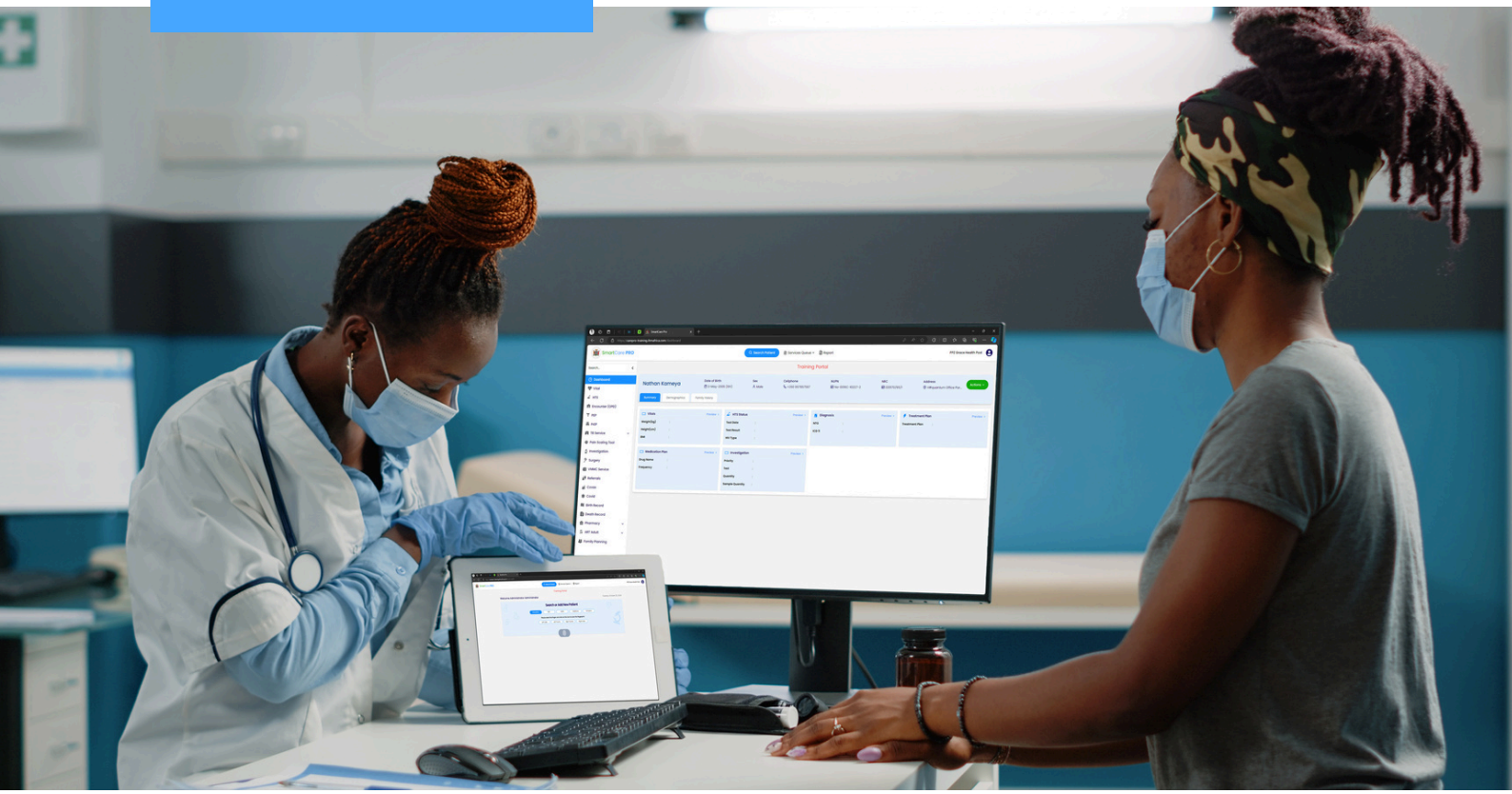
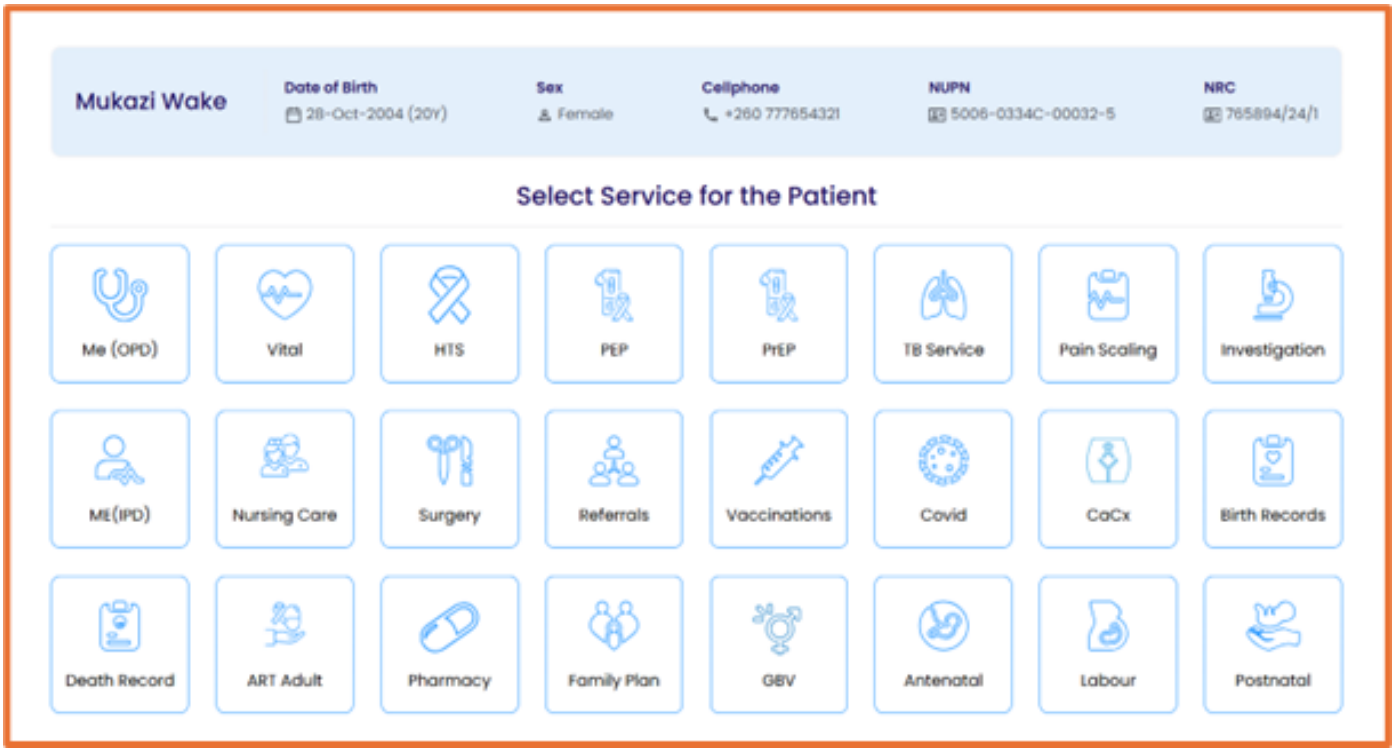
BOOKLET
NOVEMBER 2024



