# Covid-19 Insights from SA

Risenga Maluleke
Statistician-General

stats sa
Department:
Statistics South Africa
REPUBLIC OF SOUTH AFRICA

*Appreciation of the age structure of the country is essential as well as of epidemiology so that application of other countries to SA can be assessed.*

First case on 6 March resulted in various projections being made

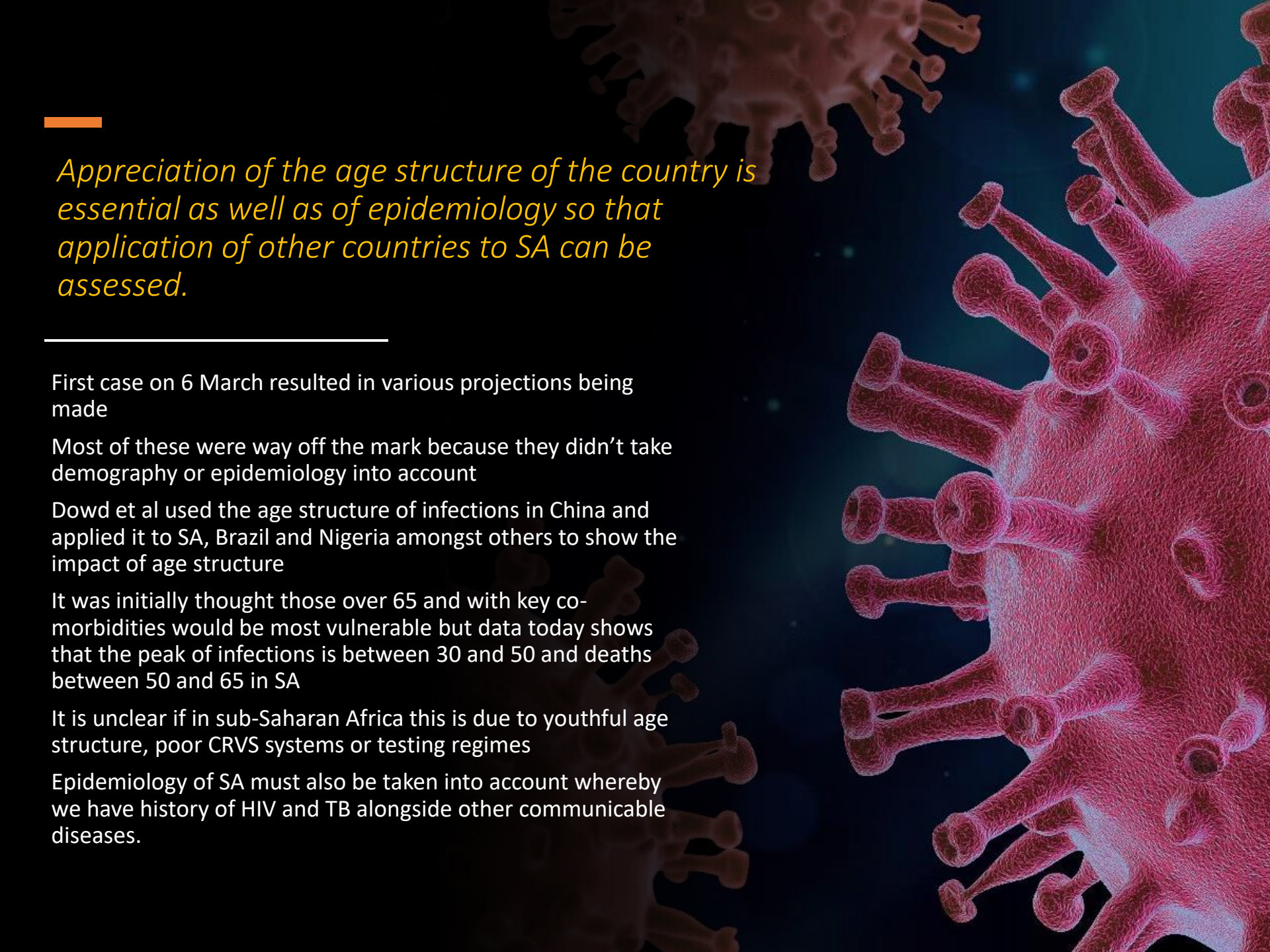
Most of these were way off the mark because they didn't take demography or epidemiology into account

Dowd et al used the age structure of infections in China and applied it to SA, Brazil and Nigeria amongst others to show the impact of age structure

It was initially thought those over 65 and with key co-morbidities would be most vulnerable but data today shows that the peak of infections is between 30 and 50 and deaths between 50 and 65 in SA

It is unclear if in sub-Saharan Africa this is due to youthful age structure, poor CRVS systems or testing regimes

Epidemiology of SA must also be taken into account whereby we have history of HIV and TB alongside other communicable diseases.



