

# Strategic Training Executive Programme (STEP)

Immunisation supply chain managers  
on the road to excellence in East Africa



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Africa's health commodity supply chains are stretched to maximum capacity. They are required to store, track and deliver an ever-expanding number of vaccines, medicines and health products, and this is only set to increase further in coming years. To meet the demands, supply chains are in need of modernisation across all areas – from data systems and cold chains to distribution systems and improvement planning. The most crucial factors for success, however, are the people who manage these systems at all levels, who need to make optimal decisions and develop strong teams that are capable of delivering sustainable change.

Since October 2015, the innovative Strategic Training Executive Programme (STEP) is helping immunisation supply chain managers across the East African Community (EAC) region to hone their skills and provide more effective supply chain leadership.

Harnessing the expertise of both the public and private sectors, STEP is provided under the auspices of the EAC Regional Centre of Excellence for Vaccines, Immunization and Health Supply Chain Management – itself the result of public-private and academic partnership. See the inside back cover for more information on the centre and its partners.



The STEP programme is based on an academic framework of professional competencies for supply chain managers developed by the People that Deliver initiative<sup>1</sup>. Crucially, it also brings in private sector innovation from logistics leader United Parcel Services (UPS) and Skillsoft, an educational technology company.

STEP, which combines traditional learning with on-the-job training, helps participants develop their problem solving skills and foster effective team building approaches. To ensure that learning extends beyond the classroom, course participants are paired up with mentors from the private sector to put their new skills into practice and build a network of contacts to share knowledge. Current course participants are mentored by management experts from UPS, Amerisource Bergen and the International Federation of Pharmaceutical Wholesalers (IFPW).

STEP aims to train and mentor up to 50 supply chain managers in Gavi priority countries during 2016. By the end of 2020, another 100 immunisation supply chain leaders are expected to have been trained at the Rwanda Centre of Excellence as well as at similar centres across Africa and Asia.

Many of those who have been trained are already implementing what they have learnt to overcome their specific supply chain management challenges.

Follow the [#vaccineswork](#) blog and [@vaccines](#) for regular updates on STEP and its alumni.

<sup>1</sup> People that Deliver 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.



# Papias Bahizi

Vaccine stock management officer  
at Rwanda's Expanded Programme on Immunization

## What does it take to be a successful stock management officer?

Before taking on this role I already worked as a logistics officer with the National Reference Laboratory. My experience both there and in my current job has taught me just how many different things must be well-managed to make sure that we can provide the right number of safe and potent vaccines, wherever and whenever they are needed.

## What is the toughest challenge you face?

One important challenge in Rwanda is accurate inventory management. For a long time, the amount of stock we had at the central warehouse didn't match with our records. These errors caused many problems, making vaccine ordering and forecasting a challenge. Sometimes opportunities to vaccinate were missed as we were left with too few vaccines to meet the demand. On the other hand, when there was too much stock accumulating then some vaccines expired in storage and were wasted.

## What novel approaches did you learn at STEP?

I was eager to attend STEP as it would be a unique opportunity to find out how strengthening our soft skills could revolutionise our work. Indeed, a major learning from the STEP course was becoming a better leader, and in particular how to build strong bonds with my team members based on trust and transparency.

## How have you been using these team building skills to address the inventory challenges?

My first step was to bring together my team to find a solution. I managed to pass on the key messages from STEP to my team and this influenced the working behaviour and culture within my unit. However, this alone was not enough to transform our stock management. When my STEP mentor visited Rwanda to check on my progress, we reassessed the situation at the warehouse to see what we could do. It was clear that in order to make a real improvement, we had to redesign our inventory management system too. My mentor, took me through a step-by-step approach to identify where our inventory management was going wrong. This helped me view our challenges from a different perspective in order to find a solution.

We set up a stock recording machine in the central store, which means that stock information can be updated immediately after vaccine orders are put together for distribution. This is complemented by taking regular, monthly stock counts to improve and maintain the accuracy of our records. We have also trained vaccine distribution staff on stock monitoring, and a distribution cold room has been constructed to make sure that vaccines are stored in the correct conditions.

