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Table of Contents

Introduction**3**

Understanding EHR Usability in context6

Challenges Health Care workers face8

Theoretical and Systems frameworks9

Impacts on workforce and health systems10

Strategic Interventions…………………………………….....................................................10

Policy and leadership recommendations……………… ……………………………………11

EHR experiences at my workplace……………………………….…………………………12

Paper reduction readiness by facilities ……………………………………………………..16

Facilities trained………….…………………………………………………………………17

Findings and recommendations per health facility…….,,,,,,……………………………20-29

Overall comment…………………………………………………………………………….30

Conclusion……………………………………………………………………………………31

Bibliography………………………………………………………………………………….32

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**Critically Assessing and Strategically Enhancing the Usability of Electronic Health Records among Healthcare Workers**

**Introduction**

The Electronic Health Record (EHR) is a digital version of the patients paper based health care charts, outpatient’s cards, clinic registers, radiology results and laboratory registers and provides real time patient cantered records and patient information is available immediately to all health care workers involved in the patient care.(HealthIT,gov,gov,2022).  
  
The EHR was developed to reduce workload by reducing paper based charts, registers, radiology results and laboratory registers and laboratory results, EHRs provides health information and patients records at our fingertips, decisions made faster, and care delivered efficiently. EHR in Zimbabwe was developed in 2015 and was piloted in Uzumba Maramba Pfungwe district in 2016 and has since been enrolled to approximately 1023 health facilities. 75% of the health facilities are Web based and 25% are using the mobile application,  
  
 EHR is now being used routinely in many health facilities, Health care workers now use the EHR in managing patients, they conduct history taking, investigate, diagnose, treat and follow up patients using the EHR. In theory, EHRs are the spine of modern healthcare. In practice they often feel like an obstacle course—one filled with drop-down menus, redundant fields, pop-up alerts, and confusing navigation. For those on the front lines, these digital systems can either be tools improve service delivery or sources of deep frustration depending on the attitude of health workers.  
  
This essay critically examines the usability of EHR systems as both a technical challenge, as human one. Usability is not just a matter of efficiency or design. Usability is about whether a system respects the rhythm of clinical work, supports the cognitive load of busy practitioners, and has benefits rather than hinders patient care. Usability is about whether technology amplifies the work of health professionals or adds workload to an already demanding profession.  
  
Electronic health records have many benefits to the patient and health workers

Benefits of the EHR to the patient’s information is readily available for patient care, reference and continuum of care in real time. The health care benefits include the patient information, accurate data collection tools and real time reports which can assist in evidence based management, policy formulation, identification of outbreaks and allocation of resources appropriately. The EHR provides relevant dashboards for data analysis. The EHR reduces workload by not documenting everything in the registers used to collect data at the health facilities for example the demographic data every time.

But the problem lies in how they are designed, who they are designed for, and how well they adapt to the dynamic environments of healthcare practice and most of the time the EHR developers do not involve the users in the development of the EHR. Poor usability can lead to clinician burnout, errors in documentation, and reduced face-to-face interaction with patients and this will hinder the benefits of using the EHR. These issues are critical and they are the core of what it means to deliver compassionate, safe, and effective care.  
  
The significance of this issue extends beyond individual inconvenience but inconveniences the whole health care as there will be no results or improvement of health care services which is the aim of the introduction of the use of EHR. The digital transformation in healthcare is accelerating, ensuring the usability of EHRs has become a public health priority. Systems that undermine workforce well-being, delay care, or contribute to patient harm carry implications not just for one clinic or hospital, but for national health outcomes and policy. Usability is, therefore both a systems issue and health care workers attitudes in using the EHR and improving it requires systems thinking and change in attitudes by health care workers.  
  
This essay aims to explore that complexity. It will begin by clarifying what EHR usability means in theory and in practice. It will then examine the day-to-day challenges faced by healthcare workers, grounding the analysis in real-life examples and literature. The discussion will be framed using established models such as the Technology Acceptance Model (TAM), Human-Computer Interaction (HCI) theory, and Sociotechnical Systems Theory. These frameworks will support a deeper understanding of how individuals interact with technology within the context of their work environments.  
  
