

# COVID-19 WEEKLY EPIDEMIOLOGY BRIEF



NATIONAL INSTITUTE FOR COMMUNICABLE DISEASES

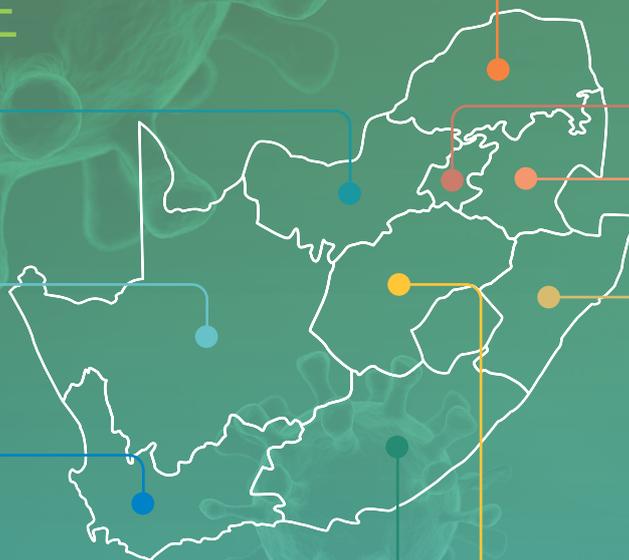
Division of the National Health Laboratory Service

SOUTH AFRICA WEEK 22 2020

## CUMULATIVE DATA FROM



## PROVINCES AT A GLANCE



\* Incidence risk - cases per 100 000 persons

## SUMMARY

### Overview of report

Disease surveillance is a core function of the National Institute for Communicable Diseases (NICD), a Division of the National Health Laboratory Service (NHLS). This report summarises information from several surveillance systems that are used to monitor the coronavirus disease 2019 (COVID-19) pandemic in South Africa. This report is based on data collected up to 30 May 2020 (week 22 of 2020) for national and provincial analysis. Note: COVID-19 is the name of the disease and SARS-CoV-2 is the name of the virus.

### Highlights

- As of 23:59 on 30 May 2020, a total of 32 683 laboratory-confirmed COVID-19 cases had been detected in South Africa. Of these, 10 100 were reported in this reporting period. A total of 761 (202 new deaths reported in past week) cases died with a case fatality ratio of 2%.
- The public-sector continues to report more cases than the private-sector. This may reflect the ongoing increasing access to testing in the public sector as well as transmission of COVID-19.
- The three provinces, Western Cape, Eastern Cape and Gauteng continue to report the majority of cases. Western Cape Province reported the highest total number of cases, 65% (21 382/32 683) of total cases. The incidence risk (cumulative incidence) was highest in the Western Cape Province (312.4 cases per 100 000 persons); 95% confidence interval [CI] 308.2-316.6) followed by Eastern Cape (58.5 per 100 000 persons 95% CI 56.7-60.4) and Gauteng (26.4 per 100 000 persons; 95%CI 25.6-27.2). In the last week, incidence risk increased by 97.0, 18.4 and 8.1 cases per 100 000 persons in Western Cape, Eastern Cape and Gauteng respectively.
- The median age of laboratory-confirmed cases was 38 years (interquartile range [IQR], 29-49 years). Children aged <10 years accounted for 3.0% (872/32 526). The incidence risk was highest among females in the 35-44-year age group (118.3 cases per 100 000 person).

58%  
OVERALL CASES  
WERE FEMALE

55.6  
/100 000  
OVERALL  
INCIDENCE RISK

## LABORATORY-CONFIRMED CASES OF COVID-19 IN SOUTH AFRICA

### Methods

Testing for SARS-CoV-2 began on 28 January 2020 at the NICD and after the first case was confirmed in early March 2020, testing was expanded to a larger network of private and NHLS laboratories. Respiratory specimens were submitted from persons under investigation (PUI). Initially, tested individuals were those who had travelled to countries with COVID-19 transmission but the PUI definition was changed over time. Community symptom screening and referral for PCR testing was implemented in April 2020 but the strategy was changed to a more targeted approach in May 2020. Contacts of cases were traced and tested if symptomatic. In some provinces and in certain circumstances (e.g. closed settings, workplaces), asymptomatic contacts were tested. Laboratories used any one of several in-house and commercial PCR assays to test for the presence of SARS-CoV-2 RNA. Test results were automatically fed into a data warehouse. We excluded specimens collected outside South Africa. Date of specimen receipt in the laboratory was used when date of specimen collection was missing. A case of COVID-19 was defined as any person, resident in South Africa, with a first positive SARS-CoV-2 PCR test. We used 2019 mid-year population estimates from Statistics South Africa to calculate the incidence risk or cumulative incidence (expressed as cases per 100 000 persons). Aggregate data on the number of deaths was obtained from the Department of Health.

### National and provincial trends

As of 30 May 2020, a total of 32 683 cases were detected in South Africa (10 100 new cases since the last report) (Figure 1). The overall proportion positive increased from 4% to 5%. The Western Cape Province continued to report the highest proportion of cases (21 382/32 683, 65.4 %), followed by Gauteng 4 003/32 683, 12.2 %) and Eastern Cape provinces (3 297/32 683, 10.1%) (Table 1). The Western Cape Province had the highest incidence risk (312.4 cases per 100 000 persons) followed by the Eastern Cape (58.5 per 100 000 persons) and Gauteng provinces (26.4 per 100 000 persons). The Northern Cape Province had the lowest incidence risk (1.7 cases per 100 000 persons). The Western Cape Province, followed by the Eastern Cape Province had the highest increase in incidence risk over the last week, increased by 97.0 and 18.4 cases per 100 000 persons, respectively (Table 1 and Figure 5). The cumulative incidence risk for the country was 55.6 cases per 100 000 persons. However, the cumulative incidence risk varied by province over time (Figure 4). This is partly explained by testing differences by province (Table 1). The number of tests performed per 100 000 persons ranged from 165 in the Northern Cape Province to 2 419 in the Western Cape Province.

