

COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

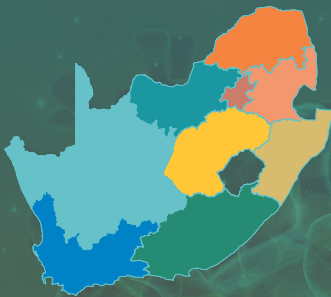


NATIONAL INSTITUTE FOR COMMUNICABLE DISEASES

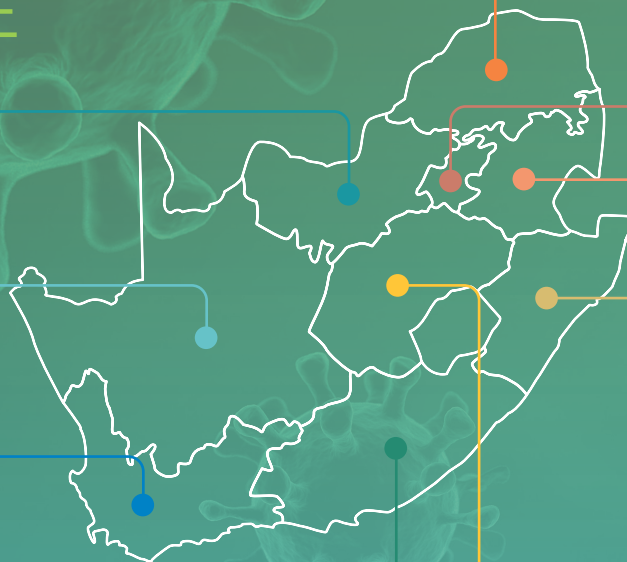
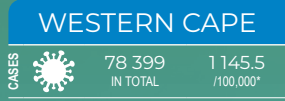
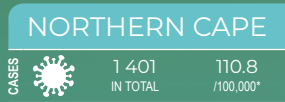
Division of the National Health Laboratory Service

SOUTH AFRICA WEEK 28 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 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 11 July 2020 (week 28 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 11 July 2020, a total of 276 242 laboratory-confirmed COVID-19 cases had been detected in South Africa. Of these, 79 492 were reported during epidemiological week 28 of 2020. The number of new cases continue to increase week on week, an increase of 20 876 cases reported in week 28 compared to week 27.
- A total of 4 079 (880 new deaths reported in past week) individuals died with a case-fatality ratio of 1.5%. The number of additional deaths was higher than the number reported in the previous week (743).
- In the past week Gauteng Province (98 431/276 241, 35.6%) moved to the top position of the three provinces contributing the majority (227 130/ 276 241, 82.2%) of total COVID-19 cases in South Africa, followed by Western Cape Province (78 399/276 241, 28.4%) and Eastern Cape Province (50 300/276 241, 18.2%)
- The increase in weekly incidence risk among all cases, varied by province over time. In the past week, Gauteng Province reported the highest weekly incidence risk, 65.5 cases per 100 000 persons).
- This week, a separate section describing COVID-19 cases aged <20 years has been included.
 - Individuals aged <20 years constitute 8% (22 057) of total cases to date.
 - To date, the majority of cases aged <20 years were reported from Gauteng Province, (34.95%, 5 149/22 057), followed by Eastern Cape (23.4%, 7 673/22 057) and Western Cape provinces (20.0%, 456/22 057).
 - Among cases aged <20 years, North West Province (51.3 cases per 100 000), followed by Gauteng (46.3 cases per 100 000) and Eastern Cape (35.2 cases per 100 000) provinces reported the highest incidence risks in the past week.
- The cumulative incidence risk among all cases to date increased with increasing age and peaked in the 50-54-year old age group. The highest increase in cumulative incidence risk in week 28 was among individuals in the ≥80-year old age group, 439 cases per 100 000 persons and the lowest increase in cumulative incidence risk was in the 0-4-year age group 14.7 cases per 100 000 persons.
- Trends in numbers of new cases by province may be affected by changes in testing practice and delays in testing of specimens.

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 of COVID-19 cases in South Africa

As of 11 July 2020, a total of 276 242 laboratory-confirmed COVID-19 cases were reported in South Africa. The number of new cases, 79 492, reported in the past week was higher than the number of cases reported the previous week, 58 616 in week 27. Similar to the previous 2 weeks, in week 28, Gauteng Province reported the highest percentage of new cases (35 027/79 491, 44.1%), followed by Eastern Cape Province (114 652/79 491 18.4%), Western Cape Province was replaced by KwaZulu-Natal Province (10 426/79 491, 13.1%) (Table 1). In the past week, Gauteng Province (98 431/276 241, 35.6%) moved to the top position of the three provinces contributing the majority (227 130/ 276 241, 82.2%) of total COVID-19 cases in South Africa, followed by Western Cape Province (78 399/276 241, 28.4%) and Eastern Cape (50 300/276 241, 18.2%).

To date, the Western Cape Province had the highest cumulative incidence risk (1145.9 cases per 100 000 persons) followed by the Eastern Cape (749.4 per 100 000 persons) and Gauteng provinces (648. 6 cases per 100 000 persons). The Limpopo Province remains the province with the lowest cumulative incidence risk (50.4 cases per 100 000 persons) to date.

The cumulative incidence risk for the country increased from 334.9 cases per 100 000 persons in week 27 to 470.0 cases per 100 000 persons in

