

COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

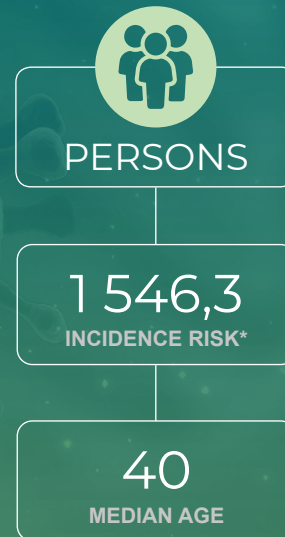
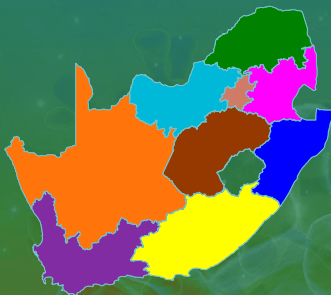


NATIONAL INSTITUTE FOR COMMUNICABLE DISEASES

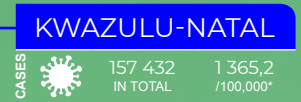
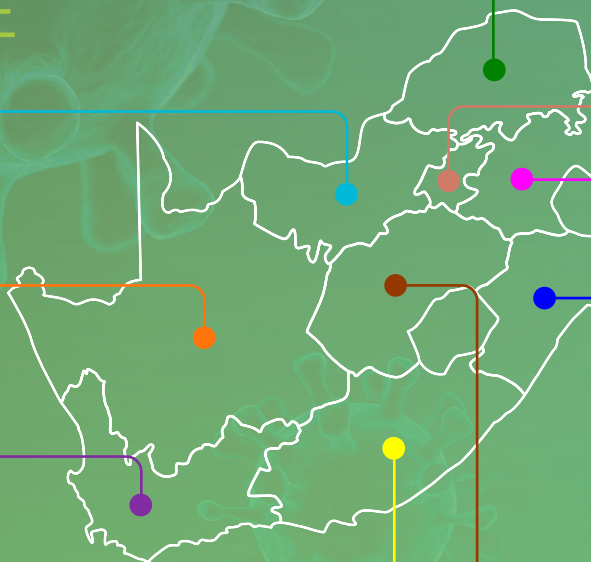
Division of the National Health Laboratory Service

SOUTH AFRICA WEEK 51 2020

CUMULATIVE DATA FROM



PROVINCES AT A GLANCE



* Incidence risk - cases per 100 000 persons
** based on samples collected/received in current reporting week

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 19 December 2020 (week 51 of 2020). Note: COVID-19 is the name of the disease and SARS-CoV-2 is the name of the virus. Trends in numbers of new cases by province and age group may be affected by changes in testing practice and delays in testing of specimens. The numbers reported may change as more data become available.

