Web-Based Management Information System for Contraceptive Supply Management in Bangladesh

2011 International Conference on Family Planning, Dakar, Senegal

November 29 – December 2, 2011
Demographic Data Sheet

People’s Republic of Bangladesh at a Glance

- Total population: 148 million [as of 2010]
- Population density: 1,000 per square kilometer
- Growth rate: 1.34%
- Contraceptive Prevalence Rate (CPR): 55.8%
- Total fertility rate (TFR): 2.7%
- Unmet need for family planning: 17.1%

National Average Monthly Contraceptive Consumption

- Condom: 23.2 million
- Pill: 12.6 million
- Injectables: 1.2 million
- IUD: 0.026 million
- Implant: 0.024 million

Family Planning Supply and Information Flow

- Central Warehouse (n = 1)
- Regional Warehouse (n = 20)
- Upazila Family Planning Store (n = 483)
- Service Delivery Points: FWA, UHC, MCWC, H&FWC, NGO (n ~30,000)

FWA: Family Welfare Assistant
UHC: Upazila (sub-district) Health Complex
MCWC: Maternal and Child Welfare Center
H&FWC: Health & Family Welfare Center
NGO: Non-Government organization
Why Use Web-Based Supply Management Tools (1)

- Manual Logistics Management Information System (LMIS)
  - The Management Information System (MIS) unit of the Directorate General of Family Planning (DGFP) had to manually enter all 483 Upazila and 21 regional warehouse reports centrally
  - 2 months to generate LMIS report
  - 2 months to generate supply plan
Why Use Web-Based Supply Management Tools (2)

- Results
  - Lack of timely logistics information for decision making
  - Leading to
    - Sporadic stock-outs
    - Reduced availability of commodities
Supply Chain Information Portal (SCIP)

www.dgfplmis.org

A Central Portal for DGFP under the Ministry of Health and Family Welfare of Bangladesh

The DGFP Supply Chain Information Portal is a website developed by the Strengthening Pharmaceutical Systems Program implemented by Management Sciences for Health with support of the U.S. Agency for International Development.
SCIP Modules and Advantages

The portal consists of four different information blocks:

1. Procurement Tracker
2. Logistics Management Information System (LMIS)
3. Stock Status of Contraceptives
4. Operational Status of MIS Tools

Advantages:

- Procurement Tracker allows tracking of the status of the procurement process every step of the way.
- The LMIS and Stock Status Report provide information on the availability of government-owned reproductive health (RH) commodities and raise an alert regarding possible shortages or overages.
- SCIP also hosts a discussion board, document archive, photo gallery, news, current tender opportunities, tender results, and more.
- Users can monitor the operational status of MIS Tools running at the warehouse and Upazila (subdistrict) levels.
SCIP: Procurement Tracker

- Allows monitoring of procurement packages through interactive dashboard
- Monitors procurement by milestones; delays trigger automated alerts
- Drills down for detailed information on progress of procurement packages
- Helps reduce lead time of procurement processes
- Facilitates efficient and effective procurement management
- Promotes transparency
- Uses a secure site with encrypted data transfer
SCIP: LMIS

- Monitors stock position at all levels through interactive dashboard
- Allows monitoring of consumption trend of RH commodities
- Quickly identifies Upazila (subdistrict) and field level stock-out situation and takes necessary action
- Facilitates stock adjustments considering requirement of commodities
- Allows monitoring of monthly logistics report submission and data accuracy
- Improves supply chain monitoring at all levels
Stock Monitoring at Different Levels

National Contraceptive Summary Report of January 2011

- Condom: 7.1 Months
- Shudhi: 11.2 Months
- IUD: 9.3 Months
- Injectables: 13.5 Months
- Implant: 8.6 Months
- DDS Kit: 14.6 Months

Stock Status of Condom at Regional Warehouses at end of January 2011

- Stock at Upazila
- Consumption Trend

Map showing the stock status of condoms in various regions of Bangladesh, with icons indicating specific locations and stock levels.
Reports Available from LMIS

**Stock Status at Upazila Store and Field on September 2011**

*Reporting rate 100%*

**Stock Status at Store**

- Stock Out: 0.21%
- Potential Stock Out: 1.34%
- Under Stock: 47.51%

**Stock Status at Field**

- Stock Out: 0.21%

**Consumption of Condom from February 2010 - January 2011**

**Stock Status at Upazilla and Field on September 2011**

<table>
<thead>
<tr>
<th>SL</th>
<th>Upazilla Name</th>
<th>RM Name</th>
<th>District</th>
<th>AMD</th>
<th>CBL at Upazilla</th>
<th>MOS</th>
<th>CBL at Field</th>
<th>MOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Alkadam</td>
<td>Bandarban</td>
<td>Bandarban</td>
<td>3.817</td>
<td>13.100</td>
<td>3.4</td>
<td>0.893</td>
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<td>02</td>
<td>Bandarban</td>
<td>Bandarban</td>
<td>Bandarban</td>
<td>5.665</td>
<td>13.000</td>
<td>2.3</td>
<td>12.117</td>
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<td>03</td>
<td>Larna</td>
<td>Bandarban</td>
<td>Bandarban</td>
<td>6.482</td>
<td>4.600</td>
<td>0.7</td>
<td>15.253</td>
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<tr>
<td>04</td>
<td>Lakshimpur</td>
<td>Bandarban</td>
<td>Bandarban</td>
<td>7.101</td>
<td>24.900</td>
<td>3.4</td>
<td>15.474</td>
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<td>05</td>
<td>Brangao</td>
<td>Bandarban</td>
<td>Bandarban</td>
<td>3.149</td>
<td>5.800</td>
<td>1.0</td>
<td>0.491</td>
<td>2.7</td>
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<td>06</td>
<td>Ruma</td>
<td>Bandarban</td>
<td>Bandarban</td>
<td>5.109</td>
<td>9.900</td>
<td>1.9</td>
<td>7.011</td>
<td>1.4</td>
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<tr>
<td>07</td>
<td>Thana</td>
<td>Bandarban</td>
<td>Bandarban</td>
<td>1.455</td>
<td>9.300</td>
<td>0.4</td>
<td>11.827</td>
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<td>Shola</td>
<td>Shola RMH</td>
<td>Shola</td>
<td>15.016</td>
<td>24.900</td>
<td>3.6</td>
<td>49.202</td>
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<tr>
<td>09</td>
<td>Bhalaurdi</td>
<td>Shola RMH</td>
<td>Shola</td>
<td>6.818</td>
<td>25.800</td>
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<td>Char Foezon</td>
<td>Shola RMH</td>
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<td>37.500</td>
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<td>2.4</td>
<td>36.438</td>
<td>3.8</td>
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</table>