SmartCare **PRO**

INTRODUCTION

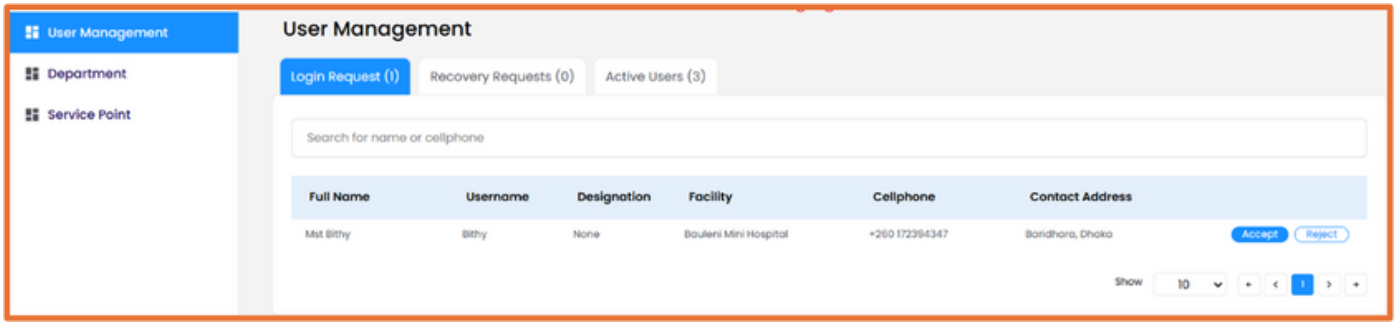
SmartCare Professional is a Zambian EHR enhanced from its predecessors SmartCare Legacy and SmartCare Plus. It is web-based with a centralized server and can be accessed through a URL, username and password. SmartCare Pro is a clinical workflow-centric EHR designed to help healthcare professionals do their work as opposed to being a data entry tool. Once a live version of SmartCare Pro has been setup at a facility, roles are assigned, and users start using the system



1. Duties of an Administrator: Once the facility In-Charge or the hospital administrator have been assigned, their duties would be as follows:

a. User Management

i. Approving Login Requests by the HCWs.
ii. Recovery Requests for those who forget their passwords.