# EC, GP and FS have followed the peak by the WC

***Confirmed incidence risk by Province per 100,000***

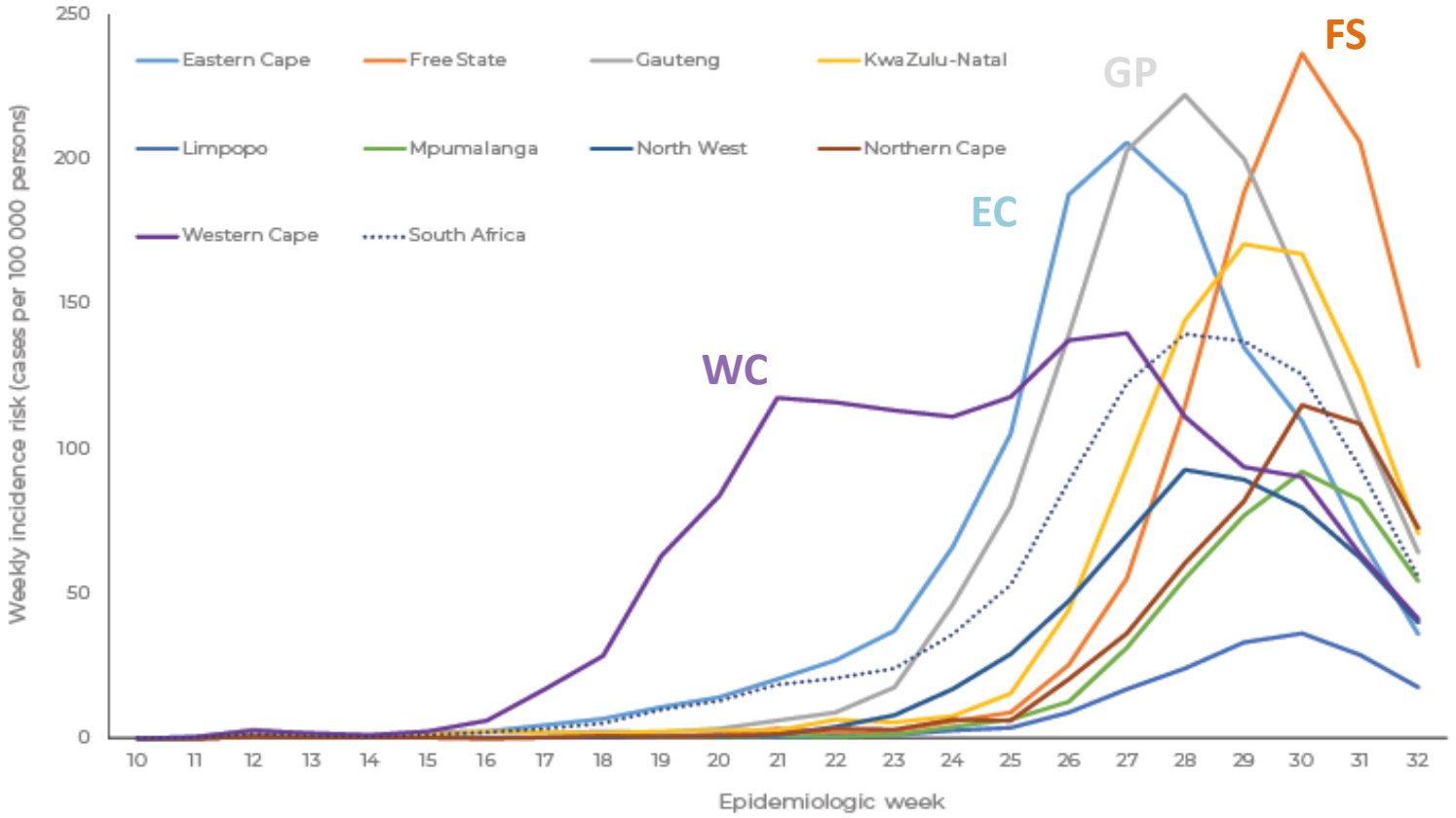



Figure 4. Weekly incidence risk of PCR-confirmed cases of COVID-19 by province and epidemiological week, South Africa, 3 March-8 August 2020 (n=559 281, 577 missing dates of specimen collection/province allocation)

# **Female** cases between ages of 25 to 49 are the most likely to be recorded as infected

***Confirmed Cases by Age Group***

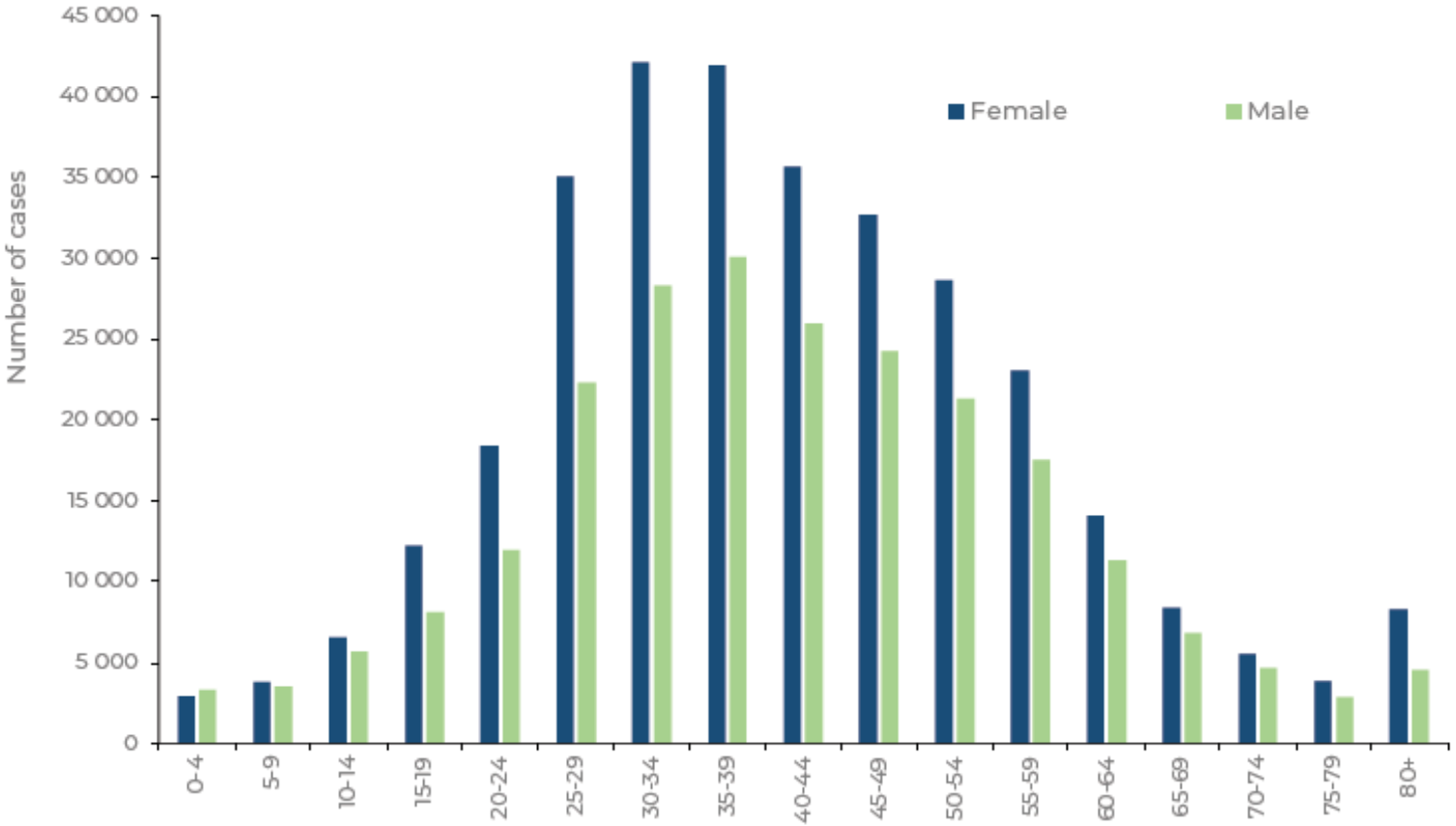
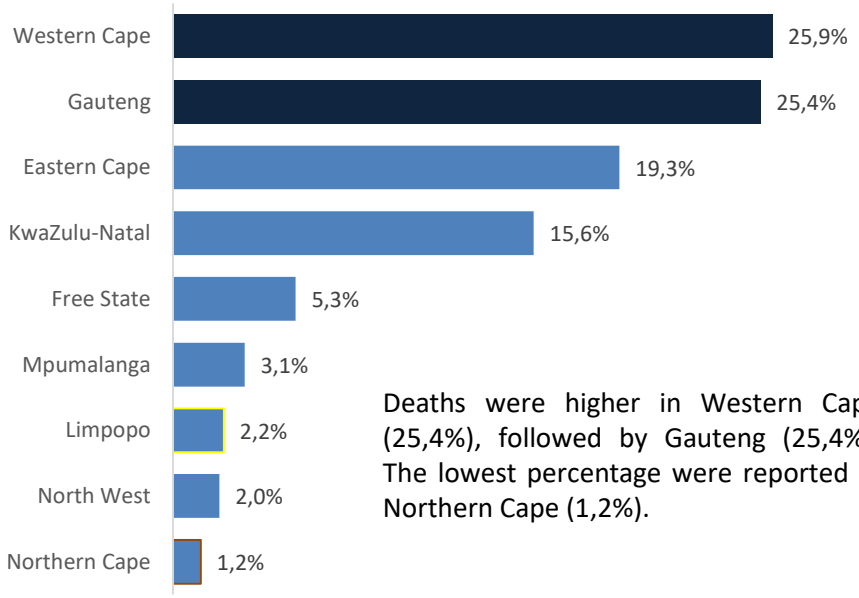



