

Considerations for countries on targeting Gavi investments to achieve immunisation outcomes

Focus area	Immunisation Supply chain
------------	---------------------------

Why invest in supply chain?

To achieve **coverage and equity goals**, countries must build strong immunization service delivery systems. Well-functioning supply chains are an integral part of these systems. **Supply chain improvements strengthen service delivery, mitigate risks to substantial investments in vaccine purchase, and can help countries achieve immunization coverage and equity goals.**

The Gavi Supply Chain Strategy has the following main objectives: availability of vaccines at the service delivery point, potency of those vaccines and efficiency of the supply chain system, while mitigating risks. The five fundamental pillars of a successful immunization supply chain are: leadership, data, continuous improvement, system redesign, and cold chain. Gavi believes **the concomitant implementation of the 5 fundamentals will lead countries and Gavi to achieve their respective objectives in terms of coverage and equity.**

What are the key considerations when planning investments in supply chain?

1. What % of activities in your EVM improvement plan have been completed? Which have not been implemented to date, and what barriers are causing this?
2. Are there signs of inefficiencies in the supply chain, such as multiple deliveries beyond the distribution plan, frequent stock outs or overstocks, or expired vaccines?
3. At what levels of the supply chain do you have routine (e.g. monthly, weekly or more frequent) visibility into vaccine stock levels?"
4. What is the appetite in exploring alternative solutions, such as private and innovative partnerships, to improve supply chain performance especially around the distribution function?
5. What is the appetite to seek opportunities for resource sharing with other supply chains, particularly for hard-to-reach areas?
6. How can the government design hiring and training programs to ensure that current and future cohorts of health staff have the necessary skills, knowledge and motivation to manage vaccines and consumables?
7. How can the government best invest in routinely updating its cold chain plan to identify capacity gaps and expansion needs, as well as set aside sufficient funds for procurement and distribution?
8. How can the government better monitor supply chain performance to ensure that vaccines are available equitably and fully across the country?

What are the measurement indices for supply chain?¹

<p>Core intermediate indicators</p>	<ol style="list-style-type: none"> 1. % of Gavi-supported countries with recent Effective Vaccine Management (EVM) assessments with composite scores of 80% or higher 2. Average closed vial wastage rate for Pentavalent vaccine across all health facilities providing immunisation services (while Penta is used as a universal tracer vaccine, countries may choose other vaccine e.g. PCV as tracer vaccine for this indicator as a tailored indicator) 3. % of health facilities with full availability of all or a selected set of tracer vaccines and immunization supplies over a resupply period (or % of districts with full availability or % of districts with at least x% of facilities with full stock availability) 4. Availability storage per child over the volume per FIC (per level)
<p>Core process indicators</p>	<ol style="list-style-type: none"> 1. Rate of implementation of annual OP of EVM improvement plan (that should be included in the annual EPI workplan) 2. Percentage of orders delivered on-time and in-full (OTIF) from first level to the second level of supply chain (in country discussions needed to ensure the possibility of capturing this information for all orders for all levels) 3. Percentage of health facilities with CCE having more than 6 temperature alarms during last month 4. Percentage of health facilities with forecasted demand ratio in a set interval for Penta vaccine doses during the year compared to the consumption forecasted for the same period (To be decided threshold e.g. +-10%) 5. Percent of refrigerators with functional prequalified Temperature Monitoring Devices (TMD) this includes both 30DTR and RTMD 6. Total corrective maintenance time for failures divided by the total number of corrective maintenance actions for failures during a given period of time (this measures the time needed to repair)

¹ Please refer to section 1.6 on page 10 “Monitoring the investments through Gavi Grant Performance Framework”

1. Targeting investments for Gavi's HSIS Support

1.1 Brief description of the focus area²

The immunization supply chain of many developing countries is stretched to maximum capacity under the pressures of increased availability and introduction of newer and more expensive vaccines, and increased storage capacity needs to fully vaccinate a child, combined with the increasing number of vaccines through the vaccine supply chain. This supply chain has reached a point it might well collapse under the added pressure. Traditionally, countries used to face new challenges by ad hoc measures, such as increasing storage capacity or frequency of transportation. This is no longer adapted to the changing environment we are facing today and hence the introduction of the new generation of the immunization supply chain.