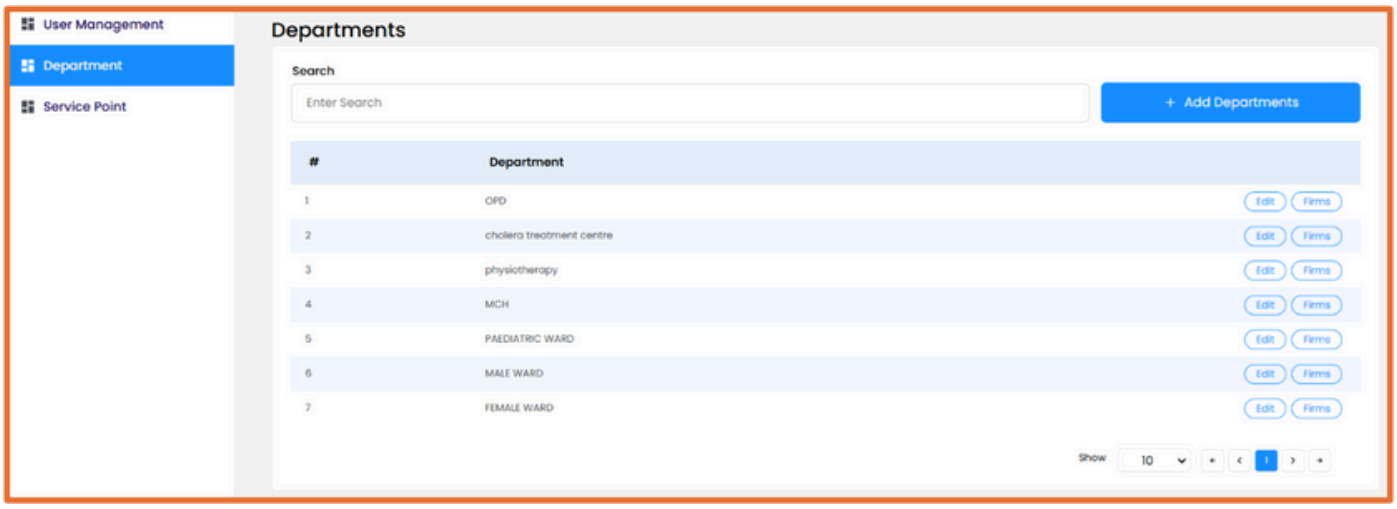


b. Departments Management

i. Defining facility departments
ii. Firms
iii. Wards
iv. Beds

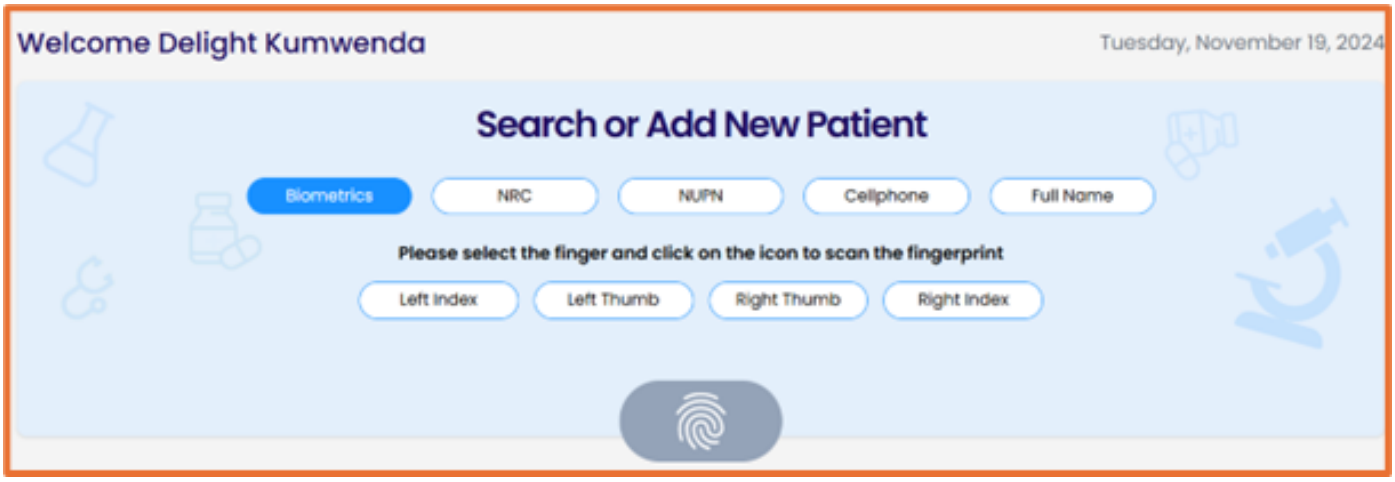
c. Service Point Management

i. Creating service queues



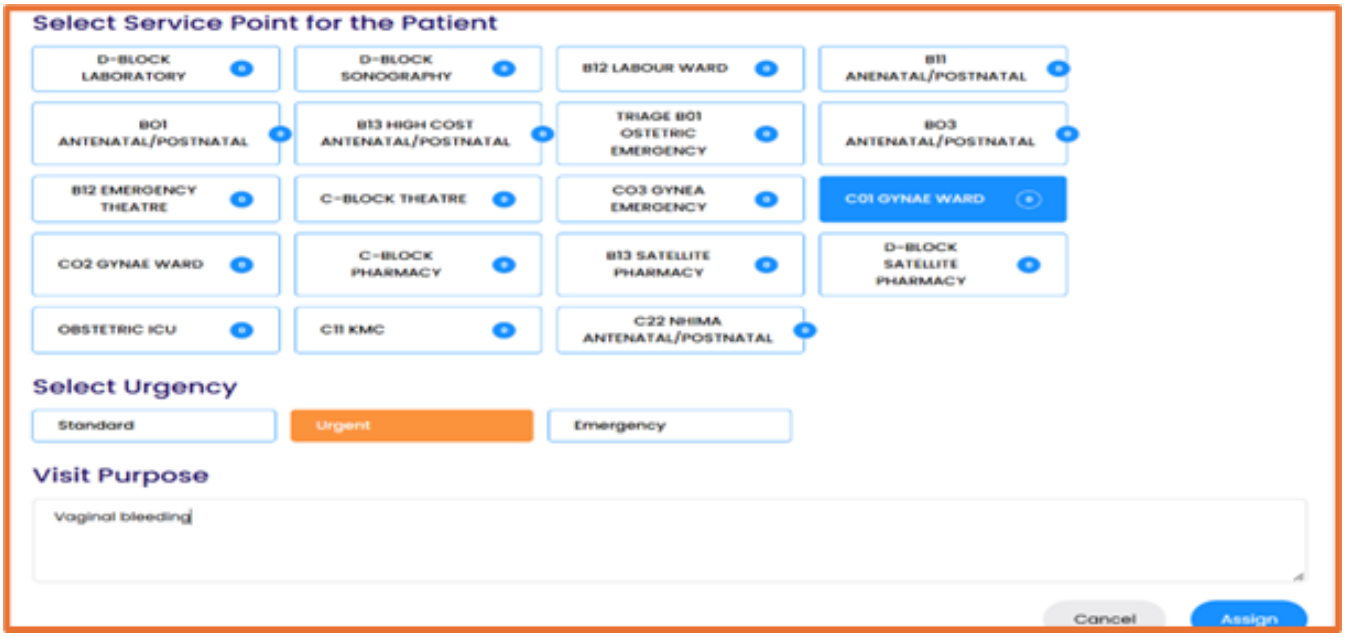
2.Duties of a Registry Clerk

a. Searching and Registering
b. Assigning to next service queue



3.Duties of a Triage Nurse

a. Reviewing a patient's file
b. Entering vitals and anthropometry

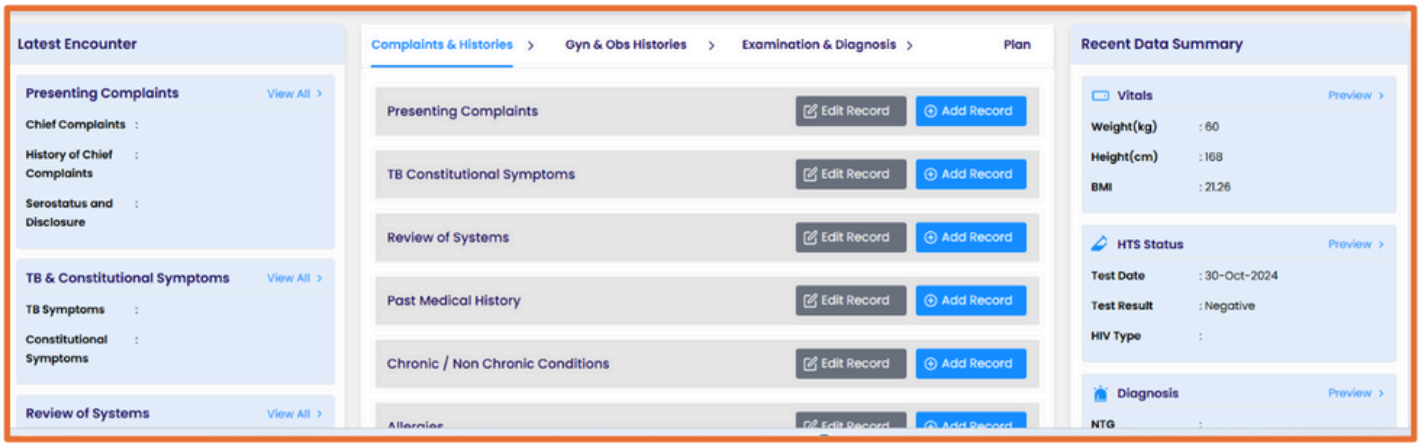


c. Assessing the patient and determining the urgency of their treatment needs.
d. Assigning to appropriate service queue.

SERVICES PROVIDED BY SMARTCARE PRO

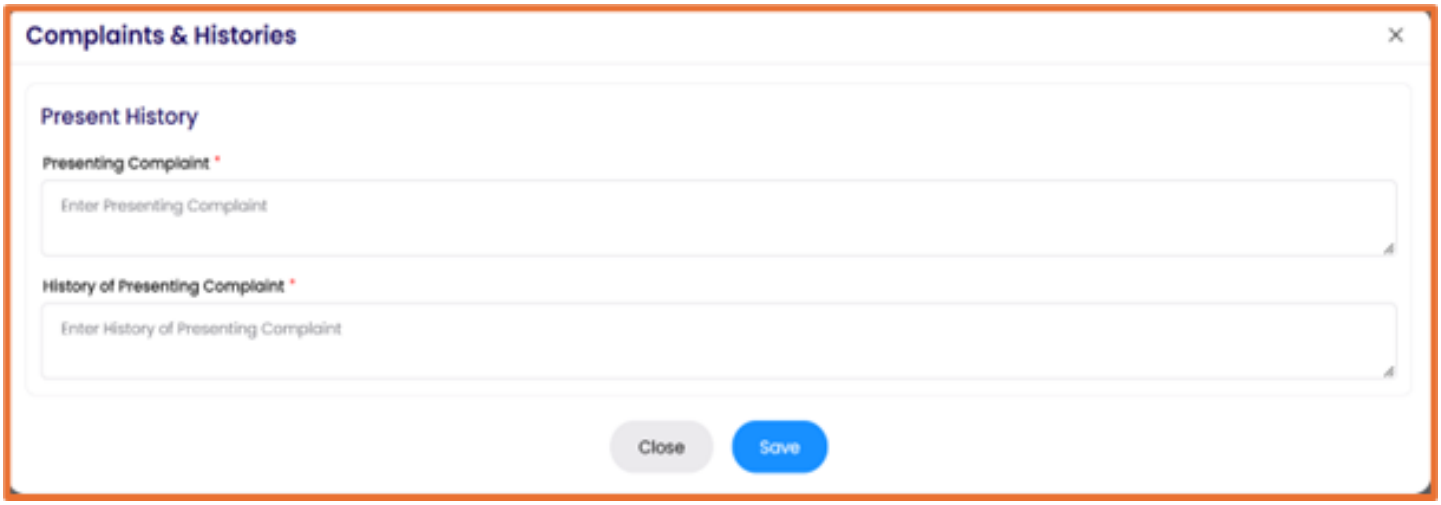
01. MEDICAL ENCOUNTER (OPD)

- First line of contact between the patient and the healthcare providers within the facility.
- The Reason for Encounter (RFE) will record patient notes using the popular approach, SOAP (Subjective, Objective, Assessment and Plan).
- Complaints and Histories including Obs and Gynae for female patients, and paediatric history for paediatric patients.
- Examinations and Diagnosis.
- Treatment Plan.



NEW IN SMARTCARE PRO

a. The clinician is provided with text boxes where they freely type their own notes enabling use of precise medical terminology, expressions and unique descriptions that predefined options may not cover.

