This case study shows how ViVa has been introduced in Afghanistan, how the process started, what actions were taken and the benefits seen in just a matter of months.

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Managing vaccine procurement in Afghanistan before the use of ViVa

Over recent years, the supply of vaccines into Afghanistan has been chaotic and extremely time-consuming. Previously, there was no specific system in place to monitor vaccines deliveries and quantities. Two separate approaches were used that included UNICEF’s internal system for checking the estimated time of arrival of vaccines and the quantity of vaccine supplied, and the Vaccination Supplies Stock Management (VSSM) system used by the Afghan National EPI (NEPI) for stock management. These computer-based systems were complex, contributing to a high margin of error. The relatively high turnover of EPI personnel and lack of institutional memory exacerbated the situation.

With over one million births projected in Afghanistan in 2017 - most of whom will require a range of immunizations – effective national vaccine forecasting is vital. Prior to using ViVa, it was necessary for the NEPI to contact UNICEF Supply Division to know about vaccines in the pipeline that had not yet been delivered, and to gather data from the paper-based national immunization supply chain on the remaining vaccine stocks. The remoteness of some areas of the country, and insecurity in others, as well as the sometimes poor quality and slow receipt of data, including stock balances, wastage data and projected needs, contributed to the chaotic nature of forecasting vaccine requirements and periodically resulted in stock-outs. This is particularly significant as Afghanistan is one of only a handful of countries globally where polio remains a challenge to public health and can ill-afford to experience stock-outs of the polio vaccine.
The MOPH is currently developing a real-time vaccine monitoring system with the support of UNICEF. However, the system is expected to be piloted in two provinces only at the end of 2017.

Steps taken to introduce ViVa in Afghanistan

In June 2016, a key official of the Ministry of Public Health, together with EPI staff of the UNICEF Country Office, in Afghanistan attended a presentation on ViVa during the Immunization Supply Chain Practitioner’s Forum in Copenhagen, Denmark. The presentation outlined the benefits of ViVa, and it became very clear, very quickly in the minds of the Afghan participants that ViVa would be of tremendous benefit owing to its ease of use and its ability to provide clear information upon which procurement recommendations could be given to decision makers before current stocks of any vaccine were completely depleted.

‘ViVa is elegant in its simplicity’
– senior member of the EPI team in Afghanistan

Following the presentation, the Afghan team met with the ViVa Project Manager at Supply Division to agree on a plan of action to bring ViVa to Afghanistan. The key tasks were incorporated into the 2016 workplan of the UNICEF Afghanistan Office. Specifically, agreement was made on who would be authorized to enter data into ViVa and who would be allowed to view the dashboards available through ViVa, after which usernames and passwords were issued by UNICEF to those designated individuals.

When ViVa first began to be used in Afghanistan, a UNICEF officer transferred data from the Ministry of Public Health’s Excel sheets into ViVa. Minimum and maximum vaccine stock levels were modified in ViVa in consultation with national partners to be in accordance with national policy. As familiarity in using ViVa increased, EPI staff of the Ministry have taken over entering data into ViVa each week, with the Ministry’s EPI Manager monitoring vaccine stock levels in ViVa on a regular basis.

Benefits of using ViVa in Afghanistan

EPI staff in Afghanistan have stressed the usefulness of having a visualization of data in the form of dashboards to provide an overview of the stock of each vaccine and in providing prompts on when actions are needed to ensure that stock-outs do not occur.
Using information about current stock levels, upcoming confirmed and forecasted orders, expected consumption and recommended minimum and maximum stock levels, ViVa creates stock projections and alerts that can trigger relevant EPI staff to take action to address potential issues. Users can sign up to receive email notifications of these alerts on a monthly, weekly, or even daily basis. The result of using ViVa in Afghanistan has been a reduction in the number of times there has been shortages of a vaccine in the country.

National EPI staff have also noted that information presented by ViVa can be easily understood by officials from outside EPI, especially decision-makers at more senior levels of the Ministry of Public Health. This has encouraged senior officials to increasingly accept data-informed decision-making. The huge amount of time saved by using ViVa compared to the previous approach is not lost on EPI staff of the Ministry and UNICEF, with one officer commenting,

“In the past, when we had to track something or monitor something, we had to open many documents, open files, check hard copies. Now it is easy. We just go to ViVa and check it. It has eased our life very much.”

Through the use of ViVa, and in becoming familiar with the visual representation of data in the form of dashboards produced by ViVa, EPI staff have developed a good understanding of what data is needed for more accurate vaccine forecasts as well as the timing of when such forecasts need to be calculated. Familiarity and practical experience of ViVa by staff of the Ministry of Public Health is slowly making them less reliant on UNICEF and will potentially allow the complete handover of ViVa to the Ministry and thereby make ViVa’s long-term sustainability more likely. The benefits seen in less than one year from using ViVa at the national level has made the Ministry of Public Health eager to expand the system to the sub-national level with the support of UNICEF in the near future.

Lessons learned from the use of ViVa in Afghanistan

- Establishing ViVa in-country can take as little as three months as it is a simple, easy and low-cost process. Training takes only a couple of hours – no previous experience of using web-based software or databases is required
- To be useful, a country must update its vaccine stock levels regularly – on a weekly or monthly basis – into ViVa
- ViVa is only as good as the quality and timeliness of the data entered into it - poor quality, old, or incomplete data will result in vaccine forecasts and procurement plans that do not meet country needs. Careful monitoring of
procurement plans that do not meet country needs. Careful monitoring of supply chain performance, and improving the use of data for management of the supply chain (see Myanmar case study) are still necessary.

- **ViVa** is currently only available at the national level, meaning that a ‘stock-out’ warning on ViVa does not include data on stock levels at regional and provincial vaccine stores in-country. ViVa also does not include non-vaccine supplies that are key to immunization, such as syringes, safety boxes, and cold chain equipment.

- ViVa presents supply chain information in a way that non-EPI officials and decision-makers can understand, making it easier for them to make timely, data-informed decisions.

- The simplicity of ViVa makes it attractive to the Ministry of Health and can quickly lead to ViVa being fully adopted and with its outputs - including alerts - trusted by decision-makers.

- The use of ViVa and real-time vaccine monitoring is beginning to build a culture of data use within EPI in Afghanistan with an increasing number of data-informed decisions being made.

Contact your UNICEF country or regional office, or the UNICEF Supply Division, to begin the process of using ViVa: viva@unicef.org.