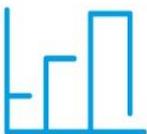
Five fundamental areas of activity have been identified to support countries in overcoming critical supply chain bottlenecks: 1) continuous improvement planning, 2) reliable cold chain equipment, 3) quality data for management, 4) strong supply chain leadership, and 5) optimal system design. EPI programs have implemented incremental supply chain improvements, such as investing in additional cold chain capacity. However, improving one part of the supply chain does not solve underlying structural problems. New approaches must reconsider the complete system, from distribution and inventory policies to the changing role of information systems and supply chain managers. The ideal supply chain improvement program is thoughtfully designed and continuously re-evaluated to keep pace with changing circumstances, such as the introduction of new vaccines, disease outbreaks and emergencies. **Considering the supply chain holistically also makes it possible to align better with national health strategies, such as a desire to outsource certain activities to the private sector.**



Continuous Improvement Planning: Strategies and activities for immunisation supply chain improvement that are continuously improved based on regular, system-wide assessments (e.g., cEVM approach). They must be incorporated in national immunisation plans and comprehensive multi-year plans, adequately resourced, and regularly monitored for results to ensure efficient and effective implementation. It is imperative to note that EVM evidence should be complemented with a routine set of supply chain and process KPIs that need to be regularly monitored at national and subnational levels of the supply chain (link to the DISC)



Reliable Cold Chain Equipment: Plans to procure, rehabilitate, maintain, and manage WHO-prequalified cold chain equipment are needed to ensure the availability, reliability and cost-effective functioning of cold chain equipment, both for vaccine storage and transportation.



Quality Data for Management: Reliable and relevant supply chain and programmatic data is needed to manage immunisation supply chains, including forecasting and stock management as well as the cold chain (including incidence of temperature risk and non-functional CCE). Logistics Management Information Systems (LMIS) improvements coupled with knowledgeable staff to review data in a continuous way, will drastically increase countries' ability to ensure that the right quantities of potent vaccines are available wherever they are needed.



Strong supply chain leadership: Human resources capacities and capabilities need to be strengthened to ensure that current and future supply chain managers and staff are in place at all levels of the health system to overcome existing and emerging immunisation challenges.

² Annex 1 presents examples of investments elements per supply chain fundamental
Revised Version May 2018



Optimal System Design: System design is an essential step towards a supply chain that is more agile, efficient and effective. System design looks beyond incremental improvements, examining all supply chain components and how they interact. Ideally systems optimisation efforts would be introduced at key touch points such as when considering major investments in infrastructure and equipment, where the optimal design can contribute to increasing coverage and equity.

1.2 Investment elements for consideration

Key investment elements/subcomponents of the focus area

Supply chain interventions and investments need to be “right-sized” and where feasible and desirable integrated with other health commodity supply chains investments to specific country needs and priorities. The following is a list of potential solutions, depending on the particular context and challenge in a country. There may be other solutions that are appropriate as well.

Continuous Improvement Planning

National plans integrate strategies and prioritised, funded activities based on EVM Assessment to strengthen the efficiency and effectiveness of supply chains in support of improved immunisation coverage and equity

Common Challenges	Successful Approaches
Getting current information about the state of the supply chain	<p>Perform periodic (3-5 years) EVM assessments and strengthened and budgeted EVM improvement plans that go beyond a checklist responding to a point-in-time assessment to be broader and more forward-thinking</p> <p>Conduct supervisory EVM at least at the primary store, 1-2 sub-national stores, 1-2 district and health centres per district</p> <p>Ongoing monitoring of implementation and improvements (e.g. “end-use verification” with supervisors visiting sample of health facilities on a regular basis)</p> <p>Establish regular data review meetings, at different levels of the supply chain, to assess on-going improvements and challenges to the supply chain</p>
Translating identified shortcomings into plans with clear activities, accountability and funding	<p>Develop country plans in partnership with UNICEF, WHO and Alliance partners.</p> <p>Track activities on a regular basis via National Logistics Working Groups, Interagency Coordinating Committees and other technical working groups to review KPIs along with progress against cIP.</p> <p>Coordinate activities at sub-national level for large and devolved countries such as India, Pakistan, Nigeria, DRC, Kenya etc.</p>
Keeping multi-year plans on track	<p>Review regularly to track progress against milestones (with accountable names), adjust resource allocations, and measure performance against the monitoring framework.</p>

