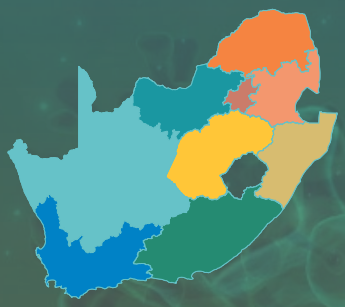
COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

NATIONAL INSTITUTE FOR COMMUNICABLE DISEASES
Division of the National Health Laboratory Service

SOUTH AFRICA | WEEK 25 2020

CUMULATIVE DATA FROM

31 JANUARY 2020 ▶ 20 JUNE 2020



CASES

97 302
IN TOTAL

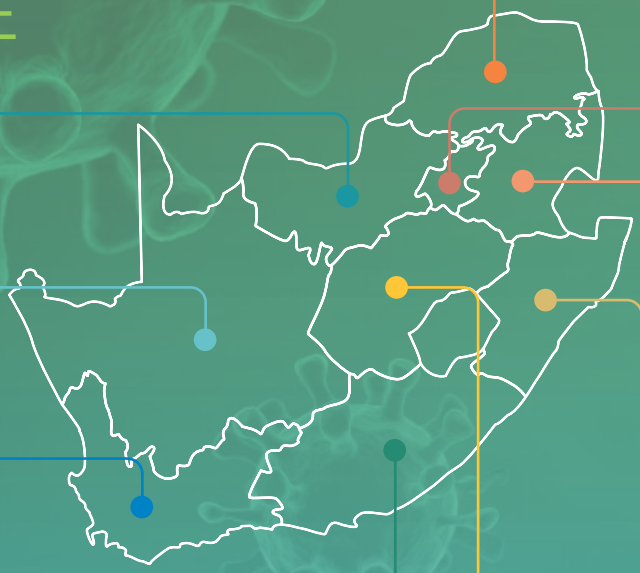
27 264
THIS WEEK

PERSONS

165.5
INCIDENCE RISK*

40
MEDIAN AGE

PROVINCES AT A GLANCE



NORTH WEST
CASES: 2 148 IN TOTAL | 53.3 /100,000*

NORTHERN CAPE
CASES: 237 IN TOTAL | 18.8 /100,000*

WESTERN CAPE
CASES: 51 441 IN TOTAL | 751.6 /100,000*

EASTERN CAPE
CASES: 15 751 IN TOTAL | 234.7 /100,000*

LIMPOPO
CASES: 564 IN TOTAL | 12.5 /100,000*

GAUTENG
CASES: 20 822 IN TOTAL | 137.2 /100,000*

MPUMALANGA
CASES: 573 IN TOTAL | 6.5 /100,000*

KWAZULU-NATAL
CASES: 5 030 IN TOTAL | 44.5 /100,000*

FREE STATE
CASES: 733 IN TOTAL | 25.4 /100,000*

* **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 data from a national laboratory-based surveillance system that is used to monitor the coronavirus disease 2019 (COVID-19) pandemic in South Africa. This report is based on data collected up to 20 June 2020 (week 25 of 2020). 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 20 June 2020, a total of 97 302 laboratory-confirmed COVID-19 cases had been detected in South Africa. Of these, 27 264 were reported during epidemiological week 25 of 2020. The number of new cases continue to increase week on week, an increase of 5 511 cases reported in week 25 compared to week 24.
- A total of 1 930 (450 new deaths reported in past week) individuals died with a case-fatality ratio of 2%. The number of additional deaths was similar to the number reported in the week 24 (482).
- Three provinces, Western Cape, Eastern Cape and Gauteng continue to report the majority of cases, 90%, to date. In the past week, Gauteng reported the highest proportion of cases (35.4%,9 658/27 264) followed by the Western Cape Province (32.7% ,8 902/27264) and the Eastern Cape Province (21%, 5724/27 264).
- Compared to the previous week, Gauteng Province reported a weekly incidence risk which was almost twice as high (63.6 vs. 34.4 cases per 100 000 persons), whereas Western Cape Province reported a lower weekly incidence risk of 130 vs. 165 cases per 100 000 persons.
- The median age of laboratory-confirmed cases for the past week, 40 years (interquartile range [IQR], 30-50 years), was similar to that of the total cases to date.
- In week 25, the weekly incidence risk was highest among females in the 40-44-year age group (55.3 cases per 100 000 person).
- Trends in numbers of new cases by Province may be affected by changes in testing practice and delays in testing of specimens.

57.3%

MAJORITY OF CASES REPORTED IN WEEK 25 WERE FEMALE

165.5 /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. Community screening was discontinued and testing efforts focussed on areas identified as hot spots and on investigating clusters. 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. 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 single positive SARS-CoV-2 PCR test. We used 2019 mid-year population estimates from Statistics South Africa to calculate the incidence risk (cumulative or weekly incidence), expressed as cases per 100 000 persons. Aggregate data on the number of deaths by province was obtained from the Department of Health.

