Statement of Work: HealthQual Report Development on OpenMRS Platform

Background

The International Training and Education Center for Health (I-TECH) is a center in the University of Washington's Department of Global Health. I-TECH has projects in more than 20 countries, and its worldwide staff work with local ministries of health, universities, non-governmental organizations, medical facilities, and other partners to support efficient, well-ordered health care systems that provide high quality care to all citizens.

Project Description

The International Training and Education Center for Health (I-TECH) seeks a highly-qualified software developer to build the HealthQual Report in the new OpenMRS-based EMR in Haiti, iSantéPlus. The targeted software release date is September 29, 2017. The report must be developed and incorporated into the core application by that date. The current version of the software, known as iSanté, is deployed in 132 sites in Haiti and is considered the national EMR.

The consultant will work with the Health Information Systems Manager based in Haiti as well as other technical staff located at I-TECH's HQ in Seattle at the University of Washington. It is expected the consultant will be able to communicate with the team remotely and collaborate with the team to meet overall project goals. Specific deliverables are outlined below.

Required Qualifications

- Proven experience with OpenMRS module development (specifically reference application)
- Solid grasp of web technologies HTML, CSS, JavaScript, JSP/JSTL, AngularJS

Desired Qualifications:

- Advanced knowledge of object oriented programming with Java
- Demonstrated experience with OpenMRS core (Spring, Hibernate)
- Demonstrated experience with PHP, SQL
- Demonstrated experience with Linux
- Excellent problem solving and debugging skills
- French language proficiency a plus

Proposed Activities and Deliverables

1. Review code for existing HealthQual report in iSanté
   Deliverable: Presentation of contractor's approach to the iSantéPlus report

2. Produce a mock-up version of the report UI
   Deliverable: HealthQual Report UI mock-up

3. Develop a test candidate of the report as outlined in the specification document (Attachment 1)
   Deliverable: HealthQual report test candidate

4. Integrate HealthQual report into core iSantéPlus reporting module
   Deliverable: HealthQual report available in core application that successfully passes testing

5. Consultant or contractor must adhere to the following expectations while executing the work:
   - All source code will be made available as open source on the iSantéPlus GitHub page.
   - Availability for weekly virtual meetings with the UW team in Haiti and Seattle.
   - Developer(s) routinely create, monitor and resolve tickets in the development tracking system.
   - Maintain regular communication with the UW team in Haiti and Seattle via remote phone calls and email.

Request for Quotes

The contract will be executed between August 1, 2017 and September 29, 2017 and will require a time commitment of approximately 300 person hours. Interested applicants should provide 1) a summary of relevant past performance and 2) a cost proposal or quote to Dr. Nathaelf Hyppolite, I-TECH/Haiti Health Management Information Systems (HMIS) Director (nathaelfhyppolite@itech-haiti.org) and Joanna Diallo, I-TECH Senior Program Manager (jdiallo@uw.edu) by July 28, 2017 at 5:00pm PST. At a minimum, the cost proposal should include number of individuals proposed to complete the work, hourly rates, and total estimated hours to complete the job by the proposed deadline of September 29, 2017.

Post Date: July 17, 2017

Attachment 1: iSantéPlus HealthQual Report Specifications

Table of Contents

Patient Definitions 1

HIV+ Patient 1

HIV+ Pediatric Patient 1

HIV+ Patient on Antiretroviral Therapy (ART) 1

Patient Status: Deceased 4

Patient Status: Transferred 4

Patient Status: Discontinued 5

Pregnancy 5

Adult Indicators 8

Pediatric Indicators 16

Display Options 28

Patient Definitions

HIV+ Patient

All patients who have at least one of the following forms completed and saved:

- 1ere Visite VIH (First HIV Visit)
- Visite VIH de Suivi (Follow-up HIV Visit)

Exception for children who have had a negative PCR test result.

HIV+ Pediatric Patient

All patients who are between the ages of 0 and 14 years old who have at least one of the following forms completed and saved:

- 1ere Visite VIH Pédiatrique (First Pediatric HIV Visit)
- Visite VIH de Suivi Pédiatrique (Follow-up Pediatric HIV Visit)

Exception for children who have had a negative PCR test result between 0 and 18 months of age.

HIV+ Patient on Antiretroviral Therapy (ART)

A patient on ART is an HIV+ patient who has received at least one ARV drug in treatment. See Figures 1 and 2.

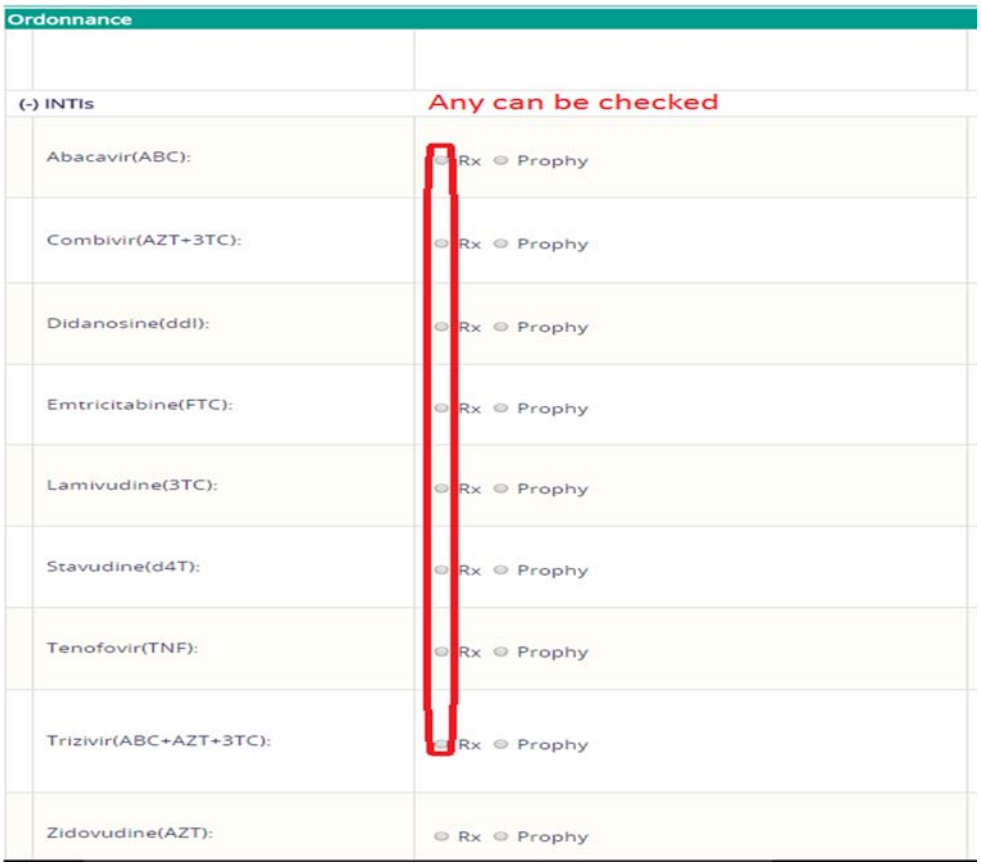


Figure 1: Prescription Form has any of the INTIs checked.

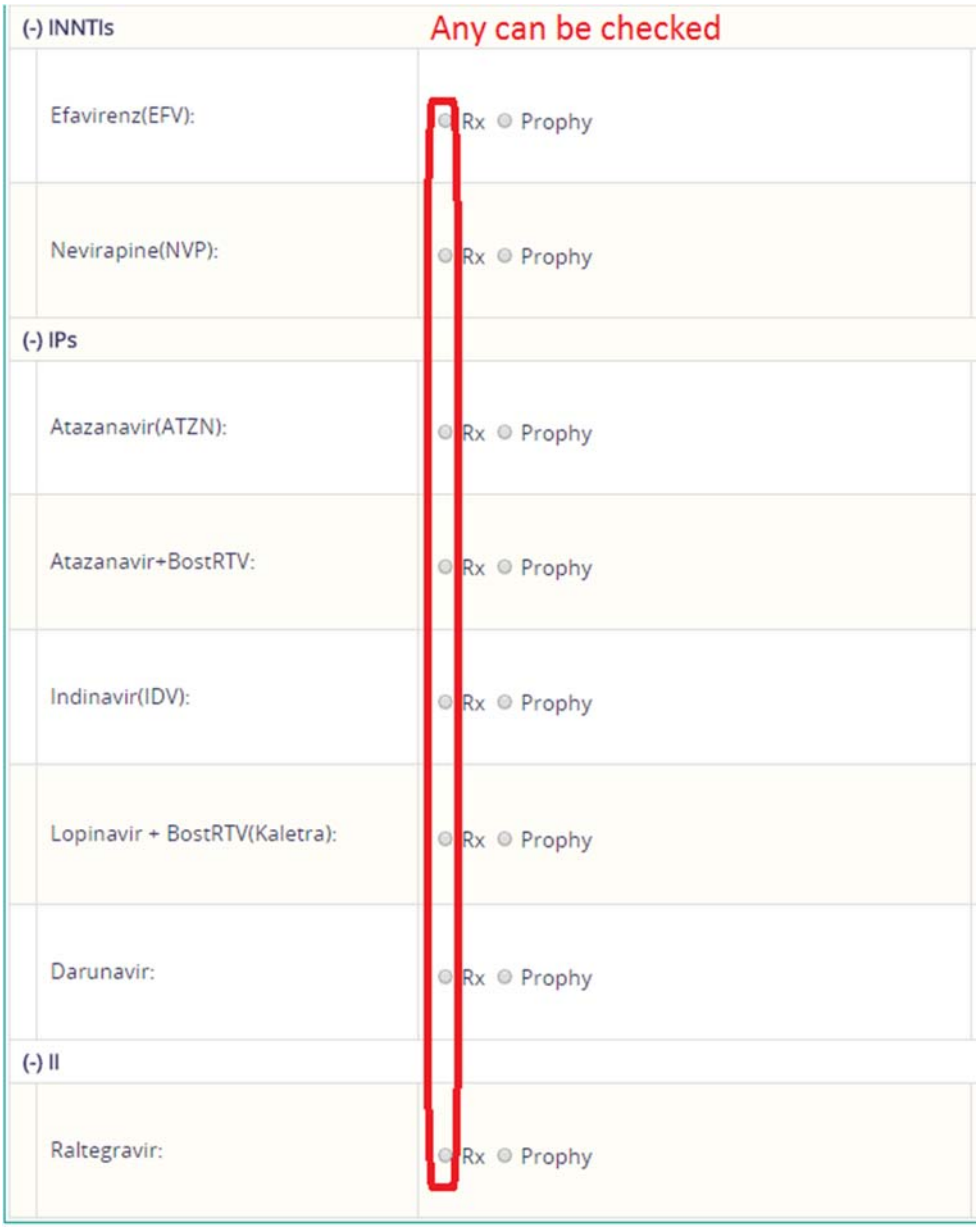


Figure 2: Prescription Form has any of the INNTIs, IPs, or II checked.

Patient Status: Deceased

Any patient with a Discontinuation Form completed with *décès* checked (Deceased). See Figure 3.

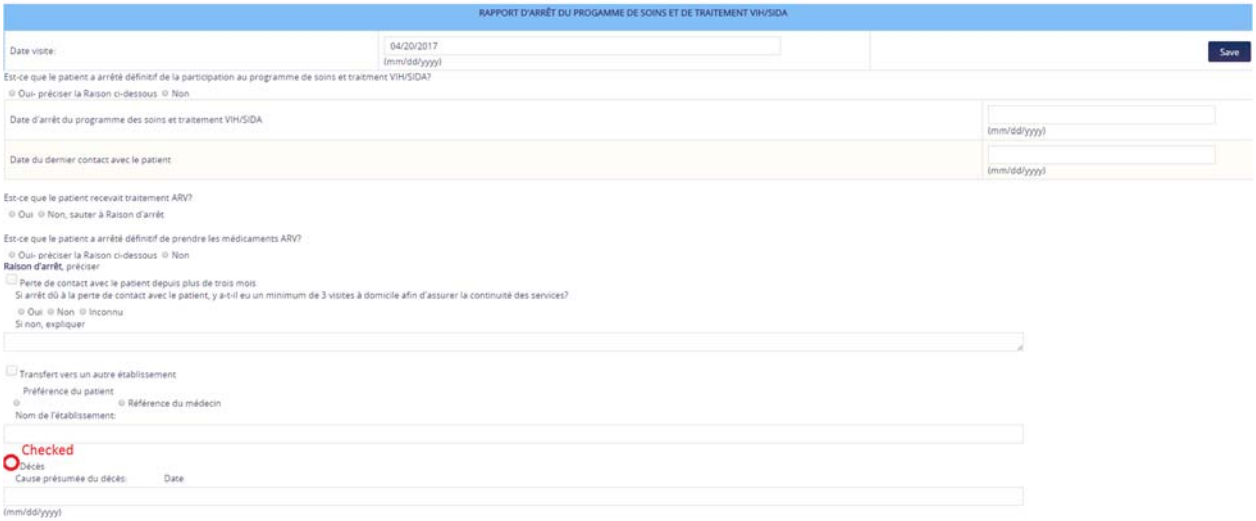


Figure 3: Discontinuation form with "décès" checked

Patient Status: Transferred

Any patient with a Discontinuation Form completed with "transfert vers un autre etablissement" checked. See Figure 4

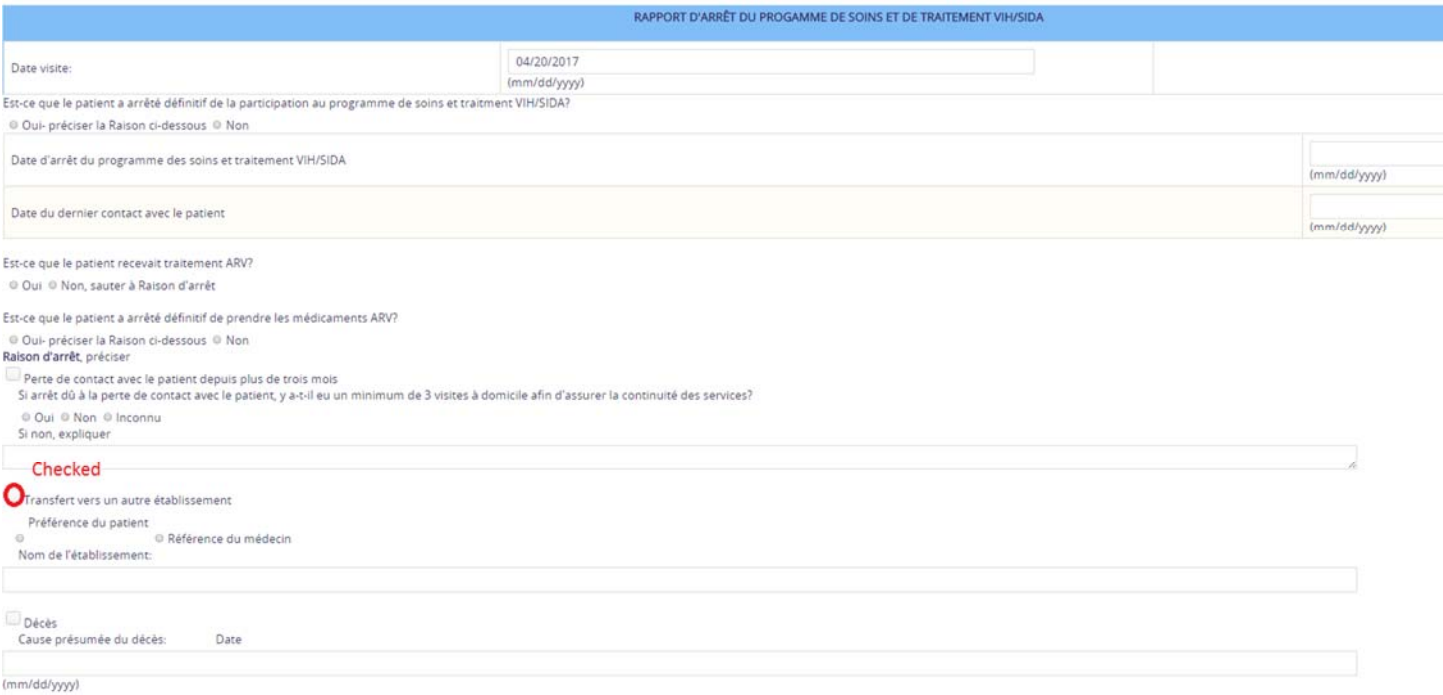


Figure 4: Discontinuation Form with transfert vers un autre établissement checked.

