



GLOBAL HEALTH SUPPLY CHAIN PROGRAM – TECHNICAL ASSISTANCE SOUTH AFRICA

YEAR 6 QUARTER I, Quarterly Report

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CONTENTS

| | |
|--|-----------|
| LIST OF TABLES | IV |
| LIST OF FIGURES | IV |
| ACRONYMS | V |
| 1. EXECUTIVE SUMMARY | 1 |
| INTRODUCTION | 1 |
| PURPOSE OF THIS DOCUMENT | 1 |
| YEAR 6 QUARTER 1 ACTIVITIES AND ACHIEVEMENTS | 1 |
| OBJECTIVE 1: IMPROVE SELECTION AND USE OF MEDICINES | 1 |
| OBJECTIVE 2: SUPPORT OPTIMIZATION OF THE SUPPLY CHAIN | 2 |
| OBJECTIVE 3: STRENGTHEN GOVERNANCE | 2 |
| OBJECTIVE 4: IMPROVE WORKFORCE MANAGEMENT | 2 |
| OBJECTIVE 5: STRENGTHEN INFORMATION SYSTEMS AND INFORMATION MANAGEMENT | 2 |
| OBJECTIVE 6: IMPROVE FINANCIAL MANAGEMENT | 3 |
| 2. INTRODUCTION | 4 |
| PROGRAM OBJECTIVES | 4 |
| YEAR 6 QUARTER 1 OVERVIEW | 6 |
| YEAR 6 QUARTER 1 ACHIEVEMENTS | 7 |
| PROGRESS TOWARDS GOAL – INCREASED MEDICINE AVAILABILITY | 8 |
| 3. IMPROVE SELECTION AND USE OF MEDICINES | 10 |
| ACTIVITIES AND ACHIEVEMENTS | 10 |
| STRENGTHEN MEDICINE SELECTION AND USE | 10 |
| OUTCOME LEVEL RESULTS | 11 |
| KPI 2. NUMBER OF MEDICINE SELECTION DECISIONS MADE UTILIZING HEALTH TECHNOLOGY ASSESSMENT PROCESSES | 11 |
| KPI 3. PERCENTAGE OF ASSISTED PHARMACEUTICAL AND THERAPEUTICS COMMITTEES (PTCS) WITH IMPROVED OPERATIONAL CAPACITY | 11 |
| 4. SUPPORT OPTIMIZATION OF THE SUPPLY CHAIN | 12 |
| ACTIVITIES AND ACHIEVEMENTS | 12 |
| DEMAND PLANNING | 12 |
| FINANCIAL MANAGEMENT | 13 |
| TLD TRANSITION | 14 |
| OUTCOME LEVEL RESULTS | 16 |
| KPI 4. PERCENTAGE OF ANTIRETROVIRAL UNITS DELIVERED BY SUPPLIERS WITHIN CONTRACTUAL LEAD-TIME (SUPPLIER PERFORMANCE RELIABILITY – ON TIME) | 16 |
| 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) | 17 |
| KPI 6. SUPPLIER PERFORMANCE RELIABILITY – PERFECT ORDER FULFILLMENT FOR ORDERS PLACED ON SUPPLIERS (ON-TIME AND IN-FULL) | 19 |
| 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 | 20 |

| | |
|---|-----------|
| KPI 9. DEMAND FORECAST ACCURACY FOR PROVINCES USING THE DEMAND FORECASTING PROCESS | 20 |
| KPI 10. FORECAST BIAS FOR PHARMACEUTICAL FORECASTS IN PROVINCES | 21 |
| KPI 11. PERCENTAGE OF ELIGIBLE PATIENTS TRANSITIONED FROM TEE TO TLD | 22 |
| KPI 16. NUMBER OF PROVINCES WHO REVIEW THEIR BUDGET VS. ACTUAL AS DEFINED IN THE NEW BUDGETING PROCESS TO SUPPORT THE RING-FENCED BUDGET | 23 |
| KPI 17. PERCENTAGE OF EXPENDITURE ON NON-ESSENTIAL MEDICINE LIST ITEMS | 24 |
| 5. STRENGTHEN GOVERNANCE | 25 |
| ACTIVITIES AND ACHIEVEMENTS | 25 |
| GOVERNANCE AND LEGISLATION | 25 |
| CONTRACTING AND CONTRACT MANAGEMENT | 25 |
| OUTCOME LEVEL RESULTS | 26 |
| 6. IMPROVE WORKFORCE MANAGEMENT | 27 |
| ACTIVITIES AND ACHIEVEMENTS | 27 |
| OUTCOME LEVEL RESULTS | 28 |
| 7. STRENGTHEN INFORMATION SYSTEMS AND INFORMATION MANAGEMENT | 29 |
| ACTIVITIES AND ACHIEVEMENTS | 29 |
| MASTER MEDICINE DATA SYSTEM | 29 |
| NATIONAL SURVEILLANCE CENTER | 30 |
| OUTCOME LEVEL RESULTS | 32 |
| KPI 12. PERCENTAGE OF USERS UTILIZING THE NSC TO REVIEW MEDICINE AVAILABILITY TRENDS AND REPORTS | 32 |
| KPI 13. NUMBER OF HEALTH ESTABLISHMENTS AND WAREHOUSES UTILIZING MEDICINE MASTER DATA SYSTEM AS A SOURCE OF MASTER DATA | 34 |
| KPI 14. NUMBER OF HEALTH ESTABLISHMENTS USING CORE SUPPLY CHAIN INFORMATION SYSTEMS TO ORDER AND/OR RECEIVE STOCK | 34 |
| KPI 15. REPORTING COMPLIANCE – PERCENTAGE OF HEALTH ESTABLISHMENTS REPORTING STOCK AVAILABILITY TO THE NSC | 35 |
| 8. PROVINCIAL SUPPORT AND REPLENISHMENT PLANNING | 37 |
| ACTIVITIES AND ACHIEVEMENTS | 37 |
| INSTITUTIONALIZATION OF THE NSC | 37 |
| REPLENISHMENT PLANNING | 38 |
| OTHER ACTIVITIES | 39 |
| OUTCOME LEVEL RESULTS | 39 |
| 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 | 39 |
| 9. SUPPORTING THE GOVERNMENT OF SOUTH AFRICA IN THE RESPONSE TO COVID-19 | 41 |
| OBJECTIVES | 41 |
| APPROACH AND KEY ACTIVITIES | 42 |
| PERSONAL PROTECTIVE EQUIPMENT | 42 |
| ROLL OUT OF COVID-19 VACCINES | 43 |
| OUTCOME LEVEL RESULTS | 45 |
| LESSONS LEARNED | 47 |

| | |
|--|----|
| 10. FINANCIAL STATUS OF THE TASK ORDER | 48 |
| ANNEX 1. PROGRESS SUMMARY | 49 |
| ANNEX 2. SUCCESS STORIES | 52 |

LIST OF TABLES

| | |
|---|--|
| Table 1: Activities and Descriptions | |
| Table 2: Key Year 6 Quarter 1 Achievements | |
| Table 3: Supply and distribution statistics | |
| Table 4: Number of COVID-19 Documents | |
| Table 5: Number of COVID-19 Multisectoral Meetings | |
| Table 6: Obligation vs. Accruals & Expenditures to Date | |
| Table 7: Total Expenditures to Date | |
| Table 8: Budget vs. Actual LOE | |
| Table 9: Key Performance Indicator Progress Summary | |

LIST OF FIGURES

| | |
|---|-----|
| Figure 1 Overall Percentage Medicine Availability in Year 6 Q1 | 9 |
| Figure 2 TLD+TEE Implied Dispensing Combined Total..... | 144 |
| Figure 3 Percentage of Anti-retroviral Units Delivered by Suppliers within Contractual Lead-time (Supplier Performance Reliability - On Time) in Year 6 Q1 | 177 |
| Figure 4 Supplier Performance Reliability - On Time - Disaggregation by Province in Year 6 Q1 | 177 |
| Figure 5 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 Q1 | 188 |
| Figure 6 Disaggregation by Province in Year 6 Q1 | 188 |
| Figure 7 Supplier Performance Reliability--Perfect Order Fulfilment for Orders Placed on Suppliers (On-Time and In-Full) in Year 6 Q1 | 19 |
| Figure 8 Disaggregation by Provinces in Year 6 Q1 | 210 |
| Figure 9 Overall Demand Forecast Accuracy in Year 6 Q1 | 21 |
| Figure 10 Disaggregation by Provinces in Year 6 Q1 | 21 |
| Figure 11 Forecast Bias for Pharmaceutical Forecasts in Year 6 Q1 ... Error! Bookmark not defined. | 2 |
| Figure 12 Percentage of Eligible Patients Transitioned from TEE to TLD in Year 6 Q1 | 233 |
| Figure 13 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 Q1 | 244 |
| Figure 14 EML vs Non-EML Spend on Medicine List Items in Year 6 Q1 .. Error! Bookmark not defined. | 4 |
| Figure 15 Percentage of Users Utilizing the NSC to Review Medicine Availability Trends and Reports in Year 6 Q1 | 333 |
| Figure 16 Percentage of Users Utilizing the NSC to Review Medicine Availability Trends and Reports in Year 6 Q1 | 333 |
| Figure 17 Number of Facilities Using Core Supply Chain Information Systems to Order and/or Receive Stock in Year 6 Q1 | 35 |
| Figure 18 Disaggregation by Province and Stock Management System in Year 6 Q1 | 35 |

| | |
|--|-------------------------------------|
| Figure 19 Number of Health Establishments Reporting Stock Availability to the NSC in Year 6 Q1 | 36 |
| Figure 20 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 Q1 | Error! Bookmark not defined. |
| Figure 21 Total Cumulative Number of Sites Reporting PPE..... | Error! Bookmark not defined. |
| Figure 22 Obligation by Year | 48 |

ACRONYMS

| | |
|---------|---|
| AIDS | Acquired Immune Deficiency Syndrome |
| AMD | Affordable Medicines Directorate |
| API | Active Pharmaceutical Ingredient |
| ARC | Africa Resource Centre |
| ARV | Antiretroviral |
| CCMDD | Centralized Chronic Medicine Dispensing and Distribution |
| CHCs | Community health centers |
| 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 |
| 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 |
| Q1 | Quarter 1 |
| RMU | Rational Medicine Use |
| SIMA | Strategy to Improve Medicine Availability |
| SITA | State Information Technology Agency |
| 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 |

I. 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 I ACTIVITIES AND ACHIEVEMENTS

Year 6 Quarter I (Q1) 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 activities and accomplishments for each objective follows.

OBJECTIVE 1: IMPROVE SELECTION AND USE OF MEDICINES

During the period under review, 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 including the National Essential Medicines List Committee (NEMLC) and its subcommittees, and strengthening rational medicine use (RMU), particularly with the convening of the new NEMLC and Tertiary Expert Review Committee (ERC) for a three-year term of office. Specific achievements included drafting the NEMLC Bulletin, updating the NEMLC and Tertiary ERC Terms of References (TOR), presenting to the newly convened NEMLC on its TORs and relevant governance documents, drafting submissions and letters for the appointment of members to the NEMLC and Tertiary ERC, as well as assistance with developing specifications for the tablet tender (HP09).

OBJECTIVE 2: SUPPORT OPTIMIZATION OF THE SUPPLY CHAIN

During this quarter, GHSC-TA initiated the implementation of demand forecasting in two new provinces, Limpopo and Mpumalanga, with both provinces at the initial stage of data collection and cleaning. The GHSC-TA team also completed the annual pharmaceutical budget reviews for all provinces. Provincial heads of departments signed off on budgets. GHSC-TA continued to provide ongoing support to update the COVID-19 forecast as more information became available and the fourth wave of COVID-19 infections hit the country.

GHSC-TA, together with provincial teams, reviewed and finalized the finance dashboard on the NSC. This dashboard will act 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. In an effort to standardize the expenditure classifications across provinces, the GHSC-TA led Task Team, in consultation with the Depot Finance Managers, completed the analysis of the Standard Charter of Accounts (SCOA) codes used across provinces for all medicines. GHSC-TA presented the outcomes of this exercise to the National Health Council – Sub-committee – Pharmaceutical Services for approval as the first step towards the adoption of the recommendations put forward by the team.

OBJECTIVE 3: STRENGTHEN GOVERNANCE

During this period, GHSC-TA continued to support AMD and the provinces to strengthen governance. The team supported AMD with reviewing the three sets of regulations relating to practice, registration, and education of pharmacy support personnel. GHSC-TA developed the supply planning guide and continued reviewing and updating the Special Requirements and Conditions of Contract (SRCC). Additionally, the team continued to support AMD with developing policy principles for tender forecasting.

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 implementation of tools, training, and a mentorship program to support clinicians with the TLD transition. In addition, GHSC-TA trained and mentored the provincial TLD champions to take over activities in preparation for the close-out of the TLD transition project.

GHSC-TA strengthened existing communication structures between national and provincial stakeholders by establishing key stakeholder groups in each province to disseminate circulars and memos from NDoH. By creating provincial WhatsApp groups, GHSC-TA is able to share information and provide feedback on key issues related to the TLD transition in real-time. Stock-outs are addressed immediately and resolved the same day. Improved communication informs clinicians of changes and updates on the clinical guidelines to ensure patients get the best treatment and care.

OBJECTIVE 5: STRENGTHEN INFORMATION SYSTEMS AND INFORMATION MANAGEMENT

GHSC-TA continues to provide assistance for the development and roll-out of the Medicine Master Data System (MMDS) and Stock Visibility System (SVS) and reached a significant milestone with the completion and deployment of new code to integrate MMDS medicine data with SVS medicine data.

The usefulness of master data depends on the ability of supporting systems and processes to access the master data they need. This development allows SVS to access medicine configuration data from the MMDS seamlessly. Once medicines are linked on both systems, changes effected on the MMDS automatically reflect on the SVS.

In addition, SVS system development focused on technical requirements gathering for integration with MEDSAS, the most widely implemented warehouse management system, with the aim of passing orders seamlessly from SVS to MEDSAS via the Remote Demander Module (RDM).

Challenges were experienced nationally with the RxSolution Automated Reporting System (API), resulting in a prolonged outage. GHSC-TA provided the technical assistance required to isolate the source of the problem and restore reporting.

During the quarter, GHSC-TA completed development work on the draft visuals and flow coding for new views for the finance planning and replenishment planning dashboard requirements. GHSC-TA completed enhancements to the trend dashboard, resulting in download and navigation options for users based on their reporting needs. GHSC-TA also developed a new scatterplot report that showcases medicine availability and reporting compliance on the same view to assess where targeted interventions may be required quickly. The program further assisted AMD with the Annual Performance Plan (APP) data and targets summary for health establishments reporting to the NSC for the NHI quarterly report response and supported the Northern Cape Pharmaceutical Services team with training to explain differences in reporting trend values between the NSC and the SVS reports available on the SVS web portal.

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 million¹ people living with the disease. In addition, the country has the third-highest burden of TB internationally.² 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 Table 1.

¹ 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>.

² 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

| Activity | Description | Objective |
|--|--|-------------|
| 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. Support the transitioning of reporting, support and general management of the NSC to AMD in preparation for the handover and finalizing the close out report for NSC activities. | 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 |

| Activity | Description | Objective |
|---------------------------|---|----------------|
| 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 Strategy for Improved Medicine Availability (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 I - Health outcomes for South Africans improved, the NDoH SIMA and the NDoH APP.

YEAR 6 QUARTER I OVERVIEW

GHSC-TA activities in Q1 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 personal protective equipment (PPE) needed by staff and patients and the roll-out of the COVID-19 vaccines.

The response to COVID-19 has allowed the program, AMD, and the provinces to monitor 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 I ACHIEVEMENTS

Table 2 provides a high-level overview of Year 6 Q1 projects and their key achievements.

Table 2: Key Year 6 Quarter I Achievements

OBJECTIVE 1: IMPROVE SELECTION AND USE OF MEDICINES

1. Updated the NEMLC and Tertiary ERC TORs and developed the quarterly NEMLC Bulletin.
2. Provided assistance with tender specifications for the tender for solid dosage forms e.g. tablets (HP09).
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.