**5%**  
OVERALL  
PROPORTION  
POSITIVE

**30-34**  
YEAR AGE  
GROUP  
HAD THE LARGEST  
PROPORTION OF  
CASES

# COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

WEEK 22 2020 | LABORATORY-CONFIRMED CASES OF COVID-19 IN SOUTH AFRICA

To date, a total of 671 (202 additional cases in the last week) of 32 683 (2%) cases were reported to have died (Figure 9). A crude case-fatality ratio calculated in this way (number of deaths/ number of diagnosed cases) is subject to numerous limitations. For instance, the CFR may be underestimated because deaths are more likely to be reported if a patient with COVID-19 died in hospital and deaths out of hospital may be missed, in addition deaths may be delayed.

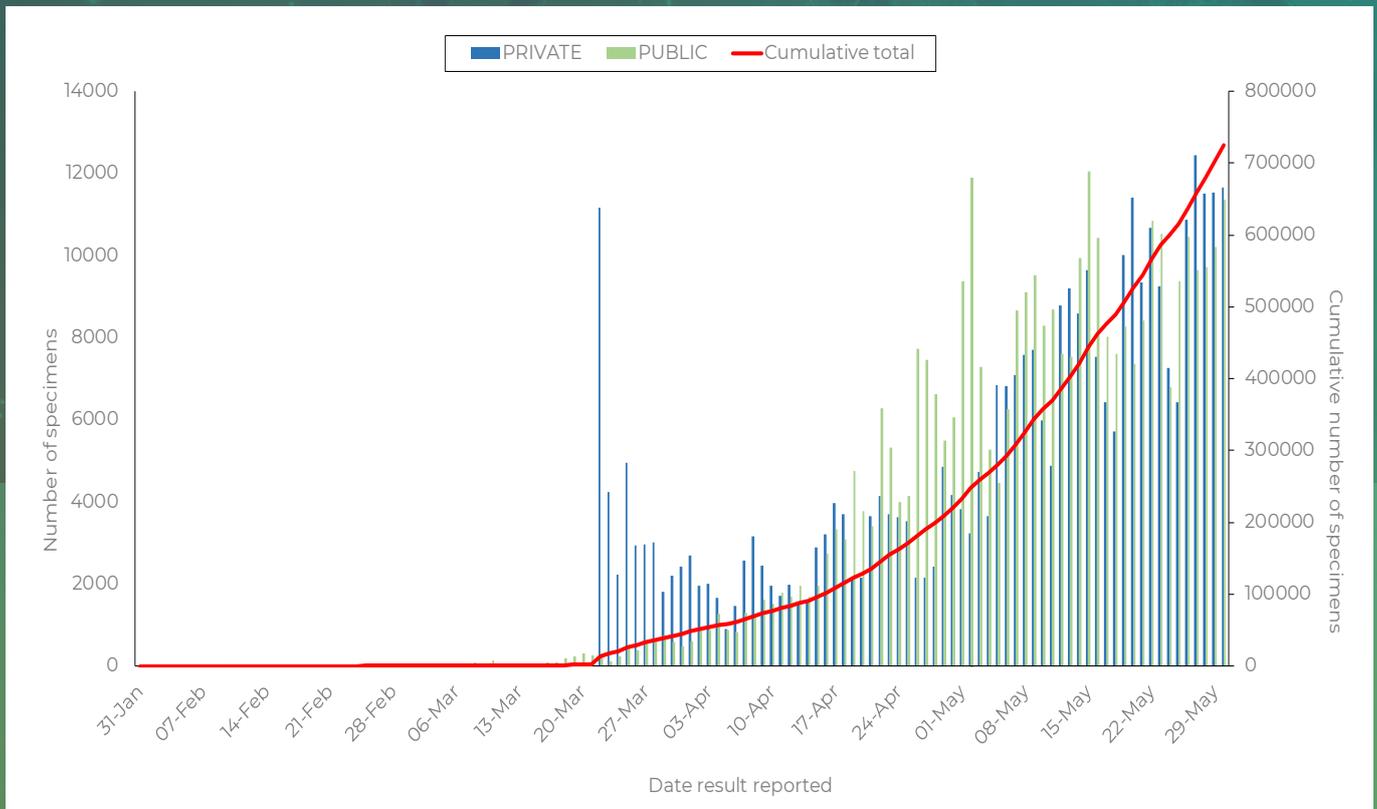
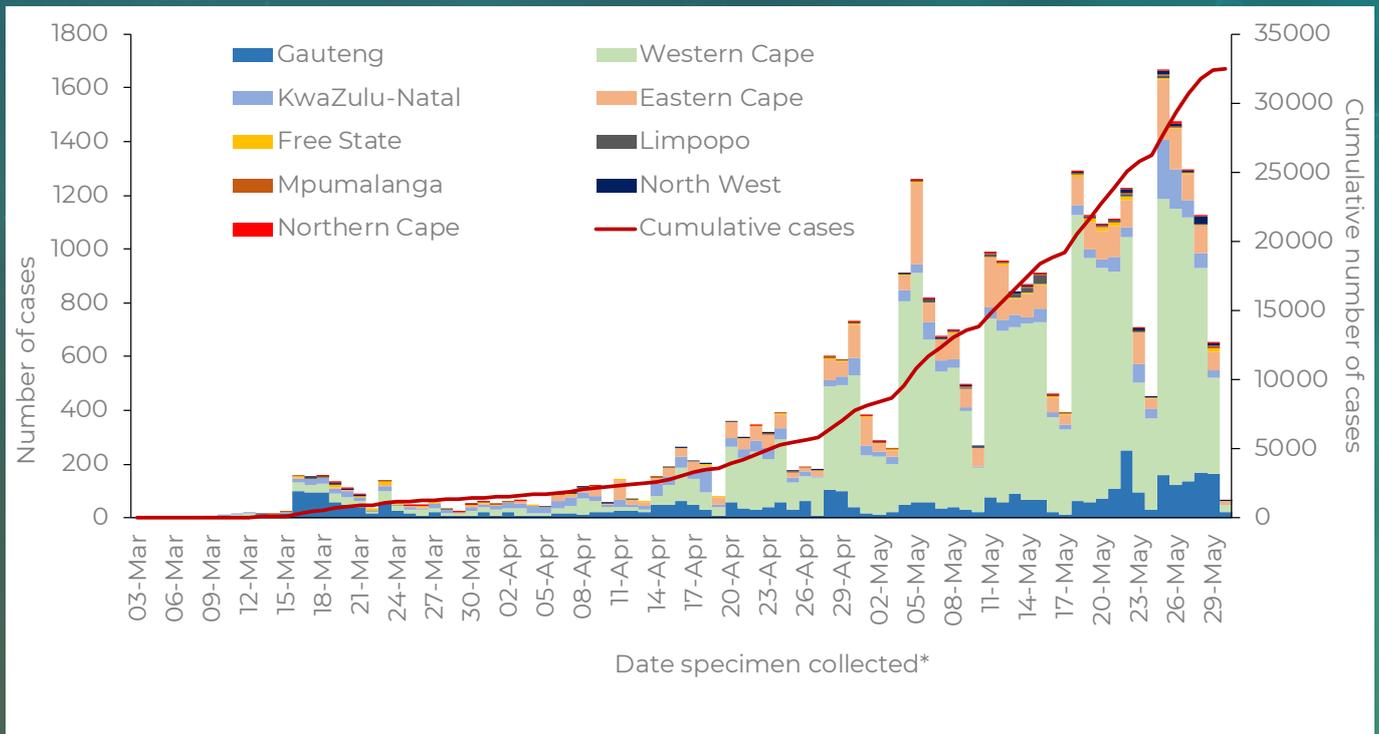


