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Optimizing on Clinical Decision Support (CDS) Reminders in AMRS-POC to Improve Quality of Care Among HIV-positive Clients in USAID AMPATH Uzima-supported Counties

EXHIBITOR

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EMR System	Functional Area							Average score (%)
	System details and standards (%)	Basic demographic and clinical Health information (%)	Order entry & prescribing (%)	Clinical decision support (%)	Health information and reporting (%)	Security and confidentiality (%)	Exchange of electronic information (%)	
AMRS- AMPATH	100	95.2	100	100	100	100	71.4	**95.2**
IQ CARE	100	85.7	100	100	100	75	71.4	**90.3**
C-PAD	71.4	80.9	100	100	100	87.5	0	**77.1**
FUNSOFT	100	66.7	100	0	100	62.5	28.6	**65.4**
Ehospital	71.4	66.7	50	0	100	75	42.9	**58.0**
COMPACT	71.4	47.6	100	0	80	75	0	**53.4**
MEDBOSS	71.4	61.9	100	0	100	37.5	0	**53.0**
HEALTH SOFT	71.4	71.4	100	0	40	62.5	0	**49.3**
OPENMRS FACES	57.1	76.2	0	0	100	50	14.3	**42.5**
Access Based system	42.9	42.9	0	0	100	100	0	**40.8**
CARE 2000	28.6	47.6	100	0	40	50	0	**38.0**
EDARP HMIS	28.6	47.6	50	0	40	37.5	14.3	**31.1**
KEMRI/Welcome Trust	42.9	38.1	50	0	40	37.5	0	**29.8**
BOMU	28.6	61.9	0	0	60	37.5	0	**26.9**
AMS 2000	42.9	52.4	0	0	40	25	0	**22.9**
EPICENTRE FUCHIA	28.6	19	0	0	80	0	0	**18.2**
TRIMED	14.3	0	0	0	0	75	0	**12.8**

Table 1: The bold represents an overall score for each system which is the average for various domain score. Data Source: Report on the review of EMR systems towards standardization by the Kenya Ministry of Health in September 2011 (MOH, 2011).

KEY OBJECTIVES

- To making informed decisions by presenting critical information, evidence-based guidelines, and relevant data at the point of care. This greatly supports more accurate assist healthcare providers (i.e retention, nurses, clinical officers, medical officers and consultants) in diagnoses and appropriate treatment plans.

KEY ACHIEVEMENTS

1. Offer real-time alerts, reminders, and suggestions based on patient data, helping clinicians adhere to best practices during a patient visit.
2. Support interoperability with other healthcare systems allowing seamless exchange of patient information between different systems, improving decision-making based on comprehensive data e.g NUPI verification, VL and EID results.
3. Patient information is readily accessible to authorized healthcare providers at the point of care, either through desktop interfaces or mobile applications, enabling timely decision-making.
4. Accurate and efficient clinical documentation, aiding in capturing patient encounters, assessments, treatments, and outcomes, which can further inform decision-making and care plans.
5. Offer Integration with Decision-Support Tools e.g clinical guidelines, protocols, alerts/reminders directly into the EMR system to aid clinicians in making informed decisions.
6. Provide tools for data analytics and visualization that allow clinicians to analyze trends, patterns, and outcomes across patient populations, assisting in evidence-based decision-making and quality improvement initiatives.

CONTACT INFORMATION

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PEPFAR U.S. President's Emergency Plan for AIDS Relief

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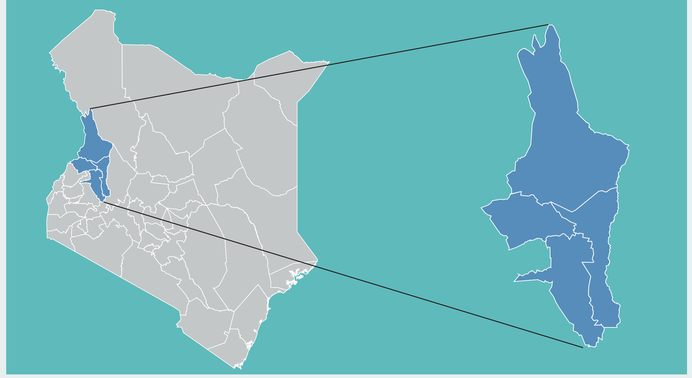
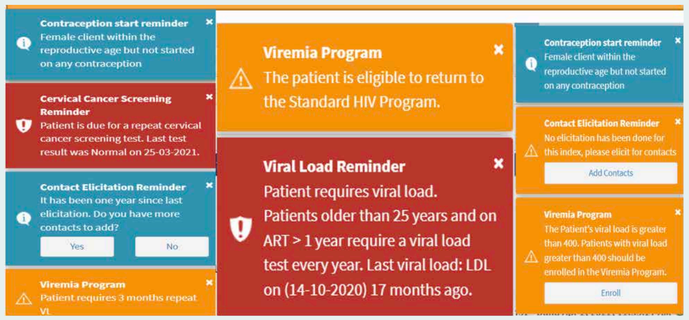


Focus Area

Traditionally, health care providers have trouble in locating, sorting and identifying key pieces of information in paper records. EMR systems can help to strengthen pathways of care and close gaps for diseases such as HIV&AIDS that require lifetime treatment. The first EMR system to be used in sub-Saharan African was AMPATH Medical Record System Point of care system (AMRS-POC) for comprehensive and clinical care of patients infected with HIV. The AMRS-POC system has inbuilt Integrated Clinical decision support (CDS) reminders which ensures that real time reminders are easily accessible, timely, aligned with patient data at the point of care to enhance decision making process.

In Kenya, the Ministry of Health assessed 17 EMR systems which were in existence in 2009. Out of the 17 existing EMR systems, AMRS emerged top with 95.2%, followed by International Quality Care (IQCare; 90.3%), and thirdly C-PAD; 77.1%) having considered seven functional areas which included the CDS component as summarized in Table 1.

The inference mechanism is a set of computer algorithms used to process clinical signs, symptoms and laboratory test results in relation to the knowledge base. System users work using CDS in an interactive manner by selectively entering clinical signs, symptoms and laboratory tests and using the CDS output recommendations to help with the diagnostic and therapeutic decision-making processes.



Reminder alerts.

Vision for the Future

The program plans to scale-up clinical reminders to include automated clients feedback which improves service provider/ Client interaction. Machine learning to enhance prediction of treatment outcomes and other quality of care parameters.

Challenges

- The clinical reminders are systems generated and responds to action depending on the completeness and accuracy of information in the clients records as provided by the service provider.
- Inadequate funding to support continuous enhancement of AMRS including setup of robust system database.