAC on COVID-19 advisories to the Minister of Health were published on the sacoronavirus website. These recommendations were made available to allow the public to compare advice received by the Minister of Health from the MAC on COVID-19, with policy and regulatory decisions implemented. Although other broader implementation considerations needed to be taken into account, most of the advice of the MAC on COVID-19 was followed. This improved public trust in decisions and accountability through transparency.

## ANNEX 1. PROGRESS SUMMARY

Table 7: Key Performance Indicator Progress Summary

INDICATOR	REPORTING YEAR	BASELINE VALUE	YEAR 6 PROPOSED TARGET	YEAR 6, Q2 ACHIEVEMENT	% YEAR 6 ACHIEVEMENT
<i>PROJECT PURPOSE – STRENGTHEN THE CAPACITY OF THE AFFORDABLE MEDICINE DIRECTORATE AND PROVINCIAL PHARMACEUTICAL SERVICES ACROSS THE MEDICINES SUPPLY VALUE CHAIN TO RESULT IN IMPROVED MEDICINE AVAILABILITY</i>					
KPI 1: Percentage availability of medicines at health establishments	<b>FY21</b>	<b>78%</b>	<b>90%</b>	<b>86%</b>	<b>96%</b>
<b>Objective 1 – Improve selection and use of medicine</b>					
KPI 2: Number of medicine selection decisions made utilizing health technology assessments	<b>FY21</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0%</b>
KPI 3: Percentage of assisted Pharmaceutical and Therapeutics Committees with improved operational capacity.	<b>FY21</b>	<b>NA</b>	<b>25%</b>	<b>Data not yet collected</b>	<b>NA</b>
<b>Objective 2- Support optimization of the supply chain</b>					
KPI 4: Percentage of antiretroviral units delivered by suppliers within contractual lead-time (supplier performance reliability – on time).	<b>FY21</b>	<b>79%</b>	<b>90%</b>	<b>83%</b>	<b>92%</b>
KPI 5: Percentage of Master Health Produce List items on transversal contracts excluding antiretroviral units delivered by suppliers within contractual lead-time (supplier performance reliability – on time).	<b>FY21</b>	<b>75%</b>	<b>85%</b>	<b>72%</b>	<b>85%</b>
KPI 6: Supplier performance reliability – Perfect order fulfilment for orders placed on suppliers (in-full).	<b>FY21</b>	<b>73%</b>	<b>80%</b>	<b>65%</b>	<b>81%</b>
KPI 7: Percentage of master health product list items on transversal contracts delivered via direct delivery to the hospitals designed by the provinces to receive direct delivery.	<b>FY21</b>	<b>NA</b>	<b>70%</b>	<b>No longer in scope</b>	<b>NA</b>

INDICATOR	REPORTING YEAR	BASELINE VALUE	YEAR 6 PROPOSED TARGET	YEAR 6, Q2 ACHIEVEMENT	% YEAR 6 ACHIEVEMENT
KPI 8: Min/Max level reporting – Number of health establishments and warehouses with configured minimum and maximum (min-max) stock levels for stocked medicines being reported to the National Surveillance Centre.	FY21	0	1,500	1,811	121%
KPI 9: Demand forecast accuracy for provinces using the demand forecasting process.	FY21	NA	55%	52%	95%
KPI 10: Forecast bias for pharmaceutical forecasts in provinces using the demand forecasting process.	FY21	TBD	<+/-15%	1%	93%
KPI 11: Percentage of eligible patients transitioned from Tenofovir/Emtricitabine/Efavirenz to Tenofovir/Lamivudine/Dolutegravir.	FY21	0%	100%	79%	79%
<b>Objective 3 – Strengthen governance</b>					
No KPIs scheduled to be reported quarterly.					
<b>Objective 4 – Improve workforce management</b>					
No KPIs scheduled to be reported quarterly.					
<b>Objective 5 – Strengthen Information Systems and Information Management</b>					
KPI 12: Percentage of users utilizing the National Surveillance Centre to review medicine availability trends and reports.	FY21	NA	80%	61%	76%
KPI 13: Number of health establishments and warehouses utilizing the Medicine Master Data Systems as a source of master data.	FY21	0	3,000	Data not yet collected	NA
KPI 14: Number of health establishments using core supply chain information systems to order and/or receive stock.	FY21	0	2600	737	28%
KPI 15: Reporting compliance – Number of Health Establishments Reporting Stock Availability to the National Surveillance Centre.	FY21	NA	3765	3874	103%
<b>Objective 6 – Improve Financial Management</b>					