Figure 1. Number and cumulative number of specimens tested for SARS-CoV-2, by testing laboratory sector and date of specimen collection, South Africa, 31 January 2020-30 May 2020 (n=698 394)

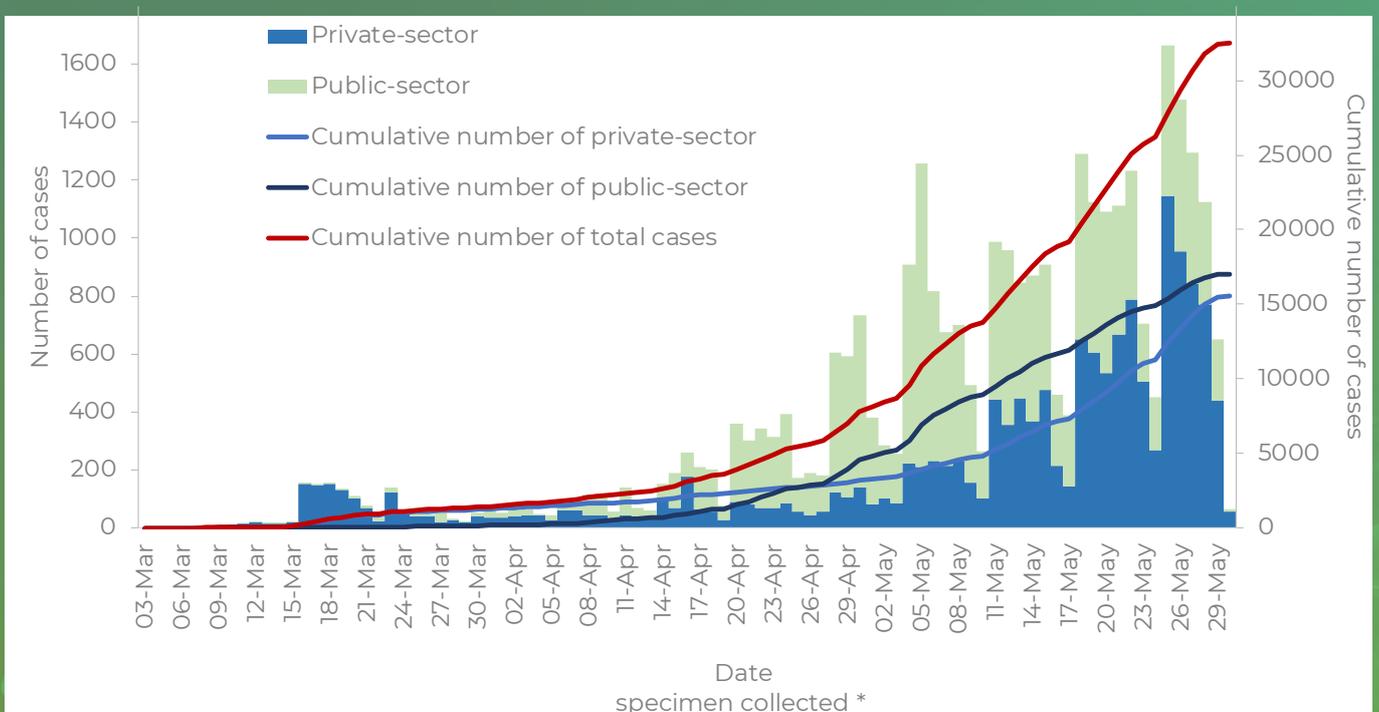
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WEEK 22 2020 | LABORATORY-CONFIRMED CASES OF COVID-19 IN SOUTH AFRICA