## What sort of impact have you seen on vaccine inventory management since STEP?

In the months since STEP a lot has changed at the warehouse. Reducing the errors in our stock records allows us to better track the number of vaccines available, making stock forecasting and ordering easier and more precise. Now we can both eliminate vaccine stock-outs and avoid the build-up of stock which is not needed.

Training our distribution staff has helped us to make sure that vaccines are handled and stored properly, so we can maximise the number of people we reach with vaccines that are both safe and effective.

## How do you see the future for stock management in Rwanda?

Introducing new working methods wasn't always easy, some of my team members resisted the change and found it difficult to adopt the new inventory keeping procedures. By using the key skills I learnt at STEP – such as emotional intelligence, problem solving and decision-making – we have managed to build a truly collaborative and driven team. I feel very positive that these achievements will make way for even more innovation in our vaccine management practices.

**“Reducing the errors in our stock records made stock forecasting and ordering easier and more precise.”**



**“After STEP, my team and I found a solution to our challenge together.”**



# Abdulhamid

**Saleh**

**National logistician**

at the Ministry of Health's central vaccine store, Zanzibar

**How long have you been working with vaccine logistics, and what has it taught you?**

I have worked as a cold chain officer for over 10 years, both at district and zonal levels. With this long experience I am familiar with the many challenges faced by the immunisation supply chain. Now that I look after logistics at the national level, I am in the perfect position to have a real impact.

**What are the most important things you learnt and experienced at STEP?**

At the STEP workshop we learned new ways of communicating with people to manage teams and inspire confidence. At the same time, we could enrich these discussions by sharing our different experiences and ideas for how to improve the immunisation supply chain. I have participated in several short courses but almost all the teaching methodology was the same. STEP is a different story, and it ended with a project proposal and mentor to support us in successfully tackling our pressing supply chain challenges.

**What are some of the specific challenges in Zanzibar?**

Many of our vaccines need to be transported to the islands using local fishing boats. This is the only way to reach some of the remote island populations with the supplies that they need. However, on the fishing boats, temperature control for vaccines in transit is often overlooked. On top of this, poor cold chain maintenance means that equipment to store vaccines on the island and elsewhere frequently breaks down. This means that vaccines risk being stored at the wrong temperature and becoming damaged. These problems happen because we have no standard operating procedures (SOPs) for vaccine management activities – this is one of our major weaknesses.

**How have you incorporated the collaborative spirit of STEP into your role at the central vaccine store?**

By using new tools I learnt at STEP for problem solving and decision-making, my team and I are able to work collaboratively, with noticeable improvements in our outputs and results. I use new methods like emotional intelligence and managing diversity to motivate my team at work.

Working as a real team, we were able to quickly develop the SOPs that we urgently needed. The SOPs guide all supply chain staff, from vaccine store managers to cold chain officers and other vaccine handlers at national and subnational vaccine stores. Together with complete standard issue forms, the SOPs cover all areas, from shipping and receiving vaccines centrally to storing and distributing them to lower levels in the supply chain.

**How have the new SOPs helped to improve vaccine distribution to the islands and elsewhere?**

The SOPs contain instructions on temperature monitoring procedures, storage, transport and stock management. In addition to defining the correct procedures, the SOPs identify the staff who are responsible for each stage. This helps us to increase accountability across the supply chain, and make sure procedures are followed correctly. Altogether, the new procedures and accountabilities mean that vaccines will be maintained at the right temperatures on their long journey to the islands.

We make sure this happens by obliging handlers to properly use freeze indicators and vaccine vial monitors, and by requiring monthly temperature records for refrigerated vehicle trips, including accurately logged sensor data. The SOPs include all the other necessary checks and procedures for temperature control across the cold chain – at every stage of transport and storage and every step of stock management.