OBJECTIVE 2: SUPPORT OPTIMIZATION OF THE SUPPLY CHAIN

4. Initiated demand planning process in Limpopo and Mpumalanga.
5. Completed pharmaceutical budget reviews with the Heads of Pharmaceutical Services.
6. Completed min-max stock level upload onto the SVS platform in Xhariep District and one sub-district in Thabo Mofutsanyane in Free State.
7. Finalized the development of new NSC reports utilizing the optimized min-max parameters.
8. Finalized engagement with the Eastern Cape to strengthen the replenishment processes at PHC level. Calculated min-max levels for clinics in the Alfred Nzo District in the Eastern Cape.
9. Initiated engagements with the KwaZulu-Natal and Mpumalanga Pharmaceutical Services Team to discuss opportunities for GHSC-TA support in strengthening medicine stock management at primary health care (PHC) level.

OBJECTIVE 3: STRENGTHEN GOVERNANCE

10. Reviewed public comment received on the three sets of regulations relating to practice, education, and registration of pharmacy support personnel.
11. Developed the draft supply planning guideline.
12. Revised the SRCC based on comment from legal experts and lessons learned from COVID-19.
13. Developed the draft discussion paper for product identification and capturing implementation.
14. Developed policy principles for tender forecasting.

OBJECTIVE 4: IMPROVE WORKFORCE MANAGEMENT

15. Trained and mentored the provincial TLD champions to take over activities in preparation for close-out of the TLD transition project.

OBJECTIVE 5: STRENGTHEN IT SYSTEMS AND INFORMATION MANAGEMENT

16. Supported system development efforts for MMDS / SVS medicine level integration with the first batch of medicines now linked.

-
17. Formulary Tool roll-out related interactions with provincial departments now active in four provinces (Free State, North West, Eastern Cape, and Mpumalanga).
-
18. Consolidated both depot catalogues from Eastern Cape and loaded onto MMDS Formulary Tool as a preliminary provincial formulary for Eastern Cape.
-
19. Loaded 840 Eastern Cape facilities onto the MMDS Location Tool in preparation for loading formularies for these establishments.
-
20. Restored RxSolution Automated Reporting System (API) after technical assistance to address system outage and maintained connections at 326 sites across eight provinces (Mpumalanga, Limpopo, Gauteng, Eastern Cape, North West, KwaZulu-Natal, Free State, Northern Cape)
-
21. Continued support to the COVID-19 response by providing weekly update reports to AMD and the provinces about reporting compliance and medicine availability.
-
22. Supported the vaccine roll-out team by providing reporting compliance reports to the team every week.
-
23. Developed draft views for the finance planning dashboards, replenishment planning dashboards, and an additional medicine availability/reporting compliance report for the integrated view dashboard.
-
24. Developed a new scatterplot report highlighting reporting compliance and medicine availability that provides a quick view of entities requiring targeted interventions.
-

OBJECTIVE 6: IMPROVE FINANCIAL MANAGEMENT

-
25. Finalized the design and development of the finance dashboard on the NSC platform. Continued to populate and update dashboards with monthly provincial expenditure data.
-
26. Presented findings and recommendations for standardization of SCOA codes used to monitor medicine budget performance across provinces.
-

PROGRESS TOWARDS GOAL – INCREASED MEDICINE AVAILABILITY

As mentioned previously, 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 1. OVERALL PERCENTAGE MEDICINE AVAILABILITY

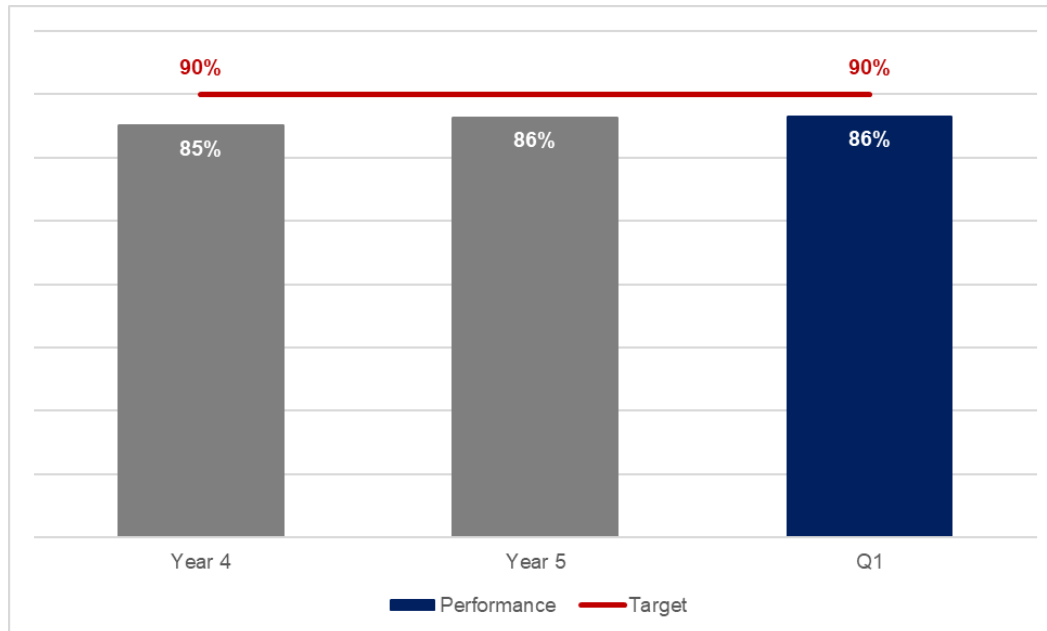
This indicator measures the availability of medicine at all health establishments (PHC clinics, community health centers (CHCs), hospitals, dispensing service providers of the Centralized Chronic Medicine Dispensing and Distribution program (CCMDD) and private sector health establishments providing health 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, 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). Three of the nine provinces achieved the target of 90 percent availability, namely Gauteng, Free State and KwaZulu-Natal. At health establishment level, medicine availability at PHC clinics improved slightly from 88.1 percent at the beginning of the quarter to 88.5 percent at the end of the quarter. Medicine availability at hospitals improved from 81.3 percent at the beginning of the quarter to 83.6 percent at the end of the quarter.

Medicine availability at suppliers remains consistently below the 90 percent target. Investigations through the Improved Medicine Availability Team (IMAT) process have shown that active

pharmaceutical ingredient (API) shortages, production-related challenges, and delays in shipping due to the COVID-19 pandemic 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 Q1



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 reduced staff capacity within depots due to COVID-19 infections. Additionally, the lack of customized formularies, particularly at warehouses and hospitals, contributes to a skewed availability picture.

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 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 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. During the first quarter of Year 6, 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). This included assistance with convening the new NEMLC and Tertiary ERC.

Support to NEMLC and the Expert Review Committees (ERC). GHSC-TA assisted the Essential Drugs Programme (EDP) of the AMD with convening the NEMLC and Tertiary ERCs, appointed for a new three-year term of office. The team drafted the quarterly NEMLC Bulletin to communicate decisions made at its meeting on 29 July and updated the NEMLC TORs to include the roles of each stakeholder in the committee and the roles and functions of the newly appointed co-chairpersons. The program presented the updated TORs, Conflict of Interest Policy, Therapeutic Class Policy, NEMLC Appeals Policy and other governance documents to NEMLC at its meetings on 2 December and 9 December.

GHSC-TA assisted the EDP with updating the Tertiary ERC TORs to align with the NEMLC TORs. The program also assisted EDP with drafting submissions and letters for the request to the Minister of Health to approve the appointment of members of the NEMLC and Tertiary ERC, as well as acceptance and rejection letters for applicants to the NEMLC and Tertiary ERC, and a memo to the Heads of Pharmaceutical Services to describe the COVID-19 therapeutics approval process.

RMU Support. GHSC-TA assisted the EDP with resolving requests on the EML Clinical Guide Application and continued updating the content with the 2020 STGs on the EML Content Management System (CMS) of the EML application. GHSC-TA also assisted the Contracting Unit of AMD to develop and consolidate specifications for the HP09 solid dosage form (tablet/capsules) tender.

OUTCOME LEVEL RESULTS

The program's theory of change hypothesizes that by supporting AMD efforts to perform Health Technology Assessments (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 Q1.

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 strengthening activities on hold, pending the finalization of legislation needed to implement NHI. In Year 5 and Year 6, GHSC-TA supported AMD with activities in preparation for implementing HTA, including providing input on the HTA Methods Guide.

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 due to the COVID-19 pandemic. However, the program has assisted in the development and management of formularies by developing provincial formulary reports in the Northern Cape, Free State, and KwaZulu-Natal.



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, including establishing medicine master data, managing formularies, creating accurate demand forecasts, effective replenishment planning, and ensuring end-to-end visibility. Governance processes have also been put in place to ensure that the approaches become a way of life.

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 Programs and PDoHs to enrich the demand forecast and enable the best demand plans possible.

Tender Forecasting. During the quarter under review, 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 antiretroviral (ARV) forecasted volumes and the oncology volumes for the upcoming bid specification meetings, which form part of the contracting cycle.

In-contract Demand Planning. GHSC-TA supported the CMU by establishing the in-contract demand forecast (ICDF), where actual and forecasted, volumes are compared to the originally contracted volumes. The basis of the model is the original contracted volumes and the signed-off “one number” forecast from the Demand Planning team. GHSC-TA also facilitated simplification of the ICDF model to streamline the monthly publication process.

Provincial Demand Planning. During the period under review, GHSC-TA continued to support provinces with establishing demand forecasts. The program has established the demand planning process in Eastern Cape, Free State, Gauteng, KwaZulu-Natal and North West, with preliminary work commencing in Limpopo and Mpumalanga. During the period under review, the GHSC-TA demand planning team continued to work closely with the provincial demand planning coordinators and relevant program teams to establish the provincial forecasts. These are compiled for review in the demand review meetings, during which the provincial forecasts are agreed upon.

FINANCIAL MANAGEMENT

Budget Planning. GHSC-TA completed the pharmaceutical budget reviews with all nine provinces, and provincial Heads of Pharmaceutical Services approved the budgets. Pharmaceutical budget review is an annual process that uses a demand forecasting process to review all pharmaceutical items in provinces, cash-up the forecast (by multiplying forecasted quantities with per item cost prices to work out the forecast in rand value), include provision for inflation and present the budget for approval. Although the provinces reviewed and accepted the adjusted budget for FY 2022/2023, the Chief Financial Officer Forum has yet to give final approval. In addition, the National Health Council Technical Advisory Committee has not yet approved ring-fencing of pharmaceutical budgets.

Budget Reporting and Monitoring. The GHSC-TA team have worked with the provinces to finalize budget dashboard views on the NSC. GHSC-TA has continued to track budget expenditure (disbursements on the NDoH financial reporting system – the Basic Accounting System (BAS)) against allocated budget and the budget forecast. Where provinces have provided additional expenditure data, i.e. accruals and commitments, GHSC-TA has shared monthly reports with provinces, identifying areas where medicine expenditure has exceeded the budget and therefore provide a basis for an adjustment budget or timely interventions. The report also highlights areas of activity with significant variances from the budget sources of funds and item descriptions.

Data submissions are still in progress to identify gaps and formalize the data submission process.

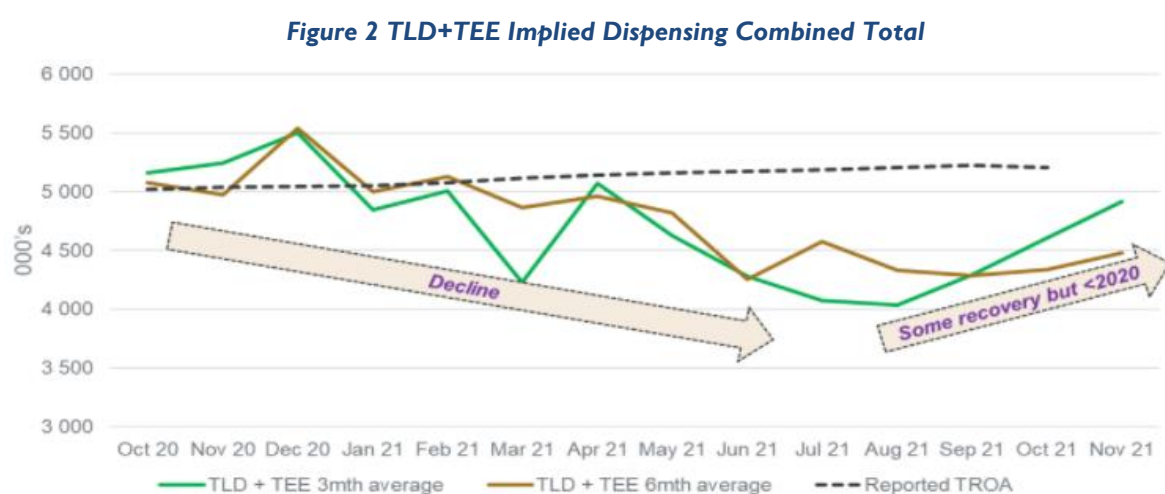
Budget Task Team. GHSC-TA led a Task Team charged with standardizing SCOA codes across provinces and mapping these codes to the budget forecast generated by the Demand Planning Team. As forecasts are generated at a product level, mapping these to SCOA codes aligns the forecasts to the reporting mechanism required by the National Treasury and enables comparison across provinces.

The GHSC-TA team provided support in analyzing codes from four provinces and presented the analysis and recommendations at the National Health Council -Sub-Committee – Pharmaceutical Services (NHC-SC-PS) for consideration and adoption by the National Chief Financial Officer and the health sector at large. Some of the proposed recommendations included reclassifying codes for medicine that do not fit in any of the established classifications versus non-medicine related items such as packaging material.

TLD TRANSITION

The first national contracts for tenofovir/lamivudine/dolutegravir (TLD) were awarded in February 2019. The TLD transition has now reached the two-year mark, with the ratio of eligible patients on TLD:TEE reaching 70:30 in November 2021 - below the planned target of 80:20. Some concerning trends include an apparent decline in usage of TLD and TEE in 2021, and anecdotal reports of patients being switched back to TEE, after being transitioned to TLD.

The TLD transition team has been tracking the distribution of TLD and TEE from suppliers to provinces, together with stock levels at depots, hospitals and PHC facilities. These 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 refer Figure 2 below. 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 the recent months, but not yet to the levels of 2020. Suppliers of TLD and TEE have also raised concerns on lower-than-expected orders signifying fewer patients.



Over the past 24 months, GHSC-TA, in collaboration with Africa Resource Centre (ARC), worked closely with the PDoHs, the HIV Program, and other implementing partners to support the TLD transition. By the end of Year 6, Q1, the provinces had transitioned 70 percent of the total remaining on antiretroviral therapy (TROA), as seen through the implied dispensing numbers. The TLD project team used the implied dispensing data in the absence of TIER.Net data (patient data). In June 2021, the TLD Project team received the TIER.Net report. 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 data. Various reporting-related challenges were identified and are being addressed.

Communication. GHSC-TA assisted AMD with a memo sent to the HIV Program requesting provinces to take active steps to achieve 80:20 TLD:TEE by November 2021 and set a clear direction on the use of DTG50 vs LPV/r 200/50. During Q1, GHSC-TA also supported the development of a

national communication plan and facilitated use of materials and platforms ranging from flyers, newspapers, television, and social media for effective engagement with stakeholders and beneficiaries. GHSC-TA assisted strengthening of existing communication structures between national and provincial stakeholders by establishing key stakeholder groups per province to disseminate circulars and memos from NDoH. By creating provincial WhatsApp groups, information can be shared easily and feedback provided in real time on key issues related to the transition. Stock-outs are addressed immediately and resolved the same day. Improved communication is informing clinicians of changes and updates on the clinical guidelines to ensure patients get the best treatment and care.

TLD Dashboard. During Q1, 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, which are 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 monthly. These 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. During Q1, GHSC-TA continued to review and update the provincial demand forecasts taking into account the current TROA on TEE and TLD, and MMD of the 90-day pack. The updated provincial forecast will determine the balance of eligible patients to be switched to TLD as well as phasing over the next three 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. During the quarter under review, GHSC-TA continued to hold weekly sales and operations meetings with provincial PS 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 team 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, developed a demand forecast to assist the provinces with switching. 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 to DTG because of the stock shortages experienced from June 2020. A quick reference guide was also developed.