\*Date of specimen receipt used where date of collection was missing

Figure 2. Number and cumulative number of laboratory-confirmed cases of COVID-19 by province and date of specimen collection, South Africa, 3 March-30 May 2020 (n=32 506, 177 missing dates of specimen collection)



\*Date of specimen receipt where date of specimen collection was missing

Figure 3. Number and cumulative number of laboratory-confirmed cases of COVID-19, by testing laboratory sector and date of specimen collection, South Africa, 3 March-30 May 2020 (n=32 506, 177 missing dates of specimen collection)

# COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

WEEK 22 2020 | LABORATORY-CONFIRMED CASES OF COVID-19 IN SOUTH AFRICA

Table 1. Number and incidence risk of laboratory-confirmed cases of COVID-19 and testing per 100 000 persons by province, South Africa, 3 March -30 May 2020 (n=32 677, province not allocated for 6 cases)

Province	Cases (n)	Proportion (n/total) (95% confidence interval)	Population in mid-2019* (n)	Incidence risk (cases per 100 000 persons)	Change in incidence risk (cases per 100 000 persons) over the past week	Tests per 100 000 persons
Eastern Cape	3 297	10.1 (9.8-10.4)	6 712 276	58.5 (56.7-60.4)	18.4	1 096
Free State	278	0.9 (0.8-1.0)	2 887 465	9.6 (8.5-10.8)	2.6	1 335
Gauteng	4003	12.2 (11.9-12.6)	15 176 115	26.4 (25.6-27.2)	8.1	1 564
KwaZulu-Natal	2 545	7.8 (7.5-8.1)	11 289 086	22.5 (21.7-23.4)	6.4	1 076
Limpopo	177	0.5 (0.5-0.6)	5 982 584	3.0 (2.5-3.4)	0.9	250
Mpumalanga	121	0.4 (0.3-0.4)	4 592 187	2.6 (2.2-3.2)	0.4	436
North West	175	0.5 (0.4-0.6)	1 263 875	13.8 (11.9-16.1)	6.7	974
Northern Cape	69	0.2 (0.2-0.3)	4 027 160	1.7 (1.3-2.2)	0.8	165
Western Cape	21 382	65.4 (64.9- 65.9)	6 844 272	312.4 (308.2-316.6)	97.0	2 419
Not allocated	6					
<b>South Africa</b>	<b>32 683</b>	<b>100</b>	<b>58 775 020</b>	<b>55.6 (55.0-56.2)</b>	<b>17.2</b>	<b>1 234</b>