**If you could tell future participants of STEP what the most valuable take-outs are, what would that be?**

I feel that the STEP training changed me from a manager into to a leader. Now I can think more strategically and lead the team in a way that is appreciated by my colleagues. Also, thanks to what I learned at STEP, my post-workshop project has made its way to ministerial level and been accepted as a working document. This means that it has a much greater potential impact.

**“Local fishing boats are the only way to reach some of the remote island populations with medical supplies.”**



Gavi - Doune Porter

**“The new procedures and accountabilities mean that vaccines will be maintained at the right temperatures on their long journey to the islands.”**



# Lucy W Kanja

Vaccine depot manager  
for Dagoretti sub-county, Nairobi, Kenya

## How did you come to work in vaccine management?

When I worked as a community nurse I witnessed first-hand the damage caused by preventable diseases – it is devastating. When I was recommended to become the manager of the Dagoretti vaccine depot, I felt it was the perfect opportunity for me to have an impact.



## What supply chain challenges do you face at the Dagoretti depot?

There is a lot to manage to make sure children receive the vaccines they need in Kenya, but our resources for immunisation activities are limited. One of the key challenges is our information management systems, which negatively affect data quality. This, in turn, has an impact on stock forecasting and ordering, and can result in vaccine damage and stock-outs. We also struggle with inadequate storage space and poorly-functioning cold chain equipment, which can leave vaccines vulnerable to temperature damage. Further, poor transport infrastructure and limited transportation make it hard for immunisation programmes to reach some areas, and for health facilities to collect stocks from the depot.

## What were the most valuable things you learned at STEP?

I saw STEP as my opportunity to drive real change, and to help my unit to do the same. For example, as a trainer of trainers and a supportive supervisor, it has been extremely valuable for me to learn how to build teams by managing diversity, and by attracting and retaining talent. We also explored emotional intelligence skills. I can use this to help me understand both my own goals and behaviours, as well as other people's feelings and how to relate to them in order to accomplish shared objectives. During the STEP workshop our group of supply chain managers and the training facilitators also set up a network through which we can be in touch and share information anytime, anywhere.

## How has your STEP experience helped you tackle your challenges around data and vaccine deliveries?

The benefits of the STEP programme have gone far beyond the classroom. Within a short time frame, and with the support of my STEP mentor, I have been able to accomplish so much together with the key collaborators in maternal and child health in Kenya. For example, we set out to tackle poor data quality through a new computerised logistics management system (LMIS) for the sub-county depot. We vertically integrated the new system into the computerised systems of the central and regional stores – ensuring seamless information flows and data visibility. Another example is our new vaccine distribution system pilot. At six facilities we are testing a direct delivery approach, removing the need for facilities to collect vaccines. The aim is to improve access to health delivery posts and to minimise any disruptions to service.

As part of my post-workshop project I also mentor three health workers in vaccine stock management, passing on to them what I have learned at STEP. We will continue to cascade these capabilities across my unit, which will have a lasting effect on the way we work.

**“Since STEP I also mentor three health workers in vaccine stock management, passing on to them what I have learned.”**

## What sort of impact are you seeing on stock management and availability?

The direct deliveries approach has helped us to overcome the obstacles of weak infrastructure and limited transportation. It has also provided us with extra opportunities to check in on stock control processes, as well as to provide supportive supervision to health facility staff on effective vaccine management during delivery visits. The vertically integrated LMIS has made our data more robust and, building on the new information, we are now working to upgrade our cold chain equipment. We have delivered new, modern and efficient refrigerators to 15 facilities so far.

## What is your vision for the future?

I want to keep up my mentorship work, cascade what I have learnt at STEP and network across the supply chain. I intend to continue advocating for strong leadership and good governance. By doing this, I believe I can have an impact on supply chain management and help improve immunisation coverage to reduce the burden of vaccine-preventable diseases.