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.

- Preparations with planning and implementation of the switching of 2nd line patients and adolescents to DTG-containing regimens as well as product switches on pediatric DTG-formulations.
- Assist HIV Program in finding solutions for unavailability of patient data from TIER.Net

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 Q1.

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 Q1, 85 percent of ARVs were delivered by suppliers within the contractual lead time of 14 days. The performance demonstrated a significant increase from the 66 percent reported at the end of Year 5, as shown in Figure 3. Challenges experienced in Year 5, especially for TLD and TEE, which had significant supply constraints due to API issues, contractual challenges and the impact of COVID-19, have been resolved - with some contracts cancelled and volumes re-negotiated. Additionally, with IMAT processes strengthened, many issues were proactively managed by AMD and provinces. Figure 4 provides a disaggregation by province.

Figure 3 Percentage of Anti-retroviral Units Delivered by Suppliers within Contractual Lead-time (Supplier Performance Reliability - On Time) in Year 6 Q1

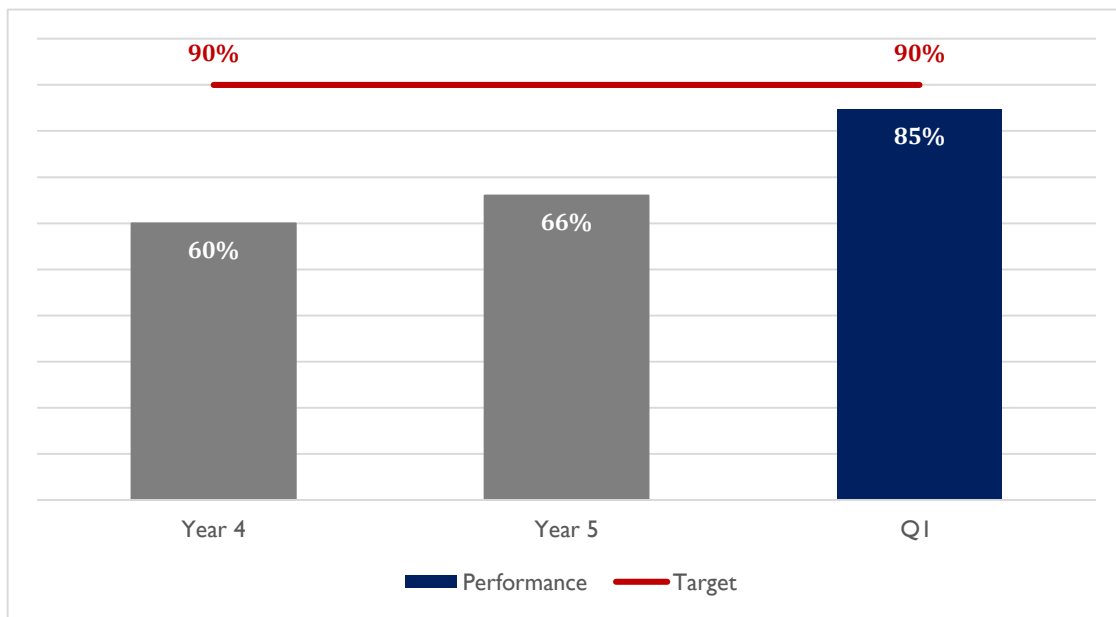
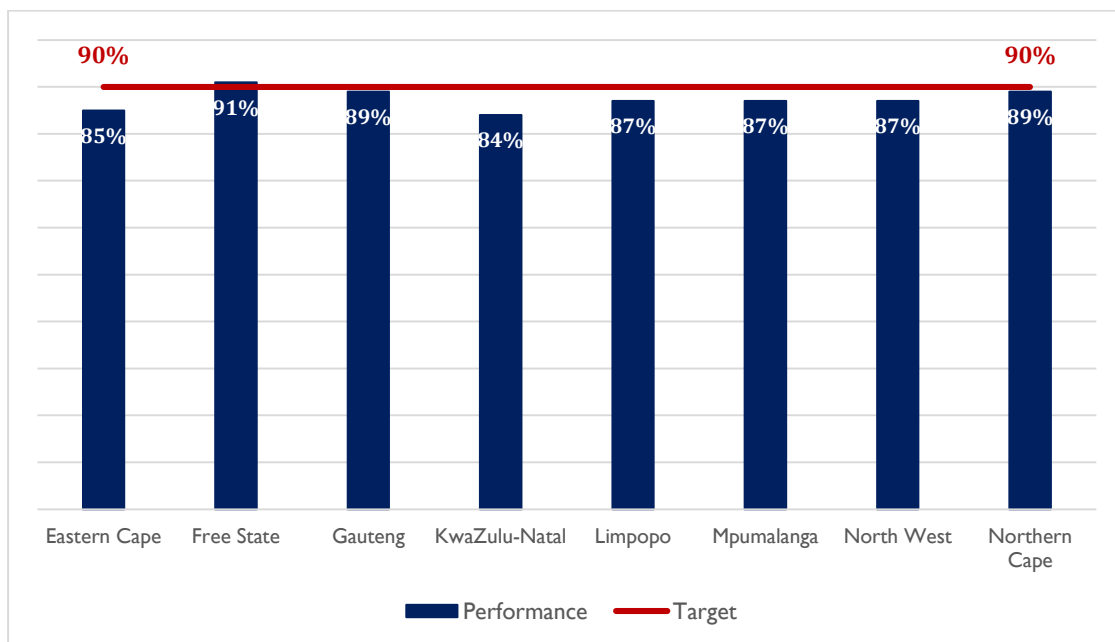


Figure 4 Supplier Performance Reliability - On Time - Disaggregation by Province in Year 6 Q1



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 Q1, 77 percent of MHPL items (excluding ARVs) were delivered by suppliers within the contractual lead-time, up from 67 percent at the end of Year 5, as shown in Figure 5. GHSC-TA

continued to support AMD in identifying interventions to resolve medicine supply challenges. Figure 6 presents the disaggregation by province.

Figure 5 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 Q1

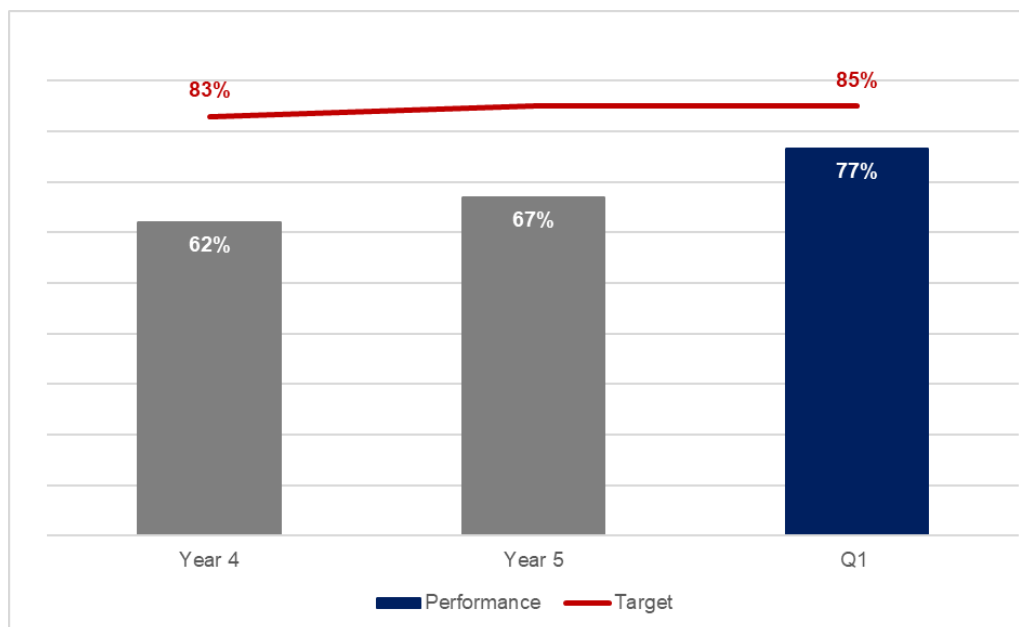
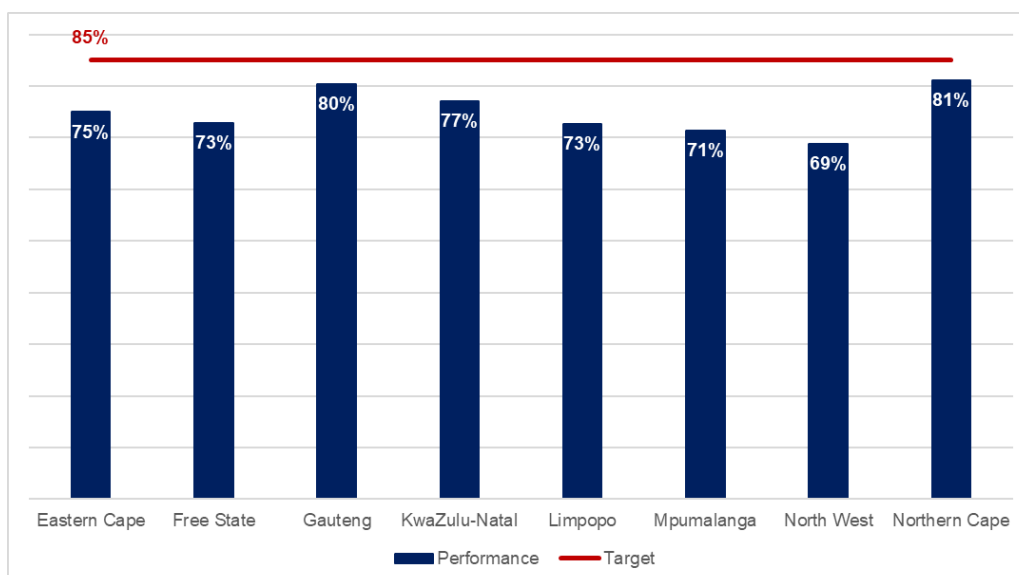


Figure 6 Disaggregation by Province in Year 6 Q1



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 Q1, supplier performance reliability was reported at 70 percent, up from 63 percent at the end of year 5 as shown in Figure 7. 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 formalize the in-contract demand planning so that AMD can engage suppliers to increase production as needed. Figure 8 presents the disaggregation by province.

Figure 7 Supplier Performance Reliability--Perfect Order Fulfilment for Orders Placed on Suppliers (On-Time and In-Full) in Year 6 Q1

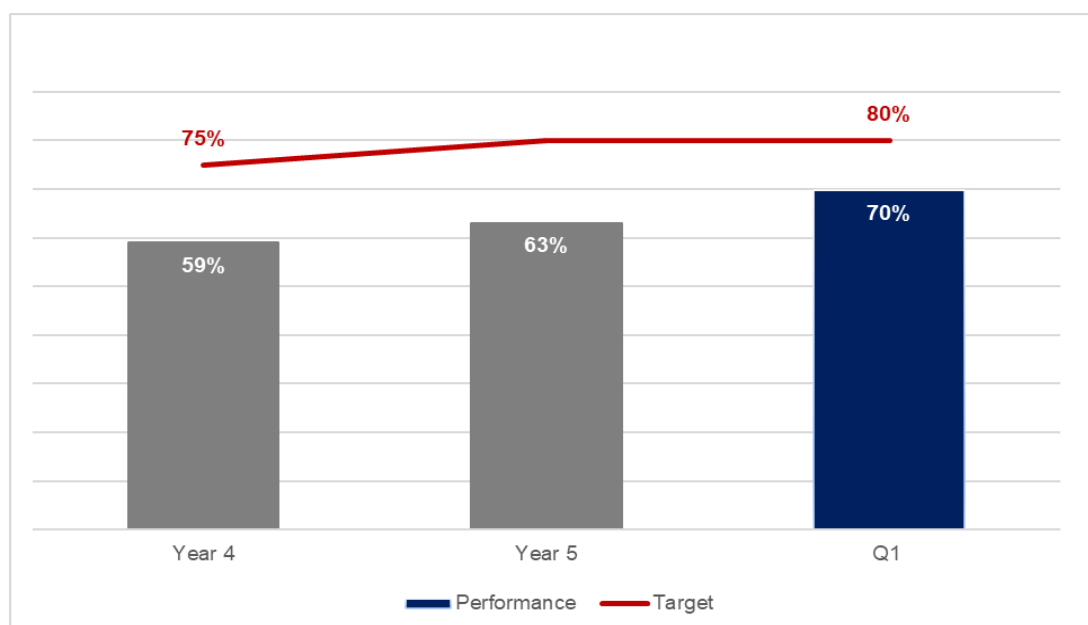
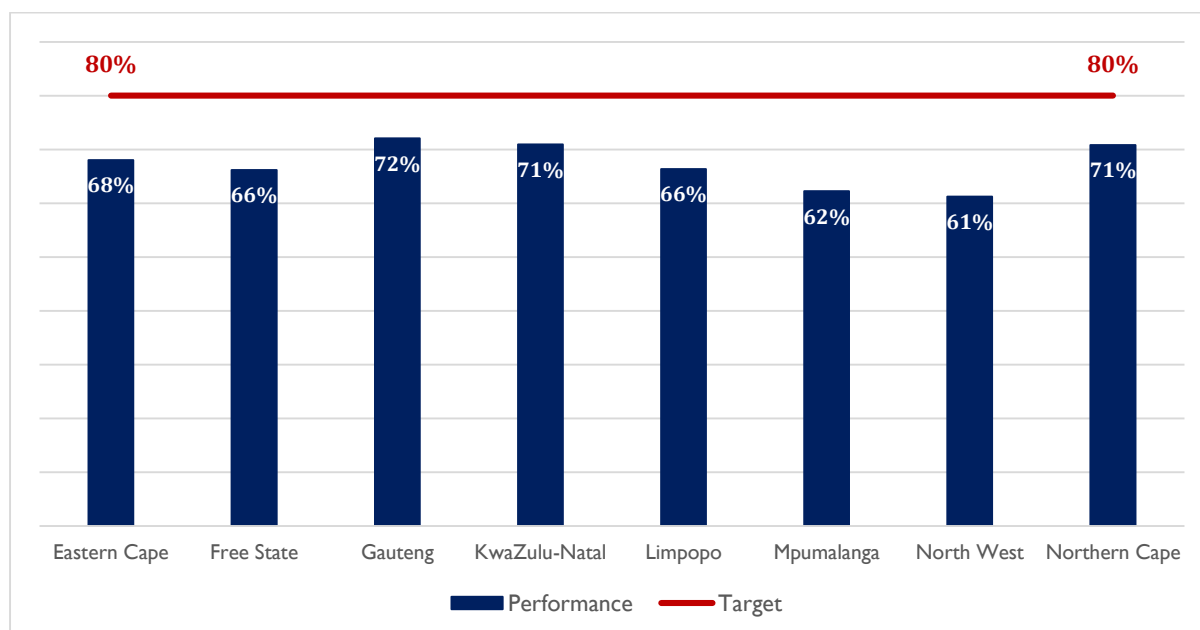


Figure 8 Disaggregation by Province in Year 6 Q1



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 relative to actual volume for 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 47 percent, an improvement from the 32% reported at the end of Y5. Performance remained below the target of 55 percent, as shown in Figure 9. Eastern Cape performed the best as shown in Figure 10. It was also observed that demand forecast accuracy for chronic medicines requires further attention. In addition, forecast accuracy in December 2021 dropped to 26 percent. The team is working to understand and address these findings in future forecasts.