Highlights

- As of 19 December 2020, a total of 921 922 laboratory-confirmed COVID-19 cases had been detected in South Africa. Of these, 60 958 were cases reported since the last report (week 50 report). There was a 2.9% decrease in number of new cases detected in week 51 (49 510) compared to the number of new cases detected in week 50 (50 971).
- An additional 1 415 deaths were reported since the last report. The overall case-fatality ratio is 2.7% (24 691/921 922).
- In the past week, the Western Cape Province reported the highest proportion of the new cases detected (15 195/49 510, 30.7%), followed by the KwaZulu-Natal Province (13 503/49 510, 27.3%), the Gauteng Province (10 182/49 510, 20.6%), and the Eastern Cape Province (7 025/49 510, 14.2%). This is a similar trend to the past two weeks.
- All provinces reported an increase in weekly incidence risk, except the Eastern Cape Province (63.4 cases per 100 000 persons, 37.8% reduction) and the Western Cape Province (29.2 cases per 100 000 persons, 11.9% reduction) which reported a decrease in weekly incidence risk, compared to week 50. Delays in reporting could affect these trends.
- In the past week, Western Cape Province (216.9 cases per 100 000 persons) reported the highest weekly incidence risk, followed by the KwaZulu-Natal Province (117.1 cases per 100 000 persons), the Eastern Cape Province (104.3 cases per 100 000 persons), the Gauteng Province (65.7 cases per 100 000 persons), and the Northern Cape Province (30.0 cases per 100 000 persons). This trend is similar to the previous week.
- The increase in the number of cases in the Western Cape Province in recent weeks was driven by a resurgence in COVID-19 cases reported mostly from the Garden Route. The incidence risk in week 50 (438.9 cases per 100 000 persons) was higher than the peak weekly incidence risk during the first wave (179.9 cases per 100 000 persons) in week 30. All the districts in the Western Cape Province reported weekly incidence risks in week 50 higher than those reported in the first wave peaks.
- The increase in the number of new cases and weekly incidence risk in KwaZulu-Natal Province in the past two weeks was largely driven by a sharp increase in number of new cases in six districts (eThekweni, iLembe, Ugu, Harry Gwala, uMgungundlovu, and King Cetshwayo). Three districts, eThekweni, iLembe, and Harry Gwala districts reported weekly incidence risks above those reported in the first wave peaks.
- The Gauteng Province has been reporting an increase in incidence risk since week 48, this trend continued in week 51.
- In week 50, there was a peak in weekly incidence risk in individuals aged 15-19 years in Gauteng and KwaZulu-Natal provinces. Incidence risk in this age group has reduced in week 51 in both provinces. Weekly incidence risk shows an increasing trend week on week in all other age groups.

INCIDENCE
RISK FOR
WEEK 51

83,0
CASES PER
100 000
PERSONS

30,7%
OF CASES
REPORTED IN
WESTERN CAPE IN
WEEK 51

IN WEEK 51,
THE HIGHEST
WEEKLY
INCIDENCE
RISK WAS IN
CASES AGED 55-
59 YEARS (172,2
CASES PER 100
000 PERSONS)

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 largely discontinued and testing efforts then 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. In recent weeks, testing has been prioritised for healthcare workers and hospitalised patients. 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. For reports published from week 41 onwards we used mid-year population estimates from Statistics South Africa for 2020 to calculate the incidence risk (cumulative or weekly incidence), expressed as cases per 100 000 persons. In historical reports published from epidemiologic week 10 (during the start of COVID-19 epidemic in South Africa) to week 40, 2019 mid-year population estimates were used. Aggregate data on the number of deaths by province were obtained from the Department of Health. Data on number of tests conducted in the past week as reported in the simultaneously-published COVID-19 weekly testing report was used to calculate tests conducted per 100 000 population. Data on province and district allocation was based on geocoding algorithm using in order of priority (i) completeness of patient data, (ii) submitting doctor's address, (iii) registering doctor's address and as final option, (iv) the guarantor's address data. The geocoding algorithm used the most complete data for assigning data on province and district where adequate information was provided on the lab request form at the time of sample collection. Data on district allocation may lag resulting in number of cases in recent weeks missing district allocation. Prevalence and incidence risk by districts should be interpreted with caution.

We estimated the time-varying (weekly) doubling time of the COVID-19 epidemic for the provinces with sufficient

data and from weeks with sufficient number of cases and complete data (week 12 to the week before the current reporting period). The unit of analysis (epidemiological week) was defined from Sunday to the following Saturday. We first estimated the weekly growth rate of the epidemic by fitting a linear regression model to the logarithm of the daily cumulative number of laboratory-confirmed COVID-19 cases. We then estimated the doubling time for each week using the following formula $\log(2)/gr$ (where gr is the estimated weekly growth rate). An increase in the doubling time may suggest a slowing of transmission but this may also be affected by changes in testing strategy or care seeking. Until the week 29 report, new cases were defined as all cases reported since the last report, irrespective of when the sample was collected. Subsequent to the week 29 report, new cases are now defined as cases detected in the past epidemiologic week based on date of sample collection or sample receipt. It is therefore possible for numbers reported as new cases for the current reporting week not to tally with total additional cases reported since the last report. This will be the case when there was a delay in reporting of cases.

