

LANDSCAPE ASSESSMENT STUDY OF ELECTRONIC MEDICAL RECORDS IN PUBLIC HEALTH FACILITIES IN UGANDA

ASSESSMENT SURVEY QUESTIONNAIRE

Introduction: This is to introduce you to the landscape study on Electronic Management Records (EMR) in Public Health Facilities in Uganda. The study aims at providing a way forward on the integration and interoperability of EMR systems in public HFs. As a key stakeholder, you are requested to respond to the questions listed below. Your responses will be treated confidentially, and the findings will be used only to improve EMR systems and information flow and use in the country.

SECTION A. BACKGROUND INFORMATION <i>Circle the correct code or fill in the response. Codes and numerical responses to be written again in column three.</i>		Write the codes in the un-shaded box
1.	Questionnaire Number:	
2.	Name of interviewer	
3.	Date of interview (dd/mm/yyyy): /..... /.....	
4.	NMS Region:	
5.	Name of the responding officer.....	
6.	Hospital name:	
7. 8	Level of care: 1=NRH 2=NRI 3=RRH 4=GH 5=HC4	
8.	Title of the responding officer: 1= ICT Officer 2=Pharmacist 3=Dispenser 4=Medical Recodes officer 5=AIMO	

9.	How long have you served in this hospital? 1=Less than 1 year 2= 1 to 2 years 3= 3 to 5 years 5= 6 years and above																					
10.	Does this HF have a system for managing patient data? 1=Yes 2=No																					
11.	Qn2. If yes, what type of system is used to manage patient data? 1=Paper based 2=Electronic 3=Hybrid (paper based & electronic)																					
12.	How is patient data stored and secured? 1=Physical storage (eg. Filing cabinets) 2=Digital storage (eg. Server, cloud) 3=Both physical storage & digital storage																					
13.	Types of reports generated from patient data? <i>Tick all that apply</i> 1=Patient management reports 2=HF management reports 3=Regulatory reports 4=Public health reports																					
SECTION B: INFRASTRUCTURE, NETWORK AND SYSTEM REQUIREMENTS <i>Circle the correct code or fill in the response. Codes and numerical responses to be written again in column three.</i>					Write the codes in the un-shaded box																	
1.	<table border="1"> <tr> <td rowspan="3"></td> <td rowspan="2">Total Number</td> <td rowspan="2">Number in Use (functional)</td> <td colspan="2">Source</td> </tr> <tr> <td>Donated</td> <td>HF procured</td> </tr> <tr> <td>Desktop</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Laptop</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>					Total Number	Number in Use (functional)	Source		Donated	HF procured	Desktop					Laptop					
	Total Number	Number in Use (functional)	Source																			
			Donated	HF procured																		
	Desktop																					
Laptop																						

2.	How many departments does this HF have?																																		
3.	How many departments are currently using any of the EMR systems (indicated above) available in the HF?																																		
4.	How many dispensing areas does this HF have?																																		
5.	On average, how many computers does each department need?																																		
6.	Does the HF have consistent power availability throughout the whole day? Rank on a scale of 1-10, 1=least availability, 10=consistently availability <table border="1"> <tr> <th>Rank</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>7</th> <th>8</th> <th>9</th> <th>10</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>											Rank	1	2	3	4	5	6	7	8	9	10													
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7.	Do you have a power backup system? 1= Yes, generator 2= Yes, solar 3=Yes, both solar and generator 4=No																																		
8.	Does the EMR systems currently being used in this HF have consistent access to internet? Rank on a scale of 1-10, 1=least accessibility, 10=consistent accessibility <table border="1"> <tr> <th>Rank</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>7</th> <th>8</th> <th>9</th> <th>10</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>											Rank	1	2	3	4	5	6	7	8	9	10													
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9.	What are the sources of internet connectivity in this HF? <table border="1"> <tr> <th rowspan="2">Source</th> <th colspan="3">Provider</th> </tr> <tr> <th>Hospital</th> <th>IP</th> <th>Personal</th> </tr> <tr> <td>Modem</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Router</td> <td></td> <td></td> <td></td> </tr> <tr> <td>WI-FI</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Other (specify)</td> <td></td> <td></td> <td></td> </tr> </table>											Source	Provider			Hospital	IP	Personal	Modem				Router				WI-FI				Other (specify)				
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Other (specify)																																			
10.	Is this HF connected to the National Backbone Infrastructure (NBI)? 1=Yes 2=NO																																		
11.	IF Yes in Qn10 above, how many departments are connected to the National Backbone Infrastructure (NBI)?																																		
12.	Do you have any other internet provider? 1=Yes 2=NO																																		