Patient Status: Discontinued/Suspended Treatment

Any patient with a discontinuation form completed and saved with “yes” in response to the question “Has the patient definitively stopped his/her participation in the HIV/AIDS care and treatment program?” See Figure 5.

Figure 5: “Oui” is checked.

Pregnancy

An HIV+ patient is considered pregnant if:

Condition 1: The patient has a diagnosis of pregnant in the chart. See Figures 6-9.

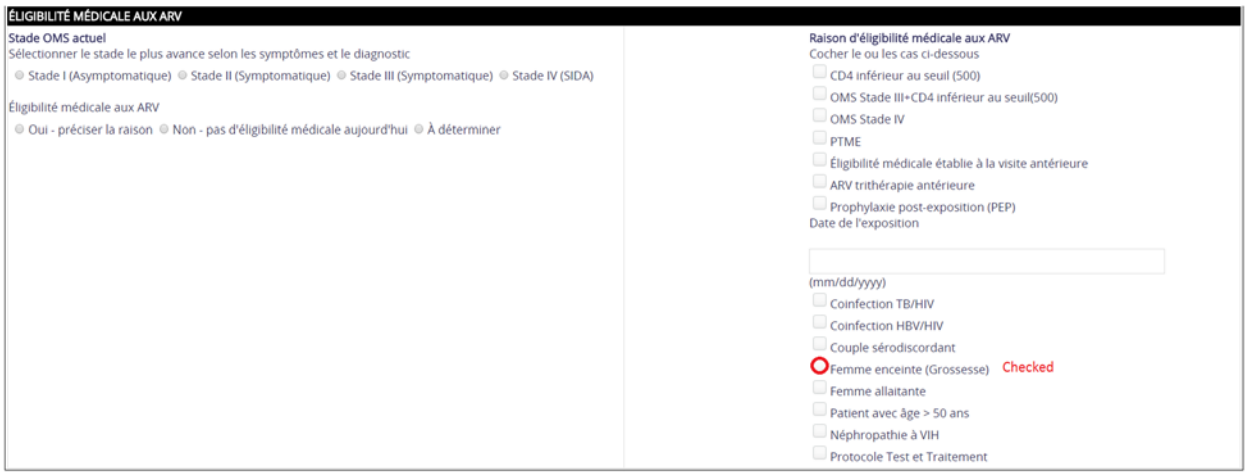


Figure 6: Checked reason for ART Eligibility is “Pregnant Woman”

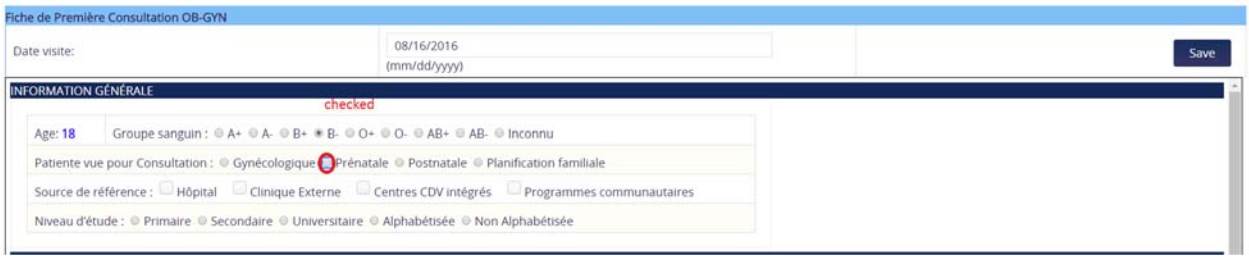


Figure 7: Checked “Prenatal” for Consultation Type

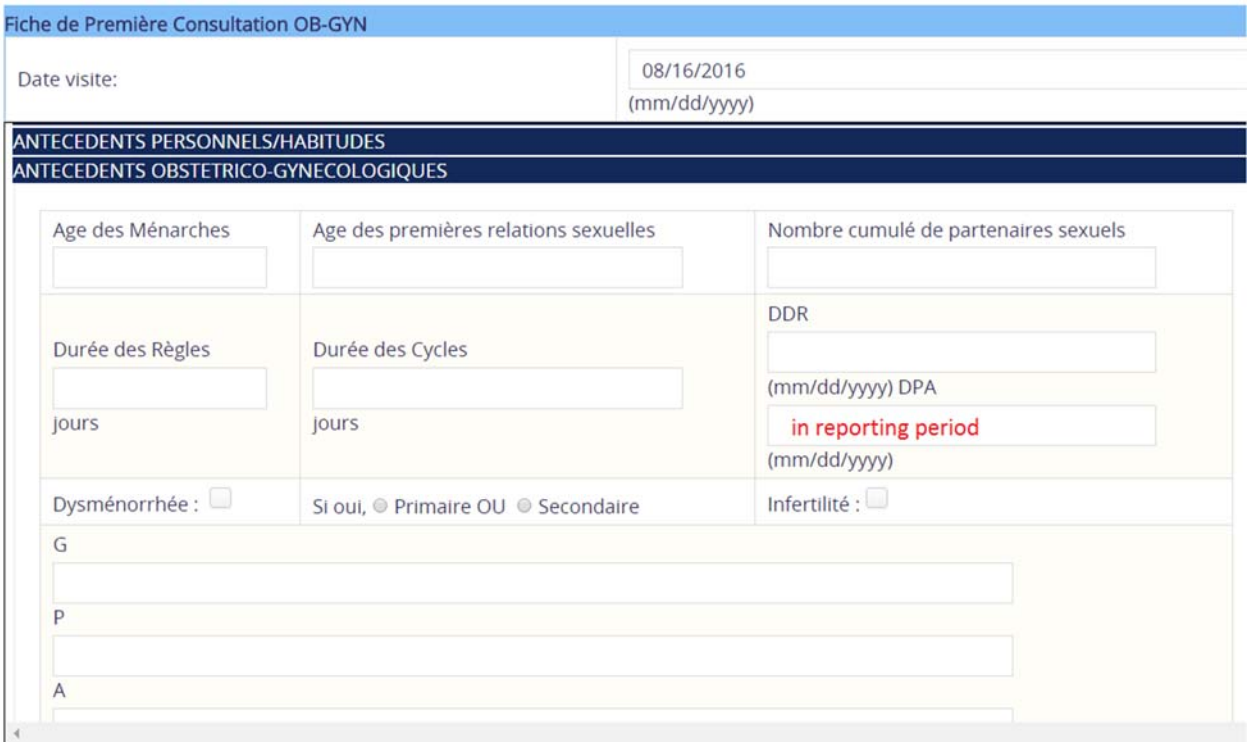


Figure 8: DPA (Due Date) field's date falls in the reporting period.

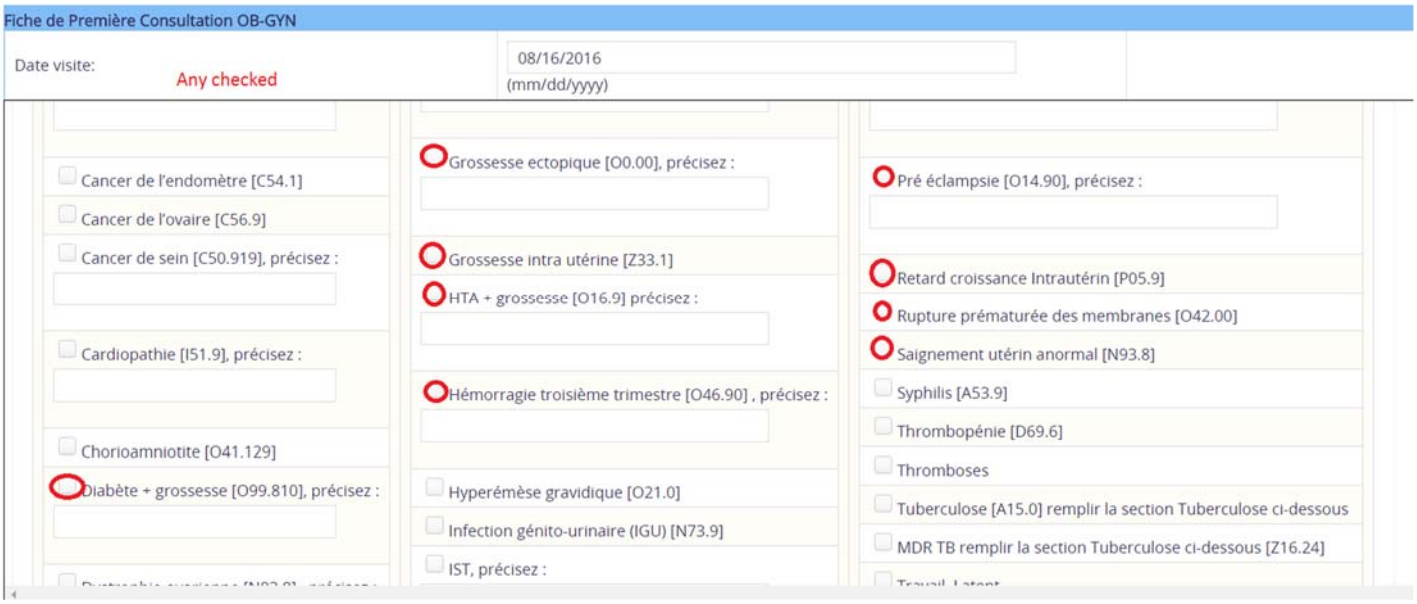


Figure 9: Any of the following are checked in the OB-GYN consultation form: Gestational Diabetes, Ectopic Pregnancy, intrauterine pregnancy, 3rd trimester hemorrhaging, pre-eclampsia, intrauterine growth restriction, premature rupture of membranes (PROM), or abnormal uterine bleeding.

<u>Pregnancy cont...</u>

Condition 2: the patient has a positive pregnancy test. See Figures 10 and 11.

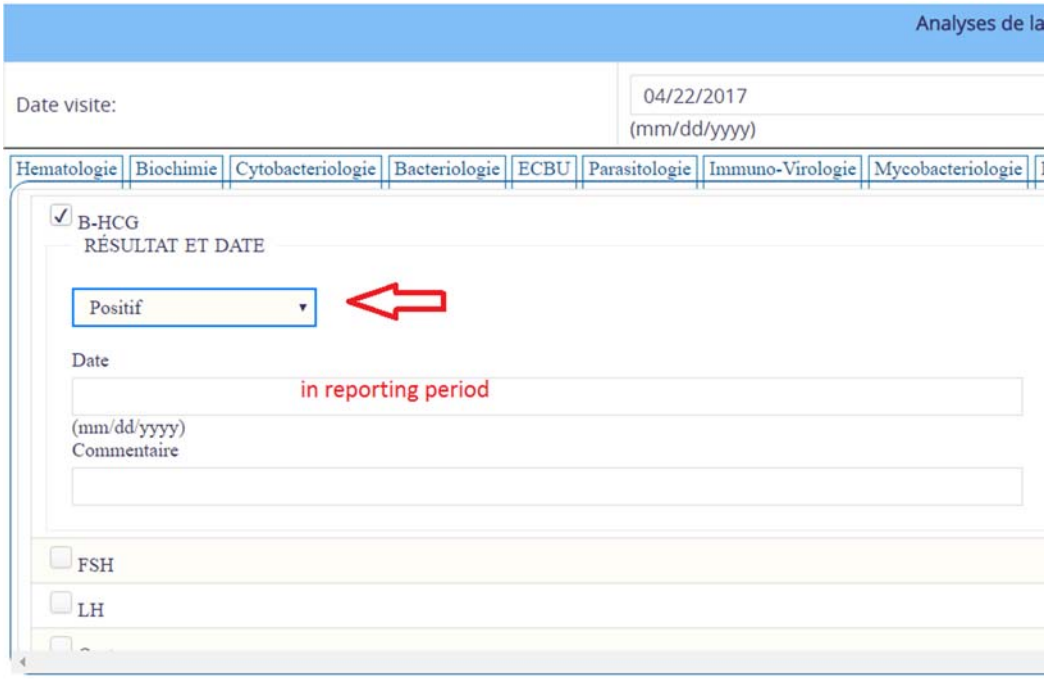


Figure 10: B-HCG result is positive and date of positive result falls in the reporting period.

