Spécification de l’interopérabilité SIDAInfo-DHIS2

*Une version anglaise est conservée en texte caché dans ce document*

Introduction

Ce document définit les exigences et les spécifications pour créer un programme Tracker dans DHIS2 qui contient les données essentielles de SIDAInfo, et pour mettre en place et maintenir un processus d’importation de données de routine pour remplir ce Tracker à partir de SIDAInfo.

***En tant que document de référence central, cette spécification doit être tenue à jour tout au long du processus de développement.*** Si des modifications sont apportées au cours de la mise en œuvre, il est extrêmement important qu'elles soient également mises à jour ici, afin que cette spécification reste une représentation fidèle du programme final paramétré dans DHIS2.

Exigences

Exigences d’interopérabilité

* Mettre en place un processus automatisé pour permettre l’importation des données TARV et PTME de SIDAInfo vers DHIS2 afin de :  
  - permettre aux utilisateurs d’accéder aux données essentielles de TARV et de PTME dans DHIS2  
  - permettre une analyse intégrée des données de traitement et de test (qui sont déjà dans DHIS2).
* Le processus doit couvrir les 8 sites TARV soutenus par PSI :

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| **Site** | **SIDAInfo** |  | **DHIS2 UID** |
| **Clinique Militaire de Rumonge** | 03010912 | BI\_1802038-AKA007 | FG6tYYTDf5d |
| **Centre Akabanga Gitega** | 06010120 | BI\_0701058-AKA002) | g9r6PbRYVAi |
| **Centre Akabanga Nyanza-Lac** | 10020502 | BI\_1102092-AKA006 | nniW4f9J1tB |
| **Centre Akabanga Muyinga** | 12010120 | BI\_1303104-AKA004 | yW1SToCNaYm |
| **Hôpital de Kibumbu** | 13010301 | BI\_HD40101 | IFiJar1g6y9 |
| **Centre Akabanga Ngozi** | 14010120 | BI\_1503117-AKA005 | ZAZapFNLXru |
| **Centre Akabanga Bujumbura** | 17010401 | BI\_0203012-AKA003 | YIJAETW8k0a |
| **Hôpital Militaire de Kamenge** | 17020203 | BI\_HD020103 | DLsHsaJhtnk |

* Les importations doivent être des données individuelles au niveau du patient (c’est-à-dire en format de DHIS2 Tracker) et doivent inclure les données démographiques des patients ainsi que toutes les données requises pour les rapports PEPFAR.
* Si possible, le processus d’importation doit être basé sur les fichiers mensuels standards d’exportation SIDAInfo. (L'alternative serait de tirer des données directement de la base de données MySQL, mais il peut y avoir d'importants obstacles administratifs à l’accès et à la mise à jour de cette base de données.)
* Le processus doit être suffisamment flexible pour permettre la mise en oeuvre des rapports hebdomadaires (au lieu de mensuels) si nécessaire.
* Le serveur de destination est l’instance dhis2 de production PSI (data.psi-mis.org)

Exigences en matière de rapports

DHIS2 doit être en mesure de générer des rapports pour les indicateurs PEPFAR suivants :

1. PMTCT\_EID
2. PMTCT\_FO
3. PMTCT\_HEI\_POS
4. PMTCT\_STAT
5. PMTCT\_ART
6. TX-Curr
7. TX-ML
8. TX-NEW
9. TX-RTT
10. TX-TB
11. TX-PVLS

Utilisateurs

[Loïc à compléter les détails sur qui (groupes d’utilisateurs DHIS2) va accéder aux :

1. Indicateurs agrégés basé sur ces programmes Tracker
2. Les dossiers individuels de patient]

**Hors de portée du projet**

* Tous les utilisateurs n’ont qu’un accès en lecteur seule – aucun accès de modification sera accordé à ces programmes Tracker.
* Il n’est pas nécessaire que les données soient renvoyées à SIDAInfo (un flux de données à sens unique est requis)
* Il n’y a pas besoin d’importer toutes les données – seulement les données démographiques et les principaux éléments de données PEPFAR doivent être importées.

Specification for SIDAInfo-DHIS2 interoperability

Introduction

This document sets out the requirements and specifications for creating a tracker program within DHIS2 that contains core SIDAInfo data, and for setting up and maintaining a routine data import process to populate this tracker from SIDAInfo.

***As a core reference document, this specification should be kept up-to-date throughout the development process.*** If any changes are made during implementation, it is extremely important that they are also updated here, so that this specification remains a true representation of the final program configured in DHIS2.

Requirements

Interoperability Requirements

* Set up an automated process to enable the import of ART and PMTCT data from SIDAInfo to DHIS2 in order to:  
  - enable project users to access key ART and PMTCT data via DHIS2  
  - enable integrated analysis of treatment and testing data (which is already in DHIS2).
* The process should cover 8 PSI-supported MOH ART sites:  
  **Clinique Militaire de Rumonge :** 003BDI003S010912 (BI\_1802038-AKA007 [FG6tYYTDf5d])  
  **Centre Akabanga Gitega :** 003BDI006S010120 (BI\_0701058-AKA002) [g9r6PbRYVAi])  
  **Centre Akabanga Nyanza-Lac :** 003BDI010S020502 (BI\_1102092-AKA006 [nniW4f9J1tB]) **Centre Akabanga Muyinga :** 003BDI012S010120 (BI\_1303104-AKA004) [yW1SToCNaYm]) **Hôpital de Kibumbu :** 003BDI013S010301 (BI\_HD40101) [IFiJar1g6y9])  
  **Centre Akabanga Ngozi :** 003BDI014S010120 (BI\_1503117-AKA005) [ZAZapFNLXru])  
  **Centre Akabanga Bujumbura :** 003BDI017S010401 (BI\_0203012-AKA003) [YIJAETW8k0a]  
  **Hôpital Militaire de Kamenge :** 003BDI017S020203 (BI\_HD020103) [DLsHsaJhtnk])
* Imports should be individual patient-level data (ie DHIS2 Tracker format), and should include patient demographics and all data required for PEPFAR reporting.
* If possible, the import process should be based on the standard SIDAInfo monthly export files. (The alternative would be drawing data directly from the MySQL database, but there may be significant administrative barriers to accessing and updating this database.)
* The process should be flexible enough to enable the implementation of weekly (instead of monthly) reporting if required.
* The destination server is the PSI production dhis2 instance (data.psi-mis.org)

Reporting requirements

DHIS2 should be able to generate reports for the following PEPFAR indicators:

1. PMTCT\_EID
2. PMTCT\_FO
3. PMTCT\_HEI\_POS
4. PMTCT\_STAT
5. PMTCT\_ART
6. TX-Curr
7. TX-ML
8. TX-NEW
9. TX-RTT
10. TX-TB
11. TX-PVLS

Users

[Loic to fill in details of who (dhis2 userGroups) will be accessing:

1. Aggregate indicators based on these Tracker programs
2. Individual patient records]

**Out of scope of the project**

* All user groups should have read-only access – no write access will be allowed for these programs.
* There is no need for data to be sent back to SIDAInfo (only one-way data flow required)
* Not all data needs to be imported – just demographics and key PEPFAR data items.

