

South Africa - The international epidemiological databases to evaluate AIDS (IeDEA) in sub-Saharan Africa-2025

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Visit our data catalog at: <https://data.ahri.org/index.php>

Identification

SURVEY ID NUMBER

IeDEA.2004-2025

TITLE

The international epidemiological databases to evaluate AIDS (IeDEA) in sub-Saharan Africa-2025

COUNTRY

Name	Country code
South Africa	ZA

ABSTRACT

TIER.net <<http://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 <<http://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 <<http://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 <<http://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 <<http://tier.net/>> system after each patient visit. Laboratory results are manually entered into TIER.net <<http://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 <<http://tier.net/>>, although modules to capture HIV testing and pre-ART care may be implemented in the future.

KIND OF DATA

Clinical Data

UNIT OF ANALYSIS

Individuals on ART at one of the 17 clinics from Hlabisa sub-district, uMkhanyakude district

Version

VERSION DESCRIPTION

v4.0.0

Scope

TOPICS

Topic	Vocabulary	URI
HIV, Epidemiology, KwaZulu-Natal, Antiretroviral therapy, Hlabisa, Population Cohort	Africa Health Research Institute	www.ahri.org

KEYWORDS

Keyword	Vocabulary	URI
HIV, Epidemiology, KwaZulu-Natal, Antiretroviral therapy, Hlabisa, Population Cohort	Africa Health Research Institute	www.ahri.org

Coverage

GEOGRAPHIC COVERAGE

Hlabisa sub-district, KwaZulu-Natal, South Africa

UNIVERSE

Individuals from Hlabisa sub-district, KwaZulu-Natal, South Africa

Producers and sponsors

PRIMARY INVESTIGATORS

Name	Affiliation
Dr Abraham Jacobus Herbst	Africa Health Research Institute
Prof. Willem Hanekom	Africa Health Research Institute
Prof. Janet Seeley	Africa Health Research Institute
Prof. Maryam Shahmanesh	Africa Health Research Institute
Dr. Guy Harling	Africa Health Research Institute
Dr. Mark Siedner	Africa Health Research Institute

PRODUCERS

Name	Abbreviation
Africa Health Research Institute	AHRI

FUNDING AGENCY/SPONSOR

Name	Abbreviation	Role
Welcome Trust	WT	Funder
DSI-MRC South African Population Research Infrastructure Network	SAPRIN	Funder
South Africa Department of Health	DoH	Data Custodian

OTHER IDENTIFICATIONS/ACKNOWLEDGMENTS

Name	Affiliation	Role
Dickman Gareta	AHRI	Research Data Management
Kathy Baisley	AHRI	Statistics
Eugene Prenzler	AHRI	IT infrastructure
Brendan Gilbert	AHRI	IT infrastructure

Sampling

SAMPLING PROCEDURE

All individuals accessing ART treatment and care in the 17 clinics in Hlabisa sub-district, KwaZulu-Natal, South Africa

Data collection

DATES OF DATA COLLECTION

Start	End
2004-01-01	2025-09-20

Data Processing

DATA EDITING

Tier.Net data is processed and stored on servers under the physical control of AHRI until datasets are made available on the data repository. The data is de-identified and can then be downloaded for processing on the data user's computer.

Data is stored on industry-standard relational databases with data integrity and user authentication for access control. Data is replicated on at least a daily basis to the Durban site of the Institution to provide secure offsite storage of data. Transactional logs are backed up every 30 minutes to enable recovery of data in the event of equipment failure.

All users of the system are authenticated through individual passwords with minimum complexity and regular change rules (passwords must be at least eight digits, with a mix of small and capital letters, at least one numeric or non-alphabetic digit and changed at least every 45 days). AHRI uses industry standard malware and intrusion detection with at least annual penetration tests by a reputable outside security audit company.

