Change Leadership:
The Making or Breaking of an Immunization Supply Chain

Immunization Supply Chains:
*Reaching the Final 20 Policy Paper Series*

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Policy Series Overview
We are mid-way through the **Decade of Vaccines**, marking a period of significant activity to prevent millions of deaths through more equitable access to vaccines. Today, about 80% of children around the world receive a complete routine of life-saving vaccines during their first year of life. The **Decade of Vaccines** was established to bring attention to the importance of reaching that final 20% of children without access to these life-saving vaccines. This decade is bearing witness to many exciting efforts to strengthen routine immunization, accelerate control of vaccine-preventable diseases, and introduce new and improved vaccines.

To a large extent, the evaluation of this decade’s success will be based on the degree to which vaccines reach the people who need them. A strong end-to-end supply chain should adapt to the resource constraints of these communities to ensure that delivery is complete, from the point of production to the point of immunization.

This policy series considers the different components of the supply chain, addresses the challenges faced at the last mile for distribution, and presents examples of innovative approaches to address those challenges.

VillageReach Overview
**VillageReach** has worked for more than a decade to develop, test, and refine system innovations to improve the performance of in-country iSC. Working closely with the Ministry of Health in Mozambique and with support from the Bill & Melinda Gates Foundation, the **Final 20 Program** (designed to reach the final 20% of children without access to vaccines) is building a sustainable model of innovative supply chain design, enhanced data collection and reporting, and public-private partnerships to improve the immunization supply chain.

To address the unique challenges of last mile distribution, VillageReach is engaged in a multi-year program in Mozambique to improve the performance of the immunization supply chain, focusing on rural communities that represent over 50% of the country’s population. The approach – the **Dedicated Logistics System (DLS)** – was developed in collaboration with provincial governments and the Mozambican organization **Fundação para Desenvolvimento da Comunidade** (FDC). The DLS uses dedicated logisticians, level jumping, dedicated resources, and service delivery-level data to improve immunization supply chain effectiveness and efficiency.

People that Deliver Overview
With the international development community increasingly realizing that a lack of appropriately qualified people is a significant barrier to the sustainable development of health supply chains, the **People that Deliver** (PtD) partnership was created in 2011. PtD is a global partnership whose mission is to build global and national capacity to implement evidence-based approaches to plan, finance, develop, support and retain the national workforces needed for the effective, efficient and sustainable management of health supply chains. **VillageReach** became a PtD board member in 2015 with leadership development as a significant focus of the initiative.
Introduction
Change leadership and effective management are critical ingredients for modernizing immunization supply chains (iSCs) to withstand current and future pressures and ensure all children have access to vaccines. This paper explores the necessary leadership qualities of people involved in the transition to next-generation immunization supply chains, and provides recommendations and resources to help ensure these qualities can be fostered and developed.

Moving to the Next-Generation Immunization Supply Chain
More and more attention is being given to the performance and the efficiency of iSCs in low-income countries around the world. The need for improvements to iSCs is clear. The Gavi Alliance’s immunization supply chain strategy\(^1\) illustrates that current iSCs fail to meet existing performance standards by a wide margin. Also, it is estimated that in 2020, Gavi-eligible countries must manage twice as many vaccine products as in 2010, with quadruple the volume and five times the value. The current supply chains operating in most low-income countries are quickly becoming outdated and inefficient as new vaccines are introduced and new technologies are becoming available that could improve efficiencies.

The initial iSC design was introduced with the Expanded Program on Immunization (EPI) in the 1970s. That design was appropriate for its time and has enabled tremendous increases in vaccination coverage rates. Given the requirements of new vaccines and availability of new technologies and methodologies, the original design is overly complicated, inefficient, and inflexible. It is now time to shift to a new design that is streamlined, dynamic and data-driven, requiring leaders and managers with the appropriate competencies to run these supply chains from end to end. There is a global movement to next-generation iSCs to continuously improve performance, ensure the availability of vaccines at the health facility level, and ensure the potency of vaccines, all in the most efficient way possible.