Tracker design

The following Tracker specification has been carefully designed around PEPFAR reporting requirements, with a structure that will enable the calculation of key PEPFAR indicators. (These indicators are outlined in the next section.)

Notes:

* For all data elements, wherever possible use the SIDAInfo code as the code, and the SIDAInfo text as the lookup value. When constructing indicators, always use codes. (See the reference file *Liste des tables, champs et leurs codes.xls*.)

**Tracked Entity and instances**

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| **Tracked Entity Type** | Person |
| **Instances** | All records from the *FileActive* table (which includes all women in the Femme\_Enceinte table)  **plus** All records from the Enfant\_PTME table  **Filter out** the patients that at the end of the process has 0 enrolments  Note that this will then cover:   * All patients registered for ARV (even if they haven’t started the ARV program) * All PMTCT mothers (HIV+) * All exposed children |
| **Attributes (all mandatory)** | |
| Code patient | It is the merge of the site code + separator “-” + site patient code.  In case of enfant, the character “E” is append after site patient code.  Examples: 17020203-002715 or 17020203-00271E  Drawn from:  FileActive-codeidpatient *or* Enfant\_PTME-CodeEnf  *Note that the child’s patient code is the mother’s patient code with an additional digit.* ***Also use this patient code as the UID for TEIs?*** |
| Sexe | Drawn from:  FileActive-Sexe *or* Enfant\_PTME-SexeEnfant |
| Date naissance | Drawn from:  FileActive-DateNaissance *or* Enfant\_PTME-DateNaissance |
| Mode d’entrée | Drawn from:  FileActive-codemodentree (recode 2: ‘PTME’ as ‘PTME mère’) *or*  Enfant\_PTME (code all children (*enfant*) as 10: ‘PTME enfant’) |
| Erreurs de validation (oui/non) | If the patient needs to be reviewed (for instance because there are events AFTER the Sortie) |
| Erreurs de validation (liste) | List of all errors that can be used for the validation process. |

Program: TARV

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| **Type** | Once in a lifetime enrolment. |
| **Enrolment records** | Each record in FileActive which has one or more matching “ARV” records in Admission\_detail. |
| **Enrolment date** | Label ‘Date d’admission’  Enrolment date is the earliest ‘datedebut’ date in this patient’s Admission\_detail records. |
| **Incident date** | Label ‘Date d’exportation de SIDAInfo’  Incident date is the date of the SIDAInfo export (taken from the export file) |
| **Enrolment status** | “ACTIVE”: Enrolment is never closed (always left open). |
| **Program stages**  In the SIDAInfo system, patients can start and exit ARV multiple times, reflecting breaks in treatment (so one patient in FileActive may have multiple ‘ARV’ entries in Admission\_detail). However, under PEPFAR guidelines, patients are only ever considered to have started ARV once – all further ARV stops and starts are considered ‘lost to follow-up’ or ‘resuming treatment’. It is therefore proposed that the PEPFAR definition be used: a single programme enrolment per patient, with the ARV admission date (ie first start of treatment) as the programme enrollment date and the first ARV visit start as the first event).  The manual recording by staff of ‘lost to follow up’ (LTFU) and return to treatment (RTT) dates in SIDAInfo is also ignored, as these are not always consistent (and they use the MoH three-month standard instead of the PEPFAR 28-day standard). Instead, LTFU and RTT dates will be automatically calculated by an algorithm based on visit dates (see notes below). | |
| Premier debut ARV | *Non-repeatable – if the datetraitement of the patient’s earliest record in Table\_ARV matches the ARVdatedebut of FileActive (in other words, that ART visit is the first time in their life they have taken ARVs), then create a ‘Premier debut ARV’ event based on that Table\_ARV record. (All other Table\_ARV records will become ‘TARV’ events – see below.) If the earliest record in Table\_ARV has not the same date as ARVdatedebut, then do not create this program stage – just create TARV program stages for that patient.*  **Event date:** Table\_ARV-datetraitement (earliest record per patient)  **Data element:**   * Data element: ‘Première visite ARV dans le système’ – yes/no (will always be ‘yes’ for this event). * Data element: ‘Molecule’ – use content of ‘codemolecule’ field. * Data element: ‘Quantité (jours)’ – use content of the ‘Qte’ field. * Data element ‘Prochaine rendez-vous (jours)’ – use content of ‘dateprochainrendev’ field (numeric). |
| TARV | *Repeatable – one event per record in Table\_ARV plus one open booking per patient for the latest datetraitement date + dateprochainerendev days, ie the next booking.*  **Event date:** Table\_ARV-datetraitement  **Booking date:** the previous event’s Table\_ARV-dateprochainrendev date (ie after the last event, create an additional booking using that event’s ‘next appointment’ date)  **Data element:**   * Data element: ‘Première visite ARV dans le système’ –this will be ‘yes’ if this is the earliest record in Table\_ARV (in other words, if there is no ‘Premier debut ARV’ event), and ‘no’ for all subsequent events. * ‘Retour à traitement après perdu de vue’ (RTT) – if this is the first event (TARV or Consultation) following a ‘Perdu de vue’ (LTFU), then flag ‘Oui’, otherwise no value. In there are two events (one TARV and one Consultation) the very same date after the LTFU, the Consultation event is selected as RTT. * ‘Molecule’ – use content of ‘codemolecule’ field. * ‘Quantité (jours)’ – use content of the ‘Qte’ field. * ‘Prochaine rendez-vous (jours)’ – use content of ‘dateprochainrendev’ field (numeric). * IMPORTANT : for older data, patients often have multiple TARV visits on the same day (ie with same ‘datetraitement’). (This is apparently because in the past they couldn’t record multiple prescriptions in a single visit; the system now lets them do this, so there shouldn’t be multiple TARV visits on the same day.) To correct this historical data, if a patient has multiple TARV visits on the same day (ie same ‘datetraitement’), ***then these should be merged into a single TARV visit***. If the two records have different days until the next booking (‘dateprochainrendev’), then ***use the earliest (smallest) value*** for the new merged TARV visit. |
| Consultation | *Repeatable event – one event per record in Consultation*  **Event date:** Consultation-dateConsultation  **Data elements:**   * ‘Retour à traitement après perdu de vue’ (RTT) – if this is the first event (TARV or Consultation) following a ‘Perdu de vue’ (LTFU), then flag ‘Oui’, otherwise no value. * ‘TB type examen’: the value in Consultation-TBTypeExamen – shows the type of TB screening or left empty if no screening done. * ‘TB résultat’: the value in Consultation-TBResultat – shows the TB test result or left empty if no test result. |
| Perdu de vue | *Repeatable event*  An algorithm will need to be used to calculate these LFTU dates and create an event in DHIS2 for that date – see notes below. |
| Debut traitement TB | *Repeatable event – one record for each Consultation record with a populated ‘TBDateDebutTraitement’ field.*  **Event date:** Consultation-TBDateDebutTraitement. |
| Sortie | *Non-repeatable – one event per FileActive record but only if the record has ‘sortie’ = ‘Vrai’* ***and*** *‘causesortie’ = 1, 2, 5 or 6 (Transféré sortant, Décès, Abandon or Autres).*  **Event date:** FileActive-datesortie (exit date)  **Data elements:**   * ‘Cause de sortie’: the value in FileActive-causesortie (see list of codes above – because of the filter applied, this will only be transferred, died or abandoned treatment). * ‘Statut à la date de sortie’, calculated field based on whether their ARV status at the time was active or LTFU: - if patient had not yet started ARV (no ‘Premier debut ARV’ event yet) then ‘TARV pas encore commencé’.  - if the patient’s status was ‘active’ (they have no LTFUs or each LTFU was matched by a RTT), then ‘Actif’; - if the patient’s status was ‘LTFU’ (they had an LTFU without a matching RTT), then ‘Perdu de vue’.   if there are events after the sortie, check if the previous event before the sortie is a ‘Perdu de vue’. In other cases, ‘Actif’. |
| **Notes** | |
| Although the TARV and Consultation events in this program are imported from SIDAInfo, it is missing other key dates, which will need to be calculated to facilitate reporting:   * SIDAInfo doesn’t seem to keep an automated record of ‘lost to follow up’ (LTFU) dates, so these dates need to be calculated and created as events in DHIS2. * SIDAInfo doesn’t maintain appointments (it just generates a number of days until next appointment), so appointments need to be calculated and ‘booking dates’ added to DHIS2. * For reporting purposes, certain flags need to be calculated to avoid double-counting (for example, a flag that says whether a patient was LTFU or active when they ‘exited’ from the ARV program – this will avoid the same patient being removed from the cohort twice, once for LTFU and again when exiting). * If more than one TARV took place the very same date, only one is taken into account (the other is dismissed). The one selected is the one with minimum number of days * If more than one Consultation took place the very same date, only one is taken into account (the other is dismissed). | |