National and provincial trends

As of 20 June 2020, a total of 97 302 laboratory-confirmed COVID-19 cases were reported in South Africa. The number of new cases, 27 264, reported in the past week was higher than the number of cases reported the previous week, 27 264 vs. 21 753 in week 24. Of the new cases reported in week 25, the Gauteng Province reported the highest proportion of cases (9 658/27 264, 35.4 %), followed by the Western Province (8 902/27 264, 32.7%) and Eastern Cape Province (5 724/27 264, 21.0%) (Table 1). In the past week, Gauteng overtook Western Cape in number and proportion of new cases reported. These three provinces continued to contribute the majority (88 014/97 302; 90%) of cases overall, with Western Cape contributing 52% (51 441) of total cases. This is a reduction of at least 10 % compared to previous weeks when Western Cape contributed ≥ 60% of the total. To date, the Western Cape Province had the highest cumulative incidence risk (751 cases per 100 000 persons) followed by the Eastern Cape (234 per 100 000 persons) and Gauteng provinces (137 per 100 000 persons). The Limpopo Province remains the province with the lowest cumulative incidence risk (9.4 cases per 100 000 persons). In the past week, the Western Cape Province (130 cases per 100 000 cases), followed by the Eastern Cape

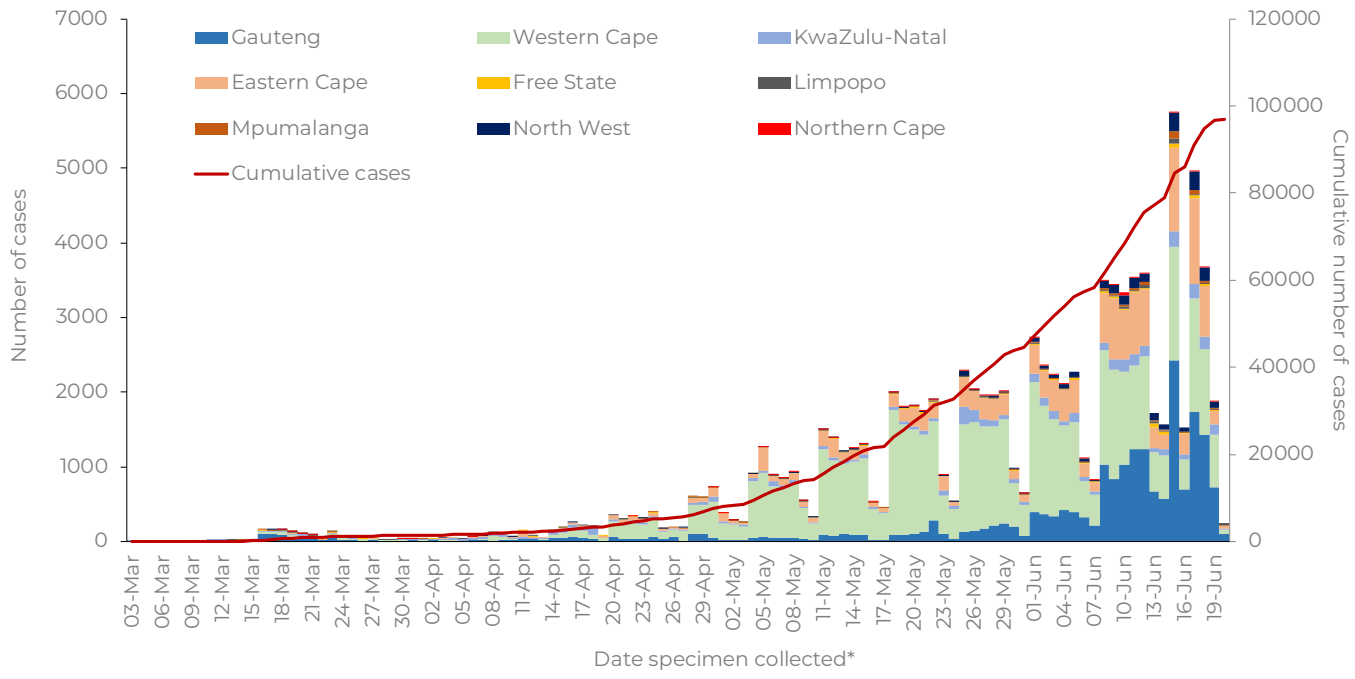
35.4%
CASES REPORTED IN GAUTENG PROVINCE IN THE PAST WEEK

40-44
YEAR AGE GROUP
HAD THE HIGHEST PROPORTION OF CASES IN WEEK 25

(85.3 cases per 100 000 persons) and Gauteng (63.6 cases per 100 000 persons) provinces reported the highest weekly incidence risk among provinces. Compared to the previous week, Gauteng Province reported a weekly incidence risk which was almost twice as high (63.6 vs. 34.4 cases per 100 000 persons), whereas the Western Cape Province reported a lower weekly incidence risk of 130 vs. 165 cases/100 000 persons. (Table 1 and Figure 4).