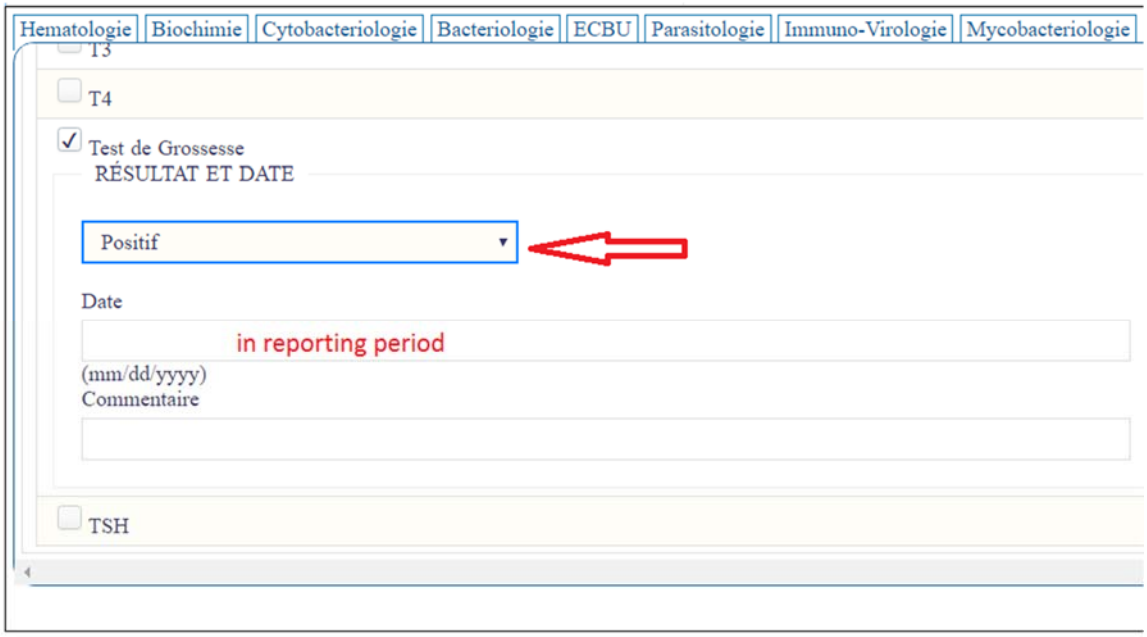


Figure 11: Pregnancy Test Result is positive and date of positive result falls in the reporting period

Condition 3: The patient has a labor & delivery form completed. In this case, the gestation period begins 40 weeks approximately before the date that the form was completed and saved.

Adult Indicators

1. **Retention of patients on antiretroviral treatment (ART)**

   Numerator : Cumulative number of HIV+ patients on ART who are still on treatment after X months following ART initiation.

   Calculation Method: HIV+ Patient who initiated treatment at X months AND who has a date of next drug dispense greater than or equal to the current date.

   Denominator: Cumulative number of HIV+ patients already placed on ART excluding deceased and transfers.

   Calculation Method: HIV+ Patient on ART who has initiated ART at X months excluding deceased and transfers.

   Disaggregation: 6,12,24,48,60 months

   (current date -3months)≤ X ≤current date

   (current date-6months)≤ X ≤current date

   (current date-12months)≤ X ≤current date

   (current date-24months)≤ X ≤current date

   (current date-48months)≤ X ≤current date

   (current date-60months)≤ X ≤current date

2. **CD4 Assessment at Enrolment (Proportion of HIV+ patients who have had a CD4 count completed at enrolment)**

   Numerator: Number of HIV+ patients enrolled during the selected period who have had at least one CD4 count completed during the first 60 days of their enrolment, excluding deceased, discontinued and transfers.

   Calculation Method:

   Numerator:

   Condition 1: HIV+ patients with a HIV First Visit form for which the completion date falls within the selected period, excluding deceased, discontinued and transfers.

   Condition 2: CD4 result within 60 days of the completed date of the First Visit form. See Figure 12.

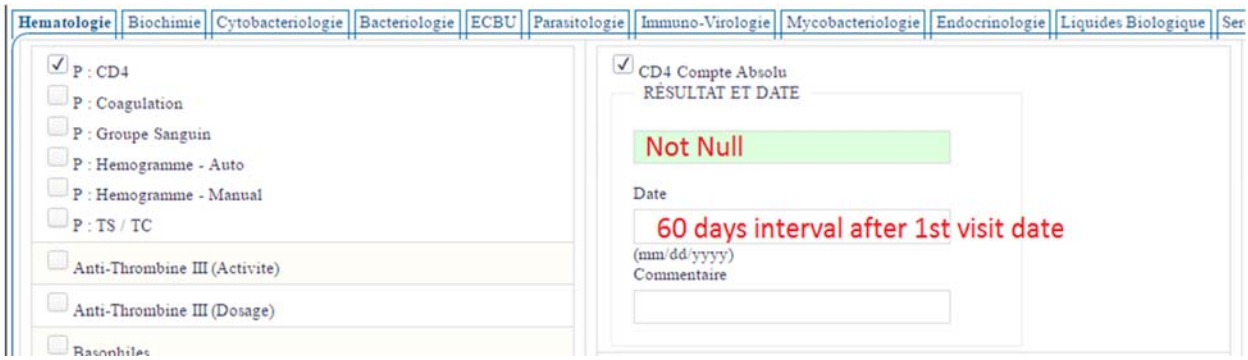


Figure 12

Denominator: Number of HIV+ patients enrolled during the selected period excluding deceased, discontinued and transfers.

Calculation Method: HIV+ patients with a First Visit form for which the completion date falls within the selected period, excluding deceased, discontinued and transfers.

3. **ARV Enrolment (Proportion of eligible HIV+ patients placed on ARVs during the selected period)**

Numerator: Number of HIV+ patients enrolled during the selected period.

Calculation method: HIV+ patients on ART with a HIV First Visit form for which the completion date falls in the selected period, excluding deceased, discontinued and transfers.

Denominator: Number of patients who tested HIV+ during the selected period excluding deceased, discontinued and transfers.

Calculation method: HIV+ patients with a HIV First Visit form for which the completion date falls in the selected period, excluding deceased, discontinued and transfers.

4. **Proportion of adult persons living with HIV (PLHIV) who have received cotrimoxazole prophylaxis during the selected period**

Numerator: Number of HIV+ patients who have received cotrimoxazole prophylaxis during the selected period.

Calculation method: See Figure 13.

Figure 13 Drug order form shows Cotrimoxazole "prophy" checked with a date that falls in the selected period.

Denominator: Number of HIV+ patients who had at least one medical consultation during the selected period excluding deceased, discontinued and transfers.

Calculation method: HIV+ patients on ART who have had at least one medical consultation (First Visit, Follow-up visit or Prescription) during the selected period, excluding deceased, discontinued and transfers.

5. **Proportion of HIV+ patients on ARVs who have had an adherence evaluation during the last 3 months.**

Numerator : Number of HIV+ patients on ARVs who have had a pill count or completed questionnaire in the last 3 months.

Calculation Method: See Figure 14.

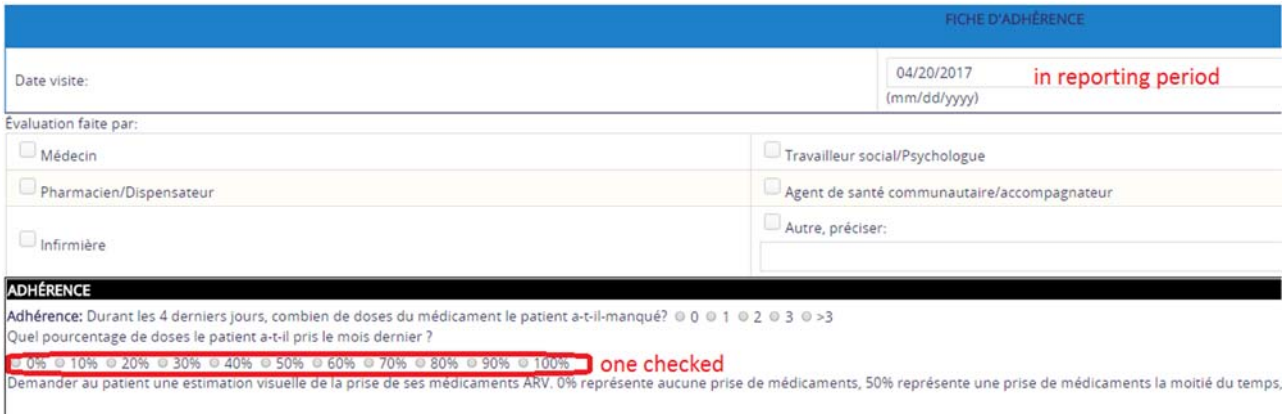


Figure 14: On the Adherence Form, at least one of the percentages is checked.

Denominator: Number of HIV+ patients who had at least one medical consultation during the last 3 months, excluding deceased, discontinued and transfers.

Calculation method: HIV+ patients on ART who had at least one medical consultation (First Visit, Follow-up visit or Prescription) during the last 3 months, excluding deceased, discontinued and transfers.

6. **Proportion of HIV+ patients on ART who are adherent to treatment during the selected period**

Numerator : Cumulative number of HIV+ patients enrolled in ART for 3 months or more who have an adherence level ≥ 95%.

Calculation method: HIV+ patients on ART who have an adherence form completed in the last 3 months with an adherence level of 90% or 100%, excluding deceased, discontinued and transfers. See Figure 15.

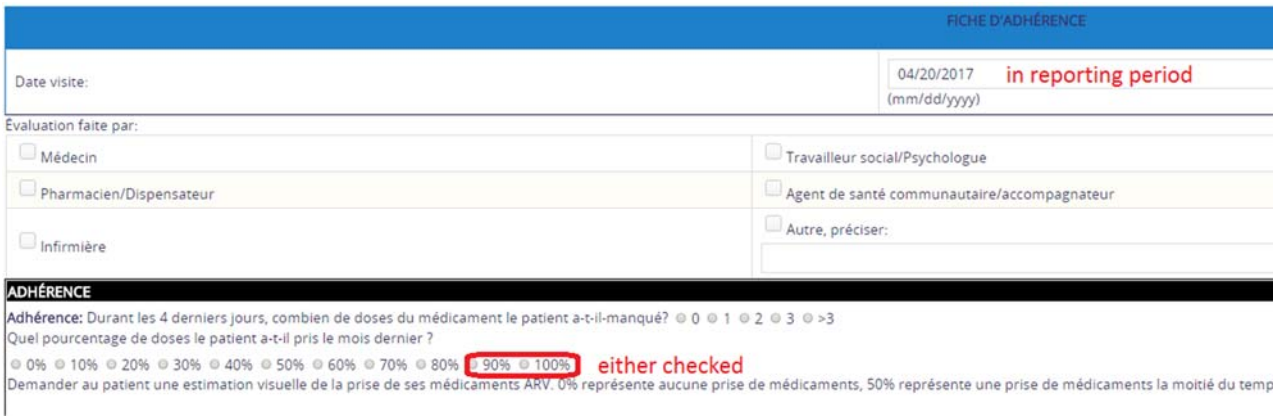


Figure 15: Adherence form has either 90% or 100% checked for the patient.

Denominator: Cumulative number of HIV+ patients enrolled in ART for more than 3 months who have had an adherence evaluation during the last 3 months, excluding deceased, discontinued and transfers.

Calculation method: See Figure 14.

7. **Proportion of PLHIV tested for TB at enrolment during the selected period**

Numerator: Number of HIV+ patients assessed for TB at enrollment during the selected period.

Calculation method: HIV+ patients with a HIV First Visit form for which the completion date falls in the selected period, excluding deceased, discontinued and transfers, with an evaluation of TB that is not null. See Figure 16.

Figure 16: Evaluation of TB has A, B, C, D, E, or F checked and G or H not null.

Denominator: Number of HIV+ patients enrolled in care during the selected period, excluding deceased, discontinued and transfers.

Calculation method: HIV+ patients with a HIV First Visit form completed for which the completion date falls in the selected period, excluding deceased, discontinued and transfers.

8. **Proportion of PLHIV who received INH chemoprophylaxis during the selected period**

Numerator: Number of HIV+ patients who received INH prophylaxis during the selected period.

Calculation method: HIV+ patients with a HIV First Visit form completed for which the completion date falls in the selected period, excluding deceased, discontinued and transfers, who have received INH prophylaxis. See Figure 17.

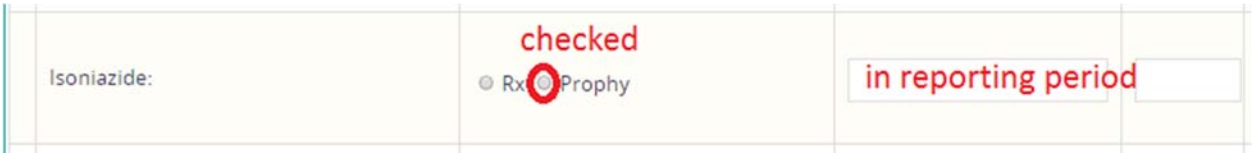


Figure 17: On drug order form, isoniazide "prophy" is checked and the date falls within the selected period.

Denominator: Number of ~~new~~ HIV+ patients enrolled during the selected period who have had at least one medical consultation, excluding deceased, discontinued and transfers.

Calculation method: HIV+ patients with a HIV First Visit form completed for which the completion date falls in the selected period, excluding deceased, discontinued and transfers.

9. **Proportion of HIV+ patients who have had a nutritional assessment during the selected period.**

Numerator: Number of HIV+ patients who have the necessary data to calculate their BMI in their chart during the selected period.

Calculation method: HIV+ patients who had at least one medical consultation (First Visit, Follow-up visit) during the selected period, excluding deceased, discontinued and transfers,

who have data to calculate BMI (height, weight). See Figure 18.

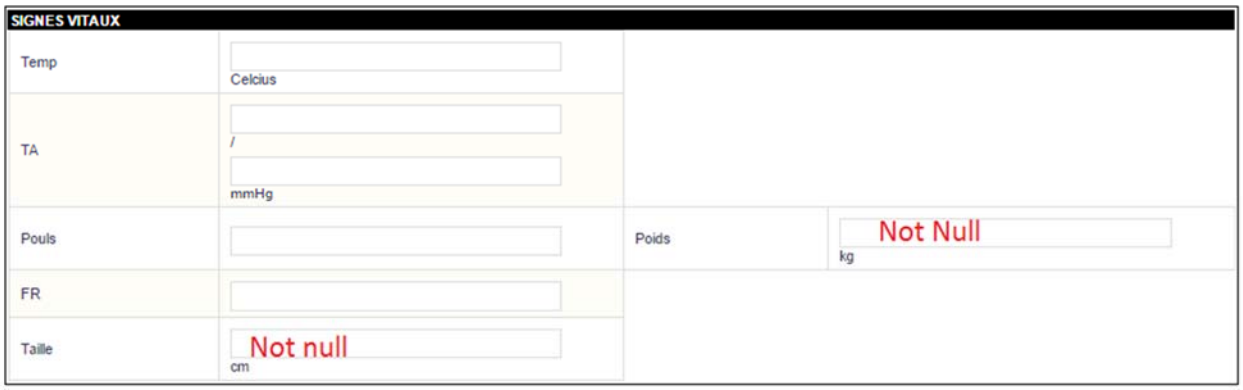


Figure 18: Under vital signs, height and weight are not null.

