

# South Africa - Coronavirus Rapid Mobile Survey of Maternal and Child Health 2020

**University of Stellenbosch**

Report generated on: October 19, 2021

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## Overview

### Identification

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#### ID NUMBER

zaf-us-cram-match-2020-v1

### Version

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#### VERSION DESCRIPTION

v1: Edited, anonymised data for public distribution

#### PRODUCTION DATE

2021

## Overview

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#### ABSTRACT

The Coronavirus Rapid Mobile Survey of Maternal and Child Health (CRAM-MATCH) was a rapid SMS (Short Message Service) survey conducted in South Africa conducted among pregnant women and mothers registered with the MomConnect mhealth platform in South Africa. This national survey was conducted in June (n=3140) with a follow up in July (n=2287). The survey collected data from pregnant women and new mothers in South Africa on how the Coronavirus pandemic has affected their health including their access to health care.

#### KIND OF DATA

Sample survey data

#### UNITS OF ANALYSIS

Individuals

## Scope

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#### NOTES

The surveys collected data on nutrition, depressive symptoms, access to antenatal care, vaccinations, and ART. Data on impediments to access was collected by asking the respondents who did not access care or collect their medicine, why they did not do so. Responses included fears about contracting COVID-19, problems with available transport, long waiting times, or stock-outs at the facility.

## Coverage

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#### GEOGRAPHIC COVERAGE

The survey data is nationally representative

#### GEOGRAPHIC UNIT

The data is at the national level

#### UNIVERSE

The survey collected data from pregnant women and new mothers in South Africa.

## Producers and Sponsors

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PRIMARY INVESTIGATOR(S)

Name	Affiliation
University of Stellenbosch	

## Metadata Production

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METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
DataFirst		University of Cape Town	Metadata producer

DATE OF METADATA PRODUCTION

2021-10-12

DDI DOCUMENT VERSION

Version 1

# Sampling

## Sampling Procedure

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The sample was drawn from the Momconnect mhealth platform created by the South African National Department of Health (NDOH) in 2014. MomConnect is a mobile health (mHealth) solution created to improve and promote maternal health services in South Africa by providing pregnant mothers with free messaging facility and a helpdesk. The mobile health application also created a national pregnancy registry which has excellent coverage of pregnant women and new mothers. By 2017 more than half of the women attending public sector antenatal care services in South Africa were registered on the Momconnect platform. By 2019 there were over 2 million registered MomConnect users.

A self-weighted sample of 15 000 pregnant women and mothers with children under 12 months was drawn from the database of MomConnect users. The sample was stratified based on province, gestational age or age of their baby and their type of phone. The 15 000 women all received an invitation to join the SMS survey on the afternoon of 24 June 2020. They could respond by SMS with "JOIN" to participate in the survey, by SMSing "STOP" to not participate or to reply with "MORE" if they needed more information. Those who participated in the survey received R10 in airtime. The wave 1 survey was completed on June 30, 2020. The wave 2 survey invitation was sent on the 2nd of July 2020 and the survey ended on the 5th of July 2020.

### Poverty Quintiles

Two sets of poverty quintiles were created for respondents by constructing poverty quintiles for primary care public health facilities. The first poverty quintile measures the wealth quintile of the small area place where the facility that the respondent last visited is located. The second poverty quintile measures the average wealth quintile of the catchment area that the facility covers. Because of the focus on access to primary care and because the Momconnect moms' registrations are at their local primary care facility, only data related to public sector primary care facilities was extracted from the government database of facilities (clinics, community health centres and community day centres).

The richest 15% of areas was also excluded since these individuals are unlikely to make use of public facilities. This implies that the 'wealthiest' quintile only represents the wealthiest of the 85% poorest South Africans. Each small area place in Census was then linked to their closest public primary care facility, using the GIS codes in both the Census and the national facility database to create a catchment area for each facility. Poverty quintiles were created by deriving a measure of living standards and wealth measures via Principal Component Analysis (PCA), using data on employment status, education level, earnings, household size, and cell phone and car ownership of the residents of the area collected during the 2011 census. PCA was used to calculate wealth scores and these were aggregated over the entire catchment area, weighted by the population size of each Small Area place in the Census 2011. The sample of respondents was matched to these poverty quintiles via the Momconnect facility identifier, which captures the facility where the mother was registered.