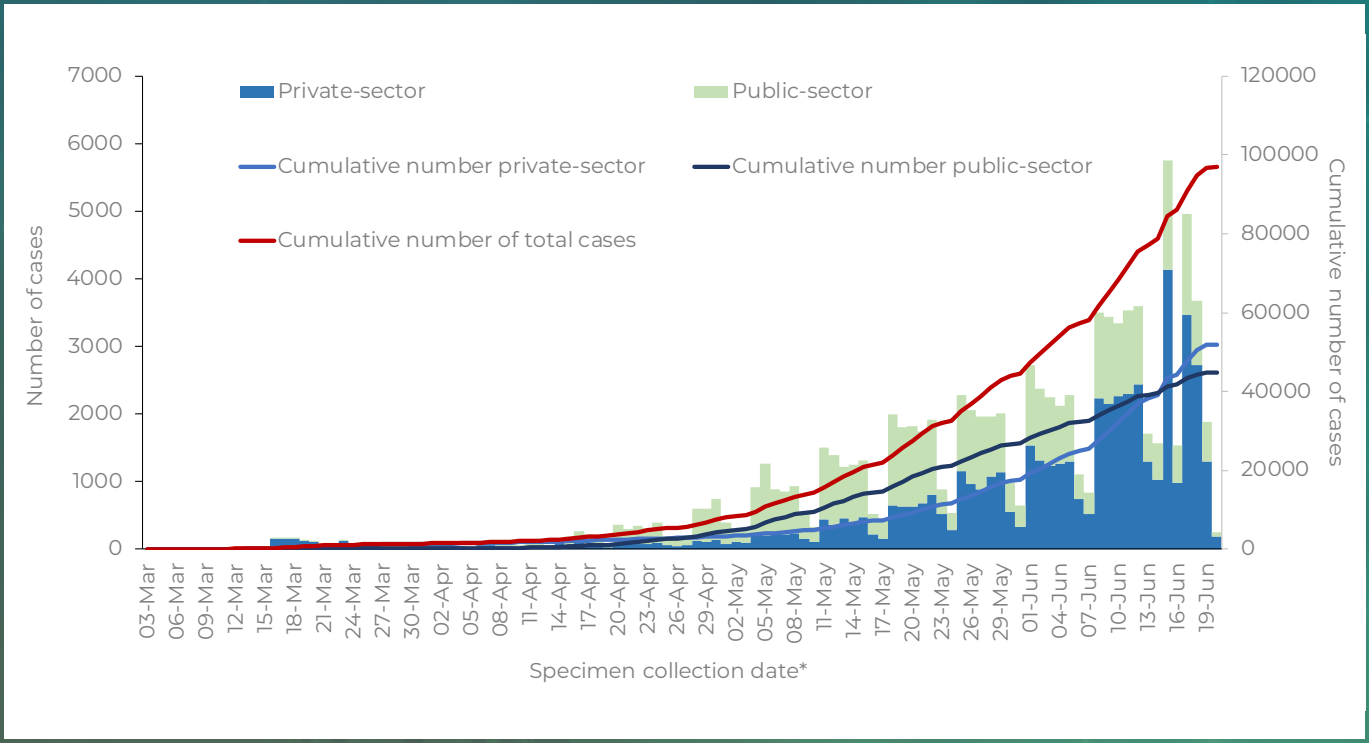
The cumulative incidence risk for the country was 165.6 cases per 100 000 persons. However, the cumulative incidence risk varied by province over time (Figure 3). This is partly explained by testing differences by province (Table 1). In the past week the number of tests performed per 100 000 persons ranged from 38.4 in Limpopo to 351.1 in the Western Cape Province.

To date, a total of 1 930 (450 additional cases reported in the last week) of 97 302 (2. 0%) individuals were reported to have died. This number of deaths is similar to the number of new deaths reported in week 24 (482). A crude case-fatality ratio (CFR) calculated in this way (number of deaths/ number of diagnosed cases) is subject to numerous limitations. The CFR may be an underestimate 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.



