


Implementation of GS1 Standards in Pakistan

Results of Piloting in Public Health Supply Chains

Dr. Muhammad Tariq
Country Director, USAID | DELIVER PROJECT, Pakistan
TARIQ@deliver-pk.org / MTARIQ@myuw.net
21-23 April 2015, Mexico City

USAID | DELIVER PROJECT



FROM THE AMERICAN PEOPLE

Country Overview

Total population: ~196 million
Size: 796,095 sq km

Administrative structure:


- 5 provinces
- 143 districts
- 4 Federally administrated regions (GB, AJ&K, FATA and ICT)


USAID | DELIVER PROJECT

FROM THE AMERICAN PEOPLE

What was our mandate



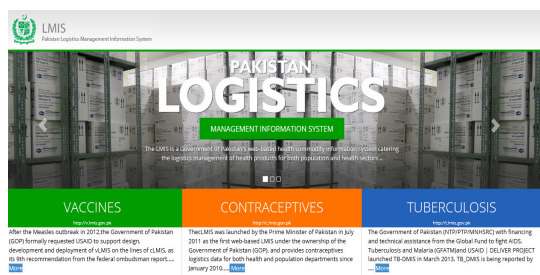
Better Governance and Accountability of FP & EPI/PEI Supply Chains




USAID | DELIVER PROJECT

FROM THE AMERICAN PEOPLE

A Model for the Global Community: Open Source LMIS



2014 2011 2013



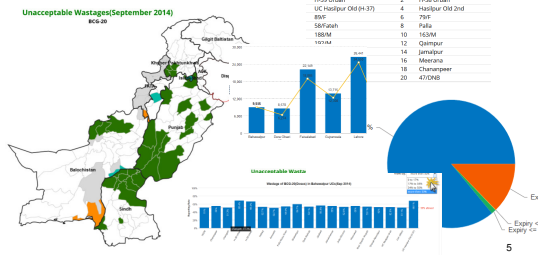

USAID | DELIVER PROJECT

FROM THE AMERICAN PEOPLE

vLMIS – Better insight through data

Unacceptable Wastages (September 2014)

S.No	Union Council Name	S.No	Union Council Name
1	16-20 Urban	2	16-20 Urban
4	Hazipur Old 2nd	4	Hazipur Old 2nd
6	796	6	796
8	Fala	8	Fala
10	153M	10	153M
12	Changpur	12	Changpur
14	Jamshaur	14	Jamshaur
16	Akernana	16	Akernana
18	Changspen	18	Changspen
20	47406	20	47406

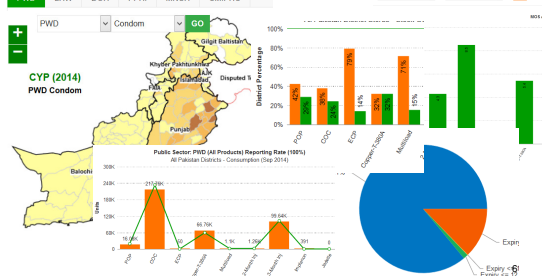
USAID | DELIVER PROJECT

FROM THE AMERICAN PEOPLE

cLMIS – Better insight through data

PWD LHW DOH PPHI MNCH CMPHC

PWD Condom



USAID DELIVER PROJECT
FROM THE AMERICAN PEOPLE

Background

- Directorate Central Warehouse, Karachi is using pre-printed non-GS1 Bar codes for tracking contraceptive commodities since Aug 2012
- Logistics management information system (LMIS) is being used as a central database to store and share barcode information (batch number) for any particular product
- Vaccine and Contraceptive LMIS Release 2 was mandated with bar code tracking of commodities
- GS1 barcode Pilot was planned from Dec14 to May15

7

USAID DELIVER PROJECT
FROM THE AMERICAN PEOPLE

Supply Chains

8

USAID DELIVER PROJECT
FROM THE AMERICAN PEOPLE

Pilot Products

Contraceptive

Vaccine (Measles & Tetanus Toxoid)