Figure 6. Number of laboratory-confirmed cases of COVID-19 by age group and sex, South Africa, 3 March-8 August 2020 (n= 555 674, sex/age missing for 4 181)

# By age group, COVID-19 deaths were high amongst persons aged 60–69 (26,9%), followed by persons aged 50–59 (22,4%).

*COVID-19 deaths by Age Group*

| Age group | Male | Female | Total |
|---|---|---|---|
| 0–9 | 0,2 | 0,2 | 0,2 |
| 10–19 | 0,2 | 0,4 | 0,3 |
| 20–29 | 1,5 | 0,9 | 1,1 |
| 30–39 | 5,7 | 4,3 | 4,9 |
| 40–39 | 10,5 | 11,5 | 11,0 |
| 50–59 | **21,6** | **23,1** | **22,4** |
| 60–69 | **25,4** | **28,3** | **26,9** |
| 70–79 | **19,7** | **19,8** | **19,7** |
| 80+ | 15,1 | 11,5 | 13,2 |
| Unknown | 0,2 | 0,2 | 0,2 |
| Total | 100,0 | 100,0 | 100,0 |




Deaths were higher in Western Cape (25,4%), followed by Gauteng (25,4%). The lowest percentage were reported in Northern Cape (1,2%).

## Percentage distribution of COVID-19 deaths by age and province

# Age 40-59 has the highest incidence of cases at around 1700 per 100 000,

***Cumulative Incidence Risk by Age***

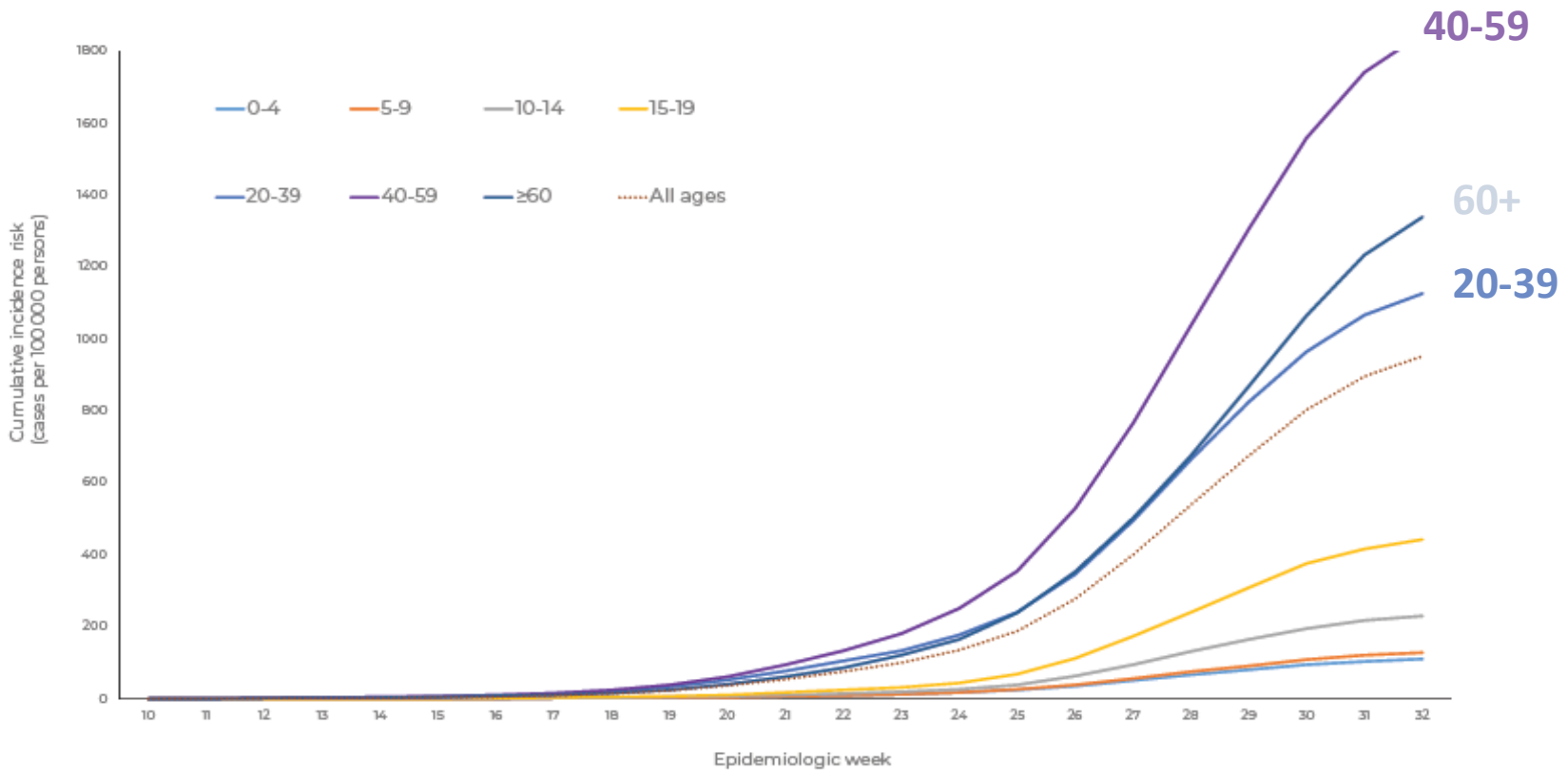



Figure 7. Cumulative incidence risk of PCR-confirmed cases of COVID-19 by age group in years and epidemiologic week, South Africa, 3 March-8 August 2020 (n=559 333, 525 missing dates of specimen collection)