Denominator: Number of HIV+ patients who have had at least one medical consultation during the selected period, excluding deceased, discontinued and transfers.

Calculation method: HIV+ patients who have had at least one medical consultation (First Visit, Follow-up visit) during the selected period, excluding deceased, discontinued and transfers.

10. **Proportion of HIV+ patients identified as severely undernourished during the selected period.**

Numerator: Number of HIV+ patients who have a BMI less than or equal to (≤) 16.

Calculation method: HIV+ patients who have had at least one medical consultation (First Visit, Follow-up visit) during the selected period, excluding deceased, discontinued and transfers, who have a BMI<=16.

Denominator: Number of HIV+ patients who have had their BMI evaluated during the selected period, excluding deceased, discontinued and transfers.

Calculation method: HIV+ patients who had at least one medical consultation (First Visit, Follow-up visit) during the selected period, excluding deceased, discontinued and transfers, who have data to calculate BMI (height, weight). See Figure 18.

11. **Proportion of HIV+ women who use a family planning method during the selected period.**

Numerator: Number of HIV+ women of reproductive age who are using a family planning method during the selected period.

Calculation method: HIV+ patient, sex female, aged 10 to 49, excluding deceased, discontinued and transfers, who have had at least one medical consultation (First Visit, Follow-up visit) during the selected period and use a family planning method. See Figure 19.

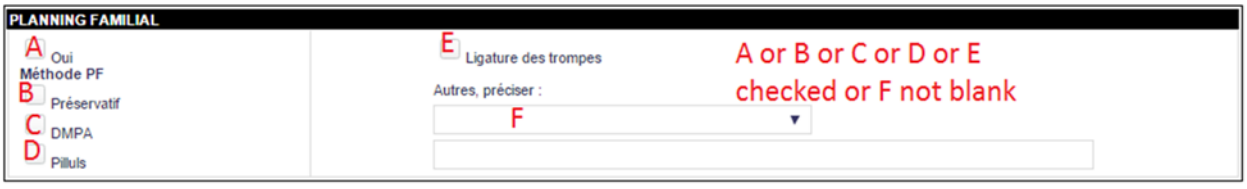


Figure 19: Under Family Planning, "Oui" is checked, and method is selected (B,C,D,or E) or F is completed.

Denominator: Number of HIV+ women of reproductive age who have had at least one visit during the selected period, excluding deceased, discontinued and transfers.

Calculation method: HIV+ patient, sex female, aged 10 to 49, excluding deceased, discontinued and transfers, who have had at least one medical consultation (First Visit, Follow-up visit) during the selected period.

12. **Proportion of HIV+ pregnant women who received triple-drug therapy (HAART) during the selected period**

Numerator: Number of pregnant women who are HIV+ (newly tested or known HIV+) who received triple-drug therapy (HAART) during the selected period.

Calculation method: HIV+ patient on ART and pregnant during the selected period, excluding deceased, discontinued and transfers, who is on HAART.

Denominator: Number of HIV+ pregnant women during the selected period, excluding deceased, discontinued and transfers.

Calculation method: HIV+ patient and pregnant during the selected period, excluding deceased, discontinued and transfers.

Note: The denominator and numerator must include women who are HIV+ and on ART who become pregnant during the selected period.

13. **Proportion of pregnant women in prenatal care or labor and delivery (L&D) who received an HIV test during the selected period.**

Numerator: Number of women seen in prenatal care or L&D and who received an HIV test during the selected period.

Calculation method: Pregnant and HIV test completed during the selected period. See Figure 20.

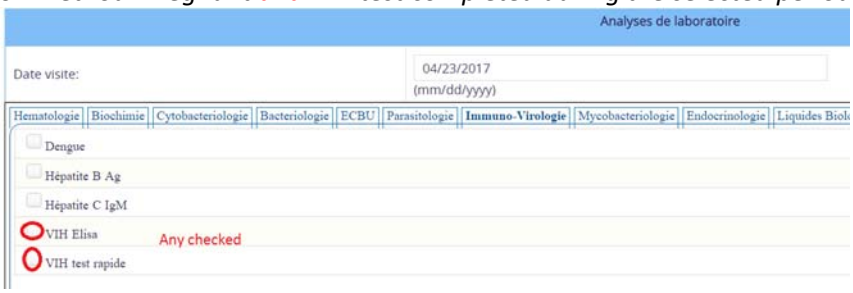


Figure 20: Laboratory Tests have HIV Elisa or HIV Rapid Test checked.

Denominator: Number of pregnant women seen in prenatal care or L&D during the selected period.

Calculation method: Patients with pregnancy identified during the selected period.

14. **Proportion of HIV+ patients on ART who received a viral load test at 6 months after the initiation of treatment.**

Numerator: Number of patients on ART who received a viral load test at 6 months after the initiation of treatment during the selected period.

Calculation method: HIV+ patient on ART for at least 6 months who have been seen in clinic (First Visit, Follow-up Visit, Lab or Rx) during the selected period and have had a viral load test completed, excluding deceased, discontinued and transfers. See Figures 21 and 22.

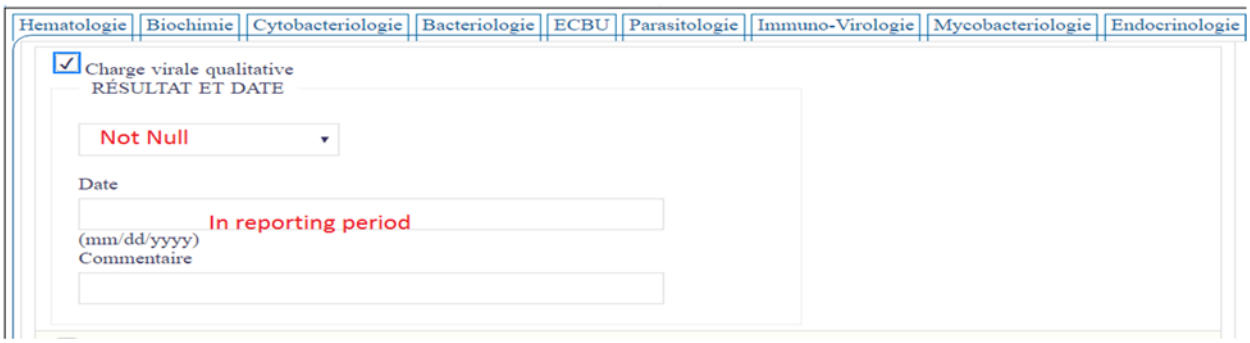


Figure 21: Laboratory Tests has "qualitative viral load" checked, result is not null and the date falls in the selected period.

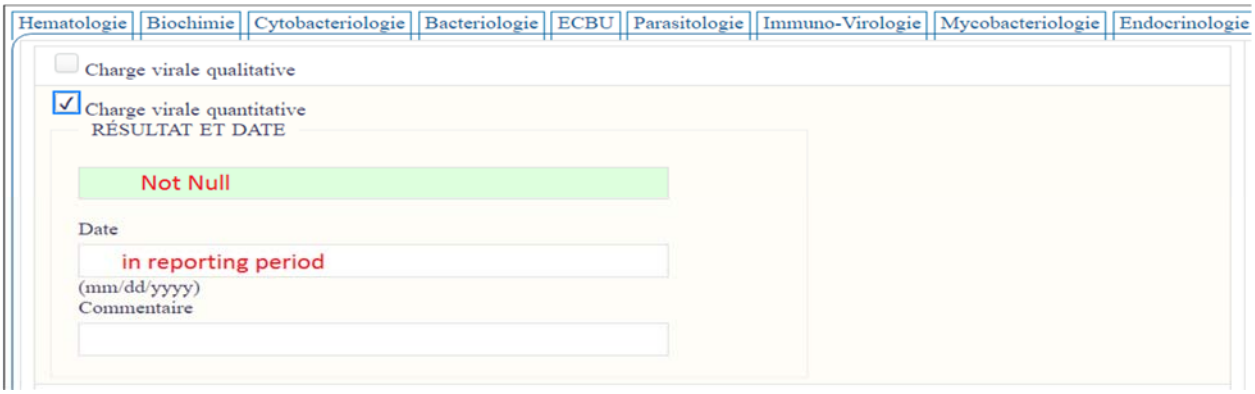


Figure 22: Laboratory Tests has "quantitative viral load" checked, result is not null and the date falls in the selected period.

Denominator: Number of patients on ART for 6 months who have been seen in clinic during the selected period.

Calculation method: HIV+ patients on ART for at least 6 months who have been seen in clinic during the selected period, excluding deceased, discontinued and transfers.

15. **Proportion of HIV+ patients on ART who received a viral load test at 18 months after the initiation of treatment.**

Numerator: Number of patients on ART who received a viral load test at 18 months after the initiation of treatment during the selected period.

Calculation method: HIV+ patient on ART for at least 18 months who have been seen in clinic during the selected period and who have a viral load test completed. See figures 21 and 22.

Denominator: Number of patients on ART for 18 months who have been seen in clinic during the selected period.

Calculation method: HIV+ patient on ART for at least 18 months who has been seen in clinic during the selected period, excluding deceased, discontinued and transfers.

16. **Proportion of HIV+ patients on ART for more than 6 months who have an undetectable viral load**

Numerator: Number of patients on ART for more than 6 months who have an undetectable viral load during the selected period.

Calculation method: HIV+ patients on ART for at least 6 months, who have been seen in clinic, excluding deceased, discontinued and transfers, who have an undetectable viral load result during the selected period. See Figure 23.

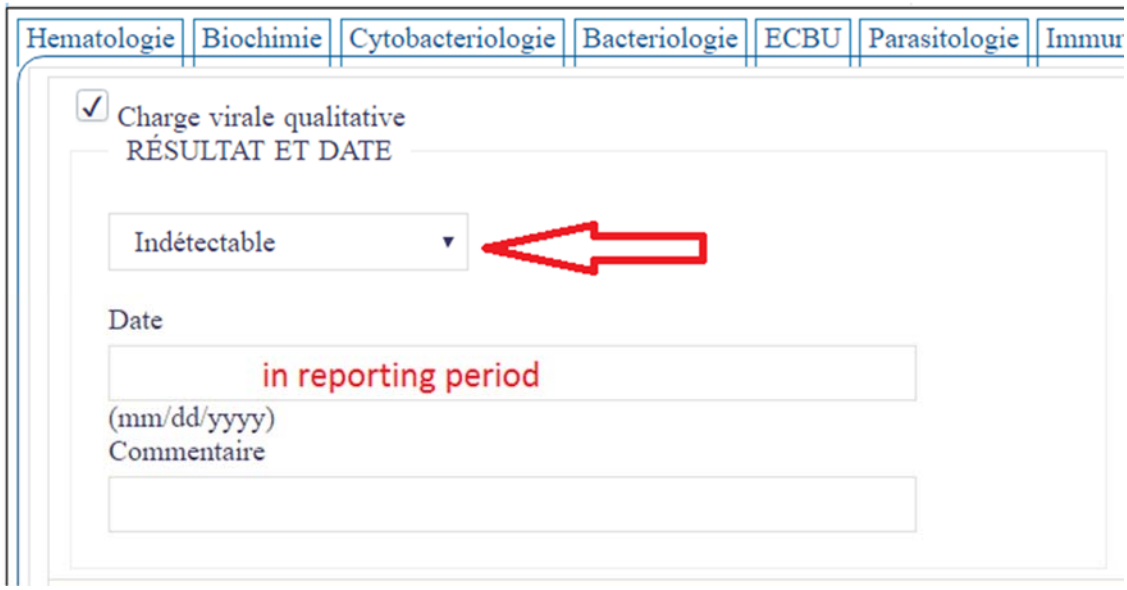


Figure 23: Laboratory Tests has "qualitative viral load" check and result is "undetectable" and the date falls within the selected period.

Denominator: Number of patients on ART for more than 6 months who received a viral load test during the selected period.

Calculation method: HIV+ patients on ART for at least 6 months who have been seen in clinic during the selected period, excluding deceased, discontinued and transfers, who have had a viral load test completed.

Pediatric Indicators

1. **Proportion of children regularly followed on ART**

   Numerator: Cumulative number of children on ART who have had at least one visit during the last 3 months.

   Calculation method: Pediatric HIV+ patients on ART excluding deceased, those who discontinued treatment and those who had a negative PCR result, who have had at least one visit (HIV First Pediatric Visit or Pediatric Follow-up or Pediatric Rx) during the last X months.

   Disaggregation: X = 6 or 12 or 24 or 48 or 60 months

   Denominator: Cumulative number of children on ART, excluding deceased and transfers and those who had a negative PCR result.

   Calculation method: Pediatric HIV+ patients on ART excluding deceased, transfers and those who had a negative PCR result.

   Disaggregation: 6, 12, 24, 48, 60 months

2. **Proportion of children tested positive for HIV and placed on ART during the selected period.**

   Numerator: Number of HIV+ children placed on ART during the selected period.

   Calculation method: Pediatric HIV+ patients on ART excluding deceased, those who discontinued treatment, transfers and those who had a negative PCR result, who have had at least one visit (HIV First Pediatric Visit or Pediatric Follow-up or Pediatric Rx) during the selected period.

   Denominator: Number of children who were diagnosed with HIV and seen in the clinic during the selected period, excluding those who have suspended treatment, those who had a negative PCR result, transfers and deceased.

   Calculation method: Pediatric HIV+ patients excluding deceased, those who discontinued treatment, transfers and those who had a negative PCR result, who have had at least one visit (HIV First Pediatric Visit or Pediatric Follow-up or Pediatric Rx) during the selected period.

3. **Proportion of children exposed to or infected with HIV who received cotrimoxazole prophylaxis during the selected period.**

   Numerator: Number of children exposed to and infected with HIV followed in clinic who are eligible for cotrimoxazole prophylaxis and received it during the reporting period.

