South Africa

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South Africa - AHRI HDSS Community Viral Load

Study Documentation

April 29, 2026

Metadata Production

Metadata Producer(s)	Africa Health Research Institute (AHRI)
Identification	DDI.AHRI.HDSS.Community.Viral.Load

Table of Contents

South Africa - AHRI HDSS Community Viral Load

Overview

Identification	AHRI.HDSS.CommunityViralLoad
Version	v1.0.0 v1.0.1 - Dataset Update v1.0.2 - Dataset Update v1.0.3 - Dataset Update

Abstract
To determine the behavioural and biological pathways through which high ART coverage reduces HIV incidence at the population level. This study seeks to establish the effect of ART scale-up on population viral load and eventually HIV incidence. It will achieve this through re-analysis of dried blood spots (DBS) collected among participants participating in Africa Health Research Institute HDSS. All HIV positive DBS were tested for viral load.

Kind of Data	Community viral load
Unit of Analysis	Each record is a viral load result from a specimen or multiple records for participants participating in individual surveillance HDSS.

Scope & Coverage

Keywords	HIV Viral load; Population viral load; HIV incidence
Topics	HIV-1, HIV Incidence, Epidemics, Population Surveillance, Rural Population, HIV prevalence, South Africa, HIV Community Viral load, Population-based surveys
Time Period(s)	2024-2025
Countries	South Africa

Geographic Coverage
AHRI's HDSS Study Area, KwaZulu Natal, South Africa.

Universe
The study includes all HIV positive resident individuals aged 15 years and above from KwaZulu Natal South Africa who consented to HIV tests as part of the AHRI population-based HIV testing.

Producers & Sponsors

Primary Investigator(s)	Dickman, Gareta, Africa Health Research Institute Siyabonga Nxumalo, Africa Health Research Institute Gregory Ording-Jesperson, Africa Health Research Institute Nompumelelo Mkwanazi, Africa Health Research Institute Sweetness H Dube, Africa Health Research Institute Theresa Smit, Africa Health Research Institute Thobeka Mngomezulu, Africa Health Research Institute Till, Baernighausen, Africa Health Research Institute Frank, Tanser, Africa Health Research Institute
Other Producer(s)	Africa Health Research Institute (AHRI)
Funding Agency/ies	National Institute of Health (NIH) , Causal Pathways to population health impact of HIV antiretroviral treatment
Other Acknowledgment(s)	, Data Documentation , Africa Health Research Institute

Sampling

Sampling Procedure

All individual dried blood spots for HIV-positive individuals from the southern part of the HDSS area.

Data Collection

Data Collection Dates	start 2024-06-20 end 2025-05-21

Accessibility

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

Gareta, D., Nxumalo, S., Ording-Jesperson, G., Mkwanazi, N., Dube, S. H., Smit, T., Mngomezulu, T., Baernighausen, T., & Tanser, F. (2026). South Africa - AHRI HDSS Community Viral Load [Data set]. Africa Health Research Institute.

DOI:https://doi.org/10.23664/AHRI.HDSS.COMMUNITYVIRALLOAD

Files Description

Dataset contains 1 file(s)

CVL 01-01 AHRI.PIP.CommunityViralLoad Analytical Dataset V2.2024.V1	
# Cases	2675
# Variable(s)	12

Variables List

Dataset contains 12 variable(s)

File CVL 01-01 AHRI.PIP.CommunityViralLoad Analytical Dataset V2.2024.V1							
#	**Name**	**Label**	**Type**	**Format**	**Valid**	**Invalid**	**Question**
1	IIntID	Unique Internal Id of Individual	continuous	numeric-12.0	2675	0	-
2	Sex	Gender	discrete	numeric-12.0	2675	0	-
3	DateOfBi ..	DateOfBirth	discrete	character-11	2675	-	-
4	VisitDate	Date of Visit	discrete	character-11	2675	-	-
5	DSRound	DSRound	discrete	numeric-12.0	2675	0	-
6	Residenc ..	Location ID at time of visit	continuous	numeric-12.0	2663	12	-
7	PIPSA	HDSS area	discrete	numeric-12.0	2672	3	-
8	HIVSampl ..	HIV Sample Id	continuous	numeric-12.0	2675	0	-
9	HIVResult	HIVResult	discrete	numeric-12.0	2663	12	-
10	WeekBlock	WeekBlock	discrete	character-5	2660	0	-
11	VLResult	Viral Load Result	continuous	numeric-12.0	1154	1521	-
12	VLResult ..	VL Result Status	discrete	numeric-12.0	1521	1154	-

