

South Africa - AHRI.COVID-19 vaccine uptake, confidence and hesitancy in rural KwaZulu-Natal, South Africa between April 2021 and April 2022: a subset of the individual population-wide surveillance system annual interview

Sweetness H Dube

Report generated on: June 1, 2023

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

Identification

SURVEY ID NUMBER

AHRI.SAPRIN.COVID-19.Vaccine.Hesitancy.Dataset

TITLE

AHRI.COVID-19 vaccine uptake, confidence and hesitancy in rural KwaZulu-Natal, South Africa between April 2021 and April 2022:a subset of the individual population-wide surveillance system annual interview

COUNTRY

Name	Country code
South Africa	ZA

ABSTRACT

This dataset is a subset of the wider population-based Covid-19 surveillance run at the Africa Health Research Institute from 2020 onwards. The dataset covers one complete year of data collection, such that all residents had the opportunity to participate. The dataset specifically provides all observations and variables needed to replicate the analyses described in the journal article “COVID-19 vaccine uptake, confidence and hesitancy in rural KwaZulu-Natal, South Africa between April 2021 and April 2022: a continuous cross-sectional surveillance study” published in PLOS Global Public Health in 2023. The dataset includes variable on Covid vaccine uptake and willingness to take a hypothetical vaccine offer on the day of interview, as well as variables measuring four groups of potential predictors of these vaccine outcomes: demographics (age, sex), pre-existing conditions (information sources, government trust, education, urbanicity), contextual factors (impact of Covid on household economics and community wellbeing, Covid-related stigma, household age composition) and cues to action (recent case counts in KwaZulu-Natal, concern about impact if infected with Covid, knowledge of others with past Covid infection, household vaccination status, depression/anxiety) and interview date.

KIND OF DATA

Survey data

UNIT OF ANALYSIS

Individual

Version

VERSION DESCRIPTION

v1.0.0

Scope

TOPICS

Topic	Vocabulary	URI
COVID-19; Vaccination; Public Health Surveillance; Epidemiology; South Africa	Africa Health Research Institute	www.ahri.org

KEYWORDS

Keyword	Vocabulary	URI
Covid-19; Surveillance; South Africa; Health and Demographic Surveillance System; Behaviour; Attitudes	Africa Health Research Institute	www.ahri.org

Coverage

GEOGRAPHIC COVERAGE

South Africa - AHRI.COVID-19 vaccine uptake, confidence and hesitancy in rural KwaZulu-Natal, South Africa between April 2021 and April 2022: a subset of the individual population-wide surveillance system annual interview
AHRI demographic surveillance area, uMkhanyakude district in northern KwaZulu-Natal

UNIVERSE

All individuals aged 18 and over resident within the areas of the Africa Health Research Institute Population Intervention Programme

Producers and sponsors

PRIMARY INVESTIGATORS

Name	Affiliation
Herbst, Kobus	SAPRIN/AHRI
Siedner, Mark	AHRI/MGH
Harling, Guy	AHRI/UCL

PRODUCERS

Name
Africa Health Research Institute

FUNDING AGENCY/SPONSOR

Name	Abbreviation	Role
Wellcome Trust	WT	Core funding
SAPRIN	SAPRIN	Surveillance funding

OTHER IDENTIFICATIONS/ACKNOWLEDGMENTS

Name	Affiliation	Role
Tinofa Mutevedzi	SAPRIN	
Thobeka Mngomezulu	AHRI	PIP Coordinator
Nomathamsanqa Majozi	AHRI	Head of Public Engagement
Siyabonga Nxumalo	AHRI	SAPRIN Research Data Manager
Njabulo Dayi	AHRI	Research Data Manager
Dickman Gareta	AHRI	Head of Research Data Management
Jaco Dreyer	AHRI	Senior Research Data Manager
Eugene Ehlers	AHRI	Senior Software Developer

Sampling

SAMPLING PROCEDURE

All adult residents in the geographic area were eligible via an individual face-to-face interview. Multiple attempts were made to reach each individual if necessary. The final sample reflects all those who consented to and completed an interview.

