

South Africa

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AHRI:Sesikhona! (we are here) wheel of fortune

Study Documentation

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Metadata Production

Metadata Producer(s)	Africa Health Research Institute (AHRI)
Identification	AHRI.Sesikhona.Wheel.of.fortune

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Overview	
Identification	AHRI.Sesikhona.Wheel.of.fortune
Version	v1.0.0
Abstract The Sesikhona study is the first of its kind study using smartphone-based GPS technology to record ultra-high resolution mobility patterns of over 200 young adults aged 20-30 years in rural KwaZulu Natal. The study seeks to identify distinct movement typologies within this highly mobile, HIV hyper-endemic population and to quantify travel in and out of known high-risk locations, with the long-term goal of developing a location-intelligent smartphone intervention that delivers real-time, precision messaging to individuals at heightened risk of HIV acquisition, transmission or treatment interruption. Conducted in three phases between 2021 and 2025, the study used the Avicenna Research Platform to collect GPS and survey data. Between 2023 and 2025, consenting individuals played bi- daily, weekly and monthly wheel of fortune activities to improve user engagement with the platform and data collection	
Kind of Data	Survey data
Unit of Analysis	Young adults aged 20-30 years old

Scope & Coverage	
Keywords	Human mobility, HIV, GPS technology, digital technology, wheel of fortune
Topics	GPS technology, smartphone-based GPS, human mobility, young adults, HIV, mobile health, digital technology, sexual health, wheel of fortune
Time Period(s)	2023-2025
Countries	South Africa
Geographic Coverage Residents from uMkhanyakude in KwaZulu Natal but move anywhere in South Africa	
Universe A random sample of adults aged 20-30 years old who were resident in Southern PIPSA, participated in the 2019 HIV surveillance and consented to participate in Sesikhona study and opted in for the sexual behavior surveys	

Producers & Sponsors	
Primary Investigator(s)	Prof. Frank Tanser(Principal Investigator), Africa Health Research Institute, KwaZulu Natal, South Africa / South African Centre for Epidemiological Modelling and Analysis, School for Data Science and Computational Thinking, Stellenbosch University, Stellenbosch, South Africa Prof Adrian Dobra, University of Washington, Washington, United States Prof Till Barnighausen, Africa Health Research Institute/Medical Faculty and University Hospital, Heidelberg University, Heidelberg Institute of Global Health, Heidelberg, Germany
Other Producer(s)	Africa Health Research Institute (AHRI)
Funding Agency/ies	National Institute of Health (NIH) , Funder German Science Foundation (DFG) , Funder Academy of Medical Sciences Newton Fund (NAF) , Funder

Sampling
Sampling Procedure

Participants were randomly selected from the 2019 AHRI HIV surveillance program if they were aged 20-30 years old and had participated in the HIV survey in 2019 and were resident members in the southern PIP and owned a smartphone that supported the study app.

Data Collection

Data Collection Dates	start 2023-11-01 end 2025-06-30
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Data Processing & Appraisal

Data Editing

Sexual behavior survey responses from Sesikhona participants via the Avicenna app

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

Tanse, F., Dobra, A., & Barnighausen, T. (2026). AHRI:Sesikhona! (we are here) wheel of fortune [Data set]. Africa Health Research Institute.

DOI:<https://doi.org/10.23664/AHRI.SESIKHONA.WHEEL.OF.FORTUNE>

Files Description

Dataset contains 3 file(s)

AHRI.Sesikhona.Monthly.WheelOfFortune.2026.v1.0	
# Cases	1594
# Variable(s)	5

AHRI.Sesikhona.Weekly.WheelOfFortune.2026.v1.0	
# Cases	6943
# Variable(s)	5

AHRI.Sesikhona.Daily.WheelOfFortune.2026.v1.0	
# Cases	45145
# Variable(s)	5

Variables List

Dataset contains 15 variable(s)

File AHRI.Sesikhona.Monthly.WheelOfFortune.2026.v1.0							
#	Name	Label	Type	Format	Valid	Invalid	Question
1	pid	Participant ID	continuous	numeric-12.0	1594	0	-
2	sched_time	Scheduled Time	discrete	character-25	1594	0	-
3	prize	Prize	discrete	character-25	162	0	-
4	rec_time	Record Time	discrete	character-32	1334	0	-
5	status	Status	discrete	numeric-12.0	1594	0	-

