CONTINUOUS IMPROVEMENT FOR IMMUNIZATION SUPPLY CHAINS USING A VISIBILITY AND ANALYTICS NETWORK: THE CASE OF KENYA

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PROBLEM STATEMENT

- While many National Immunization Programs have made significant gains in achieving 80% coverage rates, to achieve the next level, i.e., 90% coverage, they must address the following common operational inefficiencies and barriers:
  - Limited visibility into last mile operations due to lack of accurate data,
  - Insufficient people capacity for reviewing data and adapting processes for performance improvement.
- Challenges specific to Kenya include limited visibility and formal coordination mechanisms between national and county levels due to devolution, and ad-hoc distribution procedures between regional vaccine stores and SDPs inconsistent with the design.

What is a VAN?

A VAN consists of a group of supply chain experts empowered by policy, process, technology and end-to-end visibility, whose objective is to make the supply chain more collaborative, aligned, agile and demand-driven.

THEORY OF CHANGE AND RESULTS

Kenya’s VAN: Stepwise Implementation

NVP has planned a stepwise implementation that would address gaps in each of these components with a view to achieving the following outcomes/capabilities:

- Enhanced data management for all the five VAN services i.e. accurate and timely data available for end-to-end visibility. This will need improved integrated transactional systems (DIANJO), creating dashboards, and generating alerts to foster rapid responsiveness to issues identified.
- Capacitated teams of supply chain professionals (supported by clear roles, tools, SOPs, performance management systems) providing a highly competent chain of individuals at different levels of the supply chain.
- Technology that is improved and responds to the user/priority needs of the process. The system is now able to analyze the performance and continuous improvement based on user examination approaches.
- Established governance structures and working groups to support continuous improvement and management ability to utilize information for execution of decision and improvement of KPIs.

CHARTING A COURSE TOWARDS A VISIBILITY & ANALYTICS NETWORK FOR VACCINES: KENYA’S ROADMAP

Beginning 2014, a number of Ministries of Health, UN agencies, NGOs, implementing partners and the private sector held a series of meetings to design a global Visibility and Analytics Network (VAN) reference model. The purpose of the model was to guide countries in the implementation of the VAN.

Kenya’s Ministry of Health (MOH), through the National Vaccines & Immunization Program (NVP), has embraced this concept of a multi-stakeholder VAN initiative, as a way to accelerate progress towards her health goals. Kenya envisages that the VAN will transform its vaccine supply chain and enhance program performance.

VAN GOAL & OBJECTIVES

VAN GOAL

- Kenya envisages a vaccine supply chain whose different components (people, activities/processes, and tools) are all interconnected through end-to-end visibility of data.

KENYA VX VAN OBJECTIVES

- Increase efficiency of operations within the vaccine supply chain.
- Align order/shipment schedules with available storage capacity to ensure efficient use of infrastructure while minimizing potential risk of wastage or stock outs.
- Improve data collection, quality, and analysis to inform program decisions including completion of coverage data against vaccine use/availability.
- Enhance overall end-to-end data visibility in the vaccine supply chain to promote data-led, timely decision making.
- Enable real-time visibility of cold chain inventory data and track equipment downtime to facilitate action and decisions.
- Strengthen distribution and transport services across the supply chain and monitor the performance of third-party logistics (3PL) transport services.

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THEORY OF CHANGE AND RESULTS

Kenya VAN Services and Prioritized KPIs

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<thead>
<tr>
<th>Demand Planning</th>
<th>Inventory Management</th>
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<tbody>
<tr>
<td>Generate and review forecast</td>
<td>Percent of health facilities with no stockouts of any antigens</td>
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<tr>
<td>Forecast accuracy and basis</td>
<td>Reporting – percent reporting rates, percent timeliness of reports, percent completeness of reports, percent accuracy of reporting</td>
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<tr>
<th>Supply Planning</th>
<th>Distribution &amp; Transport Management</th>
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<tbody>
<tr>
<td>Percent of health facilities under, adequate, or overstocked (by level, antigen)</td>
<td>Percent shipment with documentation available on time</td>
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<tr>
<td>Generate and review supply plan</td>
<td>Number “on time, in full”</td>
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<th>Cold Chain Management</th>
<th>Analytic Decision Making</th>
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<tr>
<td>Percent of items alarmed (process KPI)</td>
<td>Generate and review a distribution plan</td>
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<tr>
<td>Percent time refrigerator remained within the temperature range 2°C and 8°C</td>
<td>Data Visibility</td>
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<td>Percent of health facilities with functional cold chain equipment, percent of health facilities with adequate cold chain capacity</td>
<td>Continuous Improvement</td>
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...and establishing a culture of continuous improvement

VAN capabilities fuel informed decision making, leading to:

- Well-justified and well-designed interventions and implementation.

...and establishing a culture of continuous improvement