Figure 9 Overall Demand Forecast Accuracy in Year 6 Q1

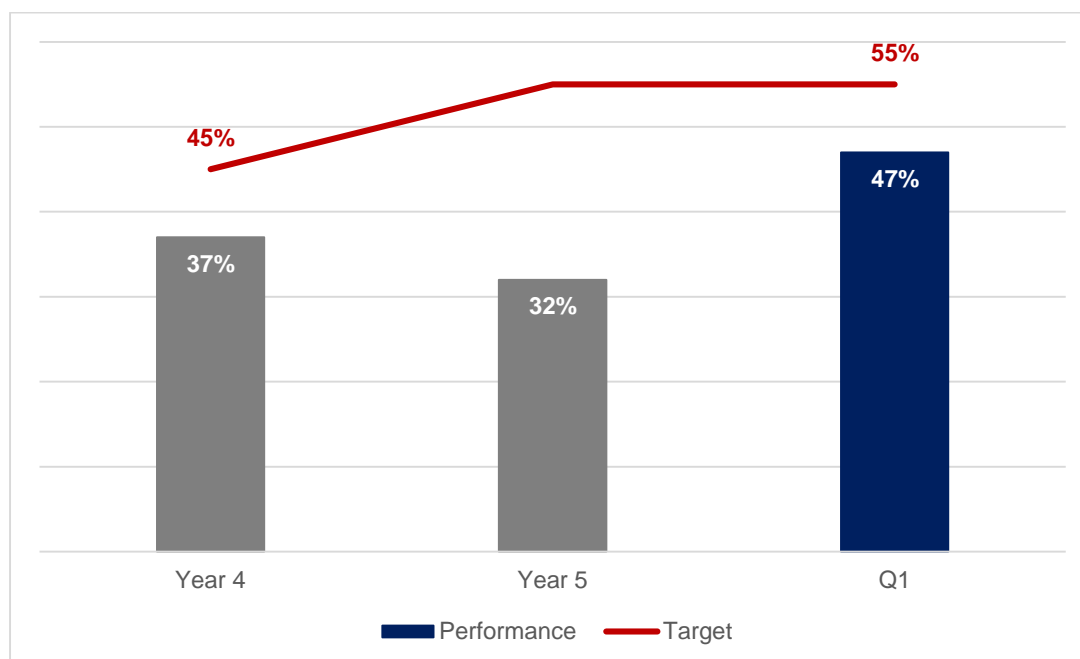
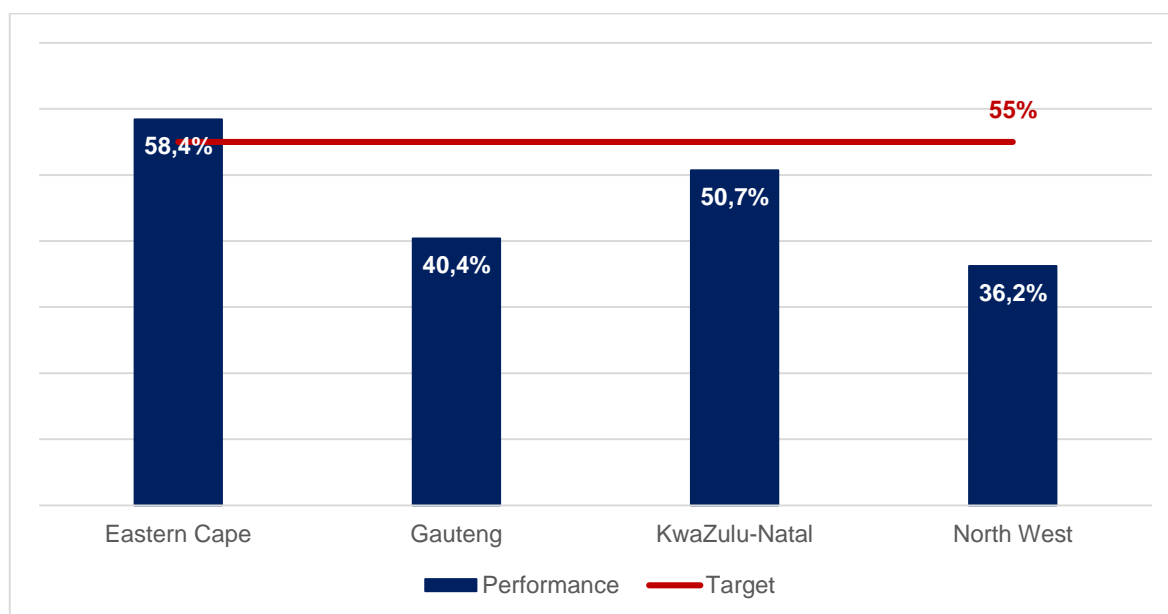


Figure 10 Disaggregation by Provinces in Year 6 Q1

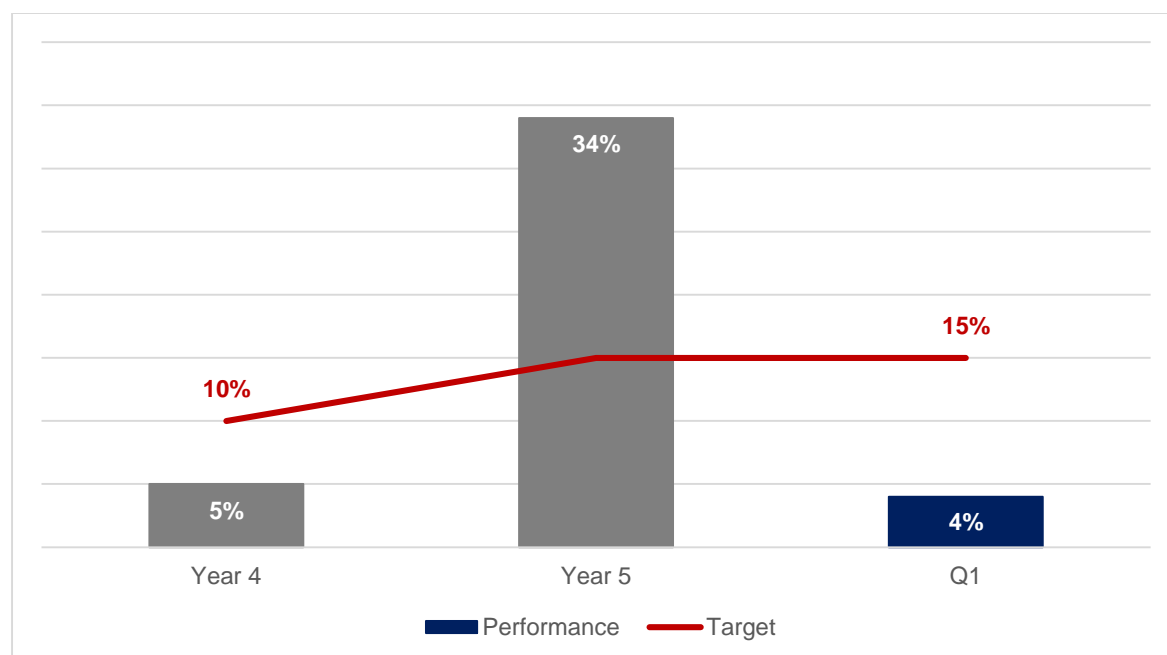


KPI 10. FORECAST BIAS FOR PHARMACEUTICAL FORECASTS IN PROVINCES

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 forecast demand and actuals, either positive or negative, expressed as a percentage of actuals over a series of consecutive periods.

At the end of the reporting period, demand forecast bias for pharmaceutical forecasts in provinces was reported at 4 percent, an improvement from the 34 percent reported at the end of Y5. Performance was within the target of 15 percent, as shown in Figure 11. However, medicines used in the management of HIV and TB, as well as vaccines showed poor performance bias largely due to less people visiting health establishments for treatment.

Figure 11 Forecast Bias for Pharmaceutical Forecasts in Year 6 Q1

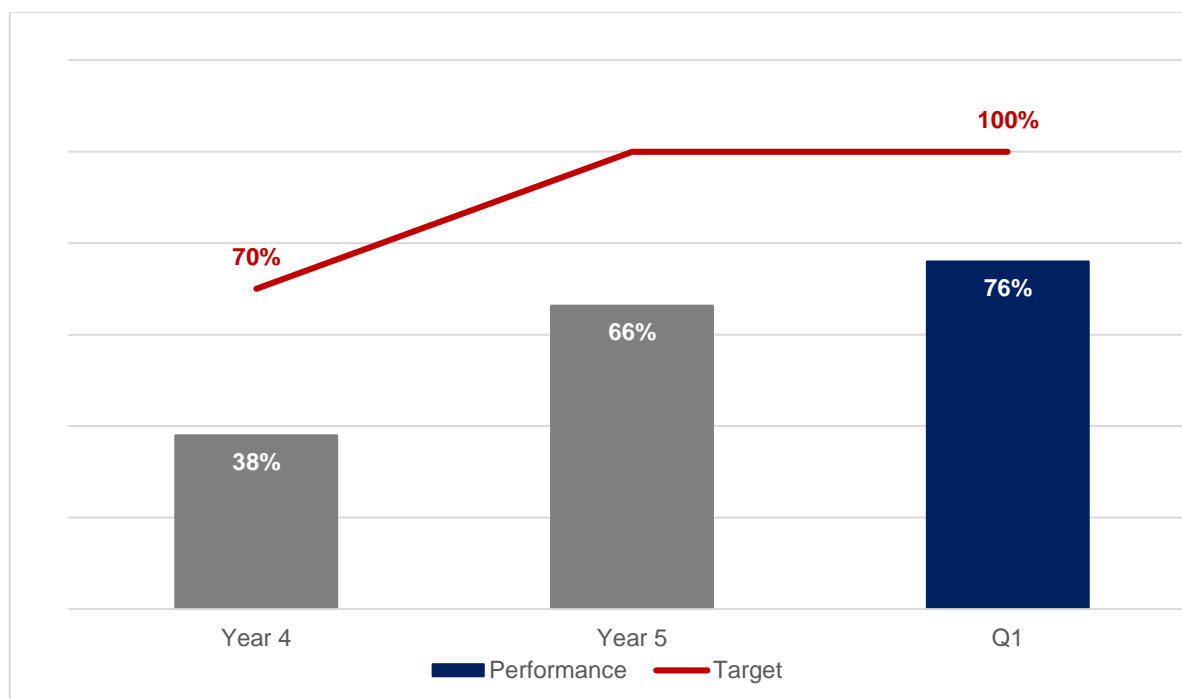


KPI 11. PERCENTAGE OF ELIGIBLE PATIENTS TRANSITIONED FROM TEE TO TLD

This indicator measures GHSC-TA's support of the phase-out of TEE and roll out of TLD nationally. As Figure 12 shows, at the end of Q1, 76 percent of patients were transitioned from TEE to TLD, which is below the GHSC-TA target of 100 percent of patients eligible to transition. 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. Measures 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 above as a matter of urgency.

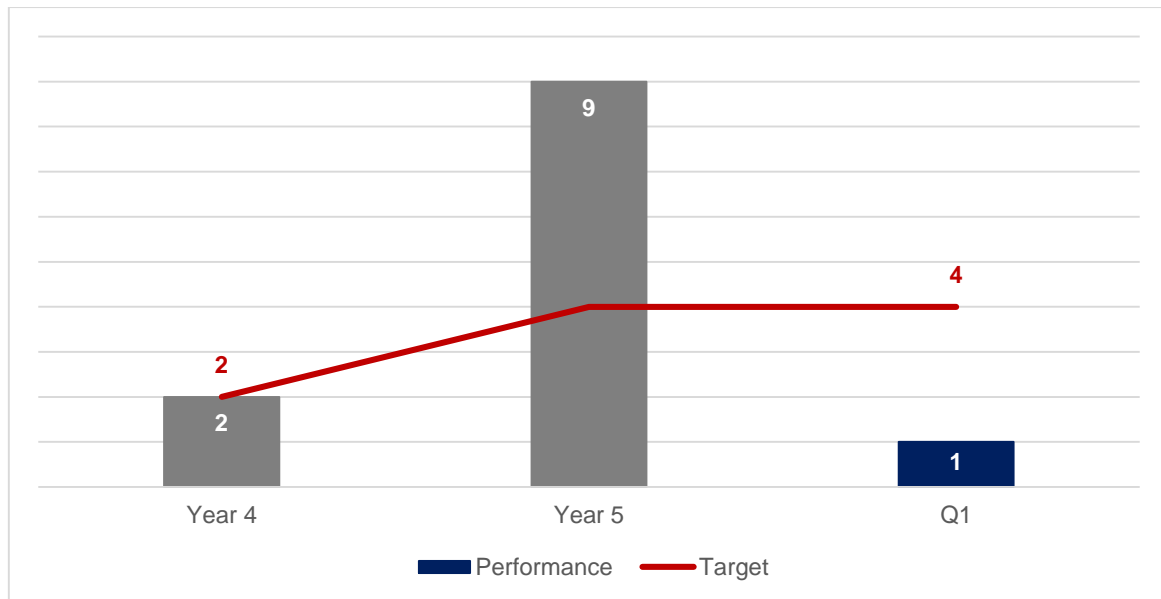
Figure 12. Percentage of Eligible Patients Transitioned from TEE to TLD in Year 6 Q1



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 13, measures the effectiveness of GHSC-TA support to the development and implementation of budgeting and financial management processes at the provincial level. The demand planning tool and process, developed by GHSC-TA, supports PDoH in establishing an accurate forecast to inform the annual pharmaceutical budget. At the end of Q1 GHSC-TA is able to confirm only one of nine provinces, Northern Cape, has reviewed their medicine expenditure against the allocated budget. Other provinces have not shared with GHSC-TA data necessary to confirm this indicator. The team is following up with the provinces.

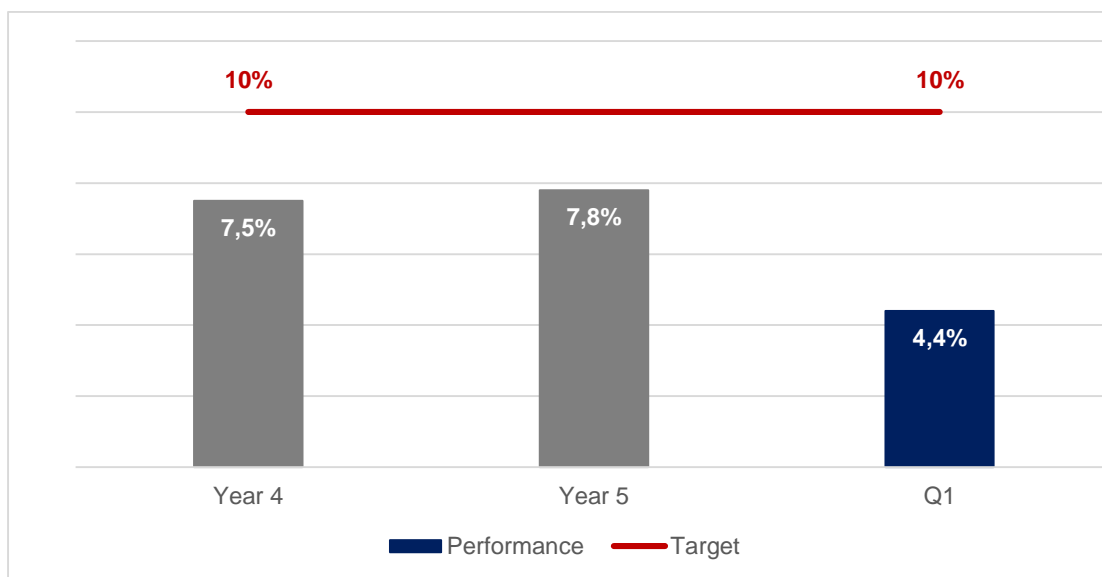
Figure 13 Number of Provinces who Review their Budget vs. Actual as Defined in the New Budgeting Process to Support the Ring-Fenced Budget in Year 6 Q1

