# Understanding the demographic, health, psycho-social and economic implications of COVID-19 on Older Persons in South Africa

**06th September 2022**

Research team:

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# Overview of presentation

Dr Candice Groenewald:

- introduction, background, desktop review

Dr Inbarani Naidoo:

- quantitative results, key findings, recommendations

- **Introduction**
- **Study objectives**
- **Target group**

# Introduction

**Growing older….**

- a measure of success globally, increased life expectancy

- Older persons age ≥ 60 years are part of the vulnerable groups in South Africa.

- live under a higher risk of poverty & social exclusion compared to the general population.

# Introduction

Vulnerability: limited/no access to specific health services, pastoral care, support & general resources  impacts on quality of life

Poverty, hunger, abuse & neglect - life-long struggles, worsening at older ages when people lose independence & rely more on others.

*United Nations Sustainable Development Group (2020):*

*mortality, economic well-being, mental health, abuse & neglect,* **even the work that older people do as essential workers & care providers**

# Introduction

**South Africa's older population:**

- South Africa has the largest population of older persons in Africa.

- Several challenges faced by older persons, are historical.

Many have:

- no formal education; less than half can perform basic literacy functions or calculate simple business transactions.

- struggled to secure a livelihood in their younger years.

- 4 in 10 older people in the country are classified as poor, mostly living in remote, rural areas.

Combined forces of poverty, unemployment, shocks such as unrest, flooding have left many older persons in a destitute position, with minimal options for those needing regular care & support.

# Objectives

1. Understand the demographic, health, psycho-social & economic implications of COVID-19 for older persons in South Africa;

2. Generate comprehensive COVID-19 data on older persons from national COVID-19 surveillance data;

3. Model the progression of COVID-19 amongst older persons;

4. Develop & propose further evidence-informed interventions & policy recommendations in response to COVID-19 specifically among older persons
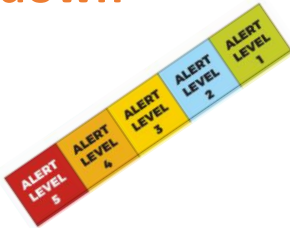
*Target study group*: older persons aged ≥ 60 years*

near old aged 50-59 years

\* Definition of older person based on Older persons Act 2006

# Interventions for epidemic control

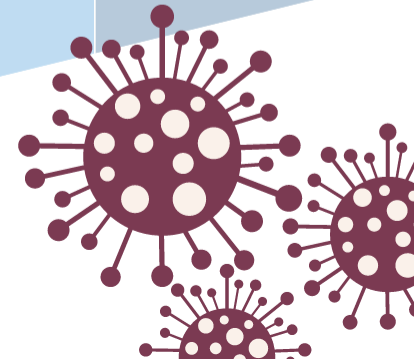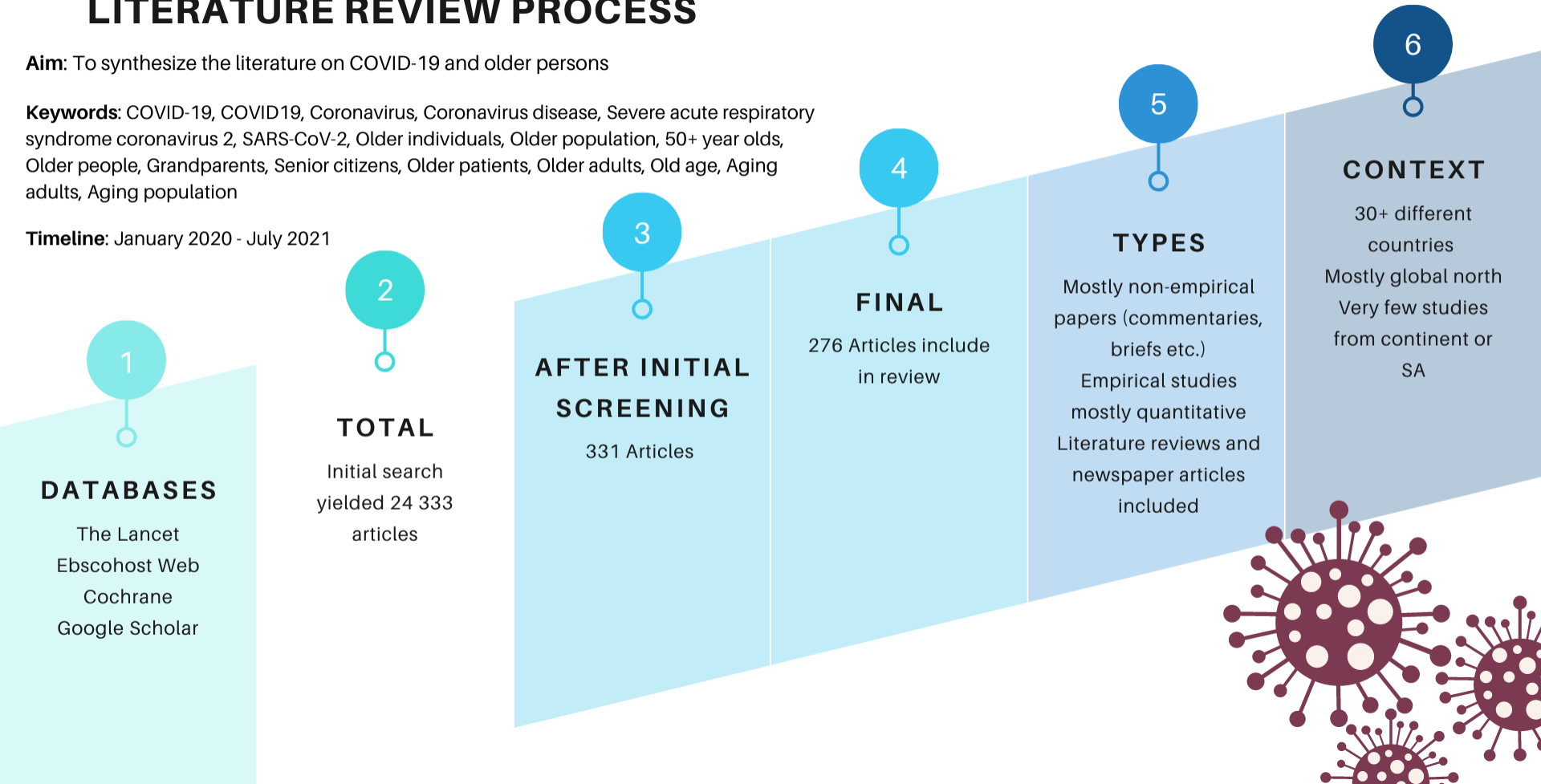| Intervention | Description |
|---|---|
| **Lockdown** | Lockdown alert levels 4 & 5: people were confined to their homes unless to get essential goods or services, to collect a social grant, pension, or seek emergency, life-saving, or chronic medical attention. |
| | Lockdown level 3: special measures for the most vulnerable were advised, specifically for ≥ 60 years & people living with underlying medical conditions, were advised to only leave home under exceptional circumstances. |
| | Lockdown levels 2 & 3: employers advised to adopt measures for employees aged ≥60 years. |
| **Testing** | DSD prioritised the training of nurses & support staff within residential facilities for older persons to do COVID-19 screening & testing during the early stages of lockdown |
| | DSD and DoH prioritised the roll-out of influenza vaccines for older persons. |
| **Vaccines** | Personal protective equipment, monitoring & evaluation procedures were in place at residential facilities for older persons across South Africa. |
| | Vaccine rollout prioritised healthcare workers, essential workers, & the most vulnerable population group, including ≥60 years. The national vaccine roll-out to older persons began in June 2021 targeting five million people aged ≥ 60 years. |