Program: PTME mère

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| **Type** | Multiple lifetime enrolments possible  (once per pregnancy episode). |
| **Enrolment records** | All patients/persons with a record in **Femme\_Enceinte** (one Person may have multiple enrolments)  Some of the necessary fields are in the Admission\_detail table – do a record match on codepatient=CodePatientSuiviPTME and datedebut=DateVisiteSuiviPTME and enrollement=“PTME” (not PTMEE or PTMES).  *Important: the Femme\_Enceinte table only has pregnancies after 2010 – PMTCT episodes before then (which can be found in Admission\_detail) won’t be included.*  *Note: there may be more PTME records in the Admission\_detail than in the Femme\_enceinte table, but only create an enrollment if there is a record in the Femme\_Enceinte table.* |
| **Enrolment date** | Label ‘Date d’admission’  Enrolment date is Femme\_enceinte-DateVisitSuiviPTME |
| **Incident date** | Label ‘Date d’exportation de SIDAInfo’  Incident date is the date of the SIDAInfo export (taken from the export file) |
| **Enrolment status** | Enrolment COMPLETED if Admission\_detail-datefin is populated. (This is important, as we won’t be able to have more than one open enrolment for any patient.). If not “ACTIVE”. |
| **Program stages** | |
| Admission PTME mère | *Non-repeatable*  **Event date:** FemmeEnceinte-DateVisiteSuviPTME (which should be the same as Admission\_detail-datedebut.  **Data elements:**   * ‘Statut avant cette grossesse’: if the mother has a FileActive-datedepist (test date) before the enrolment date, then ‘Statut déja connu’ else ‘Statut non connu’. * ‘ARV commencé avant cette grossesse’ [ARV started before this pregnancy]: if the mother has a Table\_ARV entry before the enrolment date, then ‘ARV déjà commencé’ else ‘ARV pas encore commencé’. |
| Premier debut ARV (PTME) | *Non-repeatable – one event per enrolment based on the earliest “ARV” record in Admission\_detail*  **Event date:** Admission\_detail-datedebut (earliest “ARV” record)  *This is exactly the same as the ‘TARV’ program ‘Premier debut ARV’ event, but it is only included in this ‘PTME mère’ program* ***if that event falls within the dates of this program enrolment*** (≥ enrolment start date or ≤ enrolment end date)*.* Since each patient can only have one ‘Premier debut ARV date’, it will fall within one (and only one) of their PTME enrolments, or it may fall outside of them all so this event will not be created.  Note: the generation of this event is calculated during the dhis2 payload generation process. |
| Accouchement [delivery] | *Non-repeatable*  **Event date:** Femme\_enceinte-DateAccoucheSuiviPTME  **Data elements:** ‘Issue de la grossesse’ : Femme\_enceinte-issuegrossesse (use SIDAInfo lookup codes and values). If empty, leave it blank. |
| Sortie PTME mère | Non-repeatable – one event if Admission\_detail-datefin is populated.  **Event date:** Admission\_detail-datefin |