57.4%

OVERALL
MAJORITY OF
CASES REPORTED
ARE FEMALE

470.2
/100 000
OVERALL
INCIDENCE RISK

COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

WEEK 28 2020

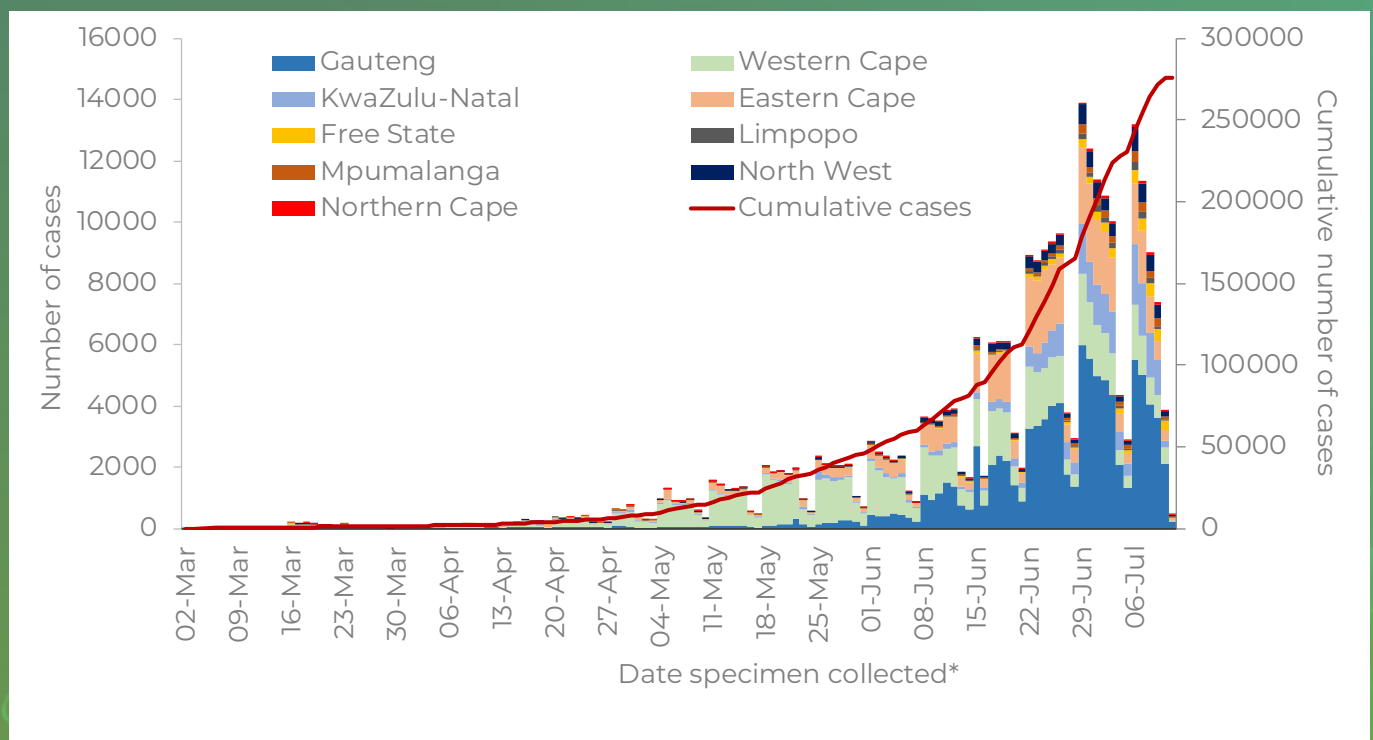
LABORATORY-CONFIRMED CASES OF COVID-19 IN SOUTH AFRICA

week 28. 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 Gauteng Province performed the highest number of tests per 100 000 persons (503.0) followed by Free State (406.0), whereas Limpopo performed the lowest number of tests per 100 000 (75.7). The weekly incidence risk continues to increase week on week for the majority of the provinces. In the past week, Gauteng Province reported the highest incidence risk (65.5 cases/100 000 persons) (Figure 4).

To date, the case fatality ratio remains around 2% (4 079/276 242, 1.5%). Of the 4 079 individuals reported to have died, 880 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 880 vs. 743. 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.

44.1%
CASES REPORTED IN
GAUTENG PROVINCE
IN THE PAST WEEK

50-54
YEAR AGE
GROUP
HAS THE HIGHEST
INCIDENCE



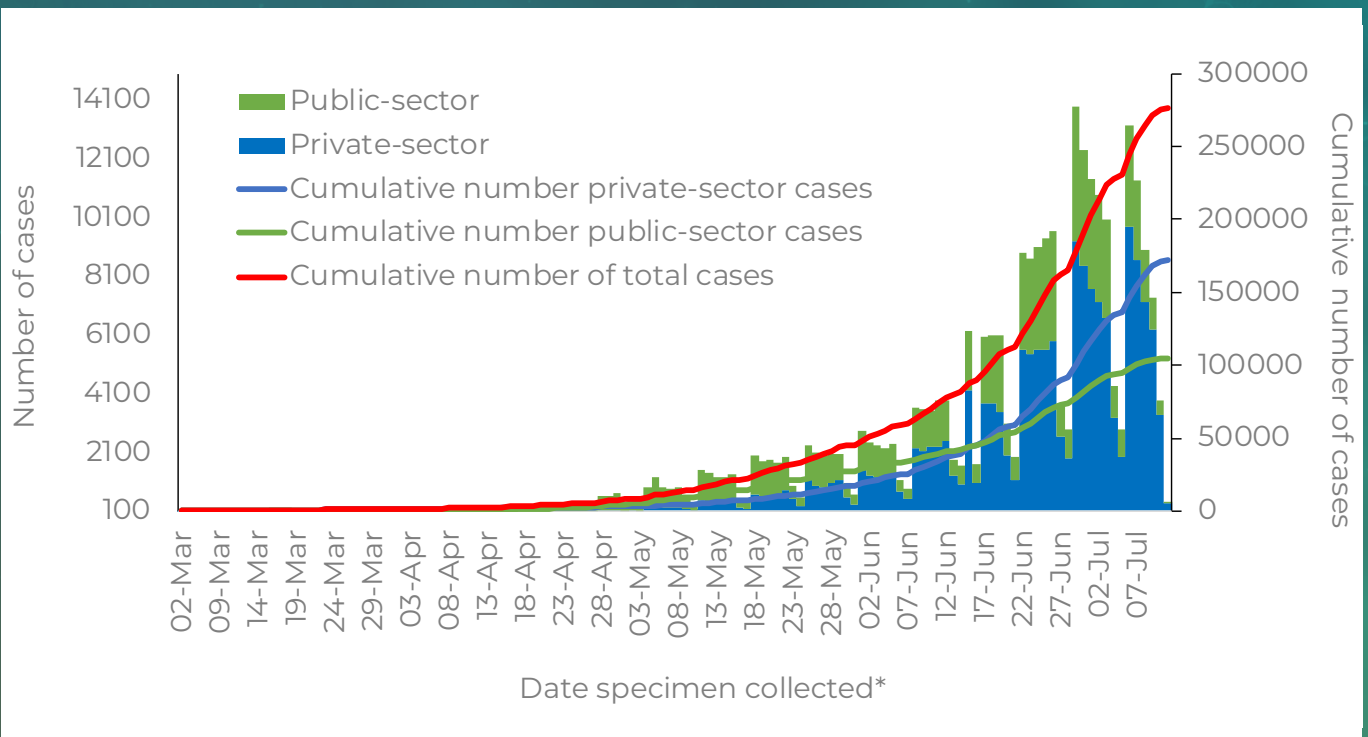
*Date of specimen receipt used where date of collection was missing