National and provincial trends of COVID-19 cases in South Africa

As of 19 December 2020, a total of 921 922 laboratory-confirmed COVID-19 cases were reported in South Africa. This is 60 958 more cases than the number reported in the last report (week 50). The number of new cases detected in week 51 (49 510) was slightly lower than the number of new cases detected in week 50 (50 971), this represented a 2.9% decrease in the number of new cases compared to the previous week. In the past week, the Western Cape Province reported the highest number of new cases (15 195/49 510, 30.7%), followed by the KwaZulu-Natal Province (13 503/49 510, 27.3%), the Gauteng Province (10 182/49 510, 20.6%), and the Eastern Cape Province (7 025/49 510, 14.2%) (Table 1). Five provinces, Gauteng (256 595/921 922, 27.8%), Western Cape (174 664/921 922, 18.9%), Eastern Cape (158 484/921 922, 17.2%), KwaZulu-Natal (157 432/921 922, 17.1%), and Free State (60 457/921 922, 6.6%) continued to report the majority (807 632/921 922, 87.6%) of total COVID-19 cases in South Africa. In keeping with the data reported in the previous weeks, there was minimal change in percent contribution of cases in the different provinces from week 50 to week 51.

The cumulative incidence risk for the country increased from 1 463.2 cases per 100 000 persons in week 50 to 1 546.3 cases per 100 000 persons in week 51. The cumulative incidence risk varied by province over time (Figure 3). This is partly explained by testing differences by province (Table 1). The Western Cape Province reported the highest cumulative incidence risk (2 493.2 cases per 100 000 persons), followed by the Eastern Cape Province (2 353.5 cases per 100 000), the Free

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State Province (2 064.2 cases per 100 000 persons), Northern Cape Province (1 869.1 cases per 100 000 persons), the Gauteng Province (1 656.7 cases per 100 000 persons), and the KwaZulu-Natal Province (1 365.2 cases per 100 000 persons). The other provinces continued to report cumulative incidence risk below 1 000 cases per 100 000 persons, with Limpopo Province reporting the lowest cumulative incidence risk (345.5 cases per 100 000 persons).

The Western Cape Province reported the highest weekly incidence risk (216.9 cases per 100 000 persons) in week 51, followed by the KwaZulu-Natal Province (117.1 cases per 100 000 persons), the Eastern Cape Province (104.3 cases per 100 000 persons), the Gauteng Province (65.7 cases per 100 000 persons), and the Northern Cape Province (30.0 cases per 100 000 persons), this is similar to the previous two weeks. The weekly incidence risk in all the other provinces remained below 25 cases per 100 000 persons. In the past week, all provinces reported an increase in weekly incidence risk, except the Eastern Cape Province (63.4 cases per 100 000 persons, 37.8% reduction) and the Western Cape Province (29.2 cases per 100 000 persons, 11.9 % reduction) which reported reductions in weekly incidence, compared to the previous week. The increase in weekly incidence risk ranged from 3.3 cases per 100 000 persons (19.6% increase) in the Free State Province to 15.3 cases per 100 000 persons (15.1% increase) in KwaZulu-Natal Province (Figure 4). Some of the reductions in week 51 weekly incidence risk could be as a result of reporting delays.