   Calculation method: Pediatric HIV+ patients (4 or more weeks old) excluding deceased, those who discontinued treatment, transfers and those who had a negative PCR result after 18 months of age, who have had at least one visit (HIV First Pediatric Visit or Pediatric Follow-up or Pediatric Rx) during the selected period and who have received cotrimoxazole prophylaxis. See Figure 13 in the Adult section.

   Denominator: Number of children exposed to and infected with HIV older than 4 weeks of age followed in clinic during the selected period, excluding discontinued cases and those who have had a negative PCR after 18 months of age.

   Calculation method: Pediatric HIV+ patients (older than 4 weeks of age) excluding deceased, those who discontinued treatment, transfers and those who had a negative PCR result after 18 months of age, who have had at least one visit (HIV First Pediatric Visit or Pediatric Follow-up or

Pediatric Rx) during the selected period.

4. **Proportion of HIV+ children on ART who have had an adherence evaluation during the last 3 months.**

   Numerator : Number of HIV+ children on ART who have had an adherence evaluation (a pill count or completed questionnaire saved to their chart) in the last 3 months.

   Calculation method: Pediatric HIV+ patients on ART excluding deceased, those who discontinued treatment, transfers and those who had a negative PCR result, who have had at least one visit (HIV First Pediatric Visit or Pediatric Follow-up or Pediatric Rx) during the last three months and who benefited from an adherence evaluation. See Figure 14 in the Adult section.

   Denominator: Number of children on ART who had at least one medical consultation during the last 3 months, excluding discontinued cases and those who have had a negative PCR.

   Calculation method: Pediatric HIV+ patients on ART excluding deceased, those who discontinued treatment, transfers and those who had a negative PCR result, who have had at least one visit (HIV First Pediatric Visit or Pediatric Follow-up or Pediatric Rx) during the last three months.

5. **Proportion of HIV+ children on ART who are considered adherent**

   Numerator: Cumulative number of pediatric patients enrolled in ART for more than 3 months who have an adherence level ≥ 95%.

   Calculation method: Pediatric HIV+ patients on ART excluding deceased, those who discontinued treatment, transfers and those who had a negative PCR result, who have had at least one visit (HIV First Pediatric Visit or Pediatric Follow-up or Pediatric Rx) during the last three months and have an adherence level ≥ 95%. See Figure 15 in the Adult section.

   Denominator: Cumulative number of pediatric patients enrolled in ART for more than 3 months who have had an adherence evaluation in the last 3 months, excluding discontinued cases and those who have had a negative PCR.

   Calculation method: Pediatric HIV+ patients on ART excluding deceased, those who discontinued treatment, transfers and those who had a negative PCR result, who have had at least one visit (HIV First Pediatric Visit or Pediatric Follow-up or Pediatric Rx) during the last three months.

6. **Proportion of HIV+ children tested for TB at enrolment during the selected period**

   Numerator: Number of children 6 months of age and older who are assessed for TB at enrollment during the selected period.

   Calculation method: Pediatric HIV+ patients older than 6 months of age excluding deceased, those who discontinued treatment, transfers and those who had a negative PCR result, who have had an HIV First Pediatric Visit with the TB section completed indicating a non-null result during the selected period. See Figure 24.

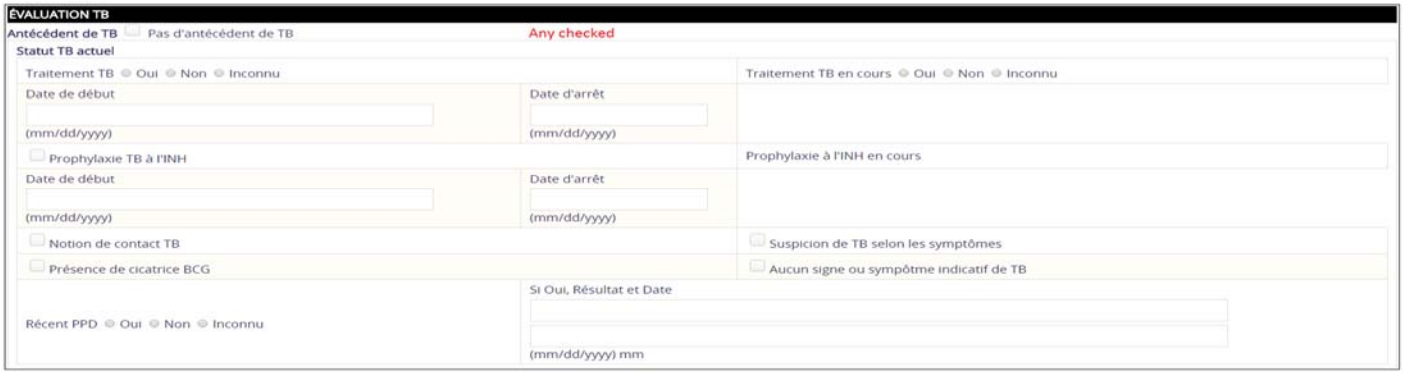


Figure 24: TB Evaluation form has any of the TB history options checked.

Denominator: Number of HIV-infected children age 6-months and older who are enrolled in care during the selected period, excluding discontinued cases and those who have had a negative PCR.

Calculation method: Pediatric HIV+ patients older than 6 months of age excluding deceased, those who discontinued treatment, transfers and those who had a negative PCR result, who have had an HIV First Pediatric Visit during the selected period.

7. Proportion of eligible (TB-negative) HIV+ children older than 1 year of age who received INH chemoprophylaxis during the selected period.

Numerator: Number of HIV+ children older than 1 year of age enrolled at the clinic during the selected period who received INH prophylaxis.

Calculation method: Pediatric HIV+ patients older than 1 year of age excluding deceased, those who discontinued treatment, transfers, those who had a negative PCR result, and those who have active TB (See Figure 25) who have had at least one visit (HIV First Pediatric Visit or Pediatric Follow-up or Pediatric Rx) during the selected period and who received INH prophylaxis. See Figure 17 in the Adult section.

Denominator: Number of HIV+ children older than 1 year of age enrolled at the clinic during the selected period, excluding discontinued cases and those who have active TB.

Calculation method: Pediatric HIV+ patients older than 1 year of age excluding deceased, those who discontinued treatment, transfers, those who had a negative PCR result, and those who have active TB (See Figure 25) who have had at least one visit (HIV First Pediatric Visit or Pediatric Follow-up or Pediatric Rx) during the selected period.

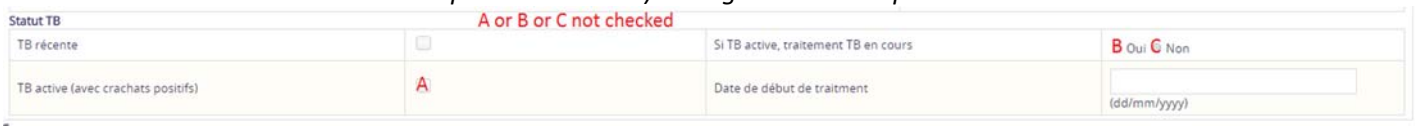


Figure 25: TB status does not have "active TB" or "TB treatment" options checked.

8. Proportion of HIV-exposed or infected children younger than 1 year of age who received INH chemoprophylaxis during the selected period.

Numerator: Number of HIV-exposed or infected children younger than 1 year of age who had contact with active TB and were placed on INH prophylaxis.

Calculation method: Pediatric HIV+ patients less than 1 year of age excluding deceased, those who discontinued treatment, transfers, and those who have active TB (See Figure 25)

who have had at least one visit (HIV First Pediatric Visit or Pediatric Follow-up or Pediatric Rx) during the selected period and who received INH prophylaxis. See Figure 17 in the Adult section.

Denominator: Number of HIV-exposed or infected children younger than 1 year of age who had contact with active TB, excluding all discontinued cases and deceased.

Calculation method: Pediatric HIV+ patients less than 1 year of age excluding deceased, those who discontinued treatment, transfers, and those who have active TB (See Figure 25) who have had at least one visit (HIV First Pediatric Visit or Pediatric Follow-up or Pediatric Rx) during the selected period

9. **Proportion of children who have had a nutritional assessment during the selected period.**

Numerator: Number of HIV-exposed or infected children who have the necessary data to evaluate their nutritional status (weight and height or MUAC and head circumference) saved in their chart during the selected period.

Calculation method: Pediatric HIV+ patients excluding deceased, those who discontinued treatment, transfers and those who had a negative PCR result, have had at least one visit (HIV First Pediatric Visit or Pediatric Follow-up or Pediatric Rx) and who have had a nutritional assessment completed during the selected period. See Figure 26.

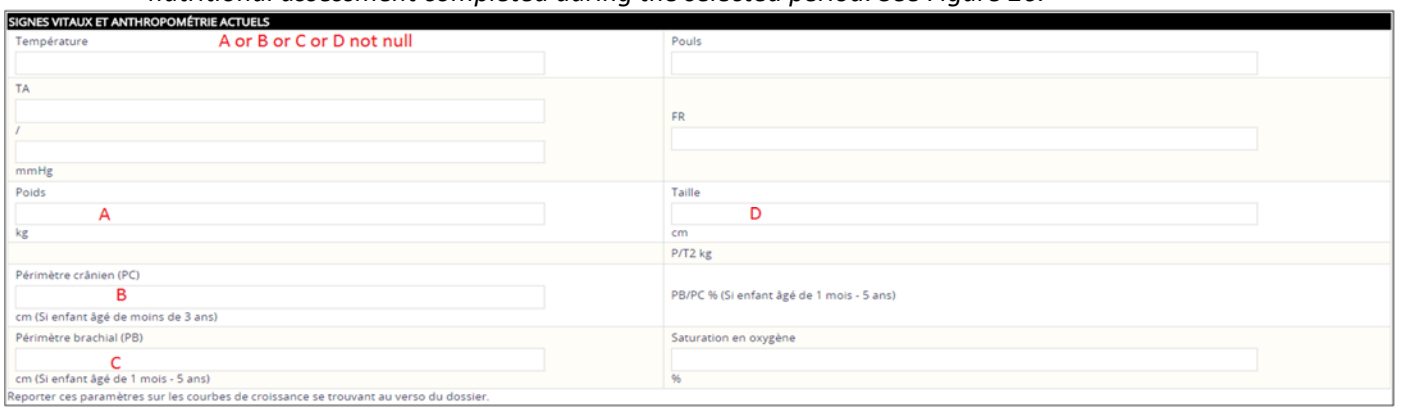


Figure 26: Vital Signs and Measurements has weight and height, or head circumference or MUAC completed.

Denominator: Number of HIV-exposed or infected who have had at least one medical consultation during the selected period,excluding discontinued cases and those who have had a negative PCR.

Calculation method: Pediatric HIV+ patients excluding deceased, those who discontinued treatment, transfers and those who had a negative PCR result, who have had at least one visit (HIV First Pediatric Visit or Pediatric Follow-up or Pediatric Rx) during the selected period.

10. **Proportion of HIV-exposed or infected children who have correctly followed the Expanded Program on Immunization and the ministry standards for pediatric vaccinations according to their age.**

Numerator: Number of HIV-exposed or infected children less than 1 years old followed in the clinic who have correctly received the appropriate immunizations for their age during the selected period.

Calculation Method: HIV+ Pediatric patient of age X, excluding those who suspended

treatment, deceased, and transfers, who have had at least one visit (HIV First Pediatric Visit or Pediatric Follow-up or Pediatric Rx) and have received the appropriate immunizations for their age X by the time of the selected period.

Denominator: Number of HIV-exposed or infected children less than 1 years old followed in the clinic during the selected period, excluding discontinued cases.

Calculation method: HIV+ Pediatric patient of age X, excluding those who have suspended treatment, deceased, transfers and those who have had a negative PCR result, who have had at least one visit (HIV First Pediatric Visit or Pediatric Follow-up or Pediatric Rx) during the selected period.

Disaggregation: X (age) = 45 days, 75 days, 105 days or 270 days.

If 0 ≤ X ≤ 45 days, then immunizations should meet the conditions shown in Figures 27 or 28.
If 45 < X ≤ 75 days, then immunizations should meet the conditions shown in Figures 29 or 30.
If 75 < X ≤ 105 days, then immunizations should meet the conditions shown in Figures 31 or 32.
If 105 < X ≤ 270 days, then immunizations should meet the conditions shown in Figures 33 or 34.

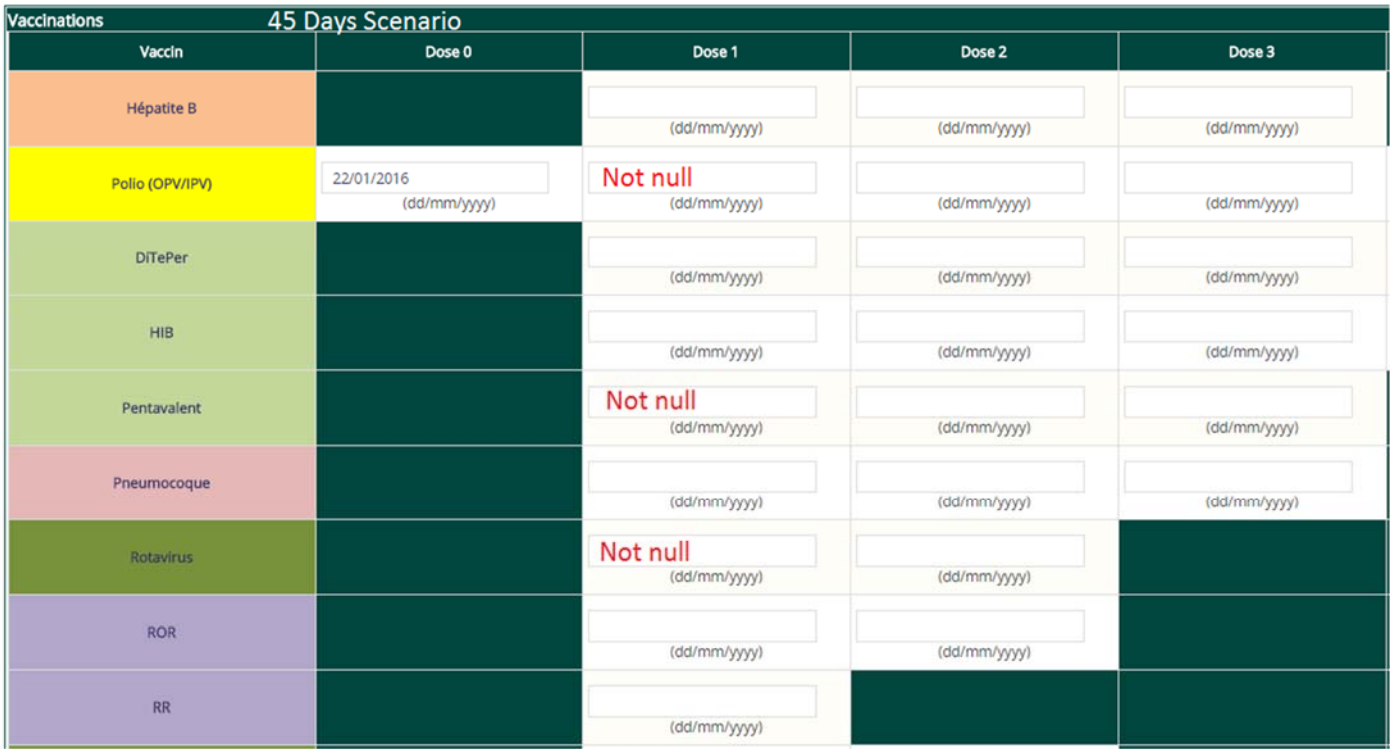


Figure 27: If child's age is less than or equal to 45 days old, Dose 1 of Polio, Pentavalent and Rotavirus should not be null.

