South Africa - AHRI.TIER.NET.Patients on Dolutegravir-containing regimen.2023

Sweetness H Dube

Report generated on: April 4, 2024

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Identification

SURVEY ID NUMBER
AHRI.DTG01-01.Patients.on.DTG.Containing.regimens

TITLE
AHRI.TIER.NET.Patients on Dolutegravir-containing regimen.2023

COUNTRY

Name	Country code
South Africa	ZA

ABSTRACT
TIER.net is an electronic patient management system that is used for monitoring and evaluation of HIV care and treatment programmes in government health facilities throughout South Africa. The system was designed as part of a 3-tier approach to implementing a full electronic medical records (EMR) system. This approach provides a flexible solution that allows facilities to transition towards EMR in stages, as their infrastructure improves, and resources become available. TIER.net forms the second tier, whereby patient's paper clinical records are entered into a non-networked computer at the health facility and transferred periodically to a central database.

The TIER.net database contains information on clinic visit attendance, laboratory results and ART dispensing records for all patients on ART. The system was implemented in uMkhanyakude district in 2013; patient records from all visits before 2013 were back-captured into the system. AHRI has a memorandum of agreement with the Department of Health to receive the TIER.net data for the 17 clinics in the Hlabisa health sub-district and Hlabisa hospital. A dedicated data entry clerk based in each clinic enters information from patients' paper clinical records into the TIER.net system after each patient visit. Laboratory results are manually entered into TIER.net after they have been received by the clinic (i.e. are not imported electronically from the National Health Laboratory Service (NHLS) system).
Currently, pre-ART visits are not recorded in TIER.net, although modules to capture HIV testing and pre-ART care may be implemented in the future.

AHRI's new clinical database - ACCDB (Africa Centre Clinical Database)
TIER.net has been integrated with AHRI's previous HIV care clinical database (ARTemis), which contains records for HIV positive patients in care at 7 clinics in the sub-district, to create a new combined clinical database, ACCDB. The ACCDB contains clinical records for all HIV positive patients on ART since 2004, when the Hlabisa HIV treatment and Care programme was implemented. Linkage between the two databases is based on personal identifiers, using algorithms developed at AHRI.
The patient records in ARTemis were captured prospectively by AHRI clinical staff from 2004 until 2012, whereas records from this period were back-captured into TIER.net. Therefore, the information in ARTemis pre-2013 was used to fill in missing data in TIER.net, with the following decision rules:
Patients who had records in TIER.net and not in ARTemis: All information retained
Patients who had records in ARTemis but not in TIER.net: No pre-ART records retained (TIER.net only contains records after ART initiation, whereas ARTemis also captured pre-ART information). Retained in new database if the patient started ART and died, transferred out, or was lost to follow-up before 2013.
Patients on ART with records in ARTemis from 2013 onwards, but no record in TIER, were assumed to be a result of a linkage mismatch and were not retained.

Patients who had records in both TIER.net and ARTemis: Visit records from TIER.net only (i.e. visits records from ARTemis are not combined with those in TIER). Laboratory results from ARTemis up to 2013 are combined with results in TIER
The new clinical database has been linked with the AHRI population surveillance database (ACDIS) and the Hlabisa hospital admissions database (HIS). A longitudinal analysis of the HIV care cascade (Haber et al. From HIV infection to therapeutic response: a population-based longitudinal HIV cascade-of-care study in KwaZulu-Natal, South Africa. Lancet HIV 2017; 4(5):e223-e230) has been rerun on the new combined TIER.net and ARTemis data, and results are consistent with those obtained from the ARTemis data alone (although the pre-ART stages must be excluded).
TIER.net data are transferred to AHRI from the central Department of Health on a monthly basis and integrated into ACCDB bi-annually, and the linkages with ACDIS and HIS are updated. (The linkage with the ARTemis database is not re-run since this database is no longer active).
In April 2017, there were >47,000 individuals on ART in the TIER database, of whom approximately 12,000 were linked to ACDIS and 6500 were linked to HIS.
Although TIER.Net data has been included up to July 2017, the current dataset should be analysed only up to end 2016,

because it has been linked to the Dec 2016 analytical database. The updated ACCDB data for 2017 will be available towards the end of the first quarter of 2018, linked to the end of 2017 analytical database relase.

