SCMS

TECHNICAL BRIEF

PEPFAR Implementing Partner

# Forecasting and Supply Planning

## Accurately forecasting the need for life-saving medicines and supplies

*Accurate quantification for HIV/AIDS care and treatment programs—forecasting the quantities needed and planning procurement for appropriate pharmaceuticals and supplies—is essential to ensuring that patients receive a continuous supply of medicines. SCMS develops harmonized national forecasts of needed products and shares this information with our donors and other stakeholders. The result is a systematic, coordinated response that helps ensure the effective use of resources.*

### The Challenge

Many countries lack a clear picture of the medicines and supplies required as part of the national scale-up of HIV/AIDS prevention, care and treatment programs. Producing an accurate forecast poses several challenges, including the following:

- Ensuring stakeholders reach consensus on assumptions (e.g., the rate of scale-up for people receiving treatment)
- Collecting reliable treatment data, including the proportion of patients prescribed each regimen and past usage of HIV/AIDS commodities
- Correctly and efficiently using appropriate, best practice tools for quantification

Poor estimates can result in drug shortages, dangerous interruptions in treatment, expensive emergency shipments or inappropriate drug substitution. Overestimating can tie up precious financial resources and storage space and can increase the risk of expired stock, waste, theft and diversion.

### Meeting the Need

SCMS works closely with stakeholders, including host governments, program managers, donors and recipients, to accurately quantify the commodities needed to meet short- and long-term program goals. Our approach can be tailored to the program or national level.

Training, mentoring and sharing best practices will help increase the capacity of host governments, program managers and recipients for conducting forecasting and for supply planning.

To ensure effective forecasting and supply planning, SCMS takes the following steps with our in-country partners:

*Step 1. Determine scope.* We determine and document the scope of the forecast by addressing several questions: What will be procured (e.g., pharmaceuticals, test kits, supplies)? What level—program or national—will the procurement support? What patient group(s) will be treated? During what time?

*Step 2. Identify data elements.* Next, we identify data needed for the quantification, including details of standard treatment guidelines, product selection, past consumption, estimated costs and numbers, and percentages of patients on each regimen. Assessing whether the available data are sufficient and reliable is an important part of this step.

*Step 3. Agree on assumptions.* We coordinate with our clients and stakeholders to reach consensus on the key assumptions needed for forecasting, including factors such as rate of new patient recruitment, health program capacity, changes in standard treatment guidelines and products used, attrition rates, and percentage of patients needing to switch to second-line treatments.

*Step 4. Validate assumptions.* In partnership with clients and stakeholders, we review all assumptions to ensure they are appropriate based on patient data, historical program consumption data and expert opinion. In the absence of country- or program-specific data, evidence from other programs can be used as a proxy.

*Step 5. Create and analyze forecast scenarios.* Next, we enter data representing the key assumptions into a desktop software tool that is best-in-class—Quantimed—to generate forecast scenarios. We then determine an optimal scenario with the client using scale-up capacity while taking into account budget and number of clinicians or nurses available. Scenarios and assumptions are reviewed and modified as needed.

*Step 6. Generate supply plan.* The forecast data from Quantimed are transferred into another best-in-class software tool—PipeLine—to generate a supply plan. Using inventory on hand, amount of buffer stock desired and total lead time to procure products, this tool shows the optimal procurement and delivery schedule.

*Step 7. Validate supply plan.* We validate the supply plan with stakeholders and refine it as needed, taking into account sources of funds for the quantities to identify gaps or overlaps in resources.

*Step 8. Share national-level quantifications.* The process does not stop when the supply plan is completed. We also prepare and, where authorized, share forecasts with national and international stakeholders to better coordinate and plan efforts that meet all programs' needs while preventing duplication. Information from national forecasts can be combined to produce an increasingly useful global picture of commodity needs.

*Step 9. Conduct quarterly review.* SCMS and the stakeholders review all assumptions and update the forecast and supply plan on a quarterly basis.

*Step 10. Analyze forecast accuracy.* On a yearly basis, we review the accuracy of forecasts with clients and stakeholders to determine future assumptions and planning.

## Sustained Benefits

Effective forecasting and supply planning support programs by ensuring product availability and by minimizing the need for costly emergency shipments. It also facilitates pooled procurement (consolidating orders to buy in larger volumes), which further reduces prices.

Our systematic approach to quantification contributes to the knowledge base of HIV/AIDS epidemiological trends and program metrics in the countries where we work. This approach also helps to identify any gaps in essential data. Where gaps are found, we can assist in-country partners in developing systems that collect the necessary information.

Additionally, forecasting and supply planning address one potential major constraint to scale-up: ensuring that sufficient quantities of products are manufactured. When presented with forecasts that are based on sound methodologies and carefully considered assumptions, vendors can have greater confidence in the estimates, can use the information for their production plans and can invest in new manufacturing capacity where needed.

## ABOUT SCMS

The Supply Chain Management System (SCMS) was established to collaborate with in-country and global partners to ensure a reliable, cost-effective and secure supply of high-quality medicines and health products for HIV/AIDS prevention, care and treatment. SCMS is funded as part of the US President's Emergency Plan for AIDS Relief through the US Agency for International Development. Visit www.scms.pfscm.org or write to scmsinfo@pfscm.org for more information.



May 2007