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

Figure 1. Number and cumulative number of laboratory-confirmed cases of COVID-19 by province and date of specimen collection, South Africa, 3 March-20 June 2020 (n=96 837, 465 missing dates of specimen collection and/or province allocation)



*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 testing laboratory sector and date of specimen collection, South Africa, 3 March-20 June 2020 (n=96 837, 465 missing dates of specimen collection and/or province allocation)

Table 1. Number and cumulative/weekly incidence risk of laboratory-confirmed cases of COVID-19 and testing per 100 000 persons by province, South Africa, 3 March 20 June 2020 (n=97 302, province not allocated for 3 cases)

Province	Total cases (n)	New cases, 14-20 June 2020, n (percentage, n/total)	Percentage (n/total) (95% confidence interval)	Population in mid-2019* (n)	Cumulative incidence risk (cases per 100 000 persons)	Change in weekly incidence risk (cases per 100 000 persons), week 24 vs. week 25	Tests per 100 000 14-20 June 2020
Eastern Cape	15 751	5724 (21.0)	16.2 (16.0-16.4)	6 712 276	234.7 (231.0-238.4)	24.9	235.7
Free State	733	238 (0.9)	0.8 (0.7-0.8)	2 887 465	25.4 (23.4-27.3)	3.6	200,2
Gauteng	20 822	9 658 (35.5)	21.4 (21.1-21.7)	15 176 115	137.2 (135.4-139.1)	29.2	329.0
KwaZulu-Natal	5 030	1156 (4.2)	5.2 (5.0-5.3)	11 289 086	44.5 (43.3-45.8)	3.4	116.6

Limpopo	564	238 (0.9)	0.6 (0.5-0.6)	5 982 584	12.5 (11.5-13.5)	2.3	38.4
Mpumalanga	573	276 (1.0)	0.6 (0.5-0.6)	4 592 187	6.5 (5.7-7.3)	3.6	102.9
North West	2 148	1 051 (3.9)	2.2 (2.1-2.3)	4 027160	53.3 (51.1-55.6)	11.8	117.0
Northern Cape	237	81 (0.3)	0.2 (0.2-0.3)	1 263875	18.8 (16.4-21.3)	3.1	74.7
Western Cape	51 441	8902 (32.7)	52.9 (52.5-53.2)	6 844 272	751.6 (745.1-758.1)	-26.5	351.1
Not allocated	3						
South Africa	97 302	27 219 (100)	100	58 775 020	165.6 (164.5-166.6)	9.3	38.7

*Statistics South Africa 2019 mid-year population estimates

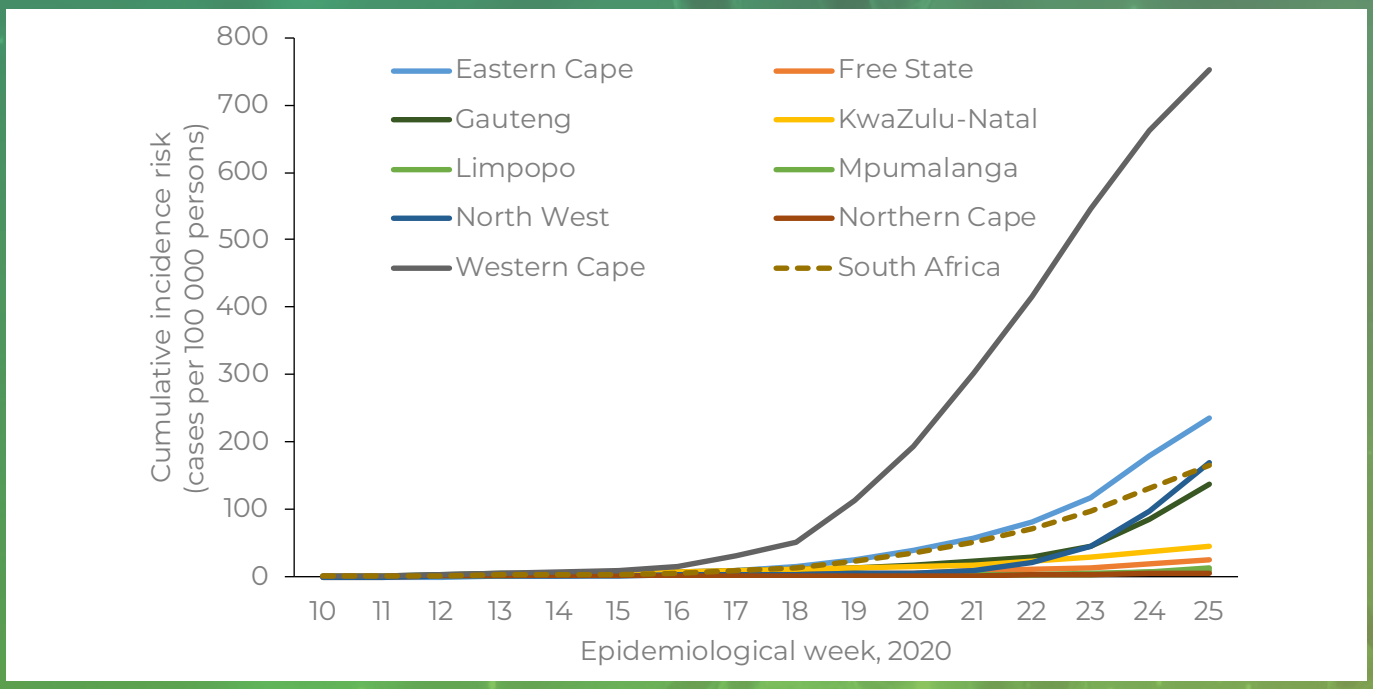


Figure 3: Cumulative incidence risk of PCR-confirmed COVID-19 by province and epidemiological week, South Africa, 3 March-20 June 2020 (n=96 837, 465 missing dates of specimen collection and/or province allocation)