Program: PTME enfant

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| **Type** | Once in a lifetime enrolment |
| **Enrolment records** | All patients/persons with a record in Enfant\_PTME |
| **Enrolment date** | Label ‘Date naissance’  Note: to enable the easy calculation of cohort-based indicators, the date of birth (rather than the admission date) should be used as the enrolment date. |
| **Incident date** | Label ‘Date d’exportation de SIDAInfo’  Incident date is the date of the SIDAInfo export (taken from the export file) |
| **Enrolment status** | Enrolment COMPLETED if Enfant\_PTME-datesortie is populated. If not “ACTIVE”. |
| **Program stages** | |
| Admission PTME enfant | *Non-repeatable*  **Event date:** DateAdmissionEnfPTME |
| PCR initial | *Non-repeatable*  **Event date:** ‘Prelèvement’ (date sample taken) – this will be the *earliest date* in the 5 fields PCR1Prelevement, PCR2Prelevement, PCR3Prelevement, PCR4Prelevement and PrelevementAutre (some records have a PCR2 date without a PCR1 date etc).  **Data element:** ‘Résultat’ – the field PCR1, PCR2, PCR3, PCR4 or ResultatAutre that ***corresponds to the test chosen*** for ‘Prelèvement’/event date, based on the lookup table. Ignore all other results, and it’s also fine if there is no result for a ‘Prelèvement’ date (just leave this data element empty).  The algorithm for constructing the two fields above is as follows: 1. Check *in order* each of the five fields (PCR1Prelevement, PCR2Prelevement, PCR3Prelevement, PCR4Prelevement and PrelevementAutre), and take the first date that is populated – this becomes the ‘**Prelèvement**’ data element.  2. Then take the ***result*** from the matching field, using the table below:  If you took the date from… …then take the result from  PCR1Prelevement --> PCR1  PCR2Prelevement --> PCR2  PCR3Prelevement --> PCR3  PCR4Prelevement --> PCR4  PrelevementAutre --> ResultatAutre  This becomes the ‘**Résultat**’ data element. |
| PCR de suivi | *Repeatable event – created if the Enfant\_PTME-PCRXprelevement field is populated.*  **Event date:** ‘Prelèvement’ (date sample taken) for all other PCR tests besides the test identified as the initial one.  **Data element:** ‘Résultat’ – as above. |
| Sortie | *Non-repeatable event – created if the Enfant\_PTME-datasortie field is populated.*  **Event date:** ‘Date sortie’, taken from the Enfant\_PTME-datesortie field.  **Data element:** ‘Cause sortie’, lookup based on code taken from the Enfant\_PTME-causesortie field. If empty, leave it blank. |

**Relationships**

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| Relationships | Mother-to-child (bi-directional):   * Every child should be joined to a single mother (but one mother can be joined to one or more children in the case of twins). * This relationship is solely to facilitate navigation of patients in DHIS2 – it is not needed for PEPFAR reporting purposes. * The relationship can be restricted to the ‘PTME mère’ and ‘PTME enfant’ programs, since all mothers and children will be enrolled in one or the other. |

Construction of PEPFAR indicators

Indicateurs PTME / *PMTCT Indicators*

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| PMTCT\_EID  **PMTCT\_EID (0 à 2 mois)**  **PMTCT\_EID (3 à 12 mois)**  **(Indicateur / *Indicator*)** | Nourrissons avec prélèvement virologique à 12 mois en % de femmes enceintes avec test positif. (Nous devons inclure toutes les femmes dont le test est positif, pas seulement celles qui sont identifiées comme positives à la CPN1 (PMTCT\_STAT\_POS).  *Infants with virologic sample taken by 12mths as % of pregnant women with positive test. (We need to include all women who test positive, not just those who are identified as positive at ANC1 (PMTCT\_STAT\_POS).* | **Numérateur :** « PTME Enfant » compte des étapes de programme « PCR initiale » au cours de la période.  (Pour désagréger entre 0 à 2 mois et 3 à 12 mois après la naissance, filtrez par mois Entre la « date de naissance » et la date de l'événement).  Indicateurs de programme :  ‘BI SIDAInfo - PMTCT\_EID\_numerator (0 à 2 mois)’ et  ‘BI SIDAInfo – PMTCT\_EID\_numerator (3 à 12 mois)’  **Dénominateur :** toute inscription au programme « PTME mère » au cours de la période.  Indicateur de programme :  ‘BI SIDAInfo - PMTCT-PTME-Mere-Enrollments’  ***Numerator:*** *‘PTME Enfant’ count of ‘PCR initial’ program stages within the period.*  *(To disaggregate within 0-2 months and within 3-12 months of birth, filter by monthsBetween ‘date naissance’ and eventDate).*  *ProgramIndicators:*  *‘BI SIDAInfo – PMTCT\_EID\_numerator (0 à 2 mois)’ and*  *‘BI SIDAInfo – PMTCT\_EID\_numerator (3 à 12 mois)’*  ***Denominator:*** *every enrolment in the ‘PTME mère’ program within the period.*  *ProgramIndicator: ‘BI SIDAInfo - PMTCT-PTME-Mere-Enrollments’* |
| **PMTCT\_FO**  **(Indicator)** | HIV-exposed infants with documented outcome at 18mths as % of HIV-exposed infants *(see detailed notes on this one!)* | **Numerator:** number of children enrolled (birth date = enrolment date) in ‘PTME enfant’, filtered by monthsBetween ‘date naissance’ and ‘PCR de suivi’ eventdate >18months (I.e., at least one PCR test after 18 months from the enrolment date).  ProgramIndicator: ‘BI SIDAInfo - PMTCT-PTME-enfant-enrollments-FO'  **Denominator:** Children enrolled in the ‘PTME enfant’ program.  ProgramIndicator: ‘BI SIDAInfo - PMTCT-PTME-enfant-enrollments'  *To make this a cohort analysis,* ***enrolment*** *analytics period boundaries for both the numerator and denominator are set to the same period 24 months before. We’ll need to play with the filters to ensure that events later than this are still captured. The combination of filtering for patients after 18 months and putting the boundary at 24 months should mean we capture data at the 24-month mark for all infants who had a PCR between 18-23 months of age.* |
| PMTCT\_HEI\_POS  PMTCT\_HEI\_POS\_0-2  PMTCT\_HEI\_POS\_3\_12  PMTCT\_HEI\_POS\_0\_12  PMTCT\_HEI\_POS\_ALL  **(Program Indicator)** | # of HIV-positive infants whose virologic sample was collected within 12 months (disaggregated by age and ART initiation) | **Program: PTME enfant**  Count of ‘PCR initial’ events filtered by DE ‘résultat’ = positive (code=1)  (To disaggregate within 0-2 months and within 3-12 months of birth, filter by monthsBetween ‘date naissance’ and eventDate) |
| PMTCT\_STAT | Femmes enceintes dont le statut VIH est connu (précédemment connu + testé en CPN et ayant reçu les résultats) en % des nouvelles clientes des CPN au cours de la période de rapport  *Pregnant women with* ***known HIV status*** *(previously known + tested in ANC and received results)* ***as % of new ANC clients*** *in reporting period* | Cet indicateur ne peut pas être suivi via SIDAInfo, car il (1) ne saisit pas la première visite de CPN (dénominateur) and (2) n'inclut pas les visites de CPN non-VIH+ (numérateur).  *This indicator can’t be tracked via SIDAInfo, as it doesn’t (a) capture the first ANC visit (denominator) or (b) include non-HIV+ ANC visits (numerator).* |
| PMTCT\_ART  **(Indicateur / *Indicator*)**  **Pending: disaggregation by new-already on ART mothers (to be confirmed this disaggregation)** | Femmes enceintes séropositives recevant un TARV en % du statut VIH connu  *HIV positive pregnant women* ***receiving ART******as % of******known HIV status*** | **Program: PTME mère**  **Numerator:** count all ‘Premier debut ARV’ events in the PMTCT program. ProgramIndicator: ‘BI SIDAInfo - PMTCT-PTME-Mere-PremierDebutARVEvents'  (To disaggregate new and already-on-ART mothers, filter on ‘ARV commencé avant cette grossesse’.)  **Denominator:** every enrolment in the ‘PTME mère’ program within the period. ProgramIndicator: ‘BI SIDAInfo - PMTCT-PTME-Mere-Enrollments’ |

