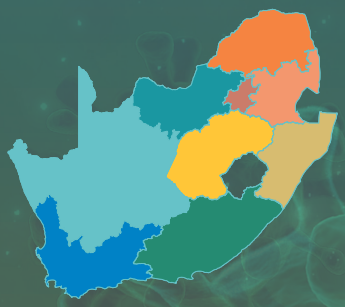
COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

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

SOUTH AFRICA | WEEK 27 2020

CUMULATIVE DATA FROM

31 JANUARY 2020 ▶ 04 JULY 2020



CASES

196 750
IN TOTAL

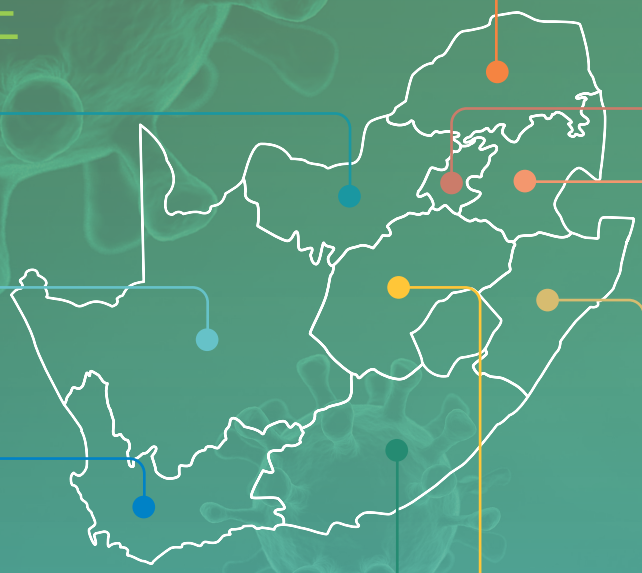
58 616
THIS WEEK

PERSONS

334.8
INCIDENCE RISK*

39
MEDIAN AGE

PROVINCES AT A GLANCE



NORTH WEST
CASES: 6 063 IN TOTAL | 150.6 /100,000*

NORTHERN CAPE
CASES: 734 IN TOTAL | 58.1 /100,000*

WESTERN CAPE
CASES: 69 531 IN TOTAL | 1015.9 /100,000*

EASTERN CAPE
CASES: 35 648 IN TOTAL | 531.1 /100,000*

LIMPOPO
CASES: 1 706 IN TOTAL | 28.5 /100,000*

GAUTENG
CASES: 63 404 IN TOTAL | 417.8 /100,000*

MPUMALANGA
CASES: 1 965 IN TOTAL | 42.8 /100,000*

KWAZULU-NATAL
CASES: 15 146 IN TOTAL | 134.2 /100,000*

FREE STATE
CASES: 2 553 IN TOTAL | 88.4 /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 4 July 2020 (week 27 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 4 July 2020, a total of 196 750 laboratory-confirmed COVID-19 cases had been detected in South Africa. Of these, 58 616 were reported during epidemiological week 27 of 2020. The number of new cases continue to increase week on week, an increase of 17 784 cases reported in week 27 compared to week 26.
- A total of 3199 (743 new deaths reported in past week) individuals died with a case-fatality ratio of 1.6%. The number of additional deaths was higher than the number reported in the previous week (526).
- Three provinces, Western Cape, Eastern Cape and Gauteng continue to report the majority of cases, (168 583/ 196 750; 85.7%). In the past week, Gauteng Province reported the highest percentage of new cases (26 509/58 616, 45.2 %), followed by Eastern Cape Province (10 549/ 58 616, 18%) and Western Cape Province (9 086/58 616, 15.5 %)
- The timing and magnitude of increase in weekly incidence risk, varied by province over time. In the past week, Gauteng Province reported the highest weekly incidence risk 124.8 cases per 100 000 persons.
- The cumulative incidence risk to date increased with increasing age and peaked in the 50-54-year age group. The highest increase in cumulative incidence risk in week 27 was among individuals in the 50-54-year age group, 206 cases per 100 000 persons and the lowest increase in cumulative incidence risk was in the 0-4-year age group 11.6 cases per 100 000 persons.
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57.3%

OVERALL MAJORITY OF CASES REPORTED ARE FEMALE

334.8 /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 4 July 2020, a total of 196 750 laboratory-confirmed COVID-19 cases were reported in South Africa. The number of new cases, 58 616, reported in the past week was higher than the number of cases reported the previous week, 40 832 in week 26. Similar to the previous week, in week 27, Gauteng Province reported the highest percentage of new cases (26 509/58 616, 45.2%), followed by Eastern Cape Province (10 549/ 58 616, 18%) and Western Cape Province (9 086/58 616, 15.5%) (Table 1). Three provinces, Western Cape (69 531/196 750, 35.3%), Gauteng (63 404/196 750, 32.2 %) and Eastern Cape (35 648/196 750, 18.1 %) contributed the majority of total cases (168 583/ 196 750; 85.7%).

