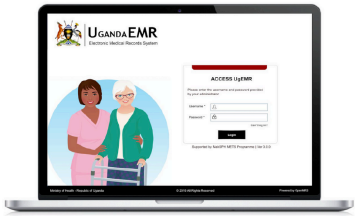


UgandaEMR Overview

Data Use Community Call

February 9, 2021

UgandaEMR
Electronic Medical Records System

Monitoring and Evaluation Technical Support (METS) Program

Makerere University

UCSF
University of California
San Francisco

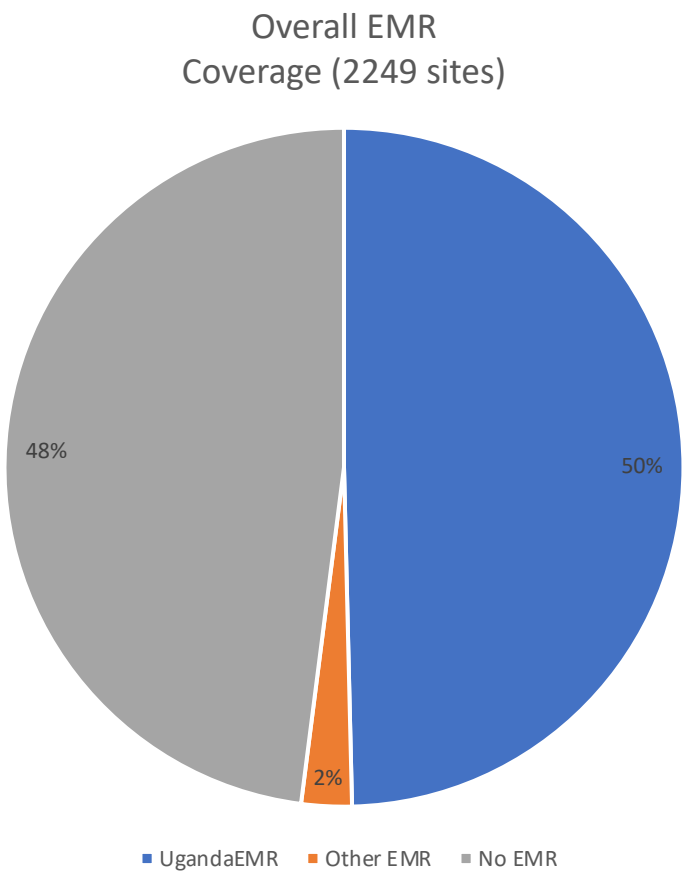
CDC

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

UGANDA EMR
Electronic Medical Records System

Rollout Status – December 2020



Total National ART Sites	2249
Has EMR August 2015	~350
Has EMR December 2020	1170
UgandaEMR & OpenMRS	1120
UgandaEMR Only	1116
Other EMR	54
No EMR	1079