## Response Rate

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Assuming a response rate of 20%, from the targeted sample of 15 000 women, the project aimed to achieve a survey sample of 3000 and realised a sample of 3140 for wave 1 and thus had an effective response rate of 21%. Of the 3140 individuals who responded to wave 1, 2287 also responded in wave 2. The attrition rate between wave 1 and wave 2 was thus about 27%.

# Questionnaires

## **Overview**

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Two questionnaires were used, one for the Wave 1 Survey and another for the Wave 2 Survey.

## Data Collection

### Data Collection Dates

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<b>Start</b>	<b>End</b>	<b>Cycle</b>
2020-06-24	2020-06-30	Wave 1
2020-06-02	2020-06-05	Wave 2

### Data Collection Mode

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Mobile Phone [mp]

### Questionnaires

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Two questionnaires were used, one for the Wave 1 Survey and another for the Wave 2 Survey.

### Supervision

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The Project received permission from the National Department of Health to survey their patients. The Team obtained ethics approval for data collection from the University of Stellenbosch's Research Ethics Committee for Social, Behavioural and Education Research [project 14926 on 15 June 2020] as part of the rapid Coronavirus research stream.

## Data Processing

No content available

## Data Appraisal

No content available

## File Description

# Variable List

**cram-match-2020-v1**

Content	
Cases	15000
Variable(s)	50
Structure	Type: Keys: ()
Version	
Producer	
Missing Data	

**Variables**

ID	NAME	LABEL	TYPE	FORMAT	QUESTION
V1	FacilityCode	Facility-Code	discrete	character	
V2	FieldExportId	Field:Export-Id	discrete	character	
V3	id	Field:Export-Id	contin	numeric	
V4	w1_whenlast	When did you last go to the clinic or hospital?	discrete	numeric	
V5	w1_whynotbeenrecently	Why didn't you go to the clinic recently?	discrete	numeric	
V6	w1_sickchildvaccination	During April, May and June, was there a child in your home who was sick or needed	discrete	numeric	
V7	w1_childsawhw	Did the child see a nurse/doctor?	discrete	numeric	
V8	w1_whychildnotseehw	Why didn't the child see a nurse/doctor?	discrete	numeric	
V9	w1_runoutART	If you take ART, during May and June, have you run out of medication?	discrete	numeric	
V10	w1_whyrunoutART	Why did you run out of ART?	discrete	numeric	
V11	w1_adulthunger	Has any adult in this household gone to bed hungry in the past 7 days?	discrete	numeric	
V12	w1_childhunger	Has any child in this household gone to bed hungry in the past 7 days?	discrete	numeric	
V13	depressed1	In the last 7 days have you felt hopeless, down or depressed?	discrete	numeric	
V14	depressed2	In the last 7 days have you felt little interest or pleasure in doing things?	discrete	numeric	
V15	type	type	discrete	character	
V16	channel	channel	discrete	character	
V17	province	province	discrete	character	
V18	stage		discrete	numeric	
V19	w1_ANY		discrete	numeric	
V20	w2_breastfeed	Yesterday did you breastfeed your baby?	discrete	numeric	
V21	w2_pregnancy_test_use	Did you use a pregnancy test to see if you were pregnant?	discrete	numeric	
V22	w2_feedformula	Yesterday did you feed your baby formula or porridge such as nestum?	discrete	numeric	
V23	w2_pregnancy_test_where	Where did you use the pregnancy test?	discrete	numeric	