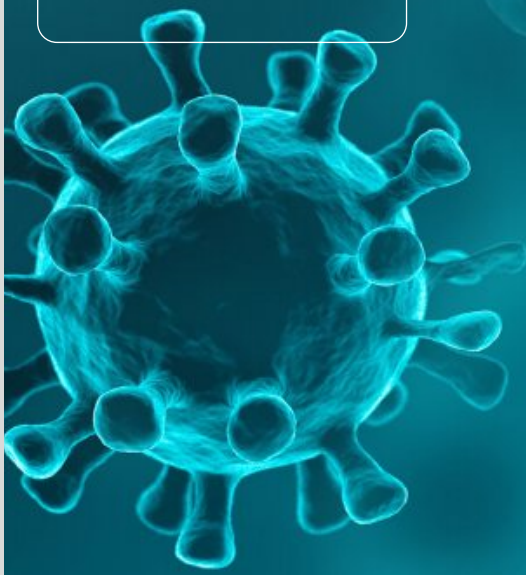
CHARACTERISTICS OF CASES BY AGE AND SEX

The largest proportion of all cases to date was in the 30-34-year age group (13219/96 759, 13.7 %) followed closely by the 35-39-year age group (13164/96 759, 13.5 %) (Figure 4). In the past week, the highest proportion of cases was in the 40-44-year age group (3 617/27 056, 13.4%). Cases reported in the last week had a similar median age (40 years, interquartile range (IQR) 30-51 years) to that reported for all cases, to date, (39 years, IQR 30-50 years). To date, the cumulative incidence risk was highest among those in the 50-54-year age group (324.5 cases per 100 000 persons), followed by those in the 45-49-year age group (321.6 cases per 100 000 persons). Cases in the younger age-groups reported the lowest cumulative incidence risk, 21.9 cases per 100 000 persons and 21.7 cases per 100 000 persons in the 0-4 and 5-9-year age groups, respectively (Figure 5 and Table 2). Similar to the previous week, the weekly incidence risk in week 25 was highest among individuals in the 50-54-year age group, even though it was higher, (97.1 versus 76.3 cases per 100 000 persons) followed by the 45-49-year age group (93.3 versus 72.8 cases per 100 000). The lowest weekly incidence risk was in the 0-4-year age group (5.7 cases per 100 000 persons). In the past week the highest increase in weekly incidence risk was in the 55-59-year age group, 21.8 cases per 100 000 cases per person.

The majority of cases reported in week 25, (57.3%, 15484 /27 039; 95% CI 56.7-58.9) were female. This was similar to the proportion reported for total cases to date (57.1 %, 55 116/96 577) (95% CI, 56.6- 57.4). The cumulative incidence risk remained higher among females than in males (183.1 cases per 100 000 persons [95%CI 178.4-188.1] versus 144.6 cases per 100 000 persons [95% CI 143.2-146.0]) (Figure 6). However, this varied by age group with the peak cumulative incidence risk among females aged 40-44 years and males aged 50-54 years (Figure 6 and Figure 7). Similarly, in week 25, the weekly incidence risk was higher among females than males (51.4 cases per 100 000 cases [95% CI 50.6-52.3] vs. 40.3 cases [95% CI 39.6-41.0]). This may be partly explained by varying testing practices by age and sex (data not shown) and by health seeking behaviour. The increase in weekly incidence risk from week 24 to week 25 was higher among females (11.3 case per 100 000 persons) than in men (7.1 cases per 100 000 persons).