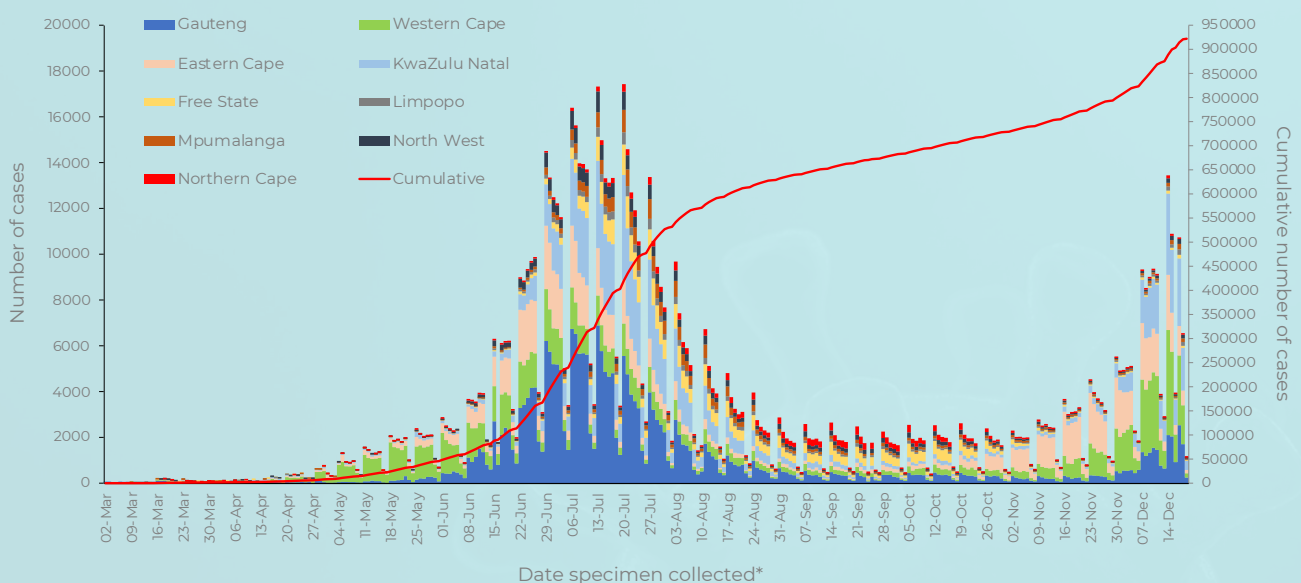
Since the peak of weekly incidence risk experienced at different levels and weeks by the different provinces in July (Western Cape

and Eastern Cape peaked earlier in week 27 and Northern Cape peaked last in week 30), followed by a decline in number of cases in subsequent weeks, a number of provinces have been reporting increases in number of cases from week 43.

Among the five provinces reporting the majority of cases in South Africa to date, doubling time of number of cases varied with time. In week 50, the estimated doubling time of number of cases decreased in all five provinces, Gauteng Province (from 317.7 days to 127.8 days, 59.8% decrease), Western Cape Province (from 58.0 days to 35.8 days, 38.3% decrease), Free State Province (from 722.5 days to 518.2 days, 28.3% decrease), KwaZulu-Natal Province (from 130.1 days to 48.7 days, 62.6% decrease), and the Eastern Cape Province (from 56.9 days to 54.5 days, 4.5% decrease) compared to week 49 (Figure 5).

The case-fatality ratio is 2.7% (24 691/921 922); an additional 1 415 deaths were reported since the last report. The number of deaths reported in the past week was higher than the number reported in the previous week, 1 415 compared to 1 070. A crude case-fatality ratio (CFR) calculated in this way (number of deaths/number of diagnosed cases) is subject to numerous limitations. Because deaths are delayed in relation to cases, as case numbers decrease rapidly, the crude case fatality ratio may increase as a result of a more rapid reduction in the denominator compared to the numerator. The CFR may be an underestimate as deaths in hospital are more likely to be reported than deaths out of hospital. In addition, occurrence and reporting of deaths may be delayed to several weeks after case diagnoses.

Figure 1. Number and cumulative number of laboratory-confirmed cases of COVID-19 by province and date of specimen collection, South Africa, 3 March-19 December 2020 (n=921 922)