The essay will assess the broader consequences of poor EHR usability, including its impacts on workforce morale, patient outcomes, and health system performance and will identify strategic opportunities for improving usability—drawing from global best practices and real-world innovations. Finally, the paper will close with policy recommendations that place healthcare workers at the centre of digital health reform.

**Understanding EHR Usability in Context**The term “usability” often evokes images of smooth interfaces, intuitive layouts, and minimal clicks. In healthcare, however, usability goes far deeper. It is about how well a system supports the thinking, movement, decisions, and pressures of those who must use it—often under urgent, high-stakes conditions. In the clinical context, usability is not merely a convenience; it is a determinant of workflow efficiency, communication, cognitive clarity, and, ultimately, patient safety.  
  
In many healthcare settings, EHR usability is experienced not in its design language, but in its friction. A nurse might spend five minutes navigating between tabs to record a vital sign. A clinician may face dozens of interruptive alerts while trying to enter a prescription. A ward team might be locked out of a patient chart because someone forgot to log out at another terminal. These small inefficiencies, compounded across shifts and departments, create digital fatigue—a form of burnout as real and taxing as physical exhaustion. In the Zimbabwe developed EHR the challenge is on assigning the diagnosis which are in line with the tools used for reporting as it uses the International Diagnosis 10 which is time consuming to the healthcare worker and in terms of linking the diagnosis with the reporting tool for accurate diagnosis becomes a challenge and frustrating to the health care.  
The presence of the EHR in the consultation room has changed the dynamic between healthcare providers and patients. Clinicians now balance eye contact with screen time. For some, the system becomes a third party in the room—demanding attention, driving the conversation, and occasionally, creating distance. When usability is poor, it affects not just the clinician’s performance, but the patient’s experience of care and it can also reduce the examination time or patient care whilst the health worker tries to manoeuvre the EHR  
  
 EHR works well during routine ward rounds may break down under the pressure of a mass casualty event or can have network connectivity challenges whist the departments are busy, In Zimbabwe there will be challenges in electricity and there are health facilities without solar backup hence those affected health facilities will be affected and will not be able to use the EHR and it is real time system and for other modules you will not be able to update the patients visits especially for those facilities which operate on an outpatient’s basis, EHR usability should be tailor made to clinical context not fixed to ideal workflow models designed in boardrooms far from patient bedsides and the users should be involved in the development of the system whereby they will be able to say their views and this will enhance the usability of the EHR system, this will make usability not to be viewed as a product feature, but as an ongoing relationship between technology, people, and place.  
  
A growing body of research reflects this complexity. Studies have consistently shown that EHRs with poor usability contribute to documentation errors, delays in care, and clinical decision fatigue. From a systems perspective, usability sits at the intersection of design, policy, and practice. It is not simply the responsibility of software engineers, but of health system leaders, procurement teams, and clinical educators.  
  
Furthermore, usability cannot be divorced from issues of equity and inclusion. When systems are not designed for multilingual users, or when older healthcare workers are expected to learn new digital systems without adequate support, the system becomes a source of exclusion. These hidden frictions accumulate into stress, errors, and disempowerment—especially among already under-resourced or overstretched teams.  
  
 **Challenges Healthcare Workers face**  
 EHRs are supposed to improve the quality of service help but can be a hinder the provision of quality health services due to the following challenges which include the following  
• Cognitive Overload which is mental strain which health care workers encounter due to poorly designed complex EHR systems this leads to incorrect data collection, health care worker burnout and frustration which leads to inaccurate clinical decision.