Figure 1. Number and cumulative number of laboratory-confirmed cases of COVID-19 by province and date of specimen collection, South Africa, 3 March-11 July 2020 (n= 276 047, 195 missing dates of specimen collection)

COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

WEEK 28 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 testing laboratory sector and date of specimen collection, South Africa, 3 March-11 July 2020 (n=276 047, 195 missing dates of specimen (collection))

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- 11 July 2020 (n=276 242)

| Province | Total cases (n) | New cases, 5 July-11 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) | Week 28 incidence risk (cases/100 000 persons) | Tests per 100 000 persons, 5 July-11 July 2020 |
|---------------|-----------------|---|--|------------------------------|---|--|--|
| Eastern Cape | 50 300 | 14 652 (18.4) | 18.2 (18.1-18.4) | 6 712 276 | 749.4 | 218.3 | 269.2 |
| Free State | 5 223 | 2 670 (3.4) | 1.9 (1.8-1.9) | 2 887 465 | 180.9 | 92.5 | 406.0 |
| Gauteng | 98 431 | 35 027 (44.1) | 35.6 (35.4-35.8) | 15 176 115 | 648.6 | 230.8 | 503.0 |
| KwaZulu-Natal | 25 572 | 10 426 (13.1) | 9.3 (9.1-9.4) | 11 289 086 | 226.5 | 92.4 | 78.3 |
| Limpopo | 3 014 | 1 308 (1.6) | 1.1 (1.0-1.1) | 5 982 584 | 50.4 | 21.9 | 75.7 |

COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

WEEK 28 2020

LABORATORY-CONFIRMED CASES OF COVID-19 IN SOUTH AFRICA

| | | | | | | | |
|---------------|---------|--------------|-------------------|------------|--------|-------|-------|
| Mpumalanga | 3 977 | 2 012 (2.5) | 1.4 (1.4-1.5) | 4 592 187 | 86.6 | 43.8 | 169.5 |
| North West | 9 924 | 3 861 (4.9) | 3.6 (3.5-3.7) | 4 027 160 | 246.4 | 95.9 | 182.2 |
| Northern Cape | 1 401 | 667 (0.8) | 0.5 (0.4-0.5) | 1 263 875 | 110.8 | 52.8 | 133.2 |
| Western Cape | 78 399 | 8 868 (11.2) | 28.4 (28.2-28.25) | 6 844 272 | 1145.5 | 129.6 | 343.1 |
| Not allocated | 1 | | 0.0 | | | | |
| South Africa | 276 242 | 79 492 (100) | 100 | 58 775 020 | 470.2 | 135.3 | 314.9 |

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

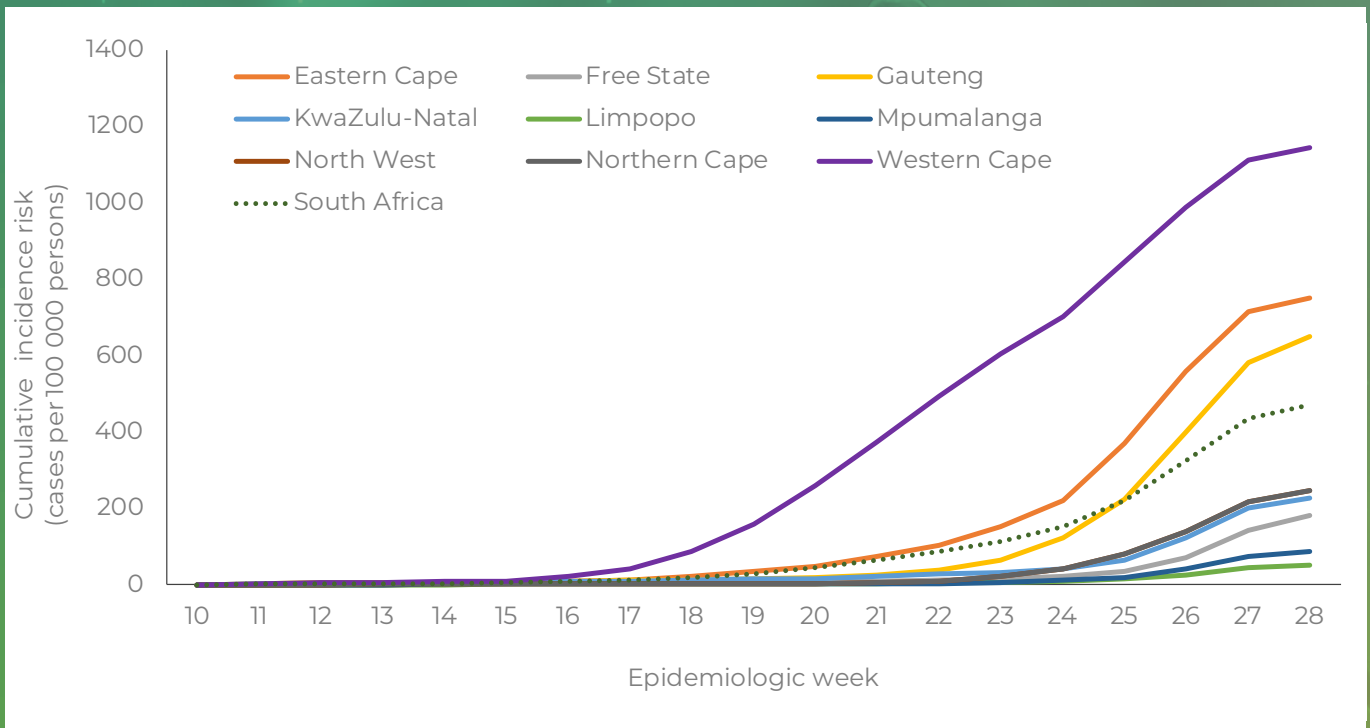


Figure 3. Cumulative incidence risk of PCR-confirmed cases of COVID-19 by province and epidemiological week, South Africa, 3 March-11 July 2020 (n=276 047, 195 missing dates of specimen collection)

COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

WEEK 28 2020 | CHARACTERISTICS OF CASES BY AGE AND SEX

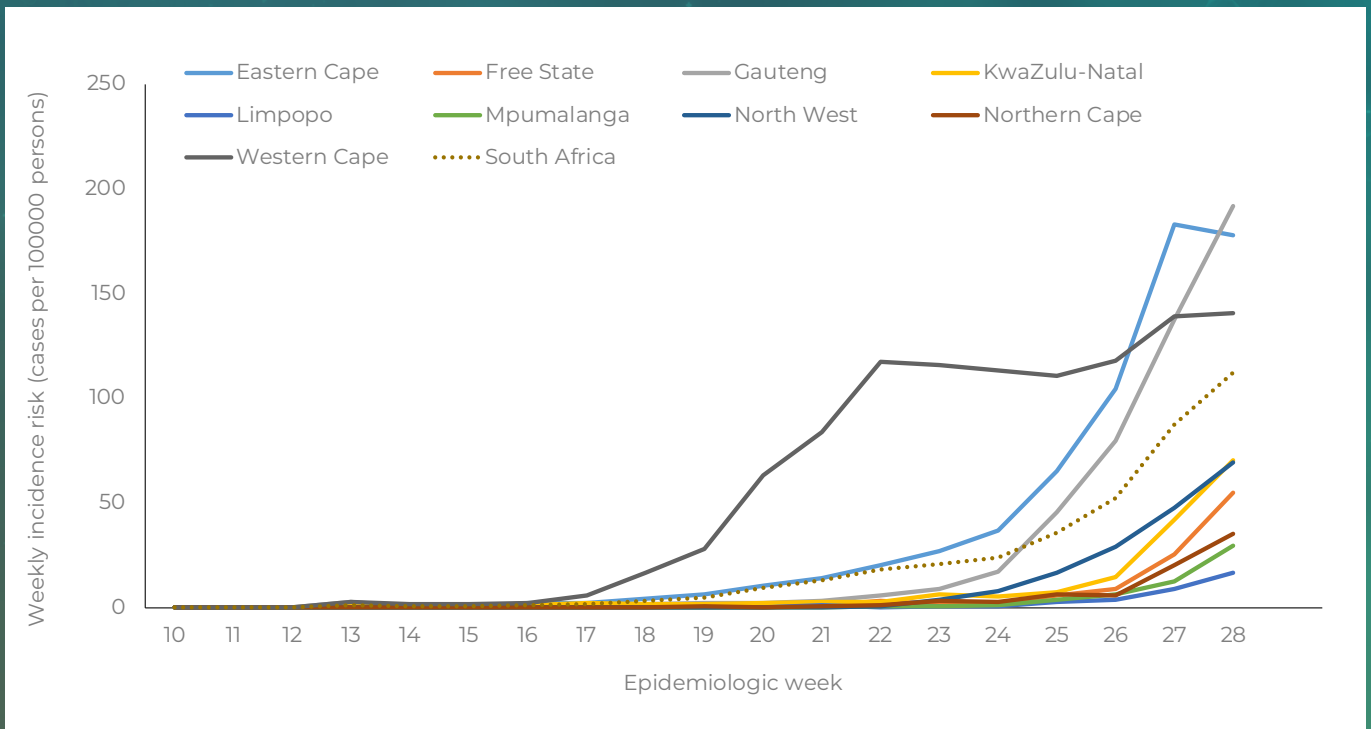


Figure 4. Weekly incidence risk of PCR-confirmed cases of COVID-19 by province and epidemiological week, South Africa, 3 March-11 July 2020 (n=276 047, 195 missing dates of specimen collection)

CHARACTERISTICS OF COVID-19 CASES IN SOUTH AFRICA BY AGE AND SEX

The median age of COVID-19 cases in South Africa to date remains at 39 years, interquartile range (IQR) 30-50 years. The distribution of cases varied by age, with highest percentage of all cases to date in the 35-39-year age group (36 931/274 547, 13.4%) followed closely by the 30-34-year age group (36 641/274 547, 13.3%) (Figure 5). Similarly, among the cases reported in the past week, the highest percentage of cases was in the 35-39-year age group (10694/ 79 492, 13.5%) followed by the 30-34-year age group (10 544/79 492). Cases reported in the past week had the same median age (39 years, IQR 30-50 years) as total cases. The cumulative incidence risk reported to date was 470.0 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 (968.6 cases per 100 000 persons), followed by those in the ≥80-year age group (953.1 cases per 100 000 persons). The lowest cumulative incidence

39
THE MEDIAN
AGE OF CASES IN THE
PAST WEEK

COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

WEEK 28 2020

CHARACTERISTICS OF CASES BY AGE AND SEX

risk was reported in the younger age-groups, 56.9 cases per 100 000 persons and 65.3 cases per 100 000 persons in the 0-4 and 5-9-year age groups, respectively (Figure 6 and Table 2). In the past week, the highest increase in cumulative incidence risk among all cases was among individuals in the ≥ 80 -year age group, 439.2 cases per 100 000 persons and the lowest increase in cumulative incidence risk was in the 0-4-year age group 14.7 cases per 100 000 persons.

To date, the majority of COVID-19 cases reported were female (57.4%, 157 503/274 547; 95% CI 57.2-57.6). This was similar to the percentage reported in the past week (57.4%, 45 610/794 92) (95% CI, 57.0- 57.7). The cumulative incidence risk remained higher among females than in males 523.2 cases per 100 000 persons [95%CI 520.6-525.8] versus 408.2 cases per 100 000 persons [95% CI 405.8-410.5]) (Figure 7). However, this varied by age group with the peak cumulative incidence risk among females aged 45-49 years and males aged ≥ 80 years (Figure 7 and Figure 8). The highest increase in cumulative incidence risk from week 27 to week 28 was among females (151.5 cases per 100 000 cases [95% CI 150.1-151.7] vs. 116.8 cases [95% CI 115.6-118.1]) 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%

