



DEPLOYING AN ELECTRONIC LMIS:
MAKING THE RIGHT CHOICE

**Introducing Field Supply LMIS software
and services**

X

15:00 CET, September 30, 2021

INTRODUCTION



TechNet-21



F/ELD

The background features a complex pattern of overlapping circles and shapes. Some circles are solid black, while others are filled with a halftone dot pattern of varying densities. There are also areas with thin, wavy black lines on a grey background.

FIELD SUPPLY CONTROL TOWER

September 2021

We are helping governments and businesses make good on the promise of healthcare in the fastest growing parts of the world.



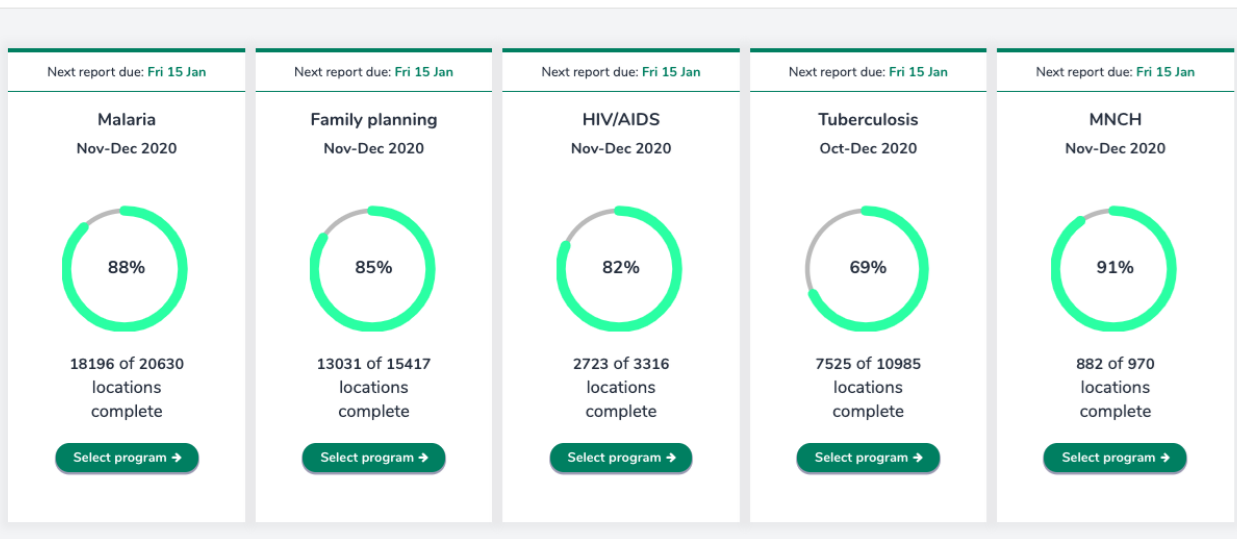
NHLMIS
Powered by Field Supply

Logged in as:
Julia ▾

- Home
- Alerts
- Analytics
- Stock reports**
- Shipments
- Planning
- Administration

Stock reports

Stock reporting for all programs



Data collected

1M+ batch-level transaction records for over 34,000 facilities across the country over 5 years

ZONAL STORES:

Abuja Premier Medical Warehouse - sgon	✓ Report complete
Abuja Premier Medical Warehouse - usaid	✓ Report complete
Benue State MNCH Store	Start report →
FCT MNCH Medical Store	Start report →

- **Accessibility (BYOD, instant-install, always up-to-date)** Removes the massive burden of enterprise deployments across a whole country
- **Offline First Complete** offline functionality allows sites to work offline for weeks - and still share data when able to opportunistically connect and sync to the network.