Data Collection

DATES OF DATA COLLECTION

Start	End
2021-04-20	2022-04-20

Data Processing

DATA EDITING

Pentaho Data Integration was used to extract the datasets. NESSTAR Publisher was used to document the datasets.

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.

Metadata production

DDI DOCUMENT ID

DDI.AHRI.SAPRIN.COVID-19.Vaccine.Hesitancy.Dataset

PRODUCERS

Name	Abbreviation
Africa Health Research Institute	AHRI

Data Dictionary

Data file	Cases	Variables
covid_vax_plos_minimum_dataset	15709	27

Data file: covid_vax_plos_minimum_dataset

Cases: 15709

Variables: 27

Variables

ID	Name	Label	Question
V466	IntId	Unique or Internal ID of Individual	
V467	HHIntId	Household ID	
V468	InterviewDate	Interview Date	
V469	Sex	Sex	
V470	agegroup	Age of respondent (4 levels)	
V471	InterviewMonth	Month of interview	
V472	covax_willing	Covid vaccine uptake or willingness to take (5 levels)	
V473	info_tradition	Information from traditional sources	
V474	info_personal	Information from personal network sources	
V475	info_healthcare	Information from healthcare sources	
V476	info_community	Information from community sources	
V477	gov_mistrust_std	Mistrust in government - per standard deviation	
V478	educ_attain_cat	Highest educational attainment	
V479	HH_older	Has household member aged 60 or older	
V480	IsUrbanOrRural	Urbanicity of household	
V481	subUnits_num	Isigodi of residence	
V482	phq4_cats	PHQ-4 categories	
V483	pandemic_change	Change in community wellbeing since March 2020	
V484	econ_stability	Change in economic stability during Covid	
V485	kzn_7day_incid_1000	Past 7-day KZN case count per 1000 population	
V486	exposure_concern	Future COVID infection concern level	
V487	covid_knowperson	Knows someone who has had COVID	
V488	stigma_stereotype_std	Covid stereotype stigma score, z-scores	
V489	stigma_anticipate_std	Covid anticipated stigma score, z-scores	
V490	cumul_covax_bin	Any other household members vaccinated up to today	
V491	covax_anyneg	Binary outcome, any negative response	
V492	covax_negative	Binary outcome, definite negative response	

Total: 27

IINTID: Unique or Internal ID of Individual

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 15709 Invalid: 0 Minimum: 17 Maximum: 258195 Mean: 77973.106 Standard deviation: 56476.976
Type: Continuous Decimal: 0 Width: 12 Range: 17 - 258195 Format: Numeric

HHINTID: Household ID

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 15369 Invalid: 340 Minimum: 11 Maximum: 41783 Mean: 12566.992 Standard deviation: 10594.969
Type: Continuous Decimal: 0 Width: 12 Range: 11 - 41783 Format: Numeric

INTERVIEWDATE: Interview Date

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 15709 Minimum: 2021-04-20 Maximum: 2022-04-20
Type: Discrete Width: 11 Range: - Format: character

SEX: Sex

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 15709 Invalid: 0
Type: Discrete Decimal: 0 Width: 12 Range: 1 - 2147483642 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
1	Male	5367	34.2%
2	Female	10342	65.8%
2147483642	Unknown	0	0%

AGEGROUP: Age of respondent (4 levels)

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 15709 Invalid: 0
Type: Discrete Decimal: 0 Width: 9 Range: 1 - 4 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
1	18-34	6394	40.7%
2	35-49	3769	24%
3	50-59	2078	13.2%
4	60+	3468	22.1%

INTERVIEWMONTH: Month of interview

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 15709 Invalid: 0
Type: Discrete Decimal: 0 Width: 9 Range: 4 - 16 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
4	Apr 2021	449	2.9%
5	May 2021	1539	9.8%
6	Jun 2021	773	4.9%
7	Jul 2021	0	0%
8	Aug 2021	587	3.7%
9	Sep 2021	1107	7%
10	Oct 2021	2159	13.7%
11	Nov 2021	2028	12.9%
12	Dec 2021	718	4.6%
13	Jan 2022	1137	7.2%
14	Feb 2022	1859	11.8%
15	Mar 2022	2704	17.2%
16	Apr 2022	649	4.1%

