July 11, 2018

USAID GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

MIS Deep Dive

Meeting Notes

## Attendees

* PSM – Clement Ndongmo, Max Kabalisa, Mekdelawit, Nuran Adris Mallya, ShiouChu Wang Scott Dubin, Joe Shobe, Ralph Titus, Kaitlyn Roche, Parambir Gill, Erica Eng,
* USAID - Jonathan Mann, Christie Hershey, Linda Gutierrez, Hayley Traeger, Ramy Guirguis, Khalid Mahood, Clerisse Lemke, Lindabeth Doby, Eric Takang, Kristina Brown,
* Global Fund –Mouna Jarmouni
* Gates - Kaleb Brownlow
* Village Reach – Brandon Bowersox-Johnson
* PWC - Jon Jensen, Arati Krishnammorthy
* JSI – Chris Wright, Paul Dowling

## Global LMIS

### Malawi

* Supply Chain manager was originally being used. This is uses MS Access. Using MS Access is difficult to implement changes, it required re-installing on every computer for an update. Master data was not standard. Once data was sent in to a central center, a lot of work had to be done to interrupt the data.
* Current Status – Using OpenLMIS in 43 sites directly, includes 28 Districts, 5 Central
* Data is still collected on paper, standard templates, all data comes to district levels, had to open data entry sites to deal with volume of paper reports coming in. Orders are now up to 2,000 products. We have a better understanding of master data across the system. We know if the data is accurate or complete, regular reporting deliverables
* People are switching over to OpenLMIS to order products
* Key Success Factors
  + Government has been behind this intervention, very supportive.
  + There was a system in place. Existing system was a desktop system.
  + Reviewed existing process, improved them and the system now supports those processes.
  + Strong post-implementation support includes site visits, trainings, provide support at the site (direct interaction with users)
* Lessons Learnt
  + Master data issues
  + Change management
  + Understanding user needs and user environment (i.e. internet connections, unreliable connections)
  + Supporting and improving existing processes
* Next Steps
  + Government wants more data visibility, though we have complete and accurate logistics data, they want to validate it against health information system. Now, want interoperability between DHIS2 and OpenLMIS
  + Automate processing with ERP
* Q&A
  + The monthly reporting of the 43 entities you have mentioned. Can you generate daily reports, or you will only have to wait for monthly ones to be submitted?
    - It has to be monthly, because the paper reporting is done on a monthly basis. I.E. by the 5th of the reporting month, health facilities are required to have submitted their paper LMIS forms to the data entry site. (one of the 43) The data entry sites capture data as is captured on the paper LMIS form. for us to have weekly visibility, then the supply chain would need to be designed that way. But it is not the case.

## Rwanda

* Has the typical supply chain, started with paper based system
* Timeline
  + eLMIS was implemented in 2014
  + Included all service delivery points
  + Shifted focus to pharmacies and central medical stores
  + Government has covered all functionality in eLMIS that they wanted
  + Paper-based was being used the same time as eLMIS, it created double work for others
  + In the beginning of 2018, they are making sure data is updated in eLMIS and will begin backing off the paper-based source
    - Going through a data cleaning exercise for service delivery points and all delivery points
    - Not just data cleaning it was other issues that were being resolved
    - Paper based has been decommissioned at this point
* Achievements
  + Have “clone forms” to make orders easier
* Training is done at the district level, this ensures they own the processes and understand the functionality
* Next Steps
  + Dashboards to showcase the key performance indicators
  + Automation of order management
    - Orders are made in the system, but estimating the quantities that should be supplied is calculated outside of the system
    - They want the system to automatically generate the order if the supply plans say X quantity of Y product needs to be delivered on MM/DD/YYYY it would be generated in the system
  + Want to make sure the system is GS1 compliant
  + Extend visibility
* Q&A
  + How did you reduce burden of the data entry?
    - Don’t need to type the product name, there’s a dropdown option
    - Also, reduced the chance of error.
  + What extent are paper based options eliminated for stock management at the facility level?
    - Stock cards – they update it
  + And interoperability with ERP – status? *<to be answered>*