← save and go back
Auto saved at 8 Aug, 2:04 PM

Immunization
Benue

Report for: Week 2018 / 32

17 products

Immunization

- BCG
- bOPV
- Penta
- MSL**
- YF
- HeP B
- Td
- PCV
- IPV
- AD 0.5ml Syringes
- 0.05ml (BCG) Syringes
- 5ml Reconstitution Syringes
- 2ml Reconstitution Syr
- Safety Boxes
- Diluent-BCG
- Diluent-YF
- Diluent-MV

4. MSL + Add batch

004F5039 <small>Barr Expires 01/25</small>	676,770
004M4135 <small>Sanofi Expires 01/25</small>	245,720
004M4139 <small>Barr Expires 01/25</small>	189,420
004N7074 <small>Serum Institute Expires 09/19</small>	217,500
2505117 <small>Bio Farma Expires 08/20</small>	66,500
2505517 <small>Bio Farma Expires 08/20</small>	112,100
2505617 <small>Bio Farma Expires 08/20</small>	93,500
2504717 <small>Bio Farma Expires 07/20</small>	36,500
2506617 <small>Bio Farma Expires 10/20</small>	126,700
Total counted:	1,764,710
Quantity reserved for campaign	35,000

← Previous
Next product →

Discard changes to this product

Settings > Locations > Cross River

Cross River BCG allocation

BCG allocation details

BCG forecast, tp

The BCG forecast for the selected location is shown calculated below.

$$\begin{array}{c} \text{Target population} \\ \mathbf{163,076} \end{array} \times \begin{array}{c} \text{Doses} \\ \mathbf{1} \end{array} \times \begin{array}{c} \text{Wastage} \\ \mathbf{2.0} \\ \text{Default} = 1.2 \end{array} \times \begin{array}{c} \text{Coverage} \\ \mathbf{0.8} \\ \text{Default} = 0.9 \end{array} + \begin{array}{c} \text{Adjustment} \\ \mathbf{1\%} \\ \text{Default} = 0 \end{array} = \begin{array}{c} \text{Forecast} \\ \mathbf{263,531} \end{array}$$

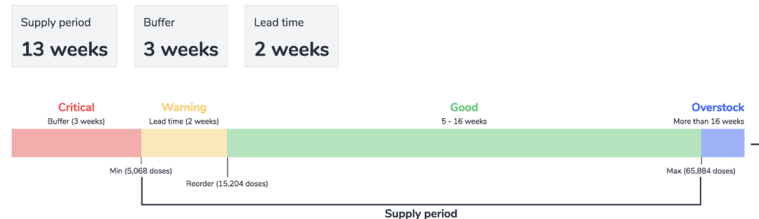
BCG demand plan

The BCG forecast for the selected location is shown calculated below.

$$\begin{array}{c} \text{Forecast} \\ \mathbf{263,531} \end{array} / \begin{array}{c} \text{Weeks} \\ \mathbf{52} \end{array} = \begin{array}{c} \text{Doses per week} \\ \mathbf{5,068} \end{array}$$

BCG supply plan

The BCG supply plan for the selected location is shown here.



40,470 product-location-specific supply plans implemented according to national policy

Purpose build planning Simplified tools to make national-scale rules- or consumption-based forecast and planning flexible and understandable

- Track shipment progress & statuses
- Shipment information gets updated on all related indicators in analytics as well as bin cards for each product
- Generate & manage shipments with orders from different suppliers
- Keep track of fill rate

Shipments

Abuja Premier Medical Warehouse shipments

Scheduled/incoming
Completed
New Shipment

SCHEDULED

Distribution to One-stop-shop-kaduna-kaduna-state from Abuja 19 Sep 2021

Products: TDF | 3TC (300/300 mg), TDF | 3TC | DTG (300/300/50mg) (90 tabs)

ID: 8406 Funder: global-fund--fhi-360

Product details ▲

	Quantity
Tenofovir/Lamivudine (300/300mg) #3130148	100
TDF 3TC DTG (300/300/50mg) (90 tabs) #PTB1150A	48

Delete

SCHEDULED

Distribution to General-hospital-igumale from Abuja 18 Sep 2021

Products: Isoniazid (INH) 300mg, ABC | 3TC (120/60mg), Fluconazole 100mg, TDF | 3TC | DTG (300/300/50mg) (90 tabs), Dolutegravir DTG 10mg