UNIT OF ANALYSIS
Individual

Version

VERSION DESCRIPTION
v1.0.0

Scope

TOPICS

Topic	Vocabulary	URI
Tier.Net	Africa Health Research Institute	www.ahri.org

KEYWORDS

Keyword	Vocabulary	URI
Individuals	Africa Health Research Institute	www.ahri.org

Producers and sponsors

PRIMARY INVESTIGATORS

Name	Affiliation
Kobus Herbst	Africa Health Research Institute; South African Population Research Infrastructure Network
Kathy Baisley	Africa Health Research Institute
Dickman Gareta	Africa Health Research Institute

PRODUCERS

Name
Africa Health Research Institute

OTHER IDENTIFICATIONS/ACKNOWLEDGMENTS

Name
KZN Department Of Health

Data Collection

DATES OF DATA COLLECTION

Start	End
2002-01-25	2023-07-05

Access policy

ACCESS CONDITIONS

Access to the data requires accurate completion of the online data access application form accessible on the AHRI Data repository(<https://data.ahri.org/>). Data users are required to abide by the data use conditions stipulated on the application for access to the data. Failure to do so may result in their data access privileges being revoked by the Data Custodian. In order to recognise the effort and intellectual contributions of AHRI investigators in producing and curating the data, users of AHRI data must acknowledge the source of the data and abide by the terms and conditions under which the data is accessed and must cite the dataset in publication using the citation provided as part of this documentation. All analytical datasets published on the AHRI Data Repository are assigned digital object identifier (DOIs) and the DOIs can be found on the Data Repository under Study Description tab - Access policy. AHRI data users are required to always cite the dataset using the relevant DOI.

CITATION REQUIREMENTS

Herbst, K., Baisley, K., & Gareta, D. (2023). AHRI.TIER.Net Patients on Dolutegravir-containing regimen:2002-2023 [Data set]. Africa Health Research Institute. DOI:https://doi.org/10.23664/AHRI.DTG01-01.PATIENTS.ON.DTG.CONTAINING.REGIMENS

Metadata production

DDI DOCUMENT ID

DDI.DTG01-01.Patients.on.DTG.Containing.regimens

PRODUCERS

Name	Abbreviation
Africa Health Research Institute	AHRI

Data Dictionary

Data file	Cases	Variables
AHRI.TIER.Net.ART.2023.v1	91150	16
AHRI.TIER.Net.Labs.2023.v1	447023	4

Data file: AHRI.TIER.Net.ART.2023.v1

Cases:	91150
Variables:	16

Variables

ID	Name	Label	Question
V1321	PatientID	TIER Patient Identifier	
V1322	Sex	Gender	
V1323	DateOfBirth	Date of Birth	
V1324	StartedARTDate	Date of ART inititaion	
V1325	DrugSwitchDate	Date of Dolutegravir switch	
V1326	DrugSwitchTo1	Drug 1 Switched to	
V1327	DrugSwitchTo2	Drug 2 Switched to	
V1328	DrugSwitchTo3	Drug 3 Switched to	
V1329	DrugSwitchedFrom1	Drug 1 Switched from	
V1330	DrugSwitchedFrom2	Drug 2 Switched from	
V1331	DrugSwitchedFrom3	Drug 3 Switched from	
V1332	OutcomeDate	Date of ART Treatment Outcome	
V1333	Outcome	ART Treatment Outcome	
V1334	TBStatus	Latest TB status	
V1335	TBStatusDate	Latest TB status date	
V1336	FacilityNameCode	Code for facility name	

Total: 16

Data file: AHRI.TIER.Net.Labs.2023.v1

Cases:	447023
Variables:	4

Variables

ID	Name	Label	Question
V1337	PatientID	Patient ID	
V1338	ResultDate	Result Date	
V1339	CD4	CD4	
V1340	VL	Viral Load	

Total: 4

PATIENTID: TIER Patient Identifier

Data file: AHRI.TIER.Net.ART.2023.v1

Overview

Valid: 91150   Invalid: 0
Type: Discrete   Width: 36   Range: -   Format: character

SEX: Gender

Data file: AHRI.TIER.Net.ART.2023.v1

Overview

Valid: 91150   Invalid: 0
Type: Discrete   Decimal: 0   Width: 12   Range: 1 - 9   Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
1	Male	28904	31.7%
2	Female	62246	68.3%
9	Unknown	0	0%

DATEOFBIRTH: Date of Birth

Data file: AHRI.TIER.Net.ART.2023.v1

Overview

Valid: 91150   Minimum: 1918-10-12   Maximum: 2023-09-04
Type: Discrete   Width: 11   Range: -   Format: character