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1. Is proactive
2. Starts with the goal in mind
3. Listens first
4. Plans and prioritizes
5. Embraces innovation
6. Encourages diversity and collaboration
7. Considers the needs of stakeholders

From the results of the IAPHL survey (www.iaphl.org), influenced by Stephen Covey’s 7 Habits of Highly Effective People

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\(^1\) http://bit.ly/1ONjS1d
Change Leadership: An Essential Ingredient for Effective Supply Chains

To be effective over time, supply chains must adapt to ever-evolving requirements using an end-to-end perspective to ensure vaccines are available to every child that needs them. Discussions on how to improve supply chain performance have focused on changes that must be made to the different supply chain components in order to move from the original ISC to a next-generation ISC. For example, installing new cold chain equipment; introducing transport loops into the overall system design; building the capacity of dedicated logisticians; and improving data management systems to strengthen operational management and enable continuous improvement, are regularly discussed.

One key question, however, is often left out of the discussion: who is willing to lead the change? Change leadership is hard to define, more ambiguous, more difficult to develop than processes or training technical staff. Change leadership can be seen as the driving force to define a new vision and the processes that can lead to that transformation; change leadership empowers people to get behind that vision to move it forward. It must go hand-in-hand with change management that ensures the change is implemented effectively and smoothly. Effective management should minimize the inevitable disruptions that occur because of changes to the system.

Much has been written about leadership from a business or management perspective, and an emerging theme is around the leader who can catalyze collective leadership for a common purpose. It is the person who has a strong commitment to improvement, both for his or her own learning and growth as well as for those around him or her, and engages others to develop that same commitment to work together for change. An effective leader will create the conditions that can produce change and the environment for the entire team to contribute to that change. That process can eventually lead to change that is self-sustaining.2

Other opinions and writings on effective change leadership reflect a similar view on a leader’s ability to see the larger system, to build trusting relationships, and to be honest about personal experiences and learn from them.3 Taking these lessons into public health, the World Health Organization (WHO) has recognized that better leadership and management are key to improving health services through efficient, creative and responsible alignment of people and resources.4

Change leadership must be considered as part of a systematic improvement for human resources (HR) for an end-to-end supply chain. The five building blocks for HR provide guidance for this.5 They include:

1. Engagement of stakeholders around the theme of HR for supply chain management can prioritize the importance of leadership and effective management.
2. Policies and plans can be optimized to have more effective recruitment plans, well-defined standard operating procedures, and a strategic plan for HR growth.
3. Workforce development can clarify job descriptions and define education and training plans.

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4 WHO. Towards better leadership and management in health: report on an international consultation on strengthening leadership and management in low-income countries. 2007.
4. A focus on increasing performance and staff retention will result in actionable guidelines for supportive supervision and performance management practices.

5. Professionalization of supply chain managers will place personnel in groups of peers from which to learn and develop professionally.

Using these five building blocks will contribute to effective leaders’ and managers’ ability to drive change for an improved iSC and ensure a sustainable supply chain system into the future.

Leadership for the Next-Generation Immunization Supply Chain

Based on the premise that change and innovation can happen with an effective leader supported by effective management, immunization supply chains around the world are in need of that leadership. A study out of Burkina Faso documents the importance of effective leadership on district-level vaccine programs. The study looked at several conditions that could influence vaccine coverage rates, including the number of partners and funding available, changes to the immunization strategy, epidemics, campaigns conducted, the distance to the closest health center, and the leadership of the district medical officer. The study found that the leadership of the medical officer appears to be the main conduit for bringing all the conditions together to result in an increase of vaccine coverage rate. While the study defined this as “leadership,” it is clear that effective management skills also played a role in moving changes forward.