## Nepal

* Background
  + eLMIS is used for ordering, inventory management, distribution of goods, records receipts, creating requisitions
  + Model is real-time processing, ordering doesn’t have to be keyed into a system
  + Portion of the business will use paper system, might take a year and a half from start time to replace it
* Phase 1 Overall
  + Top-down approach to implementation
  + Stage 2 – where we are right now; 20 district stores (20%) and 30 service delivery points (SDP)
    - This is a new part of the software so it’s just a concept
    - Nearly complete, will start Stage 3
  + Stage 3 – deploying to 4 Municipalities (out of 700+) which were just created when we started, these Municipalities had money, had inventory and already putting it in store rooms
  + SDPs budget is gradually, budget can come from multiple directions, we adjusted the application and deployment model
* Stage 1 and 2 Update
  + Completed Kathmandu sites
  + Mountain sites had special functionality due to limited internet connection, there’s a offline application that will sync back when they have internet connectivity
  + We expect 20% of the LLGs to require the offline model
* Challenges we face
  + First expiry and first out approach at first, however the box that fits this is at the back of the shelf and it makes it hard to go get it. This requires warehouse management and requires significant change management. We are working on responding to these issues (i.e. new SOPs).
  + Physical inventory – completely emptying warehouses and re-organizing them.
  + It’s a top down organization, getting approvals to go to Municipalities

## Questions, Ideas and Recommendations to tie the 3 countries

* Integration challenges
  + Need to put the main user interests first, need to present it to each user based on their need. How can we target the end user better?
* Integration with Private Sector systems. No one knows where that data exists.
  + I.e. Pharmaceutical and laboratory systems.
* Malawi forecasting and quantification. Always stocked out even when they weren’t supposed to be.
  + Malaria cases didn’t match the treatments going out. Compare where the discrepancies are, some of it was theft. Need to understand case management data. We do it manually on a routine basis, if it was automated that would be great.
* Looking at analysis, business intelligence and decision-making can help visualize a lot of this information.

## Traceability Enabled by Global Data Standards

* Track and trace is the tracking of products from (focus on end components)
* End to end visibility, more strategic, suppliers, sourcing
* GS1 used across the whole supply chain
* Master data management is the foundation for all of it
  + For countries that have or will implement LMIS, we want to establish master data practices and align it with GS1 standards
  + Second level would be to establish national master data registries, requires more governance structure to make sure it’s used in all systems
  + Ultimately, we want to have the GDSN data exchange with systems in country
* Discussion
  + What are complimentary activities across systems strengthening?
    - Any insight during the Rwanda workshop? What did other organizations say?
      * The workshop wasn’t just with MoH but it was other stakeholders, so it was “what are you going to do nationally”
    - How involved is the private sectors, local organizations?
      * There are different components of master data (i.e. Site list, facility list)
    - How is the system standard and how it addresses the last mile? When you break the package (open and dispense)? How do you address this consumption?
      * Our requirement can address it in-part, but it depends on how the requirements for the system itself. How do you want to manage the local packaging?
      * Bedside dispensing in countries that are in developed countries. GS1 is being used in supply chain, dispensing, and record of dispense to specific patients. Some hospitals in Europe and US.
  + What are complimentary activities across organizations?
    - Do we think we have a pool of consultants that are sincere experts in this? This sounds basic but there’s so much more and the process can be so much more complicated.
      * Don’t think there’s many people, we are going to conferences to see how’s interested in supporting this initiative but find people that are interested and lack experience.
      * It’s usually individuals implementing in their own function. They take the standards and implement in their area.
      * Can look at it at a macro-level: how does it fit into the bigger picture, product roadmaps, how can we fit it into foundational element (i.e FEFO)
  + What are ideas and suggestions to build on this approach?

## Developing the Community

* What are the drivers? What are the interventions?
  + For OpenLMIS support, used in 9 countries, it’s inefficient right now. There’s still staff in Malawi on VR staff and PSM staff. If there’s a problem with the software, level 1 is in-country, level 2 is a different organization, and level 3 is another organization. We have these three people supporting OpenLMIS. What should our tech support staff/desk look like? The current model is not rationale. Have one person for one country for one system.
  + These systems are funded nationally. We need to re-think the support structure, how can the software survive with a new level of thinking.
  + Look at other technology companies, would be good to get them involved on how other IT companies are doing it and tap into those resources. IT companies are the ones that evolved an international way.
  + What is the business case? What is the value of the work we are doing? Think about this through the wider implementing groups. MoH are beginning to understand. It would be a multi-year approach, but we can incorporate these ideas at the start of our work (i.e. sustainability). What should our advocacy and messaging be moving forward?
  + Should think about outsourcing some of this, might have challenges if it’s in country. Skills might not be there in country; the countries can help run the contracts.
  + Building interventions to raise this issue with MoH.
    - MoH can understand the need and be open to outsourcing technical support desks.
    - PSM as a project and provide support.
    - Across donor environment. More strategic view of how this looks moving forward.
    - This is no different than supply chain, i.e. 3PLs. Try to find business cases that are similar, find similar needs and solutions implemented to meet that need.
    - How can we facilitate those groups to do it? PEPFAR does it, find local companies. How do we do it now, not how do we think about it?
      * Nervous about building capacity in local organizations. Have not done it well with IT.
    - Automation is happening in other sectors. Look at those sectors, look at those countries to see what they are doing.
  + Break this down as Level 1, Level 2 and Level 3 support.
    - Level 1 and Level 2 you can have in-country. Level 3 can be complicated, and it may not be a matter of having the capacity in-country. That might need to be a private company.
    - Need to build up a strong change management strategy in country.
  + Do this on the market dynamics side – need to show the benefits of building up the capacity.
  + Need to look at MoH and local governments and donor’s investments. Show business value of doing Level 1 support and show what can happen if you grow that environment and mature to Level 2 support.
    - As we look to get countries to buy-in, we talked about it for years. We don’t always have visibility in making sure countries are putting it in their budget plans and included in operational plans. We should understand the support structure looks like to help advise MoH and stakeholders. We want to say it takes $XX to put this person in place and trained.
    - Example: in Nepal, had a requirement for local vendor for support.
  + Should leverage the country teams on PSM, they are the ones implementing in the country. We should look at how to increase their capacity, they are the ones that are staying in the country.

