OpenLMIS COVID edition to support supply chains during COVID

Wes Brown (OpenLMIS Community)
OpenLMIS COVID Edition

Supporting Supply Chains in a Pandemic

16th TechNet Conference
Shaping a resilient and adaptive immunization program
Wes Brown

Product Manager - OpenLMIS
Senior Technical Manager - VillageReach

Based in Nairobi, Kenya

wes.brown@villagereach.org
MISSION

Collaboratively develop shared, open source software to improve health commodity distribution in low- and middle-income countries.
What is OpenLMIS?

Open source LMIS designed for LMICs. Core software certified by global actors, highly configurable.

HCWs can easily track, order and report stock; saves time and no manual calculations.

Proven to reduce stockouts and increase reporting of stock data.
Robust Partner Network

**DONORS & THOUGHT PARTNERS**
Historically, these partners have provided both funding and strategic guidance.

**IMPLEMENTING PARTNERS**
These partners customize and deploy OpenLMIS in country health systems, provide training and other professional services for users, and jointly bid for new country implementations.

**TECHNOLOGY PARTNERS**
These partners provide technology development and bug fixes.
System Features

**Requisitions:**
Use stock data to generate orders

**Order Fulfillment:**
Fulfill and ship orders based on stock on hand and send a Proof of Delivery

**Stock/Inventory Management:**
Capture inventory data and stock movements to provide an overview of stock availability

**Analytics and Reporting:**
Use and display data with intuitive visualization that supports decision making

**Mobile Integration:**
Connect dispensing and supply information at the point of care through an integration with OpenSRP

**Equipment:**
Track equipment inventory, functional status; real-time alerts on CCE device temperature
Highly Configurable to Country Context
Geographic Reach

8 Countries
1 COVID-19 Edition

11,000+ HEALTH FACILITIES

# of Health Facilities Using OpenLMIS
Stronger Together: Interoperability
Summary of Benefits of OpenLMIS

**End User**
- Time saving!
- Quick stock calculations
- Easy, accurate reporting
- Simple admin
- Data validation
- Offline functionality

**System**
- Stock management
- Data dashboards
- Interoperability with DHIS2 & other systems
- Vaccine module
- CCE tracking

**Big Picture**
- Future code enhancement
- Community tools & support
- Certified system by Gavi & GF
OpenLMIS COVID Edition

- OpenLMIS has been configured to enable COVID-19 supply chains and can facilitate inventory management and the replenishment of COVID-19 commodities at health facilities, district/provincial warehouses, and central medical stores.
- This streamlined system requires minimal training and, therefore, can be quickly deployed.
- The software is offered as a SaaS solution, free of charge, and with no operating costs.
- Collaborative effort between VillageReach and CHAI
Supporting the COVID-19 Supply Chain

Inventory Management
Track orders, receipts, and quantities of products; receive proof of delivery of COVID-19 products

Equipment Tracking
Ventilator and other equipment location, operational status monitoring and reporting

Data Visualization
Informs decision making and completes routine reports using custom data dashboards
## Screenshot - Requisition

### Report and Requisition for EPI (Health Center)

**Regular**

- Facility: NO08 · Macoae-2, Guamba
- Operated by: Ministry of Health
- Region: Guamba
- Reporting period: 01/02/2017 - 28/02/2017

**Comments**

No comments added

**Full supply product(s)**

- All
- None

### Table: Skip, Product Code, Product, Beginning Balance, Total Received Quantity, Total Consumed Quantity, Total Losses and Adjustments, Total Stockout Days, Stock on Hand, Meas. Stock Amount, Calc. Order Qty USA, Average Consumption, Calculated Order Quantity, Requested Quantity, Requested Quantity Explanation

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Product</th>
<th>Beginning Balance</th>
<th>Total Received Quantity</th>
<th>Total Consumed Quantity</th>
<th>Total Losses and Adjustments</th>
<th>Total Stockout Days</th>
<th>Stock on Hand</th>
<th>Meas. Stock Amount</th>
<th>Calc. Order Qty USA</th>
<th>Average Consumption</th>
<th>Calculated Order Qty</th>
<th>Requested Quantity</th>
<th>Requested Quantity Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>bog20</td>
<td>BCG</td>
<td>166</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>166</td>
<td>3300</td>
<td>3134</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ipv5</td>
<td>IPV</td>
<td>68</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>68</td>
<td>3200</td>
<td>3132</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>measles10</td>
<td>Measles</td>
<td>53</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>53</td>
<td>4000</td>
<td>3947</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pcv10</td>
<td>PCV10</td>
<td>41</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>41</td>
<td>8900</td>
<td>8859</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>penta1</td>
<td>Penta1</td>
<td>47</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>47</td>
<td>6100</td>
<td>6453</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Stock Management

#### Product Code | Product | Lot Code | Expiry Date | Stock on Hand | Current Stock | VVM Status | Reasons | Unaccounted Quantity
--- | --- | --- | --- | --- | --- | --- | --- | ---
ACM-SAFETYBOX-1234 | Acme Safety Box - each | Product has no lots | 78 | 78 | | | | 0
ACM-SYRINGE005ML-1234 | Acme Syringe 0.05ml - 0.05ml | Product has no lots | 45 | 45 | | | | 0
ACM-SYRINGE05ML-1234 | Acme Syringe 0.5ml - 0.5ml | Product has no lots | 89 | 89 | | | | 0
ACM-SYRINGE5ML-1234 | Acme Syringe 5ml (updated) - 5ml | Product has no lots | 56 | 56 | | | | 4
GSK-PCV10-2-1234 | Synflorix PCV10 (2 dose) - 2 dose, injection | Product has no lots | 41 | 41 | Stage 1 | | | 0
GSK-POLIO-20-1234 | GloxoSmithKline Polio (20 dose) - 20 dose, oral drop | Product has no lots | 53 | 53 | Stage 2 | | | 0
IVX-BCG-20-1234 | Intervax BCG (20 dose) - 20 dose, injection | No lot defined | 166 | 166 | | | | 0
BCG2017A | 01/06/2019 | 28 | 28 | Stage 1 | | | | 0
BCG2017B | 01/07/2019 | 46 | 46 | Stage 1 | | | | 0
MRK-MEASLES-10-1234 | MMR II (10 dose) - 10 dose, injection | Product has no lots | 53 | 53 | Stage 2 | | | 0
Standard Reporting Dashboards

Stock Status

Months of Stock

HIV Stock Levels

TB Stock Levels
Data Visualizations

Create custom dashboards based on program priorities

Built-in reports include:

- Stockouts
- Stock Status (overstocked, understocked)
- Consumption
- Orders
- Reporting rates/timeliness

Filter by program, geographic region, date, facility
OpenLMIS COVID Edition - Lessons Learned

- Getting consensus on the product catalog is vitally important
- Even if the technology is ready, the country may not be
- Work with a local partner whenever possible
- When a vaccine is available, tracking the allocation and usage will be critical; as will monitoring cold chain equipment