To date, the Western Cape Province had the highest cumulative incidence risk (1015.9 cases per 100 000 persons) followed by the Eastern Cape (531.1 per 100 000 persons) and Gauteng provinces (417. 8 cases per 100 000 persons). The Limpopo Province remains the province with the lowest cumulative incidence risk, although this was almost double the cumulative incidence risk reported in the previous week (28.5 vs.15.8 cases per 100 000 persons).

The cumulative incidence risk for the country increased from 235.1 cases per 100 000 persons in week 26 to 334.8 cases per 100 000

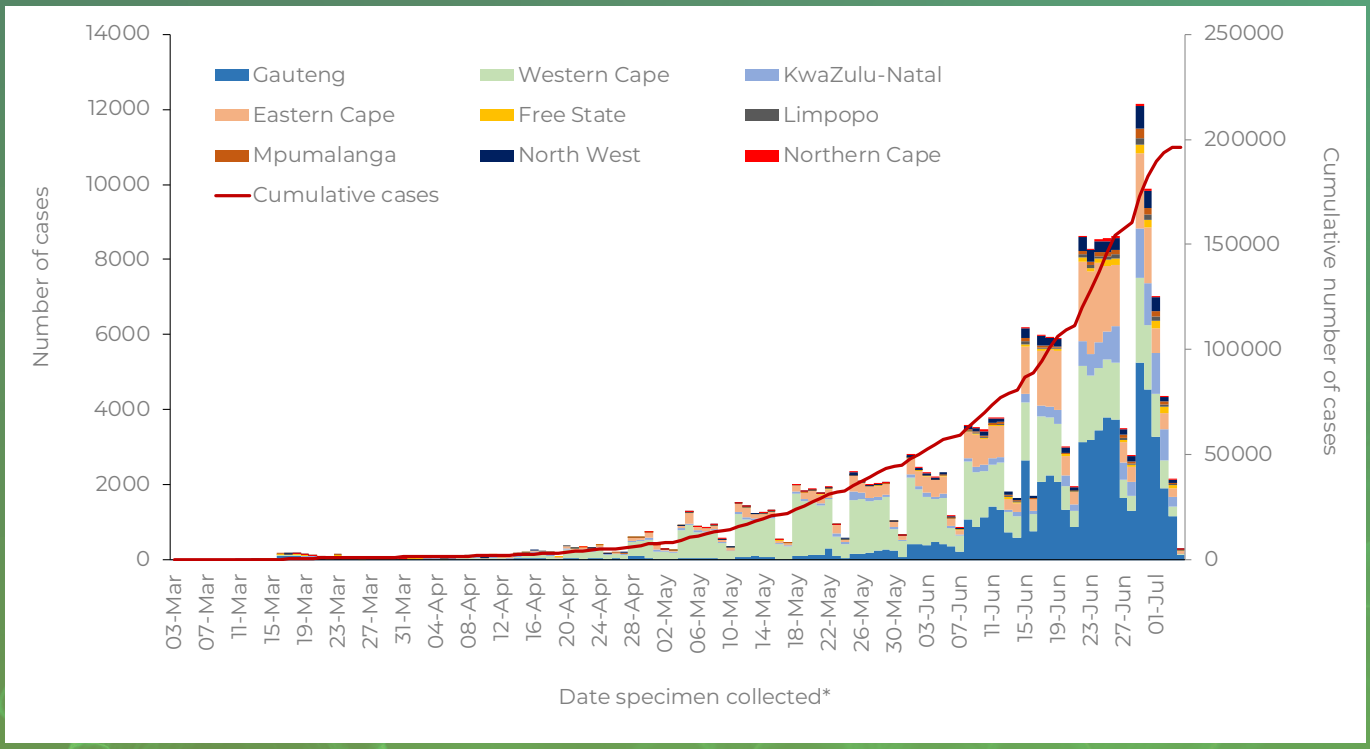
45.2%
CASES REPORTED IN GAUTENG PROVINCE IN THE PAST WEEK

50-54
YEAR AGE GROUP
HAS THE HIGHEST NCIDENCE

persons in week 27. 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 64.1 in Limpopo to 431.0 in Gauteng Province.