OVERALL HIGHEST PERCENTAGE OF CASES IS THE 35-39-YEAR AGE GROUP

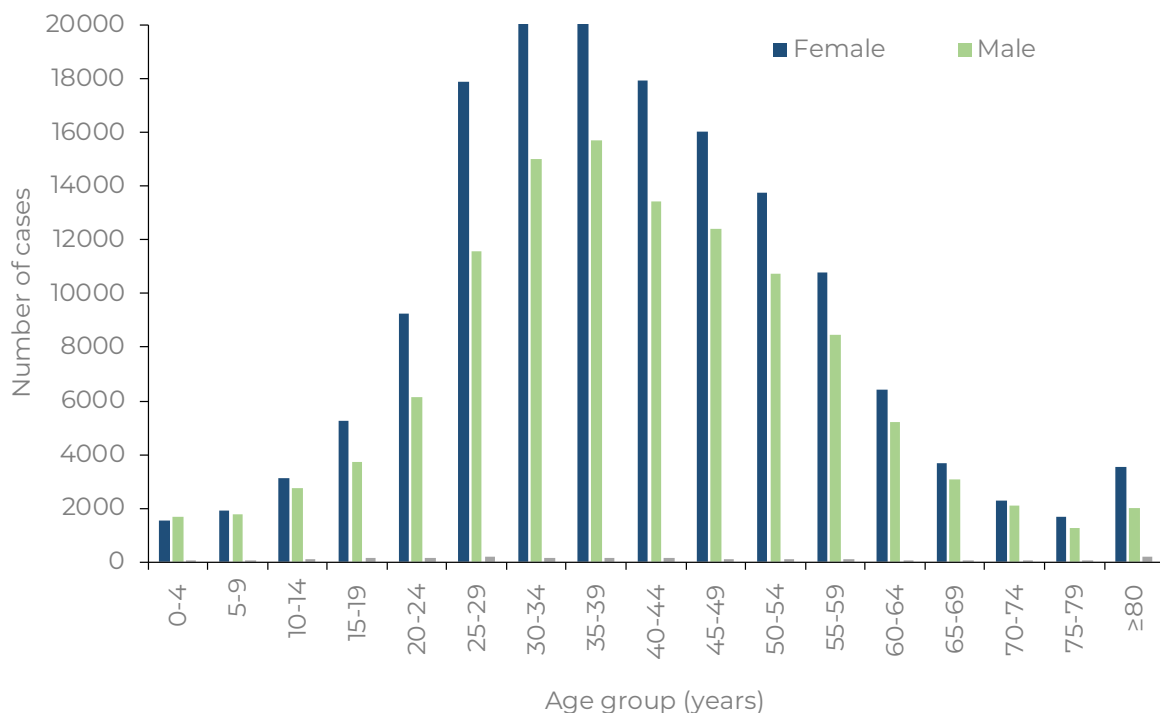


Figure 5. Number of laboratory-confirmed cases of COVID-19 by age group and sex, South Africa, 3 March-11 July 2020 (n=274 547, sex/age missing for 1 695)

COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

WEEK 28 2020

CHARACTERISTICS OF CASES BY AGE AND SEX

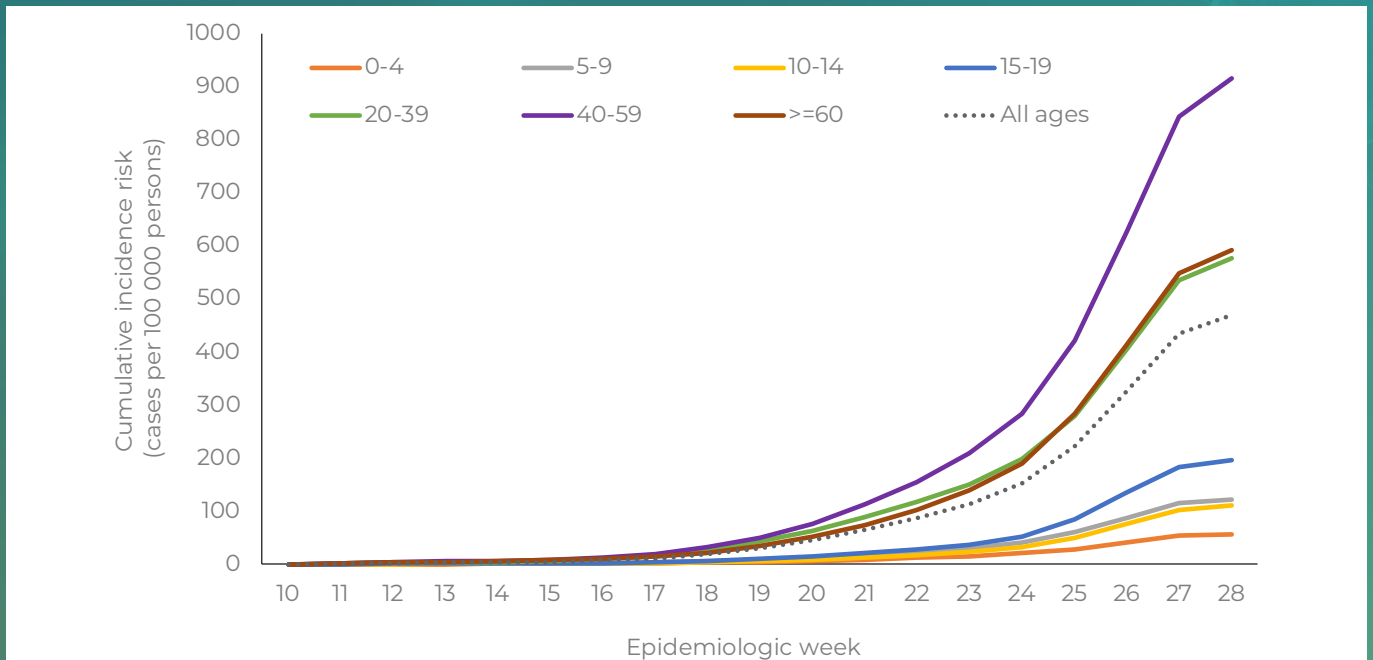


Figure 6. Cumulative incidence risk of PCR-confirmed cases of COVID-19 by age group and epidemiologic week, South Africa, 3 March-11 July 2020 (n=276 047, 195 missing dates of specimen collection)