**“We are testing a ‘direct delivery’ approach, so facilities no longer have to collect vaccines.”**





# Evodie

## Mudaheranwa

Vaccine supply chain officer  
at Rwanda's Expanded Programme on Immunization

### What are your responsibilities at Rwanda's Expanded Programme on Immunization?

I am a vaccine supply chain officer. This means that I work across the whole immunisation supply chain, from vaccine ordering through to supportive supervision.

### What are the supply chain challenges you face in Rwanda?

In Rwanda, accurate, timely and efficient vaccine distribution is a real challenge, for several reasons. Firstly, health facilities often do not have enough space to store vaccines. This problem is made worse by the lack of regional stores and contingency plans to deal with stock-outs and periods of high demand. Vaccine distribution relies completely on a collection system, but transportation for collection is currently limited. On top of this, trying to develop solutions to the challenges is hard because the capacity of our health workers is already strained. Their workloads are heavy and many do not have enough training.

### "Now we make the most of the diversity within our team, tackling tasks based on personal strengths."

I had been struggling to launch a temperature monitoring study of vaccines in transit, which was by then months overdue. The study was one of the recommendations of Rwanda's effective vaccine management assessment. The delay in starting the study meant that we were no longer compliant with WHO guidelines, so it needed to be done urgently.

### How has STEP helped improve the way you work?

STEP had a big impact on my work because it showed me how to get work done through others. Where I had previously directed people with limited results, I learned to engage my team to discuss our problems and develop solutions together. By making the most of the diversity within our team, we can all be responsible for different tasks based on our personal strengths.

### How did you use STEP learnings to address your distribution system challenges?

We used the tools from STEP to start the urgent study straight away. This meant measuring the temperature at which vaccines were stored as they were transported from the central store to the districts, and then to health centres. As we compare the results of the first phase of the study, we are initiating the next stages in more districts across Rwanda in parallel.

Through the study we are also cascading the temperature monitoring training across the supply chain, because everyone we train goes on to train more people in their districts. This also allows us to transfer some of the soft skills from STEP to other health workers.

### "We are cascading temperature monitoring training across the supply chain. Everyone we train goes on to train more people in their districts."

### What impact has STEP had on how you work, and your plans for the future?

STEP taught me that leaders cannot work alone to achieve their objectives. This has allowed me to manage programmes confidently, and the new projects that my team and I are introducing are already changing our immunisation supply chain. Though some important challenges remain, our accomplishments so far make me confident about what is to come.

As we move on to the next phases of the study, the results will help us develop plans to strengthen our cold chain nationwide. Using the results that we have achieved so far, we have proposed new strategies for cold chain equipment maintenance and new methods for temperature review exercises, as well as supportive supervision to districts.



# Eliud

## Muriiti

Commercial director  
at the Kenya Medical Supply Authority (KEMSA)

### What is the purpose of your current work at KEMSA?

I was hired to work on the transformation of Kenya's healthcare supply chain system. As part of this work, my unit has been responsible for implementing the upgraded logistics management information system (LMIS) in the 47 counties in which KEMSA operates.

### What are the main obstacles to the transformation you are seeking?

Kenya faces many long-standing challenges. These include a lack of storage space at facilities, weak temperature monitoring capabilities for storage and transport, and a shortage of adequately trained and dedicated staff for the supply chain. Accurate data and robust information management across the different parts of the supply chain are the foundation for overcoming these obstacles; this is why the decision was made to urgently upgrade the LMIS.

### How did STEP compare with your expectations?

The programme has more than exceeded my expectations. When I was invited to take part in STEP I expected to learn about leadership strategies and to network with my peers in the health supply chain. On top of this, the workshop introduced me to a new type of training. For example, as I observed the facilitators find interactive ways to engage us, I realised that I could also use my personal traits to motivate my team members back at work. The programme focused on important topics and provided invaluable learning resources – before, during and after the workshop.

### How has it changed the way you work?

Around the same time that I started the STEP training, we were planning the implementation of the LMIS in 20 remaining counties. Organising the implementation was difficult, however, in large part because I was trying to manage multiple aspects of the launch without reaching out to my team.