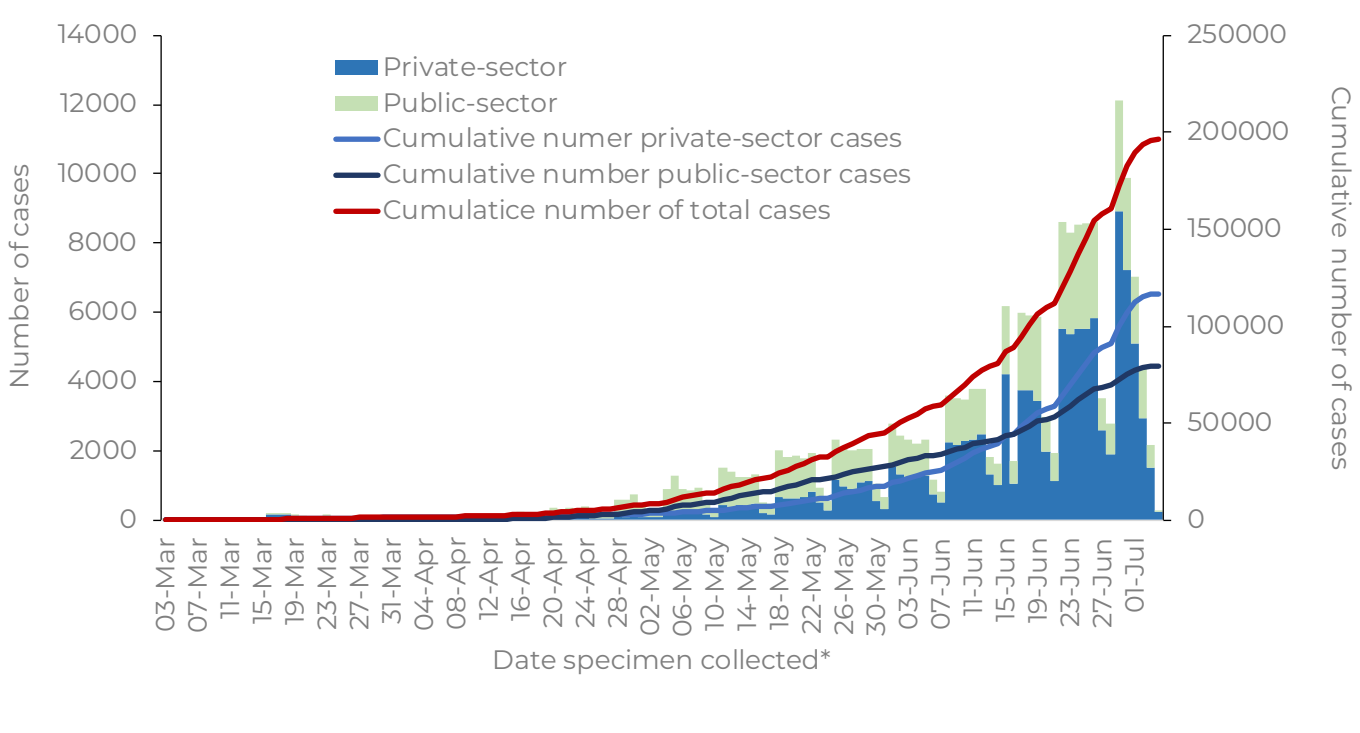
The timing and the magnitude of increase in weekly incidence risk varied by province. Western Cape Province, started increasing from week 17 with a steady increase until week 24, following which incidence risk has remained relatively stable (Figure 4).The second province to show a steep increase in weekly incidence risk was Eastern Cape, started increasing from week 19, with a sharp increase from week 24 and surpassing Western Cape Province in week 26. Gauteng Province was the third province to show a marked increase in weekly incidence risk from week 21, it showed a steep rise from week 24 onwards (Figure 4). In week 27, Gauteng reported the highest weekly incidence risk (124.6 cases per 100 000 persons). The rest of the provinces reported a week on week increase from week 23, although this was much lower than the three provinces which contribute the majority of cases. Limpopo Province reported the lowest weekly incidence risk to date

To date, the case fatality ratio remains around 2% (3199/196 750, 1.6%). Of the 3199 individuals reported to have died, 743 were reported in the past week. The number of deaths reported in the past week is higher than the number reported in the previous week 743 vs. 526. 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-4 July 2020 (n=196 297, 453 missing dates of specimen collection)



*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-4 July 2020 (n=196 285, 465 missing dates of specimen collection and/or sector allocation)

Table 1. Number and cumulative incidence risk of laboratory-confirmed cases of COVID-19 and testing per 100 000 persons by province, South Africa, 3 March- 4July 2020 (n=196 750)

Province	Total cases (n)	New cases, 28 June-4 July 2020, n (percentage, n/total)	Percentage* (n/ cumulative cases) (95% confidence interval)	Population in mid-2019** (n)	Cumulative incidence risk (cases per 100 000 persons)	Tests per 100 000 persons, 28 June-4 July 2020
Eastern Cape	35 548	10 549	18.1 (17.9-18.3)	6 712 276	531.1	284.7
Free State	2 553	1 274	1.3 (1.2-13)	2 887 465	88.4	348.2
Gauteng	63 404	26 509	32.2 (32.0-32.4)	15 176 115	417.8	431.0
KwaZulu-Natal	15 146	6 713	7.7 (7.6-7.8)	11 289 086	134.2	241.0
Limpopo	1 706	771	0.9 (0.8-0.9)	5 982 584	28.5	64.1

Mpumalanga	1 965	949	1.0 (0.9-1.0)	4 592 187	42.8	142.7
North West	6 063	2 416	3.1 (3.0-3.2)	4 027 160	150.6	128.4
Northern Cape	734	349	0.4 (0.3-0.4)	1 263 875	58.1	111.2
Western Cape	69 531	9 086	35.3 (35.1-35.6)	6 844 272	1015.9	376.3
Not allocated			0.0			
South Africa	196 750	58 616	100	58 775 020	334.9	286.2

*Percentage= n/cumulative number of cases to date ** 2019 Mid-year population Stats SA