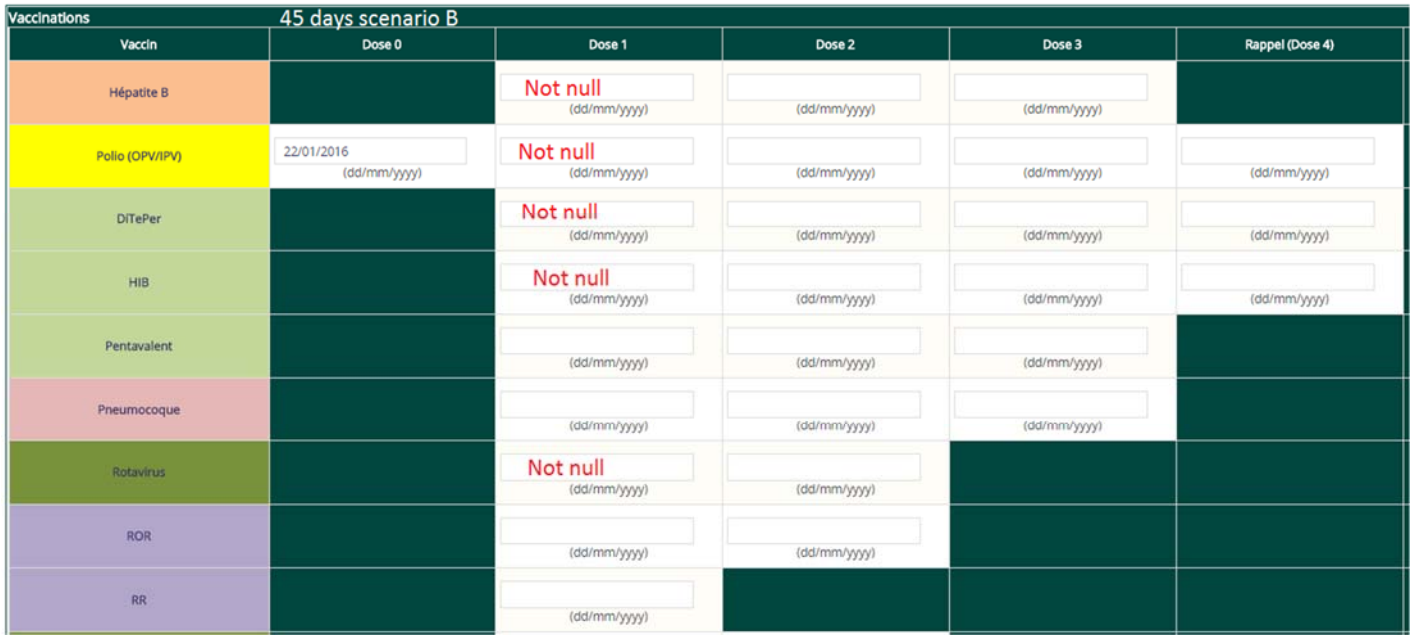


Figure 28: Or, if child's age is less than or equal to 45 days old, Dose 1 of Hep B, Polio, DTP, HiB and Rotavirus should not be null.

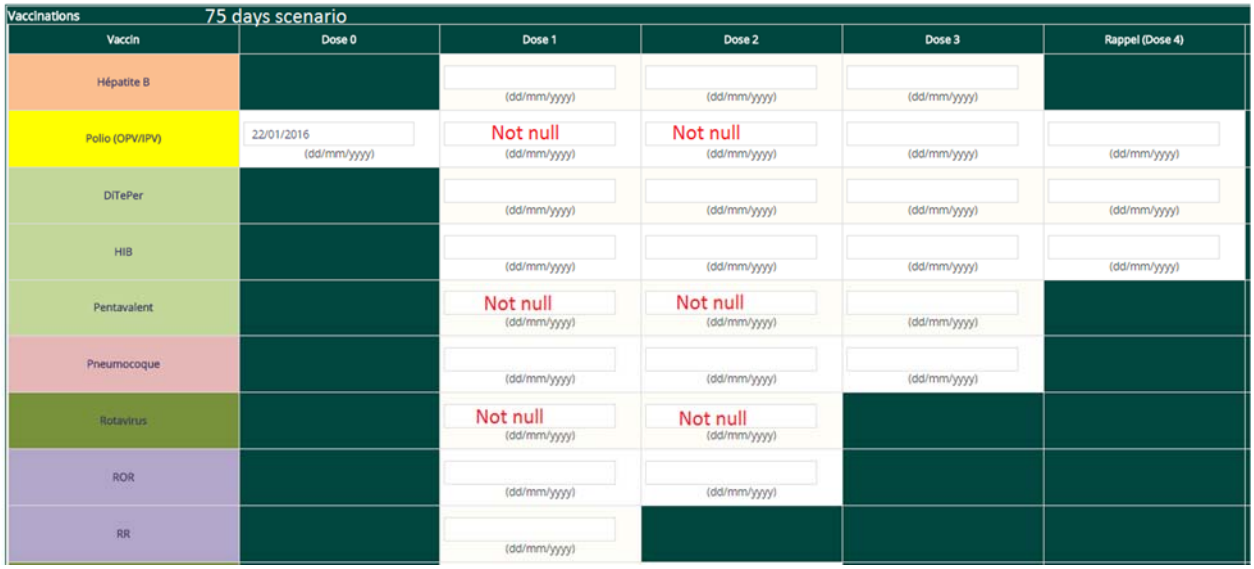


Figure 29: If child's age is greater than 45 days and less than or equal to 75 days old, Dose 1 and 2 of Polio, Pentavalent and Rotavirus should not be null.

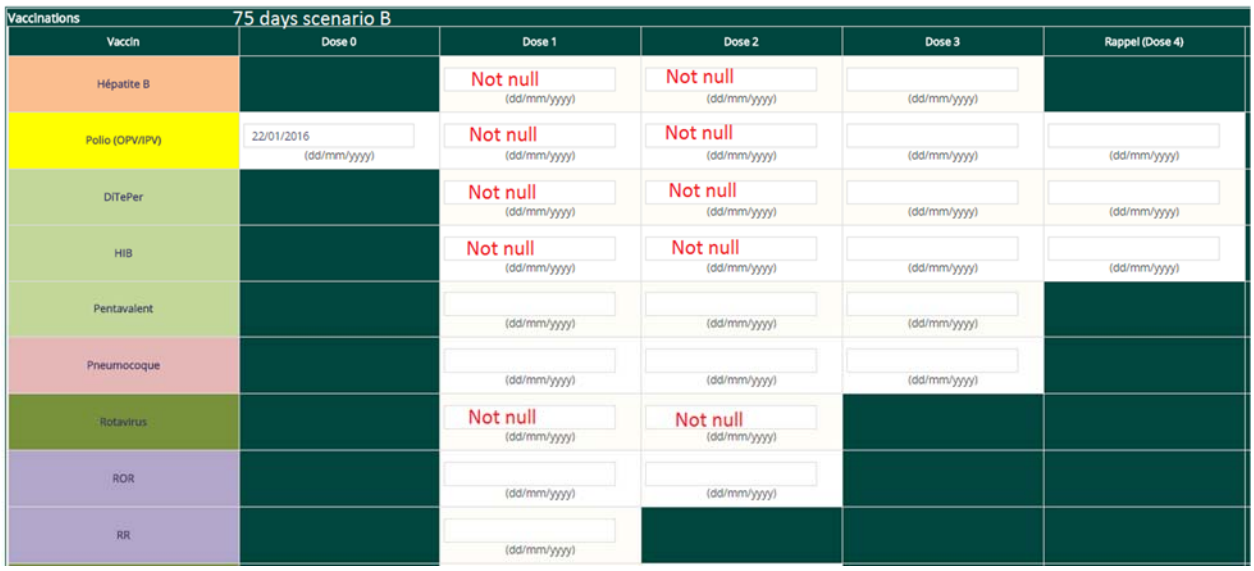


Figure 30: Or, if child's age is greater than 45 days and less than or equal to 75 days old, Dose 1 and 2 of Hep B, Polio, DTP, HiB and Rotavirus should not be null.

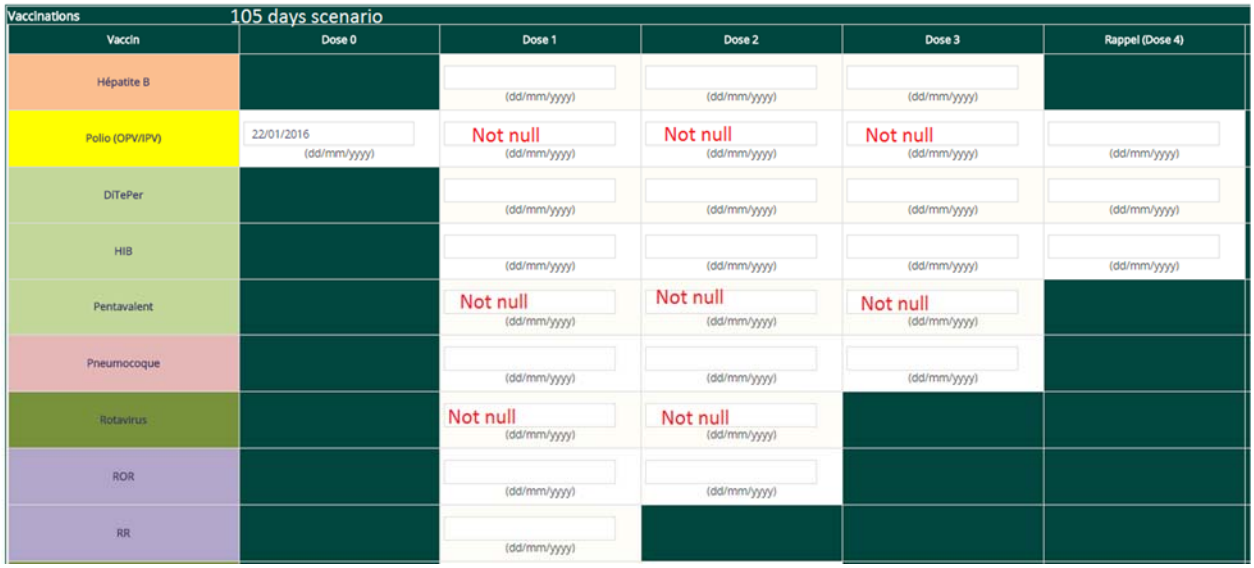


Figure 31: If child's age is greater than 75 days and less than or equal to 105 days old, Dose 1, 2 and 3 of Polio and Pentavalent and Dose 1 and 2 of Rotavirus should not be null.

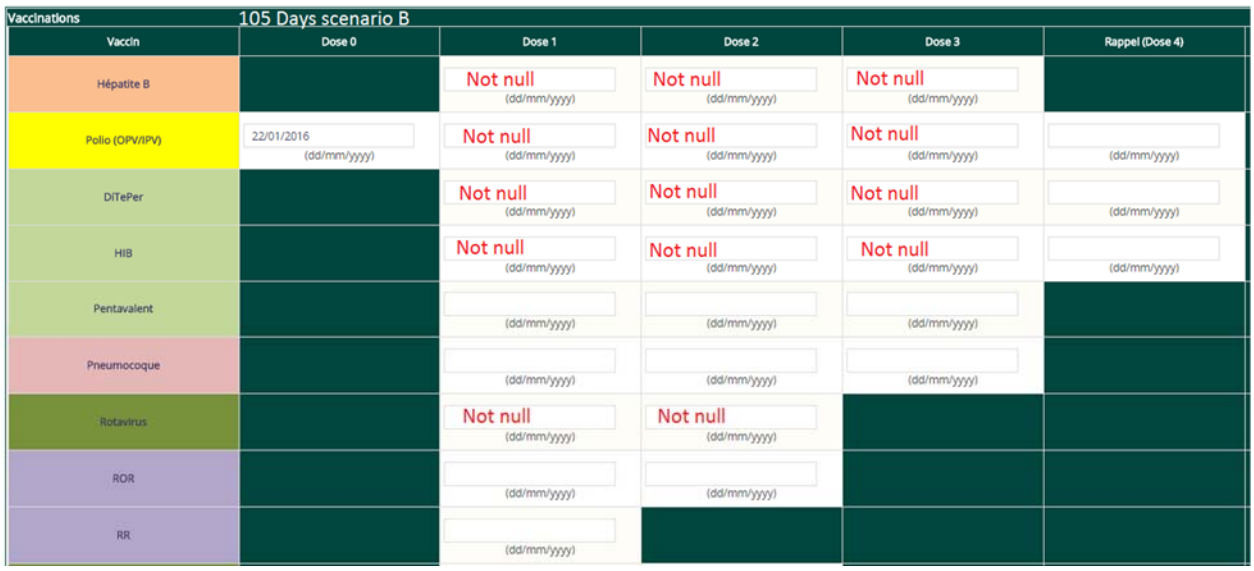


Figure 32: Or, if child's age is greater than 75 days and less than or equal to 105 days old, Dose 1, 2 and 3 of Hep B, Polio, DTP, and HiB and Dose 1 and 2 Rotavirus should not be null.