ID: 7859 Funder: pepfar--cdc

Product details ▼

Delete

← Shipment - distribution

Shipping to: ado Date: Wed 8 Aug

Type: Campaign ID: 2887

Tap on a card to see the batch list

mv ✓

YOU COUNTED:
20,000

TOTAL PLANNED:
20,000

See batch list →

diluent-mv ✓

YOU COUNTED:
20,000

TOTAL PLANNED:
20,000

See batch list →

2 of 2 products counted Proceed →

The screenshot displays a web application interface with a blue sidebar on the left containing navigation links: HOME, ANALYTICS, SHIPMENTS, Stock, STOCK REPORTING, DASHBOARD, STOCK COUNT, ACTION, and LOGOUT. A 'Go back' button is located at the top of the sidebar. The main content area features a white notification box with the following text: 'VVM sample for 320-1', 'Take a vial from the batch and tap the VVM that most closely matches:', and four circular icons representing different VVM stages. Below the icons, a red message states 'I can't sample VVM for this batch'. At the bottom left, a status bar shows 'ONLINE' and 'UP TO DATE' next to a refresh icon, with the URL 'https://staging.van.field.partners/nav/stock-count' displayed below.

Functionality designed to enforce VVM sampling for batches that arrived at any point in the supply chain from national warehouses to state stores, down to health facilities

Logged in as:
test-kano ▾

- Home
- Alerts
- Analytics
- Shipments
- Stock Reporting
- Administration
- Dashboard
- Stock Count
- Action

● ONLINE ✓ UP TO DATE

[← back to stock reporting](#)

BCG stock at Kano Cold Store

[Export data](#)

ROUTINE STOCK

23,360

SIA (CAMPAIGN) STOCK

0

OVERALL STORE BALANCE

23,360

DATE	USER	TYPE/LOCATION	BATCH DETAILS			QUANTITY	BALANCE	
			Number	Manufacturer	Expiry			
1 Mar 2019	test-kano	Stock count adjustment	1622	japan-bcg-lab	09/19	from -1,280 to 0	23,360	Details
1 Mar 2019	test-kano	Stock count adjustment	1641	japan-bcg-lab	08/20	from 780 to 7,080	22,080	Details
1 Mar 2019	test-kano	Stock count adjustment	1640	japan-bcg-lab	08/20	from 23,940 to 1,800	15,780	Details
1 Mar 2019	test-kano	Stock count adjustment	359-2	intervax	10/20	from 0 to 14,480	37,920	Details
1 Mar 2019	test-kano-nassarawa	Sent to Nassarawa Satellite Store <small>* Receiver adjusted quantities</small>	1641	japan-bcg-lab	08/20	- 6,300	23,440	Details
1 Mar 2019	test-kano-nassarawa	Sent to Nassarawa Satellite Store <small>* Receiver adjusted quantities</small>	359-2	intervax	10/20	- 14,480	29,740	Details
1 Mar 2019	test-kano-nassarawa	Sent to Nassarawa Satellite Store <small>* Receiver adjusted quantities</small>	1622	japan-bcg-lab	09/19	- 1,280	44,220	Details
1 Mar 2019	test-kano	Sent to Gwale Satellite Store	1640	japan-bcg-lab	08/20	- 20,540	45,500	Details
1 Mar 2019	test-kano	Sent to Gwale Satellite Store	1622	japan-bcg-lab	09/19	- 20	66,040	Details
28 Feb 2019	test-kano	Sent to Wudil Satellite Store	1640	japan-bcg-lab	08/20	- 16,980	66,060	Details
28 Feb 2019	test-kano	Sent to Dawakin Tofa Satellite Store	1640	japan-bcg-lab	08/20	- 14,700	83,040	Details
28 Feb 2019	test-kano	Sent to Dawakin Tofa Satellite Store	1622	japan-bcg-lab	09/19	- 1,520	97,740	Details
28 Feb 2019	test-kano	Sent to Rano Satellite Store	1640	japan-bcg-lab	08/20	- 15,220	99,260	Details
21 Feb 2019	test-kano	Stock count adjustment	037G7033	serum	08/19	from 13,820 to 0	114,480	Details
21 Feb 2019	test-kano	Stock count adjustment	034G7040	serum	08/19	from 42,000 to 0	128,300	Details