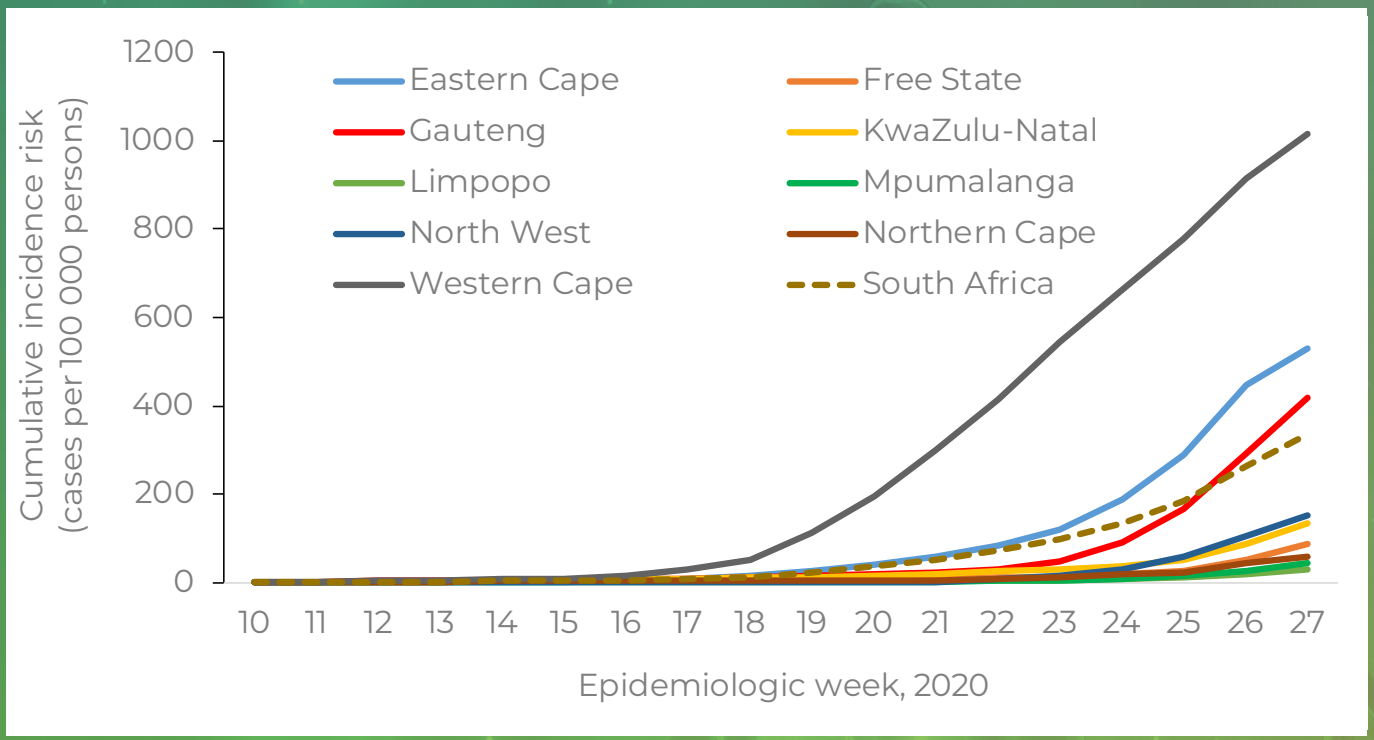


Figure 3. Cumulative incidence risk of PCR-confirmed COVID-19 by province and epidemiological week, South Africa, 3 March-4 July 2020 (n=196 297, 453 missing dates of specimen collection)

