South Africa

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Lenses for HIV testing and treatment programme success:linking population and clinical surveillance perspectives on the HIV care cascade in rural KwaZulu-Natal

Study Documentation

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Metadata Production

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Lenses for HIV testing and treatment programme success:linking population and clinical surveillance perspectives on the HIV care cascade in rural KwaZulu-Natal

Overview

Identification	AHRI.Vukuzazi.HIV.2019.V1.0
Version	V1.0

Abstract
The aim of this project is to leverage the detailed clinical, population, and laboratory data from the AHRI population cohort and new Vukuzazi study data to compare and triangulate different approaches to estimating levels of HIV testing, treatment, and viral load suppression from cross-sectional population and longitudinal clinical data sources.

The ultimate objective of the project is to develop and validate approaches to assessing HIV testing and treatment programme outcomes from clinical surveillance data in typical settings that do not have detailed population data available.

Specifically, the project will use linked population and clinical surveillance data to investigate:

· Levels of HIV testing and diagnosis, and re-testing and engagement in care.
· Retention on ART among clinical cohorts compared to cross-sectional ART coverage.
· Population wide VLS amongst persons on ART compared to levels of VLS recorded via routine clinical monitoring of viral load.

Scope & Coverage

Keywords	HIV, HIV Care cascade, ART Retention, Mathematical modelling, Viral load suppression
Time Period(s)	2018-2019
Countries	South Africa
Geographic Coverage	

Producers & Sponsors

Primary Investigator(s)	Thumbi Ndung'u, Africa Health Research Institute Mark Siedner, Africa Health Research Institute Emily Wong, Africa Health Research Institute
Other Producer(s)	Africa Health Research Institute (AHRI)
Other Acknowledgment(s)	Vukuzazi Study participants

Sampling

Sampling Procedure

Data Collection

Data Collection Dates	start 2018-05-25 end 2019-11-19

Accessibility

Access Conditions

The representative of the Receiving Organization agrees to comply with the following conditions:

1. Access to the restricted data will be limited to the Lead Researcher and other members of the research team listed in this request.
2. Copies of the restricted data or any data created on the basis of the original data will not be copied or made available to anyone other than those mentioned in this Data Access Agreement, unless formally authorized by the Data Archive.
3. The data will only be processed for the stated statistical and research purpose. They will be used for solely for reporting of aggregated information, and not for investigation of specific individuals or organizations. Data will not in any way be used for any administrative, proprietary or law enforcement purposes.
4. The Lead Researcher must state if it is their intention to match the restricted microdata with any other micro-dataset. If any matching is to take place, details must be provided of the datasets to be matched and of the reasons for the matching. Any datasets created as a result of matching will be considered to be restricted and must comply with the terms of this Data Access Agreement.
5. The Lead Researcher undertakes that no attempt will be made to identify any individual person, family, business, enterprise or organization. If such a unique disclosure is made inadvertently, no use will be made of the identity of any person or establishment discovered and full details will be reported to the Data Archive. The identification will not be revealed to any other person not included in the Data Access Agreement.
6. The Lead Researcher will implement security measures to prevent unauthorized access to licensed microdata acquired from the Data Archive. The microdata must be destroyed upon the completion of this research, unless the Data Archive obtains satisfactory guarantee that the data can be secured and provides written authorization to the Receiving Organization to retain them. Destruction of the microdata will be confirmed in writing by the Lead Researcher to the Data Archive.
7. Any books, articles, conference papers, theses, dissertations, reports, or other publications that employ data obtained from the Data Archive will cite the source of data in accordance with the citation requirement provided with the dataset.
8. An electronic copy of all reports and publications based on the requested data will be sent to the Data Archive.
9. The original collector of the data, the Data Archive, and the relevant funding agencies bear no responsibility for use of the data or for interpretations or inferences based upon such uses.
10. This agreement will come into force on the date that approval is given for access to the restricted dataset and remain in force until the completion date of the project or an earlier date if the project is completed ahead of time.
11. If there are any changes to the project specification, security arrangements, personnel or organization detailed in this application form, it is the responsibility of the Lead Researcher to seek the agreement of the Data Archive to these changes. Where there is a change to the employer organization of the Lead Researcher this will involve a new application being made and termination of the original project.
12. Breaches of the agreement will be taken seriously and the Data Archive will take action against those responsible for the lapse if willful or accidental. Failure to comply with the directions of the Data Archive will be deemed to be a major breach of the agreement and may involve recourse to legal proceedings. The Data Archive will maintain and share with partner data archives a register of those individuals and organizations which are responsible for breaching the terms of the Data Access Agreement and will impose sanctions on release of future data to these parties.