9

USAID DELIVER PROJECT
FROM THE AMERICAN PEOPLE

Vaccines Bar coding Process Diagram

10

USAID DELIVER PROJECT
FROM THE AMERICAN PEOPLE

Scanning Device & Concept

11

USAID DELIVER PROJECT
FROM THE AMERICAN PEOPLE

Training & visit by VPPAG

- Trainings on GS1 standards:
 - Federal EPI Store users – Jan 2015
 - Provincial and District users – Feb 2015
- Kaleb Brownlow visits Federal store to hear progress from National Manager EPI, Dr. Saqlain Gilani

12

USAID DELIVER PROJECT
FROM THE AMERICAN PEOPLE

WHAT HAVE WE LEARNT

13

USAID DELIVER PROJECT
FROM THE AMERICAN PEOPLE





Bar code suitable for National, Provincial but not district level due to unavailability of barcode on sub-secondary package

- Secondary package (with GS1- DataMatrix bar code) of Measles 10 dose or TT vaccine from SII has 06 sub-secondary packs with 50 vials and it contains no bar code.
- In districts, average issuance for a Union Council is approx. 100 vials of Measles, where one or two sub-secondary packs are being issued and due to no printed bar code, scanning could not be carried out

14

USAID DELIVER PROJECT
FROM THE AMERICAN PEOPLE

Bar code solution is suitable for National, Provincial but not district level, due to unavailability of barcode on sub-secondary package


Healthcare Product		
Primary packaging (one vial)		No Bar code
Sub-Secondary packaging (multipack - 1 box of 50 vials each)		No Bar code
Secondary packaging (6 multipacks of 50 vials each)		GS1-DataMatrix
Tertiary packaging - (4 multipacks of secondary packaging)		GS1-128

15

USAID DELIVER PROJECT
FROM THE AMERICAN PEOPLE

Serialization and Delimiter Character

- For complete tracking of products, serialization is key to accuracy as it avoids double scanning and tracing of batches through out the supply chain
- GS1- DataMatrix from SII has no delimiter character while parsing scanned string to separate variable length serial number and the batch



GTIN : (01) 08901213032357
 EXP : (17) 170300
 B . NO : (10) 01984006A
 S . NO : (21) S9PC3GC42DDH5GNKG3VJ

16

USAID DELIVER PROJECT
FROM THE AMERICAN PEOPLE

Case study of using serial and delimiter

- During pilot it was required to have physical count and during physical count it was found that 160 boxes were scanned twice. This fact was found due to serial number of boxes
- GS1-Data Matrix Bar code Measles-10 from SII
 - 0108901213035006
 - 17160200
 - 10004M4012
 - 21S5PZ3JCX2GD5RAPA3AYF
- 10 & 21 identifier can be part of serial or batch number, hence we used 21S as unique string to separate serial

17

USAID DELIVER PROJECT
FROM THE AMERICAN PEOPLE


Quality of bar code


- Bar codes need to be printed on paper sticker instead of rough box surface.
- Suppliers may consider quality of bar codes issue like no, skewed and deformed bar codes

Skewed



printed on rough surface





18

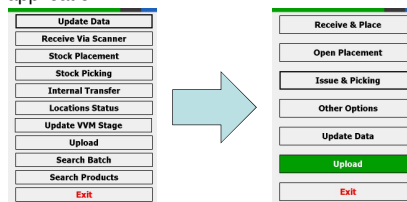
Mix batches and lose products

- Mix batch in a secondary box requires multiple bar codes or needs to be avoided
- Consignments must be round to secondary package and must not contain any lose products

19

Simplification of vLMIS Scanner App

- Simplification and enhancement of bar code scanner application



Before Pilot

Current

20

vLMIS is the “Immunization Performance Management System” of Pakistan for good governance and high accountability of global and domestic investments

Summary of Recommendations

- Create demand and preparedness within host countries to procure GS 1 complaint supplies
- Vaccine industry responds to GS 1 pilot experience in Pakistan and other countries
- The industry is requested for adequate preparedness on GS 1 compliance for all antigens
- Pakistan needs resources to scale up GS 1 to all remaining 175 locations of the country

21

Thanks

For more information

www.deliver.jsi.com
www.lmis.gov.pk