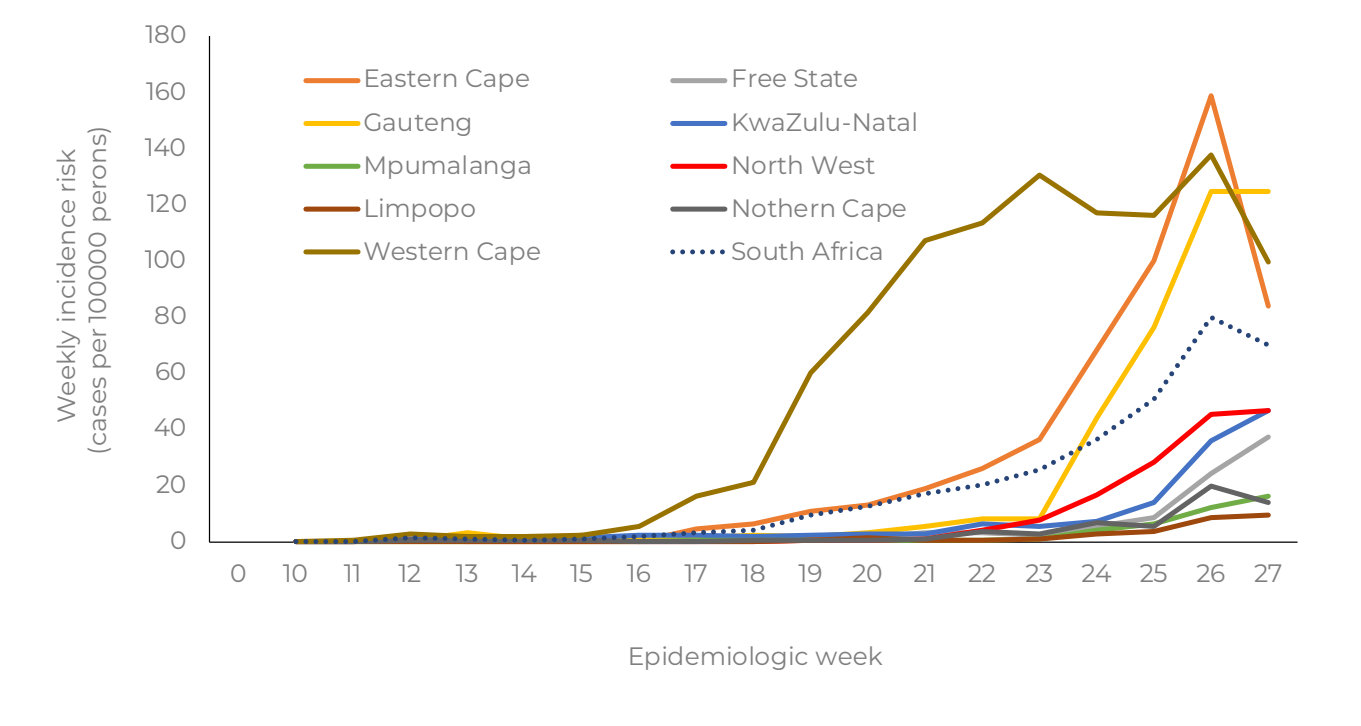


Figure 4. Weekly incidence risk of PCR-confirmed COVID-19 by province and epidemiological week, South Africa, 3 March-4 July 2020 (n=196 297, 453 missing dates of specimen collection)

CHARACTERISTICS OF CASES BY AGE AND SEX

The median age of COVID-19 cases to date remains at 39 years, interquartile range (IQR) 30-51 years. The distribution of cases varied by age, with highest percentage of all cases to date in the 35-39-year age group (26 237/195 581, 13.4 %) followed closely by the 30-34-year age group (26 097/195 581, 13.3 %) (Figure 5). Similarly, among the cases reported in the last week, the highest percentage of cases was in the 30-39-year age group (15 558/58 194, 26.7%). Cases reported in the past week had the same median age (39 years, IQR 30-51 years) as total cases. The cumulative incidence risk reported to date was 334.8 cases per 100 000 persons and varied by age group, as in previous weeks, the highest cumulative incidence risk was reported among those in the 50-54-year age group (679.9 cases per 100 000 persons), followed by those in the 45-49-year age group (658.8 cases per 100 000 persons). The lowest cumulative incidence risk was reported in the younger age-groups, 42.2 cases per 100 000 persons and 46.4 cases per 100 000 persons in the 0-4 and 5-9-year age groups,

39
THE MEDIAN AGE OF CASES IN THE PAST WEEK

respectively (Figure 6 and Table 2). Similar to the previous week, the highest increase in cumulative incidence risk in week 27 was among individuals in the 50-54-year age group, 206 cases per 100 000 persons and the lowest increase in cumulative incidence risk was in the 0-4-year age group 11.6 cases per 100 000 persons.

To date, the majority of COVID-19 cases reported were female (57.3%, 111 893 /195 433; 95% CI 57.0-57.4). This was similar to the percentage reported in the past week (57.2 %, 33 556/58 616) (95% CI, 56.8- 57.6). The cumulative incidence risk remained higher among females than in males (371.7 cases per 100 000 persons [95%CI 369.5-373.9] versus 291.4 cases per 100 000 persons [95% CI 289.4-293.3]) (Figure 7). However, this varied by age group with the peak cumulative incidence risk among females aged 45-49 years and males aged 50-54 years (Figure 7 and Figure 8). The highest increase in cumulative risk incidence from week 26 to week 27, was among females (111.5 cases per 100 000 cases [95% CI 110.3-112.7] vs. 86.2 cases [95% CI 85.2-87.3]) in men. This may be partly explained by varying testing practices by age and sex (data not shown) and by health seeking behaviour.