Citation Requirements

Ndung'u, T., Siedner, M., & Wong, E. (2019). Lenses for HIV testing and treatment programme success:linking population and clinical surveillance perspectives on the HIV care cascade in rural KwaZulu-Natal [Data set]. Africa Health Research Institute (AHRI). https://doi.org/10.23664/AHRI.VUKUZAZI.HIV.2019.V1.0

Files Description

Dataset contains 1 file(s)

AHRI.Vukuzazi.HIV.2019.V1.0	
# Cases	37358
# Variable(s)	23

Variables List

Dataset contains 23 variable(s)

File AHRI.Vukuzazi.HIV.2019.V1.0

#	Name	Label	Type	Format	Valid	Invalid	Question
1	VukuIntId	Vukuzazi Individual Id	continuous	numeric-12.0	37358	0	-
2	PIPIIntId	PIP Individual Id	continuous	numeric-12.0	37358	0	-
3	DateOfBi ..	Individual's Date of Birth	discrete	character-11	37358	-	-
4	Sex	Gender	discrete	numeric-12.0	37358	0	-
5	NearestC ..	Catchment area clinic	discrete	numeric-12.0	37358	0	-
6	WeekBlock	WeekBlock	discrete	character-5	37358	0	-
7	BSIntId	Bounded Structure Id	continuous	numeric-12.0	37358	0	-
8	VisitDate	Vukuzazi Camp Visit Date	continuous	numeric-11.0	16973	20385	-
9	Received ..	Have you ever received a test result for HIV?	discrete	numeric-12.0	16972	20386	-
10	HadPosHI ..	Have you ever had a positive HIV test result?	discrete	numeric-12.0	14249	23109	-
11	HIVPosRe ..	When was your first positive test result?	discrete	numeric-12.0	0	37358	-
12	Currentl ..	Are you currently receiving ART?	discrete	numeric-12.0	4797	32561	-
13	ARTIniti ..	When did you first start ART?	discrete	numeric-12.0	0	37358	-
14	ARTDefault	Have you ever stopped/ defaulted from ART treatment? (Defaulted explained as not t	discrete	numeric-12.0	4797	32561	-
15	ARTDefau ..	HART default times	discrete	numeric-12.0	112	37246	-
16	UrineRef ..	Current pregnancy status	discrete	numeric-12.0	7224	30134	-
17	CD4Lymph ..	CD4 Lymphocytes %	continuous	numeric-10.0	5628	31730	-
18	CD4LymphAb	CD4 Lymphocytes Abs	continuous	numeric-10.0	5637	31721	-
19	CD4CD8Ra ..	CD4/CD8 Ratio	continuous	numeric-10.0	5597	31761	-
20	CD8Lymph ..	CD8 Lymphocytes Percent	continuous	numeric-10.0	5638	31720	-
21	CD8LymphAb	CD8 Lymphocytes Abs	continuous	numeric-10.0	5638	31720	-
22	HIVElisa	HIV Elisa Result	discrete	numeric-10.0	16821	20537	-
23	VL	HIV Viral Load Result	discrete	numeric-10.0	5718	31640	-

Variables Description

Dataset contains 23 variable(s)

File : AHRI.Vukuzazi.HIV.2019.V1.0

VukuIntId: Vukuzazi Individual Id

Information	[Type= continuous] [Format=numeric] [Range= 1-37359] [Missing=*]
Statistics [NW/ W]	[Valid=37358 /-] [Invalid=0 /-] [Mean=18679.5 /-] [StdDev=10784.47 /-]

PIPIIntId: PIP Individual Id

Information	[Type= continuous] [Format=numeric] [Range= 17-242166] [Missing=*]
Statistics [NW/ W]	[Valid=37358 /-] [Invalid=0 /-] [Mean=81126.323 /-] [StdDev=55002.487 /-]

DateOfBirth: Individual's Date of Birth

Information	[Type= discrete] [Format=character] [Missing=*]
Statistics [NW/ W]	[Valid=37358 /-]

Sex: Gender

Information	[Type= discrete] [Format=numeric] [Range= 1-9] [Missing=*]
Statistics [NW/ W]	[Valid=37358 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
1	Male	15621	41.8%
2	Female	21737	58.2%
9	Unknown	0	

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.