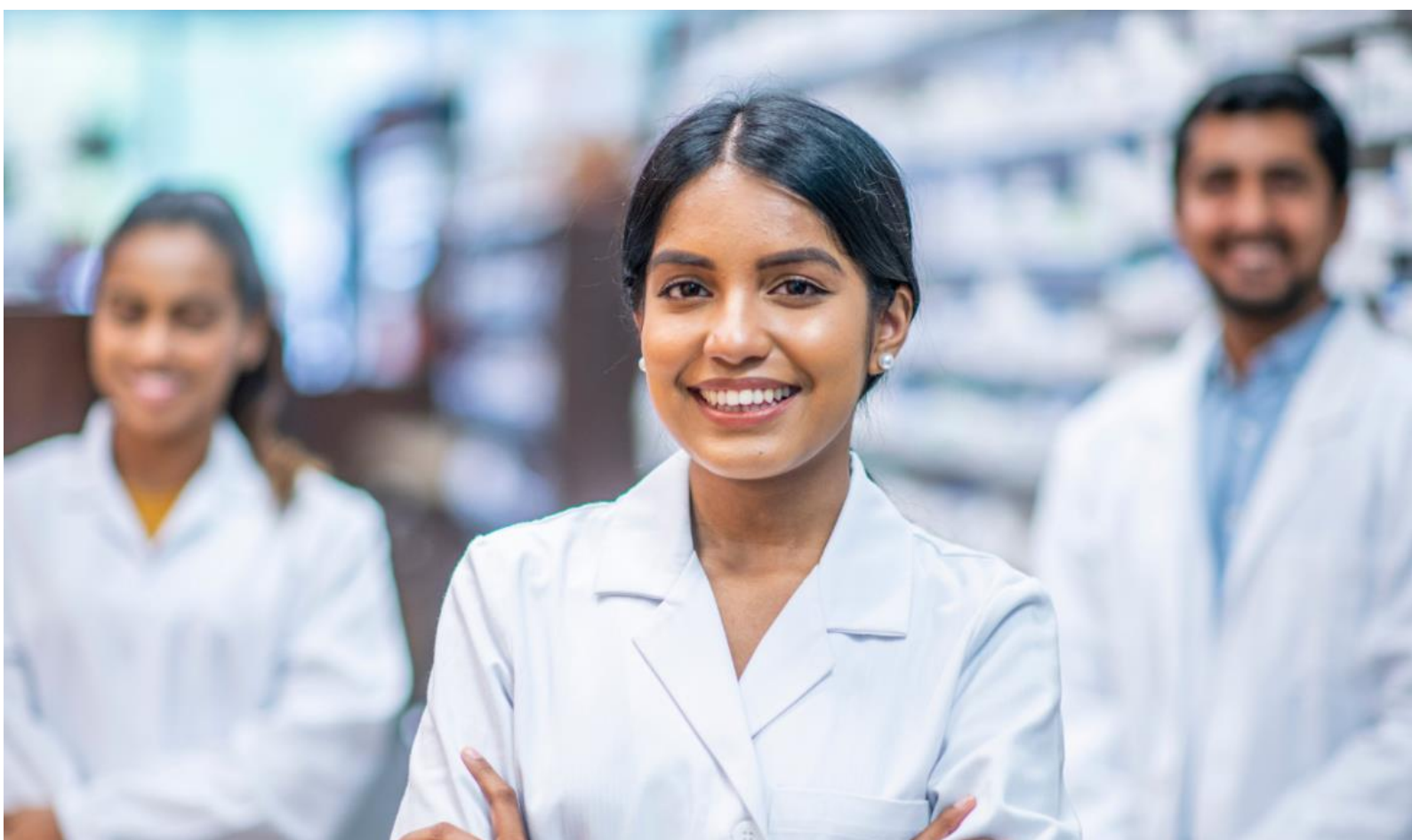


KPI 17. PERCENTAGE OF EXPENDITURE ON NON-ESSENTIAL MEDICINE LIST ITEMS

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. Q1 finished well under target 10% as shown in Figure 14.

Figure 14 EML vs Non-EML Spend on Medicine List Items in Year 6 Q1





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 Q1 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 SAPC in reviewing the public comment received on 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. Work has also commenced to revise and update the regulations based on comments received.

Supply planning guideline. GHSC-TA developed a draft guideline for supply planning which provides an overview of supply planning and guidance on replenishment planning solutions for all medicines used in the public sector.

Special Requirements and Conditions of Contract (SRCC). In efforts to promote the security of supply of essential medicines, including ARVs and medicines used in the prevention and treatment of TB, GHSC-TA continued to support AMD with reviewing the SRCC template based on previous input received from a legal expert and lessons learnt from the COVID-19 pandemic. GHSC-TA has also provided support with reviewing and updating the SRCC for each tender advertised during this period. Additionally, GHSC-TA reviewed and provided input on the national supply chain management policy, with a particular focus on alignment with the SRCC.

Tender forecasting policy principles. GHSC-TA developed the policy principles for generating the tender forecast and estimates for all tenders to be published. The policy principles were developed to ensure that there is consistency in generating volume estimates for all items on tender. GHSC-TA facilitated the review of the policy principles and supported the development of the SOP.

Product Identification and Capturing (Barcoding). GHSC-TA developed the draft discussion paper for product identification and capture implementation for all medicines registered in South Africa. 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. Additionally, GHSC-TA drafted a submission to the Director-General providing an update on work done regarding implementation of product identification and capture; and to request a meeting with the CEO of the South African Health Products Regulatory Authority (SAHPRA) to take the lead in implementation. A letter to request the meeting with SAHPRA was also drafted.

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

At the start of the COVID-19 pandemic, GHSC-TA implemented a provincial mentorship program to assist clinicians who have not completed the TLD training. Guidance was provided to clinicians by a prescriber, with considerable experience in switching clients to TLD. GHSC-TA first introduced the program in KwaZulu-Natal and, based on successful implementation there, rolled it out to other provinces. Implementation of the mentorship program enables clinicians to continue with the transition and work in a supportive environment. GHSC-TA also trained and mentored the provincial TLD champions to take over activities in preparation for close-out of the TLD transition project. GHSC-TA trained key staff members on the use of the TLD dashboard to monitor medicine availability of key items related to the transition and the use of provincial allocations.

Design of Centralized Demand Planning Unit. GHSC-TA continued to assist AMD with establishing a centralized demand planning unit at the national level. After successful recruitment, onboarding, and training, the two new NDoH demand planners have assumed responsibility for the provincial forecast generation for KwaZulu-Natal and North West, with oversight and support from the GHSC-TA demand planners. GHSC-TA also supported the future recruitment of the demand

planning manager and additional demand planners, including updating training materials, and alerting AMD to the licenses 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 the 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

The AMD is 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 efficiencies at all levels of the health care system 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. During the quarter, GHSC-TA continued supporting the AMD-contracted service provider with development, reaching an important milestone with the completion and deployment of new code to integrate MMDS medicine data with SVS medicine data. The usefulness of master data depends on the ability of processes and supporting systems to access the master data they require. This new code creates interoperability between the MMDS and SVS, allowing SVS to access medicine configuration data from the MMDS seamlessly. Once medicines are linked, changes effected on the MMDS automatically reflect on the SVS. A small batch of medicines was successfully linked and monitored after deployment of the code to the live environment, linking all relevant medicines and further monitoring to identify issues to follow in the next period.

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 maintenance, enhancements, and optimization of the NSC views and manual database.

Enhancement of the NSC. GHSC-TA continued managing the daily consolidation and execution of the NSC data flows for the daily data submissions from RxSolution (manual submissions and API submissions), warehouse management systems, CCMDD service providers, and PPE data. The SITA service outage that stopped the provision of consolidated MEDSAS data to the NSC was restored in September 2021. The process, begun in March 2021 to receive separate MEDSAS data directly from provinces, continued through this reporting period while the program determines whether the service from SITA is stable and sustainable. This manual process remains for Eastern Cape, Free State, Gauteng, Western Cape, and KwaZulu-Natal and is expected to continue through Q2 of Year 6.

In November 2021, the project team met with the NDoH IT team and the Council for Scientific and Industrial Research (CSIR) development team to understand how AMD and the NSC use the PPERT reporting data to determine the feasibility of PPERT continuity and support. CSIR decided that the PPERT system will continue to be used for Depot PPE stock reporting. The CSIR team completed making the required dataset available to the NSC in December 2021. The finalization and approval of NSC team login credentials for the updated CSIR data portal remains in progress by the CSIR. This enhancement in no way affects the NSC update process or visuals but rather streamlines the resourcing requirements by the CSIR to maintain this process moving forward.

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

- GHSC-TA held a meeting with the Finance Planning team on 26 October 2021 to discuss additional requirements on the finance dashboard. The following developments have subsequently taken place:
 - The expenditure data format is suitable, enabling the development and completion of the flow coding. This data is populating the expenditure dashboard views that GHSC-TA previously developed. Provided the source data format remains the same, this part of the development is considered complete.
 - The accruals and creditor information developments presented a challenge during the quarter as the source data received was found to be in different formats. These format

differences impeded the single process flow coding development, with data consolidation having to be a manual process (either at source or at the finance department level). NDoH decided to use a standardized format which allowed the completion of the automation and data work for accruals and commitment information in December 2021. It is important to note that the scope of this work currently includes only the Northern Cape. No information/data sets are available for the other provinces. National and provincial teams will review these finalized draft views in January 2022 to inform additional enhancements that may be required to conclude dashboard developments.

- Changes required to some of the trend views and calculations on the min-max dashboard were completed in November. GHSC-TA added these views as two separate reports to the existing min-max dashboard on the NSC with access to these views restricted to relevant stakeholders (specific users from the Free State) for review by the Replenishment Planning team and Free State users.
- The project completed the linking of an off-contract item (phenobarbital injection) to the NSC to allow for the availability of this item to be monitored on the NSC following a request by AMD in the IMAT Exploded meeting held in November 2021.
- GHSC-TA developed a draft scatter graph report highlighting reporting compliance and medicine availability and disaggregated by province, district, sub-district or health establishment. The report provides a quick view of those entities requiring targeted interventions with regard to reporting compliance or medicine availability. AMD approved the publication of this new view on the NSC in December 2021.
- GHSC-TA changed the format of the Integrated Medicine Availability Dashboard Trend Analysis view from a storyboard to a homepage format to allow for individual dashboard views within the trend dashboard to be downloaded individually to PDF as required. No changes were made to the actual dashboard views and content.

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 assisted AMD with the APP data and targets summary for health establishments reporting to the NSC, for the NHI quarterly report on 3 November 2021, and supported the Northern Cape Pharmaceutical Services team with training on 8 November to explain differences in reporting trend values on the NSC and the SVS reports available through the portal.

The project also supported AMD and Mezzanine during an NSC lockout on 6 October 2021 by providing license keys to Mezzanine and a summary of user email addresses to AMD. The issue appears to have been caused by an update to the license keys after the last license renewals.

Technical Function Specification. 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 remains work in progress. The NSC technical documents detailing the workflow image, statistics and outlines possible challenges, process inputs and outputs, workflow steps and tools were completed in September 2021 for the Integrated dashboard, the COVID-19 dashboards and the trends views. These technical documents were further enriched and reviewed in Q1 and will form part of the bigger NSC Technical Specification document that is being developed in Y6.

SUPPLY CHAIN SYSTEMS

Technology and information systems are critical enablers of health supply chain performance. Key activities performed in support of this objective during Q1, include supporting the development and deployment of information systems, including SVS.

Implementation and Development of SVS. GHSC-TA continued to focus on developing and implementing the new SVS COVID-19 instance as part of the national COVID-19 vaccination program. Importantly, it is noted that the provincial prioritization of the vaccination program meant that the environment in the provinces was not optimal for the successful introduction and implementation of the enhancements to SVS (eOrdering and eReceiving) at scale.

However, an important milestone was achieved when new code was designed, built, tested, and implemented that allows SVS to seamlessly access medicine configuration data from the MMDS. This code allows for linking of medicines shared between the two systems after which changes effected on the MMDS automatically reflect on the SVS. A small batch of medicines was successfully linked and monitored after deployment of the code to the live environment, linking all relevant medicines and further monitoring to follow in the next period.

GHSC-TA assisted SVS system development with technical requirements gathering for integration between SVS and MEDSAS, the most widely implemented WMS. Once this functionality is built and implemented, SVS will be able to automatically communicate orders to MEDSAS via the Remote Demander Module (RDM), saving the effort currently required to capture orders manually into the RDM/MEDSAS environment.

Progress was also made with some smaller enhancements to improve the functionality and usability of SVS, relating to average monthly consumption data recording, weekly compliance history, more helpful error messaging and small changes to functionality available to champions and ordering administrators.

Challenges were experienced nationally with the RxSolution Automated Reporting System (API) resulting in a prolonged outage. Reporting systems were able to rely on manually submitted reports from RxSolution, until GHSC-TA was able to provide the technical assistance required to isolate the source of the problem and restore reporting.

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.

At the end of Y6 Q1, overall performance was reported at 55 percent, a decline from the 66 percent achieved in Y5, and below the target of 80 percent. A decline occurred in a majority of the provinces, with only Free State consistently performing above the target in November and December. Notably, the lowest usage figures were observed in December given that many users take a break at this time

of year. It must be noted that low usage in Limpopo and Western Cape, and by AMD, continue to have a negative impact on overall performance of this KPI shown in Figure 15. This is an ongoing challenge that is being addressed. GHSC-TA continued to provide support by monitoring usage and engaging with users to identify and address challenges impacting on NSC use.

Figure 15 Percentage of Users Utilizing the NSC to Review Medicine Availability Trends and Reports in Year 6 Q1

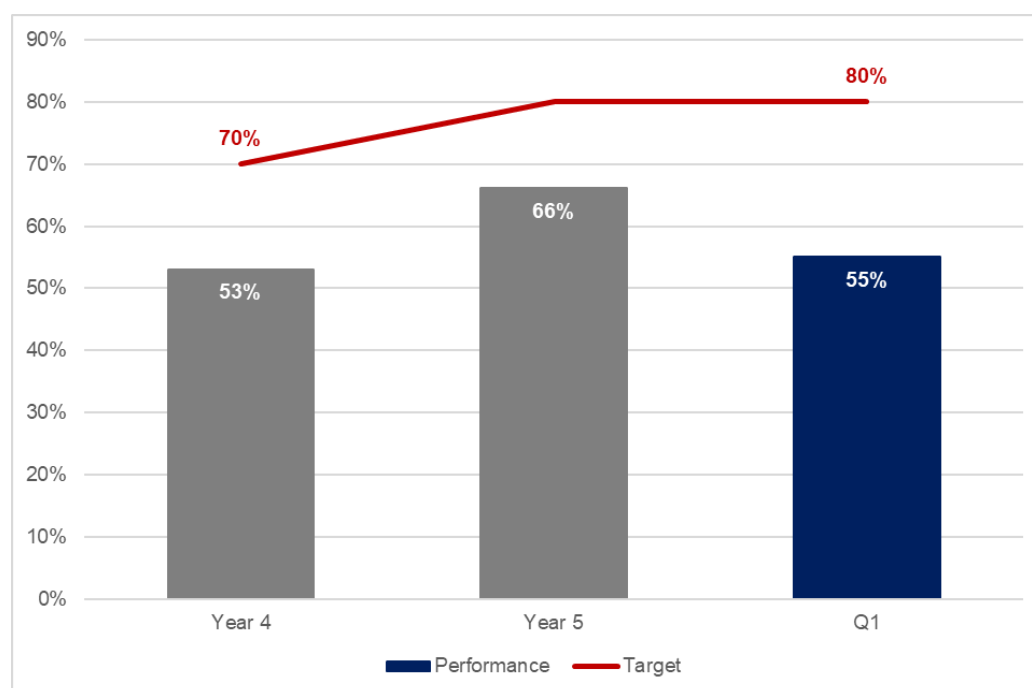
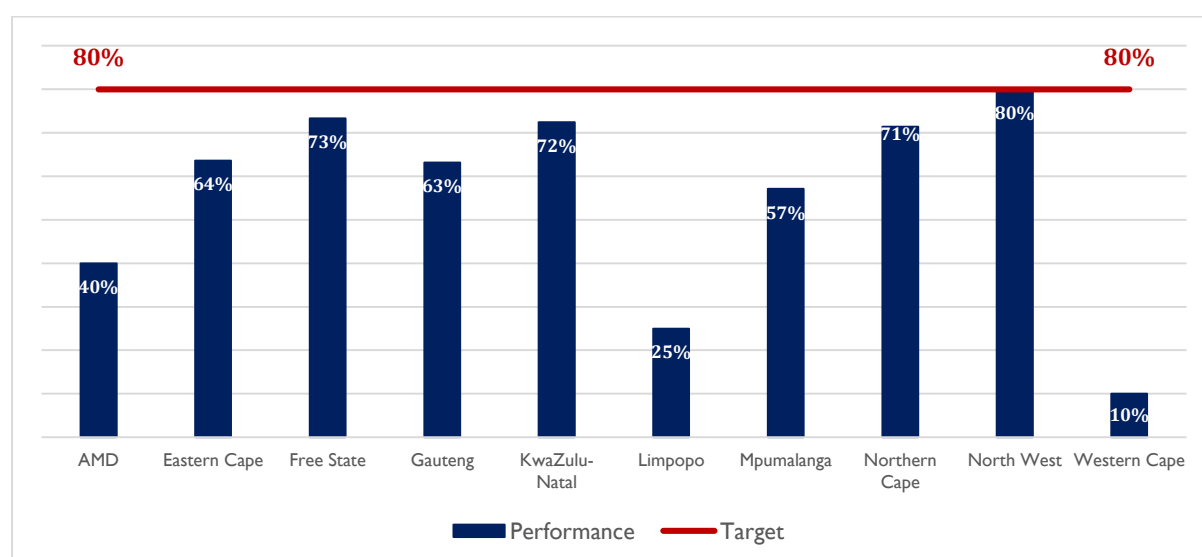


Figure 16 Percentage of Users Utilizing the NSC to Review Medicine Availability Trends and Reports in Year 6 Q1



Although there is still room for improvement, the impact of the concerted efforts of the PST to improve NSC usage is evident in the improved performance of this indicator, particularly in the Eastern Cape, Free State, and Northern Cape. Activities that resulted in these improvements included

reallocation of licenses of inactive users, hosting a number of end-user support webinars, and targeted stakeholder engagements focusing on users with low utilization.