26.7%

HIGHEST PERCENTAGE OF CASES WAS IN THE 30-39-YEAR AGE GROUP IN WEEK 27

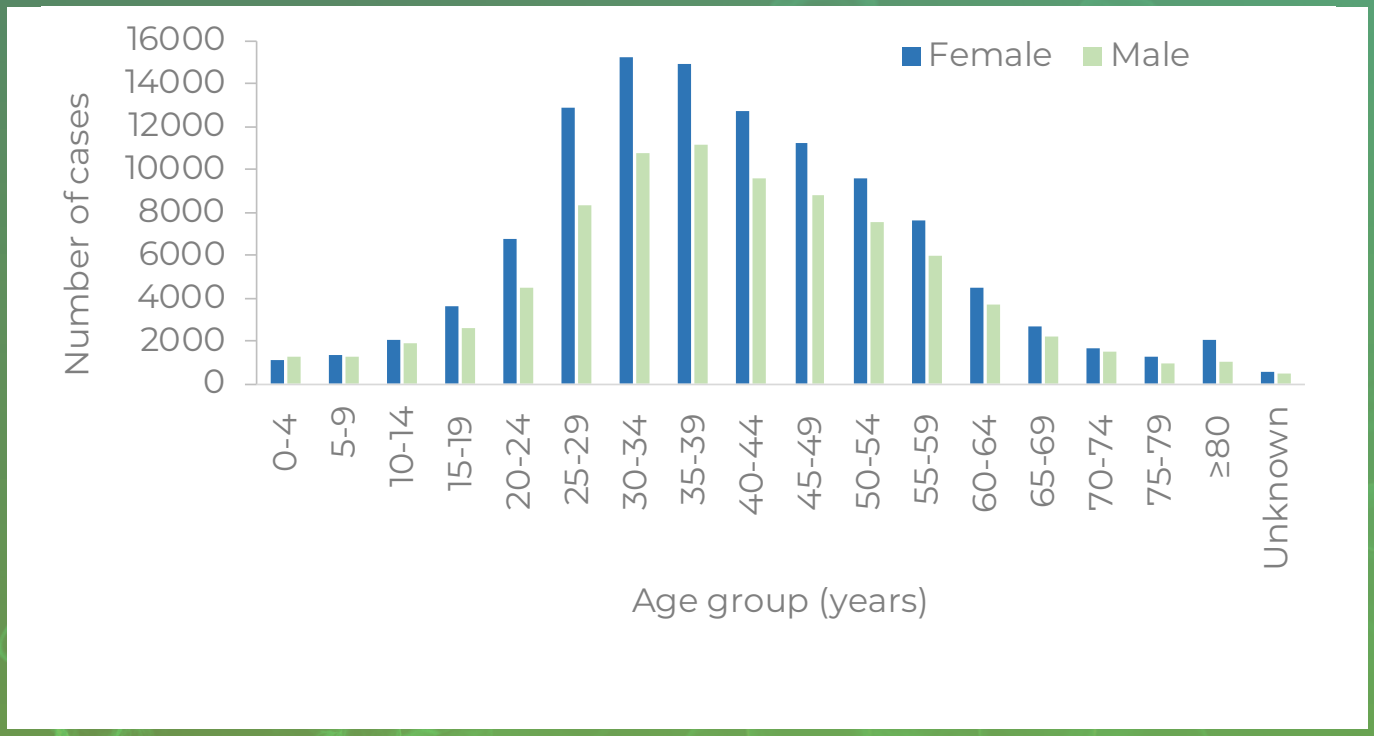


Figure 5. Number of laboratory-confirmed cases of COVID-19 by age group and sex, South Africa, 3 March-4 July 2020 (n=196 750)