NearestClinic: Catchment area clinic

Information	[Type= discrete] [Format=numeric] [Range= 1-11] [Missing=*]
Statistics [NW/ W]	[Valid=37358 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
1	ESIYEMBENI	1844	4.9%
2	GUNJANENI	3212	8.6%
3	HLUHLUWE	0	
4	KWAMSANE	13548	36.3%
5	MACHIBINI	2563	6.9%
6	MADWALENI	91	0.2%
7	MPUKUNYONI	7968	21.3%
8	MTUBATUBA	1008	2.7%
9	NKUNDUSI	0	
10	NTONDWENI	361	1.0%
11	SOMKHELE	6763	18.1%

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.

WeekBlock: WeekBlock

Information	[Type= discrete] [Format=character] [Missing=*]
Statistics [NW/ W]	[Valid=37358 /-] [Invalid=0 /-]

BSIntId: Bounded Structure Id

Information	[Type= continuous] [Format=numeric] [Range= 11-90943] [Missing=*]
Statistics [NW/ W]	[Valid=37358 /-] [Invalid=0 /-] [Mean=10351.552 /-] [StdDev=12686.971 /-]

VisitDate: Vukuzazi Camp Visit Date

Information	[Type= continuous] [Format=numeric] [Range= 1842865237000-1889793720000] [Missing=*/1316134913]

File : AHRI.Vukuzazi.HIV.2019.V1.0

VisitDate: Vukuzazi Camp Visit Date

Statistics [NW/ W]	[Valid=16973 /-] [Invalid=20385 /-] [Mean=1870394428413.6 /-] [StdDev=10649253841.002 /-]

Value	Label	Cases	Percentage
10000000000001	..		

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.

ReceivedHIVTestResult: Have you ever received a test result for HIV?

Information	[Type= discrete] [Format=numeric] [Range= 1-3] [Missing=*]
Statistics [NW/ W]	[Valid=16972 /-] [Invalid=20386 /-]

Value	Label	Cases	Percentage
1	Yes	14249	84.0%
2	No	2559	15.1%
3	NA	164	1.0%
Sysmiss		20386	

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.

HadPosHIVResult: Have you ever had a positive HIV test result?

Information	[Type= discrete] [Format=numeric] [Range= 1-3] [Missing=*]
Statistics [NW/ W]	[Valid=14249 /-] [Invalid=23109 /-]

Value	Label	Cases	Percentage
1	Yes	4960	34.8%
2	No	9228	64.8%
3	NA	61	0.4%
Sysmiss		23109	

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.

HIVPosResult1stDate: When was your first positive test result?

Information	[Type= discrete] [Format=numeric] [Range= 1-3] [Missing=*]
Statistics [NW/ W]	[Valid=0 /-] [Invalid=37358 /-]

Value	Label	Cases	Percentage
1	Yes	0	
2	No	0	
3	NA	0	
Sysmiss		37358	

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.

CurrentlyOnART: Are you currently receiving ART?

Information	[Type= discrete] [Format=numeric] [Range= 1-3] [Missing=*]
Statistics [NW/ W]	[Valid=4797 /-] [Invalid=32561 /-]

Value	Label	Cases	Percentage
1	Yes	4729	98.6%
2	No	68	1.4%
3	NA	0	
Sysmiss		32561	

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 : AHRI.Vukuzazi.HIV.2019.V1.0

ARTInitiationDate: When did you first start ART?

Information	[Type= discrete] [Format=numeric] [Missing=*]
Statistics [NW/ W]	[Valid=0 /-] [Invalid=37358 /-]

Value	Label	Cases	Percentage
Sysmiss		37358	

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.