• Alert Fatigue due to too many irrelevant alerts which are disruptive and ignored by health care workers.  
• Workflow Disruption due to EHR systems which are not in sync with the work steps and disrupt clinical logic.  
• Inadequate Customisation which systems does not reflect specific user roles and specialties.  
• Limited Training of staff and they are expected to use the EHR with minimal support for example in Bulawayo Zimbabwe health workers were trained virtual for a day and they started using the EHR thereafter.   
• Data Entry Burden due to excessive completion of forms form which will cause minimal time spent on face to face interaction with the patients.(Phansalkar et al,2013)  
• Technical Downtime which is due to poor connectivity, system errors and power outrages which affects the EHR connectivity in health facilities without power backup and this will disrupt patient flow.  
• Emotional Toll due to the fact that health workers thinking that they have been reduced to “data clerks,” leading to moral injury and burnout. (Sinsky et all. 2026)

**Theoretical and Systems Frameworks**  
  
Three theoretical models help frame EHR usability challenges and interventions:  
• Technology Acceptance Model (TAM) This framework explains how individuals adopt and use new technologies,(Davis 1989) the users acceptance or rejection of the technology depends on whether a person sees any benefits in using the EHR or if it will enhance their job performance and also if the use of HER will be free of effort. This explains why other health workers embrace the EHR and some health care workers resist the use of EHR. (Holden &Karsh, 2010)  
• Human-Computer Interaction (HCI) This studies how people interact with computer systems with the goal in designing technologies that are useful and usable.  
• Sociotechnical Systems Theory: This framework seeks to understand the complex interaction between people and technology within an organisation and views EHRs as part of an interconnected ecosystem of people, tools, infrastructure, and institutional norms. (Berg, 1999) The Sociotechnical Systems Theory considers the human behaviour that is short cuts and workarounds by health care workers. Human behaviour and physical environment that is access to hardware in the health care settings as well as team communication and role clarity in social dynamics.(Begg, 1999)  
  
These frameworks provide a lens through which we can understand usability not as a single factor, but as a composite of design, perception, workflow, and organisational culture.

**Impacts on Workforce and Health Systems**  
 The poor usability of EHR has wide-reaching consequences  
• Clinician Burnout: There is clinical burnout due to digital overload and system-induced stress to health care workers who were used to paper based way of managing patients and completion of health care registers,  
• Patient Safety Risks due to increased errors when systems are confusing or slow and then the information will not be captured and reports will be inaccurate or can under report diseases at the health facilities.(Zahabi et al.,2015)  
• Workflow Inefficiencies: Health workers spend more time navigating the EHR system especially if they are new to using EHR system rather than treating patients.  
• Poor Data Quality due to fields which are not completed and inconsistent documentation weaken surveillance and research and the reports will not be accurate as well due to this.  
• Moral Injury: Health professionals feel undermined and devalued by poorly aligned systems.  
  
  
 **Strategic Interventions**   
  
The following are the strategies which needs to be implemented in order to improve EHR usability  
• User-Centred Design: Developing the EHR system with clinicians which will make them more intrigued in using the EHR system because they will understand the systems from the time it is developed and give suggestions which will make the use of the EHR simple and also this will be based on their clinical expertise.  
• Workflow Streamlining: The EHR modules should have fewer clicks, screens, and unnecessary steps so that it’s simple to use and reduces workload and also allow the face to face care with patients.  
• Customisation The EHR system interfaces should reflect specific roles and needs which are user friendly to health workers.  
• Feedback Loops: There should be real-time reporting of usability issues and there should be the ICT support staff to assist the clinicians in real time so that there is no interruption in the EHR issues if there are connectivity issues and there should always be power back up in all health facilities.  
• Peer Mentorship Induction of new staff and ongoing training and digital literacy support.  
• Low-Tech Innovations: Hybrid offline/online systems in rural settings should be made available for example EHR mobile applications.  
  
 These strategies in U.S., Denmark, South Africa, and Zimbabwe indicates how these interventions improve staff satisfaction, reduce errors, and strengthen care delivery.  
  