\*Statistics South Africa 2019 mid-year population estimates

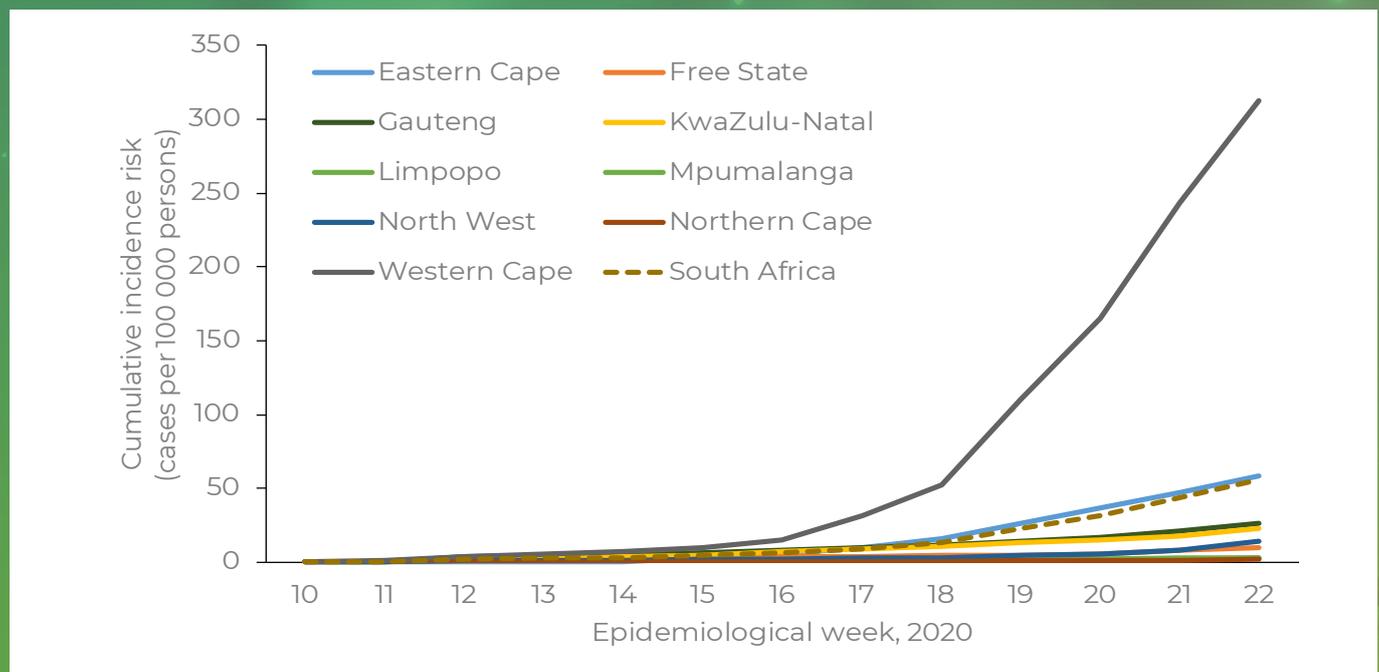


Figure 4. Cumulative incidence risk of PCR-confirmed COVID-19 by province and epidemiological week, South Africa, 3 March -30 May 2020 (n=32 677, province not allocated for 6 cases)

# CHARACTERISTICS OF CASES BY AGE AND SEX

The median age of cases was 38 years (interquartile range [IQR], 29-49 years). The largest proportion of cases was in the 30-34-year age group (4 668/32 526, 14.4 %) followed by the 35-39-year age group (4 589/32 526, 14.1 %) (Figure 5). The incidence risk was highest among those in the 45-49-year age group (104.3 cases per 100 000 persons), followed by those in the 40-45-year age group (103 cases per 100 000 persons), with the lowest incidence risk in the 5-9-year age group (7.2 cases per 100 000 persons). (Figure 6 and Table 2). Fifty-eight per cent (1 8691/32 434) (95% CI, 57.1- 58.2) of the cases were female. The overall incidence risk was higher among females than males (62.1 cases per 100 000 persons [95%CI 61.2-62.9] versus 47.2 cases per 100 000 persons [95% CI 46.4-48.0]) (Figure 6). However, this varied by age group with the peak incidence risk among females aged 35-44 years and males aged 50-54 years (Figure 7 and Figure 8). This may also be partially explained by varying testing practices by age and sex (data not shown).

# 38

THE MEDIAN AGE OF CASES

# 14.4%

THE HIGHEST PROPORTION OF CASES IN AGE 30-34

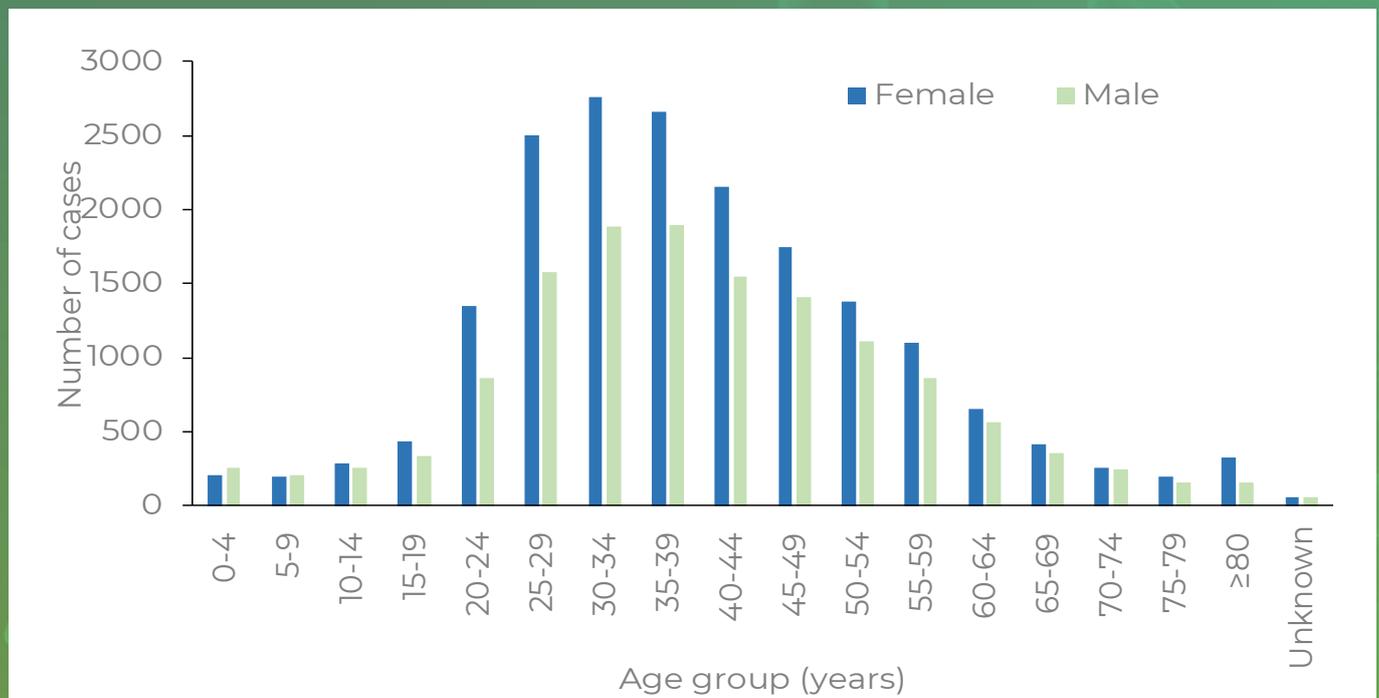


Figure 5. Number of laboratory-confirmed cases of COVID-19 by age group and sex, South Africa, 3 March-30 May 2020 (n=32 683)