ART Indicators (TARV)

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| **TX-Curr** | # on ART (excluding LTFU) | *Note that because it’s possible for a patient with a 3-month prescription to be ‘on ART’ but to not have a visit during the period, we can’t base this indicator on enrolments/events within the period.*  ***The indicator is therefore based on the full history of all enrolments/events up until the end of the reporting period.***  The suggested calculation is:  All new ART patients (‘Premier debut ARV’ events)  minus LTFUs (all ‘Perdu de vue’ events prior to the end of the reporting period)  plus RTTs (all TARV or Consultation events prior to the end of the reporting period with data element ‘Retour à traitement…’ = ‘Oui’)  minus all exits by active patients (‘Sortie’ events with ‘Statut à la date de sortie’ = ‘Actif’). |
| TX-ML  **(Program Indicator)** | # of LTFUs (>28 days) | Count of all ‘Perdue de vue’ events during the reporting period.  Note: A patient could have more than one LTFU (‘Perdue de vue’) event |
| TX-NEW  **(Program Indicator)** | # new enrolments in ART | Count of all ‘Premier debut ARV’ events (TARV program) during the reporting period.  *Filter out PEP/PreP patients: TE Attribute ‘Mode d’entrée’ = 7 ‘Prophylaxie post-exposition’ ?* |
| TX-RTT  **(Program Indicator)** | # of LTFUs (TX-ML) resuming treatment | Count of all TARV events or Consultation events during the reporting period with data element ‘Retour à traitement…’ = True. |
| TX-TB  **(Indicator)** | Patients starting TB treatment as % of patients screened for TB | **Numerator:** count of ‘Debut traitement TB’ events.  **Denominator:** patients with a consultation event in the period that has a populated (d2:hasValue) ‘TB type examen’ data element  (create an *event* program indicator, using the CountOfEnrolments variable to ensure that patients screened twice in the period are only counted once). |
| Indicateur sur la prophelaxie TB | Léon va fournir les détails de cet indicateurs |  |
| TX-PVLS | Suppressed viral-load patients as % of all VL-tested patients | Need to base this on the Depiste table), as FileActive only contains the latest test (not previous periods).  Need to exclude newly-added patients (last 3 months) |
| TB\_PREV  **(Indicator)** | Patients completing TB Preventive Treatment (TPT) as % of patients starting TPT | **Numerator:** count of ‘Debut traitement TB’ events.  **Denominator:** patients with a consultation event in the period that has a populated (d2:hasValue) ‘TB type examen’ data element  (create an *event* program indicator, using the CountOfEnrolments variable to ensure that patients screened twice in the period are only counted once). |