**Policy and Leadership Recommendations**  
EHR usability must be treated as a public health priority and the following should be adopted so that the EHR usability is improved  
• Mandatory usability in procurement contracts this ensures that the systems are user friendly and minimizes the risk of errors and improve efficiency,  
• Creating national usability advisory boards which will provide guidance on necessary features and functionalities to enhance user experience.  
• Investing in digital skills development to empower staff in order to improve health worker confidence in using the EHR system and this will lead to good patient care.  
• Incentivising inclusive, context-specific design that is designing the EHR system with input from clinicians.  
• Benchmarking usability as a quality indicator this will enable health care facilities to track improvement of EHR systems usability and make informed decisions about system upgrade or changes.  
The leaders should not use the compliance based digital adoption but should use the inclusive digital transformation which basically integrates digital technology in all aspects of an organization changing how the organisation operates and deliver quality patient care,and they should prioritize the EHR systems usability for modern health care delivery.

**Conclusion**  
  
 The use of EHR is the way to go as it has many benefits if developed and used correctly. EHRs are here to stay however empowering health workers on usability and addressing on the key issues which are associated with usability should be addressed.

**EHR Experiences at my work place**

EHR system was started in Bulawayo Zimbabwe in 2020. The EHR system has an interface which has the following workspace which has the following modules the reception module which is used by the clerk or any health worker as they register the patients in the EHT outpatients and in patient interface where there are different departments where the patients will be directed to at the reception depending on what services they have come for, the laboratory module used for all the laboratory investigations. Client follow up module used for tracking and tracing HIV positive patients attending the opportunistic infection clinic, the storeroom module which is used for stock management for the whole health facility but each department has a storeroom to manage their stock. The EHR has the following modules for provide patient care, the consultation module, antenatal module, post natal (PNC) (EPI) module, expanded programme of immunization, tuberculosis (TB) module, pre exposure prophylaxis, sexual transmitted infections (STI) HIV care and treatment. Cervical cancer screening, HIV testing services and Voluntary medical male circumcision module. These modules can be accessed by all the clinicians in their different room which assists in providing supermarket approach for example if a patient comes for antenatal services and they have a sexually transmitted disease they will treated for the sexually transmitted disease in the antenatal department unlike if using paper based registered they will have to go to the consultation so that they are entered in the consultation room and the outpatients register, Currently the health workers are using both the paper based registers and the EHR which is a challenge and has increased the work load for the health workers the EHR has the section for all the reports which are needed to report the health facility activities in real time thought there are still data issues which are both system based and user based which are making the reports not to be accurate, Despite having challenges of connectivity, power outrages there is a support team which provides real time assistance there is a what’s app chart box and group where these challenges are reported and assistance is provided. There is also a challenge of high staff turnover such that there are always new staff members who needs to be trained or mentored on EHR.EHR has many benefits as it assists in providing real time data of the patients though it is not interoperable to all facilities but the other facilities can phone the facility for patient information if the patient visits another health facility but the next steps is to issue patients with the Impilo EHR card which the other facility can scan and the patient information is availed. The aim of the introduction of the EHR was for paper reduction hence reduce the workload for patients, this process of paper reduction is on the pipeline and a few registers are validated by the developers, users and programme focal persons for the various programmes before they are decommissioned It was noted that the EHR usability in Bulawayo was poor due to knowledge gap since there were new untrained staff members and this was hindering the implementation of paper reduction and a mentorship exercise was conducted to capacitate the health worker.

**EHR mentorship in Bulawayo Province Zimbabwe**

**Introduction**

The Impilo EHR training was conducted to Cowdray Park Health Centre, Thorngrove Hospital and 18 out of 21 City of Bulawayo Clinics. The team of mentors comprised Sisters-in-Charge (SIC), Midwives, RGNs and Data Entry Clerks (DECs) from City clinics who are the EHR champions in the province; the ICT Team from PMD Bulawayo Metropolitan and System Support officers from Zim-TTECH. Only 7 facilities in Bulawayo Metropolitan province had adopted paper reduction. Recognising the potential for substantial improvement, authorities set out to bolster staff digital skills and drastically cut paper usage, ultimately aiming to streamline services and boost operational efficiency.