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, A. J., Hanekom, W., Seeley, J., Shahmanesh, M., Harling, G., & Siedner, M. (2025). The international epidemiological databases to evaluate AIDS (IeDEA) in sub-Saharan Africa-2025 [Data set]. Africa Health Research Institute.
DOI: <https://doi.org/10.23664/IeDEA.2004-2025>

Metadata production

DDI DOCUMENT ID

DDI.IeDEA.2004-2025

PRODUCERS

Name	Abbreviation
Africa Health Research Institute	AHRI

Data Dictionary

Data file	Cases	Variables
tbIBAS	272513	18
tbILAB_CD4	271453	5
tbILAB_RNA	441464	6
tbILTFU	272513	10
tbIART	3341840	7
tbIVIS	3343281	12
tbIREV_VITAL_STATUS	73042	5

Data file: tblBAS

Cases: 272513

Variables: 18

Variables

ID	Name	Label	Question
V344	IsActive		
V345	PATIENT		
V346	PROGRAM		
V347	BIRTH_D		
V348	METHOD_INTO_ART		
V349	ENROL_D		
V350	SEX		
V351	MODE		
V352	Name		
V353	NAIVE_Y		
V354	PROPH_Y		
V355	RE CART_Y		
V356	RE CART_D		
V357	AIDS_Y		
V358	AIDS_D		
V359	HIV_POS_D		
V360	Outcome		
V361	OutcomeDate		

Total: 18

Data file: tblLAB_CD4

Cases:	271453
Variables:	5

Variables

ID	Name	Label	Question
V362	PATIENT		
V363	CD4_D		
V364	CD4_D_A		
V365	CD4_V		
V366	CD4_U		

Total: 5

Data file: tbILAB_RNA

Cases:	441464
Variables:	6

Variables

ID	Name	Label	Question
V367	PATIENT		
V368	RNA_D		
V369	RNA_D_A		
V370	RNA_V		
V371	RNA_L		
V372	RNA_T		

Total: 6

Data file: tbILTFU

Cases: 272513

Variables: 10

Variables

ID	Name	Label	Question
V373	PATIENT		
V374	DROP_Y		
V375	DROP_D		
V376	DROP_D_A		
V377	DROP_RS		
V378	DEATH_Y		
V379	DEATH_D		
V380	DEATH_D_A		
V381	L_ALIVE_D		
V382	L_ALIVE_D_A		

Total: 10

Data file: tblART

Cases: 3341840

Variables: 7

Variables

ID	Name	Label	Question
V395	PATIENT		
V396	ART_SD_DMY		
V397	RegimenDuration		
V398	RegimenCode		
V399	ART_FORM		
V400	ART_COMB		
V401	ARTSTART_RS		

Total: 7

Data file: tblVIS

Cases:	3343281
Variables:	12

Variables

ID	Name	Label	Question
V407	PATIENT		
V408	CENTER		
V409	VIS_D		
V410	VIS_D_A		
V411	WEIGH		
V412	HEIGH		
V413	CDC_STAGE		
V414	WHO_STAGE		
V415	SMOKING_Y		
V416	PREG_Y		
V417	NEXT_VISIT_D		
V418	NEXT_VISIT_D_A		

Total: 12

Data file: tbIREV_VITAL_STATUS

Cases: 73042

Variables: 5

Variables

ID	Name	Label	Question
V419	PATIENT		
V420	PROGRAM		
V421	VITAL_STATUS		
V422	NPR_DEATH_D		
V423	LINKAGE_D		

Total: 5

ISACTIVE:**Data file: tbIBAS****Overview**

Valid: 272513 Invalid: 0
 Type: Discrete Decimal: 0 Width: 2 Range: 0 - 1 Format: Numeric

PATIENT:**Data file: tbIBAS****Overview**

Valid: 272513 Invalid: 0
 Type: Discrete Width: 36 Range: - Format: character

PROGRAM:**Data file: tbIBAS****Overview**

Valid: 0 Invalid: 0
 Type: Discrete Width: 1 Range: - Format: character

BIRTH_D:**Data file: tbIBAS****Overview**

Valid: 272513 Minimum: 1900-09-18 Maximum: 2025-09-01
 Type: Discrete Width: 11 Range: - Format: character