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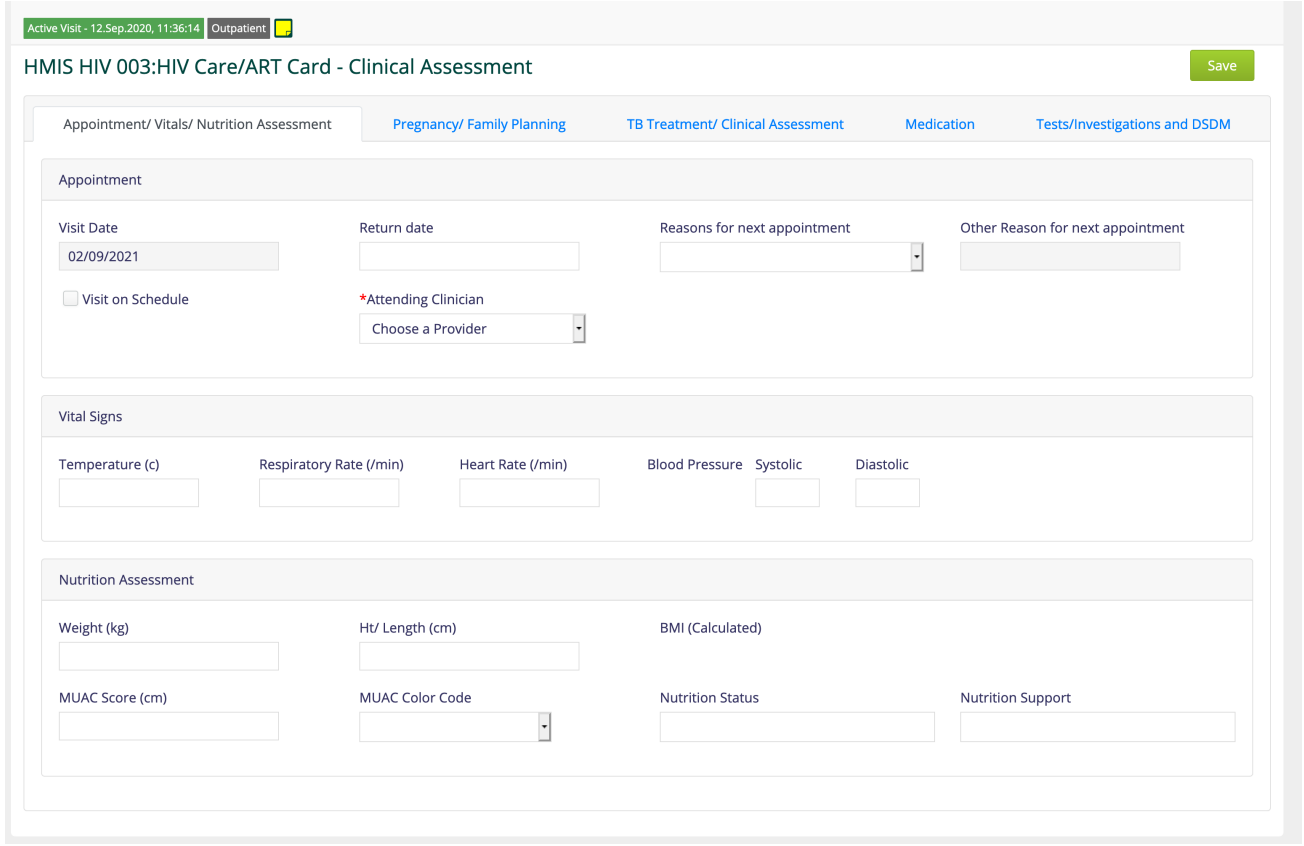
Electronic Medical Records System

