Overview of procurement of Immunization Devices including forecasting process and accuracy
UNICEF Supply Does Make a Difference...

• The overall procurement strategy is to ensure an uninterrupted sustainable supply of affordable quality products.

• UNICEF has played the role of a market shaper for AD syringes and remains one of the world’s largest buyers of AD syringes: around 504 million syringes for over 80 countries in 2012.
UNICEF forecasted AD Syringes and Safety boxes market share (2013 - 90 countries)

Safety Boxes excluding India
- 36% Others
- 64% SD

AD Syringes excluding India
- 31% Others
- 69% SD
Injection Safety
Objective - Prevent reuse of syringes which may have resulted in number of cases of HIV (260,000), Hepatitis B (21 mio) and C (2 mio).

- No harm to the recipient
- No harm to the health-care worker
- No harm to the community
Safe Disposal of Injection Equipment and Other Sharps in Safety boxes – the first level of waste management

• Prevents needle sticks

• Disposed off immediately in leak-proof, puncture-proof containers such as needle-disposal boxes, sharps containers, or safety boxes.
Guiding elements, QA and management
Driving Elements for the Management and Procurement of Devices

• WHO/UNFPA/UNICEF Joint Policy on Injection Safety

All countries should by 2003 use only Auto-Disable (AD) syringes for immunization injections, (1999)

• Bundling Policy

From a forecasting, funding and planning perspective, ensure availability of sufficient numbers of AD syringes, reconstitution syringes and Safety boxes for each vaccine dose.

Number of AD syringes = (number of vaccine doses – wastage)*1.1
Number of reconstitution syringes = (number of vials)*1.1
Number of safety boxes = ((number of AD’s + reconstitution syringes)/100)*1.1
WHO Standard (PQS) Forms The Core Guide supplemented with QAC controls

- WHO PQS Pre-qualification is a mandatory criteria to be eligible for an award in UNICEF

- WHO obtains feedback on UNICEF supplies and WHO provides technical guidance to UNICEF

- UNICEF SD Quality Assurance Centre is responsible for sample review and also testing and inspections on supplies as well as complaints handling.

- All awards for immunization devices are subject to a successful plant inspection undertaken by Quality Assurance Centre.

- Each awarded product must have gone through a successful user friendly field trial (applicable for AD syringes)
Management and Procurement

- **Annual forecasting process** for > 90 countries (routine, supplementary, stock-levels/stock outs, funding sources, procurement channels and shipment plans), including RUP (2008)

- Use of **multi year Long Terms Arrangements** with several suppliers as a result of an international competitive tendering process.

- **Allocation sheets** to ensure global availability and timely delivery

- **Working towards introducing new products** to countries
The current market
The market has moved from an almost monopoly situation to a healthy market with several stakeholders including in developing countries.

- > 50% price reduction (current WAP <4.5 cents a piece) – bulk procurement, economy of scale, product development and increased competition
- Reduced risk of re-use
- Product development - From larger to smaller products, using less material, less waste, optimising freight and lower prices – an overall more sustainable and environmental friendly supply
- Annual turnover: USD 22.8 million (2012)
Safety Box Supply and Management

• Increased competition including product development

• Price is heavily dependent on the paper and pulp market

• Increased number of suppliers, however remains limited.

• Annual turnover: USD 9.7 million (2012)
Current Long Term Arrangement period 2011-2013 and price range

• 5 LTA’s for 0.5 ml AD syringes
  Price range between: 3.92 cents – 4.65 cents per syringe

• 2 LTA’s for 0.05ml BCG syringes
  Price range between: 5.29 – 5.50 cents per syringe

• 2 LTA’s for 5L safety boxes
  Price range between: USD 0.488 – 0.580 per box

• Detailed prices could be found on UNICEF website: http://www.unicef.org/supply/files/Auto-disable_AD_syringes_and_Safety_Boxes_price_data.pdf
Demand and price development
After the peak, 2005-2007 the demand is back at levels of 2002 and 2004, with a weighted average price below 4.5 cents.
Price sensitivity due to EURO/USD and volatile paper and pulp industry (safety box procurement 2000-2012)
GAVI remains the main funding source for UNICEF SD procurement of AD syringes
GAVI together with Procurement Service partners are the main funders of UNICEF SD procurement for Safety Boxes.
The main procurement service customers are governments for AD syringes.
Governments are the dominating procurement service customers for Safety Boxes