Showing 1 to 10 of 432 entries
SCIP: Stock Status Report

Reports the stock status of DGFP commodities to assist in procurement planning. Reports can be downloaded as PDFs.

### DGFP Contraceptive Inventory Tracking Report

**Month: Jan 2011 (Updated 06 Feb 2011)**

<table>
<thead>
<tr>
<th>Year</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Condom</td>
<td>Current Stock (179 m)</td>
<td>2010-11 (GoB 193m) - 11 m.</td>
<td>USAID donations (35m) - 8 m.</td>
</tr>
<tr>
<td>AMC=10 m</td>
<td>Bid opened on 17 January, 2011. BER under preparation.</td>
<td>Out of 150m from 2010-11 GoB, yet to receive 133m. USAID donated out of 100m pcs, 15m received in January 2011.</td>
<td></td>
</tr>
<tr>
<td>Pill</td>
<td>CS (101.3 m) - 11 m.</td>
<td>2009-10 (77.5 m) - 4 months</td>
<td>Kfw 18.4 m</td>
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<tr>
<td>AMC=9 m</td>
<td>Out of 150m of 2009-10, 77.5m yet to receive.</td>
<td></td>
<td></td>
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<tr>
<td>IUD</td>
<td>CS (51.3 m) - 10 months.</td>
<td>2010-11 (Pool fund 0.475m) - 13 months</td>
<td></td>
</tr>
<tr>
<td>AMC=22,000</td>
<td>BER sent to WB on 3 Feb 2011 for NOC</td>
<td></td>
<td></td>
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<tr>
<td>Injectable</td>
<td>CS (15 m) - 10 m.</td>
<td>2010-11 (Pool fund 8m + GoB 7m + 15 m) - 13 months</td>
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<tr>
<td>AMC=15,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMPLANT</td>
<td>CS (2.35 m) - 13 m.</td>
<td>2010-11 (Pool fund 0.35m + GoB 0.0715m + 0.4215m) - 26 months</td>
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<tr>
<td>AMC=15,000 (estimated)</td>
<td>Pool fund 0.35m - BER sent to WB on 2 Feb 2011 for NOC</td>
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<td></td>
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<tr>
<td>DDS Kit</td>
<td>CS (0.088 m) - 10 m.</td>
<td>2010-11 (Pool fund 0.031m + GoB 0.037m + 0.027m)</td>
<td></td>
</tr>
</tbody>
</table>

**Legend:**
- Current Stock of contraceptives
- TBR = To be received (2009-10/11)
- 2010-11 - planned
- AMC = Average Monthly Consumption
- TEC = Technical Evaluation Committee
- NOA = Notification of Award
- BER = Bid Evaluation Report
- NOC = No Objection Certificate
- AMC = Average Monthly Consumption
- TEC = Technical Evaluation Committee
- NOA = Notification of Award
- BER = Bid Evaluation Report
- NOC = No Objection Certificate


*Inventory - includes stock on hand, plus quantities to be received on orders already placed, plus quantities included in procurement packages already approved and being processed.*
SCIP: Functional Status of Tools

Status of WIMS (Warehouse Inventory Management System) software in 21 warehouses.

Status of UIMS (Upazila Inventory Management System) software in 145 subdistrict stores.
Supply Chain Information Portal

Received National Digital Innovation Award 2011 in e-Health category and e-Governance Best Award
Success Story (2)

Web-based LMIS under SCIP is a tool that is now acting as a central repository of logistics data for RH commodities. It addresses a few key areas for real-time, end-to-end logistics management from central stores to service delivery point—

- Generates timely national logistics reports (currently 15 days vs. previous 3 months)
- Monitors stock positions at all levels, allowing quick action as required (data available on web vs. previous prolonged data collection process)
- Quickly identifies warehouse, subdistrict, and field-level stock-out situation, allowing necessary action (data available on web vs. previous telephone data collection)
Success Story (3)

- Facilitates stock adjustments for avoiding stock imbalances at any tier (previously the locations of stock imbalances were hard to track)
- Allows monitoring of data accuracy (in manual systems mismatch data tracking was absent)
- Improves supply chain monitoring at all levels (availability of recent data allows program managers to make the right decision)
- Allows demand forecasting, capacity planning, budgeting, and modeling to be based on consumption

The system helps ensure availability of RH commodities at all levels, which eventually helps reduce unwanted pregnancies and population growth, ultimately contributing to achievement of MDG 4 and MDG 5.
Future Plan

- Rollout of Upazila Inventory Management System (UIMS) software at all subdistrict family planning stores by 2013
- Upload of monthly LMIS data from UIMS software to SCIP by first week
- Field-level logistics data collection through mobile and handheld devices
Live Demonstration