INDICATOR	REPORTING YEAR	BASELINE VALUE	YEAR 6 PROPOSED TARGET	YEAR 6, Q2 ACHIEVEMENT	% YEAR 6 ACHIEVEMENT
KPI 16: Number of provinces who review their budget vs. actual as defined in the new budgeting process to support the ring-fenced budget.	FY21	0	4	7	175%
KPI 17: Percentage of expenditures on non-Essential Medicine List items.	FY21	1.60%	<10%	2,4%	76%

## **ANNEX 2. SUCCESS STORIES**

1. Strengthening the Governance of Medicine Selection Committees
2. Welcoming Change: Gauteng province embracing collaboration with the National Surveillance Center
3. Embracing supply chain optimization through “Advised Pull”



## Strengthening the Governance of Medicine Selection Committees

Any decision-making process that results in the allocation of public funds should be transparent and equitable. Good governance is crucial not only to the success of the medicine supply chain, but also critical to support evidence-based selection and rational use of medicine. The United States Agency for International Development (USAID)-funded Global Health Supply Chain – Technical Assistance (GHSC-TA) Program works in collaboration with the National Department of Health (NDoH), Provincial Departments of Health, and regulatory bodies to strengthen public health systems in South Africa and improve health outcomes. The GHSC-TA Program works closely with the Affordable Medicines Directorate (AMD) of the NDoH to support good governance in decision-making processes. This work includes the development, review and implementation of legislation, policies, guidelines, processes, and procedures to support evidence-based selection and use of medicines.

### SELECTION OF ESSENTIAL MEDICINES

GHSC-TA works specifically with the Essential Drugs Program (EDP) of the AMD to strengthen the selection and use of medicines. The Essential Medicines List (EML) is the list of medicines that are made available in the public sector of South Africa to satisfy priority health care needs of the population. Medicines are designated essential based on disease prevalence and public health relevance, evidence of clinical efficacy and safety, and comparative costs and cost-effectiveness. The

implementation mechanism of the EML is the Standard Treatment Guidelines (STGs), which provide guidance to health care professionals on the use of EML medicines. The STGs consist of a collection of disorders linked to medicines, background information on the disorder, treatment regimens, as well as other relevant information and are organized per level of care. Access to these medicines is essential for the South African population, which has one of the highest burdens of tuberculosis (TB) and Human Immunodeficiency Virus (HIV) in the world.

The Ministerially appointed National Essential Medicines List Committee (NEMLC) develops and maintains the EML and STGs. The NEMLC is a non-statutory, advisory committee. Its members are appointed by the Minister of Health. The NEMLC is supported by the EDP within the NDoH. The committee conducts medicine reviews and costing analyses that include evidence synthesis and appraisal through the Expert Review Committees (ERCs) of the NEMLC.

### TERMS OF REFERENCE

GHSC-TA working closely with the EDP to review and revise the **NEMLC Terms of Reference** (TORs) which provide the purpose, composition, procedures, and code of conduct of the NEMLC and ERCs. As the composition and processes of the NEMLC evolve, so should the governance documents informing their terms. As such, constant revision of the TORs is facilitated through GHSC-TA.

The NEMLC and ERCs consist of technical experts, members of statutory councils, academics, members of provincial departments of health, as well as NDoH clinical programs. Committee members are expected to act honestly and in good faith, and to exercise skill, care, and diligence in performing their duties. Most importantly, members are not to make improper use of the information to which they have access, and are therefore subject to provisions and procedures related to declaration of interest and confidentiality.

To protect and uphold the integrity of the medicine selection decision-making process through the NEMLC, GHSC-TA assisted in the development and amendment of guidelines and policies that inform the governance of the NEMLC and the ERCs. Decisions regarding the allocation of public funds, such as approving an additional medicine on the EML, require rectitude. The **AMD Conflict of Interest Policy** was developed by GHSC-TA to protect the decision-making of committees operating under the auspices of the AMD, through the identification, declaration, assessment, management, and disclosure of any interest/s of individuals that relate to the work of their respective committees. The policy provides for the management of actual and potential conflicts of interest, and where appropriate, recusal or exclusion of individuals from involvement in discussions and/or decision making.

