Outline of presentation

- Background on UNICEF vaccine procurement
- Update on UNICEF bar coding
- Environmental management/sustainable procurement
- CTC & DPCP
- Update on Vaccine Arrival Reports
UNICEF has a key role in Vaccine Procurement and procuring Immunization Supplies on behalf of around 100 Countries annually.

- **2016**
  - Vaccines Supplies: US$ 1.64 billion
  - 2.50 billion doses
  - 2,613 shipments

Vaccines:
- DPT
- TT/Td/DT
- Measles
- containing, OPV, HepB, YF, DTP-HepB-Hib
- Meningitis, PCV, RV,
- IPV, HPV, etc.

Injection equipment
Cold Chain Equipment

Source: UNICEF Supply Division
Delivering Vaccines to Children in Need goes beyond delivery to Port of Entry

- Latin America & Caribbean: 20
- West & Central Africa: 903
- East & South Africa: 543
- CEE/CIS: 183
- Middle East North Africa: 231
- South Asia: 375
- South East Asia & Pacific: 255
4.2.9 LABELLING AND BAR CODING
Labelling and bar coding are included in WHO’s guideline "Assessing the programmatic suitability of vaccines considered for WHO prequalification" as preferred vaccine characteristics.

Programmatic preference for Labels and Barcodes are:

- **Labelling:** Primary and secondary containers should be labelled according to the principles set out in TRS 996, Annex 2.
- **Bar Coding:** Bar codes are recommended on all packaging levels used by manufacturers, with the exception of primary packaging, and should conform to GS1 standards. The bar codes should include Global Trade Item Number (GTIN), lot number and expiry date.
Update on UNICEF Barcoding project

Phase 1
GR into UNICEF warehouses
mInventory

Phase 2
IM/WM/inventory count
For UNICEF warehouse

Phase 3
GR by IP
mHandover

Phase 4
GR by PS
customer mHandover

Phase 3 & 4 depends on outcome on licences

Next steps
UNICEF may reach out to vaccine in 2018 to understand the feasibility of adding barcodes to export boxes

Challenges for GS1
- UNICEF material number
- PO and line item number
- UNICEF kits
- Inventory management

mInventory successfully piloted in Nepal, Haiti and Uganda in 2016
Up-grade of mInventory implemented April 2017
Fourth pilot country office warehouse: Sierra Leone March 2017
First pilot Supply Division warehouse Hub: Dubai April 2017

New project for UNICEF to conduct a thorough cost and impact analysis and recommendations for adopting GS1 standard in UNICEF.
Move towards a more sustainable procurement (SP) approach encouraging product innovations that reduce the overall carbon footprint and waste disposal requirement.

The Joint UN Agencies Statement of Intent ‘Move towards a more sustainable procurement approach encouraging product innovations that reduce the overall carbon footprint and waste disposal requirement’
Environmental management/sustainable procurement

ESM entry points in the life cycle of a vaccine

Integrating environmental sustainability management (ESM) in the vaccination programme

Production
Transportation
Storage
Sustainable transportation and efficiency planning
Health center
Resilient and sustainable immunization services for children
Waste disposal

Applying an environmental lens to procurement regarding products, equipment and packaging
Improved supply networks through sustainable transport and efficiency planning
Sustainable energy can improve the resilience of energy access and the cold chain
Improved supply networks through sustainable transport and efficiency planning
Sustainable energy can improve the resilience of energy access of health centers for cooling vaccines and other services
Sustainable waste management
In the next tender round, the intent is to focus on multiple elements crossing the 3 pillars (Environmental, Economic, Social) of SP and extending along the supply chain, including

- Influencing Industry’s Sustainable Procurement Policy: Continue driving for green manufacturing (QMS) and address social SP elements through requiring industry to report on such;
- Implementation of Sustainable Procurement Criteria within the Tender activity, including SP elements in the tender evaluation (Weight, Volume, Local manufacturing); GTC requirements
- Internal process: introduce step one of e-tendering through switching from Paper based to Electronic bid submissions.

Leveraging the procurement function to reduce the resultant waste generated.

Target: 20 percent of awards made to new Local Manufacturers by 2021
(i) stimulate local production facilities to reach the required quality standards and (ii) to grow local production.
Commitment To Equity

For UNICEF, **equity** means that all children have an opportunity to survive, develop, and reach their full potential without bias or favoritism.

Wherever the poorest children are… wherever the most vulnerable children are… wherever the forgotten children are… that is where we must also be—in even greater measure.

Anthony Lake, UNICEF Executive Director

*UNICEF see both CTC and DPC as essential work to reach the 5th child*
UNICEF’s Role in promoting Vaccine Formulations with potential to support closing the Equity Gap

Vaccines in Controlled Temperature Chain

• Increasing country awareness and demand:
  – Communication to +100 countries in UNICEF’s annual forecasting letter 2017
  – Requesting indications of interest to apply CTC and switch – fully or partially - to vaccines approved for CTC once available through UNICEF
  – Support documentation, advocacy with national governments, communication and social mobilization and in-country implementation

• Stimulating the supply side:
  – In line with vaccine and immunization strategy focus, to encourage manufacturers to pursue CTC indication – potentially consider pull mechanisms
  – Include and consider CTC as an evaluation criteria in UNICEF tenders starting 2017 for suitable vaccines