Results

# Literature Review

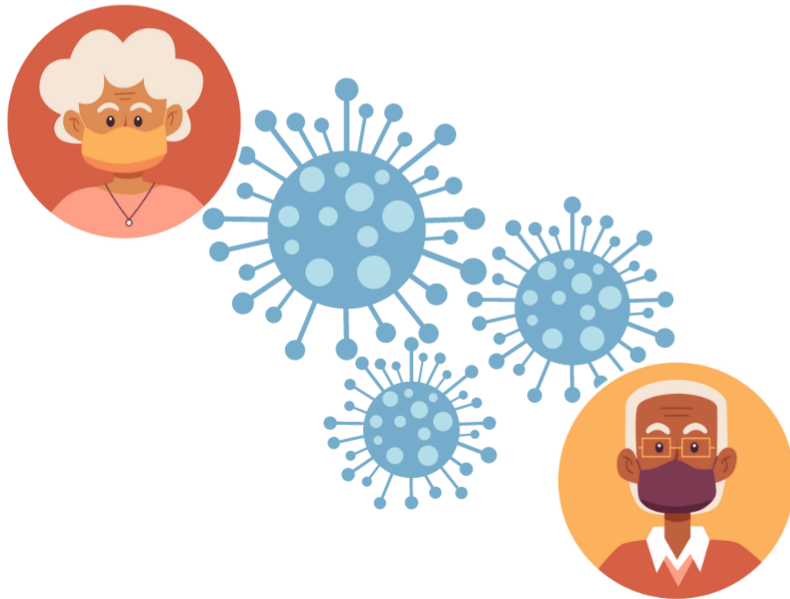## LITERATURE REVIEW PROCESS

**Aim**: To synthesize the literature on COVID-19 and older persons

**Keywords**: COVID-19, COVID19, Coronavirus, Coronavirus disease, Severe acute respiratory syndrome coronavirus 2, SARS-CoV-2, Older individuals, Older population, 50+ year olds, Older people, Grandparents, Senior citizens, Older patients, Older adults, Old age, Aging adults, Aging population

**Timeline**: January 2020 - July 2021

**1**

### DATABASES

The Lancet
Ebscohost Web
Cochrane
Google Scholar

**2**

### TOTAL

Initial search yielded 24 333 articles

**3**

### AFTER INITIAL SCREENING

331 Articles

**4**

### FINAL

276 Articles include in review

**5**

### TYPES

Mostly non-empirical papers (commentaries, briefs etc.)
Empirical studies mostly quantitative
Literature reviews and newspaper articles included

**6**

### CONTEXT

30+ different countries
Mostly global north
Very few studies from continent or SA

# COVID-19 SEVERELY AFFECTED THE LIVES OF OLDER PERSONS GLOBALLY

## INCREASED HEALTH RISKS

Surveillance studies

- Characteristics of COVID-19 amongst older patients
- Health-related outcomes
- Mortality rates (within and across countries)
- Impact of COVID-19 on comorbidities in older patients

## PSYCHOSOCIAL IMPACTS OF PANDEMIC

Mental health

- Social isolation leading to loneliness, depression, distress, anxiety
- Fears of COVID-19 infection

Social impacts

- Stigma and othering
- Compromised movement leading to physical inactivity

Support and care

- Limited and impersonal engagement with nurses
- Limited engagement with family
- Spaces of support becoming spaces of risk (for patients and staff)
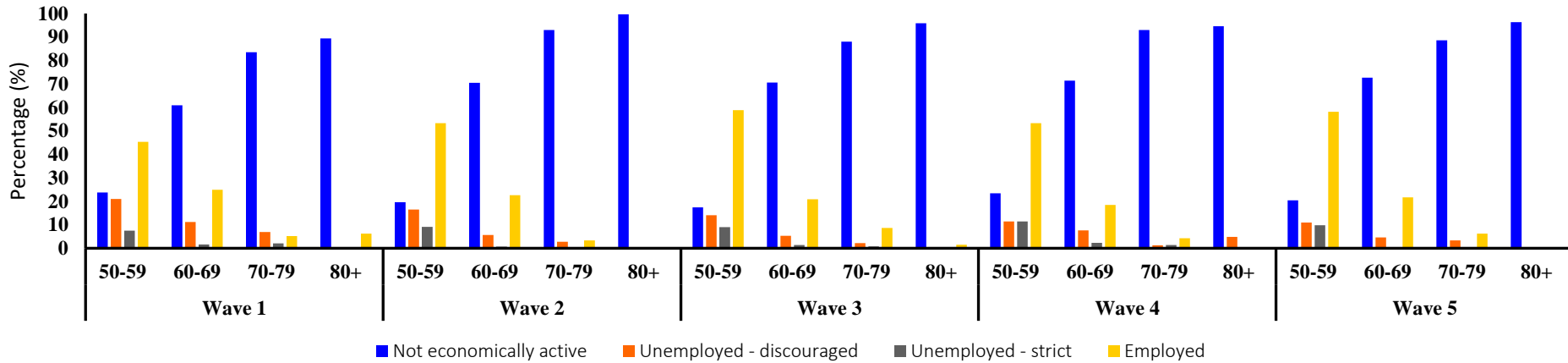
# Results

Data sources:

National Income Dynamics Study

National Income Dynamics Study – Coronavirus Rapid Mobile Survey

South African Demographic Health Survey

South African National Prevalence, Incidence, Behaviour and Communication Survey  (Known as  "SABSSM")

HSRC Lockdown survey

COVID-19 Surveillance

# Results: Demographics

| | SABSSM (2017) | SADHS (2016) | NIDS (2017) |
|---|---|---|---|
| sample | Nearly half of older person's sample were aged 50-59 years; the number of people decreased with increasing age | Over two fifths of older persons sample were aged 50-59 years; the number of people decreased with increasing age | almost half of older person's sub-group were aged 50-59 years;  the number of people decreased with increasing age |
| gender | Majority of sample were females | Majority of sample were females | Majority of sample were females |
| province | Most based in Gauteng province, resided in urban localities | Most based in Gauteng and KwaZulu-Natal provinces, as well as from urban localities | Most based in Gauteng province, resided in urban localities |
| marital status | proportion of older people widow/widower increased with age (Range: 1.9%-52.7%); ~8% were divorced or separated (95% CI 6.9-8.6) | proportion of older people widowed increased with age Range: (10.9% - 56.1%). A small proportion were either divorced or separated. | widowhood/widower increased with age; divorce high among 50 to 59 years (65%, 95% CI: 55.8-73.2); lower proportions divorced among older age groups |

# Results: Demographics

| | SABSSM (2017) | SADHS (2016) | NIDS (2017) |
|---|---|---|---|
| **No school education** | 16.9% (95% CI 15.2-18.7, p<0.001) of older people with no school education.<br><br>most older people with no school education among 80+ years (39.5%, 95% 32.9-46.4, p<0.001) | 22.3% of older people reported having no education.<br><br>% of older people with no education increased with increasing age | most older people with no school education among 80+ years (16.9%, 95% CI 15.4-18.3, p<0.001) |
| **Highest level of education** | 35.9 (95% CI 33.3-38.5) had primary school education,<br><br>just under half of the target age group had secondary school education level (49.5%, 95% CI 47.3-51.7) | 22.8,(95% CI 20.4-25.4) had some primary school education, but had not completed it.<br><br>27.6 95% CI 25.1-30.2 had some secondary school education although had not completed it | one third of older people had at least a primary school level of education (30.2%, 95% CI 28.2-32.3, p<0.001) or secondary school educational level (34.8%, 95% CI 32.4-37.1) |