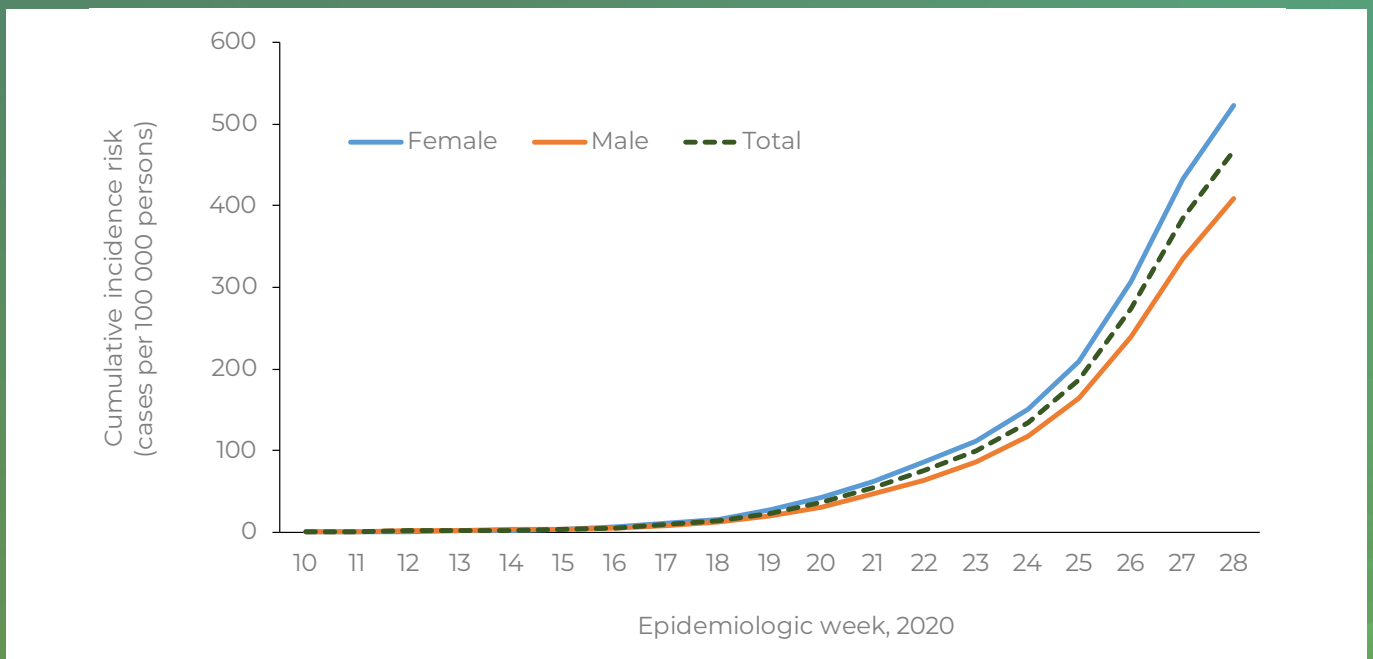


Figure 7. Cumulative incidence risk by sex and epidemiological week, South Africa, 3 March-11 July 2020 (n=274 547, sex/specimen collection date missing for 1 695)

COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

WEEK 28 2020 | CHARACTERISTICS OF CASES BY AGE AND SEX

Table 2. Number of cases and cumulative/weekly incidence risk by age group, South Africa, 3 March- 11 July 2020, n=276 242

| Age group (years) | Cases (n) | Cases 5 July-11 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 27 to week 28 |
|-------------------|----------------|--|-----------------------------|---|---|
| 0-4 | 3 263 | 843 (1.1) | 5 733 946 | 56.9 | 14.7 |
| 5-9 | 3 749 | 1 084 (1.5) | 5 737 439 | 65.3 | 18.9 |
| 10-14 | 5 941 | 1 906 (2.4) | 5 427 902 | 109.5 | 35.1 |
| 15-19 | 9 104 | 2 779 (3.5) | 4 660 002 | 195.4 | 59.6 |
| 20-24 | 15 518 | 4 152 (5.2) | 4 914 186 | 315.8 | 84.5 |
| 25-29 | 29 664 | 8 306 (10.4) | 5 528 571 | 536.6 | 150.2 |
| 30-34 | 36 641 | 10 554 (13.3) | 5 537 963 | 661.6 | 190.4 |
| 35-39 | 36 931 | 10 694 (13.5) | 4 571 175 | 807.9 | 233.9 |
| 40-44 | 31 502 | 9 088 (11.4) | 3 585 408 | 878.6 | 253.5 |
| 45-49 | 28 568 | 8 502 (10.7) | 3 045 617 | 938.6 | 279.2 |
| 50-54 | 24 554 | 7 319 (9.2) | 2 535 048 | 968.6 | 288.7 |
| 55-59 | 19 320 | 5 602 (7.0) | 2 192 512 | 881.2 | 255.5 |
| 60-64 | 11 679 | 3 406 (4.3) | 1 784 476 | 654.5 | 190.9 |
| 65-69 | 6 753 | 1 863 (2.3) | 1 370 121 | 492.9 | 136.0 |
| 70-74 | 4 397 | 1 196 (1.5) | 949 812 | 462.9 | 125.9 |
| 75-79 | 2 911 | 727 (0.9) | 597 874 | 486.9 | 121.6 |
| ≥80 | 5 747 | 2 648 (3.3) | 602 969 | 953.1 | 439.2 |
| Unknown | 0 | 0 (0) | | | |
| Total | 276 242 | 79492 (100) | 58 775 022 | 470.0 | 135.2 |

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

COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

WEEK 28 2020

NATIONAL AND PROVINCIAL TRENDS OF COVID-19 CASES AGED <20 YEARS IN SOUTH AFRICA

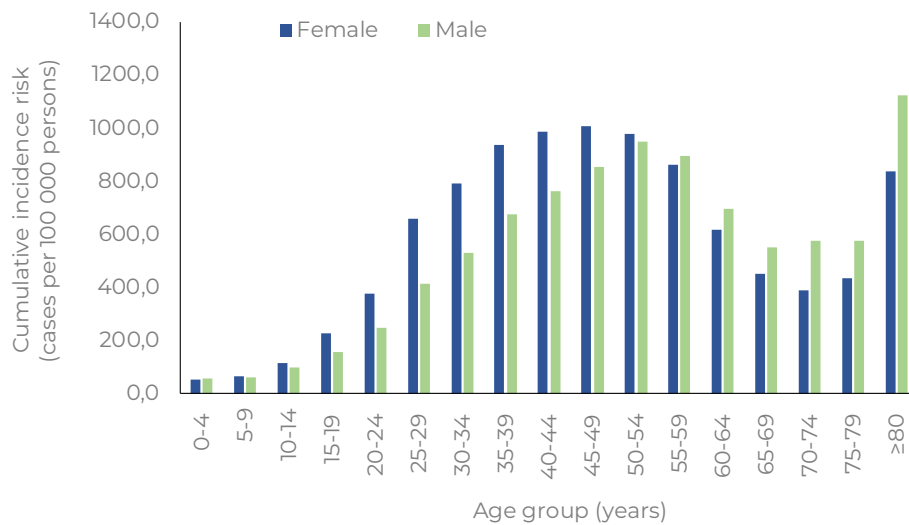


Figure 8. Cumulative incidence risk by age group and sex, South Africa, 3 March- 11 July 2020 (n=274 547, age and/or gender missing for 1 695 cases)

NATIONAL AND PROVINCIAL TRENDS OF COVID-19 CASES AGED <20 YEARS IN SOUTH AFRICA

Of the 276 242 laboratory-confirmed cases of COVID-19 in South Africa, 22 057 (8.0%) were aged <20 years. To date, the majority of cases aged <20 years were reported from Gauteng Province, (34.95%, 5 149/22 057), followed by Eastern Cape (23.4%, 7 673/22 057) and Western Cape provinces (20.0%, 4 456/22 057).