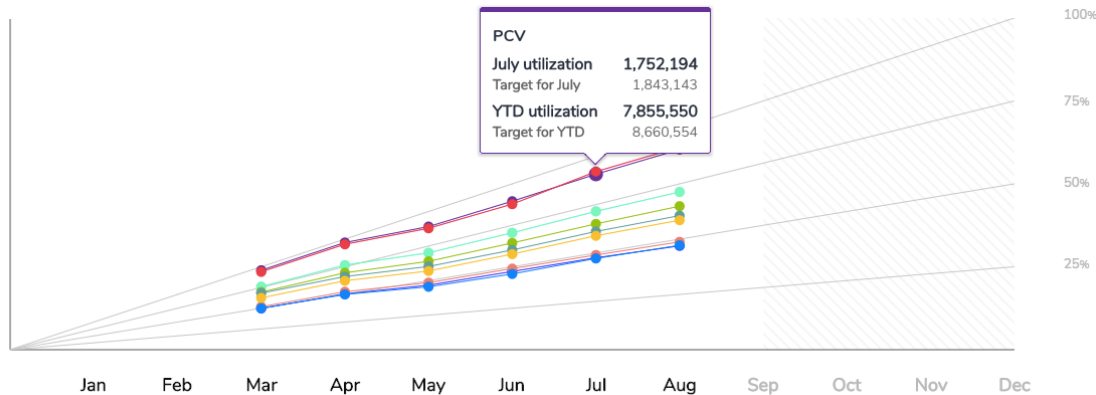
Batch-level, transactional visibility Real-time stock movements, recalls, pharmacovigilance, audits, and wastage control without overly complicated record keeping.

Doses given against plan timeline

View by: Locations Products Over time

PRODUCTS SHOWN:

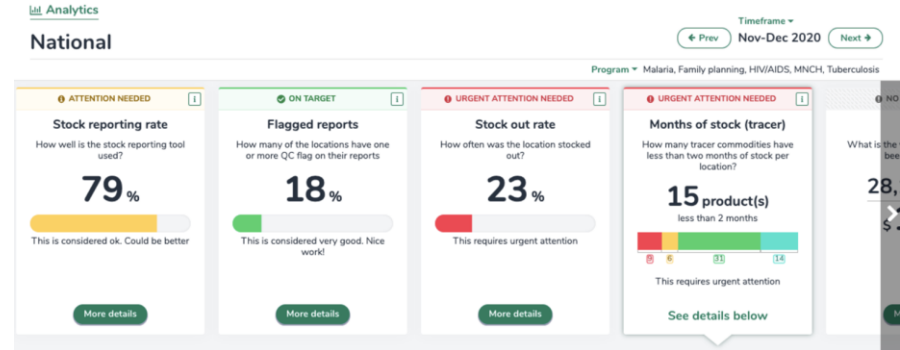
- BCG
- bOPV
- HeP B
- IPV
- MSL
- PCV
- Penta
- Td
- YF



Live wastage analysis from external triangulated data

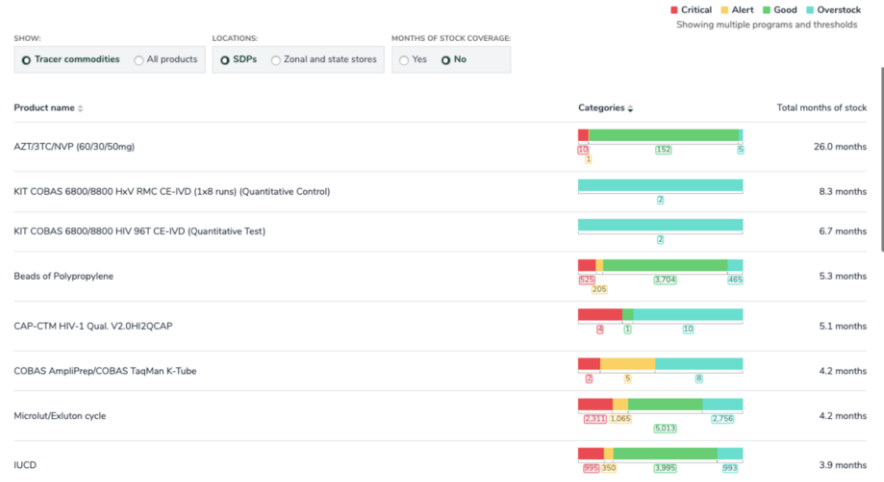
Product	Distribution	Doses given	Target wastage	Calculated wastage	Distance from target
MSL	2,923,490	505,232	30%	83%	Target 30%
BCG	2,252,860	540,736	50%	76%	Target 50%
YF	1,830,260	494,308	30%	73%	Target 30%
bOPV	4,212,740	2,082,357	25%	51%	Target 25%