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Main destinations for supply
More than 70% of the AD syringes are for the African continent (2008-2012)
UNICEF Safety boxes procurement is more fragmented (2008-2012)

- CEE/CIS: 32.6%
- EAPRO: 25%
- ESARO: 19%
- MENA: 7.2%
- ROSA: 6.5%
- TACRO: 5.9%
- WCARO: 3.8%
Forecast process
Immunization devices are forecasted in the same way as vaccines

Annual forecast exercise covering a 5 year period
• First year split on a month by month basis
• Remaining years as an annual quantity
• Covers routine and supplementary activities

Country Driven Process
• Primary Source of Country Data
• Standardized format of data capture, known software
• Data capture for evaluation purposes

SD Evaluates Country Forecast against:
• Country Specific Data provided in the forecast; Partner programmatic information; prior history
• Forecast Accuracy; Historical procurement figures and Current orders

Review and Clarification process
• Overviews generated by product
• Reviewed for peak demand periods, funding shortfalls, adjustments made

Quantities are issued to industry
Sample of the Forecasting tool - Identifying needs -

1. TOTAL PROGRAMMATIC REQUIREMENT 2009

- Please indicate if Forecast was developed in consultation with ICC:
  - If no, please indicate why below:

- Please indicate if Forecast is integrated in National Plan:
  - If no, please indicate why below:

- Please indicate if Forecast reflects routine and supplementary activities:
  - If no, please indicate why below:

Are vaccines required to be registered with the National Regulatory Authority?

Table 1

<table>
<thead>
<tr>
<th>Products: ROUTINE activities</th>
<th>Target Age Group</th>
<th>Target Population</th>
<th>Estimated Coverage 2009 (%)</th>
<th>Estimated Market Size 2009 (%)</th>
<th>Normal Stock Size</th>
<th>Current Stock</th>
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</table>

(a) Coverage for TT should relate to the target population indicated (pregnant women or women of child-bearing age)

(b) Please specify the Mumps strain preference here:

Table 2

<p>| Table 3 |
|---------|---------|---------|---------|---------|---------|---------|---------|</p>
<table>
<thead>
<tr>
<th>Devices</th>
<th>Normal Stock Size</th>
<th>Current Stock</th>
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<tbody>
<tr>
<td>BD0 Sylgard © 0.5 ml</td>
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<tr>
<td>Ad-Syringe, 3 ml</td>
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<tr>
<td>Reconstitution Syringe, 0.5 ml</td>
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<td>Reconstitution Syringe, 10 ml</td>
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<td>Stock Av. 3L</td>
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Table 4

<table>
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<tr>
<th>Products: SUPPLEMENTARY activities</th>
<th>Target Age Group</th>
<th>Target Population</th>
<th>Estimated Coverage 2009 (%)</th>
<th>Estimated Market Size 2009 (%)</th>
<th>Normal Stock Size</th>
<th>Current Stock</th>
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</table>

(a) Please specify the Mumps strain preference here:

Table 5

| Subtotal Routine 0.5ml Ad Syringes: | 0 | 0 | 0 |
| Subtotal Routine 2.8ml Reconstitution Syringes: | 0 | 0 | 0 |
| Subtotal Routine 5.0ml Reconstitution Syringes: | 0 | 0 | 0 |
| Subtotal Routine 10.0ml Reconstitution Syringes: | 0 | 0 | 0 |

2. REPORT OF STOCK-OUTS

Please indicate if you had a stock-out at central level in 2008:

- If yes, please indicate below which product(s):
- If yes, please indicate below when and for how long:
- If yes, please indicate below causes, corrective measures, action being taken:
### Table 6  PROCUREMENT QUANTITIES and MECHANISM

<table>
<thead>
<tr>
<th>Products: ROUTINE activities</th>
<th>Total No. of Doses/Caps/Tabs to be procured</th>
<th>No. of Doses/Caps/Tabs to be procured through UNICEF SD</th>
<th>No. of Doses/Caps/Tabs to be procured by Government or other Agencies/Orgs.</th>
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### Table 7  FUNDING SOURCE for PROCUREMENT through UNICEF SD (by Type of Procurement)