To date, the Western Cape Province had the highest cumulative incidence risk (203.5 cases per 100 000 persons) followed by the Eastern Cape (182.4 per 100 000 persons) and Gauteng provinces (164.8 cases per 100 000 persons). The Limpopo Province reported the lowest cumulative incidence risk (11.2 cases per 100 000 persons) to date. The cumulative incidence risk among cases aged <20 years increased from 95.5 cases per 100 000 persons in week 27 to 102.2 cases per 100 000 persons in week 28. The cumulative incidence risk varied by province over time (Figure 9).

The timing and the magnitude of increase in weekly incidence risk varied by province. From week 17 to week 24, Western Cape Province, reported the highest weekly incidence risk. In week 25, Western Cape was overtaken by Eastern Cape, North West and Gauteng provinces, which have since continued to be the three provinces reporting highest weekly incidences (Figure 10). In the past week, North West Province (51.3 cases per 100 000), followed by Gauteng (46.3 cases per 100 000) and Eastern Cape (35.2 cases per 100 000) reported the highest incidence risks.

COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

WEEK 28 2020

NATIONAL AND PROVINCIAL TRENDS OF COVID-19 CASES AGED <20 YEARS IN SOUTH AFRICA

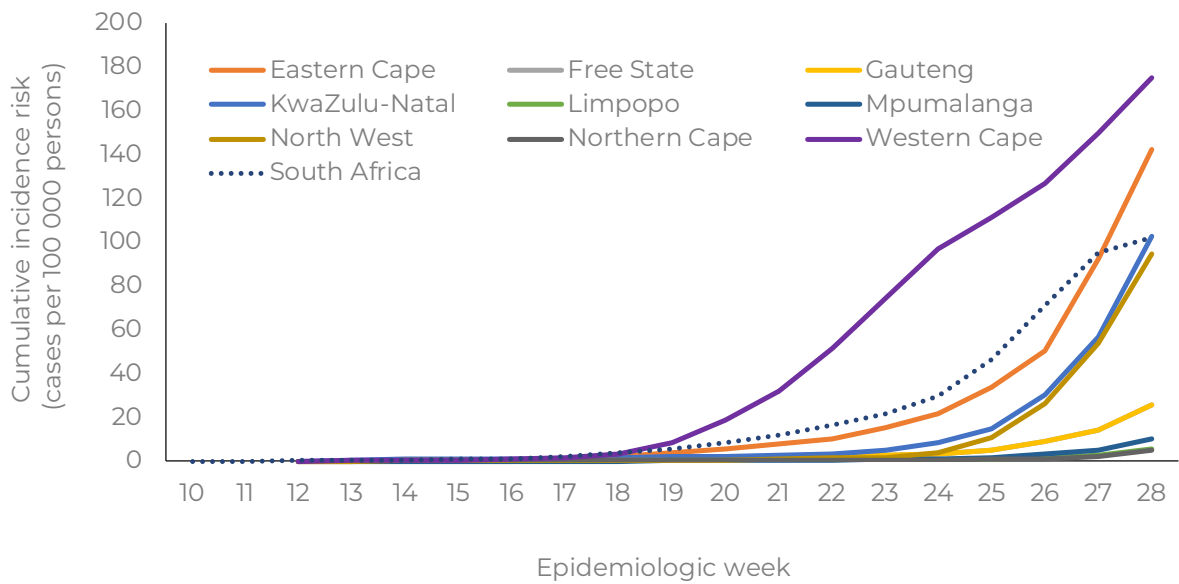


Figure 9. Cumulative incidence risk of PCR-confirmed cases of COVID-19 among individuals aged <20 years by province and epidemiological week, South Africa, Africa, 3 March-11 July 2020 (n=22 044, 13 missing sample collection date)