# Females  have a highest incidence of cases at around 1100 per 100 000

***Cumulative Incidence Risk by Sex***

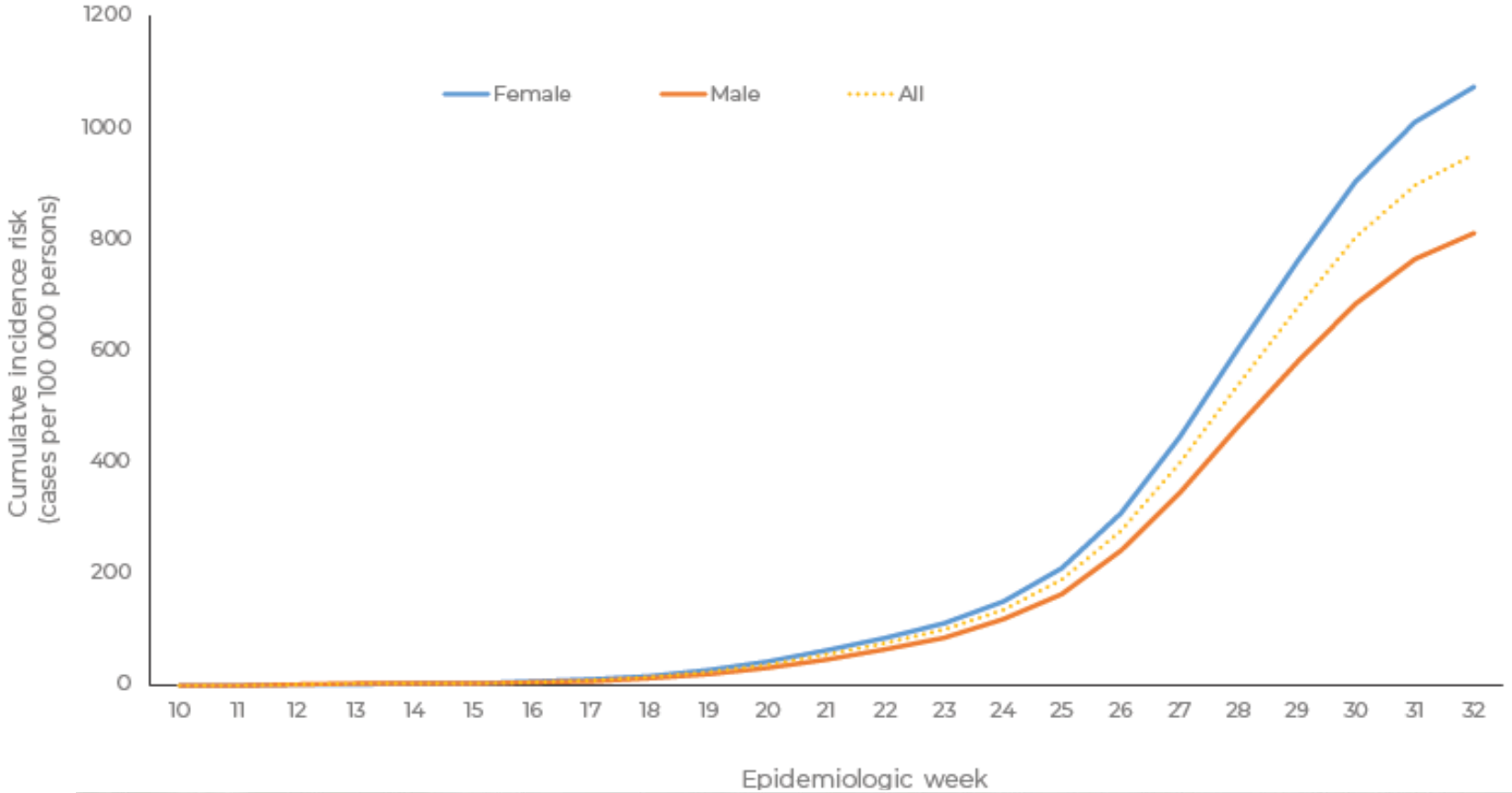


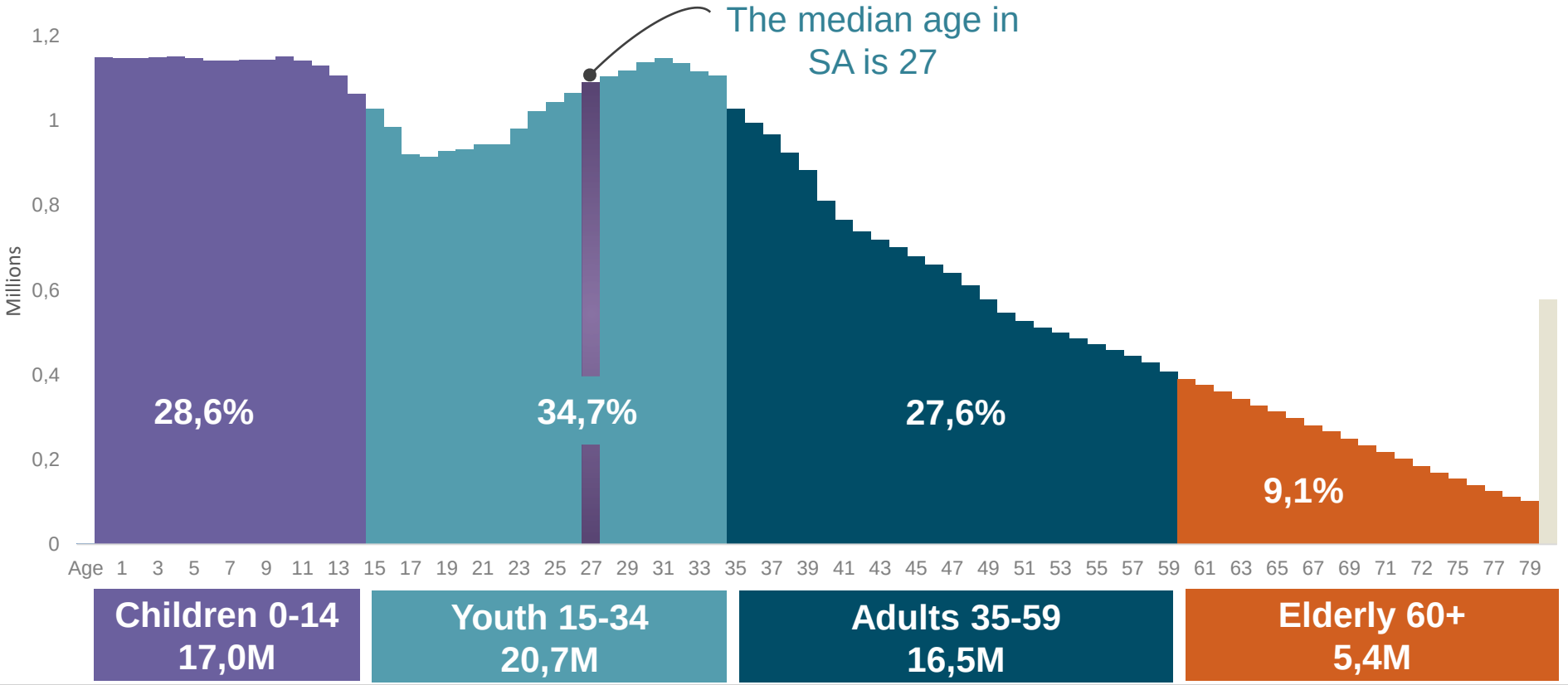

Figure 8. Cumulative incidence risk by sex and epidemiological week, South Africa, 3 March-8 August 2020 (n=555 766, sex specimen collection date missing for 4 092)

**Demography and epidemiology must go hand in hand and the overlaying impact of geography must not be overlooked due to different age structures and health risks in different areas**

# Children and youth amount to nearly 38M in SA

Children aged 0-14 and young people aged 15-34 make up more than 60% of the population.