## **TRANSPARENCY AND EFFICIENCY**

Consultation with stakeholders is an integral part of the review process and appeals against decisions made are accommodated to the extent possible. To facilitate the appeals process, GHSC-TA assisted with the development of a **National Policy for Lodging an Appeal Against a Medicine-Related Decision of the NEMLC**, with the objective of providing a transparent and equitable method for an appeal to a NEMLC decision in the development of the National STGs and EML, based on fair and evidence-based medicine principles.

As the new term of office of the NEMLC began in October 2021, GHSC-TA once again presented these governance policies and guidelines to committee members, providing the committee with a solid foundation on which to build resilient systems of medicine selection and use. As South Africa moves towards the adoption of National Health Insurance (NHI), strong governance of decision-making structures will be key to ensuring that decisions are made in an unbiased, transparent, and efficient manner.

*“We cannot be mere consumers of good governance; we must be participants; we must be co-creator.”* – [Rohini Nilekani](#), Author and Philanthropist



## Welcoming Change: Gauteng province embracing collaboration with the National Surveillance Center

Access to information on medicine availability is crucial for pharmacists and other health care workers in South Africa, to make sure that the supply of medicines meets patient demand. To acquire this data, the pharmaceutical management team, pharmacy managers and other health establishment staff, were developing various medicine availability reports, which differed from province to province, and at times even between districts in the same province. These reports were normally developed using manual paper-based data collection methods and then consolidated, usually in Microsoft Excel, for analysis followed by distribution to a broader team of stakeholders.

The United States Agency for International Development (USAID)-funded Global Health Supply Chain – Technical Assistance (GHSC-TA) Program has been collaborating with the South African National Department of Health (NDoH) to improve access to, and availability of medicine through the development of the National Surveillance Center (NSC). The Stock Visibility System<sup>1</sup> (SVS) and RxSolution<sup>2</sup> feed data into the NSC for enhanced access to information about medicine availability. With support from GHSC-TA, the NDoH conceptualized the NSC to provide visibility of medicine availability across all levels of the public health supply chain, from the supplier,

provincial depot, and district sub-depots to health establishment (facility) level. The NSC is a web-based performance monitoring and evaluation tool using nationally agreed key performance indicators which visualize medicine availability data from various data sources on dashboards. The NSC provides a holistic view of medicine availability throughout the South African public health medicine supply chain.

The provincial pharmaceutical services team in the Gauteng Department of Health (GDoH) uses the NSC to understand medicine availability at the 363 clinics, 34 hospitals, seven district/regional pharmacies/sub-depots, and one central medical supplies depot in the province.

Previously, pharmacy personnel in the GDoH provincial office accessed information from these systems on Excel spreadsheets, which allowed them to see medicine availability at the provincial level. Data from SVS and RxSolution were manually entered into Excel spreadsheets by health care workers across the five districts and sent to the provincial office for review. Medicines were classified as vital, essential, or necessary. This classification was province-specific and only included certain medicines, with the possibility of excluding surveillance of other medicines at provincial level.

<sup>1</sup> SVS is a mobile application and web-based management tool that provides innovative solutions for addressing stock outs in the health care system. SVS is used by health care providers at primary health care facilities to capture stock levels and monitor medicine availability.

<sup>2</sup> RxSolution is an electronic inventory management system that captures and records medicine transactions such as stock movement into and from a pharmacy\*





*Image 1: From left to right; Marco Falco of the GHSC-TA Provincial Support Team training Pamela Sotsaka (Sub-district Pharmacy Manager), Prudence Sodwele (Pharmacist's Assistant, Match – District Support Partner), Samekelisiwe Khumalo (Professional Nurse) using the demo mobile with Puselebo Lehase (Professional Nurse) looking on.*

Pamela Sotsaka is a hardworking sub-district pharmacy manager in the rural Alfred Nzo district in the Eastern Cape, South Africa. Pamela and her health care worker colleagues service vulnerable and poor communities in this rural district. The lack of infrastructure and technology in parts of the province mean that communities often travel far to remote health centers to access life-saving medicine. These circumstances are further exacerbated when there is rain and flooding that make the routes travelled inaccessible.