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WEEK 22 2020 | CHARACTERISTICS OF CASES BY AGE AND SEX

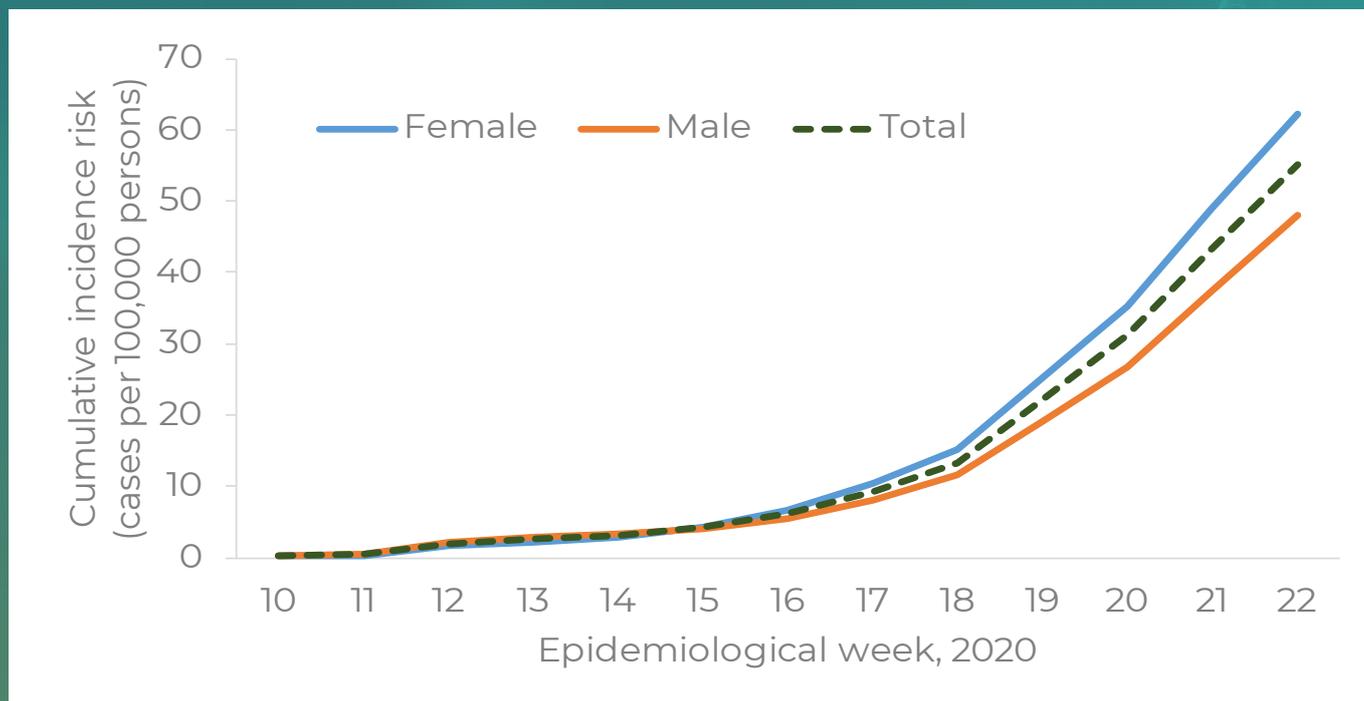


Figure 6. Incidence risk by sex and epidemiological week, South Africa, 3 March 2020-30 May 2020 (n=32 506, 177 missing dates of specimen collection)

Table 2. Number of cases and incidence risk by age group, South Africa, 3 March 2020-23 May 2020

Age group (years)	Cases (n)	Population in mid-2019*, n	Incidence risk (cases per 100 000 persons)	Change in incidence risk (cases /100 1000 persons) in past week
0-4	463	5 733 946	8.1	2.4
5-9	412	5 737 439	7.2	2.3
10-14	554	5 427 902	10.2	2.8
15-19	788	4 660 002	16.9	5.1
20-24	2 237	4 914 186	45.5	13.5
25-29	4 105	5 528 571	74.3	22.3
30-34	4 668	5 537 963	84.3	26.4
35-39	4 589	4 571 175	100.4	31.2
40-44	3 723	3 585 408	103.8	32.5
45-49	3 178	3 045 617	104.3	34.1
50-54	2 505	2 535 048	98.8	31.0
55-59	1 975	2 192 512	90.1	29.2

# COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

WEEK 22 2020 | CHARACTERISTICS OF CASES BY AGE AND SEX

60-64	1 220	1 784 476	68.4	21.9
65-69	782	1 370 121	57.1	16.7
70-74	506	949 812	53.3	14.6
75-79	348	597 874	58.2	15.3
≥80	488	602 969	80.9	23.2
Unknown	142			
<b>Total</b>	<b>32 683</b>	<b>58 775 022</b>	<b>55.6</b>	<b>17.2</b>