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. As integration of SVS and MMDS have now gone live, this metric will be tracked when a material number of medicines are linked between the two systems. This is expected to happen early in the following reporting 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. By the end of Q1, the total number of health establishments using information systems for order management was 737, an increase from 732 reported in Year 5, as shown in Figure 17. Notably, performance remains below the target of 2600. A total of 625 health establishments are using RxSolution, 110 are using JAC, and two are using Meditech shown in Figure 18. 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 informed push (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 17 Number of Facilities Using Core Supply Chain Information Systems to Order and/or Receive Stock in Year 6 Q1

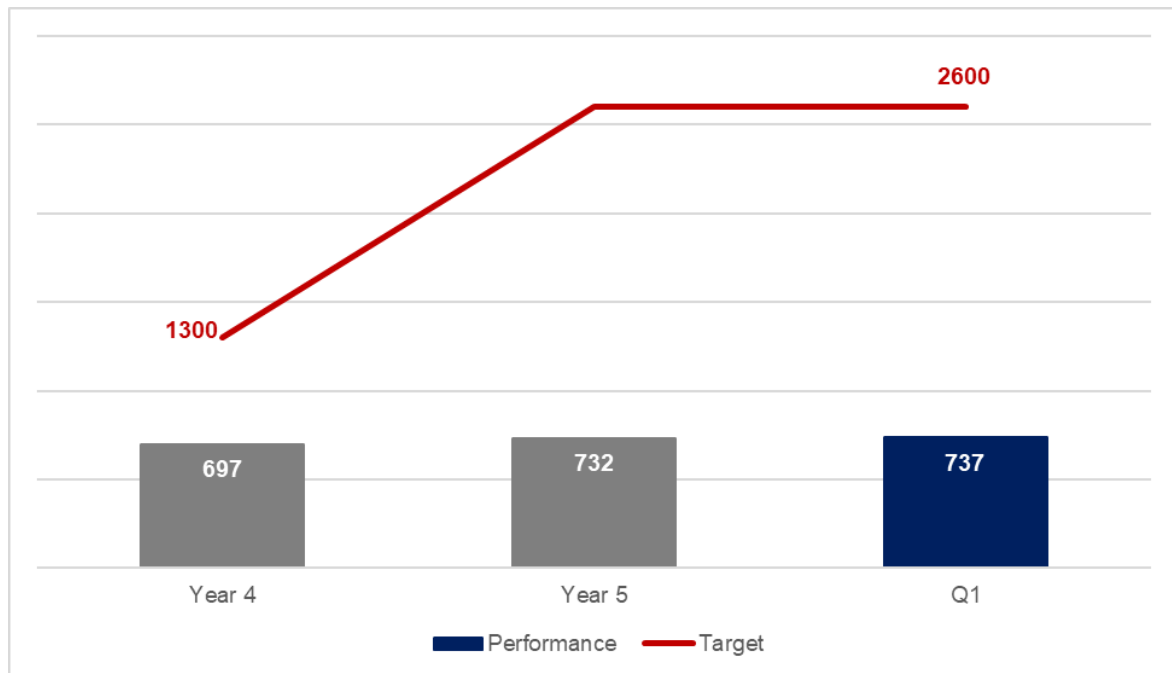
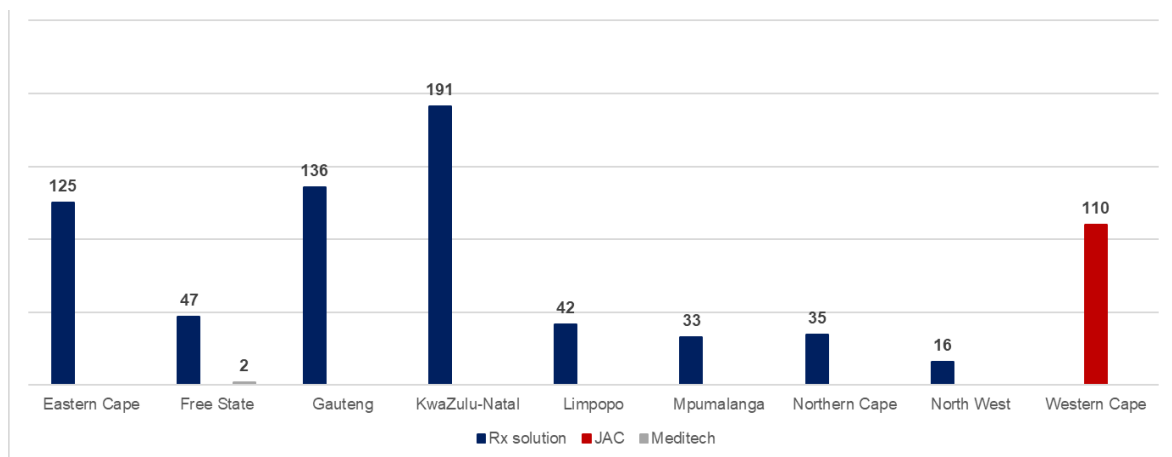


Figure 18 Disaggregation by Province and Stock Management System in Year 6 Q1



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

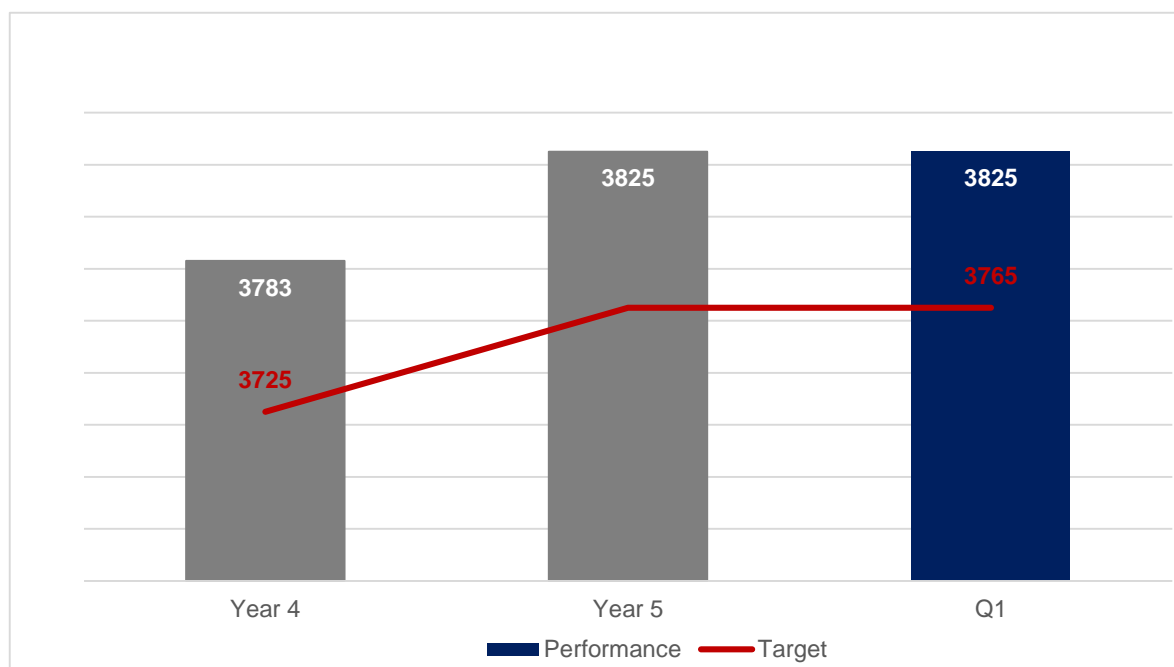
The reporting compliance KPI shown in Figure 19 below measures the number of health establishments reporting stock availability to the NSC. At the end of Quarter I, a total of 3,825 health establishments were reporting stock availability to the NSC against a target of 3,765, bringing the reporting compliance to two percent above target. This remained unchanged from the end of Year 5. The main contributing factors to this success have been the increased need and reliance on medicine

availability data, 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 health establishments.

However, during this reporting period, this KPI was impacted by replacement of SVS devices in Eastern Cape and Limpopo, meaning that facilities had no devices to report data to the NSC. Due to logistical challenges, there were some delays in new devices reaching health establishments. In addition, some provincial API servers were unable to submit data to the national server which led to data not automatically reaching the NSC.

GHSC-TA continues to monitor this KPI in collaboration with provincial and district counterparts and provide technical assistance during SVS device refresher periods. 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 19 Number of Health Establishments Reporting Stock Availability to the NSC in Year 6 Q1





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 activities of the team remain significantly impacted by the COVID-19 pandemic, including the nationwide COVID-19 vaccination program. These constraints have 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 medicine availability reports customized 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 counterparts to highlight challenges and devise solutions as needed.

Reporting compliance ranged from 83 to 86 percent in the quarter under review. Improvements have been observed in all provinces with North West having an average of 95%. Limpopo, Northern Cape and Eastern Cape were affected by the SVS device refresher in November/ December period. In addition, reporting compliance during this quarter was affected by staff taking leave over the December holiday period and staff being in isolation or off duty due to COVID-19.

Overall medicine availability improved in the Free State, KwaZulu-Natal, North West and Gauteng and remained steady in Mpumalanga, Limpopo, Northern Cape and Eastern Cape. Collaborative efforts with provincial IT, pharmaceutical and district counterparts/teams have contributed to the positive medicine availability observed through maintenance of formularies, resolving technical challenges, and providing reports to avoid stock-out in the facilities.

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 built to support the relevant policy, guidelines and SOPs impacting replenishment planning.

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 now supporting AMD with Formulary Tool adoption across four provinces, namely Free State, North West, Eastern Cape, and Mpumalanga, mostly with activities preliminary to loading formularies onto the Formulary Tool. In the Eastern Cape, 840 facilities were loaded onto the Location Tool in preparation for loading formularies for these establishments. Depot catalogues from both Eastern Cape depots were integrated, medicines structured and loaded onto the MMDS where required, and the resulting list loaded onto the Formulary Tool as a first version of the provincial formulary. In Free State, the approval and loading of individualized formularies onto the Formulary Tool was completed for the 17 remaining PHC clinics in Xhariep district.

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 the stock management systems.

Free State: Completed the implementation of optimized min-max levels in Xhariep, and Dihlabeng sub-district in the Thabo Mofutsanyane District.

Eastern Cape: Engaged in numerous discussions with the Eastern Cape Pharmaceutical Services to get buy-in to strengthen replenishment planning processes within the province. A considerable amount of time was spent facilitating discussions with different stakeholders to understand the supply chain landscape and the “as is” supply planning processes.

Following this exercise, a customized Replenishment Planning solution was developed and presented to the EC Team, together with an implementation prioritization map that placed Alfred Nzo at the top of the list. Once approval was granted, the team proceeded to engage with Alfred Nzo sub-district pharmacists to plan the project execution, gather data and calculate min-max levels.

KwaZulu-Natal: Initiated discussions with the KwaZulu-Natal Pharmaceutical Services to provide support to optimize min-max calculations. The process is still at an early stage.

Mpumalanga: Engaged with the Mpumalanga Pharmaceutical Services Team to resume the min-max work that was put on hold in the beginning of the year.

North West: No further min-max work has been done in the North West, the project has been postponed to January 2022.

Advised Pull. Continued frequent engagement with relevant stakeholders and the provincial team in Free State to action the recommendations that came from the proof of concept. The goal is to enable the province to expand the advised pull concept in all other districts. The HOPS has approved the expansion of advised pull in the entire Fezile Dabi district and the rest of the province. The team created a draft implementation plan for all relevant stakeholders in Fezile Dabi district. Furthermore, automated e-Ordering reports have been developed and are ready to be demonstrated to the province.

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.

OTHER ACTIVITIES

Provincial activities in support of demand planning remained focused on supporting the routine demand planning review meetings in provinces where this work has been initiated, including facilitating stakeholder engagement. Provincial activities relating to RMU have been deprioritized and will recommence as soon as feasible.

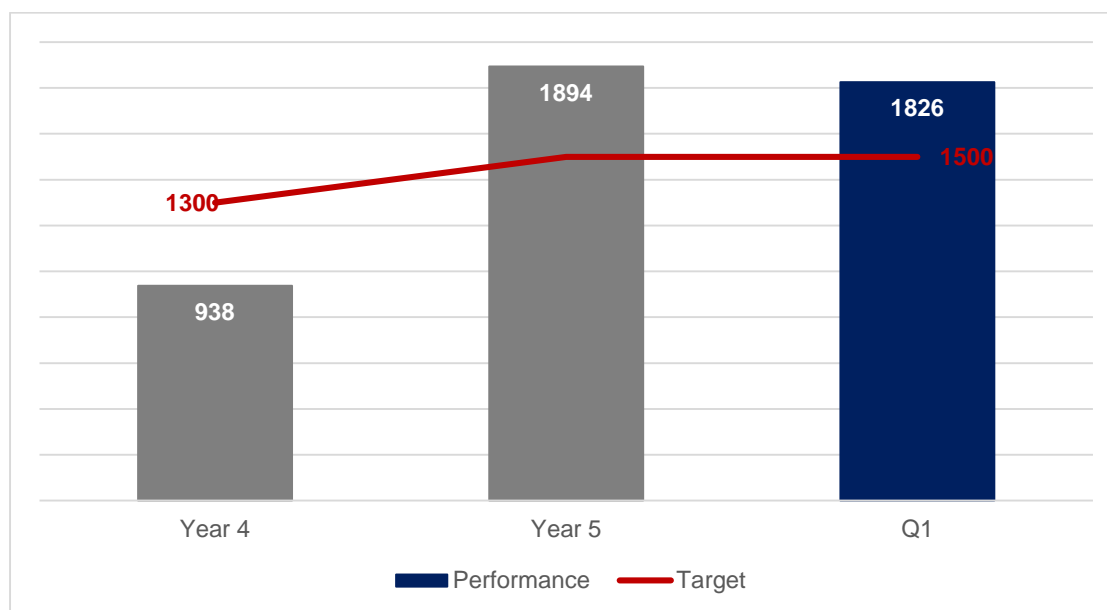
OUTCOME LEVEL RESULTS

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 Q1, data from 1,630 clinics and 231 hospitals indicated a setup of min-max stock levels on SVS (for clinics) and RxSolution system (for hospitals), bringing the total to 1,826 facilities against a target of 1,500 as shown in Figure 20. It is important to note that 35 health establishments use both systems. This showed a decline from 1,894 obtained in Y5. Moreover, the numbers show a regression from 1,638 to 1,630 for SVS sites and 282 to 231 for RxSolution sites. The decline in the number of sites can be attributed to API problems experienced by a number of health establishments. The problem will be addressed and resolved during the next reporting period.