- Each indicator has the complete package of process, thresholds (red/yellow/green), interpretation guides so that management team can follow up
- Natural UX to identify root causes
- Exports for further analysis
- Integration with external BI (Kibana, Superset), a leading data visualization layer for ad hoc queries and system monitoring



Aggregated months of stock (tracer)

View by: Locations Products

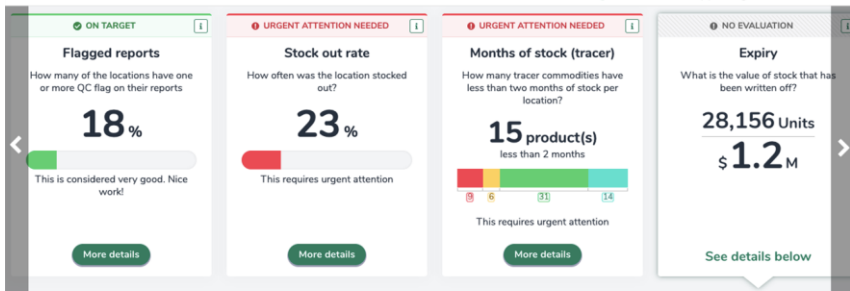


Analytics

National

Timeframe
 ← Prev **Nov-Dec 2020** Next →

Program → Malaria, Family planning, HIV/AIDS, MNCH



Aggregated Expiry

View by Locations Products

SHOW: Tracer commodities All products
 UNITS: Monetary Value Product Amounts
 LOCATIONS: SDPs Zonal and state stores

Product name	Distribution of products over facilities	Value of stock written off
Examination Glove Medium x pack		\$269,587
COBAS AmpliPrep/COBAS TaqMan K-Tube		\$132,653
TDF/3TC/EFV (300/300/600mg)		\$79,774
AL1 - Artemether/Lumefantrine 20mg/120mg		\$43,454
Lopinavir/Ritonavir (40/10mg)		\$25,210
Determine (Alere)		\$8,500
Sayana Press		\$7,120

\$568,000 of near-expiry commodities identified for expedited delivery, with a further **\$627,258** identified at risk to date

Location name	Distribution of facilities over products	Amount of stock written off
Abuja Premier Medical Warehouse		92307 units
Axios Warehouse Awka		3293 units
Axios Warehouse Gombe		1399 units
Axios Warehouse Sokoto - pmi		5220 units
Axios Warehouse Sokoto		1386 units

Analytics > Forecast

National

Timeframe
Oct 2020 - Dec 2021

Program ▾ HIV/AIDS

Program ▲ Malaria

Forecast National

View by **Products**

FILTER BY PROGRAM

Malaria Family planning HIV/AIDS MNCH

[Cancel](#) [Apply filter](#)

■ **Critical** ARV/Lab: <3 months
■ **Alert** ARV: 3-6 months Lab: 3-5 months
■ **Good** ARV: 6-12 months Lab: 5-10 months
■ **Overstock** ARV: >12 months Lab: >10 months

2020 2021

Product name

Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

TDF | 3TC | DTG (300/300/50mg) (90 tabs)

Needs Reorder



TDF | 3TC | DTG (300/300/50mg) (30 tabs)