Reliable Cold Chain Equipment

Rehabilitating, expanding or extending the cold chain, **prioritising areas or populations** that have been systematically missed (e.g. urban slums, remote rural) or hard-to-reach areas which have large numbers of unimmunised children and/or low coverage.

Consider the use of solar energy, via SDD refrigerators in areas where regular electricity supply is an issue.

Ensure equipment is tailored to local service deliver strategies and electrical requirements (e.g. solar), taking into account total cost of ownership. Secure reliable funding and expertise for preventive or corrective maintenance.

Tailor CCE selection to urban areas via the use of innovative approaches and devices such as the long term passive devices. Furthermore, the socio-economic and political context should also be taken into account when selection CCE e.g. run fast cold chain.

Common Challenges	Successful Approaches
Developing operational deployment plan for countries that have applied for CCEOP	Develop operational deployment plan (ODP) using the ODP guidance and template
Obtaining temperature data from the temperature monitoring devices	<p>Improve temperature monitoring practices through reliable and appropriate temperature monitoring devices and systems such as 30-Day Electronic Temperature Loggers (30-DTR) or with Remote Temperature Monitoring Devices (subsidy available through CCEOP) and their associated running costs</p> <p>Conduct Cold room mapping and a temperature monitoring study to help prioritize areas for system strengthening.</p>
Maintaining cold chain equipment	<p>Plan for recurrent costs for CCE maintenance and monitoring, for cold stores and down to district or facility level, to guide management decisions and monitor equipment functioning</p> <p>Monitor timeliness of planned preventative maintenance and failure rates of equipment including types of corrective maintenance</p> <p>Ensure that well-defined repair system/SOPs, capable and available technicians, spares, and operational funds are available</p>
Selecting equipment based on purchase price alone, not taking into consideration a total, or life-time, cost of ownership	Consider using the total cost of ownership (TCO) when selecting CCE
Exposing vaccines to freezing temperature during transport	<p>Budget for Grade A devices in transport via the CCEOP</p> <p>Consider procuring Grade A devices using other Gavi resources</p>

Quality Data for Management

Information systems that allow timely availability of fit-for-purpose data on vaccine stocks, distribution, wastage, temperature excursions, CCE maintenance, etc. at all levels of the supply chain for decision making.

Strong data management processes should be aligned with operations, with regular analysis of the data, and feedback to users to ensure quality of data and its use to drive informed decisions.

Strong Logical responses are triggered by data analysis (e.g. data suggesting a vaccine stock out results in a replenishment).

Common Challenges	Successful Approaches
<p>Poor data on vaccine stocks, temperature excursions and CCE performance</p>	<p>Introduce/Enhance Logistics Management Information Systems to improve availability of precise and accurate data on vaccine stocks, wastage, temperature excursions, CCE functionality at all levels of the supply chain for decision making</p>
<p>Data are not used to address stock management and other supply chain issues</p>	<p>Enable MoH staff to be accountable for data quality as well as empowering them with data literacy skills so they can make appropriate decisions/actions at the local level.</p> <p>Institute routine and standardized cold and supply-chain KPI reviews (e.g. monthly or quarterly) at multiples levels (e.g. nationally, districts) and address discrepancies, stock outs and poor CCE performance</p> <p>Implement specific strategies to decrease closed vial wastage at each level of the supply chain to 1% or below</p> <p>Triangulate vaccine stock management data with coverage data (admin/or survey) to inform decision making</p>

Strong Supply Chain Leadership

Setting up functional National Logistics Working Group led by MoH staff, training and/or deployment of supply chain managers and leaders to ensure the effective and efficient management of supply chains.