V24	w2_pregnancy_test_why_not	Why did you not use a pregnancy test?	discrete	numeric
V25	w2_feedwhat	In the last 7 days did you feed your baby...	discrete	numeric
V26	w2_other_children	Do you have any other children?	discrete	numeric
V27	w2_other_children_b4	Do you have any other children?	discrete	numeric
V28	w2_go_hungry	In the last 7 nights did YOU ever go to bed hungry?	discrete	numeric
V29	w2_go_hungry_ch	In the last 7 nights did A CHILD go to bed hungry in your household?	discrete	numeric
V30	w2_eaten_meat	Have you eaten any meat in the last 30 days?	discrete	numeric
V31	w2_clinicvisits	Since you found out you were pregnant how many times have you visited a clinic?	discrete	numeric
V32	w2_baby_to_clinic	Since your baby was born, have you ever taken your baby to the clinic?	discrete	numeric
V33	w2_baby_to_clinic_times	How many times have you taken your baby to the clinic since they were born?	discrete	numeric
V34	w2_coronavirus	Do you think you are likely to get the coronavirus?	discrete	numeric
V35	w2_employed	In June did you have any kind of job or sell things or earn any income, no matte	discrete	numeric
V36	w2_last_vaccination	When did your child last receive a vaccination/umjovo?	discrete	numeric
V37	w2_educ	What is your highest level of education?	discrete	numeric
V38	w2_worried_about	One thing you are MOST worried about	discrete	character
V39	w2_go_hungry_nights	How many nights did YOU go to bed hungry?	discrete	numeric
V40	w2_go_hungry_ch_nights	How many nights did the child go to bed hungry?	discrete	numeric
V41	w2_ANY		discrete	numeric
V42	OU5code		contin	numeric
V43	wealth_index_catch	(mean) wealth_index_catch	contin	numeric
V44	wealth_index_SAL	(mean) wealth_index_SAL	contin	numeric
V45	dccode	(first) dccode	contin	numeric
V46	district	(first) district	discrete	character
V47	population_number_catch	(sum) population_number_catch	contin	numeric
V48	population_number_SAL	(sum) population_number_SAL	contin	numeric
V49	wealth_catch_quintiles	5 quintiles of wealth_index_catch	discrete	numeric
V50	wealth_SAL_quintiles	5 quintiles of wealth_index_SAL	discrete	numeric



## Facility-Code (FacilityCode)

File: cram-match-2020-v1

**Overview**

Type: Discrete	Valid cases: 15000
Format: character	Invalid: 0
Width: 6	

## Field:Export-Id (FieldExportId)

File: cram-match-2020-v1

**Overview**

Type: Discrete	Valid cases: 15000
Format: character	Invalid: 0
Width: 6	

## Field:Export-Id (id)

File: cram-match-2020-v1

**Overview**

Type: Continuous	Valid cases: 15000
Format: numeric	Invalid: 0
Width: 6	Minimum: 1
Decimals: 0	Maximum: 561731
Range: 1-561731	Mean: 179246
	Standard deviation: 144929.6

## When did you last go to the clinic or hospital? (w1\_whenlast)

File: cram-match-2020-v1

**Overview**

Type: Discrete	Valid cases: 3140
Format: numeric	Invalid: 11860
Width: 1	
Decimals: 0	
Range: 1-6	

## Why didn't you go to the clinic recently? (w1\_whyntbeenrecently)

File: cram-match-2020-v1

**Overview**

Type: Discrete	Valid cases: 504
Format: numeric	Invalid: 14496
Width: 1	
Decimals: 0	
Range: 1-6	

During April, May and June, was there a child in your home who was sick or needed (w1\_sickchildvaccination)

File: cram-match-2020-v1

**Overview**

Type: Discrete  
 Format: numeric  
 Width: 1  
 Decimals: 0  
 Range: 1-3

Valid cases: 3083  
 Invalid: 11917

Did the child see a nurse/doctor? (w1\_childsawhw)  
 File: cram-match-2020-v1

**Overview**

Type: Discrete  
 Format: numeric  
 Width: 1  
 Decimals: 0  
 Range: 1-3

Valid cases: 684  
 Invalid: 14316

Why didn't the child see a nurse/doctor? (w1\_whychildnotseehw)  
 File: cram-match-2020-v1

**Overview**

Type: Discrete  
 Format: numeric  
 Width: 1  
 Decimals: 0  
 Range: 1-6

Valid cases: 35  
 Invalid: 14965

If you take ART, during May and June, have you run out of medication?  
 (w1\_runoutART)  
 File: cram-match-2020-v1

