Vaccine Supply Chain Transition

14th TechNet Conference
11-15 May 2015
Bangkok, Thailand
Presentation Outline

- Introduction
- Transition strategy for vaccines
- Achievements
- Challenges
- Way forward
Ethiopia: located in northeast Africa
Area: 1,104,300 square kilometers
Total Population: ~90 million (CSA projection for 2014)
Average size of household: 4.6
Ethiopia is decentralized country:
- 9 Administrative Regional States
- 2 City Administrations
Strategic Components of the Supply Chain

- Improve availability of affordable essential pharmaceuticals at health facilities from the average 55% to 100%
- Delivery to public health facilities on average every 2 months (pull/ordering basis)
- Reduce overall pharmaceuticals wastage from average 8% to less than 2%
- Rational use of medicines (managerial component)
- Enhance the construction of infrastructure and distribution networks (within 180 -300 km radius)
- Strengthen revolving drug fund (RDF) utilization and its management
- Strengthen information links and use for efficient and effective health commodity management
Spatial Distribution of PFSA Hubs in the Country
Existing Country Context for Vaccine Distribution

Cold Chain system for vaccines and other cold storage requiring health commodities consists of five levels, following the FMOH administrative structures:

PFSA Central → RHBs → ZHDs → WoHOs → HFs
Transition Strategy for Vaccines

• Policy decision in 2013 to transfer responsibility for vaccine supply chain to Pharmaceuticals Fund & Supply Agency (PFSA), Federal agency responsible for distribution of essential medicines and most other health commodities

• Rationale:
  - Professional SC Agency (PFSA) with expertise
  - Successful record: availability of basket of essential medicines c. 90%
  - GFATM, GAVI, USAID already investing in PFSA (warehouses, vehicles, capacity building)
  - Potential synergies for storage, distribution, information systems, etc.
To implement the transition process there will be two activities undertaken simultaneously:

- The transition process in selected (three) Phase I Hubs
- Implement preparatory activities for the remaining hubs to fully transit vaccine supply chain management.
# Supply Chain Comparison

<table>
<thead>
<tr>
<th></th>
<th>Essential Medicines</th>
<th>Vaccines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>PFSA – Federal SC Agency which supports MOH in its mission</td>
<td>MOH administrative structures (devolved)</td>
</tr>
<tr>
<td># Levels</td>
<td>Three</td>
<td>Five</td>
</tr>
<tr>
<td></td>
<td>Central - PFSA hub - Facility</td>
<td>Central - Regional - Zonal - Woreda (District) - Facility</td>
</tr>
<tr>
<td>HR Capacity</td>
<td>Dedicated SC professionals</td>
<td>Poorly training, transient healthcare providers</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>•New, well-designed warehouses (11 upgrades + 6 new) with cold rooms</td>
<td>•Existing cold rooms</td>
</tr>
<tr>
<td></td>
<td>•Dedicated fleet with new cold trucks</td>
<td>•General purpose vehicles and no cold trucks</td>
</tr>
<tr>
<td>Information</td>
<td>Automated at center and hub level, live dashboards for data visibility. Paper-based</td>
<td>Old paper system – very limited data visibility</td>
</tr>
<tr>
<td>Systems</td>
<td>at facility level</td>
<td></td>
</tr>
<tr>
<td>Delivery</td>
<td>Bi-monthly</td>
<td>Quarterly for center to region and monthly at lower levels</td>
</tr>
<tr>
<td>Schedule</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Transition Strategy (cont.)

1. Develop transition plan
2. Procure infrastructure – cold rooms, cold trucks
3. Create a coordinating body:
   PFSA, FMOH, JSI, UNICEF, WHO, CHAI (Federal level) &
   also at regional/hub level
4. Phased approach (allows learning, lessens risk)
   a. Take over management of central cold store
   b. Distribution of vaccines for campaigns (before routine)
   c. Begin distribution from 3 hubs (only)
   d. Adapt inventory management/LMIS tools already used by PFSA to vaccines (before transition)
Achievements

Infrastructure:
- 20 refrigerated trucks procured and deployed
- 17 cold rooms procured; installation begins in May

Storage & Distribution:
- PFSA managing vaccine stores at central level
- PFSA distributing vaccines for campaigns to woreda level
- Distribution of vaccines from first hub began in April

System Design:
- SOPs for vaccine management prepared & reviewed in April
- Distribution analysis carried out for one hub, including analysis of monthly vs. bimonthly delivery
Achievements (cont.)

• Management Information Systems
  – Existing inventory management software for essential medicines (HCMIS) expanded and deployed to manage vaccines at central & regional cold rooms
  – HCMIS currently being used at xx RHBs and hubs
  – Vaccine specific features (e.g. VVM) added & implemented
  – HCMIS Dashboard provides live vaccine commodity data for central and regional levels
Challenges

- Cold room maintenance – shortage of expertise, need to develop internal capacity within PFSA
- Replenishment: coverage targets/demographics vs. consumption
  - Resupply schedules: monthly vs. bimonthly given cold storage constraints and transport costs
- Direct delivery to facilities as a goal: current plans are for delivery to Zones and woreda level only due to constraints of resource and capacity at the health institution.
Way Forward

- Enhance learning process from the implementation of vaccine roles in center and Phase I hubs.
- Replicate good practices from the transition in Phase I sites to the next group (Phase II includes 8 hubs)
- Install new cold chain equipment in all PFSA hubs
- Coordinate the supply chain transition with the programmatic aspects of EPI
- Enhance capacity building at all levels for management of supply chain for vaccines and related supplies.
Thank you!