

## Why is the GAVI Alliance developing an immunization supply chain strategy?

The rapid expansion of immunization programs in GAVI-eligible countries over the last ten years has already resulted in tremendous improvements in health in the world's poorest countries. Since 2000, GAVI-eligible countries have collectively completed 343 new and underused vaccine program introductions. In the next two years alone, they will make 228 more vaccine program introductions, including inactivated polio vaccine, and vaccines that protect against human Papillomavirus, Japanese encephalitis, rubella, meningitis A, rotavirus, and pneumococcal disease. Many of the newer vaccines being introduced are highly temperature sensitive and some must reach larger target populations with different strategies and at contact times different from the traditional EPI schedule.



From 2000 to 2020, the overall volume of vaccines to be stored and transported is expected to quadruple, and the number of doses to be administered is expected to increase six-fold. Photo: S. Sipursky

Most immunization supply chains were established 30 years ago, when immunization programs were quite small and static. The expansion and evolution of today's immunization programs is requiring significant operational and structural changes in national immunization supply chains to achieve better performance. Results from Effective Vaccine Management (EVM) assessments in 57 countries since 2010 indicate that no country has met the WHO recommended 80% score across all nine categories of vaccine supply chain management. Only 23% of countries achieved adequate temperature control for vaccines; 23% of countries have functional vaccine stock management systems; and 24% of countries have effective vaccine transport systems.

Until supply chains are improved, stock-outs, avoidable wastage, inadequate cold chain capacity, and potential administration of compromised or expired vaccines will increasingly threaten coverage, equity, and cost-effectiveness of immunization programs.

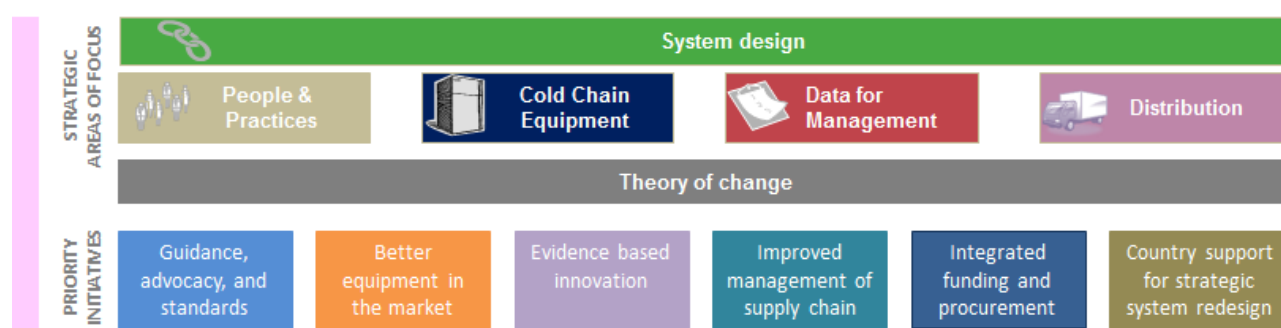
## Who is working on it?

In 2013, the GAVI Secretariat convened a task force made up of four core Alliance partners: the GAVI Secretariat, WHO, UNICEF (both supply and program divisions), and the Bill & Melinda Gates Foundation. Their role has been to lead the development of an immunization supply chain strategy that leverages the core capabilities and strengths of each organization to support and influence meaningful, measurable improvements in national immunization supply chains.

Under the leadership of this group and building from the 2020 Vision for Vaccine Supply and Logistics Systems that was initiated by Project Optimize, immunization partners at international, regional, and national levels have engaged in the development of a detailed strategy to achieve a vision in which all countries provide safe and potent vaccines efficiently to all who need them.

## What will it look like?

The goal of the GAVI Alliance immunization supply chain strategy is to have evidence, by 2020, that all GAVI-eligible countries *measure* and *meet* minimum international and WHO standards for supply chain performance (currently measured by the Effective Vaccine Management assessment tool) and *show continuous improvement* of indicators for vaccine potency, safety, availability and program efficiency.



## PRIORITY AREAS FOR INTERVENTION

To achieve this goal, Alliance members have identified five priority areas of immunization supply chains that are considered to have the greatest impact on in-country supply chain performance:

**People and practices:** involves establishing human resource policies, education programs, and training and supervision systems to ensure that leaders and professionals with strong supply chain management capabilities are in place to manage distribution and supply chain performance.

**Data for management:** addresses definition of standards, collection and use of high quality, timely, and relevant data for routine (e.g., avoiding a stock-out when a delivery is delayed) and strategic (e.g., procuring the right equipment based on an up-to-date inventory) decision-making.

**Distribution systems:** involves the procurement, allocation, proper use, fueling, and maintenance of vehicles and transport systems; decisions about delivery routes and frequencies; and proper vaccine handling during transport.

**Cold chain equipment:** addresses the development, selection, deployment, installation, proper use, and maintenance of refrigerators, freezers, cold boxes, cold rooms, temperature monitoring devices, and other equipment used to keep vaccines at proper temperatures.

**Supply chain design and structure [cross-cutting]:** involves looking holistically at the design of the system, and finding opportunities to improve network structures and their efficiency, which could include: reducing the number of intermediate storage levels in a supply chain; outsourcing specific functions, such as fleet management or cold chain equipment leasing to private or parastatal organizations; and shifting from collection to distribution systems with efficient supply routes. It also includes efforts to integrate specific supply chain functions with other health commodity supply chains or merge data collection and management systems.