40
THE MEDIAN AGE OF CASES IN THE PAST WEEK

13.7%
LARGEST PROPORTION OF ALL CASES TO DATE IN THE 30-34- YEAR AGE GROUP



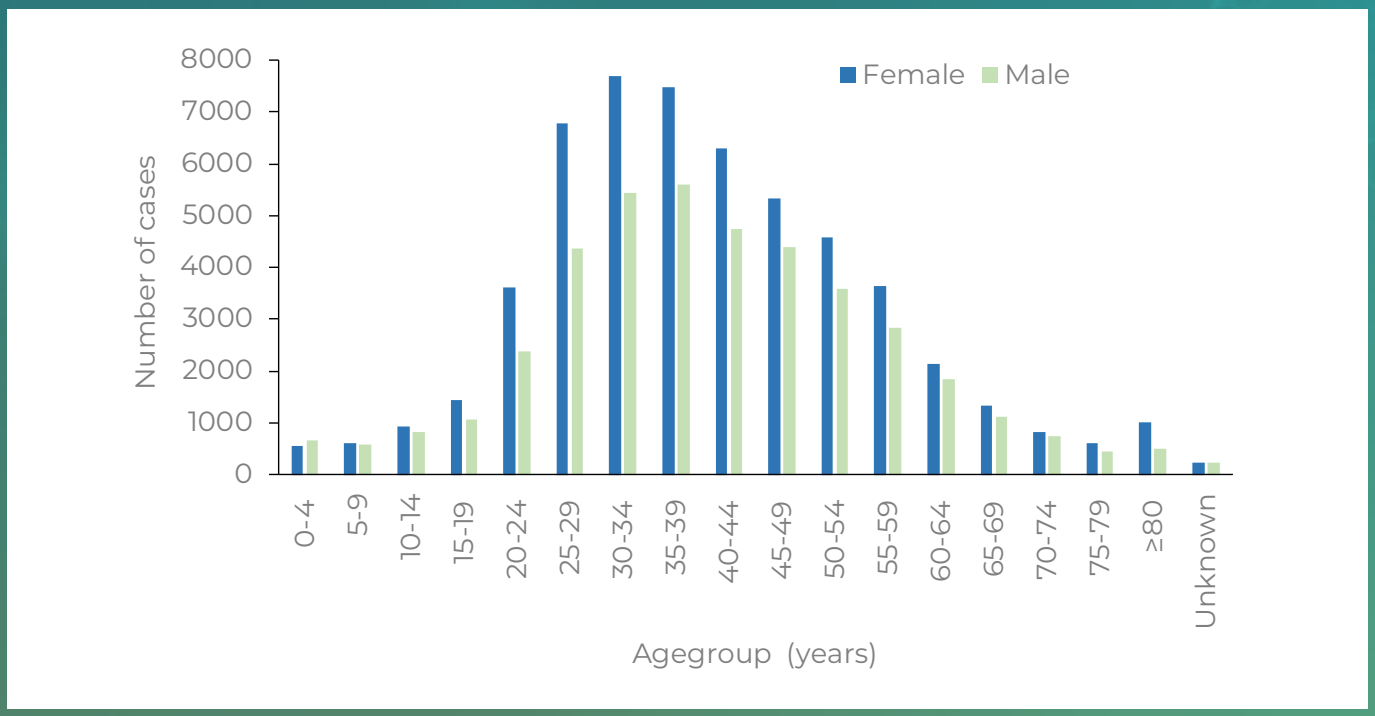


Figure 4. Number of laboratory-confirmed cases of COVID-19 by age group and sex, South Africa, 3 March-20 June 2020 (n=97 302)