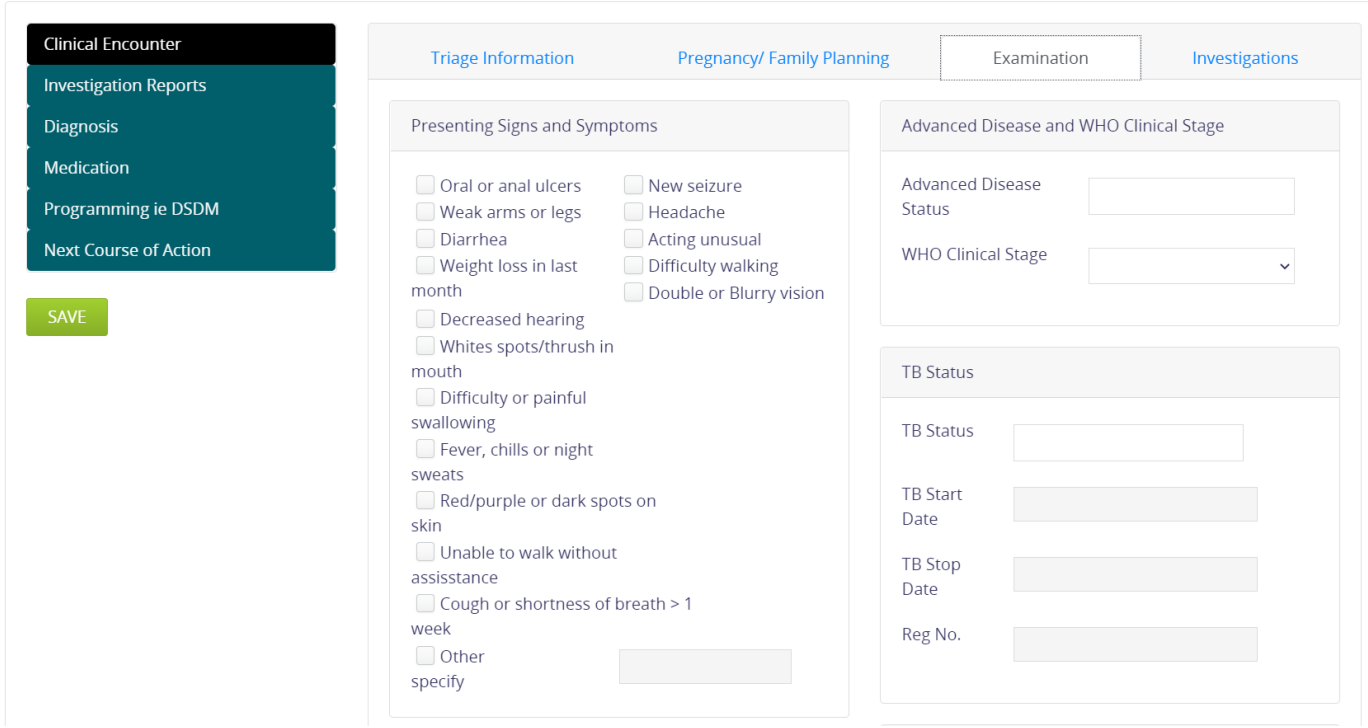
Features – 1: Patient data collection

- 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

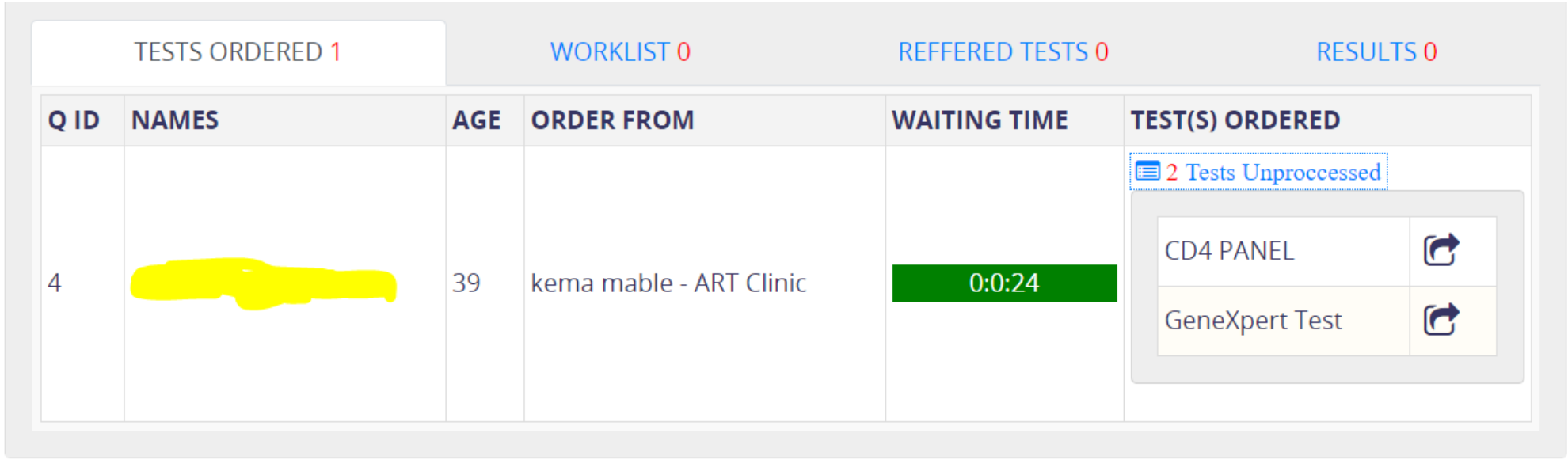


Features – 2: Point Care

- 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



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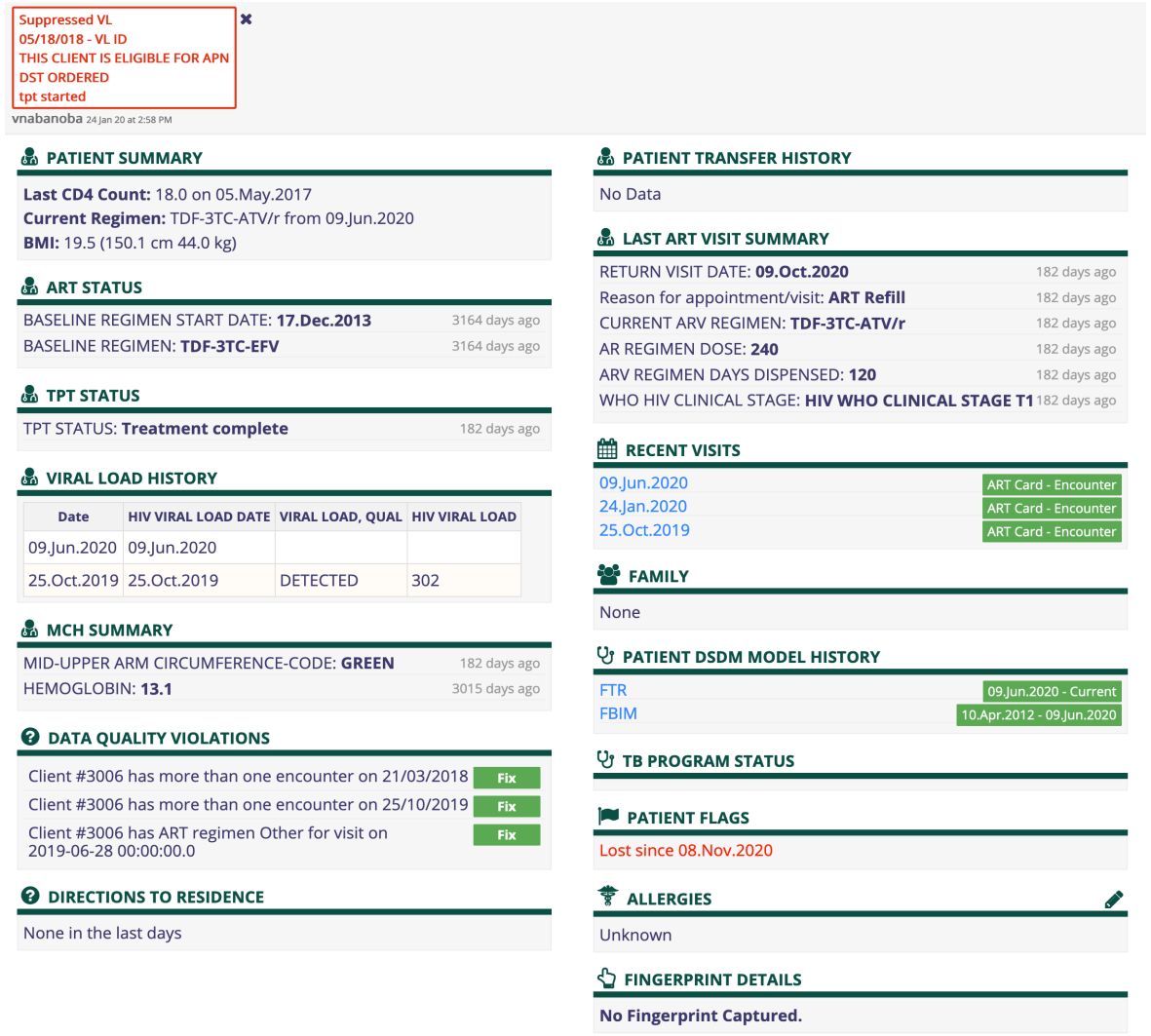
Features – 3: Clincial Decision Support

- 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



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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

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Electronic Medical Records System