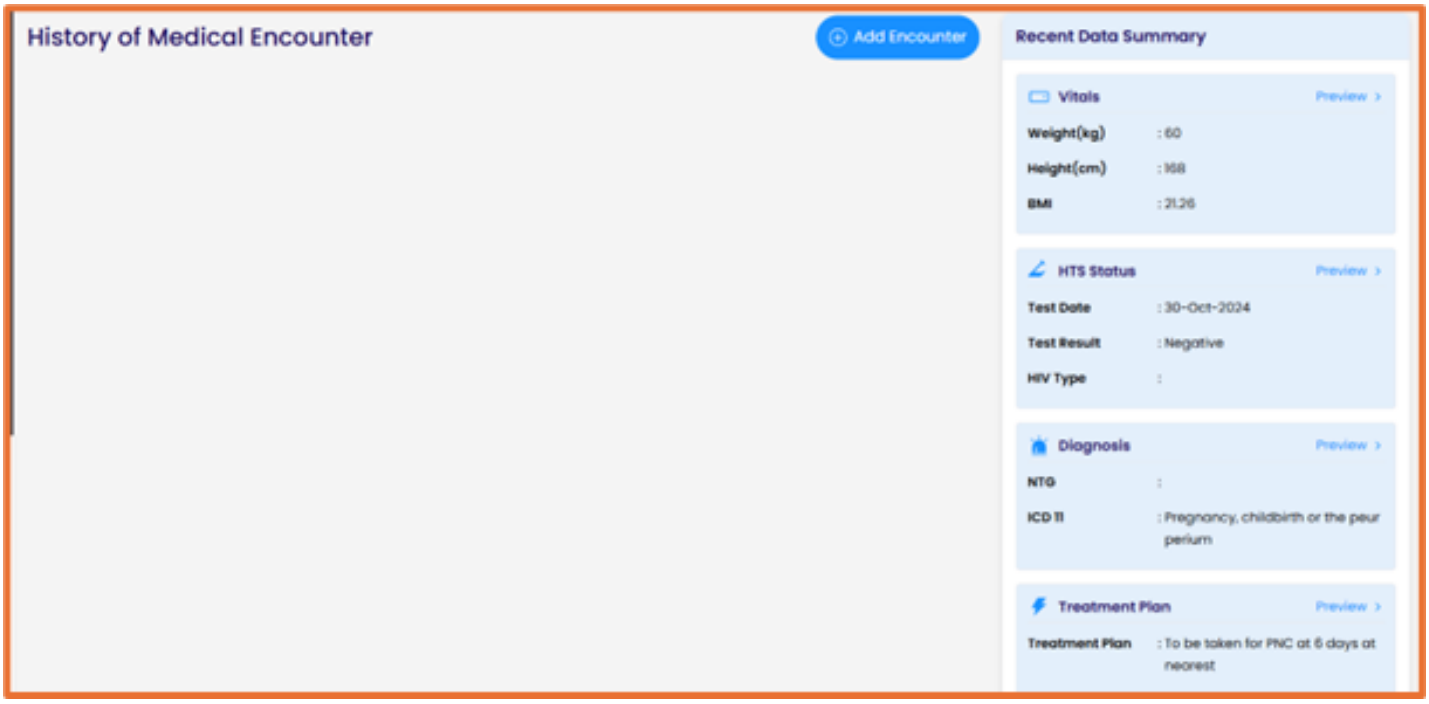


b. Diagnosis can be made in 2 ways:

1. Using NTG (National Treatment Guidelines)
2. Using ICD 11

c. Advantage of diagnosing using NTG is the availability of a suggested NTG which you may copy and use. This will result in standardization of care and improved patient outcomes because the guidelines are based on Evidence Based Practice.

d. Diagnosis, Treatment Plan, Medication Plan and Investigations will populate on the Dashboard, providing a bird's eye view of the patient's record.



02. VITALS AND ANTHROPOMETRY

Temperature, Pulse, Respiration, Blood Pressure, Weight, height, MUAC, Abdominal circumference, Head circumference, are provided with Clinical Decision Support showing when they are abnormal (above or below normal).

NEW IN SMARTCARE PRO

a. Once entered in one service point, will be seen in another service point.
b. The provision of date and time of taking them will enable monitoring over time
c. Graphs for TPR, BP can be plotted for admitted patients while Weight, Height and BMI can also be monitored in Nutrition and TB patients.
d. Weight, Height and BMI will appear on the dashboard.

03. HTS – ENTRY POINT TO ART SERVICES

- Divided into 2 parts

-Part A: Pre-test assessment where the client type, visit type, service point, source of client, reason for testing, last test date and results, partner last test date and results, counselling and consent are entered.

-Part B: Test and Results where the test number, determine result, bioline result, HIV type, DNA PCR sample collection and date details are entered. Also entered are whether client received the results and whether they consent to SMS alerts.

NEW IN SMARTCARE PRO

a. Once HTS is entered, it will be seen across all service points- no need of re-entering it.
b. Only clients with a positive HTS will access ART services
c. Only clients with negative HTS will access PEP and PrEP Services
d. Test Date, Test Result and HIV Type will populate on the Dashboard.

04. PEP (POST EXPOSURE PROPHYLAXIS)

- Management of short-term course of ARVs to reduce risk of HIV infection.
- Only applicable if HTS is negative.
- All components like for RFE in OPD will apply – complaints and histories, examination and diagnosis, treatment plan.
- ARVs are prescribed and dispensed for 28 days.
- Follow up is done with HTS results after 28 days. If still Negative – Discharge.

05. PREP (PRE-EXPOSURE PROPHYLAXIS)

- ARVs taken to reduce risk of contracting HIV infection.
- Only applicable if HTS is negative.
- All components like for RFE in OPD will apply – complaints and histories, examination and diagnosis, treatment plan.
- ARVs are prescribed and dispensed for 30 days.
- Follow up with HTS results after 30 days – If positive initiate long-term ART.

06. TB SERVICES

Services offered to a patient referred for TB Screening and management.
It has 4 Forms:
1. TB Screening – done in the same way as in RFE – Complaints and histories, examination and diagnosis and Treatment Plan.
2. TB Initial – Form used to initiate patient on ATT

- It has the same components like on RFE (OPD) – Complaints and Histories, Examination and Diagnosis and Treatment Plan.
- On Complaints and Histories is TB Service where the Patient Case ID Number, the patient category, and the patient type are entered.
- Included On treatment plan are DOTs plan, TB Contact and treatment plan itself.
- If you diagnose using NTG, a TB treatment plan is suggested which could be copied and used.
- Prescribe and Diagnose ATT