13.	IF Yes above, mention the other internet providers 1=Airtel Uganda Limited 2=Research and Education Network for Uganda 3=Mtn Uganda 4=Uganda Telecom 5=Roke Investments International Ltd 6=Blue Crane Communications (U) Ltd 7=Datnet LIC 8=Tangerine Limited 9=Bandwidth and Cloud Services Group Ltd 10=Makerere University 11=Echotel Proprietary Uganda 12=Sombha Solutions Store Limited 13=Spidd Africa Ltd 14=Cheetahnet Solutions Limited 15=Uganda Christian University 16=Kampala Siti Cable Limited 17=Central Bank of Uganda 18=Savanna Fibre Limited 19=Crown Networks Limited 20= NITA-U 21= Other (specify)	
14.	Who is paying the internet providers? 1=Health facility 2=System vendors 3=Partners 4=System users 5=Other (specify)	
SECTION C: EMR AVAILABILITY, FUNCTIONALITY AND INTEGRATION: <i>Circle the correct code or fill in the response. Codes and numerical responses to be written again in column three.</i>		Write the codes in the un-

													shaded box	
1.	Do you have any EMR systems in this health facility? 1= Yes 2=No													
2.	How many EMR systems do you have in this HF?.....													
3.	What EMR system(s) do you have in this HF?													
	System	Functionality level												
		In Use	EMHS storage	EMHS requisition	EMHS issuance	prescribing	dispensing	ordering	diagnosis/lab	HF Patient registry	Analytics	HR Registry		Program Patient registry
	Clinic Master													
	IHMIS													
	eAFYA													
	Uganda EMR													
	RX solution													
	A-LIS													
	CSSP/NMS +													
	LIMS													
	DHIS2													
	PIP													
	RASS													
	EIDSR													
	LAB EXPERT													
	IHMIS													
4.	To what extent are the EMR systems currently being used in this HF meet the following criteria? (system Useability) 1=Poor, 2=Fair 3=average 4=Good, 5=Very Good													
	EMR System	is bug/error-free, and all functionalities are working smoothly			System interfaces are user friendly		The system flow and use are understandable to the user with minimal ICT skills			Would you recommend this system				
	Clinic Master													
	IHMIS													
	eAFYA													

	Uganda EMR						
	RX solution						
	A-LIS						
	CSSP/NMS+						
	LIMS						
	DHIS2						
	PIP						
	RASS						
	EIDSR						
	LAB EXPERT						
	IHMIS						
5.	Are any of the systems indicated in questions 3 and 4 above integrated at the HF level? 1=Yes 2=No						
6.	IF Yes above, mention the EMR systems that are integrated at the HF level? 1=Clinic Master 2=IHMS 3=eAFYA 4=Uganda EMR 5=RX solution 6=A-LIS 7=CSSP/NMS+ 8=LIMS 9=DHIS2 10=OpenEMR 11=PIP 12=RASS 13=EIDSR (electronical Integrated Diseases Surveillance and Response) 14=LAB EXPERT 15=Human Resource Information System						
7.	Are any of the systems indicate in questions 3 and 4 above integrated at the National level? 1=Yes 2=No						
8.	IF Yes above, mention the EMR systems that are integrated at National level? 1=Clinic Master						

	2=IHMIS 3=eAFYA 4=Uganda EMR 5=RX solution 6=A-LIS 7=CSSP/NMS+ 8=LIMS 9=DHIS2 10=OpenEMR 11=PIP 12=RASS 13=EIDSR (electronical Integrated Diseases Surveillance and Response) 14=LAB EXPERT 15=Human Resource Information System 16=Mobile Vital Records System	
9.	What should be done to ensure seamless integration of the EMR systems both locally within the hospital and at National level? 1=Clear objective for integration 2=Clear and comprehensive detailed plan for integration 3=Stakeholder engagement 4=Conduct through testing and piloting 5=Scalable architecture to accommodate future developments 6=Ensure data security 7=Ensure budget availability 8=Change management among users 9=Training and capacity building of users 10=Flexibility among available systems vendors 11=Monitor performance post integration 12=Other (specify)	
10.	In your opinion, what would be the Motivation factors for this HF to embrace EMRs systems exchange of information (integration)? 1=Streamline workflows 2=Cost saving 3=Better analytics 4=Provide coordinated care	