Many of the leadership qualities identified by colleagues of the district medical officers in this study are reinforced in the Health Supply Chain Competency Framework for Managers and Leaders, developed by People that Deliver and validated by supply chain professionals worldwide. This competency framework, divided between technical and management domains, gets to the heart of the behavioral competencies that make an effective leader for supply chain management: being a role model; inspiring others through professional excellence, innovation and communication; having the ability to see the bigger picture and end goal, and helping others to do the same. Contributors to the framework also noted that leadership stems from social influence, not necessarily authority or power. The same attributes were given to the identified leaders in the Burkina Faso study. One notable quality also highlighted in the Burkina Faso study was a district medical officer’s

Supply chain planning meeting in Mozambique

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ability to recognize that certain national approaches were no longer appropriate for the local context. Building from that, to move to the next-generation iSC, public health systems will need leaders who are not afraid to question the status quo and are willing to challenge people’s comfort zones to seek improvement for the performance of the immunization supply chain. This change leadership/management team must be creative and innovative, with the ability to navigate through policies that oftentimes can be restrictive and inflexible.

In the Field: Successes and Challenges
Improving a system may require small changes to one component of the supply chain; or it may require a full overhaul to start with something completely new. Regardless of the changes to the system, what is absolutely required is a leader who can advocate for necessary system change across the end-to-end supply chain. This leader will use evidence to support that advocacy and generate interest across multiple stakeholders to move it forward. Through convening a group of effective leaders and managers around the particular change that is needed, stakeholder creativity and innovation is focused and can flourish.

Through VillageReach’s work in Mozambique supporting the Ministry of Health (MoH) and the Provincial Directorates of Health (DPS) to strengthen the immunization supply chain, we have seen a few examples of effective change leadership – some small influences and some monumental. In one province, the medical officer has verbally committed to the Dedicated Logistics System (see side bar) with direct delivery to health facilities that has brought higher vaccine coverage rate and a more efficient, streamlined distribution system to his province. This system is significantly different than the multi-tiered government system that adheres to administrative levels for vaccine distribution. Much like the district medical officer in Burkina Faso, this leader was willing to go against the standard of outdated practices, to build something appropriate to meet the current needs of his province. The province has moved to a next-generation iSC without a mandate from the national level but based on the actual need and effective interventions in the local context.

The medical officer is now pushing the envelope even more. The northern area of his province was previously not included in the DLS due to the difficulty of access, long distances, and very low density population. Recently, results from computer modeling of the supply chain showed the province has the transport and cold chain capacity to reach this area every two months, instead of the standard monthly deliveries, and with improved cost efficiency.9 This approach is very different than the monthly deliveries that are the government norm and

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standard, regardless of their efficiency. The medical officer adopted this two-month model based on the evidence generated by modeling, his colleague’s opinions and experience with the DLS, and his recognition of the need for a more efficient system to increase vaccine availability in this particular area. His commitment to improving the iSC grew from a group consensus, his creating an enabling environment to strive for continuous improvement, and the courage to challenge national standards that could be more efficient if adjusted to the local context. Working with effective managers, this new distribution model was rolled out and has increased vaccine availability in this area.

We see other instances of change leadership in Mozambique as well that are bolstered by an enabling environment. The commitment of the EPI manager in one province ensures a vehicle is available each month for distribution, ensuring no stockouts at the health facility level. Another DPS medical officer’s commitment comes through each month with guaranteed fuel, without fail, to ensure the vehicles can adhere to the distribution schedule. These leaders have made the commitment, are supported by an enabling environment, and have adequate resources to see that commitment through.

On the other hand, even great leaders can encounter roadblocks with policies and procedures, such as an example from another province that didn’t have access to distribution funds it was expecting, resulting in distribution delays and a scramble to find outside financial support for the monthly distribution expenses. The political will to guarantee distribution is there but complicated by factors that lie mainly in others’ hands. The Gavi Alliance People and Practice Working Group recently conducted a landscape analysis of the enabling environment of a number of countries to determine what factors influence the ability of leaders and managers to work effectively.

Having iSC Managers at the correct level within the HR system of the country was significant to ensure appropriate authority for change to take place and for iSC issues to be discussed at higher levels in the ministry. Key HR policies and the existence of an iSC strategic plan with funded and supported activities are essential for sustainable change to progress. Sufficient staff with the correct competencies in a supported HR environment is critical for activities to be undertaken, and governments need to make iSC a priority in the context of immunization service delivery.