3. TB Follow Up Form – Used for reviews.

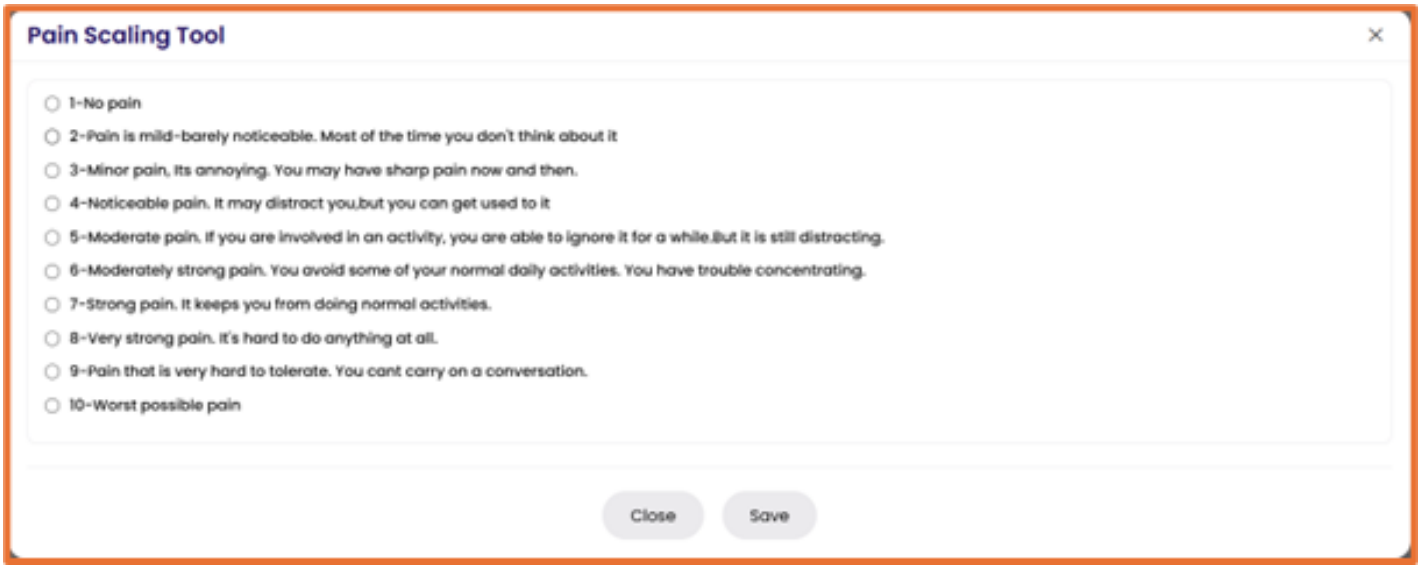
- All components like for RFE in OPD will apply – complaints and histories, examination and diagnosis, treatment plan
- Included on the treatment plan is the TB Outcome/status entered at the end of the TB treatment.

4.TB Patient Locator – Used for Contact tracing

- Patient's entry, source, background, next of kin and address are captured.
- Updated regularly.

07. PAIN SCALING

A numeric pain rating scale which is a tool used to track how well a treatment plan is working to reduce pain measured on a scale of 1 to 10. 1 means no pain, 2 to 4, mild pain, 5 to 7, moderate pain, 8 to10 means the worst possible severe pain.

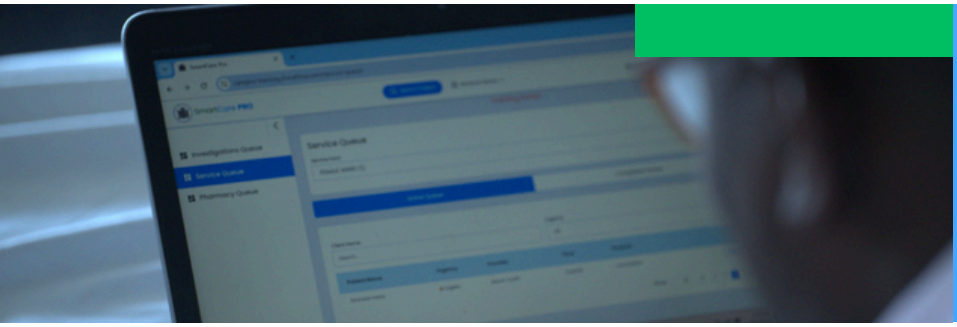


08.VMMC SERVICE

Module used to manage Voluntary Male Medical Circumcision. It has 2 forms:

a. VMMC Initial – Form used to capture client information prior to circumcision. It includes client information, complaints and histories, examination and diagnosis and a treatment plan which includes surgery and pain scaling. Surgery includes booking, pre-operation, intra-operation, post-operation and the anaesthetic plan.

b. VMMC Review: Used for VMMC follow ups. It has 2 sections; Review Visit History which captures admin data and examination, history and complications if any and Pain Scaling.



09. INVESTIGATION

Module used for ordering investigations and entering of results. It has 2 sections: Single Test – Lab, pathology and radiology single tests and Composite tests – group lab tests such as Full Blood Count (FBC), Liver Function Tess, Kidney Function Tests, Urinalysis etc
.
Interoperability – SmartCare Pro Investigations module is integrated with DISA such that investigations ordered in SmartCare Pro are able to be seen in DISA and results entered in DISA are able to be seen in SmartCare Pro.

10. SURGERY

Module used to manage patients referred for operations. It includes Booking, pre-operation, intra-operation, post-operation and anaesthetic plan.

11. REFERRALS

Module used to refer a patient either internally or externally. If externally, the referral province, the district, the facility and the service referred for are entered.

12. VACCINATIONS

Module used to manage COVID 19 Vaccinations. A pre-assessment is done before vaccination. During vaccination, the type, date and batch number are entered. If the client suffered an adverse event post vaccination, it is also entered.

13. BIRTH RECORDS

Module used to create a birth record. The components are:

a.Particulars
b.Reference Notes
c.Informant Details

14. DEATH RECORD

Module used to create a death record. The death record will include the immediate cause of death, the antecedent cause of death, the underlying cause of death and any other cause of death. The certificate handler will also have their details captured. The death record once created will produce the Notice of Death (NOD) and the Medical Certificate of the Cause of Death (MCCD).