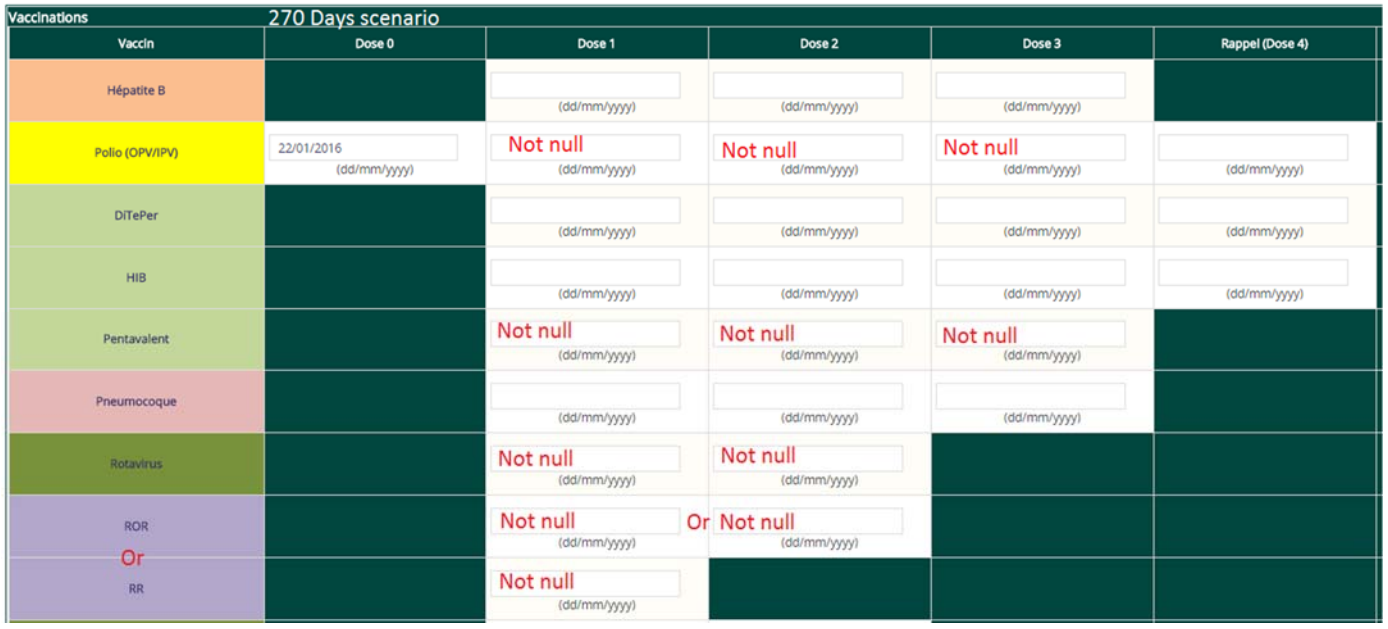


Figure 33: If child's age is greater than 105 days and less than or equal to 270 days old, Dose 1, 2 and 3 of Polio and Pentavalent, Dose 1 and 2 of Rotavirus, and Dose 1 and 2 of MMR or Dose 1 of MR should not be null.

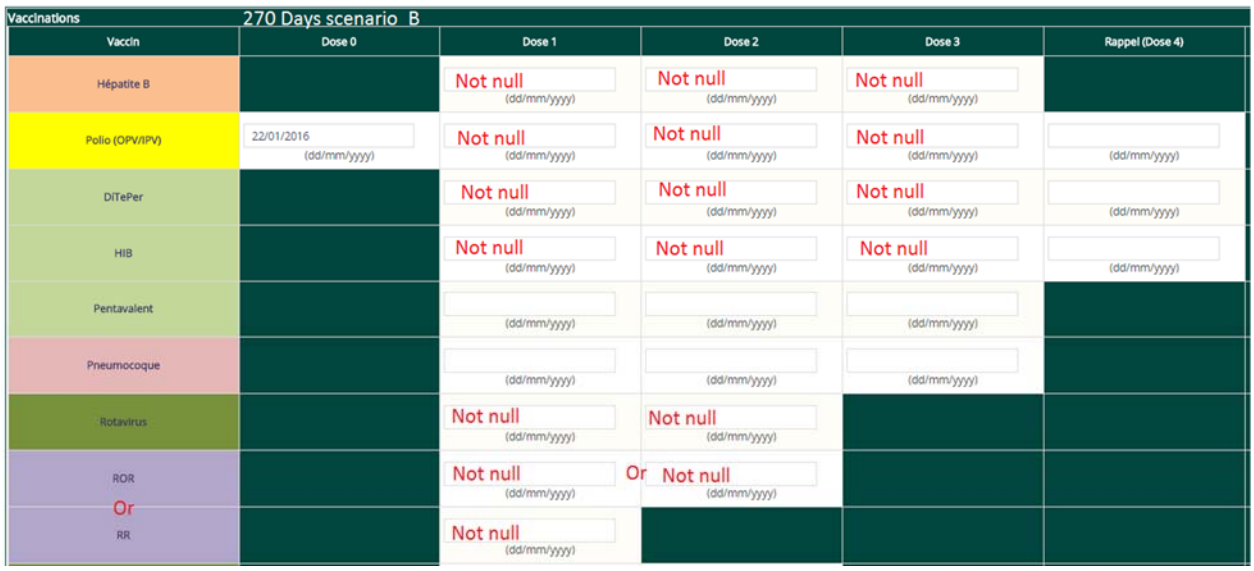


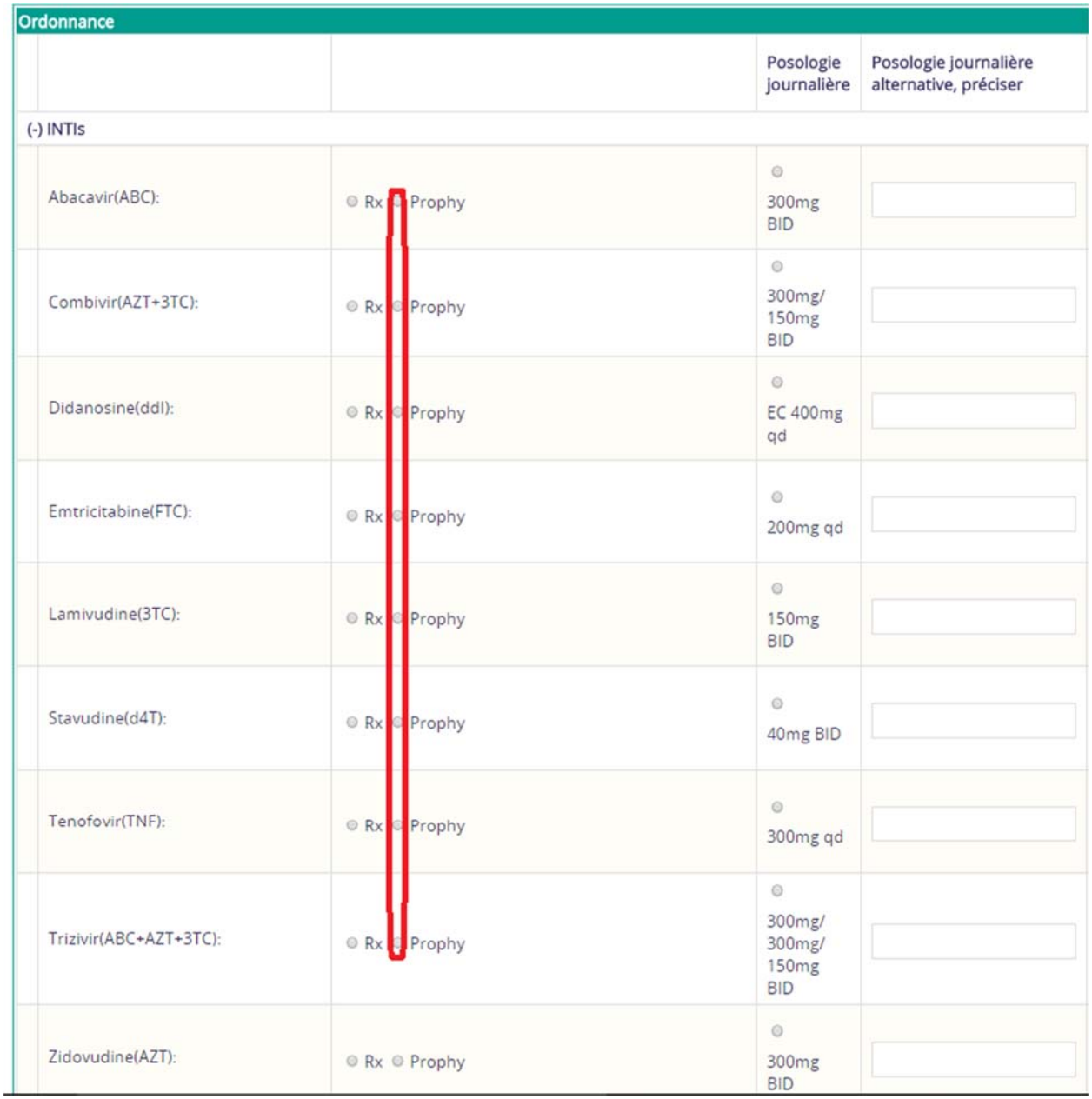
Figure 34: Or, if child's age is greater than 105 days and less than or equal to 270 days old, Dose 1, 2 and 3 of Hep B, Polio, DTP, HiB, Dose 1 and 2 of Rotavirus, and Dose 1 and 2 of MMR or Dose 1 of MR should not be null.

11. **Proportion of HIV-exposed infants who received ART prophylaxis during the selected period.**
    Numerator: Number of HIV-exposed infants between 0 and 18 months old put on ART prophylaxis during the selected period.

    Calculation method: HIV+ Pediatric patients between 0 and 18 months excluding discontinued cases, deceased, and transfers, who have had at least one visit (HIV First Pediatric Visit or Pediatric Follow-up or Pediatric Rx) and were placed on ART prophylaxis during the selected period. See Figures 35 and 36.

    Denominator: Number of HIV-exposed newborns seen in the clinic during the selected period.

    Calculation method: HIV+ Pediatric patients between 0 and 18 months excluding discontinued cases, deceased, and transfers, who have had at least one visit (HIV First Pediatric Visit or Pediatric Follow-up or Pediatric Rx) during the selected period.



Ordonnance

		Posologie journalière	Posologie journalière alternative, préciser
(-) INTIs			
Abacavir(ABC):	Rx Prophy	300mg BID	
Combivir(AZT+3TC):	Rx Prophy	300mg/ 150mg BID	
Didanosine(ddI):	Rx Prophy	EC 400mg qd	
Emtricitabine(FTC):	Rx Prophy	200mg qd	
Lamivudine(3TC):	Rx Prophy	150mg BID	
Stavudine(d4T):	Rx Prophy	40mg BID	
Tenofovir(TNF):	Rx Prophy	300mg qd	
Trizivir(ABC+AZT+3TC):	Rx Prophy	300mg/ 300mg/ 150mg BID	
Zidovudine(AZT):	Rx Prophy	300mg BID	

Figure 35: On the prescription form, "prophy" is checked for any of the INTIs.

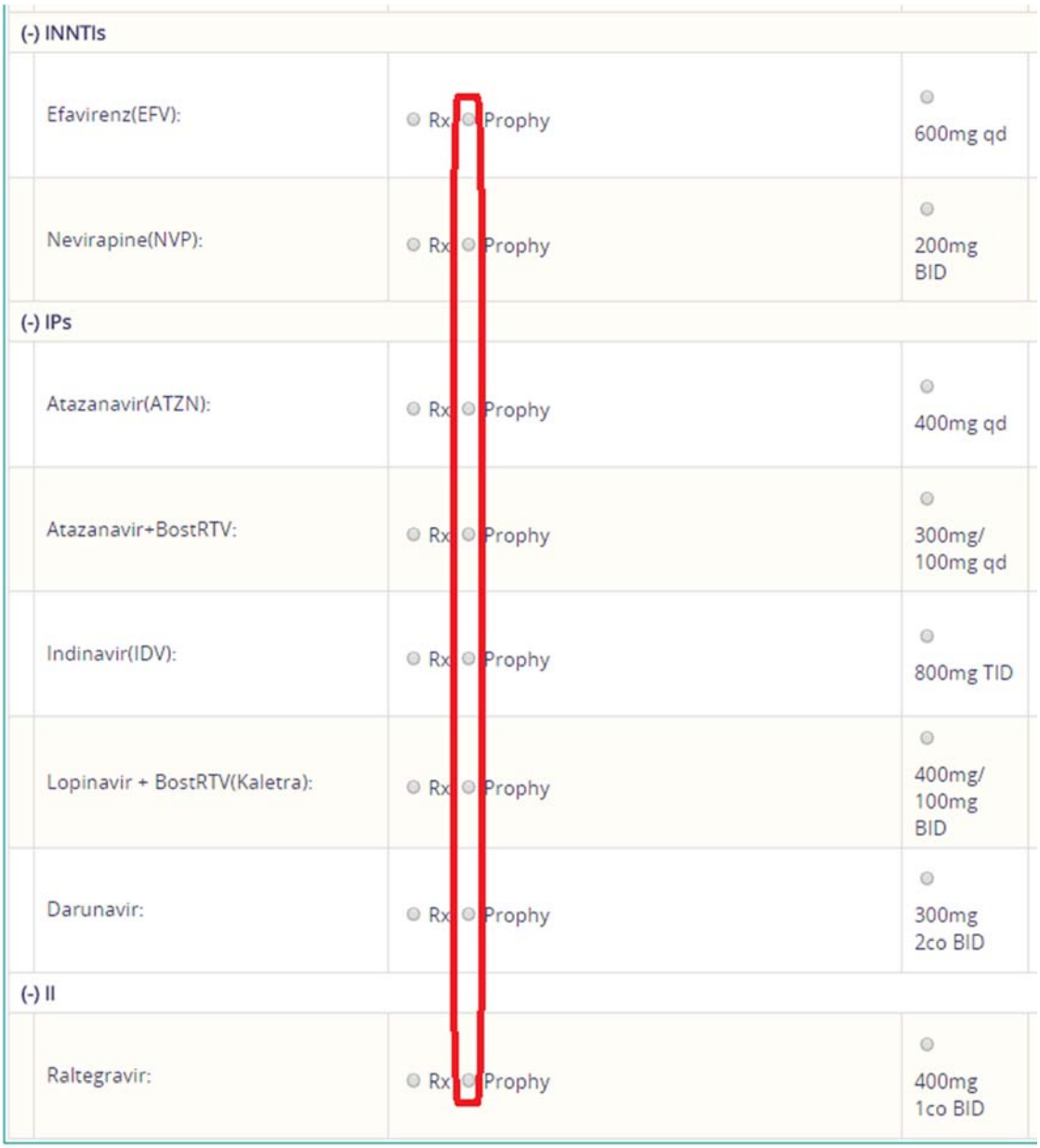


Figure 36: On the prescription form, "prophy" is checked for any of the INNTIs, IPs, and II.