METHOD_INTO_ART:**Data file: tbIBAS****Overview**

Valid: 101624
 Type: Discrete Width: 150 Range: - Format: character

ENROL_D:**Data file: tbIBAS****Overview**

Valid: 30690 Minimum: 2003-08-05 Maximum: 2025-09-10
 Type: Discrete Width: 11 Range: - Format: character

SEX:

Data file: tbIBAS

Overview

Valid: 272513 Invalid: 0
 Type: Discrete Decimal: 0 Width: 12 Range: 1 - 2 Format: Numeric

MODE:

Data file: tbIBAS

Overview

Valid: 0 Invalid: 0
 Type: Discrete Width: 1 Range: - Format: character

NAME:

Data file: tbIBAS

Overview

Valid: 101627
 Type: Discrete Width: 150 Range: - Format: character

NAIVE_Y:

Data file: tbIBAS

Overview

Valid: 272513 Invalid: 0
 Type: Discrete Decimal: 0 Width: 12 Range: 0 - 9 Format: Numeric

PROPH_Y:

Data file: tbIBAS

Overview

Valid: 272513 Invalid: 0
 Type: Discrete Decimal: 0 Width: 12 Range: 0 - 9 Format: Numeric

RECART_Y:

Data file: tbIBAS

Overview

Valid: 272513 Invalid: 0
Type: Discrete Decimal: 0 Width: 12 Range: 0 - 1 Format: Numeric

RECART_D:

Data file: tbIBAS

Overview

Valid: 101601 Minimum: 1986-04-01 Maximum: 2025-09-11
Type: Discrete Width: 11 Range: - Format: character

AIDS_Y:

Data file: tbIBAS

Overview

Valid: 272513 Invalid: 0
Type: Discrete Decimal: 0 Width: 12 Range: 0 - 1 Format: Numeric

AIDS_D:

Data file: tbIBAS

Overview

Valid: 86147 Invalid: 0
Type: Discrete Width: 30 Range: - Format: character

HIV_POS_D:

Data file: tbIBAS

Overview

Valid: 6266 Minimum: 2002-08-05 Maximum: 2025-09-05
Type: Discrete Width: 11 Range: - Format: character

OUTCOME:

Data file: tbIBAS

Overview

Valid: 58436
Type: Discrete Width: 150 Range: - Format: character

OUTCOMEDATE:

Data file: tbIBAS

Overview

Valid: 58436 Minimum: 1998-04-06 Maximum: 2025-09-12
Type: Discrete Width: 11 Range: - Format: character

PATIENT:

Data file: tbILAB_CD4

Overview

Valid: 271453 Invalid: 0
 Type: Discrete Width: 36 Range: - Format: character

CD4_D:

Data file: tbILAB_CD4

Overview

Valid: 271453 Minimum: 1969-08-19 Maximum: 2102-03-21
 Type: Discrete Width: 11 Range: - Format: character

CD4_D_A:

Data file: tbILAB_CD4

Overview

Valid: 271453 Invalid: 0
 Type: Discrete Width: 1 Range: - Format: character

CD4_V:

Data file: tbILAB_CD4

Overview

Valid: 271453 Invalid: 0 Minimum: 0 Maximum: 54000 Mean: 493.742 Standard deviation: 327.487
 Type: Continuous Decimal: 0 Width: 10 Range: 0 - 54000 Format: Numeric

CD4_U:

Data file: tbILAB_CD4

Overview

Valid: 271453 Invalid: 0
 Type: Discrete Decimal: 0 Width: 12 Range: 1 - 2 Format: Numeric

PATIENT:

Data file: **tbILAB_RNA**

Overview

Valid: 441464 Invalid: 0
 Type: Discrete Width: 36 Range: - Format: character

RNA_D:

Data file: **tbILAB_RNA**

Overview

Valid: 441464 Minimum: 1985-09-09 Maximum: 2088-11-03
 Type: Discrete Width: 11 Range: - Format: character

RNA_D_A:

Data file: **tbILAB_RNA**

Overview

Valid: 441464 Invalid: 0
 Type: Discrete Width: 1 Range: - Format: character

RNA_V:

Data file: **tbILAB_RNA**

Overview

Valid: 441464 Invalid: 0 Minimum: 0 Maximum: 12100000 Mean: 12389.552 Standard deviation: 144925.365
 Type: Continuous Decimal: 0 Width: 12 Range: 0 - 12100000 Format: Numeric

RNA_L:

Data file: **tbILAB_RNA**

Overview

Valid: 0 Invalid: 441464
 Type: Discrete Decimal: 0 Width: 12 Range: - Format: Numeric

RNA_T:

Data file: **tbILAB_RNA**

Overview

Valid: 441464 Invalid: 0
 Type: Discrete Width: 1 Range: - Format: character

PATIENT:

Data file: tbILTFU

Overview

Valid: 272513 Invalid: 0
 Type: Discrete Width: 36 Range: - Format: character

DROP_Y:

Data file: tbILTFU

Overview

Valid: 272513 Invalid: 0
 Type: Discrete Decimal: 0 Width: 12 Range: 0 - 1 Format: Numeric

DROP_D:

Data file: tbILTFU

Overview

Valid: 27435 Invalid: 0
 Type: Discrete Width: 30 Range: - Format: character

DROP_D_A:

Data file: tbILTFU

Overview

Valid: 272513 Invalid: 0
 Type: Discrete Width: 1 Range: - Format: character

DROP_RS:

Data file: tbILTFU

Overview

Valid: 27435 Invalid: 245078
 Type: Discrete Decimal: 0 Width: 12 Range: 2 - 2 Format: Numeric

DEATH_Y:

Data file: tbILTFU

Overview

Valid: 272513 Invalid: 0
 Type: Discrete Decimal: 0 Width: 12 Range: 0 - 1 Format: Numeric

DEATH_D:

Data file: tbILTFU

Overview

Valid: 4289 Invalid: 0
Type: Discrete Width: 30 Range: - Format: character

DEATH_D_A:

Data file: tbILTFU

Overview

Valid: 272513 Invalid: 0
Type: Discrete Width: 1 Range: - Format: character

L_ALIVE_D:

Data file: tbILTFU

Overview

Valid: 101518 Minimum: 2001-01-01 Maximum: 2102-12-21
Type: Discrete Width: 11 Range: - Format: character

L_ALIVE_D_A:

Data file: tbILTFU

Overview

Valid: 272513 Invalid: 0
Type: Discrete Width: 1 Range: - Format: character

PATIENT:**Data file: tblART****Overview**

Valid: 3341840 Invalid: 0
 Type: Discrete Width: 36 Range: - Format: character

ART_SD_DMY:**Data file: tblART****Overview**

Valid: 3341840 Minimum: 1959-12-29 Maximum: 2025-09-20
 Type: Discrete Width: 11 Range: - Format: character

REGIMENDURATION:**Data file: tblART****Overview**

Valid: 3341840 Invalid: 0 Minimum: -1403 Maximum: 12 Mean: 1.626 Standard deviation: 6.751
 Type: Continuous Decimal: 0 Width: 10 Range: -1403 - 12 Format: Numeric

REGIMENCODE:**Data file: tblART****Overview**

Valid: 3341840 Invalid: 0
 Type: Discrete Width: 50 Range: - Format: character

ART_FORM:**Data file: tblART****Overview**

Valid: 3341840 Invalid: 0
 Type: Discrete Decimal: 0 Width: 12 Range: 1 - 1 Format: Numeric

ART_COMB:**Data file: tblART****Overview**

Valid: 3341840 Invalid: 0
 Type: Discrete Decimal: 0 Width: 12 Range: 9 - 9 Format: Numeric

ARTSTART_RS:

Data file: tbiART

Overview

Valid: 3341840 Invalid: 0
Type: Discrete Decimal: 0 Width: 12 Range: 99 - 99 Format: Numeric

PATIENT:

Data file: tbIVIS

Overview

Valid: 3343281 Invalid: 0
 Type: Discrete Width: 36 Range: - Format: character

CENTER:

Data file: tbIVIS

Overview

Valid: 0 Invalid: 0
 Type: Discrete Width: 1 Range: - Format: character

VIS_D:

Data file: tbIVIS

Overview

Valid: 3343281 Minimum: 1959-12-29 Maximum: 2025-09-20
 Type: Discrete Width: 11 Range: - Format: character

VIS_D_A:

Data file: tbIVIS

Overview

Valid: 3343281 Invalid: 0
 Type: Discrete Width: 1 Range: - Format: character

WEIGH:

Data file: tbIVIS

Overview

Valid: 1375 Invalid: 3341906 Minimum: 0 Maximum: 836 Mean: 40.99 Standard deviation: 47.668
 Type: Continuous Decimal: 0 Width: 10 Range: 0 - 836 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category
1001	..

HEIGH:

Data file: tbIVIS

Overview

Valid: 522 Invalid: 3342759 Minimum: 0 Maximum: 176 Mean: 0.562 Standard deviation: 9.077
 Type: Continuous Decimal: 0 Width: 10 Range: 0 - 176 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category
1001	..

CDC_STAGE:

Data file: tbIVIS

Overview

Valid: 3343281 Invalid: 0
 Type: Discrete Decimal: 0 Width: 12 Range: 9 - 9 Format: Numeric

WHO_STAGE:

Data file: tbIVIS

Overview

Valid: 3343281 Invalid: 0
 Type: Discrete Decimal: 0 Width: 12 Range: 9 - 9 Format: Numeric

SMOKING_Y:

Data file: tbIVIS

Overview

Valid: 3343281 Invalid: 0
 Type: Discrete Decimal: 0 Width: 12 Range: 9 - 9 Format: Numeric

PREG_Y:

Data file: tbIVIS

Overview

Valid: 1582223 Invalid: 1761058
 Type: Discrete Decimal: 0 Width: 12 Range: 0 - 9 Format: Numeric

NEXT_VISIT_D:

Data file: tbIVIS

Overview

Valid: 2403989 Minimum: 1934-12-05 Maximum: 2106-08-12
Type: Discrete Width: 11 Range: - Format: character

NEXT_VISIT_D_A:

Data file: tbIVIS

Overview

Valid: 3343281 Invalid: 0
Type: Discrete Width: 1 Range: - Format: character

PATIENT:**Data file: tbIREV_VITAL_STATUS****Overview**

Valid: 73042 Invalid: 0
 Type: Discrete Width: 36 Range: - Format: character

PROGRAM:**Data file: tbIREV_VITAL_STATUS****Overview**

Valid: 73042 Invalid: 0
 Type: Discrete Width: 7 Range: - Format: character

VITAL_STATUS:**Data file: tbIREV_VITAL_STATUS****Overview**

Valid: 73042 Invalid: 0
 Type: Discrete Decimal: 0 Width: 49 Range: 0 - 1 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	No death recorded in National Population Register	67283	92.1%
1	Death recorded in National Population Register	5759	7.9%

NPR_DEATH_D:**Data file: tbIREV_VITAL_STATUS****Overview**

Valid: 5759 Minimum: 2011-11-07 Maximum: 2025-08-09
 Type: Discrete Width: 11 Range: - Format: character

LINKAGE_D:**Data file: tbIREV_VITAL_STATUS****Overview**

Valid: 73042 Minimum: 2025-08-13 Maximum: 2025-08-13
 Type: Discrete Width: 11 Range: - Format: character

Download related resources

Technical documents

DDI:IeDEA_DES

Title DDI:IeDEA_DES
Author(s) Nompumelelo Mkwanazi
Date 2025-10-31
Country South Africa
Language English
Publisher(s) Nompumelelo Mkwanazi
Filename IeDEA_DES_2024-06-18.pdf

DDI:IeDEA.2004-2025

Title DDI:IeDEA.2004-2025
Author(s) Nompumelelo Mkwanazi
Date 2025-11-06
Country South Africa
Language English
Publisher(s) Nompumelelo Mkwanazi
Filename IeDEA.2004-2025.pdf
