

South Africa - Performance of computer-aided chest radiography for detection of TB in a community-based multimorbidity cohort in rural KwaZulu-Natal

Sweetness H Dube

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

Overview

Identification

ID NUMBER

AHRI.Vukuzazi.ChestXrayPaperData

Version

VERSION DESCRIPTION

V1.0.0

Overview

ABSTRACT

The datasets provided here will be used for devising a machine learning tool to improve upon CAD4TB's triaging of chest x-rays.

KIND OF DATA

Survey Data

UNITS OF ANALYSIS

Each chest x-ray image or images are for a Vukuzazi study participant who had chest x-ray done.

The clinical data, each record is for a single participant who participated in Vukuzazi and had chest x-ray done. Some individuals had more than one chest x-ray images and therefore have more than one record.

TOPICS

Topic	Vocabulary	URI
Chest x-ray; machine learning; tuberculosis; population health screening	Africa Health Research Institute	www.ahri.org

KEYWORDS

Tuberculosis

Coverage

GEOGRAPHIC COVERAGE

uMkhanyakude district in northern KwaZulu-Natal

UNIVERSE

Individuals aged 15 years and above who are resident members of households in the AHRI DSS area.

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
Professor Deenan, Pillay	UCL; AHRI
Dr Olivier, Koole	LSHTM; AHRI

Dr. Emily, Wong	AHRI
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OTHER PRODUCER(S)

Name	Affiliation	Role
Africa Health Research Institute		

FUNDING

Name	Abbreviation	Role
Wellcome Trust	WT	Core funding

OTHER ACKNOWLEDGEMENTS

Name	Affiliation	Role
Dr. Kobus, Herbst	AHRI	Chief Information Officer
Dickman, Gareta	AHRI	Head of Research Data Management
Jaco, Dreyer	AHRI	Data management, data cleaning
Tshwaragang, Modise	AHRI	Data management, data cleaning
Siyabonga, Nxumalo	AHRI	Data management, data cleaning
Sweetness, Dube	AHRI	Data documentalist

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Africa Health Research Institute	AHRI		

DDI DOCUMENT ID

DDI.AHRI.Vukuzazi.ChestXrayPaperData

Sampling

Sampling Procedure

N/A. All individuals aged 15 years and older who are resident members of households in the DSS area are eligible to participate Vukuzazi study.

Questionnaires

No content available

Data Collection

Data Collection Dates

Start	End	Cycle
2018-05-01	2019-05-31	N/A

Data Processing

Data Editing

NA

Data Appraisal

No content available

File Description

Variable List

public_release

Content	
Cases	9912
Variable(s)	12
Structure	Type: Keys: ()
Version	
Producer	
Missing Data	

Variables

ID	NAME	LABEL	TYPE	FORMAT	QUESTION
V327	IndividualId	IndividualId	contin	numeric	
V328	Sex	Sex	discrete	character	
V329	age_group	age_group	discrete	character	
V330	any_symp	any_symp	discrete	numeric	
V331	binary_HIV	binary_HIV	discrete	character	
V332	GeneXpert	GeneXpert	discrete	character	
V333	LiquidCulture	LiquidCulture	discrete	character	
V334	RadiologistLungField	RadiologistLungField	discrete	character	
V335	CxrRadiologistConclusion	CxrRadiologistConclusion	discrete	character	
V336	v5_CXRScore	v5_CXRScore	contin	numeric	
V337	v6_CXRScore	v6_CXRScore	contin	numeric	
V338	v7_CXRScore	v7_CXRScore	contin	numeric	

IndividualId (IndividualId)

File: public_release

Overview

Type: Continuous
Format: numeric
Decimals: 0
Range: 5-21428

Valid cases: 9912
Invalid: 0
Minimum: 5
Maximum: 21428
Mean: 10272.1
Standard deviation: 6200.2

Sex (Sex)

File: public_release

Overview

Type: Discrete
Format: character
Width: 6

Valid cases: 9912
Invalid: 0

age_group (age_group)

File: public_release

Overview

Type: Discrete
Format: character
Width: 5

Valid cases: 9912
Invalid: 0

any_symp (any_symp)

File: public_release

Overview

Type: Discrete
Format: numeric
Decimals: 0
Range: 0-1

Valid cases: 9912
Invalid: 0

binary_HIV (binary_HIV)

File: public_release

Overview

Type: Discrete
Format: character
Width: 12

Valid cases: 9912
Invalid: 0

GeneXpert (GeneXpert)

File: public_release

Overview

Type: Discrete
Format: character
Width: 2

Valid cases: 9912
Invalid: 0

LiquidCulture (LiquidCulture)

File: public_release

Overview

Type: Discrete
Format: character
Width: 54

Valid cases: 9912
Invalid: 0

RadiologistLungField (RadiologistLungField)

File: public_release

Overview

Type: Discrete
Format: character
Width: 20

Valid cases: 9912
Invalid: 0

CxrRadiologistConclusion (CxrRadiologistConclusion)

File: public_release

Overview

Type: Discrete
Format: character
Width: 62

Valid cases: 9912
Invalid: 0

v5_CXRScore (v5_CXRScore)

File: public_release

Overview

Type: Continuous
Format: numeric
Decimals: 0
Range: 10-100

Valid cases: 9912
Invalid: 0
Minimum: 10
Maximum: 100
Mean: 33.7
Standard deviation: 16.1

v6_CXRScore (v6_CXRScore)

File: public_release

Overview

Type: Continuous
Format: numeric
Decimals: 0
Range: 0-99

Valid cases: 9912
Invalid: 0
Minimum: 0
Maximum: 99
Mean: 33.4
Standard deviation: 18.9

v7_CXRScore (v7_CXRScore)

File: public_release

Overview

Type: Continuous
Format: numeric
Decimals: 2
Range: -2-98.95

Valid cases: 9912
Invalid: 0
Minimum: -2
Maximum: 99
Mean: 18
Standard deviation: 17.8

Documentation

Technical documents

DDI:AHRI.Vukuzazi.ChestXrayPaperData

Title DDI:AHRI.Vukuzazi.ChestXrayPaperData
Author(s) Sweetness H Dube
Date 01/09/2020
Country South Africa
Language English
Filename AHRI.Vukuzazi.ChestXrayPaperData.pdf
