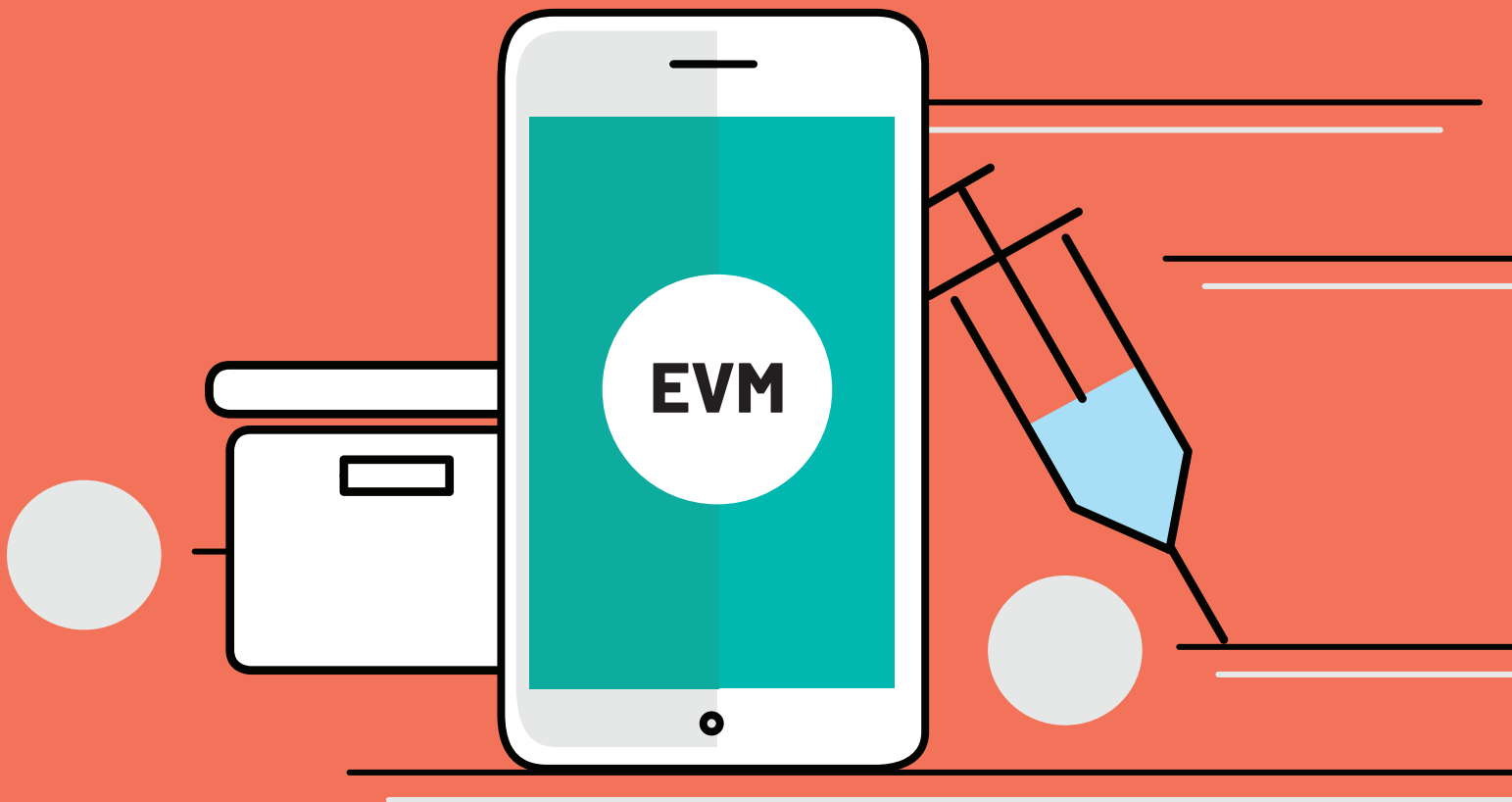


# EVM2: Making a Difference

HOW THE EVM2 TOOL WAS USED TO MAKE ISC  
IMPROVEMENT RECOMMENDATIONS IN INDONESIA, KENYA,  
LEBANON, NEPAL, NIGERIA, AND SYRIA



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## BACKGROUND

Vaccines being delivered at the right time, quality and budget is of utmost importance as countries monitor and evaluate their immunization supply chain globally.