**Step One for the Next-Generation iSC: Fostering Leadership**

Clearly the case is made for the need for effective leadership to move the current iSC to next-generation iSC. This can’t be just any leadership, but essentially a leader who is committed to the goal, has the ability to foster a group of committed partners, the courage to drive change, even in the face of multiple obstacles, and is supported by an enabling environment. Some people are recognized as natural-born leaders: assertive when appropriate, inspirational to others, committed to a common purpose, and focused on creating the conditions for others to contribute to drive change. These leaders see a problem as an opportunity. In these cases, this leader only needs the evidence base and the commitment to navigate through roadblocks to move towards the next-generation iSC.

The challenge comes when people in decision-making roles related to the immunization supply chain are not these natural born leaders or are not at the appropriate level in the HR system, with the authority to take action. Management training from a technical aspect has been a mainstay of donors and projects to varying effects, yet there is still a gap for general leadership competency training. The Gavi Alliance, through
a partnership with UPS, is filling that gap through a leadership development program to develop the core leadership and management skills for health supply chain management professionals and decision makers (this course has been directly aligned to the PtD Leadership and Management Competency Framework). The Strategic Training Executive Program (STEP) will be a continuous learning experience to focus on both the technical competencies of supply chain management as well as the ‘soft skills’ in people management, problem solving, communication, and professional development, absolutely required to move to a next-generation iSC.

**Step Two for the Next-Generation iSC: Fostering a Culture of Leadership**

The next step beyond leadership training is creating an environment where leaders can actually lead at all levels of the system. Just as system design has to consider all components of the supply chain, including the political environment, so must any leadership training. Many things can still restrict a leader’s ability to drive change, even with the skills for managing: available and appropriate resources; established policies and procedures; reporting structures and expectations; and decision making processes, to name a few. Governments are the quintessential hierarchies, slow to change and hesitant to promote or foster innovation, which is why there is a need for effective leadership, with leaders at the appropriate level of the hierarchy willing to challenge the status quo and push for policy change when necessary.

The global community and in-country decision makers need to invest the time and resources required to create a culture of leadership and effective leaders and managers throughout the system. This requires a shift in processes to create space for people at each level of the hierarchy to voice opinions, explore new ideas, feel supported to take risks, and to make level-appropriate decisions. Too often in Mozambique, the DPS managers defer to the national level for decisions to be taken that will directly affect supply chain management practices in the province, far away from the context that a national decision maker may fully understand. For a person to realize his or her full potential as a leader, regardless of the position held within the system, there must be a culture of leadership, starting at the top of the hierarchy and cascading to the health facilities. In addition to STEP, many other resources are available to build and develop a culture of leadership. The USAID|DELIVER PROJECT launched a Supply Chain Management (SCM) leadership initiative in January 2014 with a workshop that convened global, regional and national partners to further the conversation on leadership and what needs to be done to ensure that countries have supply chain leaders in place, and champions to advocate for increased focus on HR for SCM. Key activities are being undertaken in India to develop SCM leaders. Additionally, Pamela Steele and Associates have recently launched a SCM leadership short course, while Management Sciences for Health have been leading a broader Leadership, Management and Governance project with the support of USAID in recent years.

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A few key approaches must be kept in mind when striving for a culture of leadership and developing the core capabilities of an effective leader:¹¹

1. **Ensure the entire system is in focus and recognize your place within it.** Interdependencies between components are inevitable. For example, with the immunization supply chain, having a functioning cold chain is closely linked to personnel capacity to provide preventive maintenance and the funding flows to make corrective maintenance with the required spare parts a possibility. Policies and even individual people can either block innovation or can create space for innovation and improvements. This must be factored in when considering system design.