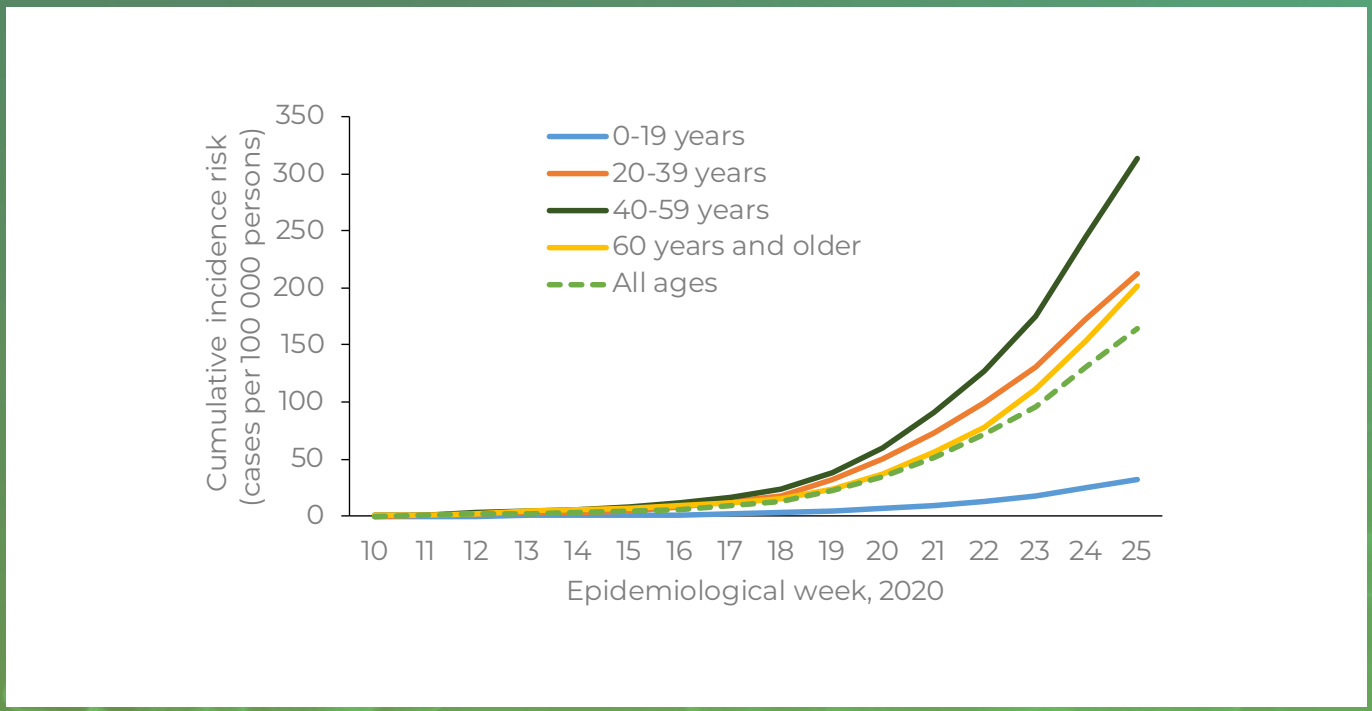


Figure 5: Cumulative incidence risk of PCR-confirmed COVID-19 cases by age group and epidemiological week, South Africa, 3 March-20 June 2020 (n=96 759, 543 missing date of specimen collection/ age)

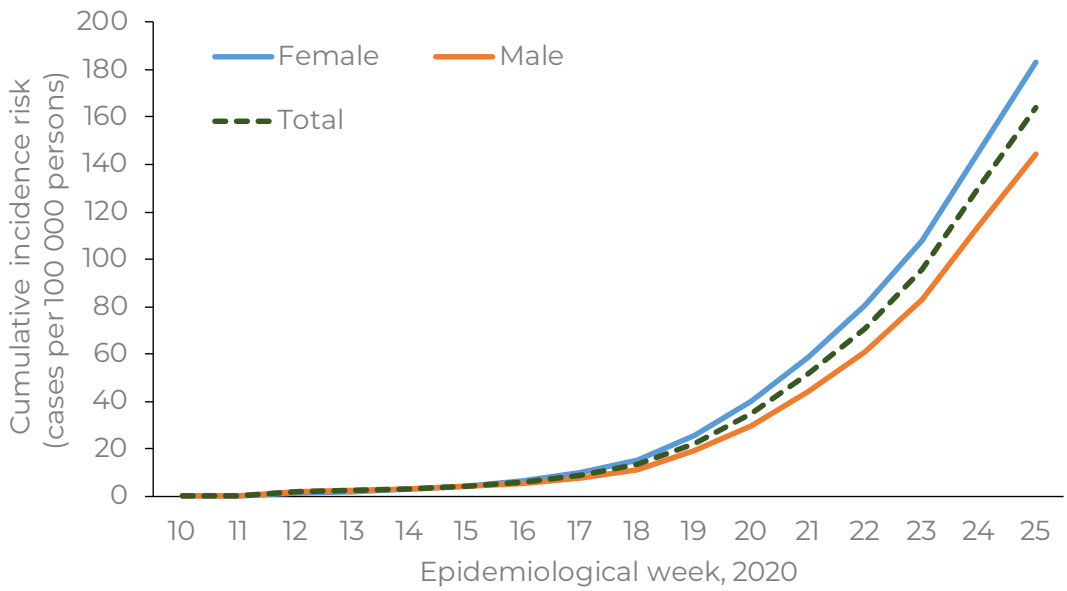


Figure 6. Cumulative incidence risk by sex and epidemiological week, South Africa, 3 March 2020-20 June 2020 (n=96 577, 725 missing dates of specimen collection/sex)

Table 2. Number of cases and cumulative/weekly incidence risk by age group, South Africa, 3 March 2020- 20 June 2020, n=97 302

Age group (years)	Cases (n)	New cases14-20 June, n (percentage, n/total)	Population in mid-2019*, n	Cumulative incidence risk (cases per 100 000 persons)	Change in weekly incidence risk (cases /100 1000 persons),week 25 vs. week 24
0-4	1 253	325 (1.2)	5 733 946	21.9	1.0
5-9	1 787	370 (1.4)	5 737 439	21.7	1.4
10-14	2 544	567 (2.1)	5 427 902	32.9	2.7
15-19	6 041	795 (2.9)	4 660 002	54.6	4.6
20-24	11 242	1 440 (5.3)	4 914 186	122.9	2.8
25-29	13 219	2 838 (10.4)	5 528 571	203.3	8.0
30-34	13 164	3 525 (12.9)	5 537 963	238.7	11.2
35-39	11 082	3 617 (13.3)	4 571 175	288.0	15.5