The **Effective Vaccine Management (EVMA)** assessment tool has long been part of a national EPI planning process to prioritize improvements across the immunization supply chain. **EVM2**, a digitally-based improvement for monitoring and evaluation of supply chains, is currently being rolled out across countries. This updated version is helping countries to more efficiently assess, improve and resource the necessary standards for immunization supply chains.



*EVM2 introductory video (click to view)*

## A GLOBAL INITIATIVE TO IMPROVE IMMUNIZATION SYSTEMS AND SAVE LIVES

In 2009, the introduction of the **EVM Assessment** tool provided, for the first time, a process for countries to systematically assess and check each part of the immunization supply chain, attach a score to it and get a holistic understanding of the strengths and weaknesses of different functions and processes. Originally launched as a paper-based tool, the EVMA tool has gone through many iterations, the most

recent being a more technologically advanced version referred to as the **EVM2** tool. This tool, [a mobile-based app](#) to conduct assessments offline, is paving the way for continuous improvement in immunization supply chains (Figure 1) to support Ministries of Health around the world. It is endorsed and supported by WHO and UNICEF.

### BENEFITS OF ADOPTING THE EVM2 TOOL AND ASSESSMENT

#### Redesigned questionnaire

Assesses additional critical criteria, from human resources to waste management, to offer a more complete assessment that yields better insights into root causes

#### Reduces need for external support

Supports implementation and continuous monitoring of iSC best practices

#### A learn by doing approach

- **Easy to use for training and assessments**  
EVM2 is designed for easy, quick and accurate use on devices by staff at all levels, building in-country iSC management capacity
- **Supports self-learning**  
In-app resources provide question guidance in real-time.

Assessments customized to different needs enables targeted assessments and improvements. Customized options are available to assess any aspect of a country's supply chain as frequently as necessary.

**Real-time data improves ease and accuracy of reporting.** The app automates complex calculations and offers different data visualizations to help with data analysis and attracting funding for iSC improvement.

## A 'LEARN BY DOING' APPROACH

Featuring Nigeria and Kenya

The technology behind the EVM2 app provides guidance, feedback, calculations and next steps for assessors. The result is a self-guided learning tool that can be used to practice administering assessments long before a national assessment. *Learn by Doing* is the label applied to the approach, and has been used globally for EVM2 assessor trainings.



250 colleagues gathered in Lagos, Nigeria for a five-day EVM2 training in January 2020. Participants included facility managers, health experts, government officials and funding partners.

During Nigeria's national training, country managers and assessors alike were able to trial the EVM2 tool over a 5-day period. In the training they learned how to use the EVM2 app to assess any facility, read the immediate results and identify the root causes of deficiencies so they can be improved. After completing the training, assessors were practiced and prepared to begin the process of a national assessment.

Although the enthusiasm was palpable at the start of training, it did not come without doubts. "There were

a lot of concerns around how the app works, how to use it and a fear of using something complicated," said Dr. Ahmad Muhammad, a Health Specialist at UNICEF based in Abuja, Nigeria, referring to the training in Lagos, Nigeria. With the support of the iSC Steering Committee (iSC2) facilitators, participants began to understand the rationale behind the EVM2 tool and how it could provide both long term and immediate

### LEARN BY DOING IN APPLICATION

The following are examples of exercises and practice sessions that comprise the 'Learn by Doing' model:

- Tablet practice ask participants to download and familiarize themselves with the application before reviewing the questions within
- In pairs, participants assume different roles to practice asking, and inputting the answer to, each question
- Individuals share proficiency at downloading, answering and sharing questionnaires
- Teams practice data collection skills, including observational and interpersonal data collection
- Teams visit facilities to practice finding the information (documents, answers, observations, calculations) to fill out the questionnaire
- Teams practice collaborating on answering and merging questionnaires
- Daily 'pulses' collect input from participants on what areas require further explanation and practice
- Refresher trainings before national assessments, in addition to facility-specific targeted assessments, are encouraged to keep skills fresh

improvement to the supply chain. After going through the training and successfully conducting an assessment using the EVM2 tool “Everyone was happy. Once they finished, they immediately had results,” said Dr. Muhammad, “Unlike before [EVM2] where you had to use hard copy tools, key everything in and then get the analysis, this was immediate.”

Similarly, in Kenya, a 5-day assessor training was completed prior to undergoing a national assessment. Kenya decided to train for and use the tool because a national assessment had not been undertaken since 2015 and the upcoming Covid-19 vaccine distribution necessitated the preparation of a reliable cold chain. Due to the timing of the training with COVID-19 restrictions, Kenya was able to perform the entire process remotely. “The commitment of the Kenya teams was amazing. They were highly skilled staff, dedicated, well-oriented and had excellent knowledge... this was part of the success,” said Zeinab Rida Berry, MSc, a Public Health and Immunization Specialist. She added that the support of partners assisted in technical know-how, making the training excellent.

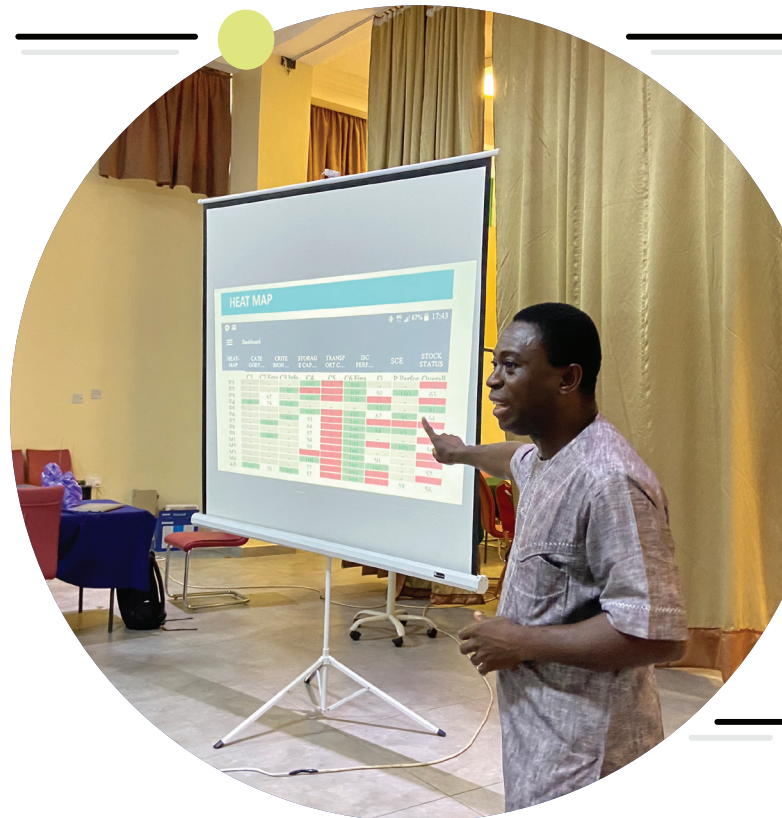
*“What has been most surprising is the acceptance of the format [EVM App], the enthusiasm! We didn’t expect it. The number of people who wanted to be onboarded exceeded our expectations.”*

– DR. AHMAD MUHAMMAD, HEALTH SPECIALIST, NIGERIA

In both Nigeria and Kenya it was noted how key it is for the Learn by Doing approach to be collaborative and cross-level. The training requires the participation of facility managers, health officers, health experts, technical experts and government officials to ensure the process continues through to an aligned improvement strategy for the country.