Using what I had learned at STEP – including from both my peers and facilitators – I returned from the workshop with a different take on how to tackle the issue. I gathered my team together to try to build a collaborative solution. I used my rapport with them and the new skills that I had gained to motivate them. Using the project planning tools from the workshop, I was much better able to lead my team effectively.

### "We have reduced the ordering cycle of commodities from approximately two months to just seven days."

### "I used our rapport and the new skills that I had gained in order to motivate my team better."

### How has the new LMIS helped to strengthen your supply chain operations?

The new LMIS has greatly enhanced the management of the whole health supply chain. We now have accurate, timely and appropriate data for decision-making across the supply chain. By using the new system, we have reduced the ordering cycle of commodities from approximately two months to seven days for counties. This means that patients across the health system can receive the treatments they need on time and in the right quantities.

With all 47 counties now able to place orders online, county pharmacists can manage supply ordering better. Thanks to the visible order status they can control and rationalise orders to fit their budgets, altogether improving supply chain efficiency. We were also able to train supply chain officers from the 20 counties on how to use the LMIS.

### How do you plan to apply your STEP learnings in the future?

There are still challenges to tackle before the LMIS system can work optimally. Most notably, we need to improve access to computer equipment and connectivity at certain health facilities, and make it easier for staff to reach training sessions.

I am confident that if we continue to apply what I learned at STEP, these challenges can be overcome with ease as we move on to strengthening other aspects of our health commodity supply chain.



# Martha

**Ajulong**

Principal pharmacist

at the Mulago National Referral Hospital, Uganda

Can you describe your role at the National Referral Hospital?

I am the principal pharmacist. My job is to manage the supply chain of all health commodities, including vaccines.

**“Thanks to our new processes we have seen improvements in stock control and also in accountability for supplies.”**

What supply chain challenges do you struggle with?

In Uganda, we have challenges related to stock management across the supply chain. However, the hospital faces an additional problem as it is currently undergoing a large renovation, which seriously disrupts the storage of medical supplies. With each phase of the renovation, storerooms are moved to another part of the hospital, which makes storing and retrieving supplies both complicated and inefficient. It also makes record-keeping chaotic. Prior to the renovation we already struggled with a shortage of staff, and this has only been made worse by the difficult working conditions.

How did STEP help you to find solutions for your staffing and stock management challenges?

When I heard about STEP through the Uganda Ministry of Health, I knew it could help us make great progress in how we manage our supply chain. At STEP I experienced a truly collaborative approach to problem solving and learnt how to build strong, effective and dedicated teams. As the training came to a close, I was determined to replicate what I had learnt back at the hospital.

How have you used the team building skills you learnt? Has it been successful?

When I returned to work I focused on getting to know my co-workers and building strong relationships with them. As communication improved I was able to engage the team with my ideas for how to improve our processes. Building on what I learned about project execution, we have put in place a change management plan at the Pharmacy Department. As the plan progressed I was proud to see that the changes we were implementing were much more than one-off activities. For example, our vaccine storeroom has remained in perfect condition since it was first reorganised several months ago. Even more inspiring is that the storeroom manager now feels a sense of ownership and pride in her job.

We also developed a new and improved ordering and forecasting system for the whole hospital, paired with a central collection point for medical supplies. To make sure that the system is always up to date, we have launched a new procedure for stock monitoring, in which every hospital ward and unit carry out monthly counts of their commodities. We also hold regular meetings to update the different stakeholders and maintain communication between units.

What improvements have you seen in staffing and stock management at the hospital?

We have already seen improvements in stock control thanks to these new processes, and also in accountability for supplies across the hospital. We are much better equipped to avoid stock-outs because we can make sure that stock is always ordered on time. We can also ensure that the right quantities of supplies are procured, which helps us to avoid the build-up of unnecessary stock and thereby to reduce stock wastage. These improvements help to ensure that all patients at the hospital are treated promptly with the correct, quality medication and vaccines.