- 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

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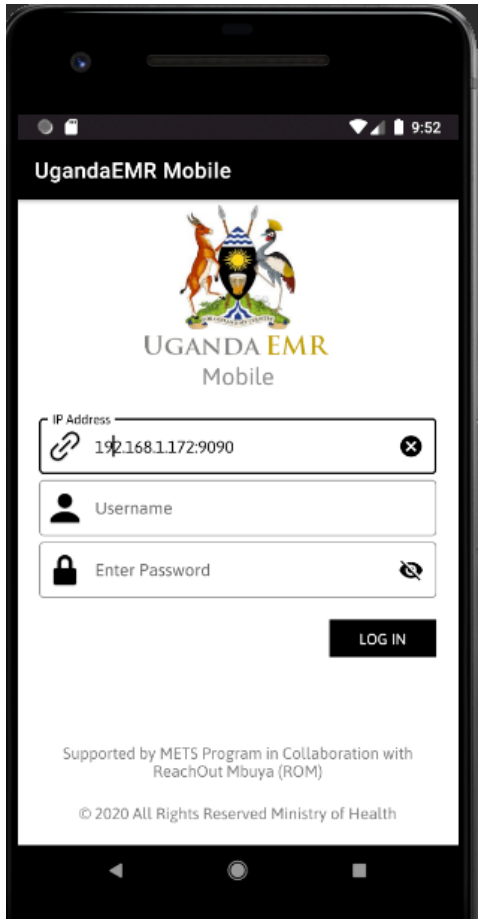
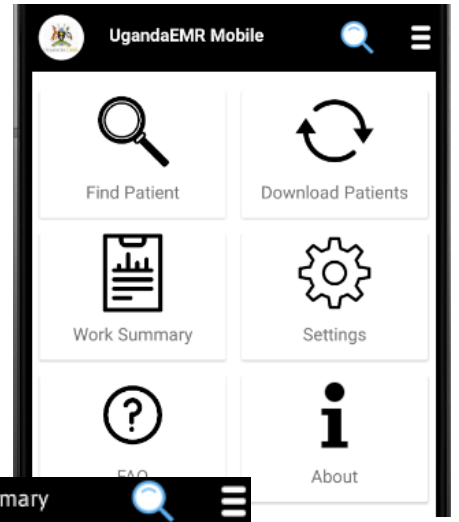
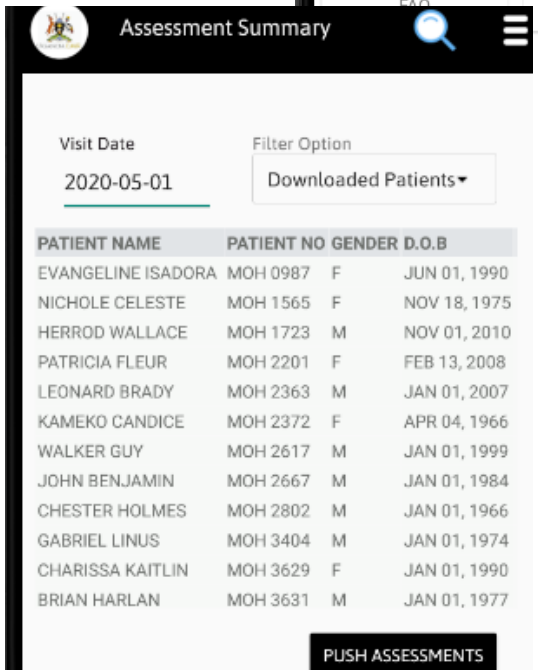
Features 6: DSDM and Community Support

- Differentiated Service Delivery Models
  - Framework to decongest health centers
  - Provide stable virally supressed 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

UGANDA EMR
Electronic Medical Records System

- 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

MAKERERE UNIVERSITY

UCSF
University of California
San Francisco

UGANDA EMR
Electronic Medical Records System

MONITORING AND EVALUATION TECHNICAL SUPPORT (METS) PROGRAM

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Any Questions

DEPARTMENT OF HEALTH & HUMAN SERVICES USA
CDC