In Kenya, after the training, the team was able to manage the national assessment themselves, usually a task delegated to an outside consultant. The country’s ability to review a robust amount of data in a short period of time was the result of six country managers being trained in data validation and tasked with reviewing the questionnaire as they were uploaded. “The country managers reviewed 230+ questionnaires, as Kenya had one of the largest samples generated so far. Next time they can conduct the EVM assessment by themselves [training and assessment], with no need for any external support.” said Ms. Berry.

Another reason for success in Nigeria was a committed government at the outset of the planning stage. The dedication led to continued standalone assessments practice after the training, which led to an increase in assessors’ proficiency and engagement with both the EVM process and the EVM2 tool. This ensured that in-country staff became champions of the tool and the process’ success.



Participants in a Nigeria training review the heatmap

*“The good thing is, as you finish the assessment, the results are displayed on the dashboard. You can use it for advocacy—EVM2 provides evidence for financial needs or government intervention for areas that need more assistance.”*

— WILLIAMS EDMOWONYI, ZONAL COLD CHAIN OFFICER (ZCCO), NIGERIA

## ASSESSMENTS CUSTOMIZED TO DIFFERENT NEEDS

*Featuring Sri Lanka and Northern Syria*

EVM2 assessments can be customised to meet the needs of a country. The EVM2 tool accomplishes this flexibility through two types of EVM assessment: Full or targeted. A full assessment assesses an entire country, with locations to assess chosen at random based on



*Testing the EVM2 app during a site visit at the Nigeria training*

the EVM site sampling methodology while a targeted assessment tailors the sites and criteria included in the assessment. Between full national assessments, country teams can use targeted assessments to focus on one or more locations chosen for specific reasons. (See Table 1.1 for additional information.)

*“EVM2 is unifying... government and partners have all aligned, as it reflects everyone’s interests and is focused on improvement.”*

— DR. AHMAD MUHAMMAD, HEALTH SPECIALIST, NIGERIA

In Sri Lanka, a targeted assessment was undertaken with the goal of specifically addressing temperature monitoring and stock management. The country team also used the targeted assessment as an opportunity to train assessors on a smaller scale as a stepping stone to performing a national assessment in the near future. For countries considering a targeted assessment, stakeholders can focus on a problem area (similar to Sri Lanka) or a specific geographic location and can also use this type of assessment to pilot smaller scale assessments before scaling nationally.

In Sri Lanka, the initiative began with a remote training for country managers to ensure they were comfortable with every aspect of the EVM2 tool software. “Now they can deliver the training for full national assessment. The preparation was smooth.” said Paul Colrain, Big Data Analysis, SW Development, Supply Chain Logistics consultant at Coly Ltd.

After a successful training, assessors (who were also EVM managers) collected data at specified facilities. They found that the collection effort was easier than in previous years because of the more automated

process. The assessment was “streamlined, convenient and will help in terms of data consistency and quality. EVM1 relied on manual interpretation, whereas EVM2 does this in a systematic manner. It takes out the subjectivity of an individual.” said Terry Hart, Sri Lanka EPI country support.

In addition to being precise with the selection and scope of the assessment, the country team found the EVM2 tool effective in dissecting information after it was collected.

