DHIS2 for Multisector Collaboration in Nutrition
Sri Lankan Perspective

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HISP Sri Lanka
Health Indicators

Maternal Mortality Ratio

- SRI LANKA: 30
- PAKISTAN: 178
- NEPAL: 258
- MALDIVES: 68
- INDIA: 174
- BHUTAN: 148
- BANGLADESH: 176
- AFGHANISTAN: 396

Skilled Birth Attendance

- SRI LANKA: 99%
- PAKISTAN: 52%
- NEPAL: 56%
- MALDIVES: 96%
- INDIA: 81%
- BHUTAN: 75%
- BANGLADESH: 42%
- AFGHANISTAN: 51%

Source:
World Health Statistics 2017 (WHO)
Severe Wasting

Wasting

Overweight

Stunting

Source: Multiple Indicator Cluster Survey (2017)
https://data.unicef.org/topic/nutrition/malnutrition/
Use Case

Malnutrition

Health related risk factors
(MoH)

Non-health related risk factors
Multi-sector stakeholders: Presidential Secretariat, Agriculture, fisheries, education, social services

Multi Sector Collaboration

Multisector Action Plan for Nutrition
Country Use Case

- MoH
  - Track Individual Children under age 5 with malnutrition
  - Routine monitoring of nutritional parameters
  - Identify risk factors for malnutrition (7 major, 35+ minor)

- Presidential Secretariat (Multisector Stakeholders)
  - Track Individual Children under age 5 with malnutrition
  - Identify risk factors for malnutrition
  - Monitor interventions
Functionality

- Register children with malnutrition at field level
- Routinely monitor and track,
  - Nutritional parameters (height, weight)
  - Household risk factors
- Obtain household geo locations
- Analytics and chart visualizations for mobile user
- Synchronize with central server and share with multi-sector stakeholders
Mobile App : Interfaces

Authentication with Unique Username & Password

Trilingual Interfaces
Mobile App: Interfaces

List of assigned areas under care

List of registered children with colour coding for enrolment status and geo-tagging status
## Child Profile

### Ambagahawella

**Bandara, Lasith**

- **CHDR No.:** 45678
- **Other Names:** Lasith
- **Gender:** male
- **Date of Birth:** 2015-03-12
- **Birth Weight:** 2.5 kg

### Guardian Details

- **Name:** Saman Bandara
- **Telephone:** 1: 1234567890

### Other Details

- **PHN Number:** 7890
- **Eligible Family Number:** 23

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## Search a Child

### Ambagahawella

### Search Child

- **Other Names**
- **Last Name**
- **Date of Birth**

Type the search term here

**Search**
List of height/weight monitoring events with colour coding for synchronization status

Height/weight data entry. Supports colour coding as you type it based on WHO reference ranges
Height/weight monitoring event details. Supports colour coding for values and data entry for past events.

Household risk factor identification. Supports multiple levels.
Display of longitudinal charting. Multiple dimensions supported

Longitudinal charting with snapshot view of nutritional status and trend with use of reference colours
Generation of reports based on nutritional problem & height/weight measurements
• Used by more than 900 PHMs across 4 districts of Sri Lanka

• More than 20,000 children actively monitored

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<tr>
<th>District</th>
<th>Children Registered</th>
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<tr>
<td>Jaffna</td>
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<td>4613</td>
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<td>Nuwara Eliya</td>
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Timeline

Design & Development
(2016 Jan)

Strengthening & Review
(2017)

Pilot in 3 Districts
(2016 June - October)

Implementation
Northern Province - 5 districts
(2018 onwards)
Challenges

- Mobile devices & data
- Maintenance of Android application
- Training and troubleshooting
Use Case

- MoH
  - Track Individual Children under age 5 with malnutrition
  - Routine monitoring of nutritional parameters
  - Identify risk factors for malnutrition

- Presidential Secretariat (Multisector Stakeholders)
  - Track Individual Children under age 5 with malnutrition
  - Identify risk factors for malnutrition
  - Monitor interventions

Data entry:
- Paper-based data entry at field level
- Data entry into web-based system at Divisional level
- Data analysis at all levels
National Nutrition Information System

- Web-based data entry
- DHIS2 Tracker Capture
- Dashboards shared with stakeholders at all levels

• **Issue**: Fine control over data entry, data view and visualization of dashboards across stakeholders
User Groups & Sharing Settings

- v2.29
- User groups & sharing settings
- Data view/ edit privileges
- Dashboard sharing
District Nutrition Monitoring System

National Nutrition Information System
Solution

- Solution with middleware server, client-side app for each DHIS2 instance
- A client application tracks the events
- Based on sharing settings, the selected events and TEI are transmitted to ActiveMQ (Middleware)
- Middleware app manages queues, work processes and stores events in DB in middleware
- Events transmitted to destination client app based on event routes
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<td>Child location coordinate</td>
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<td>R1.iv. Any constrains in obtaining loan</td>
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Challenges

- Administrative challenges in establishing collaboration
- Constraints related to data ownership
- Capacity building at all levels across sectors