2. **Create a space to reflect on performance and generate conversations.** In a small way, in Mozambique, the monthly review of the distribution reports creates this opportunity for reflections and analysis. VillageReach also saw this with the introduction of the Rotavirus vaccine. Modeling results identified constraints in cold chain and transport capacity with the immediate introduction of this vaccine. Each province took a couple of days to plan for the initial distribution of this new vaccine and how to overcome the immediate roadblocks. It was an opportunity to be creative and identify innovative approaches to be able to distribute this new vaccine to all health facilities by the time of the official launch. This leads to the third approach for developing core capabilities of a leader:

3. **Shift from reacting to co-creating the future.** The Rotavirus vaccine introduction in Mozambique and the creative approaches to handle the initial distribution were generated in reaction to the immediate ‘crisis’ of an official launch date. This creativity, however, did not translate into longer-term thinking on system design and how to continuously improve the performance of the immunization supply chain, to always be striving for the best performing iSC. The leadership didn’t move people to co-create the future; they were still at the reacting stage. The ‘creative tension’ required to address the immediate planning to resolve issues needs to be continued in order to shift from problem-solving to creating the future. The Gavi Alliance Supply Chain Strategy is a great example of co-creating the future, establishing new standards, expectations, and a positive vision for future immunization supply chains around the world. The strategy focuses on the three key elements that will enable improved iSC – effective supply chain managers, concrete supply chain management and improvement plans, and supply chain dashboards for data-driven action. These elements are bolstered by the “+1” of the strategy: system redesign for improved performance with an end-to-end perspective with the beneficiaries in mind.

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Final Considerations

Effective leadership is critical for any system changes and must be placed within the context of a comprehensive systematic approach to human resources. Focusing on the five building blocks for HR will build up support for the development of effective leaders and managers through appropriate policies, improved performance and retention, higher capacity, and professionalization of the supply chain workforce. Effective leadership is challenging to find and develop, yet the building blocks are one step to stronger leadership capacity to drive change and improvement. Global health has seen many examples where decision makers have become great leaders through their willingness to drive context-appropriate changes, despite deviation from the norm, and their ability to generate support for that change from a wide audience.

Crisis drives creativity and innovation for system changes. If a crisis is what is needed, we have one within current immunization supply chains. It should no longer be acceptable to have life-saving vaccines available but not accessible to children who need them because of lack of fuel or a broken-down vehicle. It is a crisis that needs to move from reacting to future creating, to move to a better performing iSC for continuous improvement and accessibility of vaccines for all children. It’s a crisis that requires strong leadership, effective management, and an enabling environment to achieve success.

There is no magic bullet to have effective leaders and a culture of leadership available and ready to drive the change for immunization supply chains around the world. There are, however, things that can be in place that can develop those necessary leadership skills within a culture that fosters and develops leadership. Global influencers need to invest in leadership in order to drive the change to the next-generation iSC. In-country decision makers need to understand the drive for change and create the opportunity for leadership development. They need to have the space to reflect on what needs to be done in their particular context, and they need to then be empowered to make changes, even if it goes against ‘how things have always been done. The next-generation iSC must build from the past and learn from that, being led by empowered and effective leaders for a sustainable future.
This paper is the fifth in a series addressing the components of the immunization supply chain. The health supply chain is a dynamic ecosystem which can increase access to high quality products by efficiently bringing the different components together to ensure delivery of commodities, as seen in the figure above. System design involves the set-up of the components of the supply chain system and how they interface with each other. The processes and policies determine how logistics practices get implemented in the field. Information and data flow influence forecasting, procurement, and daily management of the system, both at the global and in-country levels. Equipment ensures vaccines are delivered and have proper storage at every point of the supply chain. A key component is the people who operate and influence the supply chain and their capabilities, expertise, culture and behavior. The availability of funding, and particularly the flow of funding for each of the different levels of the system, is vital to ensuring delivery of vaccines. Finally, political will and the aspirations of leaders and champions can influence the performance of a supply chain by regulation and creating an enabling environment. Determining how the seven main components of the immunization supply chain work together ultimately influences the degree of availability of vaccines at the point of immunization.

This paper was developed together with People that Deliver, building on the extensive experience building workforce excellence in supply chain management. Additional papers in this series address the other components of the supply chain, drawing on the evidence from the last mile of vaccine distribution through the Final 20 Project and global experience.

For more information, please visit www.villagereach.org or www.peoplethatdeliver.org.

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