Needs Reorder



Lopinavir/Ritonavir (200/50mg)

Needs Reorder



TDF/3TC/EFV (300/300/600mg)

\$1.1M 187,559 items



Fluconazole 50mg (7 caps)

Needs Reorder



AZT/3TC/NVP (60/30/50mg)



COBAS AmpliPrep/COBAS TaqMan K-Tube

Needs Reorder



Includes all information to predict one year worth of stock

- Off-trend average monthly consumption
- Custom Thresholds for Programs

TDF/3TC/EFV (300/300/600mg)
\$1.1M 187,559 items



20,035

Current average monthly consumption

458,473

Current stock on hand

13 months

Stock Coverage

195,234

Order date 1 May 2021
Admin process 1 Mar 2021

Create new Shipment

Overview for TDF/3TC/EFV (300/300/600mg)



Expiries & Shipments

- Stores Lagos Premier Medical Warehouse
- 30 Oct 2021 Expiring Stock: Qty 28,310 Batch BEB49159A Stores Lagos Premier Medical Warehouse
- 30 Oct 2021 Expiring Stock: Qty 28,386 Batch BEB49160A Stores Lagos Premier Medical Warehouse
- 31 Oct 2021 Expiring Stock: Qty 34,250 Batch 3090887 Stores Axios Warehouse Awka, Lagos Premier Medical Warehouse
- 31 Oct 2021 Expiring Stock: Qty 28,400 Batch BEB49157A Stores Lagos Premier Medical Warehouse
- 31 Oct 2021 Expiring Stock: Qty 27,561 Batch BEB49161A Stores Lagos Premier Medical Warehouse

- Quantity to order prompt with administrative & ordering lead times
- Track expiring batches through all national warehouses

- Accelerate national order preparation and execution
- **Aggregates all locations all together**
- Tools for multi-level order preparation, rationing, product substitution
- **Enterprise integration with warehouses via ONE Network**
- Multiple pack size solution
- Funder specific bulk allocations

MENU NHLMIS
Powered by Field Supply

Logged in as:
abuja-pepfar-hiv-aids ▾

Home

Stock reports

Shipments

Orders

Order summaries →

Export & Import

ONLINE UP TO DATE

Orders > HIV/AIDS > Products > GHSC-AID1018

Glucose Selectra Jr Kits

All locations

LOCATION ↕	LGA ↕	STATE ↕	ORIGINAL QTY ORDERED ↕	DIFFERENCE	ADJUSTED QTY TO ORDER	ROUNDED QTY TO ORDER
Abubakar Tafawa Balewa University Teaching Hospital (Atbuth) Bauchi See all products »	bauchi	bauchi	0	+ 40 ↑	40	0
Adamawa Hospital Yola See all products »	yola-north	adamawa	0		0	0
Ahmadiyya Muslim Hospital Kano See all products »	nasarawa	kano	0		0	0
Akilu Memorial Hospital Madobi (Hub) See all products »	madobi	kano	0	+ 20 ↑	20	0
Akko - Madi Memorial Clinic And Maternity See all products »	akko	gombe	0		0	0
Al-Noury Specialist Hospital Kano See all products »	tarauni	kano	0	+ 40 ↑	40	0
Aminu Kano Teaching Hospital Kano See all products »	tarauni	kano	0		0	0
Apple Clinic Bauchi See all products »	bauchi	bauchi	0		0	0

Subtotals: ORIGINAL QTY ORDERED **66** DIFFERENCE **66 ↓** ADJUSTED QTY TO ORDER **0**

Order summary

! Stock insufficient

The following is a summary of the order for 251 facilities

Glucose Selectra Jr	
Original qty ordered	66
Available stock	0
Adjusted qty to order	0
Adjusted qty to order (WH Units)	0
Remainder	0

Available stock is less than adjusted qty to order.

