Embracing Change by Adopting Technology

Using the National Surveillance Center as a More Accurate and Reliable Source of Data about Medicine Availability in Free State Province

GHSC-TA

Pharmacists across South Africa strive to ensure that the appropriate medicines are always available for patients when they visit their hospital, community health center or clinic. To do this, pharmacy staff employ various methods to track which medicines need to be restocked at any given time.

In the Free State province, the methods for tracking medicine availability varied. For many years, pharmacy personnel and nurses in the Free State used two types of manual reports to capture medicine availability at primary health care (PHC) health establishments: Excel spreadsheets ('drug' availability reports) and tick sheets (clinic availability reports). The Excel spreadsheet was used to capture the availability of medicines at a health establishment while the tick sheet was used as a binary measure to indicate if an item was out of stock at the health establishment. Neither report showed the quantities available in real-time and required manual consolidation at a district and provincial level.

By the time the information was consolidated and ready to be used, the health establishment's stock situation may have changed, meaning the reports did not provide an accurate medicine availability view. Furthermore, this data was only collected twice a month.

Once feedback from the facilities was received, the district pharmacists would consolidate the information and share the reports with the provincial pharmaceutical services office. The tick sheet was often considered the 'go-to' report for many facilities since compiling the Excel-based report was a tedious process. As a result, stakeholders only had a partial view of the overall picture and, even then, it was a view which did not show the actual quantities for those items which were available.

The United States Agency for International Development (USAID)-funded Global Health Supply Chain Program – Technical Assistance (GHSC-TA) worked with the National Department of Health and provincial departments of health on the development and implementation of the Stock Visibility System (SVS) and the rollout of RxSolution in South Africa, including the Free State. SVS is a mobile application and web-based management tool that provides an innovative solution for identifying and addressing stockouts in the health care system. RxSolution is an electronic stock management system that captures and records medicine transactions including stock movement in a pharmacy. It allows for easy tracking and management of medicine stock, can be used to record the dispensing of medicines, and supports reporting of medicine availability. Health

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practitioners use both systems at PHC facilities to manage and monitor medicine availability, supporting improved access to medicines and helping to ensure that the supply of medicines in PHC facilities meets patient demand. Both SVS and RxSolution feed data into the National Surveillance Center (NSC) for improved visibility of medicine availability across all levels of care.

The NSC is a web-based performance monitoring and evaluation tool. Using nationally agreed key performance indicators, medicine availability data from health establishments, pharmaceutical depots, and suppliers of medicine is visualized on dashboards, providing a holistic view of medicine availability throughout the South African public health medicine supply chain. With the introduction of RxSolution mostly in hospitals and SVS in PHCs, most health establishments demonstrated improved inventory management.

As is the case with any new system, users and viewers of the NSC's dashboard reports were skeptical about the tool's accuracy. Manual reports were still being used in the province in parallel with the electronic data collection tools. The manual reports were mostly used to assist with redistribution of medicines. When it came to technology, health care providers created WhatsApp groups to circulate some of the information from these reports and facilitate the redistribution of medicines between clinics with surplus stock and those with shortages. Despite the availability of this information on the NSC, district pharmacists seemed slow to adopt the new technology, regardless of its ability to provide visibility of medicine across all levels of care. The introduction of the NSC in the Free State in 2019 enabled the monitoring and visibility of medicines across the province, paving the way for evidence-based and timeous interventions, but only if health care providers adopted the use of the system.

To increase utilization of the new technology, GHSC-TA through its Provincial Support Team provided on-the-job support to licensed users to improve the NSC's use and institutionalization. Through this support, NSC users improved their knowledge of the tool and began to enjoy the benefits of having full visibility across the supply chain when managing medicines in their health establishments. As a result, the use of the historic manual spreadsheets and tick sheets and resultant consolidated reports lost traction, as these were shown to be less accurate and reliable when compared to the data provided by SVS and RxSolution presented on dashboards on the NSC.

During one of the Free State Pharmacist Forum meetings, the Pharmaceutical Services Deputy Manager, Mr. Patrick Kgapola, highlighted that health establishments do not have any reason to continue manual reporting, as all the information is already consolidated and is available at their fingertips in a user-friendly manner.

The use of the NSC has provided district pharmacists with accurate and up-to-date information to monitor medicine availability. The information drawn from the dashboards provides information to support decision making and supports improved inventory management at all levels of care. With this new technology, fewer stockouts have been reported and rapid remedial actions can now be taken to avoid stock availability issues.

"The medicine availability dashboard is useful in monitoring consumption of items; it helps to identify surpluses and shortages, thus facilitating redistribution of stock. You can zoom into specific items at a click of a button without having to contact the facility or get the same report telephonically, especially in cases of far-off facilities."
– Charlotte Moatlhodi, District Pharmacist, Lejweleputswa