Variables Description

Dataset contains 12 variable(s)

File : CVL 01-01 AHRI.PIP.CommunityViralLoad Analytical Dataset V2.2024.V1

IIntID: Unique Internal Id of Individual

Information	[Type= continuous] [Format=numeric] [Range= 72-275950] [Missing=*]
Statistics [NW/ W]	[Valid=2675 /-] [Invalid=0 /-] [Mean=97033.175 /-] [StdDev=72890.99 /-]

Sex: Gender

Information	[Type= discrete] [Format=numeric] [Range= 1-2] [Missing=*]
Statistics [NW/ W]	[Valid=2675 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
1	Male	516	19.3%
2	Female	2159	80.7%

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

DateOfBirth: DateOfBirth

Information	[Type= discrete] [Format=character] [Missing=*]
Statistics [NW/ W]	[Valid=2675 /-]

VisitDate: Date of Visit

Information	[Type= discrete] [Format=character] [Missing=*]
Statistics [NW/ W]	[Valid=2675 /-]

DSRound: DSRound

Information	[Type= discrete] [Format=numeric] [Range= 121-122] [Missing=*]
Statistics [NW/ W]	[Valid=2675 /-] [Invalid=0 /-]

ResidencyBSIntId: Location ID at time of visit

Information	[Type= continuous] [Format=numeric] [Range= 21-355616] [Missing=*]
Statistics [NW/ W]	[Valid=2663 /-] [Invalid=12 /-] [Mean=29776.104 /-] [StdDev=67118.73 /-]

PIPSA: HDSS area

Information	[Type= discrete] [Format=numeric] [Range= 1-2] [Missing=*]
Statistics [NW/ W]	[Valid=2672 /-] [Invalid=3 /-]

Value	Label	Cases	Percentage
1	South	2672	100.0%
2	North	0	
Sysmiss		3	

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

HIVSampleId: HIV Sample Id

Information	[Type= continuous] [Format=numeric] [Range= 1162769-1217164] [Missing=*]
Statistics [NW/ W]	[Valid=2675 /-] [Invalid=0 /-] [Mean=1186059.976 /-] [StdDev=16209.793 /-]

HIVResult: HIVResult

Information	[Type= discrete] [Format=numeric] [Range= 1-1] [Missing=*]
Statistics [NW/ W]	[Valid=2663 /-] [Invalid=12 /-]

Value	Label	Cases	Percentage
1	Positive	2663	100.0%
Sysmiss		12	

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

File : CVL 01-01 AHRI.PIP.CommunityViralLoad Analytical Dataset V2.2024.V1

WeekBlock: WeekBlock

Information	[Type= discrete] [Format=character] [Missing=*]
Statistics [NW/ W]	[Valid=2660 /-] [Invalid=0 /-]

VLResult: Viral Load Result

Information	[Type= continuous] [Format=numeric] [Range= 1550-8203080] [Missing=*]
Statistics [NW/ W]	[Valid=1154 /-] [Invalid=1521 /-] [Mean=52582.978 /-] [StdDev=315524.307 /-]

VLResultCode: VL Result Status

Information	[Type= discrete] [Format=numeric] [Range= 1-7] [Missing=*]
Statistics [NW/ W]	[Valid=1521 /-] [Invalid=1154 /-]

Value	Label	Cases	Percentage
1	Valid result	0	
2	Below detectable limit	1521	100.0%
3	Invalid result	0	
4	Insufficient for testing	0	
5	Specimen not found	0	
6	Excluded from testing due to insufficient funding or field error	0	
7	Other	0	
Sysmiss		1154	

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.