**Employment status, NIDS-CRAM (Wave 1-5)**

# Results: Demographics

| | SABSSM (2017) | SADHS (2016) | NIDS (2017) |
|---|---|---|---|
| **Employment status** | 28.4% (95% CI 26.3-30.6) reported being employed. Decline in employment with increasing age. | Most elderly who were employed, were in the near old age groups | Overall 35.2% (95% CI 32.8-37.5) were employed. |
| **Socio-economic status** | 36.2% (95% CI 33.1-39.4) had low socio-economic status.<br><br>Half of those aged ≥ 80 years had low socio-economic status | 54.2% (95% CI 48.7-59.5) had a low socio-economic status.<br><br>Higher (56.4%) socio-economic status was observed in the age group 50-59 years | 73.6% had a low socio-economic status compared to high socio-economic status |

# Results:
## Demographics

| Grants | |
|---|---|
| **SABSSM (2017)** | **SADHS (2016)** |
| 40.3%, (95% CI 38.0-42.6) said they had government pensions/grants. For 50–59-year-old people, the main source of income was salary/earnings (67.5%, 95% CI 64.4-70.6); government pensions/grants (11.6% 95% CI 9.8-13.5). For ≥ 60 year old people the main source of income was consistently government pensions/grants. | Of the older people who reported receiving a grant, 80.9% (95% CI 74.9-85.6) aged 50-59 received a disability grant. |

**Personally received grant from government, NIDS-CRAM (Wave 1-5)**
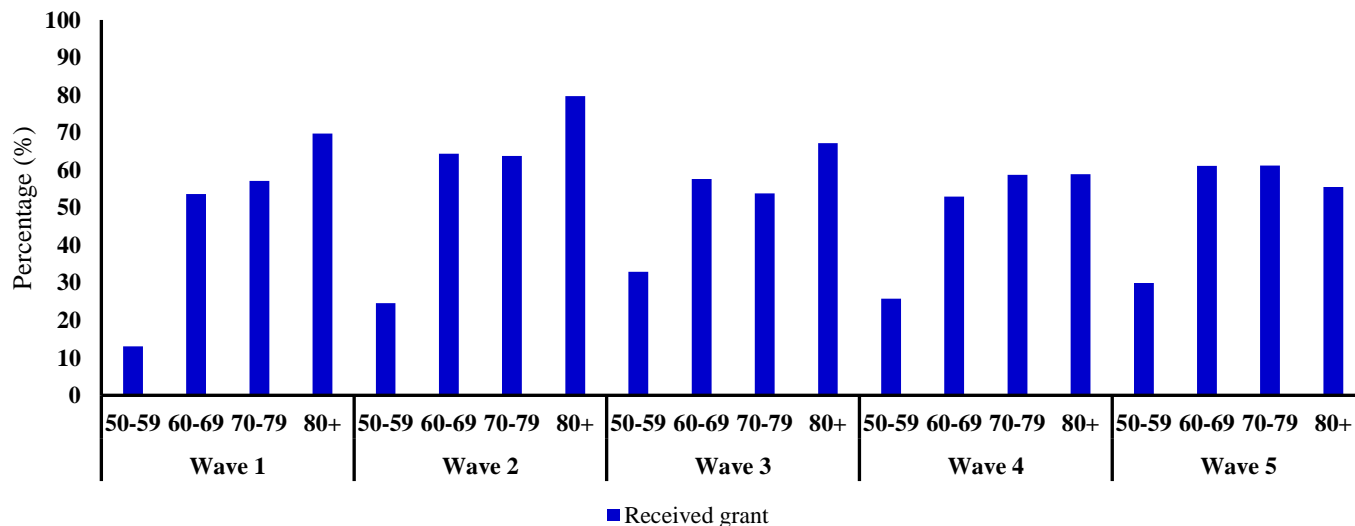


Most people aged 80+ reported that they received a government grant in the first four waves, whereas in Wave 5 more people aged 60-69 and 70-79 years received grants than others

# Results: NIDS-CRAM: Hunger

- 6%-20% of 50–59-year-old people reported their households went hungry due to lack of food over the past seven days
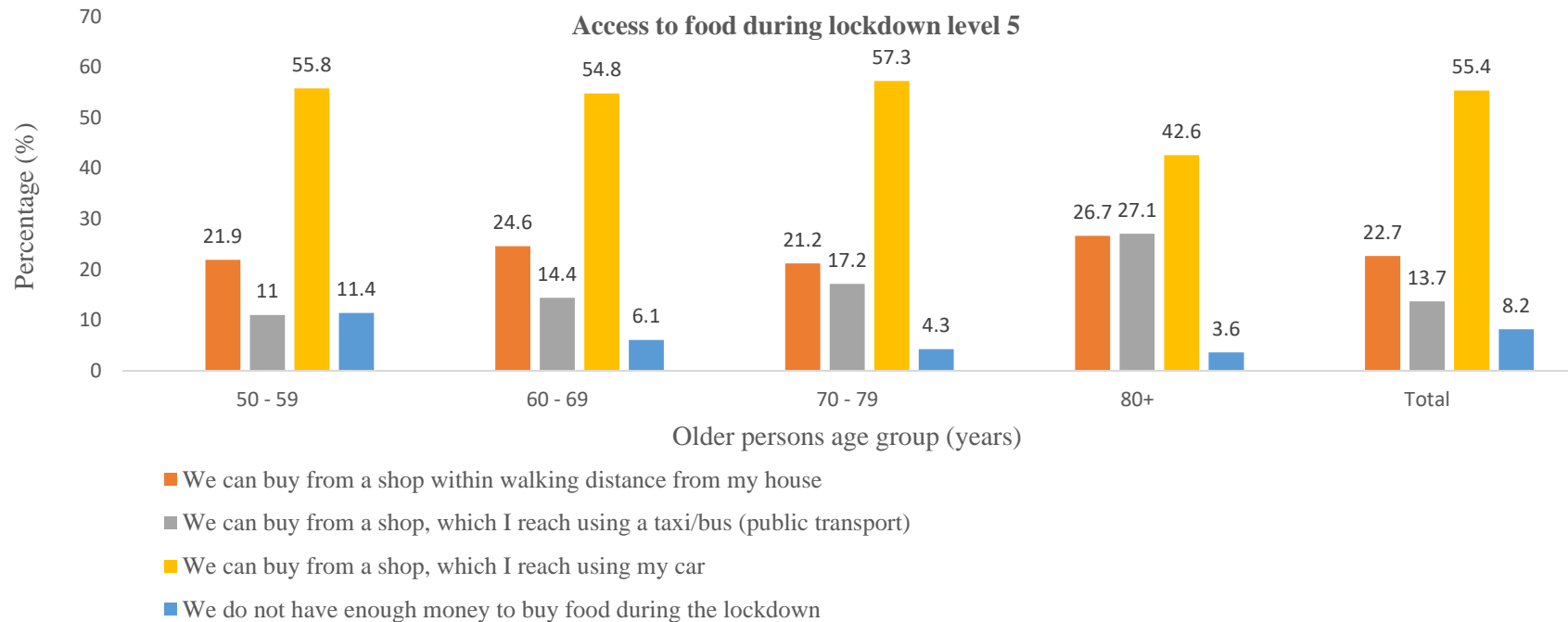- 20%- 47.3% did not have enough money for food