Progressive knowledge and capacity transfer to national training institutions (public or private) in consideration of sustainability and capacity development of basic supply chain fundamentals and vaccine management practices of all staff handling vaccines along the supply chain.

Common Challenges	Successful Approaches
<p>Lacking data on the agents in charge of managing supply chain at country level</p>	<p>Utilise the rapid Human Resources assessments, or implement as part of updated EVM assessment (EVM 2.0)</p> <p>Consider the HR component within the system design and adjust to ensure the design of the supply chain matches available capacity.</p> <p>Design necessary HR supply chain structures, and clearly document roles and responsibilities (ToR) throughout the supply chain system</p>
<p>Insufficient dedicated health logisticians that have the appropriate skills, personnel, recognition, resources, and authority to effectively, efficiently and sustainably manage supply chain operations</p>	<p>Complete Strategic Training Executive Programme (STEP), or a degree at the East African Community Centre of Excellence for Vaccines, Immunization and Health Supply Chain Management (Rwanda), LOGIVAC (Benin), or other sites in India and around the world</p> <p>Complete online e-learning modules (https://agora.unicef.org/Logistics for Health Commodities)</p>
<p>Health staff enter their roles with insufficient technical knowledge and skills, and capacity building efforts rely on resource-intensive (and sometimes unsuccessful) cascade trainings.</p>	<p>Explore new forms of supportive training models, including e-learning platforms, mentorship models, and pre-service training packages.</p> <p>Review the curriculum of major feeder institutions for health workers and supply chain managers, and explore opportunities to expand the content provided.</p>

Optimal System Design

Improve service delivery models that have proven ineffective or less effective in reaching targeted populations, and ensure supply chain is tailored to those models for specific areas.

Adjust the frequency of vaccine distribution to match service delivery strategies (outreach, PIRI, etc.) and accessibility (increase frequency from monthly to quarterly for hard to reach areas or during rainy season).

Invest in activities that drive improvements and optimize the design of supply chain systems, considering reduction in the number of tiers or changing delivery frequencies (as examples) if this is shown to improve effectiveness and efficiency.

Optimize the selection of vaccine doses per vial (different presentations) suited to raising coverage and equity while reducing wastage.

Common Challenges	Successful Approaches
Inefficiencies in cold storage locations, unreliable transportation down to health centres, and poorly designed distribution networks that primarily mirror the number of administrative levels of a country can lead to inefficiencies of vaccine products (e.g. surpluses or stock outs) coupled with poor coverage/inequity in hard-to-reach areas	<p>Conduct an analysis of system design options, at national or sub-national level, using modelling or other approaches.</p> <p>Based on analysis, develop a strategy and plan for distribution of vaccines and related products including cold chain placement. This could include improvements such as informed push and/or removing a level from the supply chain.</p> <p>Tailor supply chain design to match the realities of hard-to-reach facilities.</p>
Inefficient transport system, poor vehicle maintenance	Evaluate options for outsourcing to private sector using local Third Party Logistics (3PL) or Fourth Party Logistics (4PL) providers.
Limited visibility into actual demand causing unreliable forecast	Create inventory and distribution policies for each province/state, district, etc.
Close and Open vaccine wastage	<p>Optimize the selection of vaccine doses per vial suited to raising coverage and equity while reducing wastage.</p> <p>Consider adoption and effective implementation of the Multi-dose vial policy (MDVP) to reduce not only open vial wastage; but also the quantity of vaccines in the pipeline and in the forecast.</p>

1.3 Investments to be discouraged

- Equipment that is not WHO PQS prequalified cannot be purchased with Gavi resources, especially absorption refrigerators
- Investments that are narrowly focused on one supply chain area are discouraged. Countries should consider gradually expanding support across each of the five fundamentals.
- Plans which do not consider longer-term development of the supply chain to increase efficiency and support improvements in coverage and equity (e.g. large procurement of vehicles or fridges without analysing optimal system design and transport options).
- Procurement without planned deployment, installation and maintenance of the equipment, such that equipment sits in national stores for lengthy periods

- Investments without sufficient consideration of sustainability, including requirements for recurrent costs.