***Population age structure by single years, 2020***

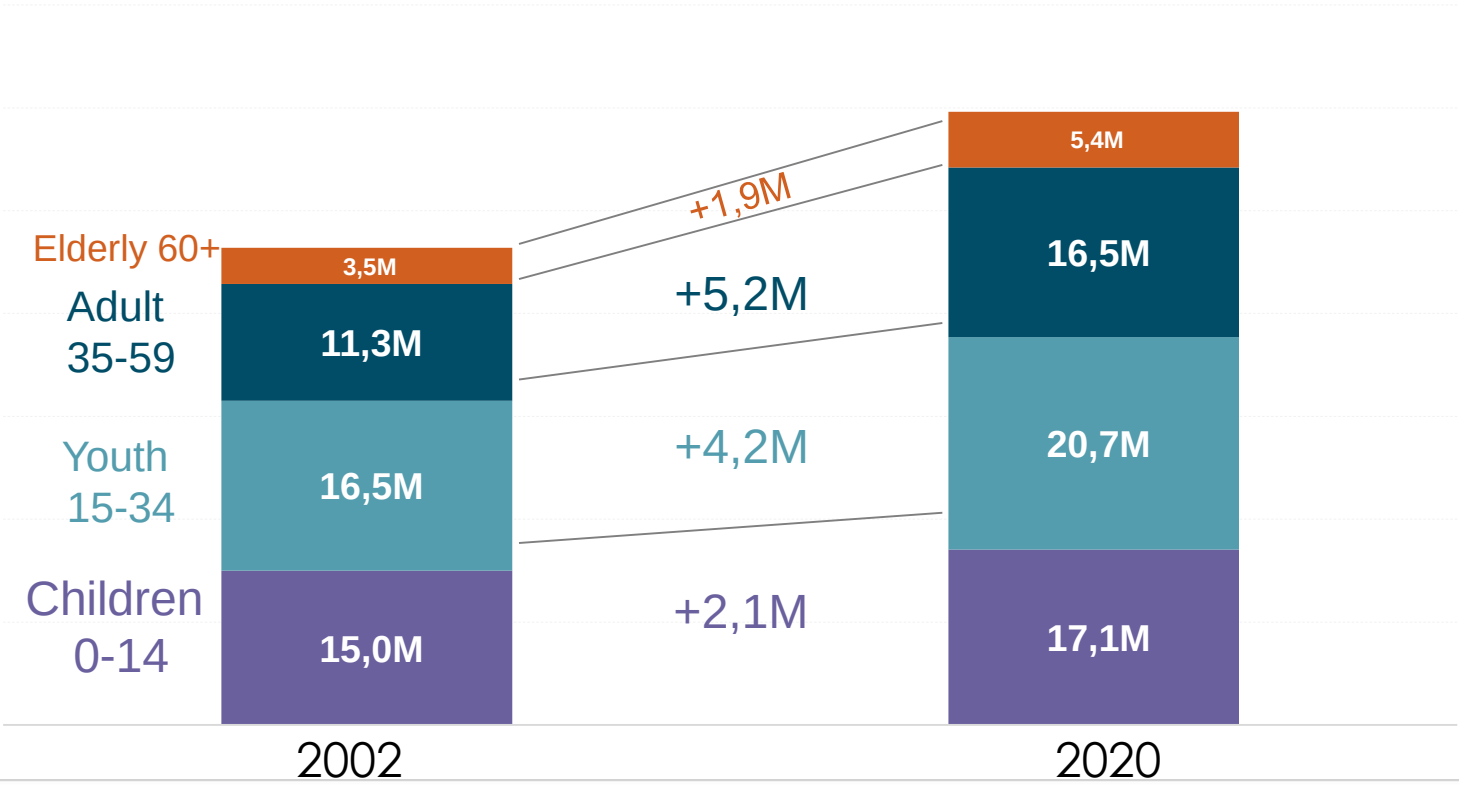



*Source: MYPE 2020*

# Youth 15 – 34 has increased by 4,2m between 2002 & 2020

Children age 0-14 and adults age 15-34 make up more than 60% of the population.

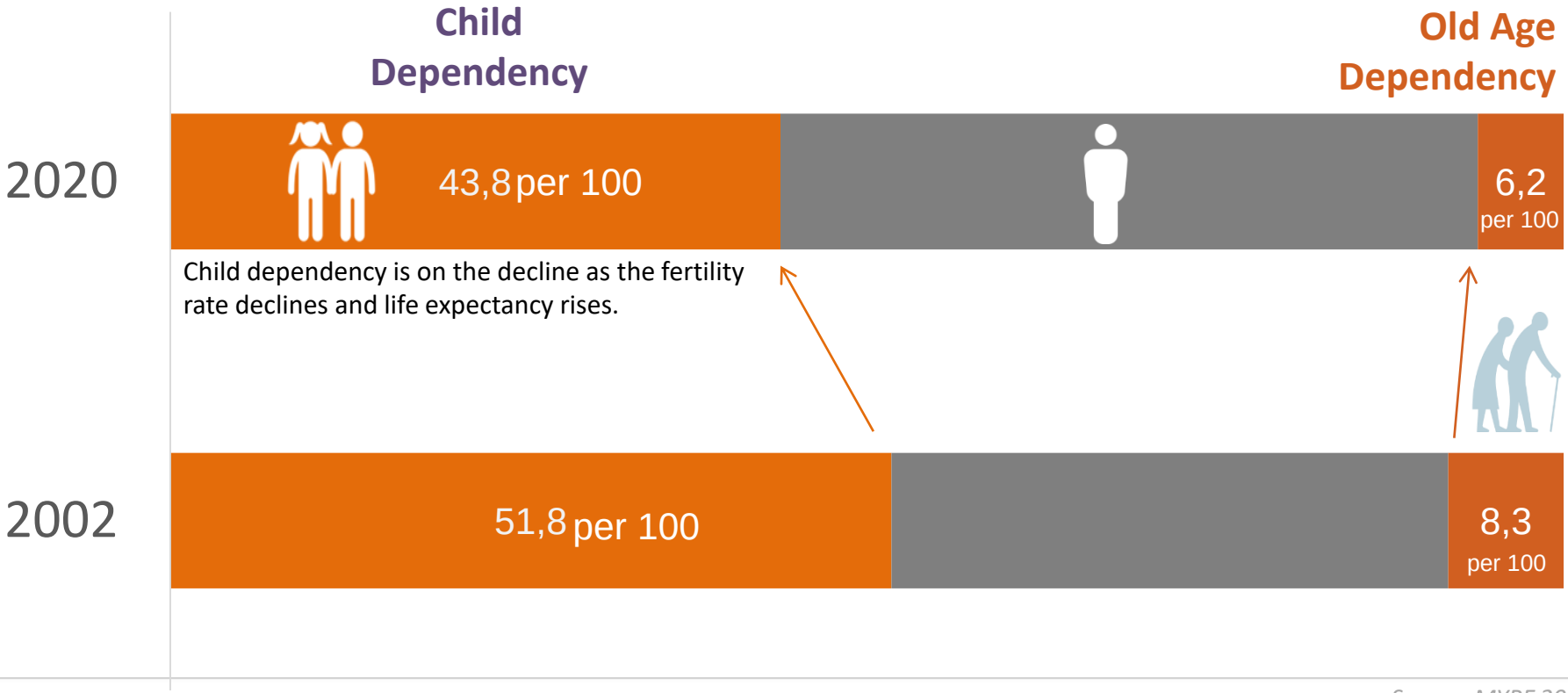
***Population growth by age groups over time, 2002–2020***