**Experienced hunger, NIDS-CRAM (Wave 1-5)**
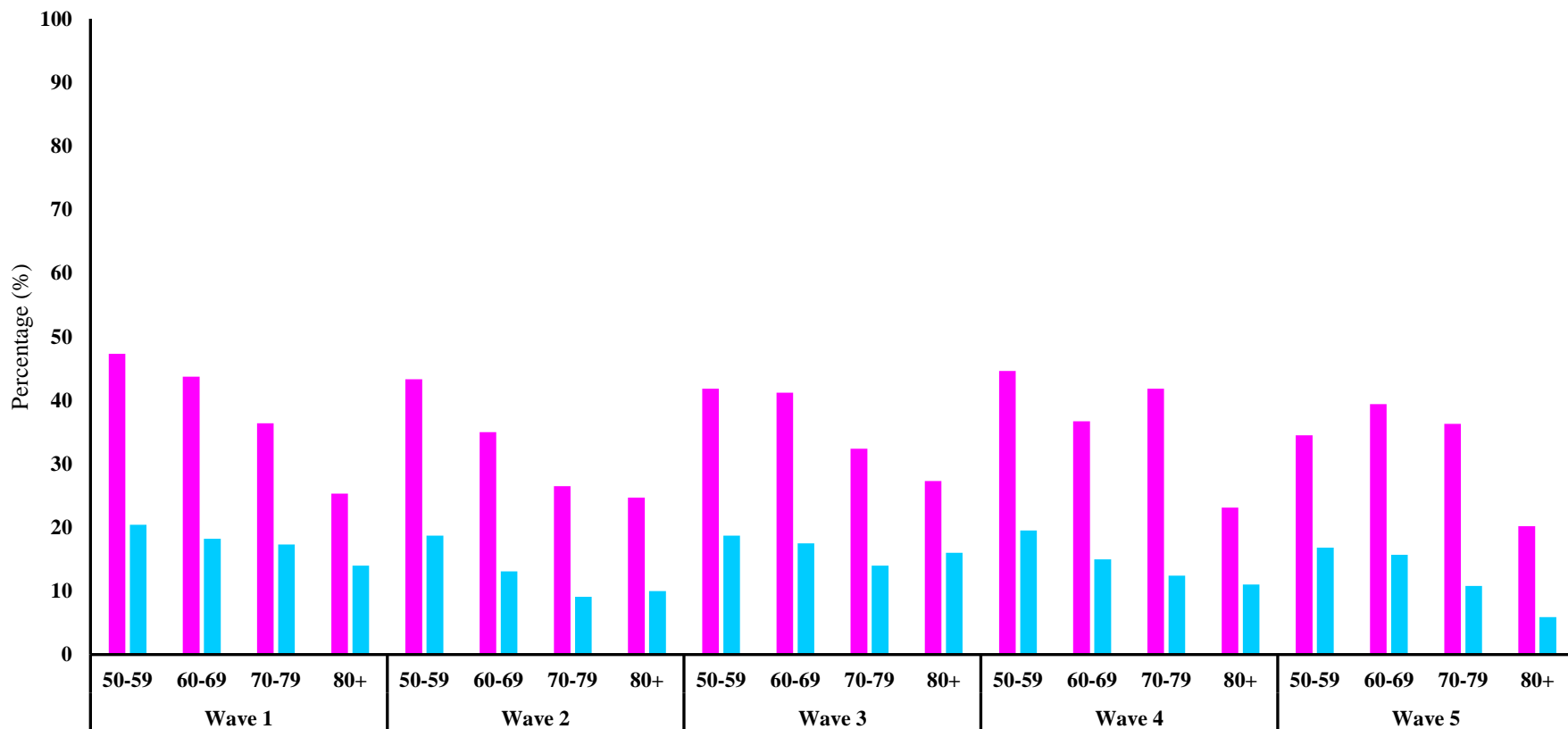


Household ran out of money for food

Household gone hungry due to lack of food (7 days)

# Results: Access to food during lockdown, HSRC lockdown survey 2020



**Access to food during lockdown level 5**

Legend:
- We can buy from a shop within walking distance from my house
- We can buy from a shop, which I reach using a taxi/bus (public transport)
- We can buy from a shop, which I reach using my car
- We do not have enough money to buy food during the lockdown

- Most could buy food during lockdown using their vehicles, taxi/bus(public transport) or by walking to the shop near their homes.
- ~ 8.2%, (95% CI 6.8-9.8) did not have enough money to buy food during lockdown, mostly by people aged 50-59 years (11.4%, 95% CI 9.4-13.8).
- 23.2% (95% CI 20.9-25.6) of all older persons aged 50+ felt strongly that COVID-19 made it difficult to feed their families.
- 21% (95% CI 18.7-23.5) said they would arrange for late payment with creditors
- 11.1% (95% CI 9.1-13.6) said that they would not pay bills due to financial hardship.
- 5.3%, (95% CI 4.0-7.0) indicated they would skip meals.

# Results: chronic conditions

| Self Reported Health Status | |
|---|---|
| **SABSSM (2017)** | **SADHS (2016)** |
| Hypertension was more common among those aged 60+; more than half within each age group self-reported hypertension.<br><br>~ one fifth of people aged 70-79 and 60-69 years respectively were diabetic. Nearly 10% of those aged 70-79 years and 80+ were diagnosed with heart disease. | ~ ¼ of all older people reported average health.<br><br>More people in the 70-79 years age group self-reported having high blood pressure (57.3%), diabetes (17.9%), cancer (4.5%), and asthma (7.3%).<br><br>Heart attack diagnoses increased with age (5.7%-12.9%). |

# Results: Psycho-social

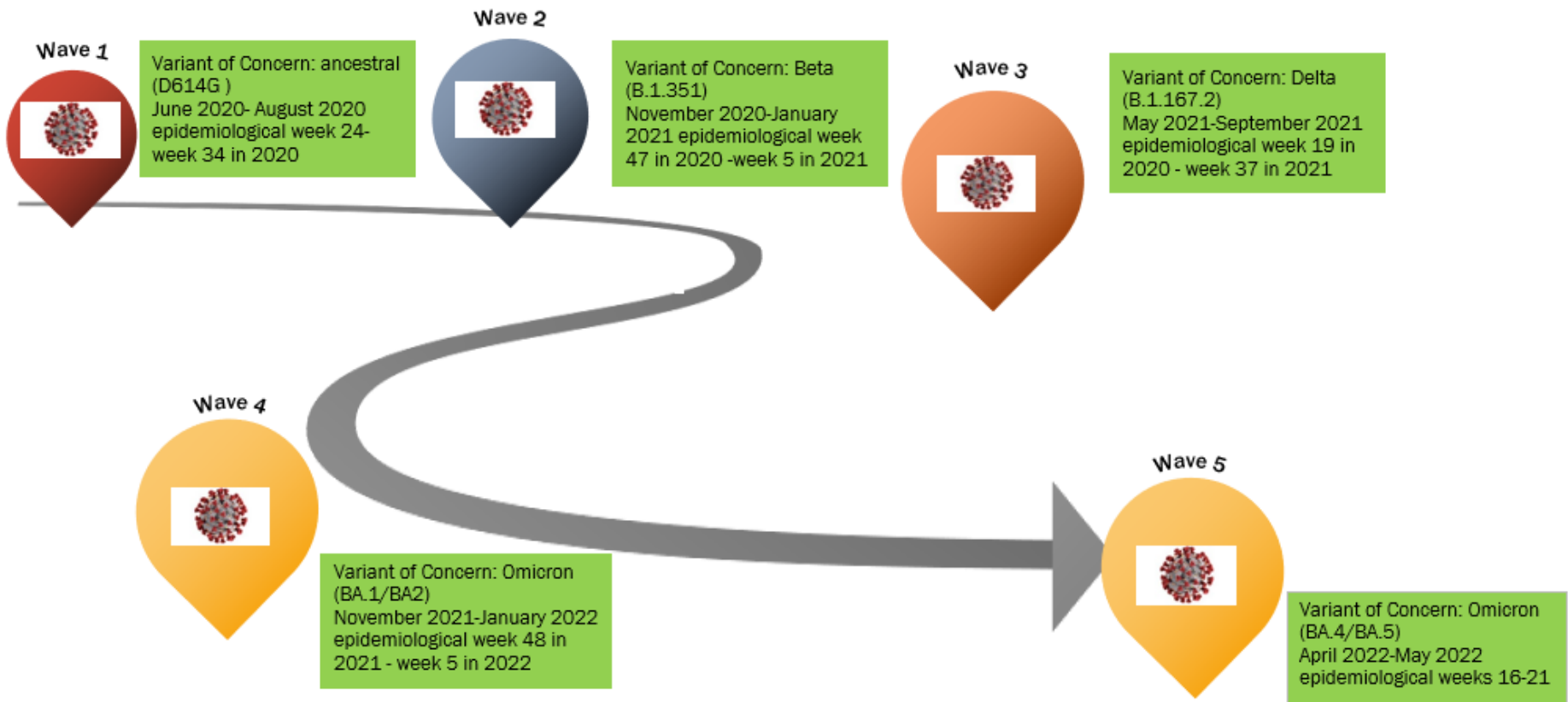People were asked about how they felt in the past week:

- rare that older people felt depressed, lonely, or fearful for most of the week or all the time.

- one fifth of those aged ≥ 80 years said they felt unusually bothered sometimes (17.9%, 95% CI 9.3-31.4) or occasionally (17.9%, 95% CI 9.3-31.4).

- one quarter of those aged 50-69 years felt bothered sometimes.

## Results: NIDS-CRAM- Psycho-social

**Showing little interest or pleasure in doing things, NIDS-CRAM (Wave 2,3,5)**
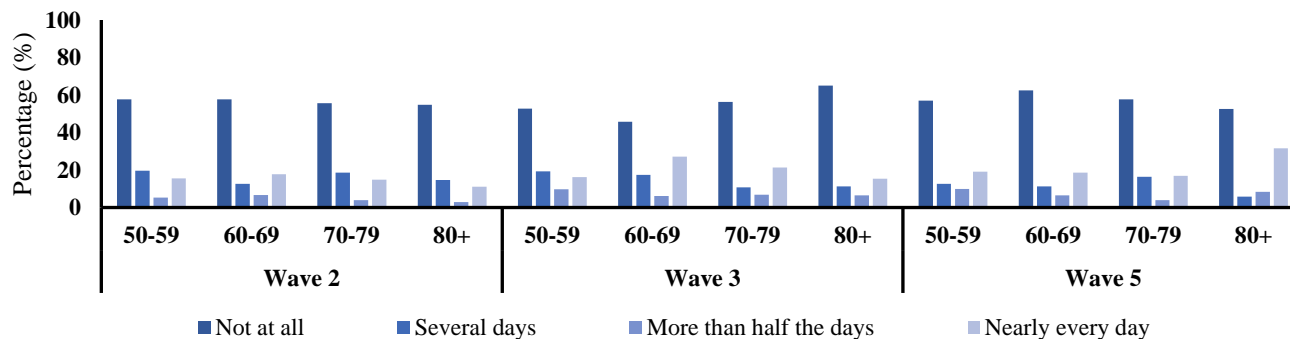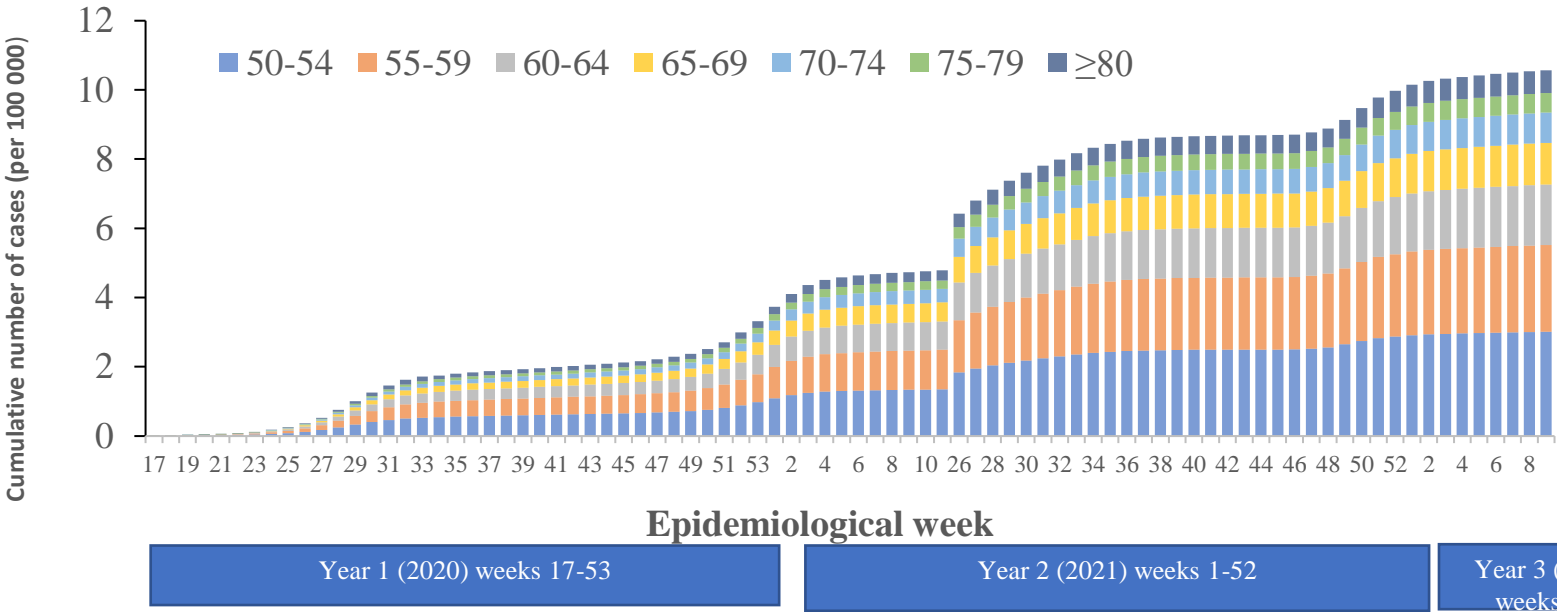


Feelings of having little pleasure nearly every day increased between Waves 2-3, and Waves 3-5 for those aged 50-59 years
Notable change among ≥ 80 years (from 11% in Wave 2 to 31.6% in Wave 5) expressing little interest or pleasure in activities.

**Wave 1**

Variant of Concern: ancestral (D614G)
June 2020- August 2020 epidemiological week 24- week 34 in 2020

**Wave 2**

Variant of Concern: Beta (B.1.351)
November 2020-January 2021 epidemiological week 47 in 2020 -week 5 in 2021

**Wave 3**

Variant of Concern: Delta (B.1.167.2)
May 2021-September 2021 epidemiological week 19 in 2020 - week 37 in 2021

**Wave 4**

Variant of Concern: Omicron (BA.1/BA2)
November 2021-January 2022 epidemiological week 48 in 2021 - week 5 in 2022

**Wave 5**

Variant of Concern: Omicron (BA.4/BA.5)
April 2022-May 2022 epidemiological weeks 16-21

SARS-CoV-2 Waves and timelines
South Africa 2020-2021

# COVID-19 cumulative cases plotted over epidemiological week 2020-2022



Cumulative number of reported COVID-19 cases among those aged 50-59, 60-69 and ≥ 70 years

Data source: https://www.nicd.ac.za/diseases-a-z-index/disease-index-covid-19/surveillance-reports/weekly-epidemiological-brief/

- Most cases occurred among people aged 50-59 years (551 489)

- There were 295 058 cases among people aged 60-69 years

- There were 210 074 cases among those aged ≥ 70 years.