\*Statistics South Africa

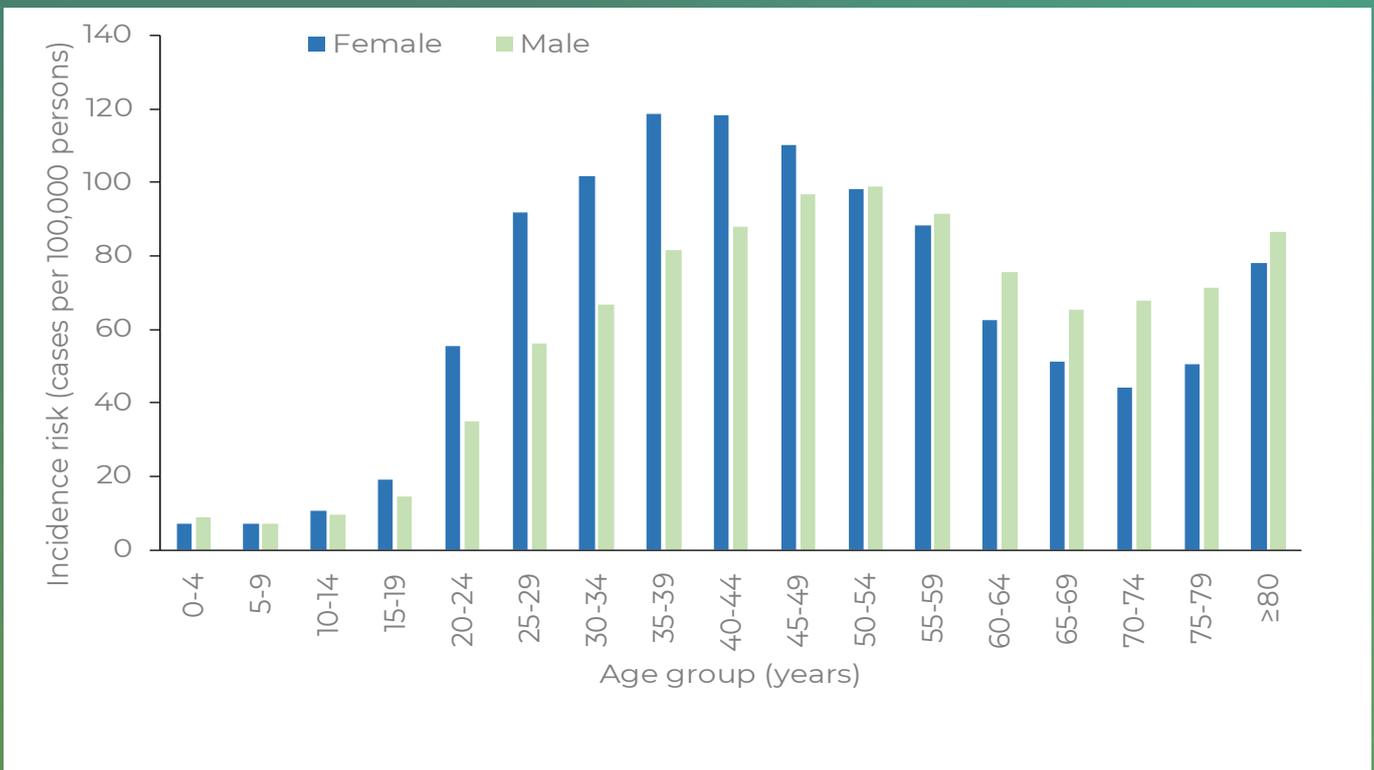


Figure 7. Incidence risk by age group and sex, South Africa, 3 March 2020-30 May 2020 (n=32 319, age and/or gender missing for 364 cases)

# COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

WEEK 22 2020 | CHARACTERISTICS OF CASES BY AGE AND SEX

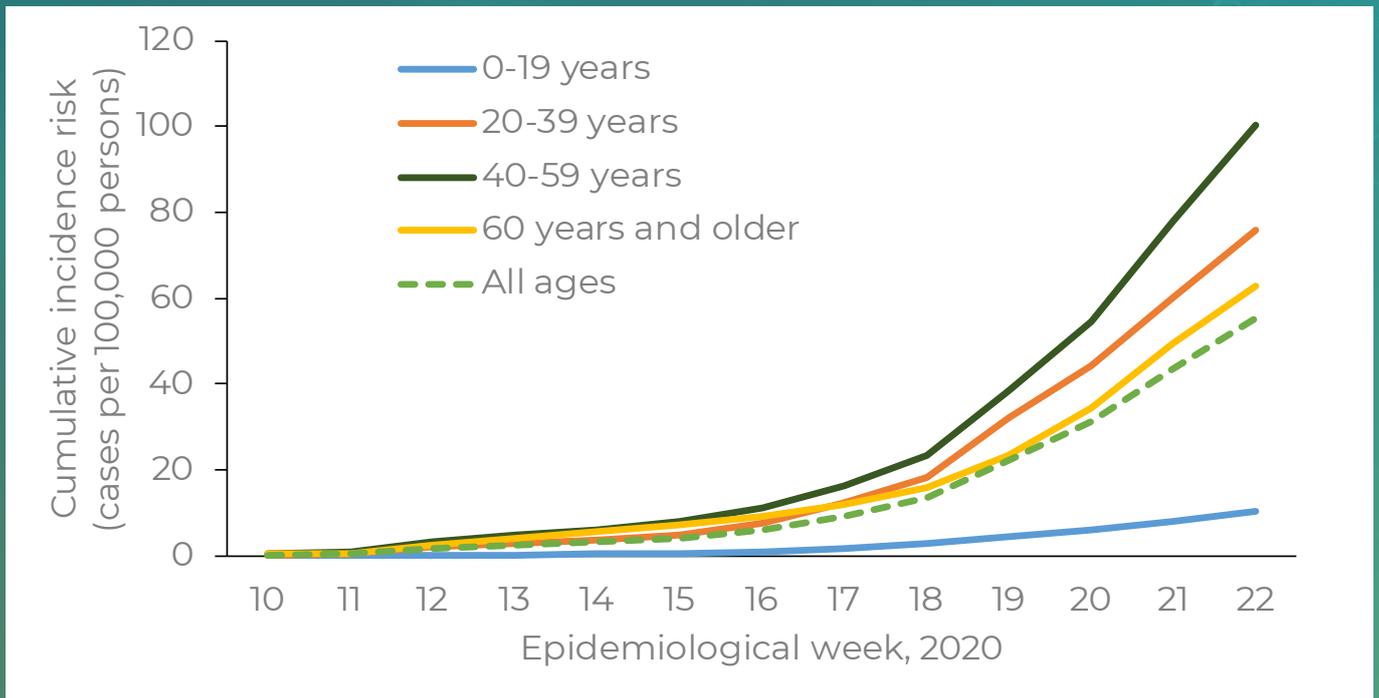


Figure 8: Cumulative incidence risk of PCR-confirmed COVID-19 cases by age group and epidemiological week, South Africa, 3 March -30 May 2020 (n=32 506, date of sample collection missing for 177 cases)

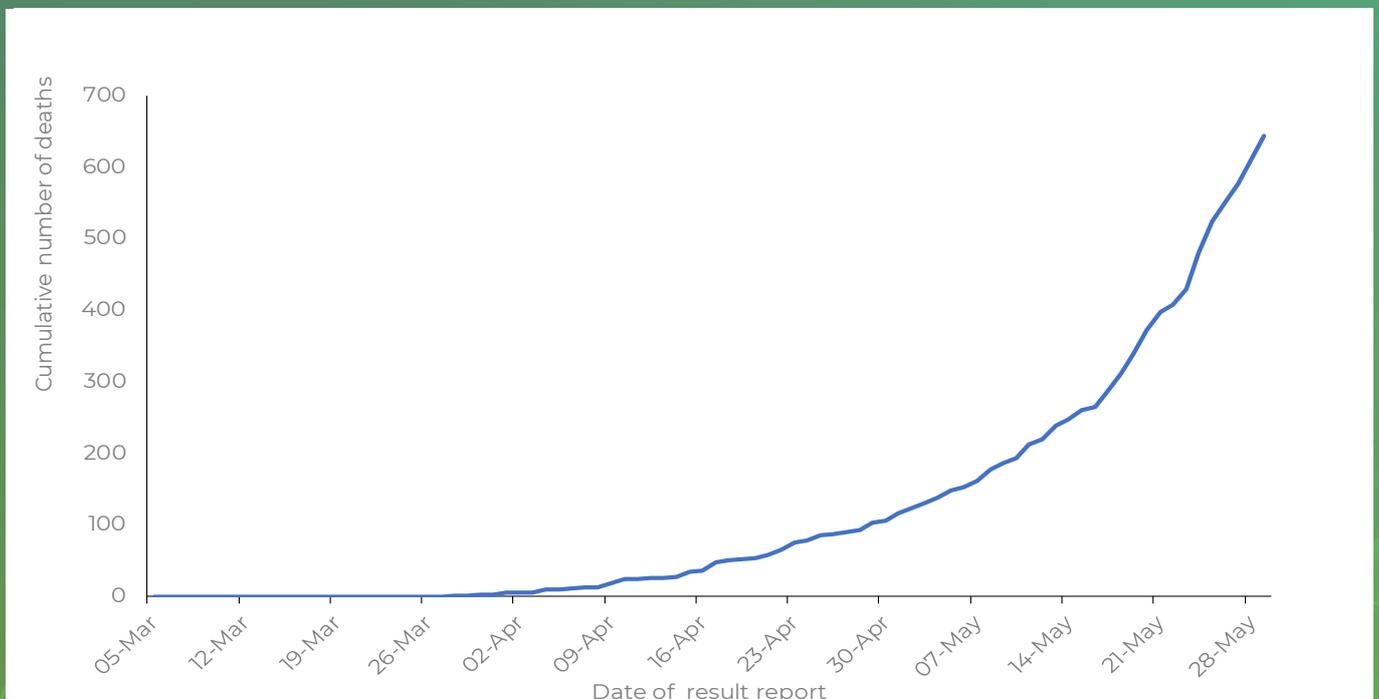


Figure 9: Cumulative number of deaths among persons with PCR-confirmed COVID-19 by epidemiological week, South Africa, 3 March-30 May 2020 (n=671)

## LIMITATIONS

This report is based on laboratory surveillance. The number of reported cases is heavily dependent on testing practices. Although trends over time and comparisons by geographic area are presented in this report, changes in testing practices over time or differences by region may partially explain the results. The crude case-fatality ratio reported here is subject to numerous limitations.

## CONCLUSIONS

The number of COVID-19 cases reported continue to increase week on week in all nine provinces of South Africa. Western Cape Province, the epicentre of the outbreak, reported just under two-thirds of the total cases. Three provinces (Western Cape (97.0), Eastern Cape (18.4) and Gauteng (8.1)) reported the highest increases in incidence risk in the last week. The majority of cases and the highest incidence risk was reported among females.