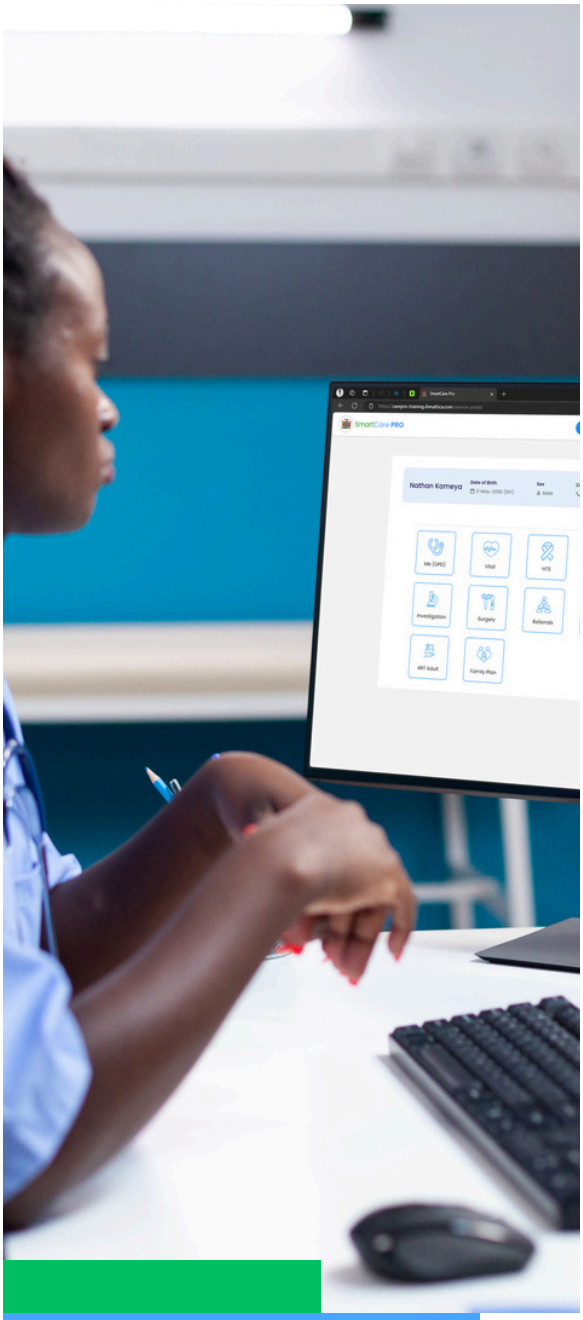
15. PHARMACY

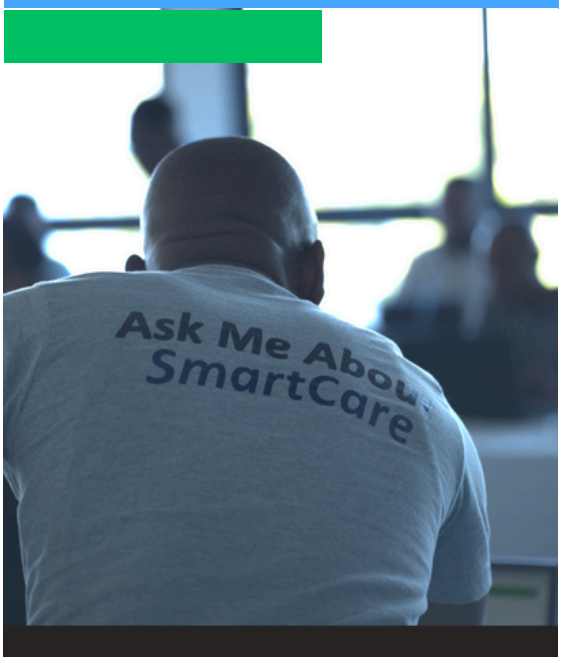
Module used for prescription and dispensation of drugs. Drugs are put into 3 categories:

a. General Drugs – Essential medicines
b. ARVs and ATT – ARVs and Anti-TB Drugs
c. Custom Drugs – Drugs not in the system but are in the pharmacy can be prescribed.

The drugs can be searched for through different methods:
a. Text Search
b. Search by Physical Systems
c. Search by Utility
d. Search by Class
e. Search by Indication

Once a prescription has been made, the patient is assigned to the dispensary for dispensation, or the drug is dispensed in the clinic using the dispensations module.





16. ADULT ART

Module used to manage adult clients on ARVs. Treatment eligibility requires a positive HTS status of the client. If client has no or negative HTS, the system would prompt the user to go to HTS. HTS is administered in 2 ways:

a. Professional administered Test
b. Self-test

Under Professional administered test, there is pre-test assessment and test and results. Under self-test, there is an indication as to whether the test was directly assisted or unassisted and whether the client is for key populations.
Adult ART in SmartCare Pro has the following forms:
a. Adult Patient Locator – details are entered in the following sections:
i. Entry and source
ii. Households
iii. Next of Kin
iv. Disclosure, Index testing and partner notification services (IT&PNS)
The ART Number is on Disclosure, IT&PNS page. When the answer to the question, “Does the client have an ART number”, is Yes, the ART number is entered in the next box. If the answer is No, the system allocates an ART number to the client.

b Adult Patient Status – Form used if the client has a change in status e.g. trans-out, stopped ART, being inactivated, being reactivated, dead etc.
c .Adult IHPAI – (Initial History, Physical and Initiation) form used to initiate client on ART. Details entered include complaints and histories, gynae and Obs for female clients, examinations and diagnosis and treatment plan.
d. Adult Follow Up – Form used for clinical follow ups. Layout of the form is as for IHPAI form with complaints and histories, gynae and Obs for female clients, examinations and diagnosis and treatment plan.
e. Adult Stable on Care – Form used to manage ART clients that are stable on care and are on Differentiated Service Delivery (DSD). The form has Purpose of Visit to indicate whether it is a buddy pick up or patient is present, complaints and histories, gynae and Obs histories, examinations and diagnosis and treatment plan.

17. PAEDIATRIC ART

Module used to manage paediatric clients on ART. Eligibility to ART requires a Positive HTS status. If the child has no HTS status or it is Negative, the system redirects the user to HTS Module. The HTS interaction is performed in the same way as for an adult client where you enter the visit type, the service point, last test results, consent, Determine Result, Bioline Result and HIV Type. Paediatric ART like Adult ART has similar forms:

a. Patient Locator used for contact tracing with the following sections:
   i. Entry & Source
   ii. Households
   iii. Next of Kin
   iv. Disclosure, IT&PNS.

b. Patient Status – used when the client has a change in patient status:
   i. Trans-out
   ii. Being made inactive
   iii. Stopped ART
   iv. Being Reactivated
   v. Has died

c. Paediatric Initial History, Physical and Initiation (IHPAI) – Form used to initiate client on ART. It is entered in the same way as for adult ART.

i. Complaints & Histories
ii. Paediatric Histories
iii. Examination & Diagnosis
iv. Plan

Drugs are prescribed and Dispensed in the normal way and investigations are ordered.

18. GBV

Module used to manage clients who have suffered Gender Based Violence (GBV). Details entered include incident details and the type of GBV:

a. Sexual Violence
b. Physical Violence
c. Emotional Violence
d. Psychological

The plan is whether the client is linked to care and treatment or not.

19. ANTENATAL

Module used to manage expecting mothers from the start of the pregnancy until the day the baby is delivered. The module has the following forms:

a. ANC Initial Visit – Includes ANC-related complaints and Histories, Gynae and Obs Histories, examination and diagnosis and treatment plan.
b. ANC Follow Up – Form used for ANC Reviews. Layout of the form is the same as ANC Initial including ANC-related complaints and histories, Gynae and Obs Histories, Examinations and Diagnosis and Treatment Plans.
c. Initial Already on ART – Form used for clinical follow ups for expecting mother on ART while at MCH. It has the following sections:

i. Patient Locator
ii. Patient Status
iii. Complaints and Histories
iv. Gynae and Obs Histories
v. Examination and Diagnosis
vi. Treatment Plans.

d. ANC 1ST Time on ART – Form used to manage expecting mothers first time on ART. Form has the same sections as for Initial already on ART as follows:

i. Patient Locator
ii. Patient Status
iii. Complaints and Histories
iv. Gynae and Obs Histories
v. Examination and Diagnosis
vi. Treatment Plans.

e. ANC Follow Up PMTCT – Form used for following up exposed expecting mothers for PMTCT. The layout of the form is the same:

i. Patient Locator
ii. Patient Status
iii. Complaints and Histories
iv. Gynae and Obs Histories
v. Examination and Diagnosis
vi. Treatment Plans.

