

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

Nompumelelo Mkwazi

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Identification

SURVEY ID NUMBER

AHRI.Sesikhona.Wheel.of.fortune

TITLE

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

COUNTRY

Name	Country code
South Africa	ZA

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

Version

VERSION DESCRIPTION

v1.0.0

Scope

TOPICS

Topic	Vocabulary	URI
GPS technology, smartphone-based GPS, human mobility, young adults, HIV, mobile health, digital technology, sexual health, wheel of fortune	Africa Health Research Institute	www.ahri.org

KEYWORDS

Keyword	Vocabulary	URI
Human mobility, HIV, GPS technology, digital technology, wheel of fortune	Africa Health Research Institute	www.ahri.org

Coverage

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 and sponsors

PRIMARY INVESTIGATORS

Name	Affiliation
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

PRODUCERS

Name	Abbreviation
Africa Health Research Institute	AHRI

FUNDING AGENCY/SPONSOR

Name	Abbreviation	Role
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

DATES OF DATA COLLECTION

Start	End
2023-11-01	2025-06-30

Data Processing

DATA EDITING

Sexual behavior survey responses from Sesikhona participants via the Avicenna app

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

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>

Metadata production

DDI DOCUMENT ID

AHRI.Sesikhona.Wheel.of.fortune

PRODUCERS

Name	Abbreviation
Africa Health Research Institute	AHRI

Data Dictionary

Data file	Cases	Variables
AHRI.Sesikhona.Monthly.WheelOfFortune.2026.v1.0	1594	5
AHRI.Sesikhona.Weekly.WheelOfFortune.2026.v1.0	6943	5
AHRI.Sesikhona.Daily.WheelOfFortune.2026.v1.0	45145	5

Data file: AHRI.Sesikhona.Monthly.WheelOfFortune.2026.v1.0

Cases: 1594

Variables: 5

Variables

ID	Name	Label	Question
V16	pid	Participant ID	
V17	sched_time	Scheduled Time	
V18	prize	Prize	
V19	rec_time	Record Time	
V20	status	Status	

Total: 5

Data file: AHRI.Sesikhona.Weekly.WheelOfFortune.2026.v1.0

Cases: 6943

Variables: 5

Variables

ID	Name	Label	Question
V21	pid	Participant ID	
V22	sched_time	Scheduled Time	
V23	prize	Prize	
V24	rec_time	Record Time	
V25	status	Status	

Total: 5

Data file: AHRI.Sesikhona.Daily.WheelOfFortune.2026.v1.0

Cases: 45145

Variables: 5

Variables

ID	Name	Label	Question
V26	pid	Participant ID	
V27	sched_time	Scheduled Time	
V28	prize	Prize	
V29	rec_time	Record Time	
V30	status	Status	

Total: 5

PID: Participant ID**Data file: AHRI.Sesikhona.Monthly.WheelOfFortune.2026.v1.0****Overview**

Valid: 1594 Invalid: 0 Minimum: 39636 Maximum: 95065 Mean: 52244.267 Standard deviation: 11723.138

Type: Continuous Decimal: 0 Width: 12 Range: 39636 - 95065 Format: Numeric

SCHED_TIME: Scheduled Time**Data file: AHRI.Sesikhona.Monthly.WheelOfFortune.2026.v1.0****Overview**

Valid: 1594 Invalid: 0

Type: Discrete Width: 25 Range: - Format: character

PRIZE: Prize**Data file: AHRI.Sesikhona.Monthly.WheelOfFortune.2026.v1.0****Overview**

Valid: 162 Invalid: 0

Type: Discrete Width: 25 Range: - Format: character

REC_TIME: Record Time**Data file: AHRI.Sesikhona.Monthly.WheelOfFortune.2026.v1.0****Overview**

Valid: 1334 Invalid: 0

Type: Discrete Width: 32 Range: - Format: character

STATUS: Status**Data file: AHRI.Sesikhona.Monthly.WheelOfFortune.2026.v1.0****Overview**

Valid: 1594 Invalid: 0

Type: Discrete Decimal: 0 Width: 12 Range: 0 - 6 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Unknown	26	1.6%
1	Completed	872	54.7%

2	Canceled	0	0%
3	Expired	696	43.7%
4	Blocked	0	0%
5	Invalid Criteria	0	0%
6	In progress	0	0%

PID: Participant ID**Data file: AHRI.Sesikhona.Weekly.WheelOfFortune.2026.v1.0****Overview**

Valid: 6943 Invalid: 0 Minimum: 39636 Maximum: 95065 Mean: 52162.443 Standard deviation: 11515.006

Type: Continuous Decimal: 0 Width: 12 Range: 39636 - 95065 Format: Numeric

SCHED_TIME: Scheduled Time**Data file: AHRI.Sesikhona.Weekly.WheelOfFortune.2026.v1.0****Overview**

Valid: 6943 Invalid: 0

Type: Discrete Width: 25 Range: - Format: character

PRIZE: Prize**Data file: AHRI.Sesikhona.Weekly.WheelOfFortune.2026.v1.0****Overview**

Valid: 777 Invalid: 0

Type: Discrete Width: 25 Range: - Format: character

REC_TIME: Record Time**Data file: AHRI.Sesikhona.Weekly.WheelOfFortune.2026.v1.0****Overview**

Valid: 5915 Invalid: 0

Type: Discrete Width: 32 Range: - Format: character

STATUS: Status**Data file: AHRI.Sesikhona.Weekly.WheelOfFortune.2026.v1.0****Overview**

Valid: 6943 Invalid: 0

Type: Discrete Decimal: 0 Width: 12 Range: 0 - 6 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Unknown	102	1.5%
1	Completed	3921	56.5%

2	Canceled	0	0%
3	Expired	2919	42%
4	Blocked	1	0%
5	Invalid Criteria	0	0%
6	In progress	0	0%

PID: Participant ID

Data file: AHRI.Sesikhona.Daily.WheelOfFortune.2026.v1.0

Overview

Valid: 45145 Invalid: 0 Minimum: 39636 Maximum: 95065 Mean: 52161.307 Standard deviation: 11424.962

Type: Continuous Decimal: 0 Width: 12 Range: 39636 - 95065 Format: Numeric

SCHED_TIME: Scheduled Time

Data file: AHRI.Sesikhona.Daily.WheelOfFortune.2026.v1.0

Overview

Valid: 45145 Invalid: 0

Type: Discrete Width: 25 Range: - Format: character

PRIZE: Prize

Data file: AHRI.Sesikhona.Daily.WheelOfFortune.2026.v1.0

Overview

Valid: 5939 Invalid: 0

Type: Discrete Width: 19 Range: - Format: character

REC_TIME: Record Time

Data file: AHRI.Sesikhona.Daily.WheelOfFortune.2026.v1.0

Overview

Valid: 41143 Invalid: 0

Type: Discrete Width: 32 Range: - Format: character

STATUS: Status

Data file: AHRI.Sesikhona.Daily.WheelOfFortune.2026.v1.0

Overview

Valid: 45145 Invalid: 0

Type: Discrete Decimal: 0 Width: 12 Range: 0 - 6 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Unknown	236	0.5%
1	Completed	26355	58.4%

2	Canceled	0	0%
3	Expired	18533	41.1%
4	Blocked	21	0%
5	Invalid Criteria	0	0%
6	In progress	0	0%

Download related resources

Technical documents

DDI:AHRI.Sesikhona.Wheel of fortune

Title	DDI:AHRI.Sesikhona.Wheel of fortune
Author(s)	Nompumelelo Mkwanazi
Date	2026-03-18
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