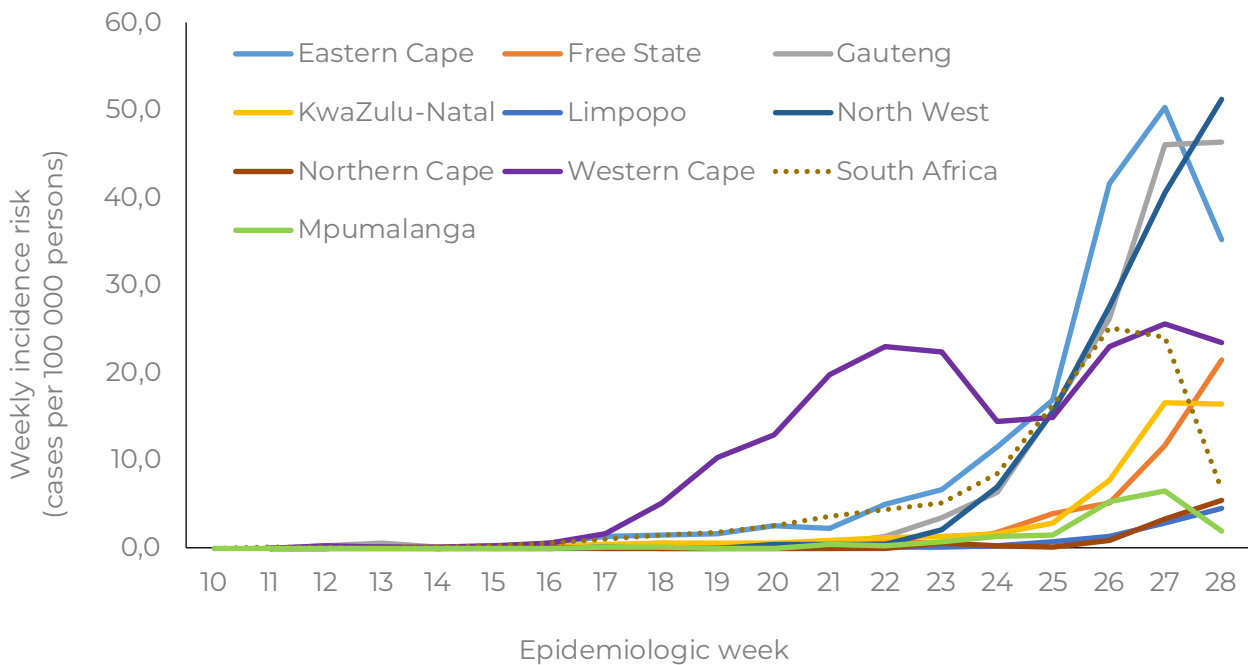


Figure 10. Weekly incidence risk of PCR-confirmed cases of COVID-19 among individuals aged <20 years by province and epidemiological week, South Africa, Africa, 3 March-11 July 2020 (n=22 044, 13 missing dates of specimen collection)

CHARACTERISTICS OF CASES AGED <20 YEARS IN SOUTH AFRICA BY AGE AND SEX

Among the individuals <20 years, 54% (11 795/21 718) were female and the majority, (9 104/22 057, 41.2%) were aged ≥15 years. The median age of cases was 13 years IQR (8-17). The cumulative risk among cases aged <20 years was 102.3 cases per 100 000 persons, with the highest cumulative incidence risk reported among individuals aged 15-19 years (195.4 cases per 100 000 persons) and the lowest cumulative incidence risk reported among cases aged 5-9 years (56.9 cases per 100 000 persons). The cumulative incidence risk was slightly higher among females (106.5 cases per 100 000 persons) than in males (91.3 cases per 100 000). For both females and males, the highest cumulative incidence risk was reported among individuals aged 15-19 years, however, this was higher for females, 195.4 cases per 100 000 persons versus 160.0 cases per 100 000 persons in males (Figure 11).

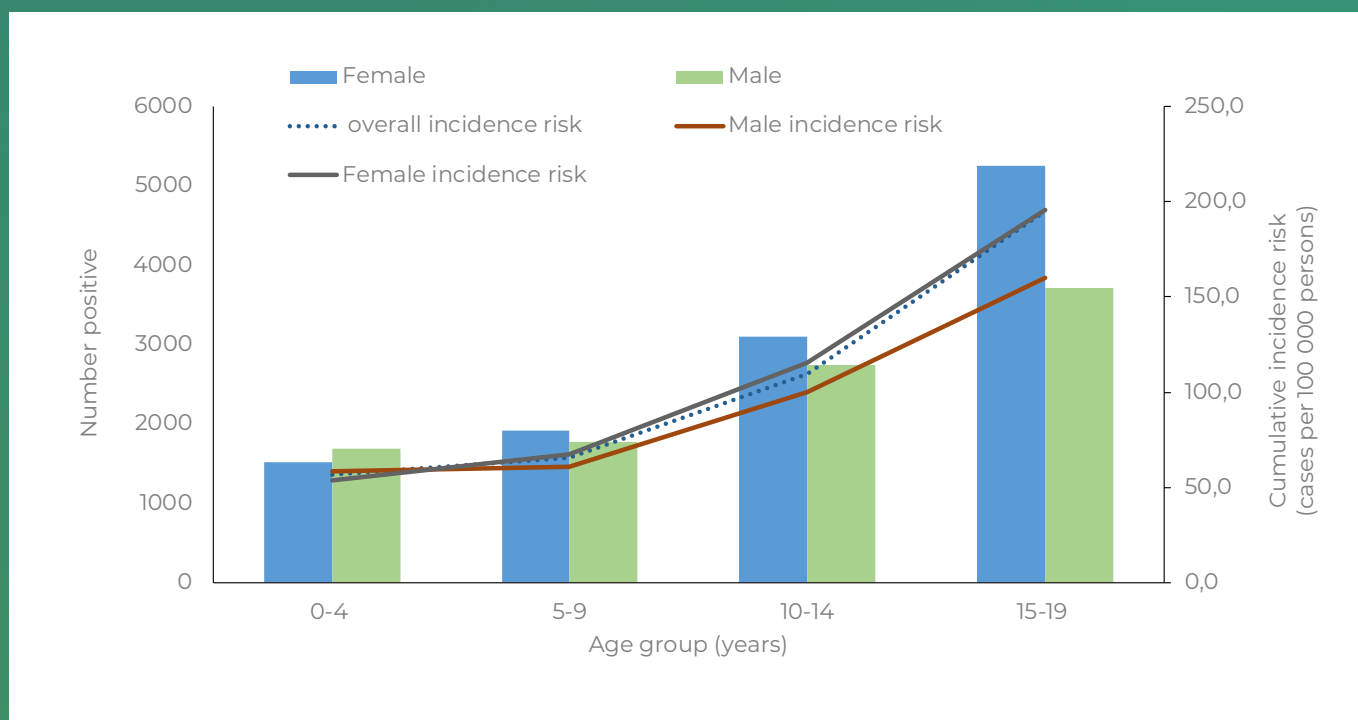


Figure 11. Number and incidence risk of laboratory confirmed COVID-19 cases aged <20 years by age group and sex, South African 3 March 2020-11 July 2020

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 276 242 cases, including 4079 deaths reported to date. Individuals aged <20 years constitute 8% (22 057/276 242) of the total cases in South Africa. The number of COVID-19 cases reported continues to increase week on week, with increase in numbers mostly driven by three provinces, Gauteng, Eastern Cape and Western Cape Province which contribute ~ 80% of total cases. In the past three weeks, Gauteng and Eastern Cape provinces reported the highest increases in number of cases. For the first time, in the past week Gauteng reported the highest percentage of all COVID-19 cases in the country, surpassing Western Cape Province. However, Western Cape remains the province with the highest cumulative incidence to date among all cases and in the group younger than 20 years. The increase in overall number of cases in Gauteng and Eastern Cape may be explained by increasing transmission as well as increased testing. Weekly incidence risk in Gauteng and Eastern Cape continue to increase, whereas 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 cumulative incidence risk increases with increasing age and peaks in the 50-54-year age group. Similarly, among cases aged <20 years the incidence risk increased with increasing age, peaking in the 15-19 year-age group. Overall, and among cases aged <20 years females continue to contribute the majority of cases to date.