

System will monitor availability of medicines at clinics – Aaron Motsoaledi

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South Africa has the world's largest antiretroviral treatment (ART) programme with an estimated 3.1 million people receiving treatment as of the end of March 2015. In May this year, the new “Test and Treat” antiretroviral (ARV) treatment strategy as announced and as a result, we expect this number to increase and in turn this will place pressure on our medicine supply systems to deliver the volumes of treatment needed to cater for our people's treatment needs.

In a move aimed at improving health systems performance at all primary health care clinics, the National Department of Health (NDoH), has developed a system, in partnership with Vodacom, to monitor the availability of medicines at clinic level. The mobile-based Stock Visibility System (‘SVS’) is able to provide real-time information on the availability of medicines in primary health care (PHC) clinics thereby preventing stock-outs or shortage of medicines at facilities when there is adequate stock in the district or province.

This strategic approach which will bolster the strength of the public health care supply chain and is being implemented as part of the phased implementation of the National Health Insurance (NHI) that is focused on ensuring that everyone has access to appropriate, efficient, affordable and quality health services as well as access to essential medicine. Access to medicines implies continuous availability and affordability of medicines at health facilities which are close to where people live.

Public health sector medicine supply chains globally are currently affected by sporadic and recurring challenges with medicine availability. In South Africa, stock-outs also occur at health facilities from time to time. They are more common at primary health care (PHC) clinics than at hospitals. These challenges are mostly underpinned by weak demand planning and order management and an overall lack of an effective medicine availability information system.

The Department has been working very closely with Vodacom to developing SVS and ensure that it is adapted to the South African environment and can be operational at all facilities, even in the most rural areas.

SVS Deployment

In my budget speech in May I announced that the system would be deployed at all our clinics within three months. I am happy to inform you that we have met and exceeded our own target as the system has been deployed over two months and is now active at 3126 clinics to in eight (8) of our nine (9)

provinces with the exception of the Western Cape Province which uses a different system to monitor medicine availability at facilities. This has now enabled us to ensure national-level oversight of medicine availability in all nine (9) provinces as SVS and Western Cape medicine availability data can now be pulled into a centrally PHC dashboard which forms part of the National Surveillance Centre.

The SVS is a mobile application used to report medicine availability at primary health care clinics, thereby enabling informed decision-making and proactive stock management in the 'last mile' of the supply chain. Increased access to information results in improved demand planning and proactive medicine supply management, and lead to improved availability of essential medicine and consequently translate into improved treatment outcomes for patients.

The application enables information relevant to stock management to be captured using facility-specific smart phones. It is capable of capturing information for all contracted essential medicines available at primary health care clinics, including ARV and TB medicines. The data is captured by clinic staff and is automatically uploaded to a central, online repository or cloud. From this repository, the information is consolidated in real-time and can be presented in diverse reporting formats structured to meet the needs of clinic, district, province or national authorities to improve demand planning and/or oversight and monitoring.

The system is also capable of detecting stock-outs reported at clinic level and provides specific information about which stock items are affected and the duration of the problem. In addition, early warning alerts about low-stock situations which could lead to stock-outs are automatically sent to managers at the different hierarchical levels involved in the supply chain from clinic right through to national level. The system essentially provides scientifically sound information based upon which appropriate action can be taken. Similarly, the system also notifies managers of over-stocking situations which are known to lead to stock loss due to expiry. Managers are thus able to act proactively to prevent stock-outs and excessive loss of stock from occurring in the first place.

The system was initially piloted at all PHC clinics in Kwazulu-Natal (605 clinics) and Limpopo (478 clinics) in 2014 and 2015 respectively and was used to monitor the availability of all antiretroviral, tuberculosis and vaccine stock items. These pilots aimed to, amongst other aspects; establish an understanding of the enabling factors that must be addressed for SVS to support medicine replenishment management at PHC level with the ultimate aim of improving medicine availability. Over the 2014 and 2015 period, the overall number of stock-outs reported in KwaZulu-Natal decreased by 46%, 49% and 14% for ARVs, TB medicines and vaccines respectively. Similarly in Limpopo the overall decrease in the number of reported stock-outs during 2015 for ARVs, TB medicines and vaccines was 66%, 49% and 42% respectively.

The next stage in improving medicine availability which we have planned is to use data from SVS in conjunction with upstream electronic stock management systems such as RxSolution®. This integration will allow the upstream system to automatically place replenishment orders for clinics in an informed push replenishment, a further modernisation of supply chain practices. The orders placed automatically will be based on monthly stock consumption determinations based on regularly reported medicine availability information uploaded into the SVS. This process will assist particularly nurse-driven clinics to manage stock more efficiently.

The collection of data related to medicine expiry dates also enables the system to generate alerts regarding short-dated stock, thus providing relevant authorities with information of impending stock expiry. This will ultimately lead to the reduction of stock-loss through expiry, resulting in massive savings in the expenditure losses related to health care commodities. Moreover, the application is able to function when the mobile device is out of network range, for example facilities in deep rural areas. In such situations, data captured at the facility is stored on the device and uploaded automatically as soon as network connectivity is restored.

The outcomes of any great technological innovation are however impacted by the human element. The level of impact the system can make will be directly determined by the level of uptake and dedication at the clinics themselves in terms of ensuring that accurate information is captured on a routine basis. The onus will be on clinic staff to take this instrument and use it to inform their activities and improve management of medicines. The level of supervisory support offered by the supervising managers using the system will also have bearing on the use of the information generated through SVS.

At the upcoming 21st International AIDS Conference being held in Durban from 18th - 22nd July, we will be showcasing the system to the international community as part of our story which chronicles the journey our health care system has taken since 1994, celebrates our successes and asserts the vision of where we are heading to as a country.

We believe that the increased access to information will result in improved demand planning and proactive medicine supply management. This will lead to a reduction in essential medicine stock-outs and will ultimately ensure improved treatment outcomes for South Africans.

I have invited our colleagues from Vodacom to demonstrate the application to you so that you can see for yourselves what our managers are able to do to with this system.

Issued by Charity Bhengu on behalf of Minister of Health, 14 July 2016