**Aim**

To scale up paper reduction in the province

**Objectives**

* To conduct Impilo EHR mentorship onsite
* To prepare facilities for paper reduction

**Focus**

The mentorship was done on the following modules:

* Introduction to ICT equipment and basic troubleshooting
* Client registration
* Reception
* Warehouse
* General Consult
* HIV testing module
* HIV care and treatment
* TB Module
* PrEP
* VMMC
* Cervical cancer screening
* STI
* Antenatal Care
* Postnatal Care
* EHR registers and reports
* Mobile Backup application and WhatsApp chatbot

**Data verification**

Data verification of total number of patients in the EHR and the paper-based registers was also conducted and there were discrepancies due to underutilisation of EHR, network challenges and lack of power back up.

**Data quality checks**

The completeness of fields on EHR was checked and the registers were incomplete as the EHR users were omitting some data elements when entering data in the system.

**Paper Reduction readiness by the facilities**

The following 13 registers are for paper reduction and the proposed date of paper reduction was the 1st of October 2024:

* OPD attendance Register
* OPD General register T12
* Sexually transmitted register
* Dispense Register
* Zimbabwe Expanded Program on Immunisation register
* HIV testing register
* HIV PrEP
* ART register
* TB presumptive register
* TB treatment register
* Malaria register
* Antenatal Care register
* Delivery register

Facilities were to implement paper reduction and use paper registers only if they were offline. However, the health facilities sited that they were not ready for paper reduction due to power back up challenges, network issues and some of the EHR registers and reports were not populating figures needed in reporting.

**Facilities were trained as follows:**

The Bulawayo district is dived into 3 administrative districts namely Emakhandeni district. Northern Suburbs District and Nkulumane district

**District:** EMAKHANDENI

|  |  |
| --- | --- |
| **Health facility** | **Staff trained** |
| Cowdray Park Health Centre | 43 |
| Emakhandeni Clinic | 14 |
| Cowdray park Clinic | 19 |
| Magwegwe Clinic | 14 |
| Pumula Clinic | 16 |
| Pumula South Clinic | 14 |
| Njube Clinic | 9 |
| Luveve Clinic | 34 |
| **TOTAL STAFF TRAINED** | **163** |

**District:** NORTHERN SUBURBS

|  |  |
| --- | --- |
| **Health facility** | **Staff trained** |
| Mahatshula Clinic | 0 |
| Princess Margaret Rose Clinic | 19 |
| Mzilikazi Clinic | 12 |
| Entumbane Clinic | 13 |
| EF Watson Clinic | 14 |
| Khami Road Clinic | 9 |
| CeSHHAR | 6 |
| Thorngrove Hospital | 24 |
| Northern Suburbs Clinic | 12 |
| **TOTAL STAFF TRAINED** | **109** |

**District:** NKULUMANE

|  |  |
| --- | --- |
| **Health facility** |  |
| Nketa Clinic | 16 |
| Dr Shennan Clinic | - |
| Maqhawe clinic | 20 |
| Tshabalala Clinic | 14 |
| Emganwini Satelite Clinic | - |
| Nkulumane Clinic | 25 |
| Pelandaba Clinic | 31 |
| **TOTAL STAFF TRAINED** | **106** |

Mahatshula, Emganwini Satelite and Dr Shennan clinics could not be trained on their scheduled dates of training due to power unavailability.