[Reset to original qty ordered](#)

Confirm

AVAILABLE STOCK **0** SUMMARY X Close

Programs and services at this location

Check to apply changes from 1 Mar, 2021

 Malaria Family planning HIV/AIDS

Program Code

SELECT FUNDER

 ahf--ahf fgon--ncap global-fund--fhi-360 global-fund--lagos-smoh pepfar--cdc pepfar--dod pepfar--usaid sgon--sacp USAID-KPIF

SELECT IMPLEMENTING PARTNER

 msh hai tmecc-rise fhi-360 chemonics kp-care-1 kp-care-2 EPIC-KPIF

PROGRAM CONTACT

Contact Person

Phone number

Email

SELECT SERVICES

 PMTCT ARVs Cotrim ARV PPR

Locations

- More than 34,000
- Decentralized implementation - key to scale
- Keep even federated systems in sync
- Add/edit services, donors, contract information
- Keep program-specific location ids

Products

- More than 2,000
- Mappings to external ids (e.g. ONE, ARTMIS, GS1)

Features

The user will have access to the app by default. Select all the user should be able to access.

Settings: Super Admin
Grants access to all Settings areas. If this is applied, other settings are not needed.

Settings: Facilities Admin
User can add and edit facilities.

Settings: Facilities Change Approvals
User can approve proposed Facilities master data changes

Settings: Facilities Change Requests
User can request proposed Facilities master data changes

User settings

Location

Programs

Malaria

Family planning

HIV/AIDS

Tuberculosis

MNCH

Funders

AIDS Healthcare Foundation

ahf--ahf

Federal Government

fgon--ncap

The Global Fund

global-fund--fhi-360

Confirm quantities to be delivered

Product	Closing	Delivered	Balance	Sep Unit price ₦	Balance value ₦
Tab Coartem 80/480mg x6	0	3	3	1,236	3,708
Tab Lonart DS 80/480 x6	0	0	0	1,113	0
Tab Artequick 62.5/375mg x4	0	4	4	743	2,972
Tab Augmentin 1g x10	0	0	0	3,391	0
Tab Augmentin 625mg	0	13	13	2,934	38,142
Tab Paracetamol 500mg (Emzor)	0	7	7	287	2,009
Cap Amoxil 500mg (Unbranded)	0	0	0	1,009	0
Alabukun	0	0	0	1,304	0
3G Cream 20g	0	0	0	344	0

Please confirm delivery and acknowledge receipt of the products listed above from Field Technology Development Partners LTD by signing on behalf of the company here below:



Direct delivery operations

- Field Supply has private sector clients like **shelf life**
- Vendor management inventory for last mile
- Private sector source of financing that helps insure the financial sustainability of FS

OUR PARTNERS



BILL &
MELINDA
GATES
foundation

McKinsey
&Company





Nigeria Health Logistics

Management Information System

Powered by Field Supply

Challenges of the Nigerian Supply Chain

The Nigerian supply chain was filled with many complex challenges across multiple dimensions including:

- ❖ Fragmented supply chain
- ❖ Multiple data systems
- ❖ Poor data quality
- ❖ Lack of aggregate visibility
- ❖ Poor government ownership
- ❖ Limited performance management
- ❖ Suboptimal stock management
- ❖ High system costs

To address these challenges, Nigeria set out to create sustainable E2E visibility into the supply chain across 5 health programs – *HIV, Malaria, Family Planning, Tuberculosis and Maternal, Newborn & Child Health*

Goals of NHLMIS

- ❖ Improve cost savings for data collection and lower inventory and transportation costs
- ❖ Reduce amount of redundancy and overlap in the warehousing and distribution systems
- ❖ Significantly reduce the occurrence of stock out situations at facilities
- ❖ Minimize wastage within the system
- ❖ Significantly lower time to respond to low stock or stock-out situation ultimately avoiding stockouts
- ❖ Entrench ownership and accountability into the supply chain particularly at government/state LMCUs

Key Modifications made to the Nigerian Supply Chain

- ❖ One central Data Repository: To help Improve access to datasets at all levels of the supply chain
- ❖ Timely Visibility into warehouse data: To reduce stock out rates and provides more accurate and timely LMD plans based on available stock
- ❖ Dashboard Visibility across all levels to support state and national programs with key data points to improve decision making.
- ❖ Unified data, ordering and distribution flow across programs