Figure 20 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 Q1





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, giving them the potential to have 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 December 2021, a total of 3, 458, 286 confirmed cases of COVID-19 had been recorded in South Africa, with the country still under adjusted lockdown.

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. 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 and vaccines to manage the disease.

Support for the MAC on COVID-19. In addition to working with AMD, GHSC-TA also provided 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. As of March 25, 2020, GHSC-TA began providing **secretariat** support to the MAC on COVID-19 and its sub-committees. To date the program has assisted in convening over **245 meetings**, documenting proceedings, and drafting **145 advisories** on COVID-19 related decisions. 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, and collaborating with other COVID-19 technical working groups.

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 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 also supported the EDP and the demand planning team to generate forecasts of medicine requirements to treat patients presenting with COVID-19 and for items where the security of supply was a challenge. The demand plan is published periodically and is based on anticipated medicine requirements, patient projections, and baseline demand forecasts. Weekly monitoring continued and COVID-19 infection numbers were shared with the core and provincial task teams.

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 as determined by the COVID-19 response team. Categories include COVID-19 priority list items, COVID-19 treatment items, chronic medicines, and non-COVID-19 medicines. The program assisted with query resolution and the monitoring of reporting compliance and medicine availability, which was presented to provincial and national stakeholders on a weekly basis during the quarter.

The project completed development on the vaccine dashboards that allow for reporting compliance reports to be sent automatically to NSC users responsible for reporting compliance. The development work done on this element will be used in applying a similar automated report from the integrated dashboard to NSC users as applicable.

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 with the goal of improving PPE availability.

GHSC-TA compiles a weekly availability report for provinces and monthly presentation for 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 discussion with the Project Management Office.

ROLL OUT OF COVID-19 VACCINES

During the quarter, comprehensive support continued to be provided to the NDoH in implementing the COVID-19 vaccine roll-out in both the public and the private sectors.

Supply and distribution. GHSC-TA spent the quarter refining the supply and distribution process to take the vaccine provided to the provinces and private sector. Tools that have been implemented to streamline and make the process reliable and efficient include:

- **Vaccine distributor performance management.** In line with the contract conditions, monthly KPI sessions were established by GHSC-TA with each of the three vaccine distributors, all reporting on a standard set of KPIs, using a GHSC-TA developed template. These sessions now allow the NDoH to review the distributor's previous month's performance and assist in developing improvement plans where necessary.
- **Purchase Order Control.** The tool that takes purchase order information from sector-wide delivery sites and collates orders for submission to distributors was successfully enhanced and implemented in the last quarter.
- **Dashboards.** Dashboards have been refined to further enable the GHSC-TA supply, allocation and distribution team to have greater insight into both the supply pipeline and the demand and supply capacity to sub-district level. The output of these dashboards assists the team with improving the availability of vaccines. Weekly vaccine procurement statistics are provided to each province to guide decisions on the next procurement cycle.

GHSC-TA coordinated the weekly engagements between the vaccine distributors and the National Joint Operational and Intelligence Structure (NATJOINTS). Proposals submitted were adopted by NATJOINTS, reducing the necessity to escort every shipment, but rather those on problematic routes and those carrying high-value loads.

GHSC-TA continues to coordinate the timing of all inbound vaccine shipments with the vaccine suppliers and communicates the volume of vaccines to be supplied to each distributor to serve their allocated customer base. Furthermore, GHSC-TA coordinated the outbound logistics for donations to other African countries as part of the Africa Vaccine Acquisition (AVAT) initiative.

Table 3: Supply and distribution statistics

| Month | October | November | December | Total |
|---|-----------|------------|-----------|------------|
| Number of inbound vaccine shipments coordinated | 2 | 9 | 4 | 15 |
| Volume of inbound vaccine shipments coordinated (doses) | 2,522,400 | 11,983,900 | 4,275,060 | 18,781,360 |
| Number of orders vetted and processed | 1,022 | 610 | 422 | 2,054 |
| Volume of vaccine orders processes (doses) | 3,883,040 | 2,907,540 | 2,018,110 | 8,808,690 |

Forecasting and procurement. GHSC-TA finalized the forecast for 2022 using the Vaccine Ministerial Advisory Committee (VMAC) advisories, considering additional doses, booster doses, current demand, and stock on hand. The forecast is used to inform the procurement plan for COVID-19 vaccines for 2022. The results were shared and agreed upon with the NDoH. As a result of the forecast, suppliers' delivery schedules were adjusted to mitigate the risk of expiry of vaccines.

Vaccine redistribution. As COVID-19 vaccines have a limited expiry date as they move through the various cold chain storage solutions, the risk of expiry due to decreased demand has increased. GHSC-TA is assisting both public and private sector sites with the redistribution of vaccines to mitigate the risk of wastage. As such, GHSC-TA developed a comprehensive standard operating procedure (SOP) detailing the processes to be followed during redistribution. The SOP considers logistics, cold chain solutions and the finance processes necessary for this redistribution.

Vaccine Ancillary Items. GHSC-TA provides dedicated support to resolve supply and payment challenges relating to the supply and distribution of the ancillary items required to administer the vaccines. The program acted as a link between the NDoH, National Treasury, contracted suppliers, and provinces. GHSC-TA also assisted other African countries (eSwatini, Botswana, Namibia and Kenya) in obtaining diluent, coordinating with a local South African manufacturer to ensure local market supply was not disrupted.

SVS COVID-19 Vaccines Instance. In response to the COVID-19 pandemic and vaccine roll-out program, GHSC-TA provided extensive support to the NDoH with the roll-out of the SVS COVID-19 instance to monitor vaccines, ancillary items and diluents at sites in both the public and the private sector and address possible challenges. GHSC-TA has also played a key role in improving the availability of quality data through variance checks and targeted SVS COVID-19 refresher trainings and proposing system enhancements through collaboration with the service provider.

On the ground SVS support. GHSC-TA continued to provide ongoing support to ensure that sites were appropriately equipped to report on SVS COVID-19 and assisted with technical challenges. Training sessions were provided to empower site staff and champions on enrolling and reporting on SVS COVID-19. 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. A Variance Finder Tool was developed by GHSC-TA, which aids in identifying data variances at specific sites on specific days leading to poor data quality. During this reporting period, the quality of data obtained from distributors improved due to support provided by GHSC-TA.

GHSC-TA drafted a proposal requesting system enhancements to be implemented on the capturing of vaccine expiry dates on SVS COVID-19 to improve the management of COVID-19 vaccines. In addition, GHSC-TA proposed further system enhancements based on feedback from end users and personal use by the PST. During this quarter, GHSC-TA continued to collaborate closely with the service provider and advise on system issues which enabled timeous rectification.

A *Deactivation Assessment Tool* was presented to NDoH which will assist champions and group leads to identify sites which have been uploaded on SVS COVID-19 which can potentially be deactivated.

COVID-19 Vaccine Toolkit. To support the roll-out and implementation of the COVID-19 vaccine, as new data and information comes through, the GHSC-TA has 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 the drafting, contribution to and review of multiple documents related to the COVID-19 vaccine programme.

Table 4: Number of COVID-19 Documents

| Month | October | November | December | Total |
|-------------------------------|---------|----------|----------|-------|
| Number of circulars | - | - | 2 | 2 |
| Guidelines | - | 1 | 2 | 3 |
| Standard Operating Procedures | - | 4 | 5 | 9 |
| Letters | - | 3 | 1 | 4 |

Multisectoral Engagements. GHSC-TA has not only led the public and private sector logistics workstreams but 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 is an active participant at the Joint Special Operations Command (JSOC) meetings attended by labor, government and the private sector.

Table 5: Number of COVID-19 Multisectoral Meetings

| Month | October | November | December | Total |
|----------------------------------|---------|----------|----------|-------|
| Number of multisectoral meetings | 51 | 71 | 31 | 153 |

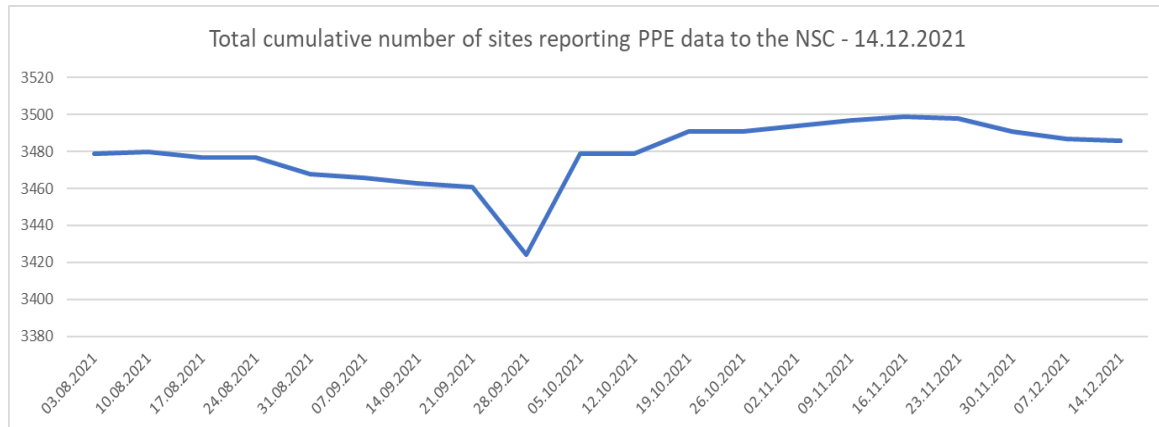
Cold Chain Donations. GHSC-TA assisted the NDoH with coordinating and allocating the Vodacom cold chain equipment donation by ensuring that quantities and detailed information by province were completed for distribution. GHSC-TA updated the donation letters to provinces to include the donation on the asset registers and assisted with allocating the cold chain equipment from Vodacom to public sector sites in provinces. Delivery is expected from January 2022.

PERSONAL PROTECTIVE EQUIPMENT

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 how many health establishments and distribution centers have reported PPE data to the NSC. For this reporting period 3,219 of 3,486 submitted data to the NSC. Reporting compliance was 85 percent, up from 84 percent in the previous quarter. Eastern Cape, Free State, Gauteng, Limpopo, Mpumalanga, and North West recorded 90% or more percent reporting compliance of PPE. KwaZulu-Natal recorded PPE reporting compliance of 83%. Northern Cape compliance was 79% and Western Cape recorded PPE reporting

compliance below 20%, mainly due to the province's slow adoption of SVS reporting. Gauteng switched their reporting platform to SVS for PPE. GHSC-TA continued to support the NDoH to improve performance by working with provincial PPE appointed coordinators and other key stakeholders.

Figure 21 Total Cumulative Number of Sites Reporting PPE



LESSONS LEARNED

Teamwork is essential in getting the job done - The COVID -19 project was a new project and had no reference and systems in place as it had never been done before. GHSC-TA assisted by coming together as a team to build systems/tools/solutions from scratch to ensure the efficient and effective operation of the vaccine supply chain. The lesson that was learned was that teamwork is essential if the goal is to move quickly to establish both a distribution network and a large number of equipped vaccination sites across both public and private sectors. The establishment of common systems, processes and terminology, thoroughly understood by all role players was key to the vaccine rollout success.

Effective communication structures are essential at national and provincial levels - Old methods of communication through memos and circulars that were sent through emails were ineffective for the TEE - TLD project as it took weeks or months to reach the target audience. GHSC-TA intervened through assisting in the establishment of key stakeholder groups at national and provincial level and communicating through WhatsApp groups to disseminate information to key staff members. The communication through WhatsApp groups was instant. This was observed when AMD requested that a memo be sent to provinces requesting them to accelerate the rate of transition to TLD and consider switching second line patients to DTG continuing regimens. Delays in finalizing the memo resulted in the risk of DTG stock aging and expiring resulting in potential stock write offs amounting to millions of dollars (USD). The lesson learned was that it is vital that key information from internal memos and circulars is readily available and is implemented timeously. WhatsApp groups have proven to be faster in delivery and communication.

Virtual meetings are often more efficient than face-to-face meetings - Due to COVID, face-to-face meetings were replaced with virtual meetings to connect stakeholders. The virtual meetings proved to be a more efficient use of time and money. Many of the stakeholders involved in the committees that AMD supports are busy experts who have limited availability. The time spent at the meetings was reduced, and travel and catering were no longer relevant, resulting in a process that was more efficient in terms of time and financial resources.

Communication needs to be provided that policies developed at a national level are evidence-based - In medicine selection and use, the implementation of policy decisions made at a national level was sometimes limited due to lack of buy-in of stakeholders. GHSC-TA intervened through ensuring that stakeholders understood the evidence-based nature of policy decisions. For example, GHSC-TA supported with the formulation of bulletins for communication to assist with the uptake of policies. This was achieved through making the evidence behind policies clear and effectively communicating them to implementing stakeholders. This resulted in improved buy-in and implementation. The lesson learned was that policies are more likely to be implemented if stakeholders understand them to be based on evidence.

Clear reporting lines are key to good leadership – GHSC-TA has observed unfilled and unfunded staffing at all levels (facility, sub-district, district and province) resulting in leadership challenges, and unclear reporting lines. GHSC-TA through the PST intervened through the implementation of escalation protocols, which has resulted in improved efficiency and reporting lines with limited staff. The escalation protocol assists with mitigating any medicine availability challenges through the correct reporting lines. It supports facilities in districts to resolve stockouts within districts (through redistribution to other local facilities) before escalating to the provincial office or medical depot. This has worked well in all the provinces. The lesson learned was that SOPs and clear reporting roles are necessary to improve reporting and efficiency.

10. FINANCIAL STATUS OF THE TASK ORDER

ANNEX I. PROGRESS SUMMARY

Table 9: Key Performance Indicator Progress Summary

| INDICATOR | REPORTING YEAR | BASELINE VALUE | YEAR 6 PROPOSED TARGET | YEAR 6, Q1 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 | FY21 | 78% | 90% | 86% | 96% |
| Objective 1 – Improve selection and use of medicine | | | | | |
| KPI 2: Number of medicine selection decisions made utilizing health technology assessments | FY21 | 0 | 2 | 0 | 0% |
| KPI 3: Percentage of assisted Pharmaceutical and Therapeutics Committees with improved operational capacity. | FY21 | NA | 25% | Data not yet collectable | NA |
| Objective 2- Support optimization of the supply chain | | | | | |
| KPI 4: Percentage of antiretroviral units delivered by suppliers within contractual lead-time (supplier performance reliability – on time). | FY21 | 79% | 90% | 85% | 94% |
| 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). | FY21 | 75% | 85% | 77% | 91% |
| KPI 6: Supplier performance reliability – Perfect order fulfilment for orders placed on suppliers (in-full). | FY21 | 73% | 80% | 70% | 88% |
| 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. | FY21 | NA | 70% | No longer in scope | NA |

| INDICATOR | REPORTING YEAR | BASELINE VALUE | YEAR 6 PROPOSED TARGET | YEAR 6, Q1 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 | 1,826 | 122% |
| KPI 9: Demand forecast accuracy for provinces using the demand forecasting process. | FY21 | NA | 55% | 47% | 85% |
| KPI 10: Forecast bias for pharmaceutical forecasts in provinces using the demand forecasting process. | FY21 | TBD | <15% | 4% | 73% |
| KPI 11: Percentage of eligible patients transitioned from Tenofovir/Emtricitabine/Efavirenz to Tenofovir/Lamivudine/Dolutegravir. | FY21 | 0% | 100% | 76% | 76% |
| Objective 3 – Strengthen governance | | | | | |
| No KPIs scheduled to be reported quarterly. | | | | | |
| Objective 4 – Improve workforce management | | | | | |
| No KPIs scheduled to be reported quarterly. | | | | | |
| Objective 5 – Strengthen Information Systems and Information Management | | | | | |
| KPI 12: Percentage of users utilizing the National Surveillance Centre to review medicine availability trends and reports. | FY21 | NA | 80% | 55% | 69% |
| 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 collectable | 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 | 3825 | 102% |
| Objective 6 – Improve Financial Management | | | | | |

| INDICATOR | REPORTING YEAR | BASELINE VALUE | YEAR 6 PROPOSED TARGET | YEAR 6, Q1 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 | 1 | 25% |
| KPI 17: Percentage of expenditures on non-Essential Medicine List items. | FY21 | 1.60% | <10% | 4.4% | 56% |

ANNEX 2. SUCCESS STORIES

1. Multi-month dispensing – a holiday gift
2. Supporting the Supply Chain: Aiding Resilience and Adherence
3. Private Sector Collaboration for COVID -19 Vaccine Delivery
4. My Great Vaccination Experience – COVID -19



Multi-month dispensing – a holiday gift

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 product supply chain that supports medicine availability is critical to addressing that disease burden. During the COVID-19 pandemic, there is an imperative to ensure that patients who need chronic medicines receive them without gaps. The United States Agency for International Development (USAID)-funded Global Health Supply Chain Program – Technical Assistance (GHSC-TA) works closely with the National Department of Health (NDoH) and the provinces to make this happen.