20. LABOUR AND DELIVERY

Module used to admit an expecting mother in labour ward and provide delivery services. It has the following Sub Modules:
a. History of Labour and Delivery with the following sections:

i. Complaints and Histories
ii. Gyn and Obs Histories
iii. Examination and Diagnosis
iv. Plan

Complaints and Histories will include:
i. ANC Referrals
ii .ANC Service
iii. Presenting Complaints
iv. ANC Screening
v. TB Constitutional Symptoms
vi. Review of Systems
vii. Past Medical History
viii. Drug Adherence
ix. Chronic/non-chronic conditions
x. Allergies
xi. History of Blood Transfusion
xii. Family and Social History

Gyn & Obs Histories will include:

i. Booking
ii. Gyn & Obs
iii. Mother Details
iv. Child Details
v. Past Antenatal Visits

Examination and Diagnosis will include:

i. General Assessment
ii. System Examination
iii. Glasgow Coma Scale
iv. Obstetric Examination
v. Vaginal Examination
vi. Diagnosis

Plan will include:
i. Surgery
ii. Counselling Service
iii. Screening and Prevention
iv. Treatment Plan

b.Labour and Delivery PMTCT – with the following sections:
i. Patient Locator
ii. Patient Status
iii. Complaints and Histories
iv. Gyn and Obs Histories
v. Examination and Diagnosis
vi. Plan

Patient Locator will include:

i. Entry and Source
ii. Households
iii. Next of Kin
iv. Disclosure, IT&PNS

Patent Status will include

i. Patent is being sent to another clinic
ii. Patient is being made inactive
iii. Patient has stopped ART
iv. Patient is being reactivated
v. Patient has died

Complaints and Histories will include:

i. ANC Referrals
ii. ANC Service
iii. Presenting Complaints
iv. ANC Screening
v. TB Constitutional Symptoms
vi. Review of Systems
vii. Past Medical History
viii. Drug Adherence
ix. Chronic/non-chronic conditions
x. Allergies
xi. History of Blood Transfusion
xii. Family and Social History

Gyn & Obs Histories will include:

i. Booking
ii. Gyn & Obs
iii. Mother Details
iv. Child Details
v. Past Antenatal Visits

Examination and Diagnosis will include:

i. General Assessment
ii. System Examination
iii. Glasgow Coma Scale
iv. Obstetric Examination
v. Vaginal Examination
vi. Diagnosis

Plan will include:

i. Surgery
ii. Counselling Service
iii. Screening and Prevention
iv. Treatment Plan

c. Partograph – This is a tool for monitoring maternal and foetal wellbeing during the active phase of labour and a decision-making aid when abnormalities are detected. To initiate the partograph, the following must be entered:

i. Date of Admission
ii. Time of Admission
iii. Gravida
iv. Parity
v. LMP
vi. EDD
vii. Initiation Date
viii. Initiation Time

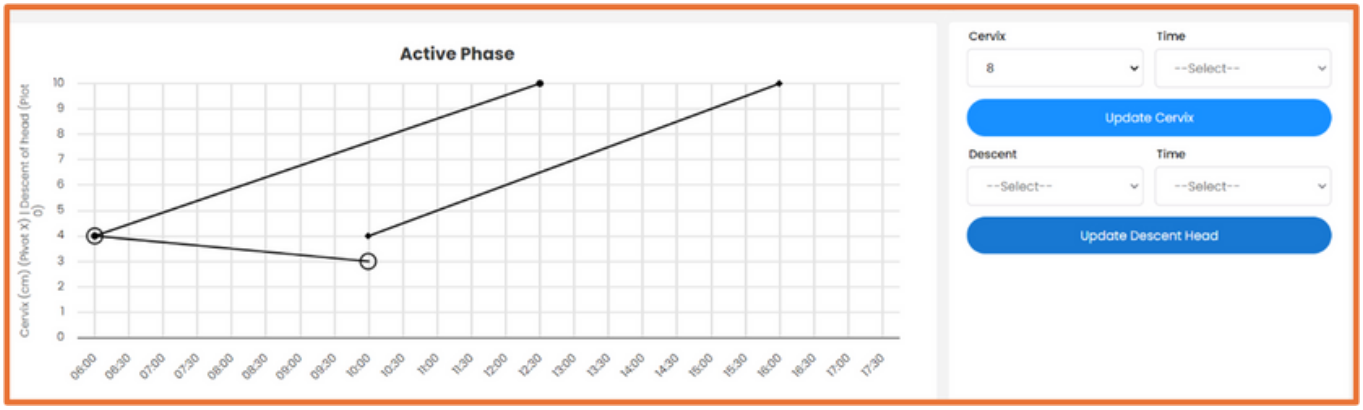
Parameters that need to be monitored and updated are as follows:

i. Fetal Heart Rate
ii. Liquor and Moulding
iii. Cervix
iv. Descent
v. Contractions
vi. Oxytocin
vii. Drug given and IV Fluids
viii. Pulse and Blood Pressure

Once the delivery has been successful, the following information is captured:

i. Gender
ii. Weight
iii. Type of Delivery:
  (a) Vaginal Delivery
  (b) Caesarian Section
  (c) Vacuum Extraction
iv. Birth Date
v. Birth Time

The Partograph is then completed and can even be printed



d.Summary – This is the labour and Delivery Summary. It will include:

i. Delivery Summary: Mother
ii. Newborn Details

Delivery Information will include:

i. Third Stage Delivery
ii. Treatment for PPH
iii. Medical Treatment
iv. Condition of Uterus
v. Placenta Removal
vi. Perineum Intact
vii. Identified Perineum Intact

e. Delivery Discharge – This is the Delivery Discharge for both the mother and Baby after Delivery Services. It includes:

i. Delivery Discharge Baby
ii. Delivery Discharge Mother

Delivery Discharge Baby includes:

i. Complaints and Histories
ii. Paediatric and Histories
iii. Examination and Diagnosis
iv. Plan

Complaints and Histories includes:

i. Baby (Discharge Metrix)

Paediatric and Histories includes:

i. Immunization History
ii. Feeding Method

Examination and Diagnosis includes:

i. General Assessment

Plan includes:
i. Treatment Plan

Delivery Discharge Mother includes:
i. Complaints and Histories
ii. Examination and Diagnosis
iii. Plan

Complaints and Histories includes:

i. Presenting Complaints
ii. Key Population Demographics
iii. HIV and EMTCT

Examination and Diagnosis includes

i. General Assessment

Plan includes:

i. Treatment Plan

21. POSTNATAL CARE (PNC)

Module used to manage the health and wellbeing of both the mother and the newborn. It has 2 components:

a. Postnatal – Mother
b. Postnatal PMTCT – Mother

Postnatal – Mother includes:

i. Visit Details
ii. Complaints and Histories
iii. Examination and Diagnosis
iv. Plan

Postnatal PMTCT – Mother Includes:

i. Visit Details
ii. Complaints and Histories
iii. Gyn and Obs
iv. Examination and Diagnosis
v. Plan

Postnatal Care for the newborn is performed by searching and retrieving the baby's file. Postnatal for the baby has 2 components:

a. Postnatal – Baby
b. Postnatal PMTCT – Baby

Postnatal – Baby includes:

i. Visit Details
ii. Examination and Diagnosis
iii. Plan

Postnatal PMTCT – Baby includes:

i. Visit Details
ii. Examination and Diagnosis
iii. Plan

22. FAMILY PLANNING

Module used for timing of pregnancies and birth spacing. It includes the following components:

a. Family Planning Register
b. Complaints and Histories
c. Gyn and Obs
d. Examination and Diagnosis
e. Plan

After this assessment a prescription is made, and a dispensation is made in the clinic or through the Dispensation module.

23. UNDER FIVE

This is a module used to manage children younger than 5 years. It has 2 components:

a. Under 5
b. Paediatric Charts

Under 5 includes the following:
i. Complaints and Histories
ii. Paediatric and Histories
iii. Examination and Diagnosis
iv. Plan

Birth History, Immunization History, Feeding History, Developmental History and all that is going to be done on the child will fall under Paediatric and Histories. Anthropometric measurements like weight, height, circumference will be done through vitals.

Paediatric Charts includes the following:

i. Weight for Age
ii. Length/Height for Age
iii. Head Circumference for Age

These must be captured in the Vitals Module whenever the child is brought for Under 5.