How do you plan to expand these successful practices, in Uganda and beyond?

STEP showed me that the key to success lies in my people and how I motivate them. The results that we are now seeing make me confident in my ability to do so. The support of my STEP mentor was essential to my progress, as was the forum I set up to stay in touch with the other participants. I hope to build this into something bigger, through which all STEP participants can share ideas despite the distances which separate us.

As we continue to improve the ordering system at the hospital we are setting more ambitious goals for redesigning our supply chain. Our progress so far is just the first step towards transforming the supply chain at the National Referral Hospital and, eventually, across Uganda.

**“The store room manager now feels a sense of ownership and pride in her job.”**



Gavi - Adrian Brooks



# EAC Regional Centre of Excellence for Vaccines, Immunization and Health Supply Chain Management

In March 2016, the EAC Regional Centre of Excellence for Vaccines, Immunization and Health Supply Chain Management was launched in Kigali, Rwanda. The centre builds upon the experience of the LOGIVAC health logistics centre in Benin, and the collaborative efforts of a diverse range of public, private and academic partners.

Educational offerings include accessible short courses for continued professional training, as well as a range of post-graduate certificates leading to a master's degree. The aim is to professionalise health, immunisation and commodity supply chain management across the region.



## Partners of the Rwanda Centre of Excellence



**AmerisourceBergen** contributed sponsorship funding directly to the EAC launch event and contributes to the IFPW Foundation, which provides scholarship funding and consultative services to the centre to support curriculum development. In addition, AmerisourceBergen has provided a senior executive who helps facilitate STEP leadership classes in both Rwanda and Uganda and has played a key role as a mentor for STEP participants.



**The Bill & Melinda Gates Foundation** supported an initial short course offered by the centre, as well as initial work on the development of the business plan. Further support will be considered once a work plan has been submitted by the centre's management consultants.



**Gavi, the Vaccine Alliance** has helped the centre to build upon the experience of the LOGIVAC centre in Benin, West Africa. In addition, Gavi provided support in the early stages of the establishment of the centre, including through a landscape assessment study, management expenses, IT materials, training of trainers and costs associated with the second short course. Gavi continues to support the centre in collaboration with other key stakeholders.



**The German Development Bank**, through KfW, provided start-up funding to the centre, and continues to provide on-going operational funding.



**Imperial Health Sciences and Dr Andrew Brown**, an independent consultant, have provided expertise on curriculum and accreditation processes for the establishment of the centre's Masters' degree programme.



**International Federation of Pharmaceutical Wholesalers (IFPW)** leverages its corporate members, via the IFPW Foundation, to provide funding and to share expertise and methodologies in supply chain management. This includes scholarship funding, consultative services, support for curriculum development and mentors for the STEP programme.



**UNICEF** leads the implementation of the Vaccine Alliance's overall supply chain strategy, in which STEP and the Centre of Excellence play a major part. UNICEF supports the centre as a sponsor, and has a key role in approving training content and methodology. It also continues to support governments in applying STEP best practices to strengthen immunisation supply chain management.



**United Parcel Services (UPS)** played the lead role in crafting the STEP training with content provided by Skillsoft. The company also plays a key role in providing mentors for STEP. In addition, UPS provides technical assistance in the form of short course leadership for STEP, and consults with the centre for its short courses.



**The University of Rwanda** hosts the EAC Regional Centre of Excellence for Vaccines, Immunization and Health Supply Chain Management. It also provides instructors and administration services for the centre's activities. In addition, the university makes sure the centre offers high-quality pre-service and continued professional trainings to support the development of strong human capital for sustainable health supply chain management.

**The East African Community Secretariat** is a supporter and sponsor of the centre.

**In addition, the Rwanda Centre of Excellence benefits from the commitment of the Ministries of Health of partner countries: Burundi, Kenya, Rwanda, Tanzania and Uganda.**



# Reach every child