*Source: MYPE 2020*

# Burden of care in SA has declined over time. Child and old age dependency ratios show a decrease since 2002

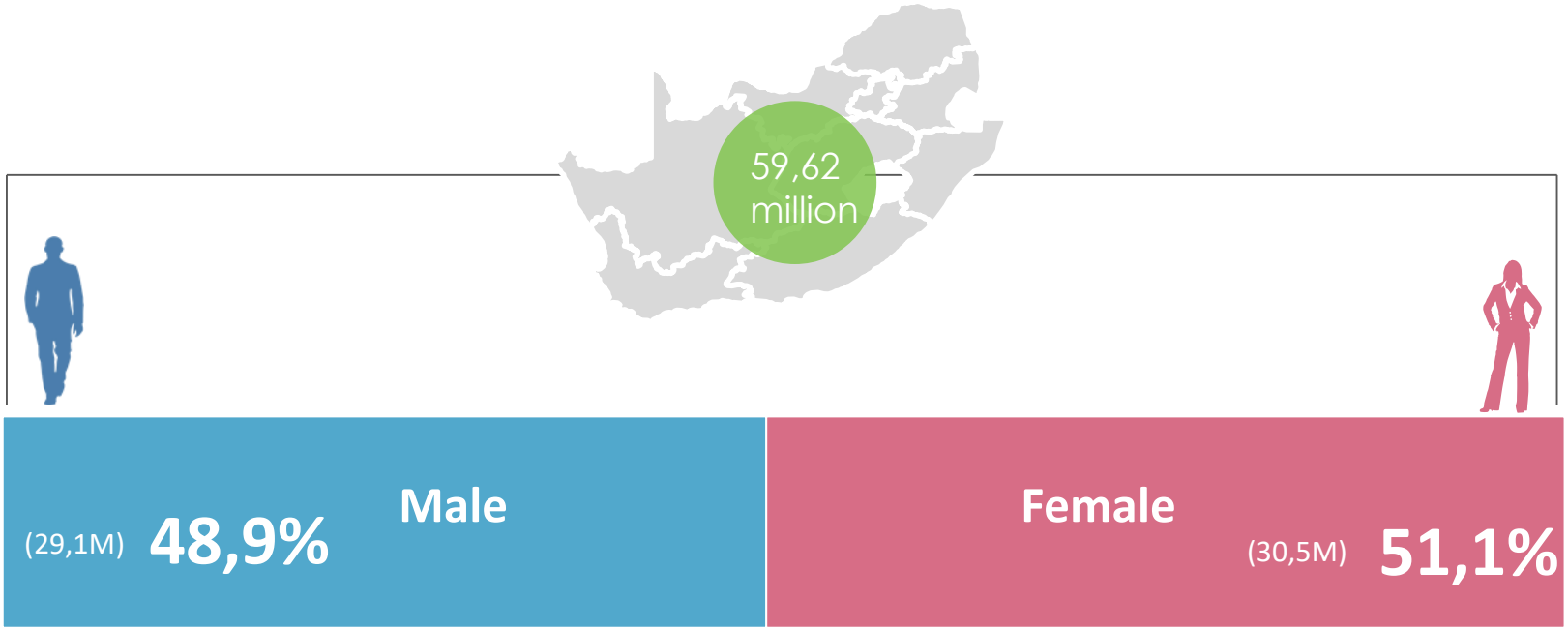
*Old Age and Child Dependency Ratio's 2002 - 2020*




*Source: MYPE 2020*

# Approximately 51,1% (30,5 million) of the population is female.

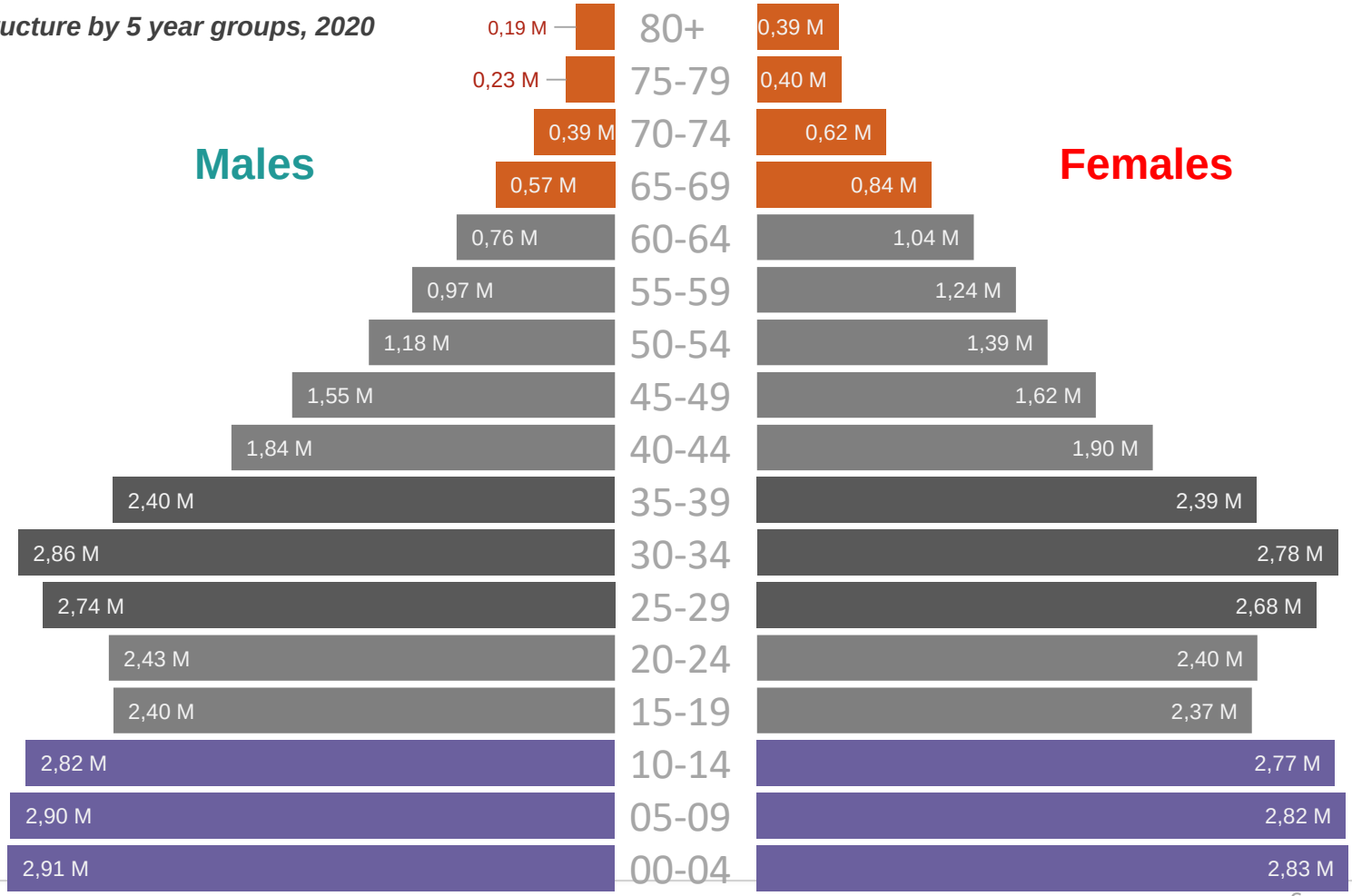
*South Africa's population, mid-2020*




*Source: MYPE 2020*

# There is a surplus of females to males at older ages, as well as a significant youth bulge aged 25-39

*SA age structure by 5 year groups, 2020*




*Source: MYPE 2020*

# Issues related Fertility, Age Structure and Migration

## Fertility

Continues to drive population growth in SA and will continue to do so

Raging debate around children and the risk they are exposed to and that they represent

