Coordinated Quantification of Health Commodities Helps Increase Availability of Medicines in Swaziland

Challenge
Inconsistent supply of health commodities inhibits progress against HIV and TB

Swaziland, working to combat two concurrent epidemics of HIV and tuberculosis (TB), has recently intensified nationwide HIV testing and TB case finding campaigns. However, these efforts have been hampered by routine stock-outs of key TB, laboratory, HIV and AIDS, and other health commodities. In December 2011, 50% of tracer products were stocked out at the central level, while 23% of tracer products were stocked out at health facility warehouses. The challenge of maintaining a consistent supply of commodities threatens not only current efforts to help curb the HIV and TB epidemics, but may also erode the progress made to date toward advancing prevention, diagnosis, and treatment services. The rapid scale-up of these programs as well as fiscal challenges in the health sector, have exposed weaknesses related to procurement and supply chain systems.

SIAPS Activities
Regular quantification exercises help plan the supply of commodities

Working closely with the Ministry of Health (MOH) and other relevant partners, SIAPS helped to establish an effective system for conducting regular quantification exercises for several essential health commodities. As part of this effort, SIAPS worked to establish the multidisciplinary Forecasting and Supply Planning Technical Working Groups, which comprise staff from the MOH, health programs, and partner organizations, and are designed to allow stakeholders to use logistics and supply chain information more effectively.

By using information from its logistics management information system (LMIS), the working groups help facilitate proper planning, procurement, and distribution schedules to avoid both over- and under-stocking of commodities. Members of the TWGs and technical officers in the MOH were trained on quantification principles, processes, methodologies, and on the use of key quantification tools (Quantimed®, Reality® and Pipeline®). SIAPS also provided on-the-job mentoring and support during actual quantification exercises to further build the capacity of local stakeholders to conduct these exercises.

Number of annual forecast and quarterly supply plan exercises conducted, 2012-2014

<table>
<thead>
<tr>
<th>Commodity</th>
<th># of annual forecast exercises conducted</th>
<th># of quarterly supply plan exercises conducted</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV/AIDS</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Laboratory</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>TB</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Family planning</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>40</td>
</tr>
</tbody>
</table>
**RESULTS**

Effective quantification systems improve availability of commodities

The regular annual forecasting and quarterly supply planning activities have helped the MOH to better plan procurements from different funding sources (e.g. UNFPA, the Global Fund, and others), and to advocate for and mobilize resources. As a result, Swaziland’s Ministry of Finance was able to prepare financial plans and allocate about USD 30 million for procurement of TB, HIV/AIDS, family planning, and laboratory commodities in fiscal year 2013-2014. UNFPA also allocated a budget of about USD 1.03 million for family planning commodities.

Better quantification systems and processes have helped to improve the availability of tracer commodities. The stock-out rate for tracer commodities was reduced from 50% in December 2011 to 0% in September 2014 at the central warehouse, and from 23% to 0% at health facilities during the same time period. Additionally, the forecasting and supply planning exercises were able to act as an early warning system as they helped to indicate imminent stock-outs, shortages, and expiries.

Conducting regular quantification and planning exercises also enabled a rapid emergency procurement of condoms in August 2014, when an imminent stock-out had been identified. Conversely, the development of forecasts and supply plans also helped to inform UNFPA that a planned order of contraceptive implants would result in an overstock scenario. UNFPA cancelled the order, resulting in a cost savings of USD 102,000. Additionally, due to quarterly supply planning revisions and adjustments, the financial requirements for procurement during fiscal year 2013-2014 were reduced by 6.4% and 69.2% for HIV/AIDS and reproductive health commodities respectively compared to the estimates at the beginning of the period.

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**NEXT STEPS**

Focusing on country ownership and data quality

Through trainings and on-the-job mentorship, SIAPS has strengthened local capacity to conduct quantification exercises and use forecasting and supply planning tools such as Quantimed, Reality√ and PipeLine. In a step toward sustainability, staff from MOH and CMS now lead the quantification exercises and supply plan revisions with support from SIAPS provided on an as needed basis. Additionally, the technical working group model for quantification has been adopted by other SIAPS countries as well, including Angola, Mali and Cameroon.

SIAPS continues to collaborate with the MOH and other key stakeholders through the National Supply Chain technical working group, and is also working with MOH to establish a similar system for supply chain management of other essential medicines. Lastly, to help improve overall quality of data used for decision making, SIAPS is working on quality improvement projects that involve continuous supportive supervision and mentorship throughout the supply chain, from the health facility level to the central warehouse level.

**ABOUT SIAPS**

The Systems for Improved Access to Pharmaceuticals and Services (SIAPS) program works to assure access to quality pharmaceutical products and effective pharmaceutical services through systems-strengthening approaches to achieve positive and lasting health outcomes. SIAPS is funded by the US Agency for International Development (USAID) and is implemented by Management Sciences for Health. For more information, visit www.SIAPSprogram.org.

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