STARTEDARTDATE: Date of ART inititaion

Data file: AHRI.TIER.Net.ART.2023.v1

Overview

Valid: 91147   Minimum: 1986-04-01   Maximum: 2023-09-14
Type: Discrete   Width: 11   Range: -   Format: character

DRUGSWITCHDATE: Date of Dolutegravir switch

Data file: AHRI.TIER.Net.ART.2023.v1

Overview

Valid: 49344   Minimum: 2002-01-25   Maximum: 2023-09-14
Type: Discrete   Width: 11   Range: -   Format: character

DRUGSWITCHTO1: Drug 1 Switched to

Data file: AHRI.TIER.Net.ART.2023.v1

Overview

Valid: 49344   Invalid: 41806
Type: Discrete   Decimal: 0   Width: 12   Range: 0 - 15   Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Tenofovir	48401	98.1%
1	Stavudine	3	0%
2	Zidovudine	368	0.7%
3	Abacavir	572	1.2%
4	Lamivudine	0	0%
5	Emtricitabine	0	0%
6	Didanosine	0	0%
7	Efavirenz	0	0%
8	Nevirapine	0	0%
9	Lopinavir	0	0%
10	Ritonavir	0	0%
11	Atazanavir	0	0%
12	Darunavir	0	0%
13	Raltegravir	0	0%
14	Etravirine	0	0%
15	Dolutegravir	0	0%
Sysmiss		41806	

DRUGSWITCHTO2: Drug 2 Switched to

Data file: AHRI.TIER.Net.ART.2023.v1

Overview

Valid: 49343   Invalid: 41807
Type: Discrete   Decimal: 0   Width: 12   Range: 0 - 15   Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Tenofovir	0	0%
1	Stavudine	0	0%
2	Zidovudine	0	0%
3	Abacavir	0	0%
4	Lamivudine	48983	99.3%
5	Emtricitabine	359	0.7%
6	Didanosine	1	0%
7	Efavirenz	0	0%
8	Nevirapine	0	0%
9	Lopinavir	0	0%
10	Ritonavir	0	0%
11	Atazanavir	0	0%
12	Darunavir	0	0%
13	Raltegravir	0	0%
14	Etravirine	0	0%
15	Dolutegravir	0	0%
Sysmiss		41807	

▌ DRUGSWITCHTO3: Drug 3 Switched to

Data file: AHRI.TIER.Net.ART.2023.v1

Overview

Valid: 49344   Invalid: 41806
Type: Discrete   Decimal: 0   Width: 12   Range: 0 - 15   Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Tenofovir	0	0%
1	Stavudine	0	0%
2	Zidovudine	0	0%
3	Abacavir	0	0%
4	Lamivudine	0	0%
5	Emtricitabine	0	0%
6	Didanosine	0	0%
7	Efavirenz	0	0%
8	Nevirapine	0	0%

9	Lopinavir	0	0%
10	Ritonavir	0	0%
11	Atazanavir	0	0%
12	Darunavir	0	0%
13	Raltegravir	0	0%
14	Etravirine	0	0%
15	Dolutegravir	49344	100%
Sysmiss		41806	

▌ DRUGSWITCHEDFROM1: Drug 1 Switched from

Data file: AHRI.TIER.Net.ART.2023.v1

Overview

Valid: 82018   Invalid: 9132
Type: Discrete   Decimal: 0   Width: 12   Range: 0 - 15   Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Tenofovir	73350	89.4%
1	Stavudine	2864	3.5%
2	Zidovudine	2391	2.9%
3	Abacavir	3413	4.2%
4	Lamivudine	0	0%
5	Emtricitabine	0	0%
6	Didanosine	0	0%
7	Efavirenz	0	0%
8	Nevirapine	0	0%
9	Lopinavir	0	0%
10	Ritonavir	0	0%
11	Atazanavir	0	0%
12	Darunavir	0	0%
13	Raltegravir	0	0%
14	Etravirine	0	0%
15	Dolutegravir	0	0%
Sysmiss		9132	

▊ DRUGSWITCHEDFROM2: Drug 2 Switched from

Data file: AHRI.TIER.Net.ART.2023.v1

Overview

Valid: 82018   Invalid: 9132
Type: Discrete   Decimal: 0   Width: 12   Range: 0 - 15   Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Tenofovir	0	0%
1	Stavudine	0	0%
2	Zidovudine	0	0%
3	Abacavir	0	0%
4	Lamivudine	14606	17.8%
5	Emtricitabine	67396	82.2%
6	Didanosine	16	0%
7	Efavirenz	0	0%
8	Nevirapine	0	0%
9	Lopinavir	0	0%
10	Ritonavir	0	0%
11	Atazanavir	0	0%
12	Darunavir	0	0%
13	Raltegravir	0	0%
14	Etravirine	0	0%
15	Dolutegravir	0	0%
Sysmiss		9132	