**Findings and recommendations per health facility**

**EMAKHANDENI DISTRICT**

1. **Cowdray Park Health Centre**

*Findings:*

* The facility was introduced to Impilo EHR and started implementation on 18 September 2024.
* All staff mastered the system well from the onset of training and were given full support for 5 days post training.
* Doctors were not trained on the use of the system. Doctors consult alone (take over consultation from the nurses). This has a bearing on the dispensing of drugs where no prescriptions exist on EHR, and leaving the system to auto-discharge clients due to non-utilisation of the system by the same.
* There is no DEC at the facility

*Recommendations:*

* Facility to implement paper reduction with effect from 1 October 2024
* Doctors to use the system
* Consider a DEC for day-to-day first line support

1. **Emakhandeni Clinic**

*Findings:*

* Staff knowledge of EHR is generally good. There is reluctance by some staff to use the system and to complete all fields in eHR.
* Expired drugs were not being returned to the storeroom
* HIV self-testing and defaulter tracking were not being recorded on eHR.
* Very little of dispensing of drugs was done in consultation rooms

*Recommendations:*

* Staff encouraged to use EHR consistently
* Expired stock in bins to be returned to the storeroom
* CRFs trained on self-testing and defaulter tracking in eHR
* Sister-In-Charge to monitor eHR usage by staff

1. **Cowdray Park Clinic**

*Findings:*

* Network strength was low at some service delivery points
* There was no dedicated storeroom nurse leading to discrepancies
* There was no dispensary assistant hence nurses doubled up with other duties, hence overwhelmed
* The system did not list/account for all clients tested using the HTS register, resulting in less clients in the system compared to those on the paper registers

*Recommendations:*

* Optimise Impilo WiFi network
* Cervical screening numbers need to be documented on the patients’ notes as the numbers are needed when updating the ART status (module)
* Nurse-In-Charge needs to be active on eHR to enable ease of supervision of staff. This is not the DEC’s role.

1. **Magwegwe Clinic**

*Findings:*

* Staff had general knowledge of eHR
* Client demographics were captured in full but the rest of the registers had some empty fields. Some diagnoses were not captured.
* All test kits to be entered in the proper storerooms
* HIV tested clients on eHR not appearing on the HTS register
* PNC module not linking mother and baby

*Recommendations:*

* Staff to consistently use the system
* Staff to mentor each other where there is knowledge gap

1. **Pumula Clinic**

*Findings:*

* HTS screening tool on eHR differs from the screening tool in the approved Ministry of health and Child Care job aide
* Some registers are not populating, for example the Sexually transmitted register, Pre exposure prophylaxis and Mother-Baby Pair (PNC)
* Cervical cancer screening was not done arguing that it was the OPHID cadre’s role (who was absent on the day of mentorship)

*Recommendations:*

* Encourage staff to use the system
* Frequent support and supervision is required
* When creating user credentials, administrators to enter full details of the users so that reports do not show ‘null’ where staff names should reflect (for accountability)
* Clinicians in charge of the warehouse are encouraged to dispense medicines to bins and dispose of expired medicines on the system
* Defaulter tracking register was not populating clients

1. **Pumula South Clinic**

*Findings:*

* The STI register was not being used on eHR
* The HTS module was fully utilised
* TB contact tracing was not being used in the system
* Vitals were not being captured in full

*Recommendations:*

* Clinicians to use the STI module
* Clinicians to ensure they capture all vitals in the system

1. **Njube Clinic**

*Findings:*

* Vitals were not being captured in the system
* Post-test counselling was not being done in the system
* STI register was not being used in the system

*Recommendations:*

* Clinicians to ensure they capture all vitals in the system and use the modules stated above

1. **Luveve Clinic**

*Findings:*

* PNC examinations from the baby was being generalised and not baby-specific
* Not all midwives were trained. Some were on night shift.