<table>
<thead>
<tr>
<th>No. of Doses/Caps/Tabs</th>
<th>Programme Funding</th>
<th>Procurement Services</th>
<th>Qty funded by GAVI or MSF (A)</th>
<th>Qty Unfunded</th>
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<tbody>
<tr>
<td>No. of Doses/Caps/Tabs</td>
<td>Qty funded by RR</td>
<td>Qty funded by OR</td>
<td>Qty funded through FS</td>
<td>PS Funding Source</td>
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<th>Devices: ROUTINE activities</th>
<th>Total No. of pieces to procure</th>
<th>No. of pieces to be procured through UNICEF SD</th>
<th>No. of pieces to be procured by Government or other Agencies/Orgs.</th>
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<th>No. of pieces to be procured by Government or other Agencies/Orgs.</th>
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### 4. SHIPMENT PLAN 2009 for Products Procured through UNICEF; and QUANTITY FORECAST for 2010-2013

**Notes:**
1. For 2009, insert the quantities in the cell for the month(s) in which they are requested to be in-country. Special attention should be paid to cold chain capacity when making the shipment plan.
2. For 2010-2013 indicate the total estimated annual quantity of doses/medications.
3. Please note that BCG's vaccine is currently available only in a 20-dose vial presentation.

#### Table 8

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<tr>
<td>AD Syringe, 0.0 ml</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Reconstitution Syringe, 2.0 ml, w/needle</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Reconstitution Syringe, 0.5 ml, w/needle</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Other</td>
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<td>0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>
Forecast accuracy
AD syringes Awarded vs Actual Procurement

<table>
<thead>
<tr>
<th>Year</th>
<th>Awarded</th>
<th>Actual Procurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>82.63%</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td></td>
<td>66.33%</td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td>96.84%</td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td>85.50%</td>
</tr>
<tr>
<td>2012</td>
<td></td>
<td>83.68%</td>
</tr>
</tbody>
</table>

Legend: 
- Blue: Awarded
- Red: Actual Procurement
BCG syringes Awarded vs Actual Procurement

- 2008: 73.56%
- 2009: 80.85%
- 2010: 90.54%
- 2011: 83.14%
- 2012: 80.24%

Legend:
- Awarded
- Actual Procurement
Safety boxes Awarded vs Actual

<table>
<thead>
<tr>
<th>Year</th>
<th>Awarded</th>
<th>Actual off take</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>92.11%</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>96.06%</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>138.82%</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>89.62%</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>125.67%</td>
<td></td>
</tr>
</tbody>
</table>
Multiple causes for Variances in demand

• Slow uptake of new vaccines and therefore related immunization devices
• Competing programmes/priorities
• Delay or lack of Funding - (e.g. large campaigns)
• Independent (un-forecasted) activities
• Outbreaks and emergency response
• Political factors (country preferences)
• Etc, etc ..........

• Continuous dialogue with countries, programmes and suppliers is critical
Enhanced Injection Safety
Additional Injection Safety Elements

• **2005 - Reduce risk of re-use** - UNICEF preference for AD syringes with a location of the disabling mechanism commencing prior to injection of the full fixed dose

• **2006 - Program instruction on RUP syringes** – Enhanced Injection Safety targeting 2ml, 5ml and 10 ml syringes destined for reconstitution of vaccines with a built in safety mechanism preventing re-use

• **2008 - Enhanced Injection Safety** – LTA in place for Re-use prevention featured syringes (RUP), so far around 50 million pcs for 21 countries (2012) and a price below the WAP price for AD syringes (2013).
THANK YOU
Eastern and Southern Africa
*Eastern and Southern Africa Regional Office (ESARO)*
Angola, Botswana, Burundi, Comoros, Eritrea, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Rwanda, Seychelles, Somalia, South Africa, South Sudan, Swaziland, Uganda, United Republic of Tanzania, Zambia, Zimbabwe

West and Central Africa
*West and Central Africa Regional Office (WCARO)*
Benin, Burkina Faso, Cameroon, Cape Verde, Central African Republic, Chad, Congo, Côte d’Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Sao Tome and Principe, Senegal, Sierra Leone, Togo

Middle East and North Africa
*Middle East and North Africa Regional Office (MENARO)*
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Central and Eastern Europe and the Commonwealth of Independent States
*Central and Eastern Europe and the Commonwealth of Independent States Regional Office (CEE/CIS)*
Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Georgia, Kazakhstan, Kosovo, Kyrgyzstan, Montenegro, Republic of Moldova, Romania, Russian Federation, Serbia, Tajikistan, The former Yugoslav Republic of Macedonia, Turkey, Turkmenistan, Ukraine, Uzbekistan

South Asia
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East Asia and the Pacific*
*East Asia and Pacific Regional Office (EAPRO)*
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*Latin America and the Caribbean Regional Office (TACRO)**
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