**Overview**

Type: Discrete  
 Format: numeric  
 Width: 1  
 Decimals: 0  
 Range: 1-4

Valid cases: 3047  
 Invalid: 11953

Why did you run out of ART? (w1\_whyrunoutART)  
 File: cram-match-2020-v1

**Overview**

Type: Discrete  
 Format: numeric  
 Width: 1  
 Decimals: 0  
 Range: 1-5

Valid cases: 169  
 Invalid: 14831

Has any adult in this household gone to bed hungry in the past 7 days? (w1\_adulthunger)

File: cram-match-2020-v1

#### Overview

Type: Discrete  
Format: numeric  
Width: 1  
Decimals: 0  
Range: 1-3

Valid cases: 3022  
Invalid: 11978

Has any child in this household gone to bed hungry in the past 7 days? (w1\_childhunger)

File: cram-match-2020-v1

#### Overview

Type: Discrete  
Format: numeric  
Width: 1  
Decimals: 0  
Range: 1-4

Valid cases: 2992  
Invalid: 12008

In the last 7 days have you felt hopeless, down or depressed? (depressed1)

File: cram-match-2020-v1

#### Overview

Type: Discrete  
Format: numeric  
Width: 1  
Decimals: 0  
Range: 1-4

Valid cases: 2943  
Invalid: 12057

In the last 7 days have you felt little interest or pleasure in doing things? (depressed2)

File: cram-match-2020-v1

#### Overview

Type: Discrete  
Format: numeric  
Width: 1  
Decimals: 0  
Range: 1-4

Valid cases: 2915  
Invalid: 12085

type (type)

File: cram-match-2020-v1

#### Overview

Type: Discrete  
Format: character  
Width: 9

Valid cases: 15000  
Invalid: 0

channel (channel)

File: cram-match-2020-v1

**Overview**

Type: Discrete  
 Format: character  
 Width: 8

Valid cases: 15000  
 Invalid: 0

province (province)

File: cram-match-2020-v1

**Overview**

Type: Discrete  
 Format: character  
 Width: 13

Valid cases: 15000  
 Invalid: 0

(stage)

File: cram-match-2020-v1

**Overview**

Type: Discrete  
 Format: numeric  
 Width: 1  
 Decimals: 0  
 Range: 1-4

Valid cases: 15000  
 Invalid: 0

(w1\_ANY)

File: cram-match-2020-v1

**Overview**

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

Valid cases: 15000  
 Invalid: 0

Yesterday did you breastfeed your baby? (w2\_breastfeed)

File: cram-match-2020-v1

**Overview**

Type: Discrete  
 Format: numeric  
 Width: 1  
 Decimals: 0  
 Range: 1-9

Valid cases: 987  
 Invalid: 14013

Did you use a pregnancy test to see if you were pregnant?

(w2\_pregnancy\_test\_use)

File: cram-match-2020-v1

**Overview**

Type: Discrete  
 Format: numeric  
 Width: 1  
 Decimals: 0  
 Range: 1-6

Valid cases: 1300  
 Invalid: 13700

Yesterday did you feed your baby formula or porridge such as nestum? (w2\_feedformula)

File: cram-match-2020-v1

**Overview**

Type: Discrete  
 Format: numeric  
 Width: 1  
 Decimals: 0  
 Range: 1-9

Valid cases: 981  
 Invalid: 14019

Where did you use the pregnancy test? (w2\_pregnancy\_test\_where)

File: cram-match-2020-v1

**Overview**

Type: Discrete  
 Format: numeric  
 Width: 1  
 Decimals: 0  
 Range: 1-6

Valid cases: 1176  
 Invalid: 13824

Why did you not use a pregnancy test? (w2\_pregnancy\_test\_why\_not)

File: cram-match-2020-v1

**Overview**

Type: Discrete  
 Format: numeric  
 Width: 1  
 Decimals: 0  
 Range: 1-8

Valid cases: 117  
 Invalid: 14883

In the last 7 days did you feed your baby... (w2\_feedwhat)