# Number of new COVID-19 confirmed cases by age group from 27th April 2020 to 5th March 2022, South Africa



New COVID-19 cases
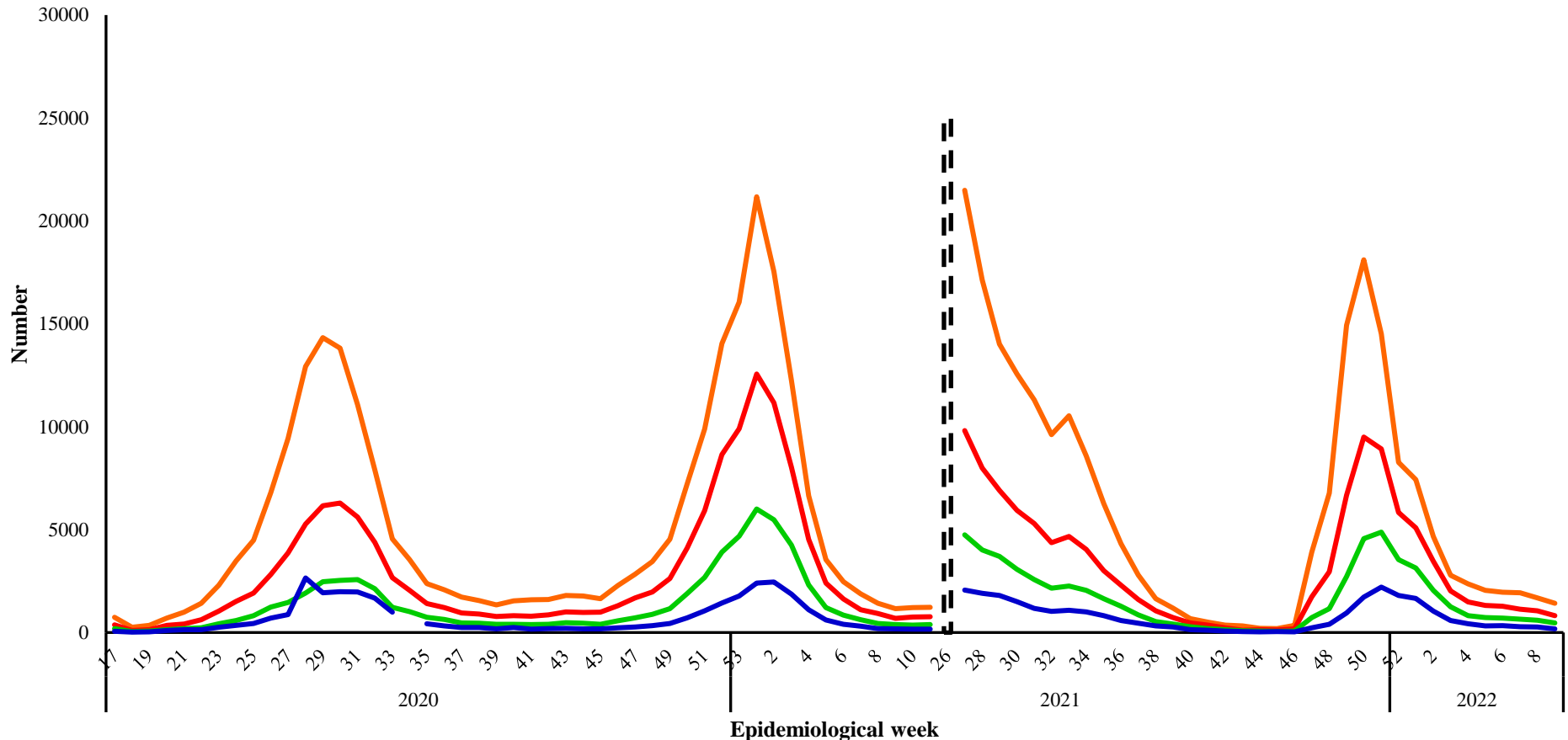
# COVID-19: Mortality

- Among older persons COVID -19 mortality was highest among 60-69 years followed by 50-59 years & 70-79 years.

**New COVID-19 deaths**

# COVID-19 Vaccinations by wave

**Number of people vaccinated**

Total vaccinated:

**50-59:** 3,119,472

**60+:** 3,849,483

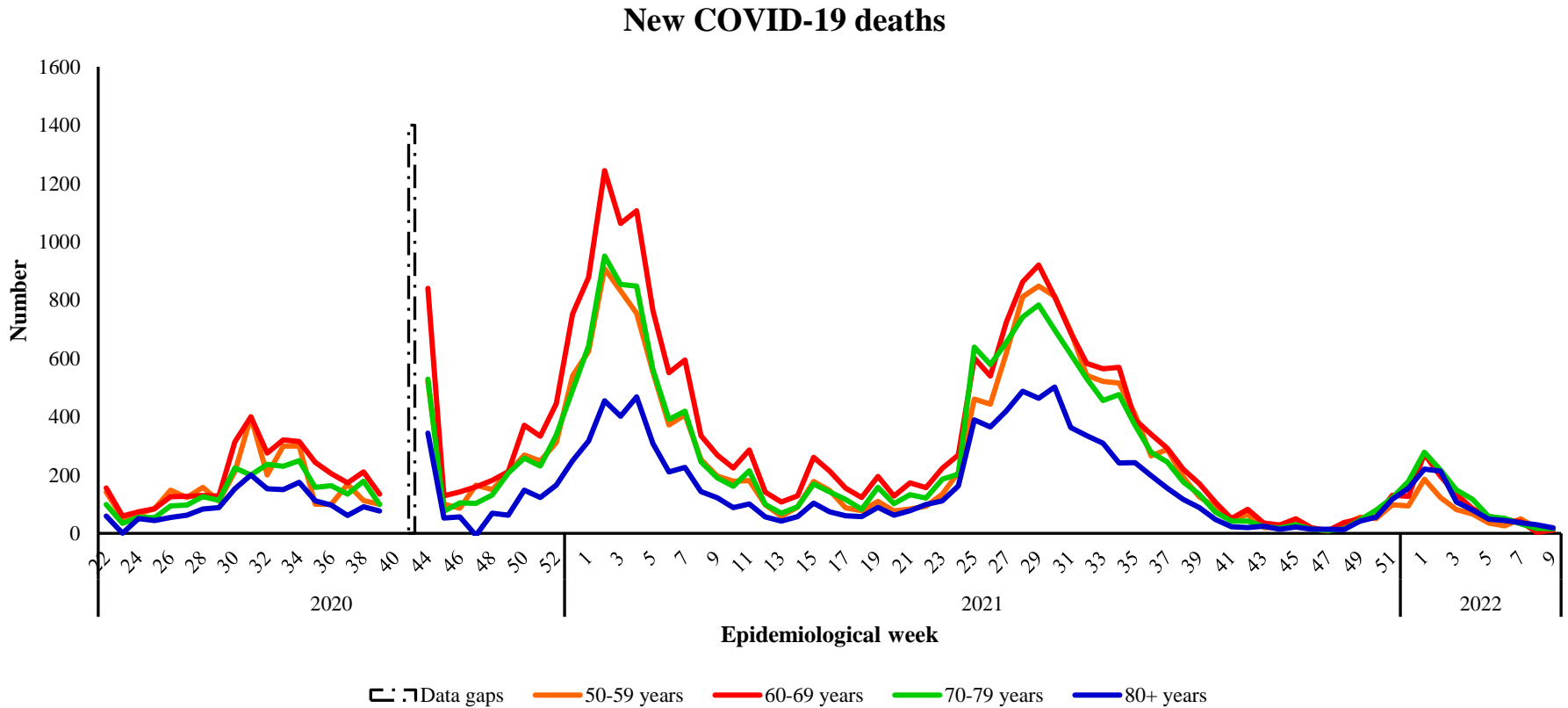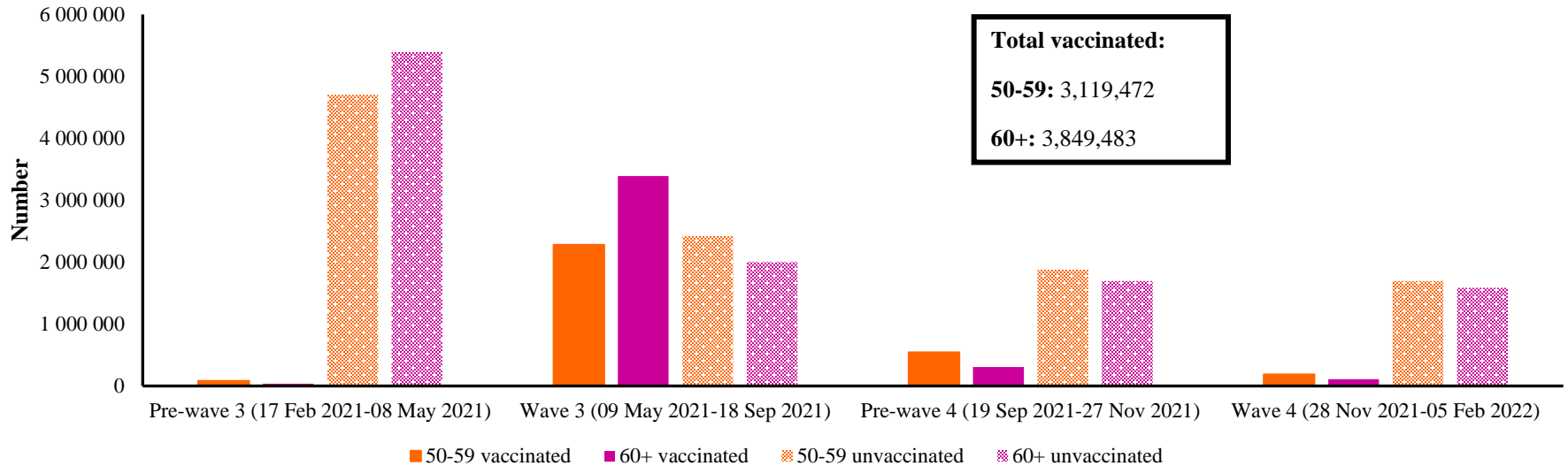Number (y-axis): 0, 1 000 000, 2 000 000, 3 000 000, 4 000 000, 5 000 000, 6 000 000