One of the consequences of the COVID-19 pandemic, has been challenges with the medicine supply chain, including shortages of antiretroviral drugs (ARVs) caused by production-related issues and importation delays. Another consequence of the pandemic is patients reducing medical visits to hospitals and clinics to minimize their exposure to the COVID-19 virus.

An additional challenge that arises during the holiday period at health establishments, is reduced capacity from a staffing perspective, and patients often traveling within and across provinces for family engagements.

Since March 2020, the NDoH with support from GHSC-TA and other implementing partners took proactive steps to mitigate the impact of COVID-19 on its HIV program and adopted numerous strategies to minimize clinical visits and promote adherence and retention in care, including multi-month dispensing (MMD) and delivery of patients' medicines to convenient pick-up points.

GHSC-TA works closely with the Affordable Medicines Directorate of the NDoH, the Provincial Departments of Health (PDoHs), the HIV Program, Africa Resource Centre (ARC) and other implementing partners, to improve the security of supply of medicine. Over the holiday period, this support helped ensure that adequate supplies of medicines for chronic conditions were available and enabled patients to receive additional supplies of medicine – the so-called 'holiday dispensing.'

GHSC-TA worked with NDoH and provinces to strengthen demand planning and inventory management, improve visibility via the National Surveillance Center (NSC) and strengthen analytics.

Demand planning involves combining statistical forecasting techniques and critical judgment to construct demand estimates for medicines to fulfill forecasted patient needs. GHSC-TA

continues to review and update the provincial demand forecasts considering the current number of patients on treatment on TEE and TLD, as well as the availability of a 90-day TLD pack donated by USAID and Global Fund. The TLD was previously dispensed in a 28-day pack, with the 90-day pack now allowing for easier storage, transport, and use.

GHSC-TA works with the NDoH to introduce and sustain 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. Accurate demand forecasts are thus the basis for an effective and efficient supply chain, improving medicine availability, and reducing costs. In South Africa, demand planning also improves the availability of medicines used to fight HIV/AIDS and TB and provides a good base for supply chain planning during the current and future pandemics.

In addition, GHSC-TA provides support to the provincial depots to improve the availability of TLD and TEE and avoid potential stock-outs while also assisting the HIV Program to secure Pre-exposure Prophylaxis medication (PrEP) for the national roll-out. Unfortunately, the holiday period where the consumption of alcohol and gender-based violence numbers peak mean this risk may be heightened. The availability of HIV medication is crucial to reducing infections.

The TLD dashboard developed by GHSC-TA, which is monitored weekly, tracks the transition of patients from TEE to TLD and enables visibility of the availability of TB medicines and contraceptives, which are crucial in ART treatment regimens.

The dashboard enables stakeholders to manage stock levels down to the district and health establishment level and supports the movement of stock between facilities, where needed.

In addition, USAID GHSC-TA helped patients receive additional supplies of medicine to cover the holiday period by:

- Requesting the 90-day pack of TLD to be included in the formulary for reporting via RxSolution, the Stock Visibility System (SVS), and provincial warehouse management systems.
- Assisting the provincial depot in Mpumalanga and USAID and CDC partners resolve stock challenges in North West, Mpumalanga, and KwaZulu-Natal mainly on TB medicines and ARVs.
- Assisting health establishments in North West arrange for emergency orders to be processed and delivered to facilities due to the incorrect stock numbers resulting in TLD orders not being captured.

These interventions helped to increase the number of patients who received three months supply of medicine, as a result of a demand-driven supply chain. With good planning, 'holiday dispensing' helped patients on chronic medication have sufficient medicine during the holiday period enabling them to spend time with their families and loved ones.



Image 1: Mrs. Nonceba Clara Njemla, beneficiary of anti-retroviral treatment

The year 2021 marked 40 years since the discovery of the human immunodeficiency virus (HIV). Nonceba, or “Ncesh” as she is affectionately called by her community, has lived with HIV almost as long as it has existed. She is at the heart of the AIDS pandemic both as a person living with HIV, and as a retired staff nurse who treated others in the public health care system.

South Africa remains at the center of the worldwide AIDS pandemic with an estimated 7.9 million people living with the disease. In addition, the country has the third-highest burden of tuberculosis (TB) internationally. An efficient and effective health supply chain that improves medicine availability is critical to addressing the disease burden.

The United States Agency for International Development (USAID)-funded Global Health Supply Chain Program – Technical Assistance (GHSC-TA) was launched in South Africa in September 2016. The program provides technical assistance 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.

A resilient supply chain is key to ensuring that health establishments have adequate medicine stock on hand to meet patient needs and assist to achieve the 95-95-95 targets. When this is not the case, patients' health is jeopardized, and patients must return to the health establishment at their own expense and inconvenience to collect their medicines at a future date.

Addressing constraints and improving medicine availability is a core objective of South Africa's National Department of Health (NDoH). GHSC-TA works with the NDoH and the provinces to design and implement innovative solutions to transform the South African public health supply chain.

Nonceba “Ncesh” knows firsthand how vital medication is in response to AIDS. “Nonceba” means mercy in her native Xhosa - its meaning reflects the resilience she has shown. As a retired field nurse with a career that spanned more than three decades, Ncesh was in the eye of the storm at the height of the AIDS pandemic, when critical medicines did not reach the average South African, and families in her local community in Mthatha, lost entire households to the disease. Stigma

impacted patients testing for the virus, and unnecessary lives were lost along the way.

The NDoH has been at the helm of the response to the AIDS pandemic, with the mandate of ensuring that challenges and constraints are addressed and medicine is available to those, like Ncesh, who need it.

In addition to supporting NDoH, GHSC-TA works with the provinces to implement supply chain interventions and track medicine availability through the National Surveillance Center (NSC). This work helps to save lives and advance the USAID 95-95-95 goals, prioritizing access to life saving medicine for all. Over the last two years the Eastern Cape has achieved 90 percent availability of all necessary antiretrovirals. (See Figure 1).



Figure 1: Eastern Cape Medicine Availability - December 2022

The GHSC-TA team in the Eastern Cape also supports the district assigned champion and district support partners to ensure that medicine availability data is up-to-date and available to inform decision-making and redistribute stock to prevent wastage.

As a result of years of continued support and capacity building, the provincial Departments of Health have improved medicine availability by leveraging technology to support monitoring and continuous improvement. This supports a reliable and efficient public health supply chain and access to safe, efficacious, good quality, and affordable medicines.

The information visualized on the dashboards of the NSC is used to monitor medicine supply on a routine basis. This data has been crucial to ensuring that sufficient supplies are available. The data is used for decision making, and collaboration takes place with facilities to identify stock problems at suppliers of these life-saving medicines, as well as at the provincial depots, hospitals and clinics, as well as at the service provider appointed to provide centralized chronic medication dispensing and distribution (CCMDD) services to the province.

Ncesh receives her treatment from the Mthatha Gateway Clinic in Eastern Cape and does not experience challenges with obtaining the medicine she needs. Her life expectancy has increased with the sustained availability of live saving medication - she recently celebrated her 70th birthday.



Private Sector Collaboration for COVID -19 Vaccine Delivery

Photo 1: A nurse attending to a patient at the SA Taxi Vaccination Site.

The United States Agency for International Development (USAID)-funded Global Health Supply Chain Program – Technical Assistance (GHSC-TA) works in collaboration with the National Department of Health (NDoH), Provincial Departments of Health (PDoHs), and regulatory bodies to strengthen public health systems in South Africa and improve health outcomes. The COVID-19 pandemic sparked an urgency to address the logistical problem of providing the South African population with timely vaccination. South Africa's population is estimated at 59,572,622. By December 2021 there had been 3,458,286 infections of COVID-19 in the country, with 91,312 recorded deaths as of December 31, 2021.

GHSC-TA provides comprehensive technical assistance to the NDoH, PDoH, the private sector, and other stakeholders in the planning and roll-out of the COVID-19 vaccination program.

Public taxis are a critical pillar of the public transport sector servicing the majority of South Africa's working population. Setting up a vaccination site was thus an imperative for SA Taxi. With about 35,000 minibus taxis, they service a large number of commuters in the population. SA Taxi Investor Relations Head, Megan Morreira shares that "We wanted to do our part when we approached

the NDoH to obtain the relevant permits in order to open up our own vaccination site with Kaelo Health Care as the clinic partner".

GHSC-TA support included assisting the NDoH to manage vaccine supplies, distributors, order management, and the design of solutions for equitable distribution. GHSC-TA also supported implementation of the Stock Visibility System COVID-19 (SVS COVID-19) - the stock monitoring system used in the private and public sectors to monitor the availability of COVID-19 vaccines on a daily basis, at distribution and vaccination sites across the country. GHSC-TA also provides extensive support to sites on utilizing SVS COVID-19, including onboarding, training, and technical support to address possible challenges.

In addition to supporting the vaccine supply chain GHSC-TA provided technical assistance to enable health establishments and other organizations participate in the vaccination program. This included implementation of the process of issuing permits to vaccination sites. These permits are subject to compliance with the set of minimum standards developed by NDOH with technical assistance from GHSC-TA.

SA Taxi has established a vaccination site on their premises, which is open to both staff members and the general public. It was well

received by taxi drivers and commuters alike and contributed to encouraging the public to vaccinate.

GHSC-TA assisted SA Taxi with the required permits for the pop-up vaccination site and supported the supply and stock on hand to meet the sector's demand.

When reporting compliance at the vaccination site at the Midrand Occupational Health Clinic was adversely affected by technical challenges, GHSC-TA assisted SA Taxi to resume reporting on SVS COVID-19 which allowed for continued visibility of their stock holding to ensure that drivers receive their first and subsequent doses of COVID-19 vaccines. SA Taxi also received support with cold chain handling and addressing early challenges in the manual capturing of orders and aligning reporting administration of vaccines to members of medical aid schemes and those who use public health care services.



Photo 2: A vaccinated client at the SA Taxi Vaccination Site.

Wandile Dyantjie is a taxi driver in South Africa and is part of the priority population identified for occupational health risk. She is at risk of COVID-19 due to the proximity to others that her job requires. Her business is people, and social distancing protocols have economically hampered her business. She has no time to join long queues in hospitals to get vaccinated as that would impede on how much money she can make for the day. Every hour counts. The innovation shown in communicating to her, and fellow drivers at the vaccination sites at SA Taxi were really the difference between whether she was vaccinated or not. Now fully vaccinated she can focus on her business.

"We believe that by leveraging of this partnership, it was a great example of a successful private public working relationship". While the target was 24,000 vaccines, they reached 19,000, which is above 70 % of their target achieved.

Morreira is proud that collectively they achieved their purpose. "SA Taxi contributed to South Africa's call to achieve herd immunity, preventing ongoing transmission of Covid-19 and rebuilding our economy," she commented.

In addition to the taxi industry, other occupations including mineworkers and defense and police forces. Each industry presents an opportunity to tailor the process to ensure a seamless delivery to employees. Mobilizing all the provinces in this multi-sectoral campaign is required to increase vaccinations against COVID-19 among the key working population of South Africa.

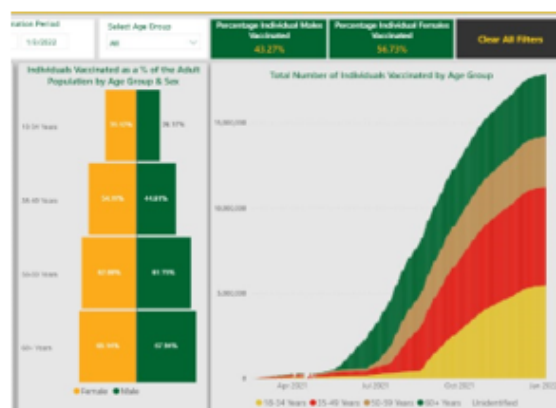


Photo 1: Nicky Sukazi after vaccination.

Across the globe, countries are responding to the COVID-19 pandemic by tasking their national departments of health and other relevant bodies with tracking and controlling its spread. South Africa detected its first case of COVID-19 on March 5, 2020. By December 31, 2021, there were total of 3,475,512 confirmed cases recorded. More recently, the emergence of the Omicron variant has increased the susceptibility of younger people to the disease. Omicron has been the dominant variant in South Africa since November 15, 2021.

With this new variant, an increasing proportion of young people are being diagnosed with COVID-19, with younger people more susceptible to the Omicron variant, than the strains that dominated the earlier half of 2021. Yet many young people are hesitant and may refuse to get vaccinated. People between the ages of 18 and 34 years are the least vaccinated group in the population (refer Figure 1).

Figure 1: Vaccination records of the South African population per age group with data from Electronic Vaccination Data System (EVDS) as of December 31, 2021.



Nicky Sukazi, 27, initially resisted vaccination. Nicky is a photographer and motion picture designer working in the East Rand township of Buhle Park. The misinformation around the disease and the vaccines led to his apprehension. He felt it was a daunting task to find a vaccination site and going into a typical hospital or clinic didn't appeal to him.

"Based on the negative information spreading on social media platforms, I was scared and could not stop thinking about all the possibilities of dying after getting vaccinated. After speaking to a nurse, she explained to me the situation and answered every question I had, which calmed me."

This conversation took place at one of the COVID-19 vaccination sites established at various locations throughout the country.

The United States Agency for International Development (USAID)-funded Global Health Supply Chain Program – Technical Assistance (GHSC-TA) is providing comprehensive technical assistance to the National Department of Health (NDoH) and works in collaboration with the provincial departments of health, the private sector, and other stakeholders in the planning and rollout of the COVID-19 vaccination program. Together they work tirelessly to remove barriers to vaccination, especially for young people.

Technical assistance provided by GHSC-TA includes coordinating inbound shipments of vaccines, managing distributors, and outbound logistics from central storage to vaccine distribution or vaccination sites in both the public and the private sector as well as providing expert technical assistance related to vaccine warehousing and distribution. The team created a supply, allocation, and distribution strategy coordinating the supply of 18,781,360 doses of vaccine.

The GHSC-TA team worked with the NDoH to design the site typology to enable provinces and the private sector to set up vaccination services at a wide variety of different venues, including hospitals and clinics, private pharmacies, and well as outreach (pop-up sites). Outreach services are provided in a number of places where community members can quickly access a COVID-19 vaccine while going about their daily business.

GHSC-TA also provided technical support to new and existing vaccine sites reporting on the COVID-19 instance of the Stock Visibility System (SVS). They assisted in the activation of sites on SVS, training on the use of the tool, and analysis of data and interventions to improve data quality.

The intermediate outcome has been a large number of innovative vaccination sites outside medical facilities and a steady supply of vaccines at these sites. Vaccination sites are easily accessible to young people like Nicky, facilitating uptake in vaccine administration and feedback from the targeted population.

Nicky really appreciated the outreach approach and used the opportunity to get vaccinated at a site near to his home. His experience highlighted that well-trained staff following due procedure recorded his personal data and administered a dose of the vaccine. The process was quick, and Nicky would encourage any of his peers to go to the site he did. Nicky will return for his second dose in January 2022.

The work done to support Nicky and his family and peers to get vaccinated is key to improving the vaccination rate and reducing the burden on the health system. Vaccines reduce severe illness, hospitalisation, and death amongst those who contract COVID-19. This will ensure South Africa can focus on the economy, jobs, and livelihoods of all its citizens. GHSC-TA is playing a key role in supporting the NDoH to make sure vaccines are readily available at easily accessible vaccination sites.