*Recommendations:*

* An arrangement to be made to follow up midwives who were on night shift
* There is need to dedicate more time to mentor TB staff on registering TPT clients

**NORTHERN SUBURBS DISTRICT**

1. **Princess Margaret Rose Clinic**

*Findings:*

* ANC registration failure
* BCG and Tetanus diphtheria vaccines not showing on some clients
* STI contacts were recorded as STI indexes

*Recommendations:*

* An arrangement to be made to follow up midwives who were on night shift
* Clinicians must be motivated enough to collect tablets at the start of each day rather than wait for DEC to distribute these

1. **Mzilikazi Clinic**

*Findings:*

* Clinicians were not capturing clients on STI the module
* Clinicians were not screening clients using eHR hence TB presumptive register was blank
* Client flow affects the way the ANC register populates regarding HTS

*Recommendations:*

* SIC encouraged to issue test kits and medicines to bins
* Recommended to change client flow to align with the system’s data flow. Clinicians at HTS to use the ANC module to test pregnant women.
* Solar power backup needs to be fixed

1. **Entumbane Clinic**

*Findings:*

* Most staff have sound knowledge of eHR
* ANC, OI ART and Reception were doing very well on eHR
* HIV self-testing, Defaulter tracking, STI register not being used in the system
* Inconsistent use of system in the HTS department
* Some clients were not being initiated properly in the OI ART department
* Expired drugs were not being returned to the storeroom from the bins in system

*Recommendations:*

* Staff encouraged to always use eHR
* Training was conducted to staff that never used eHR. These are expected to use the system forthwith.
* Expired drugs to be returned to the storeroom.

1. **EF Watson Clinic**

*Findings:*

* Very good use of eHR was observed at the facility
* TB module does not effect changes immediately on the register
* Primary Counsellor (PC) re-registered PNC mothers whenever the system refused to issue a new HTS number.

*Recommendations:*

* Technical team to investigate the TB module issues.
* PC to desist from re-registering clients to avoid duplication of clients’ files

1. **Khami Road Clinic**

*Findings:*

* Generally good use of the system across the departments
* Inadequately captured client demographics, particularly mobile numbers, making it difficult to do client tracking
* Reports such as the ART Monthly, HIV Indicators and Treatment Current (Tx Curr) were failing to generate
* There was an alleged mix up of clinician signatures in the system
* Diagnoses and complaints were not populating in the OPD General Register though captured by clinicians

*Recommendations:*

* Receptionist to capture contact details of all clients in the system
* ICT to investigate failure to generate reports
* Users to clear all saved passwords, clear all browsing history and log out
* The technical team to investigate failure to populate diagnoses and complaints

1. **CeSHHAR Clinic**

*Findings:*

* The facility had a lot of outreaches and requested the EHR mobile App

*Recommendations:*

* Developers to add the new Key Population (KP), ‘Man having Sex with Sex Workers’ in the client profile. This is a new KP of interest to funding partners.

1. **Thorngrove Hospital**

*Findings:*

* The system had numerous replicated clients in the Reception module
* Findings module not visible in the OPD module

*Recommendations:*

* Replicate client records to be marked as ‘Duplicate’ in the system
* ICT to investigate network and system challenges that were observed during mentorship

1. **Northern Suburbs Clinic**

*Findings:*

* Network was slow
* Maternity module could not re-admit pregnant mothers for delivery who were captured prior as false positives
* Clinicians were using each other’s credentials, leading to false signatures on the reports
* PMTCT report could not be generated due to an internal server error

*Recommendations:*

* ICT to investigate network challenges
* Saved passwords were cleared from the web browser and users were encouraged to log out of the system every time they changed departments or at end of day

**NKULUMANE DISTRICT**

1. **Nketa Clinic**

*Findings:*

* Outstanding use of the system
* Facility was piloting Impilo eHR version 1.26.nr-2.
* System glitches were noted and escalated to developers

*Recommendations:*

* To request Nurse in Charge to cascade her EHR management style to other facility managers to motivate staff to use the system as the health facility had 100% of staff using the EHR,

1. **Maqhawe Clinic**

*Findings:*

* Good use of the system at ANC, HTS, EPI, Reception and IO/ART departments
* The system was slow due to low signal strength
* Quality control in HTS, Pre exposure prophylaxis and Defaulter tracking were not being used properly
* Inconsistent use of STI, OPD General and TB modules
* Expired drugs were not being returned to the storeroom in the system
* Unused vaccines were not being wasted in the system