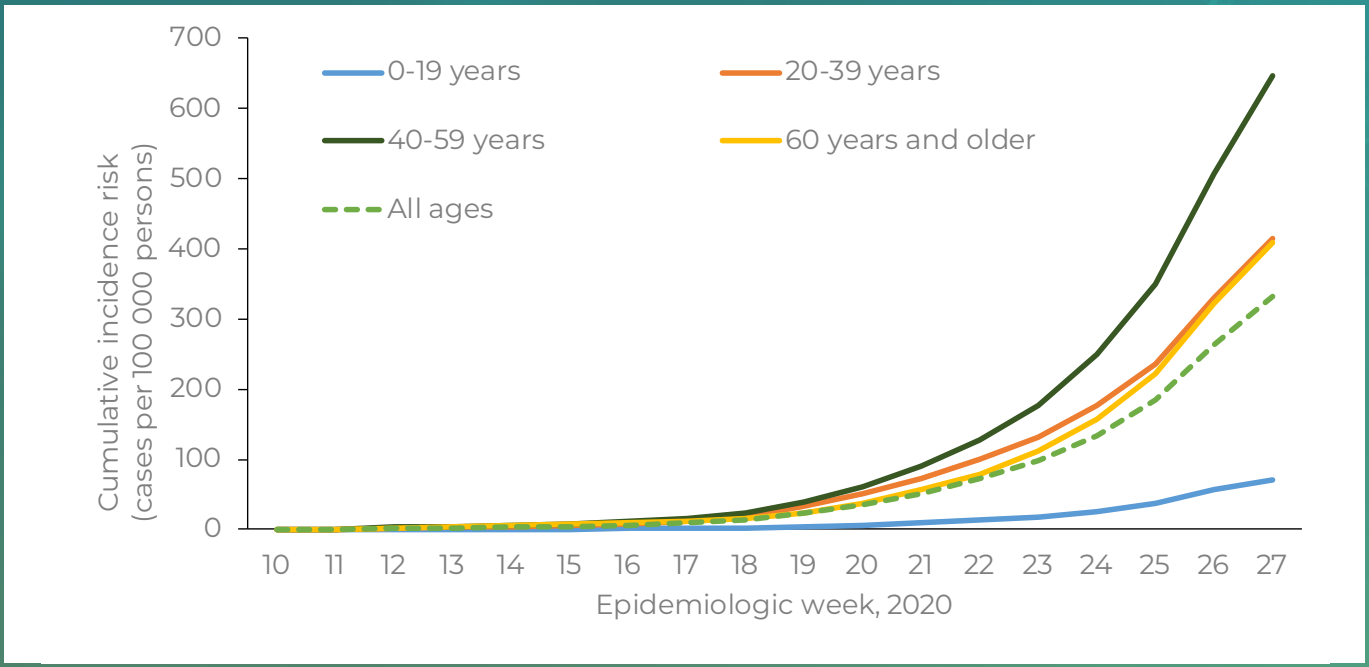


Figure 6. Cumulative incidence risk of PCR-confirmed COVID-19 cases by age group and epidemiological week, South Africa, 3 March-4 July 2020 (n=195 581, 751 missing date of specimen collection/age)

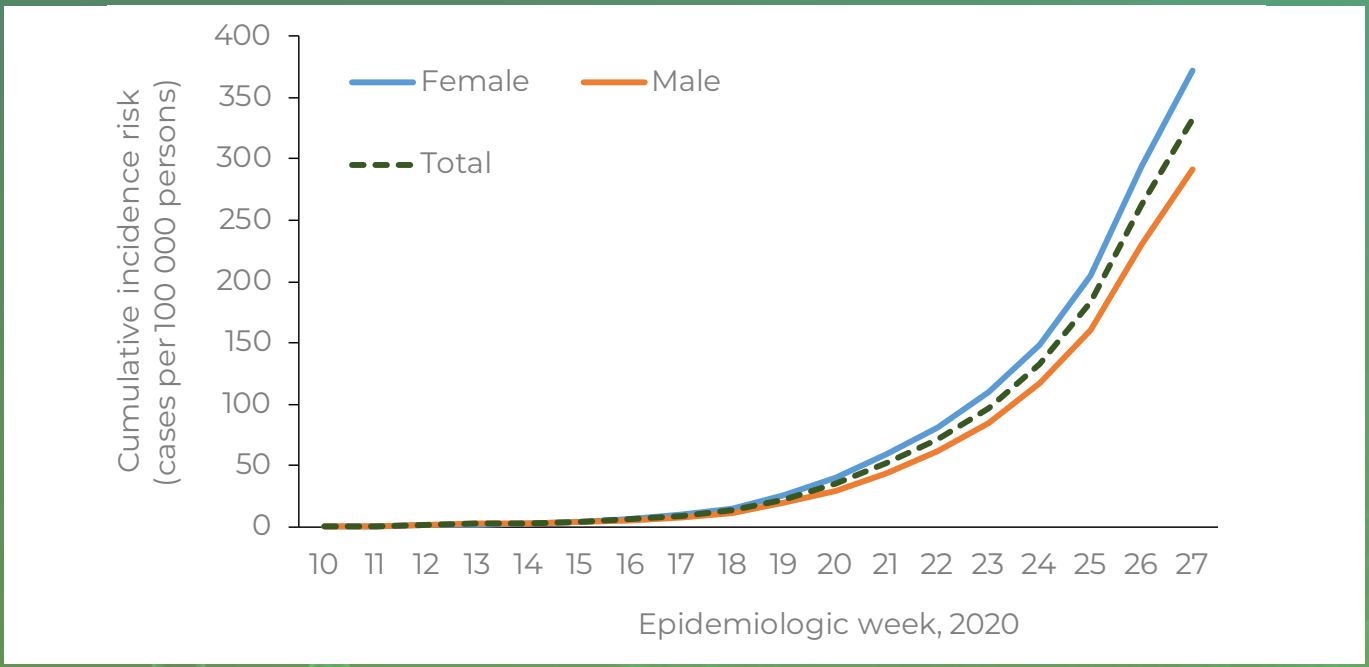


Figure 7. Cumulative incidence risk by sex and epidemiological week, South Africa, 3 March-4 July 2020 (n=195 433, 1317 missing dates of specimen collection/sex)

Table 2. Number of cases and cumulative/weekly incidence risk by age group, South Africa, 3 March- 4 July 2020, n=196 750