## Other Digital Technologies

### Transport Management Tool (TransIT)

* Started at the beginning of the project, how do we manage our transporters?
* Worked with ASU students in computer science and IS majors to start developing this tool and an app.
* Challenges
  + No systems in place, these systems are very expense, costs to train people, costs to support it
  + Business processes aren’t the same, languages are different, flow of commodities are different from country to country
* Want to look at historical data, trends, how are spending our funds
* Want to share trucks with donors, improve route planning, improve how warehouses pack their trucks
* Next Steps
  + Piloting the tool in Lesotho, making it more user friendly and testing out the mobile app
  + There will be another pilot in Mozambique end of this year.
  + This product is not just PSM, it’s for other Chemonics projects that need help tracking transportation

### Temperature Monitoring Sensors

* Want to understand more what temperatures our products are feeling
* Without the visibility we have product degradation that we are not aware of
* Internet of Things technology
  + Send information to the cloud and have someone analyze it
  + What technology is out there and what fits in with our objective (temperature and location)
* Placed sensors in different locations (i.e. central, regional)
  + We didn’t just want to say it’s hot, but wanted to make recommendations

### Nigeria Control Tower

* Seeking one source of truth, one system of truth
* One Network – proposed a control tower solution that allows countries to use existing systems
  + Control tower is an overlay, works with any system in place, if you don’t have the existing systems, you can use the control tower capabilities.
  + It is a network approach, not a linear supply chain solution. All parties get updates at the same time, there’s no lag.
* Piloting in Nigeria
  + Documenting Quality Management Systems (QMS) at the Nigeria country level (like Chemonics internal QMS)
    - Mapped 25 top priorities for Nigeria
  + Have one person sitting at MoH entering data manually into the system (Navision)
  + Drivers all have mobile phones and enter in the quantity delivered in ePOD app
* Q&A
  + If you are 99% accurate with paper-based system, what’s the benefit with adding the system?
    - System helps identify what trucks aren’t full and help
    - What are the success criteria for this intervention?
      * Transportation savings
      * Operational savings
      * Improved forecasting and supply planning data, tied with consumption data, what’s the demand at the service delivery time
        + How can we supply the right medicine, at the right time, at the right cost?
  + What is the sustainability picture?
    - We have 9 supply chains, we are trying to coordinate all supply chains. We documented all the processes and will hand it back to the MoH.
    - It’s the cost and people, not just the manuals need to be handed over, its all the processes, organizations and the technology.
  + What is the product scope for 2018 milestone?
    - Functionality within control tower that gives you visibility, LMIS, transportation, will move more into advanced planning in a later phase. Includes Global Fund product.
  + PSM and USAID is supporting the Navision. Paid for the optimization of processes. Also, helping get state buy-in.
  + Chemonics is paying for control tower.
  + It is a licensing model that other countries can use.

## OpenLMIS Product Roadmap

* A bunch of donors came together and developed one common software platform
* OpenSRP – Open source patient registry to track clinician records and works with OpenMRS
* Created ability to include cold chain elements (can tell when a fridge is plugged in and working)
* Use “Superset” which is an open source data analytics tool, self-service
* The Gap Project – aims to close the gap between OpenLMIS versions that were slightly customized implementations, it will make upgrading to newer versions of OpenLMIS much easier

## Closing Remarks

* Topics for future Deep Dives
  + Data Standards
  + Interoperability
  + Data Analytics and Maturity
  + Sustainability – how to transition Level 1, 2 and 3 to local partners
  + Implementation roadmap including all components – people, processes, technology, governance
  + Challenges in change management
  + What other donors investing in and where are their interests?