A unique situation exists in Northwest Syria, where using a targeted assessment also made strategic

**TABLE 1: WHEN IS A TARGETED ASSESSMENT (VS. NATIONAL ASSESSMENT) BEST?**

CHALLENGE	HOW TARGETED ASSESSMENTS RESPOND
Specific deficiencies to monitor	<b>Specify Scope:</b> Choose whether to assess all EVM requirements or only a subset; for example, only E5 Maintenance and repair
Particular geographies of focus	<b>Specify Range:</b> Choose whether to include locations from the entire country or only those in specific administrative units (AUs) in the random site selection; for example, focus the EVM2 assessment on geographies that are underperforming to understand root causes
Particular facility type	<b>Specify Type:</b> Choose whether to include both private and public facilities; depending on the country’s scenario it might be necessary to look at these facilities separately
Parts of the country are insecure	<b>Specify Criteria:</b> Choose whether to make a random site selection or pick individual locations; for example, focus the EVM2 assessment in areas of greatest need for positive life saving outcomes
Report on progress	<b>Specify Scope and Range:</b> An interim assessment can be used by individual facility managers or regional EPI teams to monitor progress between 5-year milestones
Update to funders	<b>Specify Sample:</b> Choose whether to make a single random site selection for the entire country or make individual ones for each AU; for example, In Lebanon, UNRWA was able to assess ONLY the clinics they financially support, as well as the central pharmacy.

*“Now, with the software, that’s all done for you; you can click on a low score and see the requirements that are beneath it, you can click on that requirement and see the sub requirements that are beneath it, you can click on a sub-requirement and see the questions that were asked to evaluate that sub-requirements score. So understanding the root cause of a low score at a high level is much easier now within your software and it’s all online and web-based..”*

— PAUL COLRAIN, BIG DATA ANALYSIS, SW DEVELOPMENT, SUPPLY CHAIN LOGISTICS CONSULTANT AT COLY LTD

sense. In this region, immunization activities are not managed at the national level by the Ministry of Health, but rather driven by the Syria Immunization Group (SIG) and a UNICEF country office. The team could focus the assessment on the region, where ongoing violence has left many health infrastructures destroyed or damaged. This allowed them to prioritize rebuilding the vaccine cold chain and logistics (CCL) systems in Northern Syria to ensure adequate supplies are available without temperature damage and at the lowest possible cost. ([source](#))

## REAL-TIME DATA TO ACTION IMPROVEMENTS

*Featuring Indonesia, Nepal and Lebanon*

In addition to interactive trainings and the ability to conduct targeted assessments, the EVM2 tool streamlines result reporting that supports real-time collaboration, resourcing and local ownership. Whether completing a national assessment or monitoring through a targeted assessment, these efforts reinforce the comprehensive EVM framework at a local level so teams can more effectively catalyse immunization supply chain improvements in their country and region.

### Real-time Results

The real-time results available in the EVM2 tool close the gap between data collection and data analysis – empowering assessors, facility managers and health workers to learn from and apply feedback. This more dynamic process also allows for additional content; for example, attaching images to the questionnaire rather than simple responses alone.

In Indonesia, the full assessment itself was met with great acceptance. The country wanted to use the assessment to gain an understanding of how facilities were monitoring, performing and improving each aspect of the immunization supply chain. Health facility managers were pleasantly surprised by the assessment process that took a fraction of the time of previous assessments and provided them with

instantaneous data that could be turned into system improvements.

The EVM2 app provided features that assisted the assessment process, giving real-time data to assessors and facilities as the assessment was ongoing. “The heat map, the ability to upload photos and seeing immediate recommendations for improvements were helpful and not possible in the past,” said Ruhul Amin, Immunization Specialist, UNICEF Indonesia. These immediate results allowed Indonesia to more quickly evaluate their iSC and turn outcomes into action.



*Vaccine Freeze Protection (Adawatu Dispensary), during a Learn by Doing training in Lebanon*

### Roadmap for Resourcing

EVM2 has positively impacted the budgeting and future resourcing process for countries that have used the tool. Countries are able to identify clear gaps within the immunization supply chain and use those findings to accelerate needed funding.