Concerns exist over access to reproductive health services but consensus is that in tough economic times fertility will slow down slightly until health improves

## Age Structure

NICD consortium of modellers predicts 50,000 deaths by end of October (May, 2020)

Equates to 10% of all annual deaths with 2/3 occurring to those over 60

Age structure may be impacted slightly at older ages but no evidence of de-population occurring

Excess Deaths

## Migration

With lockdown and closing of international borders international and internal migration to a lesser extent has ground to a halt

Main repercussion is amongst payment of remittances which is expected to drop by 20%

Key source of income = 3x Overseas Development Assistance prior to pandemic

Despite slowdown of migration hardening of anti-migrant attitudes due to resentment of foreigners at work or in public hospitals in tough social, economic and health environment

# Contribution from Stats SA

Stats SA has been able to release 3 waves of population based online surveys during the most intense phases of lockdown dealing with poverty, unemployment, migration, education and health status

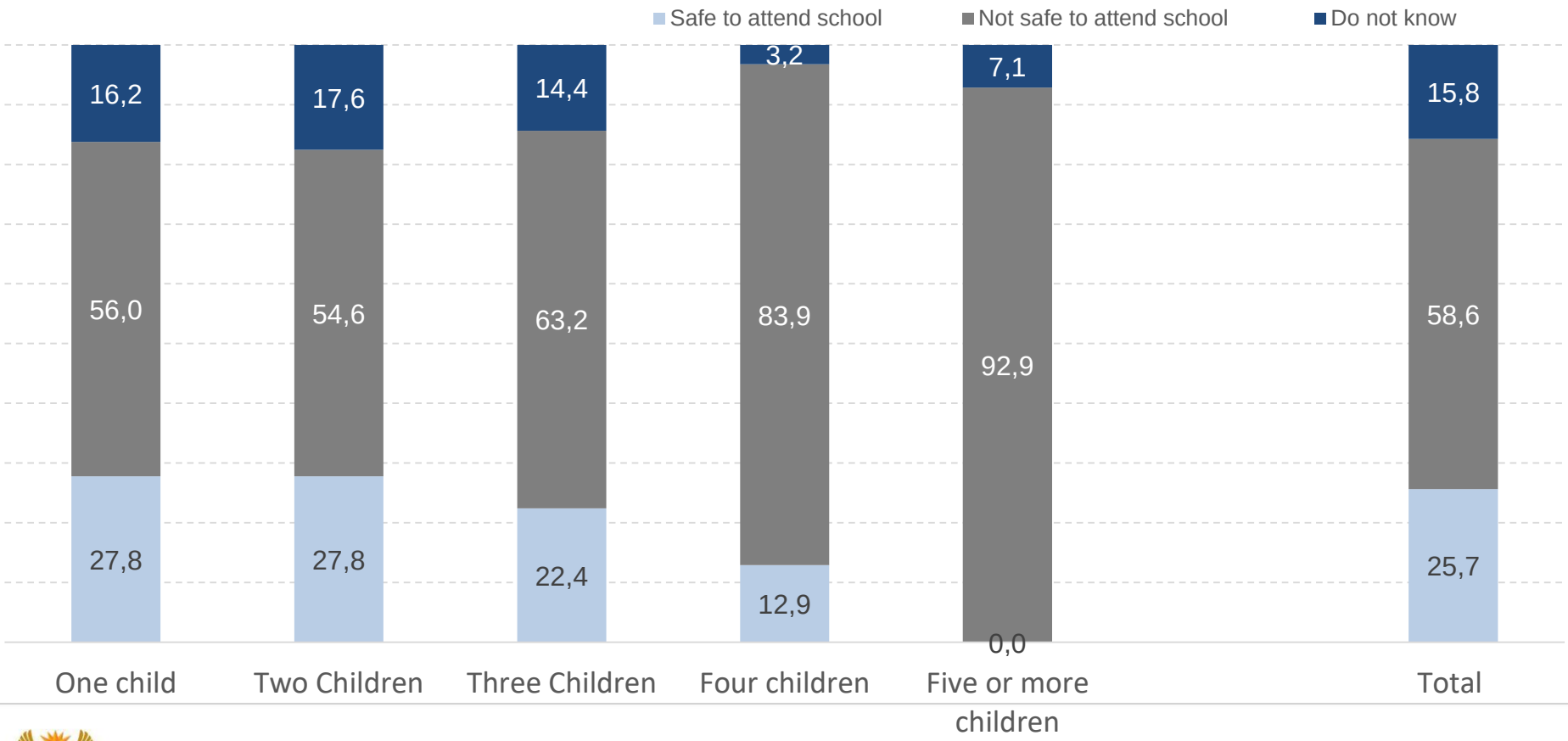
3 waves on economic online surveys assessing the impact on the economy

Ongoing work being done on vulnerability index

# 1 out of 4 respondents thought it was safe for the children to attend school

Behavioural and health impacts of the COVID-19 pandemic in South Africa (experimental study)