Categories (x-axis):
- Pre-wave 3 (17 Feb 2021-08 May 2021)
- Wave 3 (09 May 2021-18 Sep 2021)
- Pre-wave 4 (19 Sep 2021-27 Nov 2021)
- Wave 4 (28 Nov 2021-05 Feb 2022)
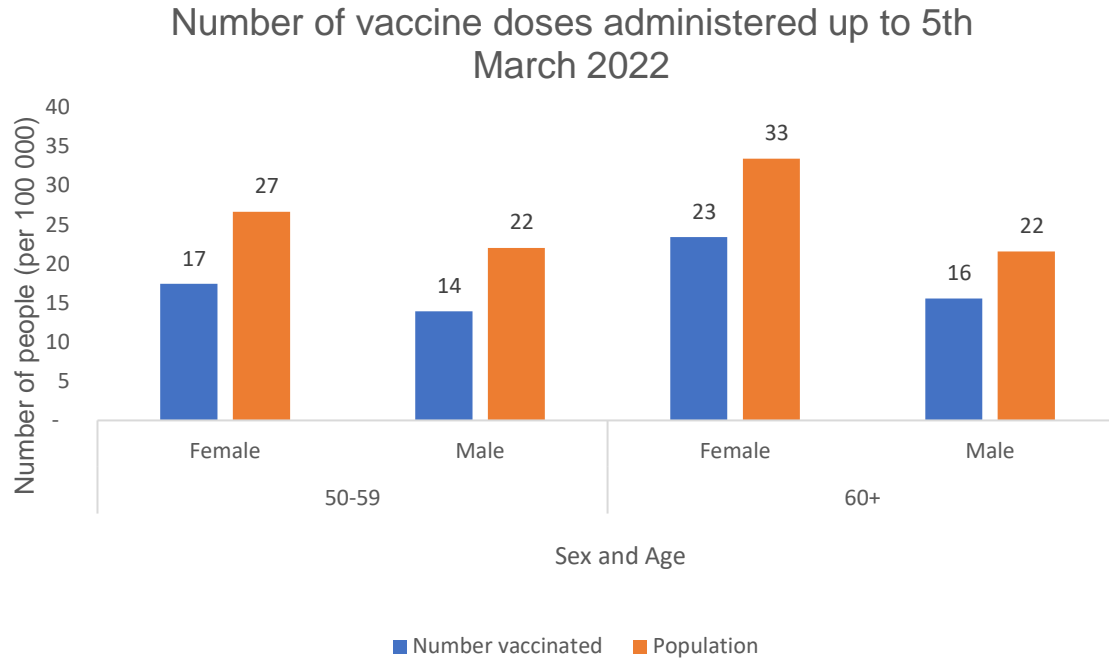
Legend: ■ 50-59 vaccinated ■ 60+ vaccinated ■ 50-59 unvaccinated ■ 60+ unvaccinated

- Vaccine uptake higher before Wave 3 among 50-59 year old people due to vaccine roll-out strategy
- Vaccine uptake increased for 60+ years during Wave 3 also due to roll-out strategy but decreased thereafter
- Stagnation in vaccination uptake in both age groups

*Data Source: retrieved the vaccination coverage as at 5th March 2022 & graphed by age and those vaccinated versus not vaccinated, for 50-59 year olds and 60+. Vaccination numbers were subtracted for each wave period from the total vaccinations administered for each age group.*

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# COVID-19 Vaccinations by sex



Number of vaccine doses administered up to 5th March 2022

- data suggest that more females have been vaccinated than males
- uptake being mostly among females aged ≥ 60 years.
- NB: we do not have data stratified by the two doses required for complete coverage for the Pfizer vaccine.

*Data Source: retrieved the vaccination coverage as at 5th March 2022 & graphed by age and sex with the Stats SA mid-year population, 2021 for the target age groups*

| Indicator: Demographics | | | |
|---|---|---|---|
| **Indicator** | **Literature review** | **Quantitative analyses of available survey and surveillance data** | **Recommendations** |
| **Age** | Unspecified age group, few studies included 50+ and 90+ year olds; | Participation was low for 70+ in the general population | Targeted research on older persons aged 70+ years<br><br>Older age group are heterogenous and not a one size fit all approach might miss some people |
| **Gender** | No explicit focus on gender | Surveys had more participation from females; better vaccine uptake among females | Need for more information on gender issues<br><br>Need to target older men in future research, particularly pertinent for vaccine uptake |