*Recommendations:*

* ICT to re-set MAC address-filtered Access Points to allow addition of tablets
* To improve on Quality Control in HTS, PrEP and Defaulter tracking using eHR
* To consistently use STI, OPD General and TB modules

1. **Tshabalala Clinic**

*Findings:*

* Use of the system was generally poor
* Tablets were not kept securely in one place overnight
* ANC numbers were not being allocated sequentially
* System referenced previous visit during current visit on HTS on selected clients
* The TB screening tool on eHR did not reflect the rubber stamp TB screening tool
* Vitamin A did not deduct stock balance after dispensing
* The STI module was not being used. As a result, the STI register was blank
* SIC called a staff meeting during mentorship, hindering completion of the program.

*Recommendations:*

* Impilo experts to investigate failure to issue ANC numbers sequentially. Database backup to be generated and sent to developers for scrutiny.
* Nurse aides advised to capture vitals in the system for all clients

1. **Nkulumane Clinic**

*Findings:*

* The TB overview dashboard not showing diagnoses and types of TB despite these having been captured in the system
* The Pre exposure Prophylaxis ( PrEP) module was not being utilised

*Recommendations:*

* ICT to escalate system developmental issues
* Staff to use the PrEP module

1. **Pelandaba Clinic**

*Findings:*

* OPD and Delivery registers had missing vitals details
* Server time was not reported as incorrect

*Recommendations:*

* ICT to escalate system developmental issues
* Staff to complete all fields when capturing vitals
* Staff to use the PrEP module

**OVERALL COMMENTS**

1. For all facilities, clinicians should allow the system to generate numbers automatically.
2. Sharing of user credentials among staff and staff not logging out and switching tablets.
3. Integrate EHR with electronic logistic information system (eLMIS) to reduce workload as these are being used separately.
4. Where tablets were reported as insufficient, facilities with excess to re-distribute to those in need
5. Staff rotation affects system reporting as one cadre may diligently use the system while the next carder may not (staff attitude)
6. HIV Testing services results for ANC clients are blank when generating reports. ANC module to be used at HTS for ANC clients
7. System requires manufacturer names hence challenges performing malaria tests. (for developers)
8. Delivery history- system to incorporate specific private facilities and other countries
9. ICD10 has missing diagnoses
10. All cough cases are classified as influenza even when it is a mild cough
11. System to allow back-capture to prescribe and dispense medicines
12. TB to increase more options for DOTs visits, i.e. more days to be added. Notes section is required.
13. The EHR TB presumptive register does not have Code 0 as on the paper register.
14. Include PNC on out-patients’ queue so that post-natal referrals can be done
15. Resolving duplicate entries on clients’ registration appeared to be a challenge to most facilities as they did not know how to mark entries as such.
16. Key STI symptoms are not populating in the register, particularly genital ulcers
17. The system should conform to the 2024 TB screening tool
18. TAF is not in the system
19. Mylan HIV self-test kit is not in the system
20. Malaria Pf/Pan Ag test kit is not in the system
21. DBS to be separated into adult and neonatal DBS
22. Hospital number for birth certificate application does not exist on eHR (ref: Pelandaba clinic)
23. Delivery register is not on T5
24. There is a shortage of tablet chargers almost everywhere. ICT to issue USB charging stations to facilities.

**Recommendations:**

1. Health facilities to use EHR on a real-time basis
2. EHR challenges to be reported via the Impilo help desk
3. All data elements in the EHR to be completed
4. EHR users to analyse their EHR registers and reports for completeness and accuracy
5. Conduct regular Impilo eHR DHE and PHE support and supervision
6. To replace gel batteries with lithium and fix Solar for Health issues to improve efficiency of the solar backup systems

**Conclusion**

The EHR mentorship was a success as it identified the gaps which was making the use of EHR not to be done properly by the health facilities and also there was a knowledge gap on how to use the EHR by the new members of staff who were never trained and also it was a refresher course to those trained previously as the EHR is continuously being upgraded.

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