File AHRI.Sesikhona.Weekly.WheelOfFortune.2026.v1.0							
#	Name	Label	Type	Format	Valid	Invalid	Question
1	pid	Participant ID	continuous	numeric-12.0	6943	0	-
2	sched_time	Scheduled Time	discrete	character-25	6943	0	-
3	prize	Prize	discrete	character-25	777	0	-
4	rec_time	Record Time	discrete	character-32	5915	0	-
5	status	Status	discrete	numeric-12.0	6943	0	-

File AHRI.Sesikhona.Daily.WheelOfFortune.2026.v1.0							
#	Name	Label	Type	Format	Valid	Invalid	Question
1	pid	Participant ID	continuous	numeric-12.0	45145	0	-
2	sched_time	Scheduled Time	discrete	character-25	45145	0	-
3	prize	Prize	discrete	character-19	5939	0	-
4	rec_time	Record Time	discrete	character-32	41143	0	-
5	status	Status	discrete	numeric-12.0	45145	0	-

Variables Description

Dataset contains 15 variable(s)

File : AHRI.Sesikhona.Monthly.WheelOfFortune.2026.v1.0

pid: Participant ID

Information [Type= continuous] [Format=numeric] [Range= 39636-95065] [Missing=*]

Statistics [NW/ W] [Valid=1594 /-] [Invalid=0 /-] [Mean=52244.267 /-] [StdDev=11723.138 /-]

sched_time: Scheduled Time

Information [Type= discrete] [Format=character] [Missing=*]

Statistics [NW/ W] [Valid=1594 /-] [Invalid=0 /-]

prize: Prize

Information [Type= discrete] [Format=character] [Missing=*]

Statistics [NW/ W] [Valid=162 /-] [Invalid=0 /-]

rec_time: Record Time

Information [Type= discrete] [Format=character] [Missing=*]

Statistics [NW/ W] [Valid=1334 /-] [Invalid=0 /-]

status: Status

Information [Type= discrete] [Format=numeric] [Range= 0-6] [Missing=*]

Statistics [NW/ W] [Valid=1594 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	Unknown	26	1.6%
1	Completed	872	54.7%
2	Canceled	0	
3	Expired	696	43.7%
4	Blocked	0	
5	Invalid Criteria	0	
6	In progress	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.

File : AHRI.Sesikhona.Weekly.WheelOfFortune.2026.v1.0

pid: Participant ID

Information [Type= continuous] [Format=numeric] [Range= 39636-95065] [Missing=*]

Statistics [NW/ W] [Valid=6943 /-] [Invalid=0 /-] [Mean=52162.443 /-] [StdDev=11515.006 /-]

sched_time: Scheduled Time

Information [Type= discrete] [Format=character] [Missing=*]

Statistics [NW/ W] [Valid=6943 /-] [Invalid=0 /-]

prize: Prize

Information [Type= discrete] [Format=character] [Missing=*]

Statistics [NW/ W] [Valid=777 /-] [Invalid=0 /-]

rec_time: Record Time

Information [Type= discrete] [Format=character] [Missing=*]

Statistics [NW/ W] [Valid=5915 /-] [Invalid=0 /-]

status: Status

Information [Type= discrete] [Format=numeric] [Range= 0-6] [Missing=*]

Statistics [NW/ W] [Valid=6943 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	Unknown	102	1.5%
1	Completed	3921	56.5%
2	Canceled	0	
3	Expired	2919	42.0%
4	Blocked	1	0.0%
5	Invalid Criteria	0	
6	In progress	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.

File : AHRI.Sesikhona.Daily.WheelOfFortune.2026.v1.0

pid: Participant ID

Information [Type= continuous] [Format=numeric] [Range= 39636-95065] [Missing=*]

Statistics [NW/ W] [Valid=45145 /-] [Invalid=0 /-] [Mean=52161.307 /-] [StdDev=11424.962 /-]

sched_time: Scheduled Time

Information [Type= discrete] [Format=character] [Missing=*]

Statistics [NW/ W] [Valid=45145 /-] [Invalid=0 /-]

prize: Prize

Information [Type= discrete] [Format=character] [Missing=*]

Statistics [NW/ W] [Valid=5939 /-] [Invalid=0 /-]

rec_time: Record Time

Information [Type= discrete] [Format=character] [Missing=*]

Statistics [NW/ W] [Valid=41143 /-] [Invalid=0 /-]

status: Status

Information [Type= discrete] [Format=numeric] [Range= 0-6] [Missing=*]

Statistics [NW/ W] [Valid=45145 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
0	Unknown	236	0.5%
1	Completed	26355	58.4%
2	Canceled	0	
3	Expired	18533	41.1%
4	Blocked	21	0.0%
5	Invalid Criteria	0	
6	In progress	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.