Age group (years)	Cases (n)	Cases 28 June-4 July, n (percentage*, n/ total)	Population in mid-2019**, n	Cumulative incidence risk (cases per 100 000 persons)	Change in cumulative incidence risk (cases /100 1000 persons), week 26 to week 27
0-4	2 420	666 (1.1)	5 733 946	42.2	11.6
5-9	2 663	849 (1.5)	5 737 439	46.4	14.8
10-14	4 035	1 367 (2.3)	5 427 902	74.3	25.2
15-19	6 325	2 163 (3.7)	4 660 002	135.7	46.4
20-24	11 366	3 201 (5.5)	4 914 186	231.3	65.1
25-29	21 358	6 011 (10.3)	5 528 571	386.3	108.7
30-34	26 097	7 789(13.4)	5 537 963	471.2	140.6
35-39	26 237	7 769 (13.4)	4 571 175	574.0	169.9
40-44	22 414	6 674 (11.5)	3 585 408	625.1	186.1
45-49	20 066	6 058 (10.4)	3 045 617	658.8	198.9
50-54	17 235	5 244 (9.0)	2 535 048	679.9	206.9
55-59	13 718	4 187 (7.0)	2 192 512	625.7	191.0
60-64	8 273	2 466 (4.2)	1 784 476	463.6	138.2
65-69	4 890	1 407 (2.4)	1 370 121	356.9	102.7
70-74	3 201	881 (1.5)	949 812	337.0	92.8
75-79	2 184	585 (1.1)	597 874	365.3	97.8
≥80	3 099	877 (1.5)	602 969	514.0	145.4
Unknown	1 169	422 (0.7)			
Total	**196 750**	**100**	**58 775 022**	**334.8**	**99.7**

*Percentage=n/total number of cases in current week **2019 Mid-year population Stats SA

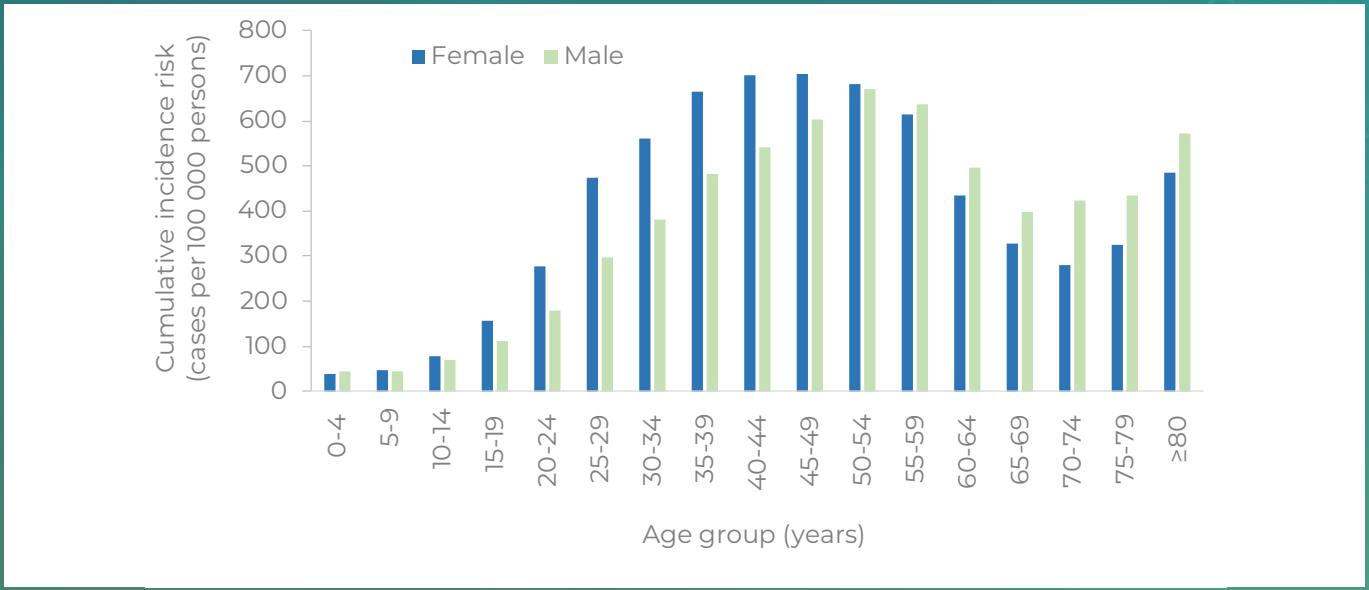


Figure 8. Cumulative incidence risk by age group and sex, South Africa, 3 March- 4 July 2020 (n=195 566, age and/or gender missing for 1184 cases)

LIMITATIONS

This report is based on laboratory-based surveillance of PCR-confirmed cases. 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. Differences in health-seeking behaviour by age group and sex could also contribute to observed differences in case numbers between groups.

CONCLUSIONS

Cases of COVID-19 continue to increase in South Africa, with a total of 196 750 cases, including 3 199 deaths reported to date. The number of COVID-19 cases reported continues to increase week on week in all nine provinces of South Africa. However, the increase in numbers is mostly driven by three provinces, Gauteng, Eastern Cape and Western Cape which contribute ~ 80% of total cases. In the past three weeks, Gauteng and Eastern Cape provinces reported the highest increases in number of cases. However, the Western Cape Province remains as the province with the highest proportion of cases and cumulative incidence risk to date. Weekly incidence in the Western Cape Province appears to be stabilising. This could reflect a true slowing of the rate of increase and/or changing testing practices with a shift to prioritisation of testing for hospitalised cases. The increase in number of cases in Gauteng and Eastern Cape maybe explained by increasing transmission as well as increased testing. The cumulative incidence risk increases with increasing age and peaks in the 50-54-year age group. Females continue to contribute the majority of cases to date.