COVAX_WILLING: Covid vaccine uptake or willingness to take (5 levels)

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 15709 Invalid: 0
Type: Discrete Decimal: 0 Width: 20 Range: 0 - 4 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Already vaccinated	3854	24.5%
1	Definitely would	5115	32.6%
2	Probably would	4130	26.3%
3	Probably would not	1366	8.7%
4	Definitely would not	1244	7.9%

INFO_TRADITION: Information from traditional sources

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 11075 Invalid: 4634
Type: Discrete Decimal: 0 Width: 9 Range: 0 - 1 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	No	197	1.8%
1	Yes	10878	98.2%
Sysmiss		4634	

INFO_PERSONAL: Information from personal network sources

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 11075 Invalid: 4634
Type: Discrete Decimal: 0 Width: 9 Range: 0 - 1 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	No	10548	95.2%
1	Yes	527	4.8%
Sysmiss		4634	

INFO_HEALTHCARE: Information from healthcare sources

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 11075 Invalid: 4634

Type: Discrete Decimal: 0 Width: 9 Range: 0 - 1 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	No	9335	84.3%
1	Yes	1740	15.7%
Sysmiss		4634	

INFO_COMMUNITY: Information from community sources

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 11075 Invalid: 4634

Type: Discrete Decimal: 0 Width: 9 Range: 0 - 1 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	No	10682	96.5%
1	Yes	393	3.5%
Sysmiss		4634	

GOV_MISTRUST_STD: Mistrust in government - per standard deviation

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 15664 Invalid: 45 Minimum: -2.326 Maximum: 2.476 Mean: -0.00452 Standard deviation: 1.001

EDUC_ATTAIN_CAT: Highest educational attainment

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 14455 Invalid: 1254
Type: Discrete Decimal: 0 Width: 19 Range: 1 - 5 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
1	None	1540	10.7%
2	Primary	2193	15.2%
3	Some secondary	6332	43.8%
4	Completed secondary	3418	23.6%
5	Any tertiary	972	6.7%
Sysmiss		1254	

HH_OLDER: Has household member aged 60 or older

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 15369 Invalid: 340
Type: Discrete Decimal: 0 Width: 9 Range: 0 - 1 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	No	6994	45.5%
1	Yes	8375	54.5%
Sysmiss		340	

ISURBANORRURAL: Urbanicity of household

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 15709 Invalid: 0
Type: Discrete Decimal: 0 Width: 12 Range: 2 - 2147483625 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
2	Peri-Urban	3921	25%
3	Rural	10596	67.5%
4	Urban	1192	7.6%
2147483625	Unknown	0	0%

SUBUNITS_NUM: Isigodi of residence

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 15709 Invalid: 0

Type: Discrete Decimal: 0 Width: 22 Range: 1 - 29 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
1	Ebaswazini	1082	6.9%
2	Esiyembeni	421	2.7%
3	Gunjaneni	576	3.7%
4	KwaMsane (Isigodi)	1848	11.8%
5	KwaMsane (Township)	667	4.2%
6	Kwahoho	309	2%
7	Macambini	366	2.3%
8	Machibini	1193	7.6%
9	Madwaleni	2	0%
10	Mahunjini	216	1.4%
11	Makhambane	37	0.2%
12	Mapheleni	814	5.2%
13	Mfekayi	0	0%
14	Mshaya	343	2.2%
15	Mvutshini	68	0.4%
16	Myeki	1354	8.6%
17	Ndlovu Village	542	3.5%
18	Nkolokotho	1291	8.2%
19	Nkombose	1459	9.3%

20	Nkundusi	0	0%
21	Nomathiya	618	3.9%
22	Nompondo	0	0%
23	Nqopheni	314	2%
24	Nsolweni	664	4.2%
25	Ogengele	822	5.2%
26	Ophaphasi (Mpukunyoni)	428	2.7%
27	Ophondweni	275	1.8%
28	Qakwini	0	0%
29	Shikishela	0	0%

