UgandaEMR Overview

Data Use Community Call

February 9, 2021
UgandaEMR Overview

• Facility-level Electronic Medical Record (EMR) based on OpenMRS
  • Successor to Ministry of Health (MoH) OpenMRS Express rollout in 2011
  • Follows national HMIS guidelines for patient data management

• Branding and initial announcement by MoH in July 2016

• Customisation and development led by METS in collaboration with Division of Health Information (DHI) at Ministry of Health (MoH)
  • METS is CDC funded collaboration between Makerere University School of Public Health and University of California San Francisco
  • METS started in 2015 to September 2020, and has been renewed until September 2025

• Rollout, upgrade and operation at public health facilities led by MoH through comprehensive implementing partners

• Running on OpenMRS Platform 2.3.1, Reference Application 2.10.0 compatible
Rollout Status – December 2020

Overall EMR Coverage (2249 sites)

<p>| | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Total National ART Sites</td>
<td>2249</td>
</tr>
<tr>
<td>Has EMR August 2015</td>
<td>~350</td>
</tr>
<tr>
<td>Has EMR December 2020</td>
<td>1170</td>
</tr>
<tr>
<td>UgandaEMR &amp; OpenMRS</td>
<td>1120</td>
</tr>
<tr>
<td>UgandaEMR Only</td>
<td>1116</td>
</tr>
<tr>
<td>Other EMR</td>
<td>54</td>
</tr>
<tr>
<td>No EMR</td>
<td>1079</td>
</tr>
</tbody>
</table>
Features – 1: Patient data collection

- Patient Registration
  - Demographics
  - Identification - National ID, Fingerprint biometrics
  - Service Point specific Identifiers

- Retrospective Data Collection Tools – match national HMIS tools starting with HIV/TB related services

![HMIS HIV 003: HIV Care/ART Card - Clinical Assessment](Image)
Features – 2: Point Care

- Based on user access permissions
- Complimentary to retrospective data entry allowing for hybrid implementations
- Service point based specific tools
- Patient queues to track flow of patients between service points
- Provider specific views of HMIS data collection tools
Features – 2: Point Care - Queues

<table>
<thead>
<tr>
<th>Q ID</th>
<th>NAMES</th>
<th>AGE</th>
<th>ORDER FROM</th>
<th>WAITING TIME</th>
<th>TEST(S) ORDERED</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>kema mable</td>
<td>39</td>
<td>ART Clinic</td>
<td>0:0:24</td>
<td>CD4 PANEL, GeneXpert Test</td>
</tr>
</tbody>
</table>
Features – 3: Clinical Decision Support

- Analysis of patient data
- Patient flags – traffic light analogy
- Encounter summaries extract
- Important data analysis – due for viral load, appointments etc
- Data validation rules to ensure completeness and accuracy of data
- Lab tests and results
Features – 4: Reports and Data Extracts

- **Registers** – monthly and quarterly MOH HMIS standard Reports
- **Facility Reports** – support facility operations
  - Due & Overdue for VL
  - Active Patients in Care
  - Non-Suppressed VL
  - HTC Card Data Export
  - Stability Assessment & Patient DSDM Report
- **MER Indicator Reports** – PEPFAR exports
- **Early Warning Indicator Reports** for surveillance
- **Data Integration Data Exports** - for integration with other systems
- Reports are extracted in both Excel and CSV formats
Features – 5: System Integration and HIE Data Exchange

• Integration with other systems via CSV/Excel/XML/FHIR formats:
  • UNICEF MomConnect through eMTCT module
  • Lab Systems LIS (FHIR & LOINC mappings)
  • Rx Solutions use UgandaEMR as source of patient data for dispensing (FHIR and RxNorm)

• Integration options:
  • CSV/Excel/XML based data file exchange

• HIE data exchange operations
  • Submission of viral load request and receipt of results within the EMR
  • HIV Recency Testing surveillance
  • UgandaEMR Usage analytics submission (monitor rollout)
  • Submission of Monthly 105 and Quarterly 106a to DHIS2 via ADX profiles
  • Submission of TB patient data to TB Surveillance system
Features 6: DSDM and Community Support

• Differentiated Service Delivery Models
  • Framework to decongest health centers
  • Provide stable virally suppressed clients with long refills & services in community

• Mobile App
  • Community based health service delivery outreach from a facility
  • Covers: Assessments, back to care followup and drug dispensing
Stakeholder Involvement & Capacity Development Approach

• Implementation aligned with:
  • MoH program area priorities, policy, strategy and guidelines
  • District and facility level operational needs

• Grow capacity of stakeholders
  • National TOTs May 2016 and June 2017 (~250 trainers)
  • IP Regional Training – led by national trainers
  • ~2500 health sector staff trained nationally (September 2020) to use UgandaEMR
  • Hosted International OpenMRS conference December 2016
  • 2 Developer Bootcamp for 40 participants in November 2018 and October 2019 on how to add HMIS tools to UgandaEMR
  • 4 custom distributions built on top of UgandaEMR – MUJHU Mulago, Mulago ISS Clinic, UgandaEMR, UPDFEMR
Any Questions