A story about the supply chain challenges in country
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Immunization supply chain system
Backbone of national immunization programmes

- Manufacturer
- Shipments
- Vaccine Arrival
- Ordering
- National Store
- Sub-national Stores
- Health Centers
- Service Delivery
- Waste management
- Records
- Analysis
- Forecasting
- Reports
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Immunization supply chain system
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Supply chains developed over 30 years ago!

Taken for granted that these systems run smoothly today

Recent evidence indicate that systems are stretched

And will be a bottleneck to new vaccine introduction if we continue with “business as usual” approaches to addressing current and future challenges!
Vaccine Arrival

Frequency and quantities are increasing

One of 20+ vaccine shipments arriving per year

Source: Dereje Haile (UNICEF)
Vaccine Arrival

Vaccine volume beginning to exceed management capacity

Shipping container of pneumococcal vaccine = 400 kg / 2m tall

Palletized containers and no forklift

Non-recyclable containers

Source: Serge Ganivet (WHO)
Storage Capacity

More and new vaccines fill limited space
Temperature Control

Temperature monitoring essential but costly and not prioritized

Ice covered boxes of vaccines

Ice covered floor of the cold room

Source: Serge Ganivet (WHO)
Maintenance

Cold chain equipment requires regular maintenance

Cold room door no longer closing

In Nigeria, 40% of the cold chain equipment is non-functional

lack of spare parts and technical ability to maintain equipment

Source: Serge Ganivet (WHO)
In-country transport is the weakest link in the supply chain. In-country transport of vaccine often lead to temperature excursion.
Distribution

Getting more vaccines to remote communities is difficult

Reaching the last mile with more vaccines is a challenge

Source: Dereje Haile (UNICEF)
Infrastructure

Ancient and inefficient equipment is still used at health center level

Inefficient and costly kerosene refrigerators still used today

Source: Simona Zipursky (WHO)
Human resources

The supply chain extends all the way to service delivery

New vaccines means health workers need to carry more and more supplies
Vaccine Management

Avoidable wastage is widespread

VVM is great innovation...
... but makes the amount of damaged vaccines visible from poor vaccine management

Source: Patrick Lydon (WHO)
Vaccine Management

Use of expired and poorly stored vaccines is a concern

Expired vaccines still being administered in October 2010

Source: Diana Chang-Blanc (WHO)
Waste Management

More and more syringes to dispose of safely
Information Systems

Point of service data could help improve forecasts

Paper based system is time-consuming and error prone

Challenge of getting timely information of vaccine stocks at lower levels to improve forecasting of needs

Source: Aya Kouame (Independent)
Thank You