40-44	9 794	3 097 (11.4)	3 585 408	309.1	17.9
45-49	8 227	2 841 (10.4)	3 045 617	321.6	20.5
50-54	6 495	2 462 (9.0)	2 535 048	324.5	20.8
55-59	1 246	2 016 (7.4)	2 192 512	296.2	21.8
60-64	4 017	1 203 (4.4)	1 784 476	225.1	12.8
65-69	2 453	710 (2.6)	1 370 121	179.0	12.3
70-74	1 606	483 (1.8)	949 812	169.1	12.9
75-79	1 073	334 (1.2)	597 874	179.5	19.3
≥80	1 516	433 (1.6)	602 969	251.4	15.1
Unknown	543	208			
Total	**97302**	**2 7264**	**58 775 022**	**165.5**	**9.4**

*Statistics South Africa

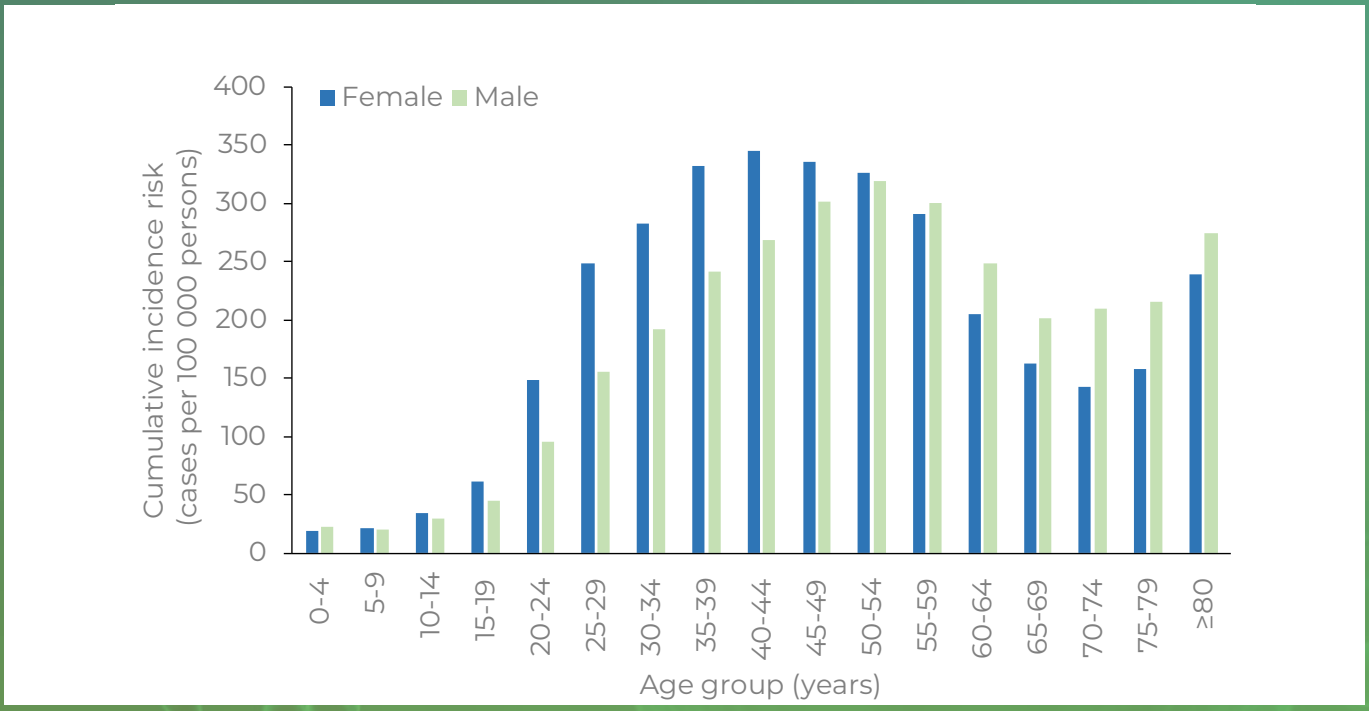


Figure 7. Cumulative incidence risk by age group and sex, South Africa, 3 March 2020-20 June 2020 (n=96 759, age and/or gender missing for 543 cases)

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, it is likely to be an underestimation as deaths may be delayed and deaths which occurred outside health facilities may be missed.

CONCLUSIONS

The number of COVID-19 cases reported continue to increase week on week in all nine provinces of South Africa. For the first time since the outbreak gained momentum, the Western Cape Province reported a lower proportion of cases compared to Gauteng Province in the past week. The increase in Gauteng may be explained by an increase in testing in Gauteng and improved case finding and / or an increase in community spread. In the last week, the Western Cape Province reported a lower incidence risk as compared to the previous week. The most likely reason for the decrease in numbers and the weekly incidence risk in the Western Cape is changes in testing practices, rather than an actual decrease in cases, as the focus shifts towards testing of hospitalised cases. The Western Cape Province continued to report the majority of cases and the highest cumulative incidence risk to date. Individuals <19 years contributed a small proportion of the cases to date.