## **GROUPS OF PRIORITY INITIATIVES**

Recognizing that supply chains are primarily the responsibility of national governments, and that each supply chain has a different set of capabilities, opportunities, and challenges, immunization partners agree that a country-specific approach is required. The GAVI Alliance supply chain strategy leverages the policy-making, convening power, and standards-setting abilities of WHO and UNICEF and the advocacy, proposal review, and funding abilities of GAVI itself to establish a powerful enabling environment for supply chain improvement within countries. Incentives for purposeful and meaningful investments in supply chains will be provided along with guidance and technical assistance to countries as they embark on this change process. Priority initiatives within the strategy are organized in the following groups:

**Guidance, advocacy, and standards:** Priority initiatives under this theme establish norms and offer general knowledge and guidance to countries as they make improvements to their immunization supply chains. Examples include global guidance and recommendations for in-country information systems; knowledge-sharing platforms for cold chain equipment (including a buyers' guide, equipment field performance reports); and standard operating procedures for equipment commissioning, operation, maintenance, and disposal.

**Availability of improved cold chain equipment:** Priority initiatives under this theme are directed toward improving the quality and choice of cold chain and temperature monitoring equipment. Examples include investing in early-design-stage field-testing of equipment that meets desirable specifications defined by countries and the GAVI Alliance, and promoting timely feedback on post-market product performance.

**Evidence-based innovation:** Priority initiatives under this theme are designed to encourage innovation in education and training, cold chain equipment, information systems, distribution strategies, and forecasting approaches.

**Improved management of supply chain:** Priority initiatives under this theme are designed to build capacity among supply chain managers through education and training, the development of tools and processes, and the provision of direct assistance to countries. Examples include supporting the establishment of a Supply Chain Manager position in every GAVI country, and providing technical assistance to help countries build and actively manage cold chain equipment.

**Integrated funding and procurement:** Priority initiatives under this theme are designed to reduce the cost of supply chains and improve efficiency. They include integrating forecasting of equipment volumes across countries, advocating with global supply chain donors to adopt standards from the GAVI supply chain strategy, and coordinated procurement as well as supplier interaction on cold chain equipment as much as possible.

**Country support for supply chain system design:** Priority initiatives under this theme are directed toward helping countries redesign their immunization supply chain systems. Examples include encouraging and supporting countries to engage in redesign of their supply chain network by reducing levels or changing distribution models, and helping support integration with other health supply chains where countries express interest.

### **How does the WHO/UNICEF immunization supply chain Hub fit with the strategy?**

The GAVI immunisation supply chain task force conducted a landscape of new and ongoing supply chain activities and prioritized critical activity areas that were likely to provide the strongest support the GAVI Alliance's objectives. Building on recent WHO/UNICEF activities focusing on the immunization supply chain Hub, WHO and UNICEF have assumed responsibility for a set of activities that are now well-coordinated with the emerging GAVI strategy:

- Providing global guidance on the supply chain through the establishment of a policy change mechanism at global, regional and country levels using SAGE, Immunization Practices Advisory Committee, regional Technical Advisory Groups, EPI managers' meetings, etc.
- Developing an in-country change mechanism with support from WHO and UNICEF regional and country offices (i.e., establishing sub-groups of the ICC dedicated to planning and implementing supply chain change).
- Supporting the implementation of a comprehensive EVM approach (as defined in the WHO/UNICEF EVM Joint Statement) to guide further development and improvement of immunization supply chains.

In addition, WHO and UNICEF will maintain their traditional roles associated with immunization supply chains, including UNICEF's vaccines and cold chain market shaping and procurement functions, the WHO Performance, Quality, and Safety (PQS) process for qualifying cold chain equipment, the Vaccine Presentation and Packaging Advisory Group for suggesting improvements to vaccine products and packaging, global monitoring and evaluation activities, and the ongoing development of guidelines and policies.

## **How is the broader immunization community involved in the strategy development?**

The supply chain strategy task force has involved the broader immunization community through interaction with key stakeholders in working groups, as well as individual interviews and feedback cycles with country managers.

- Each priority topic area has been elaborated by working groups made up of representatives from organizations active in immunization, including PATH, Clinton Health Access Initiative, John Snow Inc, USAID, VillageReach, Bioforce, Agence de Medecine Preventive, OpenLMIS, consultants, universities and others. These groups have reviewed potential initiatives in person, engaged in regular discussions, and participated in moderated online discussions.
- In November 2013, the task force distributed a web-based survey to logisticians, EPI managers, civil society organizations, UN agency staff, consultants, and international nongovernmental organizations asking them to describe the supply chain challenges they are facing. Approximately 150 individuals responded, about half of whom work at the national or sub-national level. Currently, the task force is surveying participants of EPI manager meetings in various regions of AFRO to collect further feedback on specific strategic elements. The task force also continues to consult with individuals that represent specific constituencies, including donors, civil society, and international NGOs.

These stakeholders will continue to participate in discussions and decisions as the strategy is finalized and the implementation stage begins.

## **When will implementation begin?**

Several key initiatives are already underway with funding from GAVI business plan and other sources. These include technical assistance to specific countries; the development of target product profiles for solar direct-drive refrigerators; investment in new supply chain innovations such as bar codes on packaging to improve stock management of vaccines; and, passive-cooling for vaccine storage.

The supply chain task force is planning to begin broader implementation during the second half of 2014.

## **What are the next steps?**

The strategy will be presented to the GAVI Programme and Policy Committee (PPC) on 5-6 May. The GAVI board will review the supply chain strategy on 18-19 June, where they will be asked to provide guidance on direction and decide on a few relevant policy and funding decisions.

## **What is being asked of SAGE members?**

For the April 2014 meeting, SAGE members will be asked to provide guidance and input into the GAVI immunization supply chain strategy. SAGE members can also support the strategy process by endorsing the IPAC “Call to Action” for immunization supply chains and the WHO-UNICEF EVM Joint Statement.