Key Features of NHLMIS

NHLMIS Feature	Goal	Impact Area
Interoperability	<p>APIs for integration with Warehouse, e-POD and DHIS</p> <p>2 systems created</p> <p>Impact</p>	<ul style="list-style-type: none"> ❖ NHLMIS can send available data sets and receive batch specific warehouse inventory levels and proof of delivery data ❖ Reduce write-offs
Orders and Rationing	<p>LMD feature has simplified the ordering process, reducing time to place orders by 4 weeks</p>	<ul style="list-style-type: none"> ❖ Real time data for order processing ❖ Better integration between warehouse and regional managers ❖ Increased visibility on commodity pipeline
QC Alerts	<p>Customised Alerts for different programs based on specific business rules that apply to programs</p>	<ul style="list-style-type: none"> ❖ Improves Data Quality ❖ Data and processes to aid addressing of stockouts, data quality and reporting issues

Key Features of NHLMIS

<p>Analytics Dashboard</p>	<p>Cross Program centralised visibility into supply chain performance, and effective supply chain services.</p> <p>Key Indicators Include:</p> <ul style="list-style-type: none"> ❖ Stock Reporting Rate ❖ Flagged reports ❖ Stock Out Rate ❖ Months of Stock ❖ Mos Cover ❖ Mos+orders: ❖ Expiry Indicator ❖ Average Monthly Consumption 	<ul style="list-style-type: none"> ❖ Improves performance management ❖ Improves stock-management efficiency ❖ Lowers Cost of managing commodities especially with expiry indicator and Batch level Visibility ❖ Significantly reduce the occurrence of stock out situations at facilities ❖ Minimize wastage within the system ❖ Significantly lower time to respond to low stock or stock-out situation ultimately
<p>Master Data Management</p>	<p>Master data interface created Impact</p>	<ul style="list-style-type: none"> ❖ Admin users can manage the database of facilities and other users on the NHLMIS interface

5 Public Health Programs now onboarded and reporting nationwide on NHLMIS

Public	Family Planning	17,684
Added Q2	Malaria	110,564
	HIV-AIDS	157
	Maternal & Newborn Child Health	246,619
	Tuberculosis	118,061

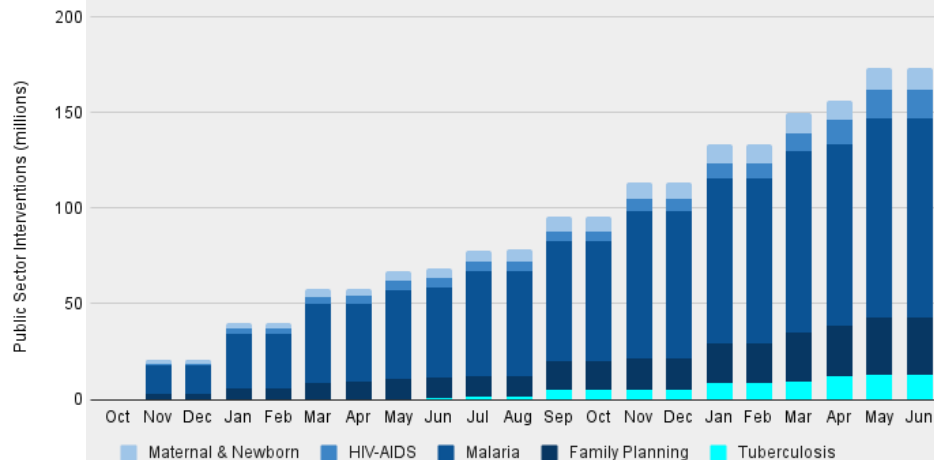
30k facilities reporting on NHLMIS

12,746 users on NHLMIS

The LMIS has now enabled over 193 million pharmaceutical interventions (measured by consumption) since 2016.

Tuberculosis reporting scaled up nationally.

Pharmaceutical Interventions Enabled | Q4 2019 to Q1 2021



CONCLUSION



TechNet-21