Appendix A: list of data quality checks/rules

**Structural & content data quality checks**

In the ‘Action’ column below, “Error message” means that an error message is imported into DHIS2 and an entry is added to the log. “Error log” means that only the log is updated (no error message is imported into DHIS2).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Code** | **Description** | **Message** | **Message fr** | **Message dhis2** | **Action** |
| 01 | There are events after Sortie event date | Patient ${this.code} has events after a Sortie event date. Date sortie: ${this.ARV\_DateSortie.format(DHIS2\_DATEFORMAT)}. Last known event date: ${lastEvent.eventDate.format(DHIS2\_DATEFORMAT)} | Le patient ${this.code} a des evenements après une date sortie. Date sortie: ${this.ARV\_DateSortie.format(DHIS2\_DATEFORMAT)}. Dernier évènement enregistré : ${lastEvent.eventDate.format(DHIS2\_DATEFORMAT)} | Le patient a des evenements après une date sortie. Date sortie: ${this.ARV\_DateSortie.format(DHIS2\_DATEFORMAT)}. Dernier évènement enregistré : ${lastEvent.eventDate.format(DHIS2\_DATEFORMAT)} | Error message (but imported) |
| 02 | Number of days until the next treatment (dateprochainrendev) below 0 or above 365 | Patient ${codepatient} has a number of days until next treatment below 0 or above 365 (the number of days is ${dateprochainrendev}). Check the row number ${row\_number + 1} in the ${CURRENT\_TABLE} table` | 02;${codepatient};Le patient ${codepatient} a un nombre de jours au prochain rendez-vous qui est inférieur à 0 ou supérieur à 365 (le nombre de jours est ${dateprochainrendev}). Veuillez consulter la ligne ${row\_number + 1} dans la table ${CURRENT\_TABLE} | Le patient a un nombre de jours au prochain rendez-vous qui est inférieur à 0 ou supérieur à 365 (le nombre de jours est ${dateprochainrendev} à ${datetraitement}). | Error message (but imported) |
| 03 | Patient with more than one consultation the very same date | Patient ${patient.code} has more than one consultation (table CONSULTATION) for the same date. The duplicated date is: ${dateConsultationMoment.format(DHIS2\_DATEFORMAT)}. | Le patient ${patient.code} a plus d'une consultation (table CONSULTATION) à la même date. La date dupliquée est: ${dateConsultationMoment.format(DHIS2\_DATEFORMAT)}. | Le patient a plus d'une consultation (table CONSULTATION) à la même date. La date dupliquée est: ${dateConsultationMoment.format(DHIS2\_DATEFORMAT)} | Error message + (drops one of the two consultations when importing) |
| 04 | The person enrolled in the PTME Mere program is not a FEMALE | Patient ${this.code} is not FEMALE but it is enrolled in the PTME Mere program. | Le patient ${this.code} n'est pas une FEMME mais il est enregistré dans le programme PTME Mère. | Le patient n'est pas une FEMME mais il est enregistré dans le programme PTME Mère. | Error message (but imported) |
| 05 | The person hashas more than one open enrolment (FemmeEnceinte-DateVisiteSuiviPTME empty) | Patient ${this.code} has more than one PTME admission active at the same time (start date without end date): ${JSON.stringify(this.getPregnancies())} | Le patient ${this.code} a plus d'une admission PTME active au même temps (dateDebut sans DateFin) : ${JSON.stringify(this.getPregnancies())} |  | Error log + **not import patient** |
| 06 | A person with more than one Femme\_enceinte-DateVisitSuiviPTME the same day | Patient ${this.code} has more than one pregnancy (entry in FEMME\_ENCEINTE table) for the same date. The duplicated date/s is/are: ${duplicatesUnix.map(d => new Moment(d).format(DHIS2\_DATEFORMAT))}. All the enrollment days in the PTME meré program (FEMME\_ENCEINTE table, column DateVisitiSuiviPTME) are: ${enrollmentDates.map(d => d.format(DHIS2\_DATEFORMAT))} | Le patient ${this.code} a plus d'une grossesse (enregistrement dans la table FEMME\_ENCEINTE) à la même date. La/les date(s) dupliquée(s) est/sont: ${duplicatesUnix.map(d => new Moment(d).format(DHIS2\_DATEFORMAT))}. Toutes les dates de d'enregistrement dans le programme PTME meré (table FEMME\_ENCEINTE, champ 'DateVisitiSuiviPTME') sont : ${enrollmentDates.map(d => d.format(DHIS2\_DATEFORMAT))} |  | Error log + **not import patient** |
| 07 | The org unit of the file is not mapped against a dhis2 org unit | The Org Unit of the files (" + SOURCE\_OU\_CODE + ") is not mapped against DHIS2 | Le site des fichiers (" + SOURCE\_OU\_CODE + ") n'est pas lié avec une unité organisationelle de DHIS2 |  | Error log + **stop the process** |
| 08 | Birth day is below a threshold (1900) | Patient ${codepatient} has a Birth date with an unexpected DATE ${birthdate}. Check the row number ${row\_number + 1} in the ${CURRENT\_TABLE} table | Le patient ${codepatient} a une date de naissance avec une DATE inattendu : ${birthdate}. Veuillez consulter la ligne ${row\_number + 1} dans la table ${CURRENT\_TABLE} | Le patient a une date de naissance avec une DATE inattendu : ${birthdate}. | Error message (but imported) |
| 09 | Admission date is below the event threshold (1950) | Patient ${codepatient} has a Date Admission Enfant PTME with an empty DATE. Check the row number ${row\_number + 1} in the ${CURRENT\_TABLE} table | Le patient ${codepatient} a une Date Admission Enfant PTME avec une DATE vacie. Veuillez consulter la ligne ${row\_number + 1} dans la table ${CURRENT\_TABLE} |  | Error log + **not import patient** |
| 10 | PCR date (1, 2, 3, 4, autre) is below the event threshold (1950) | Patient ${codepatient} has a PCR X with an unexpected DATE ${PCRXPrelevement\_raw}. Check the row number ${row\_number + 1} in the ${CURRENT\_TABLE} table | Le patient ${codepatient} a une date PCR X avec une DATE inattendu : ${PCRXPrelevement\_raw}. Veuillez consulter la ligne ${row\_number + 1} dans la table ${CURRENT\_TABLE} | Le patient a une date PCR X avec une DATE inattendu : ${PCRXPrelevement\_raw}. | Error message (but imported) |
| 11 | Date Sortie is below the event threshold (1950) | Patient ${codepatient} has a Date Sortie with an unexpected DATE ${DateSortie\_raw}. Check the row number ${row\_number + 1} in the ${CURRENT\_TABLE} table | Le patient ${codepatient} a une Date Sortie avec une DATE inattendu : ${DateSortie\_raw}. Veuillez consulter la ligne ${row\_number + 1} dans la table ${CURRENT\_TABLE} | Le patient a une Date Sortie avec une DATE inattendu : ${DateSortie\_raw}. | Error message (but imported) |
| 12 | EntryMode code is not a number | Patient ${tmp\_patientCode} in the FileActive table has a value for entryMode (${value}) that is not a number. Please, check patient ${tmp\_patientCode} or line ${context.lines} in the FileActive table. | Le patient ${tmp\_patientCode} de la table FileActive a une valeur pour codeModeEntree (${value}) qui n'est pas un nombre. Veuillez vérifier patient ${tmp\_patientCode} ou la ligne ${context.lines} dans la table FileActive. |  | Error log |
| 13 | Date Depist is below the event threshold (1950) | Patient ${codepatient} has a Date Depist with an unexpected DATE ${datedepist\_raw}. Check the row number ${row\_number + 1} in the ${CURRENT\_TABLE} table | Le patient ${codepatient} a une Date Depist avec une DATE inattendu : ${datedepist\_raw}. Veuillez consulter la ligne ${row\_number + 1} dans la table ${CURRENT\_TABLE} | Le patient a une Date Depist avec une DATE inattendu : ${datedepist\_raw}. | Error message (but imported) |