# Synthesis: Key findings and recommendations

| Indicator: socio-economic | | | |
|---|---|---|---|
| **Indicator** | **Literature review** | **Quantitative analyses of available survey and surveillance data** | **Recommendations** |
| **Economic** | hospitalised older persons with Covid-19 were generally dependent & malnourished. Poverty & hunger amongst older persons in sub-Saharan Africa escalated during the pandemic. | low socio-economic status among older persons; 80+ years mostly have low socio-economic status; 50–59-year-old people are economically active but expressed food insecurity & not being able to pay bills during lockdown | need to conduct in-depth research of economic differences & associated factors among near old & older aged persons. |
| **Support & care** | Need for support to have access to information & communication technology; including care strategies for older persons, example: being able to use smart phones or tablet devices for video-calls, smart tvs<br><br>End-of-life & palliative care, complex ethical issues such as in-home dying | | Explore ways to connect older persons with technology |
| **Access to health care** | strained public health systems contributed to uptake of traditional & home-remedies by the elderly | | investigate the use of home remedies or traditional medicine among older persons<br><br>collaboration between social workers, care givers & health authorities to develop social & health programmes that facilitate older person's access to healthcare during shocks such as unrest, natural disasters, future epidemics |

| Indicator: health | Psychosocial implications of COVID-19 |
|---|---|
| **Literature review** | Pre-existing mental health issues: isolation & loneliness among those with mental health disorders may escalate to suicidal thoughts, especially for those living alone with limited support. |
| | Found increase in prescribed antipsychotic medication. |
| | Challenges: social isolation, social stigma & negative stereotypes. |
| | Social isolation due to restrictions on movement was associated with loneliness, depression, anxiety & distress, potential increases in cognitive impairment & disruptions to daily life. Reduced physical activity. |
| | Compromised ability to receive support from caregivers. Grandparents identified the need for connections with family & grandchildren & the need to feel valued. |
| | High rates of technophobia may compromise their ability to engage digitally. |
| **Quantitative analyses of available survey & surveillance data** | 80+ felt bothered; expressed lack of pleasure in life. |
| | All older persons felt some degree of mental anguish. |
| **Recommendations** | Early in the pandemic, the focus was on older persons as high risk, rather than their overall wellbeing. |
| | Need to identify practical measures that could balance the need for social distancing against feelings of loneliness & isolation. |
| | Qualitative research to delve into older persons experiences since COVID-19 emerged & to identify their support needs during shocks in our context. |
| | Practical & targeted interventions to promote social connectedness and activity e.g participation in clubs, community organisations, teach skills to others, try new activities |
| | Consider ways to improve literacy in general & specifically digital literacy & their ability to access & use platforms such as video calls, whatsapp. |
| | Review communication strategies to improve social connectedness. |
| | Look into ways to support physical activity & staying active among older persons in South Africa. |

| Indicator: surveillance | | | |
|---|---|---|---|
| **Variable** | **Literature review** | **Quantitative analyses of available survey and surveillance data** | **Recommendations** |
| **Types of studies** | Biomedical issues dominated the literature i.e.; surveillance studies, comorbidities, characteristics of COVID-19, medication/treatment options.<br><br>Studies done on mortality in care homes. | Analysed publicly available data on cases, mortality & vaccines, which limited the extent of the analyses that could be done. | Need for targeted primary research on older persons stratified by age groups, sex & locality |
| **Profiling older patients with COVID-19** | Common symptoms were headaches, fever, cough & fatigue. Comorbidities, which included diabetes, cardiovascular disease, & hypertension.<br><br>Leading causes of hospitalisation for older patients were fever, dyspnoea, geriatric syndromes, e.g., falls, delirium and malaise.<br><br>Comorbidities & confusion more common in older patients than younger patients. | | Promote "active ageing."<br><br>Promote positive attitudes towards ageing |

# Indicator: surveillance

**Literature review:**

Found few studies on COVID-19 testing. Studies reported pneumonia, heart disease, diabetes as comorbidities.

Mortality among older persons was a critical issue.

**Recommendations:**

- Need for targeted primary research on testing behaviour among older persons stratified by age groups, sex & locality.

- Also need to look at current testing strategies in settings such as care facilities.

- Asymptomatic carriers represent a risk for onward transmission unknowingly.

- Gaps identified with similar work assessing the impact of comorbidities in the context of COVID-19 in our setting.

## Indicator: vaccine uptake

- **Literature review:** Found few studies focused on vaccination; few studies examined issues pertaining to COVID-19 vaccinations.

- US-based study, vaccine coverage was highest among ≥ 65 years compared to younger age groups.

- requirement to register for the vaccine online was reported as a major barrier to the uptake of vaccination by older persons

**Quantitative analyses of available survey and surveillance data**

- more females vaccinated than males

- not being able to access or easily use the electronic vaccination system

**Recommendations:**

- more research needed to understand uptake of the vaccines

- exploratory, qualitative social science research to understand older persons perspectives on vaccines; experiences of vaccine hesitance, barriers to uptake, acceptability

- data stratified by vaccine type, sex, locality, age, marital status, living arrangements. Consider the influence of their immediate families (spouse, children) in decision making around vaccines

- assess existing strategies to reach older people who have not been vaccinated yet, or who need booster doses of vaccine

- distinguish between hesitancy & barriers to uptake among older persons

# Study limitations

- We proposed a data driven analytical approach. Hence the analyses depends on the completeness, quality & timeliness of the data being available within the project time frame.

- Surveillance data that were manually extracted are time dependent & potentially impacts the results & recommendations presented.

- Due to the aggregated nature of the data, we were unable to link specific health, socio-economic & psycho-social factors to the COVID-19 outcomes for our target age group.

- We do not have testing data for our specific target age groups. Health-seeking behaviour differs by age & sex for other health issues. Related heterogeneities could contribute to observed differences in the cumulative & new case counts between ages in our target groups.

- However, we synthesised data into an evidence base for near old and older persons in South Africa.

# Recommendations

**heterogenous older age ``group"**

explore their lived experiences of COVID-19; the impact on their lives & livelihoods

specific theme: lives pre- and post-COVID including areas of health care and support access (e.g. food vouchers, social grants), information sources & dissemination streams for vaccinations including booster doses

**gender**

no explicit focus on gender issues related to the emergence & spread of COVID-19

**socio-economic**

older persons from low socio-economic circumstances have vulnerabilities including hunger, malnourishment, food insecurity, not being able to pay bills.

Strategies to ensure continuity of support should be explored together with measures to enhance safety of the elderly who collect government pensions in person

**dis connectedness**

Disconnected physically & by not having the technological know-how or resources in terms of hardware & associated data. Need to identify barriers & facilitators for connectivity. Related to this, we could identify ways to educate older people on the benefits/value of using the devices they are able to access

# Recommendations

**differentially abled**

Need to understand individual & social factors related to disability & COVID-19

**mental anguish**

improve COVID-19 literacy and indeed other epidemics, using their home languages, culturally & contextually appropriate dissemination mechanisms

**COVID-19 testing, vaccinations**

training nurses & support staff within residential facilities to perform COVID-19 screening & testing of older persons,

how accessible are testing centres for older persons in communities?

# Project Team

# Thank you

| | | |
|---|---|---|
| **Dr Inbarani Naidoo** | Human Sciences Research Council | Lead investigator, data analyst |
| **Dr Candice Groenewald** | Human Sciences Research Council | Co-lead investigator, qualitative data analyst |
| **Dr Zaynab Essack** | Human Sciences Research Council | Co-investigator, qualitative data analyst |
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| **Mr Dane Isaacs** | Human Sciences Research Council | Co-investigator, qualitative data analyst |
| **Ms Katlego Mokonoto** | Human Sciences Research Council | Intern from Presidential Youth Employment Intervention |
| **Dr Tarylee Reddy** | South African Medical Research Council | Co-investigator, lead biostatistician |
| **Ms Nada Abdelatif** | South African Medical Research Council | Co-investigator, biostatistician |
| **Ms Mikateko Mazinu** | South African Medical Research Council | Co-investigator, biostatistician |
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