PHQ4_CATS: PHQ-4 categories

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 15610 Invalid: 99

Type: Discrete Decimal: 0 Width: 9 Range: 0 - 3 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Normal	10172	65.2%
1	Mild	2974	19.1%
2	Moderate	1992	12.8%
3	Severe	472	3%
Sysmiss		99	

PANDEMIC_CHANGE: Change in community wellbeing since March 2020

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 11073 Invalid: 4636

Type: Discrete Decimal: 0 Width: 15 Range: 1 - 3 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
1	Got better	185	1.7%

2	Stayed the same	8850	79.9%
3	Got worse	2038	18.4%
Sysmiss		4636	

ECON_STABILITY: Change in economic stability during Covid

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 11073 Invalid: 4636

Type: Discrete Decimal: 0 Width: 19 Range: 1 - 5 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
1	Much better off	67	0.6%
2	A little better off	406	3.7%
3	About the same	8792	79.4%
4	A little worse off	871	7.9%
5	Much worse off	937	8.5%
Sysmiss		4636	

KZN_7DAY_INCID_1000: Past 7-day KZN case count per 1000 population

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 15709 Invalid: 0 Minimum: 0.0208 Maximum: 1.52 Mean: 0.227 Standard deviation: 0.282

Type: Continuous Decimal: 0 Width: 9 Range: 0.0208416990935802 - 1.52049267292023 Format: Numeric

EXPOSURE_CONCERN: Future COVID infection concern level

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 15677 Invalid: 32

Type: Discrete Decimal: 0 Width: 12 Range: 1 - 5 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
-------	----------	-------	--

1	Not at all	3355	21.4%
2	Slightly concerned	6132	39.1%
3	Moderately concerned	2738	17.5%
4	Very concerned	3452	22%
5	Not applicable	0	0%
Sysmiss		32	

COVID_KNOWPERSON: Knows someone who has had COVID

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 15658 Invalid: 51
Type: Discrete Decimal: 0 Width: 9 Range: 0 - 1 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	No	14744	94.2%
1	Yes	914	5.8%
Sysmiss		51	

STIGMA_STEREOTYPE_STD: Covid stereotype stigma score, z-scores

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 11073 Invalid: 4636 Minimum: -2.188 Maximum: 5.408 Mean: 0.153 Standard deviation: 0.814
Type: Continuous Decimal: 0 Width: 9 Range: -2.18814563751221 - 5.40825080871582 Format: Numeric

STIGMA_ANTICIPATE_STD: Covid anticipated stigma score, z-scores

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 11073 Invalid: 4636 Minimum: -1.424 Maximum: 4.945 Mean: 0.0311 Standard deviation: 0.937
Type: Continuous Decimal: 0 Width: 9 Range: -1.42416882514954 - 4.94502449035644 Format: Numeric

CUMUL_COVAX_BIN: Any other household members vaccinated up to today

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 15709 Invalid: 0
Type: Discrete Decimal: 0 Width: 9 Range: 0 - 1 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	No	10904	69.4%
1	Yes	4805	30.6%

COVAX_ANYNEG: Binary outcome, any negative response

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 15709 Invalid: 0
Type: Discrete Decimal: 0 Width: 9 Range: 0 - 1 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	No	13099	83.4%
1	Yes	2610	16.6%

COVAX_NEGATIVE: Binary outcome, definite negative response

Data file: covid_vax_plos_minimum_dataset

Overview

Valid: 15709 Invalid: 0
Type: Discrete Decimal: 0 Width: 9 Range: 0 - 1 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	No	14465	92.1%
1	Yes	1244	7.9%

Download related resources

Technical documents

DDI:COVID-19.Vaccine.Hesitancy.Dataset.

Title	DDI:COVID-19.Vaccine.Hesitancy.Dataset.
Author(s)	Sweetness H Dube
Date	01/06/2023
Country	South Africa
Language	English
Publisher(s)	Sweetness H Dube
Filename	AHRI.SAPRIN.COVID-19.Vaccine.Hesitancy.Dataset.pdf