1.4 Gavi Transition³

Countries that are entering their transition phase are encouraged to evaluate their supply chain well ahead of transition, orienting them to key risks.

Examples of key points to discuss could include:

- Readiness of the cold chain to absorb all NVIs and population growth for next 5 years;
- Mapping areas of operational expenditure currently covered by HSS that would need to be transitioned to government;
- Any multiple-year transformation projects which funding will extend beyond the available HSS period.

1.5 Relevant Gavi strategy level indicator/s

During the course of the 2016-2020 Gavi strategic period, successes and progress made by countries and the Alliance to remove supply chain bottlenecks and strengthen immunization supply chains systems is measured by a strategy level indicator for supply chain performance: **% of Gavi-supported countries with recent Effective Vaccine Management (EVM) assessments with composite scores of 80% or higher.**

Additional visibility on country supply chain performance will be measured through a subset of key metrics and indicators, such as the DISC presented below, for:

- **Vaccine availability** at all levels and especially service delivery points (e.g. stock management);
- **Vaccine potency**, reflecting practices throughout the storage and distribution system (e.g. temperature monitoring);
- Increased supply chain **efficiencies** (e.g. operating procedures around the management of vaccines, equipment, data, and staff, and triangulation of vaccine consumption data with programmatic data on service delivery; and
- Mitigating **risks** of vaccine wastage.

³ Please refer to the Gavi Sustainability Tracers available on the following link: <https://gavinet.sharepoint.com/gov/Committee%20Meetings/Programme%20and%20Policy%20Committee/PPC-2017-Mtg-3-26-27%20October%202017/04%20-%20Annex%20A%20-%20Tracer%20Framework.pdf>

1.6 Monitoring the investments through Grant Performance Framework

Performance Framework indicators should be linked to investments made to deliver specific immunisation outcomes. Targets should be realistic.

Seven primary key indicators are additionally proposed to collect and monitor data that provide a comprehensive overview of the performance of the four key functions of supply chain management: forecasting and demand planning, stock management, distribution, and cold chain management (see table 1 below).

Table 1: DISC indicators definition and purpose

Indicator name	Definition	Purpose
Closed Vial Wastage	Percentage of spoiled closed vial vaccine (due to expiry, freezing, heat exposure, breakage, loss of the accompanying diluent, etc.) in a store or health facility in a particular period compared to the total number of doses managed during the same period.	Measures avoidable wastage related to storage, distribution or vaccine ordering. Closed vial wastage can reveal practices that need to be addressed.
Forecasted Demand Ratio	Ratio of actual consumption by product during a particular period compared to the consumption forecasted for the same period. Includes vials opened or administered and closed vial wastage.	Used to validate and improve forecasting practices and assumptions (e.g., target population, coverage, wastage) to increase forecasting accuracy.
Full Stock Availability	Percentage of storage points with full availability of all or a selected set of tracer vaccines and immunization supplies over a resupply period. Full availability is defined as no stock-out in the store or health facility at any point during the time period.	Measures the availability of immunization products. Low stock availability can indicate system problems that need to be addressed.
Functional Status of Cold Chain Equipment	Proportion of the overall number of commissioned cold chain equipment (CCE) devices in a particular area operable for storing vaccines at a point in time or over a particular period. CCE is defined as all refrigerators, freezers, passive storage devices, and walk-in cold rooms and freezer rooms designated for storing vaccines.	Measures operational cold chain equipment to identify risk of inadequate cold storage for maintaining vaccine potency. Used for operational purposes, such as to ensure that vaccines are properly stored, and for strategic purposes, such as to plan for replacement.
On-Time and In-Full Delivery	Percentage of deliveries delivered on-time and in-full (OTIF) with OTIF defined as order fulfilled (store can fill the complete order); on time (order is delivered when expected); and accurate (the correct products are delivered in the correct quantities).	Used to ensure a store's ability to meet the needs of lower level stores, as well as the timeliness and reliability of order deliveries. The indicator can be used to monitor incoming shipments and in-country distribution by the national store or outsourced distributors.
Stocked According to Plan	Percentage of the overall number of health facilities or stores in an area maintaining appropriate levels of vaccine or immunization product stock during a particular time. Stocked according to plan (SATP) is defined as levels between set minimums and maximums.	Used to monitor and manage immunization products and as a warning to avoid stock-outs or wastage. Diversions from the planned stock levels can signal risk of stock-outs or closed vial wastage.
Temperature Alarm Rate	Number of times the temperature inside cold chain equipment exceeds or drops below a reference range. The indicator is applicable where vaccines are stored and during transportation.	Used as a proxy for measuring vaccine potency and safety. Exposure to temperatures outside the reference range indicates a risk of heat or freeze damage to sensitive vaccines.