12. **Proportion of HIV-exposed infants between 4 weeks old and 12 months old who have received a PCR test during the selected period**

    Numerator: Number of HIV-exposed infants between 4 weeks old and 12 months old who have received a PCR test at the clinic during the selected period**.**

    Calculation method: HIV+ Pediatric patients between 4 weeks old and 12 months old excluding discontinued cases, deceased, and transfers, who have had at least one visit (HIV First Pediatric Visit or Pediatric Follow-up or Pediatric Rx) and who had a PCR test done during the selected period. See Figure 37.

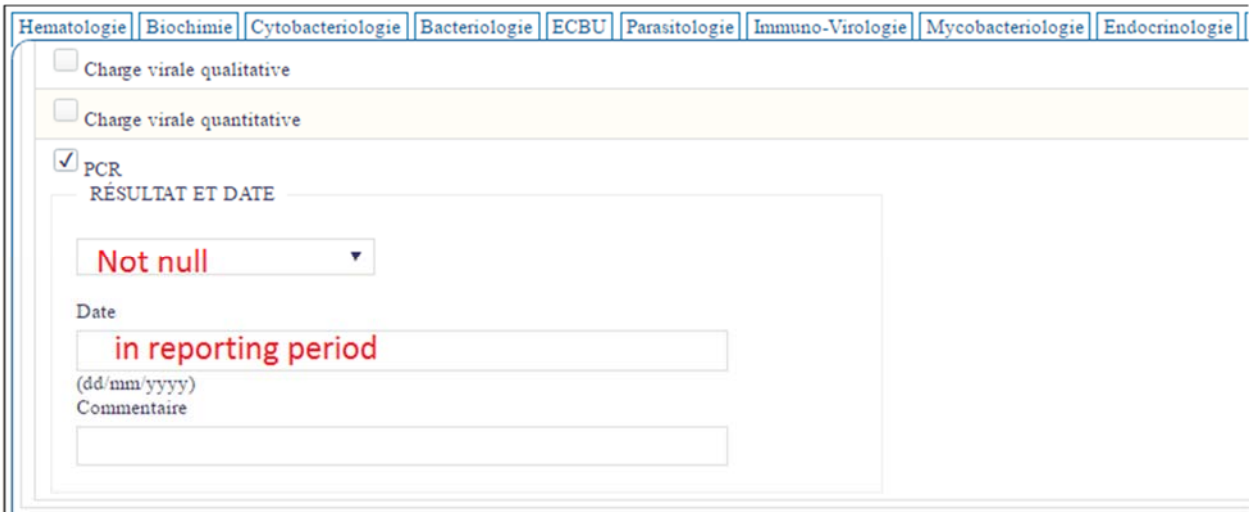


Figure 37: Laboratory form has a non-null result for PCR, the date for which falls in the reporting period.

Denominator: Number of HIV-exposed infants between 4 weeks old and 12 months old who were seen at the clinic during the selected period.

Calculation method: HIV+ Pediatric patients between 4 weeks old and 12 months old excluding discontinued cases, deceased, and transfers, who have had at least one visit (HIV First Pediatric Visit or Pediatric Follow-up or Pediatric Rx) during the selected period.

13. **Proportion of HIV-exposed infants who had a negative PCR test result during the selected period.**
Numerator: Number of HIV-exposed infants between 4 weeks and 18 months old who had a negative PCR test result.

Calculation method: HIV+ Pediatric patients between 4 weeks old and 18 months old excluding discontinued cases, deceased, and transfers, who have had at least one visit (HIV First Pediatric Visit or Pediatric Follow-up or Pediatric Rx) and who had a PCR test done during the selected period. See Figure 38.

Denominator: Number of HIV-exposed infants between 4 weeks and 18 months old who were seen at the clinic and had a PCR test completed during the selected period.

Calculation method: HIV+ Pediatric patients between 4 weeks old and 18 months old excluding discontinued cases, deceased, and transfers, who have had at least one visit (HIV First Pediatric Visit or Pediatric Follow-up or Pediatric Rx) during the selected period.

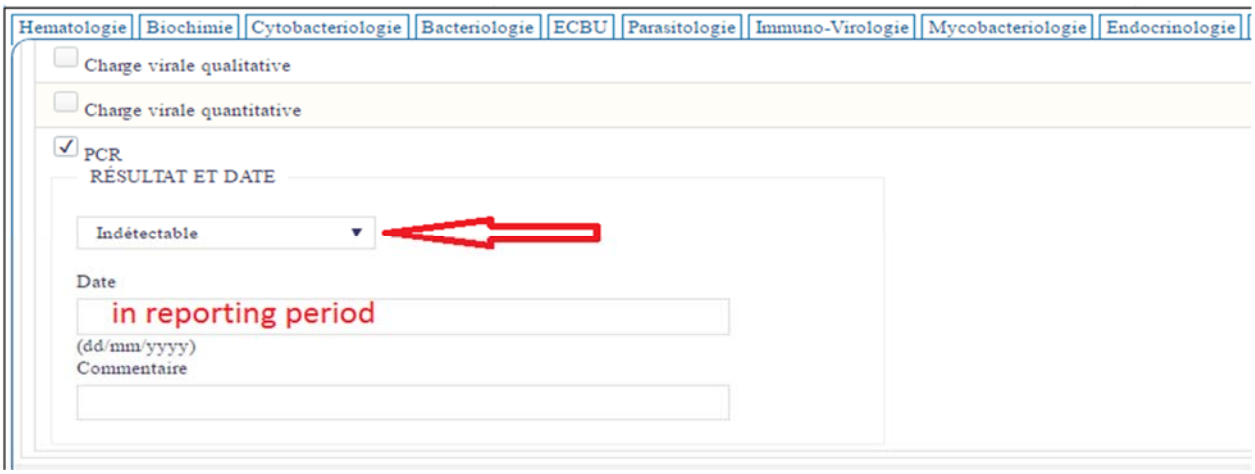


Figure 38: Laboratory form with PCR result as "undetectable" for which the date falls in the selected period.

Display Options

Table 1 describes the indicators for which the user can select a start date and end date or a single date. The table also specifies which indicators include selection options for the user.

Table 1: Display Options

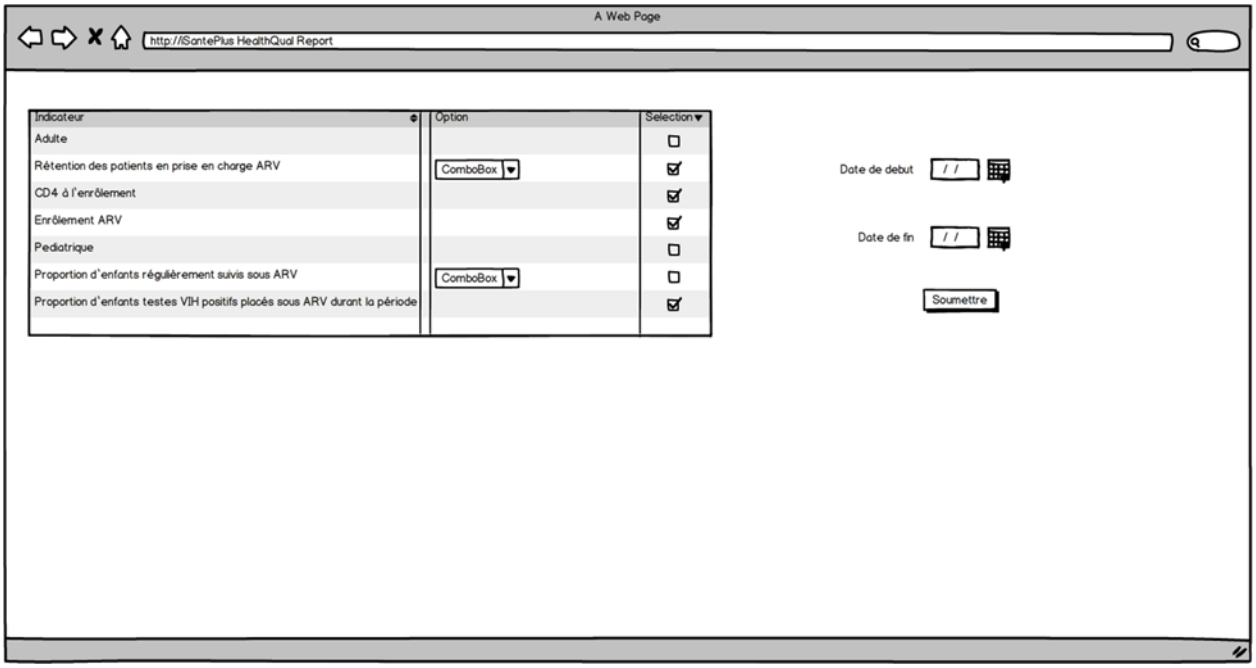
	Start & End Date	Single Date	Selection Option	Notes
Adulte				
Retention of patients on ARV treatment	**No**	**Yes**	**Yes**	**End user can pick a date and a period (6,12,24,48, or 60 months)**
CD4 at enrollment	**Yes**	**No**	**No**	
Enrollment in ART	**Yes**	**No**	**No**	
Proportion of adult PLHIV who have received cotrimoxazole prophylaxis during the selected period	**Yes**	**No**	**No**	
Proportion of HIV+ patients on ARVs who have had an adherence evaluation during the last 3 months	**No**	**Yes**	**No**	
Proportion of HIV+ patients on ART who are adherent to treatment during the selected period	**No**	**Yes**	**No**	
Proportion of PLHIV tested for TB at enrolment during the selected period	**Yes**	**No**	**No**	
Proportion of PLHIV who received INH	**Yes**	**No**	**No**	

chemoprophylaxis during the selected period				
Proportion of HIV+ patients who have had a nutritional assessment during the selected period	**Yes**	**No**	**No**	
Proportion of HIV+ patients identified as severely undernourished during the selected period	**Yes**	**No**	**No**	
Proportion of HIV+ women who use a family planning method during the selected period	**Yes**	**No**	**No**	
Proportion of HIV+ pregnant women who received triple-drug therapy (HAART) during the selected period	**Yes**	**No**	**No**	
Proportion of pregnant women in prenatal care or L&D who received an HIV test during the selected period	**Yes**	**No**	**No**	
Proportion of HIV+ patients on ART who received a viral load test at 6 months after the initiation of treatment	**Yes**	**No**	**No**	
Proportion of HIV+ patients on ART who received a viral load test at 18 months after the initiation of treatment	**Yes**	**No**	**No**	
Proportion of HIV+ patients on ART for more than 6 months who have an undetectable viral load	**Yes**	**No**	**No**	
Pediatrique				
Proportion of children regularly followed on ART	**No**	**Yes**	**Yes**	**End user picks a date and a period (6,12,24,48, or 60 months)**
Proportion of children tested positive for HIV and placed on ART during the selected period	**Yes**	**No**	**No**	
Proportion d'enfants exposés et infectés au VIH ayant reçu la prophylaxie au cotrimoxazole durant la période d'analyse	**Yes**	**No**	**No**	
Proportion d'enfants VIH sous ARV ayant bénéficié d'une évaluation sur l'adhérence au cours des 3 derniers mois.	**No**	**Yes**	**No**	
Proportion d'enfants VIH+ sous ARV considérés comme adhérents	**No**	**Yes**	**No**	
Proportion d'enfants VIH+ dépistés pour la tuberculose à l'enrôlement au cours de la période d'analyse	**Yes**	**No**	**No**	
Pourcentage d'enfants VIH positifs âgés de plus d'un an éligible ayant reçu la	**Yes**	**No**	**No**	

prophylaxie a l'INH durant la période d'analyse				
Pourcentage d'enfants exposes ou infectes au VIH âgés de moins d'un an ayant reçu la prophylaxie a l'INH durant la période d'analyse	**Yes**	**No**	**No**	
Proportion d'enfants ayant bénéficié d'une évaluation nutritionnelle au cours de la période d'analyse	**Yes**	**No**	**No**	
Proportion d'enfants exposés ou infectés au VIH ayant reçu les vaccins adéquats pour leur âge selon le PEV.	**Yes**	**No**	**Yes**	**end user pick a start and end date and an age interval 45,75,105,270 days)**
Proportion d'enfants exposés au VIH ayant bénéficié de la prophylaxie aux ARV au cours de la période d'analyse.	**Yes**	**No**	**No**	
Proportion d'enfants exposés au VIH âgés de 4 semaines à 12 mois ayant bénéficié d'un test PCR diagnostic au cours de la période d'analyse.	**Yes**	**No**	**No**	
Proportion d'enfants exposés au VIH ayant un test PCR négatif au cours de la période d'analyse.	**Yes**	**No**	**No**	

For the indicators that need only a single date, the start date should be used. The selection of indicators is done by the user as described in Table 2. A combobox is used for the indicators with options.

Table 2



The display of the report should be as shown in Table 3 and 4. Table 4 is an enlargement of the first section of table 3.

Table 3

Rapport HEALTHQUAL

31/07/16 - 31/01/17

			Patients en cours			Nom de l'indicateur									Nom de l'indicateur									Nom de l'indicateur								
						Num.			Dén.			%			Num.			Dén.			%			Num.			Dén.			%		
Dépt.	Clinique	Type	H	F	Tot	H	F	Tot	H	F	Tot	H	F	Tot	H	F	Tot	H	F	Tot	H	F	Tot	H	F	Tot	H	F	Tot	H	F	Tot
		Adulte	570	674	1244	302	353	655	451	534	985	67	661	665	1	9	10	119	140	259	8	64	39	0	0	0	279	307	586	0	0	0
Ouest	Sanatorium de Sigueneau	Péd.	1	3	4	1	0	1	1	1	2	100	0	50	0	0	0	0	2	2	0	0	0	0	0	0	0	1	0	1	0	0	0
		Total	571	677	1248	303	353	656	452	535	987	67	66	66.5	1	9	10	119	142	261	0.8	6.3	3.8	0	0	0	280	307	587	0	0	0

Table 4

			Patients en cours			Nom de l'indicateur								
						Num.			Dén.			%		
Dépt.	Clinique	Type	H	F	Tot	H	F	Tot	H	F	Tot	H	F	Tot
		Adulte	570	674	1244	302	353	655	451	534	985	67	661	665
Ouest	Sanatorium de Sigueneau	Péd.	1	3	4	1	0	1	1	1	2	100	0	50
		Total	571	677	1248	303	353	656	452	535	987	67	66	66.5