▊ DRUGSWITCHEDFROM3: Drug 3 Switched from

Data file: AHRI.TIER.Net.ART.2023.v1

Overview

Valid: 82018   Invalid: 9132
Type: Discrete   Decimal: 0   Width: 12   Range: 0 - 15   Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Tenofovir	0	0%

1	Stavudine	0	0%
2	Zidovudine	0	0%
3	Abacavir	0	0%
4	Lamivudine	0	0%
5	Emtricitabine	0	0%
6	Didanosine	0	0%
7	Efavirenz	76581	93.4%
8	Nevirapine	1527	1.9%
9	Lopinavir	3854	4.7%
10	Ritonavir	20	0%
11	Atazanavir	19	0%
12	Darunavir	6	0%
13	Raltegravir	6	0%
14	Etravirine	5	0%
15	Dolutegravir	0	0%
Sysmiss		9132	

OUTCOMEDATE: Date of ART Treatment Outcome

Data file: AHRI.TIER.Net.ART.2023.v1

Overview

Valid: 48252   Minimum: 2001-01-02   Maximum: 2023-09-14
Type: Discrete   Width: 11   Range: -   Format: character

OUTCOME: ART Treatment Outcome

Data file: AHRI.TIER.Net.ART.2023.v1

Overview

Valid: 48252   Invalid: 42898
Type: Discrete   Decimal: 0   Width: 12   Range: 0 - 2   Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	RIP	3490	7.2%
1	TFO	19972	41.4%
2	LTF	24790	51.4%
Sysmiss		42898	

TBSTATUS: Latest TB status

Data file: AHRI.TIER.Net.ART.2023.v1

Overview

Valid: 89918   Invalid: 1232
Type: Discrete   Decimal: 0   Width: 12   Range: 0 - 6   Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Asymptomatic	83496	92.9%
1	Symptomatic	514	0.6%
2		3	0%
3	On TB treatment at this facility	1575	1.8%
4	On TB treatment at another facility	58	0.1%
5		31	0%
6	Screening Status Unknown	4241	4.7%
Sysmiss		1232	

TBSTATUSDATE: Latest TB status date

Data file: AHRI.TIER.Net.ART.2023.v1

Overview

Valid: 89918   Minimum: 2001-01-01   Maximum: 2102-03-21
Type: Discrete   Width: 11   Range: -   Format: character

FACILITYNAMECODE: Code for facility name

Data file: AHRI.TIER.Net.ART.2023.v1

Overview

Valid: 91122   Invalid: 28   Minimum: 138242   Maximum: 983342   Mean: 652988.671   Standard deviation: 230463.256
Type: Continuous   Decimal: 0   Width: 12   Range: 138242 - 983342   Format: Numeric

PATIENTID: Patient ID

Data file: AHRI.TIER.Net.Labs.2023.v1

Overview

Valid: 447023   Invalid: 0
Type: Discrete   Width: 36   Range: -   Format: character

RESULTDATE: Result Date

Data file: AHRI.TIER.Net.Labs.2023.v1

Overview

Valid: 447023   Minimum: 1969-08-19   Maximum: 2102-03-21
Type: Discrete   Width: 11   Range: -   Format: character

CD4: CD4

Data file: AHRI.TIER.Net.Labs.2023.v1

Overview

Valid: 241975   Invalid: 205048   Minimum: 0   Maximum: 54000   Mean: 492.495   Standard deviation: 324.6
Type: Continuous   Decimal: 0   Width: 12   Range: 0 - 54000   Format: Numeric

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VL: Viral Load

Data file: AHRI.TIER.Net.Labs.2023.v1

Overview

Valid: 353075   Invalid: 93948   Minimum: 0   Maximum: 12100000   Mean: 14440.346   Standard deviation: 156407.056
Type: Continuous   Decimal: 0   Width: 12   Range: 0 - 12100000   Format: Numeric

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Download related resources

Technical documents

DDI:TIER.Net

Title	DDI:TIER.Net
Author(s)	Sweetness H Dube
Date	04/04/2024
Country	South Africa
Language	English
Publisher(s)	Sweetness H Dube
Filename	DTG01-01.Patients.on.DTG.Containing.regimens2.pdf