1.7 Data/evidence sources to inform investments in this area

Key documents with additional data points/evidence sources to inform supply chain investments:

- National Health Strategic Plans
- Comprehensive Multi Year Plans (cMYP)
- Effective Vaccine Management Assessment and Improvement Plan progress reports
- Data collected through tools available to manage the EPI program and supply chains including stocks (DVDMT, DHIS2, SMT, Logistimo, OpenLMIS, eVin, VIMS, etc.)
- WUENIC coverage data
- Grant Performance Framework Indicators
- Programme Capacity Assessments/Grant Management Requirements
- Inventories of existing cold chain equipment deployment, volume, age, functional status, and maintenance data, including vehicles for transport.
- Vaccine coverage surveys, DHS/MICS surveys, routine reporting of immunization coverage, notifiable disease surveillance reports, especially for Measles and AFP/Polio
- Recent Joint Appraisal Reports, CSO reports, and any other relevant data sources should be reviewed

1.8 Additional requirements for other types of Gavi support

Types of support	Input (include links to reference documents where possible)
Vaccine introduction grant	<ul style="list-style-type: none"> • Ensure adequate cold chain capacity before the introduction; reinforce cold chain training.
Operational support for campaigns	<ul style="list-style-type: none"> • Ensure adequate cold chain capacity before the campaign; reinforce cold chain training. • Funds can support limited supply chain costs (e.g. cold boxes and water packs; rental of temporary cold room space)
Product or presentation switch grants	<ul style="list-style-type: none"> • Product switches should be considered to reduce vaccine wastage and address storage capacity issues.
CCEOP	<ul style="list-style-type: none"> • Provide incentive to countries to procure high efficient, grade A cold chain equipment that require less maintenance • Funds can be used to procure only a sub-set of WHO prequalified devices • Require countries to have budgeted maintenance plan • Include acquisition and service bundle (in-country distribution, installation and training)

1.9 Guidance on country dialogue

The “Discussion guide for country dialogue” provides the Gavi and country stakeholder with guidance on topics to discuss during an iterative country dialogue as part of the proposal development process. It is intended to help country stakeholders arrive at an appropriate set of long-term priorities and associated investments for Gavi’s financial and vaccine support for the duration of a country’s current or upcoming planning period (aligned with a relevant health or immunisation strategy).

1.10 Stakeholders to be included in the country dialogue workshop

The country dialogue should include EPI staff and partners, and the Ministerial departments responsible for strategic planning and financing, health commodity procurement and logistics management, buildings and medical equipment, maintenance, staff training, and information management. The dialogue should also involve private sector providers of third party logistics services, international development (World Bank, Global Fund, USAID, DfID, and others) and technical partners associated with improving health commodity supply chain performance.

The ICC, NITAG and national logistics working groups should be encouraged to establish and set up regular (e.g., quarterly) meetings.