	5=Improve access to patient information 6=Reduce medical errors 7=Improving diagnosis and treatment 8=Better data management 9=Regulatory requirement 10=Enhanced communication 11=Other (specify)	
11.	What challenges do you face when using the EMR systems available in your HF? 1=System downtime 2=Data silos due to lack of interoperability within the existing systems 3=Inadequate capacity/knowledge gap to use the system 4=Untimely system support in case of breakdown 5=Lack of user training and resistance to adoption among staff 6=Limited availability of IT infrastructure to support EMR operations 7=Poor network connectivity 8=Data entry burden 9=EMR systems interfacing with medical devices 10=Lack of customization 11=Lack of ICT personnel 12=Limited user training 13=Other (specify)	
SECTION D: GOVERNANCE AND SUPPORT: <i>Circle the correct code or fill in the response. Codes and numerical responses to be written again in column three.</i>		Write the codes in the un-shaded box
1.	How did you acquire the system (s) that you are currently using in the HF? 1= It was donated to us 2=MoH pushed for the system 3=The system vender approached us to use their system	
2.	What factors did you consider while choosing the system (s) that you are currently using in the HF? <i>Tick all that apply</i>	

	1=Functionality and features 2=Ease of use and user interface 3=Interoperability 4=Customization and flexibility 5=Data security and compliance 6=Vendor support and reputation 7=Mobile access and usability 8=Easy Maintenance 9=Training of users by the vender and easy implementation 10=Other (specify)	
3.	Who provides maintenance support in case of an EMR system breakdown? <i>Tick all that apply</i> 1= The hospital through the IT team 2= The hospital through outsourcing 3=The system vender 4=MoH 5=NITA-U 6=District/DHOs office 7=Other	
4.	What is the average downtime in case of a system breakdown? 1=Less than 1 hour 2=less than 12 hours 3=One day 4=Within one week 5=Within one Month 6=More than one month	
5.	Do you get continuous support supervision for any of the EMR systems you are currently using? 1=Yes, from the system vendor 2=Yes, from NITA-U 3=Yes, from Ips 4=Yes, from MoH 5=Yes, from the district 6=No	
6.	Does this HF have an ICT department/section? 1=Yes, and well-staffed 2=Yes, sub optimally staffed 3=Yes, but without ICT officer(s) 4=No	

7.	If YES above, does the ICT section provide enough support to the EMR systems available in this HF? 1=Yes 2=No																																	
8.	What challenges do you face when using the EMR systems available in your HF? 1=System downtime 2=Data silos due to lack of interoperability within the existing systems 3=Inadequate capacity/knowledge gap to use the system 4=Untimely system support in case of breakdown 5=Lack of user training and resistance to adoption among staff 6=Limited availability of IT infrastructure to support EMR operations 7=Poor network connectivity 8=lack of data 9=EMR systems interfacing with medical devices 10=Other (specify)																																	
9.	Does the HF have a budget dedicated towards ICT equipment acquisition, ICT maintenance, and support of ICT infrastructure for this HF? 1=Yes 2=No																																	
10.	To what extent are you satisfied with the EMR system you are currently using? ? Rank on a scale of 1-10, 1=least satisfied, 10=most satisfied <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 15%;">Rank</td> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td> </tr> <tr> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>											Rank	1	2	3	4	5	6	7	8	9	10												
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SECTION E: TRAINING AND CAPACITY BUILDING <i>Circle the correct code or fill in the response. Codes and numerical responses to be written again in column three.</i>												Write the number in each unshaded box																						
1.	To what extent is the computer literacy level of the following health workforce in this HF? Choose 1= Very illiterate, 2=Illiterate 3=Neutral, 4=Literate 5=Excellent <table border="1" style="width: 100%;"> <tr> <td style="width: 40%;">Cadre</td> <td>Computer Literacy level</td> </tr> <tr> <td>Consultants</td> <td></td> </tr> <tr> <td>Medical Officers</td> <td></td> </tr> <tr> <td>Clinical Officers</td> <td></td> </tr> <tr> <td>Pharmacists</td> <td></td> </tr> <tr> <td>Dispensers</td> <td></td> </tr> <tr> <td>Nursing Officers</td> <td></td> </tr> <tr> <td>Nursing Assistants</td> <td></td> </tr> </table>											Cadre	Computer Literacy level	Consultants		Medical Officers		Clinical Officers		Pharmacists		Dispensers		Nursing Officers		Nursing Assistants								
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	Midwives			
	Medical Records Officer			
	AIMO/Stores Officers			
2.	Has the hospital provided on job basic computer training to the following health workforce in this HF? Choose 1= Yes, 2=No			
	Cadre	Received computer training		
	Consultants			
	Medical Officers			
	Clinical Officers			
	Pharmacists			
	Dispensers			
	Nursing Officers			
	Nursing Assistants			
	Midwives			
	Medical Records Officer			
	AIMO/Stores Officers			

END

THANK YOU