In September of 2020 the Indonesia Ministry of Health leveraged EVM2 by asking the Country Office to use a cold chain capacity assessment to reveal gaps at the sub-national level and health facility level related



to Covid-19. An in-depth assessment of cold chain capacity was done using the sizing tool, which showed gaps in the immunization supply chain and helped the government mobilize resources and funds from donors. "Using EVM2 as a basis, I gave a presentation to the current health minister who was the former Deputy Minister of State-owned Enterprise (SoE) and Head of Economic Recovery Task Force of Committee for Covid-19 Response and National Economic Recovery (KPCPEN). By using the heat map tool, I was able to



share a quick presentation to show opportunities for both public and private sectors," said Amin. "Later, the Ministry of Health requested UNICEF to conduct an EVM assessment of the private vaccine stores and private health facilities. The Ministry of Health has since taken a course of corrective action to strengthen the supply chain."

Similarly in Nepal, an EVM2 assessment was leveraged to identify gaps and support future funding. "Before conducting the assessment, we didn't have any idea of gray areas and those are now clear," said Pradeep Shrestha, Program Planning Officer at UNICEF. "Categorization in the tool makes it very easy to identify problem areas in the supply chain and allows us to prioritize and excel interventions that will link to funding," he said.

#### Local Ownership & Capacity

The EVM2 tool has created and encouraged a clear path to local ownership of the EVM assessment. Once trained, a country can both plan for future assessments and carry the assessments out with minimal external support; saving the country's precious resources and strengthening their local workforce.

This was abundantly clear in Nepal:

*"We are the first country in our region to do this process without external agencies; it's a very good product and the entire experience is very good in terms of sequence with the questionnaire in one section. In previous years you had to go [to a facility] many times. With the EVM2 tool, you go once. And the best part is that you can generate the report right away; the dashboard is all there in one place."*

— PARITOSH PANIGRAHI, TECHNICAL OFFICER (IMMUNIZATION SUPPLY CHAIN), UNICEF



EVM2 training workshop, Beirut, Lebanon, December 2020

In Lebanon, when the decision was made to undertake the EVM assessment, it was expected that this would be a challenging task given the ongoing political and social unrest, economic collapse, humanitarian and refugee crises and fallout from the 2020 explosion in Beirut. Nevertheless, throughout the EVM2 exercise there was a spirit of determination among all those involved in the task.

*“One outcome of the EVM exercise is that all those involved in this project have gained a better understanding and greater appreciation of the many elements that make up the immunization supply chain. Notably, field assessors had to come to grips with aspects of the supply chain that they were not quite familiar with at the outset. From an organisational capacity building point-of-view this is a positive outcome.”*

– UNICEF LEBANON TEAM

The set-up allowed Lebanon to quantify the performance of each aspect of the supply chain; zoom in on weaknesses and shortcomings and then specifically address those in the future developed Improvement Plan.

Assessors that came from health facilities all across Lebanon now have the tools to continually monitor and benchmark their performance in the key EVM criteria making the EVM assessment an important trigger for continuous improvement and ownership.

## AN EQUITABLE WAY FORWARD

Through a simple tool, EVM2 facilitates a process that

assists countries in improving their immunization supply chain regardless of location, situation or abundance of resources.

While using the EVM2 tool requires additional ICT team members to manage the inherent issues with a mobile and tablet-based technology, the benefits it offers validate the investment of time and limited resources: Easy to learn, customizable, and real-time results that together guide impactful improvements. With a new delivery method for a redesigned questionnaire, countries are experiencing the ongoing benefits of making the transition.

EVM is both a tool and process that assesses each component of the immunization supply chain, such as the people and management, infrastructure and equipment, or policies and procedures, looking for strengths and weaknesses. This allows countries to develop improvement plans and allocate resources where they are needed most.

For further information, please visit <https://extranet.who.int/evm2/web/Public> or contact Olamide Folorunso, Health Specialist, Programme Group (PG), UNICEF HQ ([ofolorunso@unicef.org](mailto:ofolorunso@unicef.org)).