File: cram-match-2020-v1

**Overview**

Type: Discrete  
 Format: numeric  
 Width: 1  
 Decimals: 0  
 Range: 1-8

Valid cases: 190  
 Invalid: 14810

Do you have any other children? (w2\_other\_children)

File: cram-match-2020-v1

**Overview**

Type: Discrete  
 Format: numeric  
 Width: 1  
 Decimals: 0  
 Range: 0-8

Valid cases: 1288  
 Invalid: 13712

Do you have any other children? (w2\_other\_children\_b4)  
 File: cram-match-2020-v1

**Overview**

Type: Discrete  
 Format: numeric  
 Width: 1  
 Decimals: 0  
 Range: 0-8

Valid cases: 971  
 Invalid: 14029

In the last 7 nights did YOU ever go to bed hungry? (w2\_go\_hungry)  
 File: cram-match-2020-v1

**Overview**

Type: Discrete  
 Format: numeric  
 Width: 1  
 Decimals: 0  
 Range: 1-9

Valid cases: 2250  
 Invalid: 12750

In the last 7 nights did A CHILD go to bed hungry in your household?  
 (w2\_go\_hungry\_ch)  
 File: cram-match-2020-v1

**Overview**

Type: Discrete  
 Format: numeric  
 Width: 1  
 Decimals: 0  
 Range: 1-9

Valid cases: 2232  
 Invalid: 12768

Have you eaten any meat in the last 30 days? (w2\_eaten\_meat)  
 File: cram-match-2020-v1

**Overview**

Type: Discrete  
 Format: numeric  
 Width: 1  
 Decimals: 0  
 Range: 1-6

Valid cases: 2221  
 Invalid: 12779

Since you found out you were pregnant how many times have you visited a clinic? (w2\_clinicvisits)

File: cram-match-2020-v1

#### Overview

Type: Discrete  
Format: numeric  
Width: 1  
Decimals: 0  
Range: 0-9

Valid cases: 1256  
Invalid: 13744

Since your baby was born, have you ever taken your baby to the clinic? (w2\_baby\_to\_clinic)

File: cram-match-2020-v1

#### Overview

Type: Discrete  
Format: numeric  
Width: 1  
Decimals: 0  
Range: 1-9

Valid cases: 957  
Invalid: 14043

How many times have you taken your baby to the clinic since they were born? (w2\_baby\_to\_clinic\_times)

File: cram-match-2020-v1

#### Overview

Type: Discrete  
Format: numeric  
Width: 1  
Decimals: 0  
Range: 0-9

Valid cases: 925  
Invalid: 14075

Do you think you are likely to get the coronavirus? (w2\_coronavirus)

File: cram-match-2020-v1

#### Overview

Type: Discrete  
Format: numeric  
Width: 1  
Decimals: 0  
Range: 1-9

Valid cases: 1251  
Invalid: 13749

In June did you have any kind of job or sell things or earn any income, no matter (w2\_employed)

File: cram-match-2020-v1

#### Overview

Type: Discrete  
 Format: numeric  
 Width: 1  
 Decimals: 0  
 Range: 1-9

Valid cases: 1245  
 Invalid: 13755

When did your child last receive a vaccination/umjovo?  
 (w2\_last\_vaccination)

File: cram-match-2020-v1

#### Overview

Type: Discrete  
 Format: numeric  
 Width: 1  
 Decimals: 0  
 Range: 1-9

Valid cases: 948  
 Invalid: 14052

What is your highest level of education? (w2\_educ)

File: cram-match-2020-v1

#### Overview

Type: Discrete  
 Format: numeric  
 Width: 1  
 Decimals: 0  
 Range: 1-9

Valid cases: 2177  
 Invalid: 12823

One thing you are MOST worried about (w2\_worried\_about)

File: cram-match-2020-v1

#### Overview

Type: Discrete  
 Format: character  
 Width: 159

Valid cases: 2155

How many nights did YOU go to bed hungry? (w2\_go\_hungry\_nights)

File: cram-match-2020-v1

#### Overview

Type: Discrete  
 Format: numeric  
 Width: 1  
 Decimals: 0  
 Range: 0-9

Valid cases: 408  
 Invalid: 14592

How many nights did the child go to bed hungry?