1.11 Information repositories

Evidence of impact for supply chain improvements:

- [Building Next Generation Immunization Supply Chains](#). *Vaccine* Volume 35, Issue 17, Pages 2101-2278 (19 April 2017)

On the Gavi Immunisation Supply Chain Strategy:

- [Gavi Immunisation Supply Chain Strategy](#)
- [Factsheet on the Gavi Immunisation Supply Chain Strategy](#)

Continuous Improvement Planning:

- [EVM assessment site](#)
- [EVM e-learning website](#)

Cold Chain Equipment:

- [Vaccine Management Handbook](#)
- CCEOP Technology Guide
- [PQS Catalogue](#)
- [Cold Chain Support Package](#)
- [Total Cost of Ownership Tool for Cold Chain Equipment](#)

Data for Management:

- Dashboards for Immunisation Supply Chains (DISC)
- [Common Requirements for Logistics Management Information Systems \(PATH\)](#)
- [Computerizing Logistics Management Information Systems: A Program Manager's Guide](#) (JSI / USAID | DELIVER PROJECT)

Supply Chain Leadership:

- [People that Deliver \(Country Support Package on Human Resources for Supply Chain Managers\)](#)
- [International Association of Public Health Logisticians \(IAPHL\)](#)
- [LOGIVAC Center](#)
- [EAC Center of Excellence for Vaccines, Immunization and Health Supply Chain Management](#)
- National Cold Chain and Vaccine Management Resource Center

System Design:

- Introduction to System Design (hosted on Technet) <https://www.technet-21.org/iscstrengthening/index.php/en/system-design>
- [HERMES](#)
- VillageReach

- [The Supply Chain Managers Handbook, Ch. 2: System Design & Strategy \(JSI\)](#)
- Outsourcing Guidance Report FAQ, Outsourcing the Distribution Component of Vaccine and Medicine Supply Chains

Others:

- TechNet



For feedback and further information, please contact:

Mr. Hamadou Modibo Dicko, Senior Manager-HSIS, Email: hdicko@gavi.org Mobile: +41792040294

Annex: Examples of key investment elements for supply chain

Fundamentals	Examples of investments with high impact potential	Country examples
Continuous improvement planning	1. Strengthen/develop the National Logistics Working Groups to include oversight on monitoring of implementation of immunization supply chain management improvement plans (iSCM-IPs)	DRC
	2. Perform periodic (3-5 years) EVM assessments followed by budgeted and strengthened EVM improvement plans	DRC, Nepal, Timor-Leste
Cold chain equipment	1. Procure PQS-qualified cold chain equipment	All countries using Gavi resources
	2. For countries that have applied to CCEOP - Develop operational deployment plan (ODP)	Pakistan, Guinea, Niger, Kenya, DRC
	3. Strengthen critical pillars of the maintenance system, including technician capacities and hiring pipelines, spare parts management, and operational funding flows	Uganda, Vietnam
Data for Management	1. Introduce/Enhance Logistics Management Information Systems to improve supply chain for decision making at all levels, including service delivery level	VIMS in Tanzania, SELV in Mozambique, e-Vin in India, SMT and DVDMT in ~20 countries, VSSM in Haiti
	2. Adopt and use of Dashboard for Immunization Supply Chain (DISC) indicators in all immunization programs supported by Gavi grants	The DISC indicators will be part of the Gavi's M&E framework going forward
	3. Support the introduction of sub-national immunization data reviews that include supply chain KPIs.	Kenya, Guinea, Mozambique, Nigeria and Pakistan (on a pilot basis in Sindh).
Strong supply chain leadership	1. Conduct a HR Assessments for ISCM	Ethiopia, Kenya, Uganda, South Sudan, Malawi, Zambia, Lesotho, Pakistan and Nigeria.
	2. Develop capacity building plan for agents involved in EPI supply chain management.	Ethiopia, Kenya, Uganda, South Sudan, Malawi, Zambia, Lesotho, Pakistan and Nigeria.
	3. Investigate potential for innovative capacity building models, including mentorship, e-learning, and pre-service training curriculum.	LOGIVAC Center in Benin, EAC Center of Excellence, Nigeria, DRC
System design	1. Conduct an evidence-based modelling exercise of the supply chain, identify options for optimisation including removal of redundant storage points, alternative delivery frequency or transport routes, updating re-engineering business processes to optimize distribution, etc.	Benin, Ethiopia, Zambia, DRC, Pakistan
	2. Hold discussion with other health programs to seek synergies in key supply chain functions	DRC, Ethiopia,