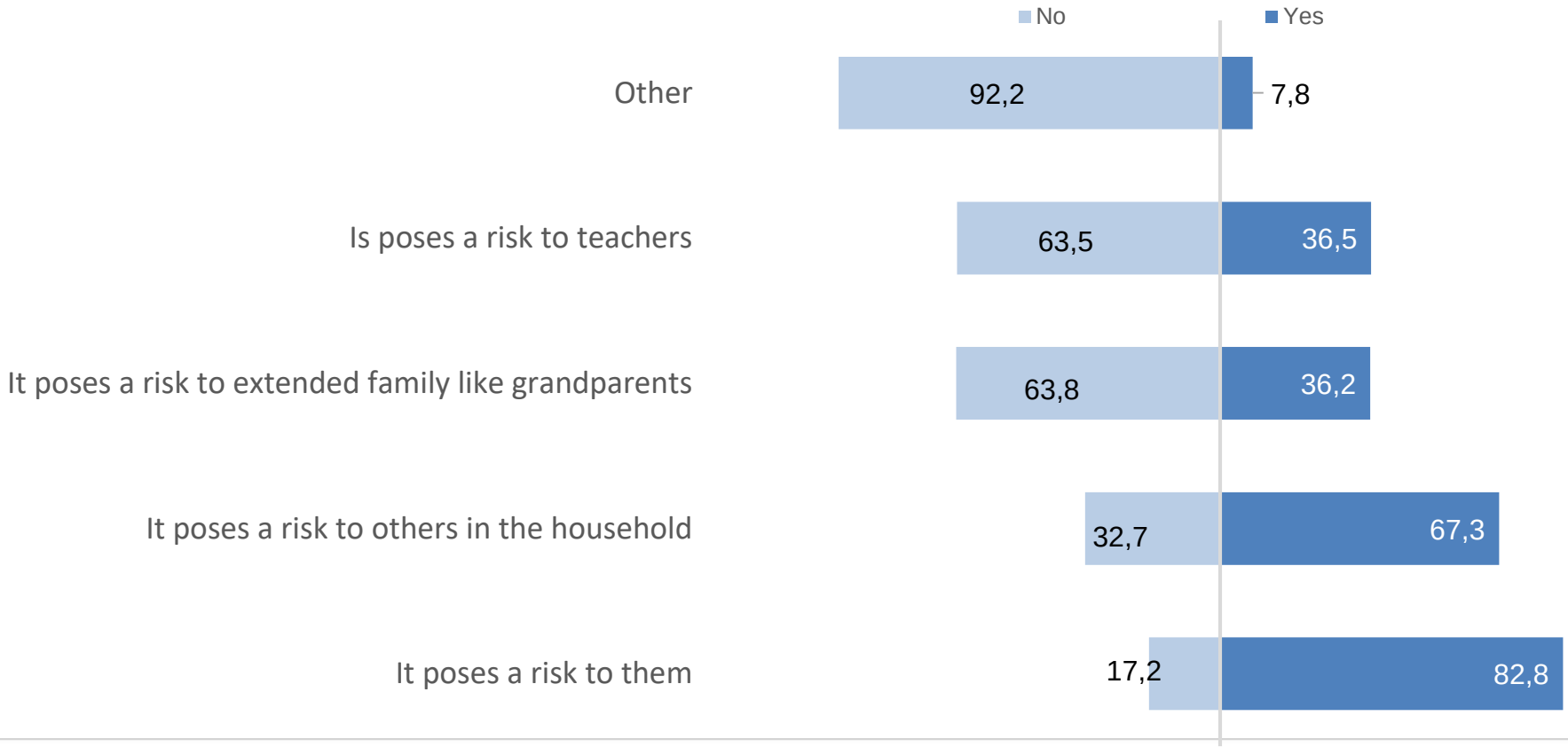
***Percentage distribution of respondents who think that it is not safe for their children to attend school***



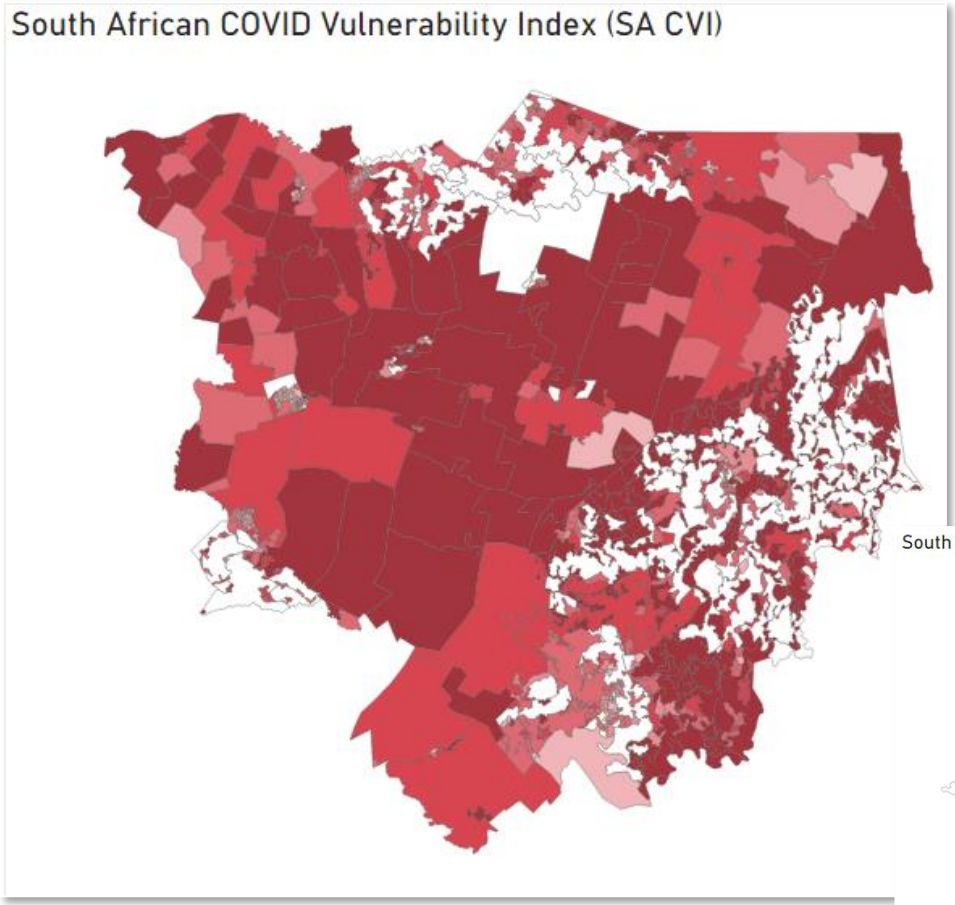
# 8 out 10 of respondents said attending school poses a risk to the children

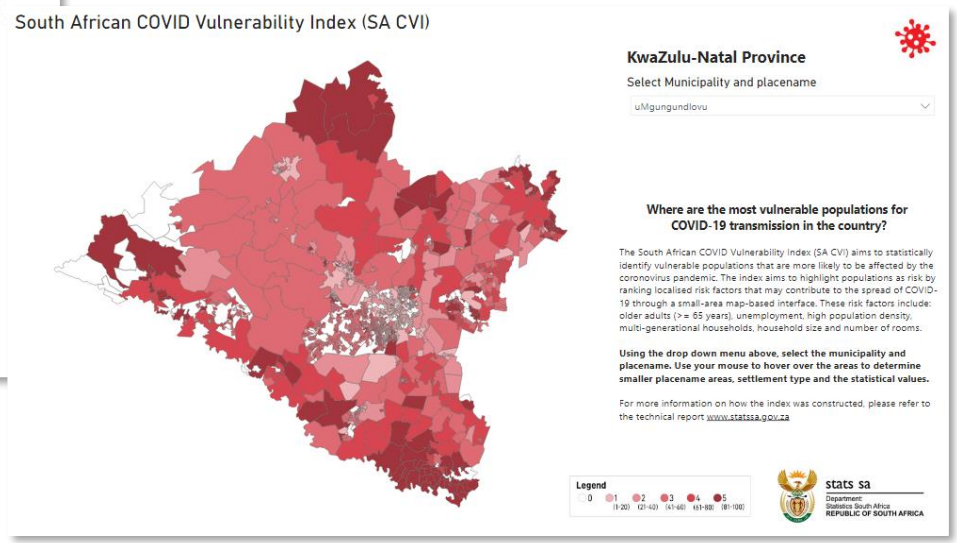
Behavioural and health impacts of the COVID-19 pandemic in South Africa (experimental study)

***Percentage distribution of respondents by reasons given why it is not safe for children to attend school***



# Examples of Vulnerability Dashboards



# Ndzi hela Kwala