(w2\_go\_hungry\_ch\_nights)

File: cram-match-2020-v1

#### Overview

Type: Discrete  
 Format: numeric  
 Width: 1  
 Decimals: 0  
 Range: 0-9

Valid cases: 200  
 Invalid: 14800

(w2\_ANY)

File: cram-match-2020-v1

#### Overview

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

Valid cases: 2915  
 Invalid: 12085

(OU5code)

File: cram-match-2020-v1

#### Overview

Type: Continuous  
 Format: numeric  
 Width: 6  
 Decimals: 0  
 Range: 100006-998842

Valid cases: 15000  
 Invalid: 0  
 Minimum: 100006  
 Maximum: 998842  
 Mean: 545306.6  
 Standard deviation: 241850.3

(mean) wealth\_index\_catch (wealth\_index\_catch)

File: cram-match-2020-v1

#### Overview

Type: Continuous  
 Format: numeric  
 Width: 16  
 Decimals: 0  
 Range: -4.6587929725647-2.394935131073

Valid cases: 14393  
 Invalid: 607  
 Minimum: -4.7  
 Maximum: 2.4  
 Mean: -1.2  
 Standard deviation: 1.5

(mean) wealth\_index\_SAL (wealth\_index\_SAL)

File: cram-match-2020-v1

#### Overview

Type: Continuous  
 Format: numeric  
 Width: 17  
 Decimals: 0  
 Range: -6.92175674438476-10.6321811676025

Valid cases: 14552  
 Invalid: 448  
 Minimum: -6.9  
 Maximum: 10.6  
 Mean: -0.2  
 Standard deviation: 2.7

(first) dccode (dccode)

File: cram-match-2020-v1

**Overview**

Type: Continuous	Valid cases: 14485
Format: numeric	Invalid: 515
Width: 3	Minimum: 101
Decimals: 0	Maximum: 947
Range: 101-947	Mean: 638.9
	Standard deviation: 248.6

(first) district (district)  
File: cram-match-2020-v1

**Overview**

Type: Discrete	Valid cases: 14485
Format: character	Invalid: 0
Width: 25	

(sum) population\_number\_catch (population\_number\_catch)  
File: cram-match-2020-v1

**Overview**

Type: Continuous	Valid cases: 14485
Format: numeric	Invalid: 515
Width: 6	Minimum: 0
Decimals: 0	Maximum: 129943
Range: 0-129943	Mean: 20521.4
	Standard deviation: 16904.9

(sum) population\_number\_SAL (population\_number\_SAL)  
File: cram-match-2020-v1

**Overview**

Type: Continuous	Valid cases: 14874
Format: numeric	Invalid: 126
Width: 5	Minimum: 0
Decimals: 0	Maximum: 11717
Range: 0-11717	Mean: 687.7
	Standard deviation: 466.5

5 quantiles of wealth\_index\_catch (wealth\_catch\_quintiles)  
File: cram-match-2020-v1

**Overview**

Type: Discrete	Valid cases: 14393
Format: numeric	Invalid: 607
Width: 1	
Decimals: 0	
Range: 1-5	

5 quantiles of wealth\_index\_SAL (wealth\_SAL\_quintiles)  
File: cram-match-2020-v1

**Overview**

Type: Discrete  
Format: numeric  
Width: 1  
Decimals: 0  
Range: 1-5

Valid cases: 14552  
Invalid: 448

# Documentation

## Questionnaires

### [CRAM-MATCH 2020 Wave 1 Questionnaire]

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Title [CRAM-MATCH 2020 Wave 1 Questionnaire]  
Date 2020-06-18  
Country South Africa  
Language English  
Contributor(s) This is the questionnaire for Wave 1 of the survey  
Filename q-cram-match-2020-w1.xlsx

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### [CRAM-MATCH 2020 Wave 2 Questionnaire]

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Title [CRAM-MATCH 2020 Wave 2 Questionnaire]  
Date 2020-06-29  
Country South Africa  
Language English  
Contributor(s) This is the questionnaire for Wave 2 of the survey  
Filename q-cram-match-2020-w2.xlsx

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