| 14 | Date Sortie is below the event threshold (1950) | Patient ${codepatient} has a Date Sortie with an unexpected DATE ${datesortie\_raw}. Check the row number ${row\_number + 1} in the ${CURRENT\_TABLE} table | Le patient ${codepatient} a une Date Sortie avec une DATE inattendu : ${datesortie\_raw}. Veuillez consulter la ligne ${row\_number + 1} dans la table ${CURRENT\_TABLE} | Le patient a une Date Sortie avec une DATE inattendu : ${datesortie\_raw}. | Error message (but imported) |
| 15 | Date Debut is below the event threshold (1950) | Patient ${codepatient} has a Date Debut with an unexpected DATE ${datedebut}. Check the row number ${row\_number + 1} in the ${CURRENT\_TABLE} table | Le patient ${codepatient} a une Date Debut avec une DATE inattendu : ${datedebut}. Veuillez consulter la ligne ${row\_number + 1} dans la table ${CURRENT\_TABLE} | Le patient a une Date Debut avec une DATE inattendu : ${datedebut}. | Error message (but imported) |
| 16 | Date Fin is below the event threshold (1950) | Patient ${codepatient} has a Date Fin with an unexpected DATE ${datefin}. Check the row number ${row\_number + 1} in the ${CURRENT\_TABLE} table | Le patient ${codepatient} a une Date Fin avec une DATE inattendu : ${datefin}. Veuillez consulter la ligne ${row\_number + 1} dans la table ${CURRENT\_TABLE} | Le patient a une Date Fin avec une DATE inattendu : ${datefin}. | Error message (but imported) |
| 17 | The datedebut of an admission is later than the datefin | Patient ${codepatient} has an ADMISSION where the start date (datedebut ${datedebut}) is not before the end date (datefin ${datefin}). | Le patient ${codepatient} a une ADMISSION dont la dateDebut (${datedebut}) n'est pas avant la dateFIN (${datefin}). |  | Error log + **not import patient** |
| 18 | Patient in the ADMISSION/TABLE\_ARV/CONSULTATION/ FEMME\_ENCEINTE table but not in the File\_Active table | Patient ${codepatient} appears in the ${CURRENT\_TABLE} table but not in the File\_Active table. Check the row number ${row\_number + 1} in the ${CURRENT\_TABLE} table. | Le patient ${codepatient} est dans la table ${CURRENT\_TABLE} mais n'est pas dans la table File\_Active. Veuillez confirmer la ligne ${row\_number + 1} de la table ${CURRENT\_TABLE}. |  | Error log + **not import patient** |
| 19 | Date Traitment is below the event threshold (1950) | Patient ${codepatient} has a Date traitement with an unexpected DATE ${datetraitement}. Check the row number ${row\_number + 1} in the ${CURRENT\_TABLE} table | Le patient ${codepatient} a une Date traitement avec une DATE inattendu : ${datetraitement}. Veuillez consulter la ligne ${row\_number + 1} dans la table ${CURRENT\_TABLE} | Le patient a une Date traitement avec une DATE inattendu : ${datetraitement}. | Error message (but imported) |
| 20 | Multiple ARV treatments the same day BUT different number of days for next appointment. | Patient ${codepatient} has two ARV treatments on the same date (${datetraitement}), but each with different number of days until next appointment: ${dateprochainrendev} ${treatment\_already.num\_days}. (The smaller number will be imported.) | Le patient ${codepatient} a deux traitements ARV à la même date (${datetraitement}), mais le nombre de jours au prochain rendez-vous est différent : ${dateprochainrendev} et ${treatment\_already.num\_days} (le nombre plus petit sera importé). | Le patient a deux traitements ARV à la même date (${datetraitement}), mais le nombre de jours au prochain rendez-vous est différent : ${dateprochainrendev} et ${treatment\_already.num\_days} (le nombre plus petit sera importé). | Error message (import as single event, using shortest treatment days) |
| 21 | Multiples ARV treatments the same day BUT same number of treatment days | Patient ${codepatient} has duplicated ARV\_treatment date: datetraitement:${datetraitement}; dateprochainrendev: ${dateprochainrendev}. Error automatically resolved during import (the duplicate treatment dates have been merged into a single treatment date). | Le patient ${codepatient} a des dates de traitement ARV dupliquées  : datetraitement ${datetraitement} (dateprochainrendev ${dateprochainrendev}) Erreur automatiquement résolue lors de l’importation (les dates traitements dupliquées sont fusionnées dans une seule date traitement). |  | Error log only, no message (import as single event) |
| 22 | There are some missing data in the ARV Treatment (datetraitement or dateprochainrendev) | Patient ${codepatient} has missing data for the ARV\_treatment: datetraitement:${datetraitement}; dateprochainrendev: ${dateprochainrendev} | Le patient ${codepatient} manque des données pour le traitement ARV : datetraitement: ${datetraitement}; dateprochainrendev: ${dateprochainrendev} |  | Error log + **not import patient** |
| 23 | TB Date Debut is below the event threshold (1950) | Patient ${codepatient} has a TB Date Debut Traitement with an unexpected DATE ${TBDateDebutTraitement}. Check the row number ${row\_number + 1} in the ${CURRENT\_TABLE} table | Le patient ${codepatient} a une TB Date Debut Traitement avec une DATE inattendu : ${TBDateDebutTraitement}. Veuillez consulter la ligne ${row\_number + 1} dans la table ${CURRENT\_TABLE} | TB Date Debut Traitement avec une DATE inattendu : ${TBDateDebutTraitement}. } | Error message (but imported) |
| 24 | Consultation Date is below the event threshold (1950) | Patient ${codepatient} has a CONSULTATION with an unexpected DATE ${dateConsultation}. Check the row number ${row\_number + 1} in the ${CURRENT\_TABLE} table | Le patient ${codepatient} a une CONSULTATION avec une DATE inattendu : ${dateConsultation}. Veuillez consulter la ligne ${row\_number + 1} dans la table ${CURRENT\_TABLE} | CONSULTATION avec une DATE inattendu : ${dateConsultation}. | Error message (but imported) |
| 25 | No codepatient in Consultation table | NO codepatient appears in row number ${row\_number + 1} of the ${CURRENT\_TABLE} table. | Il n'y a pas de codepatient dans la ligne ${row\_number + 1} de la table ${CURRENT\_TABLE}. |  | Error message (no event imported) |
| 26 | Enrollment Date (FEMME\_ENCEINTE) is below the event threshold (1950) | Patient ${codepatient} has a enrollment Date with an unexpected DATE ${enrollmentDate}. Check the row number ${row\_number + 1} in the ${CURRENT\_TABLE} table | Le patient ${codepatient} a une DateVisiteSuiviPTME avec une DATE inattendu : ${enrollmentDate}. Veuillez consulter la ligne ${row\_number + 1} dans la table ${CURRENT\_TABLE} | DateVisiteSuiviPTME avec une DATE inattendu : ${enrollmentDate}. | Error message (but imported) |
| 27 | Delivery Date is below the event threshold (1950) | Patient ${codepatient} has a delivery Date with an unexpected DATE ${deliveryDate}. Check the row number ${row\_number + 1} in the ${CURRENT\_TABLE} table | Le patient ${codepatient} a une DateAccoucheSuiviPTME avec une DATE inattendu : ${deliveryDate}. Veuillez consulter la ligne ${row\_number + 1} dans la table ${CURRENT\_TABLE} | DateAccoucheSuiviPTME avec une DATE inattendu : ${deliveryDate}. | Error message (but imported) |
| 28 | If enrollmentDate is after the delivery date AND the enrollment date is no longer than 2 months ago (from export date) | Patient ${codepatient} has an enrollment Date ${enrollmentDate} after the delivery Date ${deliveryDate}. Check the row number ${row\_number + 1} in the ${CURRENT\_TABLE} table | Le patient ${codepatient} la DateVisiteSuiviPTME (${enrollmentDate}) n'est pas avant la DateAccoucheSuiviPTME (${deliveryDate}). Veuillez consulter la ligne ${row\_number + 1} dans la table ${CURRENT\_TABLE} |  | Error log **+ not import patient** |