Pamela spends hours driving across the district, while community members sometimes must walk long distances to receive health services. Long queues are a normal sighting at health facilities in the district, composed of the sickly collecting their medicines. As dire as the picture may seem, the United States Agency for International Development (USAID) Global Health Supply Chain – Technical Assistance (GHSC-TA) Program has worked to optimize the medicine supply chain and help make sure that local health establishments can focus their efforts on the people that need it most.

South Africa has one of the highest burdens of disease in the world. An efficient and effective health supply chain, which improves medicine availability is critical to addressing that disease burden. The GHSC-TA program works closely with the Affordable Medicine Directorate (AMD) of the National Department of Health

(NDoH), to optimize supply chain processes with the aim of ensuring uninterrupted supply of medicines through a resilient and reliable supply chain. One of the key enablers is the implementation of improved replenishment planning processes.

To achieve this, AMD, with the support of the GHSC-TA program, has identified “Advised Pull” as the replenishment planning process that will most improve medicine availability. The legacy process used to replenish medicine is an onerous, paper-driven process reliant on manual inputs from health professionals like Pamela and the staff at facilities. The order lead time is lengthened by the physical movement of the order form from the clinic to the district office, and eventually to the provincial depot. There is a limitation in a holistic view of the sub-district or district of orders placed, and there is no visibility of adherence to minimum and maximum (min-max) stock levels. The ordering process is lengthy, with incorrect medication and quantities sometimes being ordered, with the potential for over- or under-stocking. Health care professionals also spend valuable time on ordering and managing stock that could have been spent on patient care.

“Advised pull” is an electronically enabled replenishment process – the eOrdering functionality of the Stock Visibility System

(SVS)<sup>1</sup> - that uses data analytics and technology and may be used at each participating health establishment. The process optimizes the supply and the management of stock at clinics by ensuring order quantities are informed by optimized min-max stock levels. The process also empowers pharmacists to exercise improved oversight and manage stock more effectively across all the health establishments in their sub-district or district. This means there is end-to-end visibility of stock at participating health establishments.

The “advised pull” process ensures that orders are in line with min-max stock levels and assists in reducing wastage and managing the balance of stock across sub-districts or districts, especially in cases where limited stock is available.

Pamela and her team received training on the Advised Pull approach as part of a pilot for the Alfred Nzo district to help ensure a more effective process of managing medicine. The training was a collaborative effort between GHSC-TA and Mezzanine – the NDoH service provider responsible for SVS. While the cell phone network in the area continues to be a challenge, the team is elated that the system can operate from the mobile phones used to operate SVS - even under a tree - which is where they conducted the session. The added advantage for Pamela, is that she can train others and the process only takes 20 minutes whereby the paper-based system took longer. The system is advanced enough to capture data, even if there is a network delay which is

common in the area and can be loaded later once connectivity is re-established.

**“I was very happy with the training and how it was conducted,”** said Pamela. **“All the concepts were clearly explained, and everything was easy to follow and understand, not only for myself, but for the nurses as well. The most important benefit for me for the “Advised Pull” solution is how it will improve our ordering process. Cutting out the collection and delivery of orders via courier and receiving everything electronically will improve efficiency and ways of working. It will also remove the risk of lost orders during the collection and delivery from multiple facilities.”**

Pamela is excited to reach the other twenty-five facilities she services and onboard them into the “Advised Pull” solution. The processes have already taken a load off the health workers and the nurses were happy to rush back to service their patients waiting to receive vital medications.



*Image 2: From left to right; GHSC-TA team member Khamotjo Mabatja, Professional Nurse, Samekelisiwe Khumala, Sub district Pharmacy Manager, Pamela Satsaka and GHSC-TA team members Talent Bhobo, Letlhogonolo Maluleke and Marco Falco.*

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<sup>1</sup> SVS is a mobile application and web-based management tool that provides innovative solutions for addressing stock outs in the health care system.

*SVS is used by health care providers at primary health care facilities to capture stock levels and monitor medicine availability.*