24. CACX

Module used to screen and manage women diagnosed with cervical cancer. It has the following components:

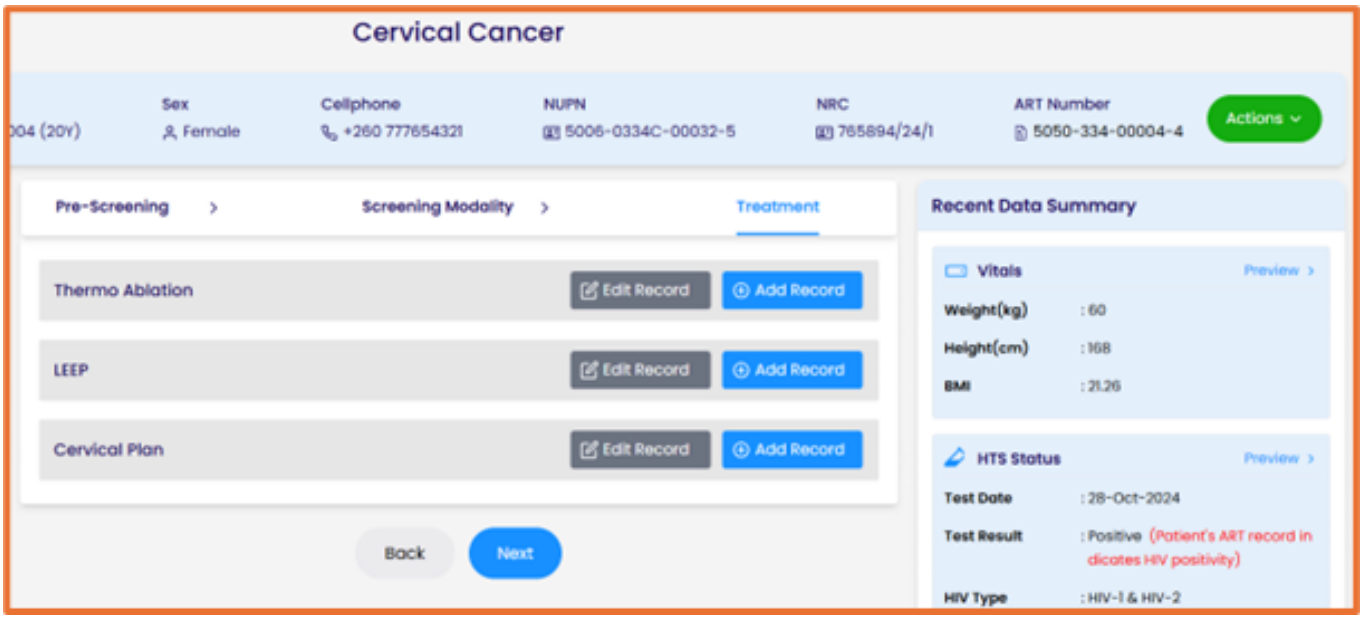
a. Pre-screening
b. Screening Modality
c. Treatment

Pre-screening includes:
i. Type of Visit
ii. Obstetrics and Gynaecology

Screening Modality includes:

i. Pap Smear (screening)
ii. HPV Genotype
iii. VIA
iv. Enhanced Digital Imaging

Treatment includes:
i. Thermo Ablation
ii. LEEP
iii. Cervical Plan



25. MEDICAL ENCOUNTER (IPD)

Module used to attend to a patient who has been admitted to the ward. Admission could either be through OPD or directly to the ward without passing through OPD. If patient is being admitted from OPD, the Green Action Buton is clicked, and Admit Patient is selected. Admit Patient will have the following information captured:

a. Admission Date
b. Department
c. Firm/Unit
d. Ward
e. Bed Number
f. Additional Comments

Department, Firm/Unit, Ward and Bed Numbers should have been created in advance by the facility administrator. Once this information is captured, the patient is then assigned to IPD.
Medical Encounter (IPD) will include the following sections:

a. Presenting Complaints and Examination
b. Diagnosis
c. Treatment Plan

Investigations and Prescriptions are done from the Green Action Button. At the end of the stay in hospital, the Discharge/Transfer Patient Date and any other notes are entered.

26. NURSING CARE

This is the formalized process used by Nurses to provide individualized and holistic care to patients admitted in the ward. It includes the following sections:

a. Nursing Plan
b. TPR and other charts/vitals
c. TPR and other charts/Glasgow Coma Scale
d. Turning Charts
e. Fluids and Weight
f. Blood Transfusion Monitoring/Pre-Transfusion Vitals
g. Blood Transfusion Monitoring/Intra-Transfusion Vitals

Nursing Plan will include:

a. Planning Date
b. Planning Time
c. Problem Need
d. Goal Objective
e. Nursing Diagnosis
f. Nursing Intervention/Rationale
g. Evaluation Post Intervention

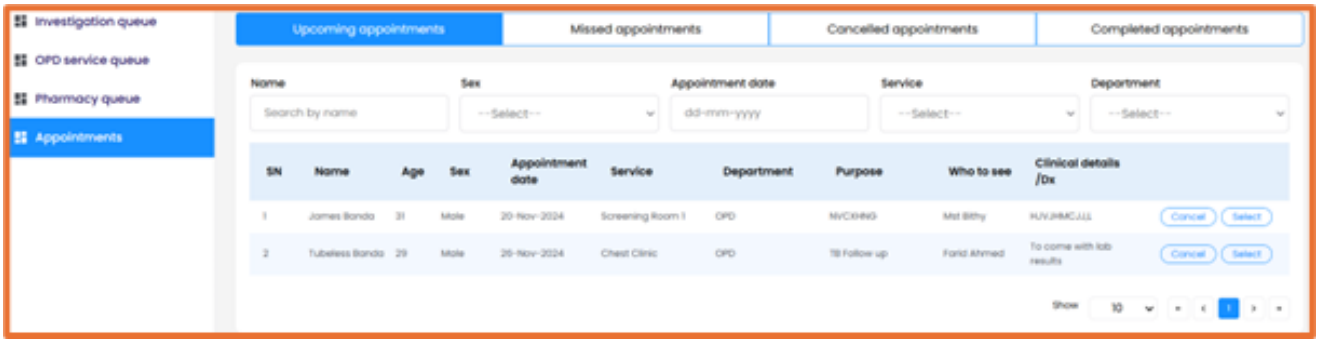
27. APPOINTMENTS

These are dates given to patients to come back for review or follow-up. They come out in form of lists of patients indicating the following:

a. Appointment Date
b. Service
c. Department
d. Purpose
e. Who to See
f. Clinical Details/Diagnosis

Listings would be generated for the following:

a. Upcoming Appointments
b. Missed Appointments
c. Cancelled Appointments
d. Completed Appointments



28. HISTORICAL VISIT

This is where data is entered in e-Last Mode from paper to SmartCare Pro. The components include:

a. The Previous Session Date
b. The Service being captured

29. BINDING

Refers to the process of linking or associating individuals for HIV testing based on their relationship to an index client. Binding is also used in linking a newly born baby to her mother. In the DFZ version of SmartCare Pro, Binding is also used to link or associate a dependent such as spouse or a child to a principal member of DFZ. It includes the following:

a. Searching for the client
b. Relationship
c. Binding

30. COVID

This is the module used to manage a patient suspected to have COVID-19. The components of the module are:

a. Integrated Screening Form
b. Symptom Screen
c. Exposure Risk
d. Case Report
e. Clinical Assessment
f. Co-Morbid Conditions

After completion of the assessments, investigations are ordered, Diagnosis is made and a treatment plan formulated.

THANK YOU