| 29 | Patient has a DateVisiteSuiviPTME in the table FEMME\_ENCEINTE that is not present in the ADMISSION table. | Patient ${codepatient} has a DateVisiteSuiviPTME (${enrollmentDate}) in the table ${CURRENT\_TABLE} that is not present in the ADMISSION table. It should match the date debut of one of the PTME mere admissions. List of PTME meré admissions records of the table ADMISSION: ${JSON.stringify(patient.PTME\_mere\_admissions)} | Le patient ${codepatient} a une DateVisiteSuiviPTME (${enrollmentDate}) dans la table ${CURRENT\_TABLE} qui n'est pas présente dans la table ADMISSION. La DataVisiteSuiviPTME devrait correspondre à l'une des dateDebut des admissions PTME mère. Liste des admissions PTME mère de la table ADMISSION : ${JSON.stringify(patient.PTME\_mere\_admissions)} |  | Error log **+ not import patient** |
| 30 | Patient duplicated | Patient ${code} is duplicated. | Le patient ${code} est un doublon. |  | Error log + **not import patient** |
| 31 | Unexpected code. Validation for all values that are linked to an optionSet (like sexe, Mode d’entrée, Issue Grossesse, TBTypeExamen, TBResultat...) | Patient ${patientCode}. Unexpected option value: '${optionToValidate}' for the optionSet '${optionSets[optionSetUID].name}'. Expected values are: ${validOptions} | Le patient ${patientCode} a une valeur inattendue '${optionToValidate}' pour la liste d'options '${optionSets[optionSetUID].name}'. Les valeurs attendues sont : ${validOptions} |  | Error **+ not import patient** |
| 32 | Unexpected Patient Code: the patient code isn’t six characters (6 digits or 5 digits + E character) | Patient '${patientCode}' has a patient code that does not follow the expected pattern (6 numbers or 5 numbers + the character E)) | Le patient '${patientCode}' a un code de patient qui ne suit pas le modèle attendu (6 chiffres or 5 chiffres + la lettre E)). |  | Error **+ not import patient** |
| 33 | A PCR test has a valid result, but there is not date associate to it | Patient ${patientCode} (enfant) has a valid PCR result BUT without PCR date: ${JSON.stringify(pcr)} | Le patient ${patientCode} (enfant) a un résultat PCR valid mais sans date : ${JSON.stringify(pcr)} | Résultat PCR valid mais sans date : ${JSON.stringify(pcr)} | Error message + not import any PCRPCR events (but import patient) |
| 34 | Patient (enfant) has PCR dates that are not consecutive | Patient ${patientCode} (enfant) has PCR dates that are not consecutive: ${JSON.stringify(pcr\_dates)} | Le patient ${patientCode} (enfant) a des dates de PCR qui ne sont pas consécutives : ${JSON.stringify(pcr\_dates)} | Le patient a des dates de PCR qui ne sont pas consécutives : ${JSON.stringify(pcr\_dates)} | Error message + not import any PCR events (but import patient) |
| 35 | Patient (enfant) has two PCRs on the very same date | Patient ${patientCode} (enfant) with more than one PCR on the very same date: ${duplicateElements} | Le patient ${patientCode} (enfant) a deux PCR à la même date : ${duplicateElements} | Le patient (enfant) a deux PCR à la même date : ${JSON.stringify(pcr\_dates)} | Error message + not import any PCR (but import patient) |
| 36 | ARV debut date is expected to be the same in the Admission detail table and in the File Active table. | Patient ${this.code} has unexpected different dates for File Active ARV debut: ${file\_active\_debut\_log} and Admission detail ARV debut: ${admission\_detail\_ARV\_debut.format(DHIS2\_DATEFORMAT)} | Le patient ${this.code} a une difference inattendue de dates pour le debut ARV dans FileActive (${file\_active\_debut\_log}) et Admission\_detail (${admission\_detail\_ARV\_debut.format(DHIS2\_DATEFORMAT)}) |  | Error message + import (using Admission detail date)(no Premier debut ARV event created) |
| 37 | The earliest record in Table\_ARV comes *before* the ARVdatedebut date in FileActive. | Patient ${this.code} has a date for File Active ARV debut: ${file\_active\_debut\_log} which is later than the earliest visit in Table ARV: ${table\_ARV\_firstEvent.format(DHIS2\_DATEFORMAT)} | Le patient ${this.code} a dans FileActive une date debut ARV de ${file\_active\_debut\_log} qui est plus tard que la première visite TARV dans TableARV : ${table\_ARV\_firstEvent.format(DHIS2\_DATEFORMAT)} |  | Error message (no Premier debut ARV event created but imported) |
| 38 | There is one or more record in Table\_ARV, but ARVdatedebut date in FileActive is missing. | Patient ${this.code} has a Table ARV first event: ${ table\_ARV\_firstEventDate.format(DHIS2\_DATEFORMAT)} but FileActive ARV debut is empty. | Le patient ${this.code} a un premier évènement dans Table\_ARV ($ table\_ARV\_firstEventDate.format(DHIS2\_DATEFORMAT)}) mais le champs debut ARV dans FileActive est vide. |  | Error message (but imported) |
| 39 | Patient with empty code | Patient with empty patient code. Check the row number ${row\_number + 1} in the ${CURRENT\_TABLE} table | Patient avec un champs code patient vide. Veuillez consulter la ligne ${row\_number + 1} dans la table ${CURRENT\_TABLE} |  | Error log + not import patient |
| 40 | ARVdatedebut is below the event threshold (1950) | Patient ${codepatient} has a ARVdatedebut date with an unexpected DATE ${patient.ARVdatedebut}. Check the row number ${row\_number + 1} in the ${CURRENT\_TABLE} table | Le patient ${codepatient} a un ARVdatedebut inattendu : ${patient.ARVdatedebut}. Veuillez consulter la ligne ${row\_number + 1} dans la table ${CURRENT\_TABLE} | Debut date avec une DATE inattendu : ${patient.ARVdatedebut}. Veuillez consulter la ligne ${row\_number + 1} dans la table ${CURRENT\_TABLE} | Error message (but imported) |
| 41 | Patient has more PTME admissions (date debut/fins) than pregnancies (in FEMME\_ENCEINTE table). | Patient ${this.code} has more PTME admissions [${datedebuts.length}] (ADMISSION\_DETAIL table) than pregnancies [${enrollmentDates.length}] (FEMME\_ENCEINTE table). Missed admission/datedebut dates: ${difference\_datedebut} | Le patient ${this.code} a plus d’admissions PTME ([${datedebuts.length}]) dans la table ADMISSION\_DETAIL que grossesses ([${enrollmentDates.length}]) dans la table FEMME\_ENCEINTE. |  | Error message |
| X1 | Patient with more RTT than LTFU. The problem is not in the source, it is in the algorithm | Patient ${this.code} has more RTT than LTFU |  | Le patient ${this.code} a plus de "retours à traitement" que "perdues de vue" | Error log + not import patient |
| X2 | The difference between LTFU and RTT is more than one. The problem is not in the source, it is in the algorithm | Patient ${this.code} has LTFU minus RTT > 1 (${this.LTFU.length - this.RTT.length}) | Le patient ${this.code} a perdus de vue moins retour à traitement > 1 (${this.LTFU.length - this.RTT.length}) |  | Error log + not import patient |
| X3 | There are duplicated RTT dates. The problem is not in the source, it is in the algorithm | Patient ${this.code} has same RTT date for different LTFU: ${rttDate.format(DHIS2\_DATEFORMAT)} | Le patient ${this.code} a la même date de retour au traitement pour des différentes dates de perdu de vue: ${rttDate.format(DHIS2\_DATEFORMAT)}. |  | Error log + not import patient |
|  |  |  |  |  |  |