ARTDefault: Have you ever stopped/defaulted from ART treatment? (Defaulted explained as not t

Information	[Type= discrete] [Format=numeric] [Range= 1-3] [Missing=*]
Statistics [NW/ W]	[Valid=4797 /-] [Invalid=32561 /-]

Value	Label	Cases	Percentage
1	Yes	114	2.4%
2	No	4662	97.2%
3	NA	21	0.4%
Sysmiss		32561	

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.

ARTDefaultTimes: HART default times

Information	[Type= discrete] [Format=numeric] [Range= 1-12] [Missing=*]
Statistics [NW/ W]	[Valid=112 /-] [Invalid=37246 /-]

Value	Label	Cases	Percentage
1		87	77.7%
2		10	8.9%
3		9	8.0%
5		1	0.9%
6		3	2.7%
10		1	0.9%
12		1	0.9%
Sysmiss		37246	

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.

UrineRefusal: Current pregnancy status

Information	[Type= discrete] [Format=numeric] [Range= 1-3] [Missing=*]
Statistics [NW/ W]	[Valid=7224 /-] [Invalid=30134 /-]

Value	Label	Cases	Percentage
1	Yes	14	0.2%
2	No	6933	96.0%
3	Visibly Pregnant	277	3.8%
Sysmiss		30134	

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.

CD4LymphPercent: CD4 Lymphocytes %

Information	[Type= continuous] [Format=numeric] [Range= 2-72] [Missing=*/101]
Statistics [NW/ W]	[Valid=5628 /-] [Invalid=31730 /-] [Mean=30.061 /-] [StdDev=10.077 /-]

Value	Label	Cases	Percentage
101	..		

File : AHRI.Vukuzazi.HIV.2019.V1.0

CD4LymphPercent: CD4 Lymphocytes %

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.

CD4LymphAb: CD4 Lymphocytes Abs

Information	[Type= continuous] [Format=numeric] [Range= 3-4084] [Missing=*/10001]
Statistics [NW/ W]	[Valid=5637 /-] [Invalid=31721 /-] [Mean=715.336 /-] [StdDev=341.233 /-]

Value	Label	Cases	Percentage
10001	..		

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.

CD4CD8Ratio: CD4/CD8 Ratio

Information	[Type= continuous] [Format=numeric] [Range= 0.01-4.51] [Missing=*/11]
Statistics [NW/ W]	[Valid=5597 /-] [Invalid=31761 /-] [Mean=0.825 /-] [StdDev=0.484 /-]

Value	Label	Cases	Percentage
11	..		

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.

CD8LymphPercent: CD8 Lymphocytes Percent

Information	[Type= continuous] [Format=numeric] [Range= 11-90] [Missing=*/101]
Statistics [NW/ W]	[Valid=5638 /-] [Invalid=31720 /-] [Mean=42.631 /-] [StdDev=12.545 /-]

Value	Label	Cases	Percentage
101	..		

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.

CD8LymphAb: CD8 Lymphocytes Abs

Information	[Type= continuous] [Format=numeric] [Range= 140-5205] [Missing=*/10001]
Statistics [NW/ W]	[Valid=5638 /-] [Invalid=31720 /-] [Mean=1019.275 /-] [StdDev=504.36 /-]

Value	Label	Cases	Percentage
10001	..		

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.

HIVElisa: HIV Elisa Result

Information	[Type= discrete] [Format=numeric] [Range= 1-3] [Missing=*/11]
Statistics [NW/ W]	[Valid=16821 /-] [Invalid=20537 /-]

Value	Label	Cases	Percentage
1	Positive	5725	34.0%
2	Negative	11094	66.0%
3		2	0.0%
11	..	0	
Sysmiss		20537	

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.

VL: HIV Viral Load Result

Information	[Type= discrete] [Format=numeric] [Range= 1-10000001] [Missing=*/100000001]
Statistics [NW/ W]	[Valid=5718 /-] [Invalid=31640 /-]

Value	Label	Cases	Percentage
1	< 40		

File : AHRI.Vukuzazi.HIV.2019.V1.0

VL: HIV Viral Load Result

Value	Label	Cases	Percentage
2	NOT DETECTED		
100000001	..		

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.