CTC has the potential to reduce logistics costs at lower levels and increase vaccine reach and coverage – requiring a total systems costs approach beyond vaccine prices
**UNICEF’s Role in promoting Vaccine Presentations with potential to support closing the Equity Gap**

**Vaccine Product Presentations**

- Developing country preferences for vial sizes:
  - Historically: Multi-dose vials used in developing countries
  - New vaccines, early product life cycle: Single or low MDVs (penta: 1+2 ds, PCV: 1+2 ds)
  - Over time: Countries switching to larger vial sizes (penta: 10 dose; PCV: 4 dose)
  - Lowest cost per dose, easing burden on supply and logistics, including cold chain due to reduced per dose volume, maximizing production output

- Moving cost-efficiency from decision maker to health care worker:
  - Hesitancy to open large vial of expensive vaccine to reduce wastage in RI? Risks of suboptimal coverage, delayed immunizations; and drop outs. Smaller vial sizes – reduced risk of AEFI?
  - Improved data required on the effects of dose per container choices on key elements of immunization programmes - case studies in progress

- Through Dose Per Container Partnership better guidance to countries and industry; requesting guidance from countries on preferred presentation beyond those available

**Optimal vial size – or mix of vial sizes? – depends on setting of each immunization activity and has potential to improve health impact**
Some issues that may have links with TSE

- Focus more on the customer - (the customer is not necessarily the one who pays for products but who ultimately uses them) - go and meet them and have them input in product design!
- EPI managers have become more informed and need to be responded to - they are your market influencers and need more choice!
- Designing more pro-grammatically suitable vaccines needs an understanding of the front line health workers, beneficiaries and the PHC context in which vaccines are delivered (also urban / rural and foxed site / outreach / mobile delivery all have specific needs that may need different products)
- Vaccine presentations influence (there are trade offs) coverage, cost, equity, safety, wastage and HCW behaviour - these dimensions need mapped out and considered
- think of a menu approach of presentations that considers trade offs between different aspects of presentation and the effects on systems – DPC Partnership is considering this and this could be a useful addition to TSE work

Source: JSI
Vaccine Arrival Report App to be Launched Globally

Supply Division is developing an electronic version of the Vaccine Arrival Report (VAR).

As part of the shipping process, the VAR is a requirement in the WHO guidelines on international packaging and shipping of vaccines which requires all countries to complete a paper-based form and return to SD within three days of receiving the shipment.

The current rate of return of the VAR to SD within three days is less than 40 percent.

This can lead to inaccurate and delayed information in the reports, hindering a timely response by UNICEF.

Implementation of the VAR app is expected to lead to time and cost savings. The faster turnaround time for receipt of the VAR, which in turn allows for faster notification of shipment inadequacies, will enable UNICEF and suppliers to respond to inadequacies in a timelier manner.

During 2015-2016, a pilot was conducted by the Albania, Turkmenistan, Nigeria, and Somalia Country Offices. The app was used by consignees in the respective countries and received positive feedback. The roll-out across all UNICEF country offices is scheduled for Q1 of 2018.
### Vaccine Arrival Reports

*Percentage of Vaccine Arrival Reports (VAR) received at SD of total vaccine shipments – Target 80%

<table>
<thead>
<tr>
<th>KPI6 – Vaccine Shipments inspected</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Shipments</td>
<td>2511</td>
<td>2619</td>
</tr>
<tr>
<td>Number of VAR Received</td>
<td>2276</td>
<td>2548</td>
</tr>
<tr>
<td>Percentage of VAR received</td>
<td>91%</td>
<td>97%</td>
</tr>
<tr>
<td>Number of VARs received within 3 days</td>
<td>663</td>
<td>936</td>
</tr>
<tr>
<td>Percentage of VAR received within 3 days</td>
<td>26%</td>
<td>37%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q1 2016</th>
<th>Q2 2016</th>
<th>Q1 2017</th>
<th>Q2 2017</th>
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<tbody>
<tr>
<td>800</td>
<td>627</td>
<td>615</td>
<td>580</td>
</tr>
<tr>
<td>776</td>
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<td>573</td>
<td>559</td>
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<td>92%</td>
<td>93%</td>
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<tr>
<td>262</td>
<td>268</td>
<td>228</td>
<td>229</td>
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<tr>
<td>34%</td>
<td>43%</td>
<td>37%</td>
<td>39%</td>
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</tbody>
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### New* Vaccine Inspection Timeliness

Inspection timeliness is measure days between arrival of shipment at airport of destination and date of inspection at Central store as reported by consignee on the VAR.

<table>
<thead>
<tr>
<th>Vaccine Shipment Inspection Timeliness</th>
<th>Q1 2017</th>
<th>Q2 2017</th>
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</thead>
<tbody>
<tr>
<td>Number of Shipments</td>
<td>615</td>
<td>580</td>
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<tr>
<td>% of Shipments Inspected &lt;=1 day</td>
<td>81%</td>
<td>79%</td>
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<tr>
<td>% of Shipments Inspected 2-3 days</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>% of Shipments Inspected 4+ days</td>
<td>12%</td>
<td>13%</td>
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</tbody>
</table>

- Inspection timeliness introduced in 2017 to show VAR delays in customs/inspection vs submission of VAR
- Q2/Q3 focus on top 10 poor performing countries to understand reasons for VAR delay
- VAR Mobile App project to scale up Q3/Q4 to support VAR timeliness
Real Equality is Equity