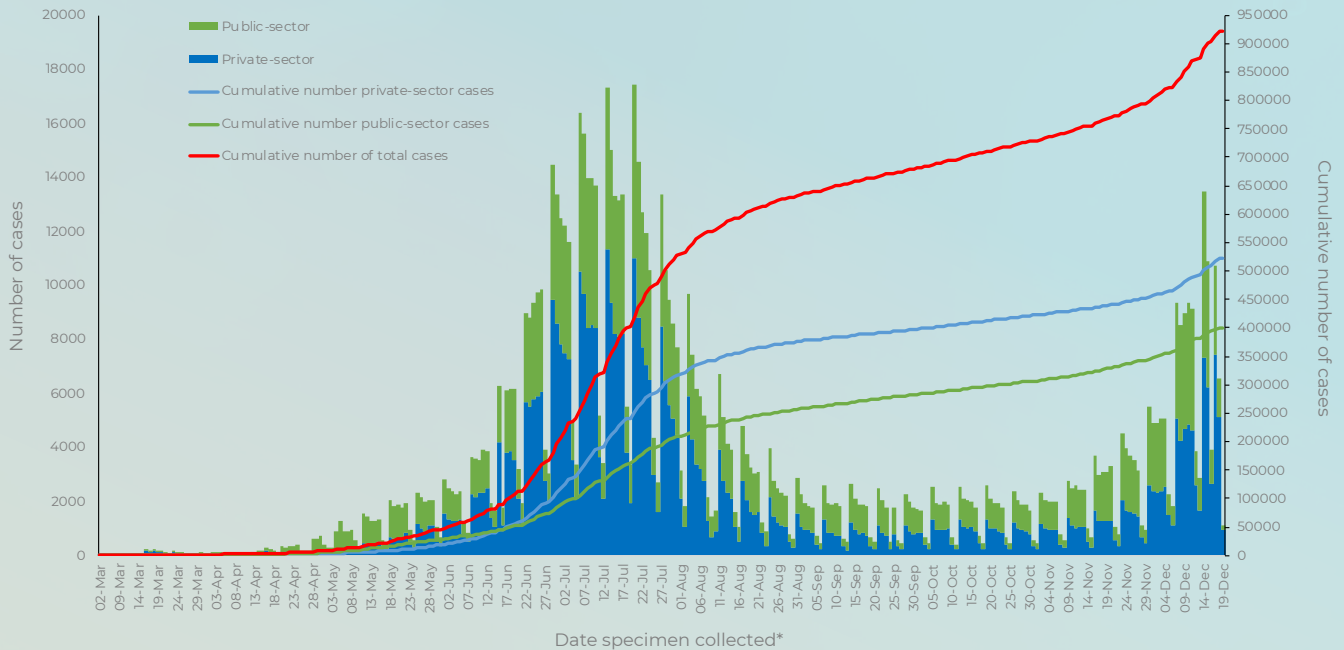


*Date specimen received where date collected missing

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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-19 December 2020 (n=921 922)



*Date specimen receipt where collection date missing

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-19 December 2020 (n=921 922)

Province	Cumulative cases (n) (percentage, n/total cases in South Africa)	New cases ¹ detected in 51 (13-19 December 2020), n (percentage ² , n/total)	Population in mid-2020 ³ , n	Cumulative incidence risk (cases per 100 000 persons)	Incidence risk of new cases detected in week 51 (cases/100 000 persons)	Tests ⁴ per 100 000 persons, 13-19 December 2020
Eastern Cape	158 484 (17.2)	7 025 (14.2)	6 734 001	2 353.5	104.3	360.4
Free State	60 457 (6.6)	586 (1.2)	2 928 903	2 064.2	20.0	198.3
Gauteng	256 595 (27.8)	10 182 (20.6)	15 488 137	1 656.7	65.7	417.4
KwaZulu-Natal	157 432 (17.1)	13 503 (27.3)	11 531 628	1 365.2	117.1	398.7
Limpopo	20 220 (2.2)	853 (1.7)	5 852 553	345.5	14.6	61.5
Mpumalanga	33 228 (3.6)	868 (1.8)	4 679 786	710.0	18.5	167.0
North West	36 678 (4.0)	910 (1.8)	4 108 816	892.7	22.1	95.9
Northern Cape	24 164 (2.6)	388 (0.8)	1 292 786	1 869.1	30.0	229.0
Western Cape	174 664 (18.9)	15 195 (30.7)	7 005 741	2 493.2	216.9	599.3
Unknown	0	0	0			
Total	921 922	49 510	59 622 350	1 546.3	83.0	337.1

¹New cases refer to cases whose samples were collected or received in the current reporting week; ²Percentage=n/total number of new cases (specimen collected or received in current reporting week); ³2020 Mid-year population Statistics South Africa ⁴Data on number of tests conducted sourced from COVID-19 weekly testing report of the same reporting week

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Figure 3. Cumulative incidence risk of PCR-confirmed cases of COVID-19 by province and epidemiologic week, South Africa, 3 March-19 December 2020 (n=921 922)

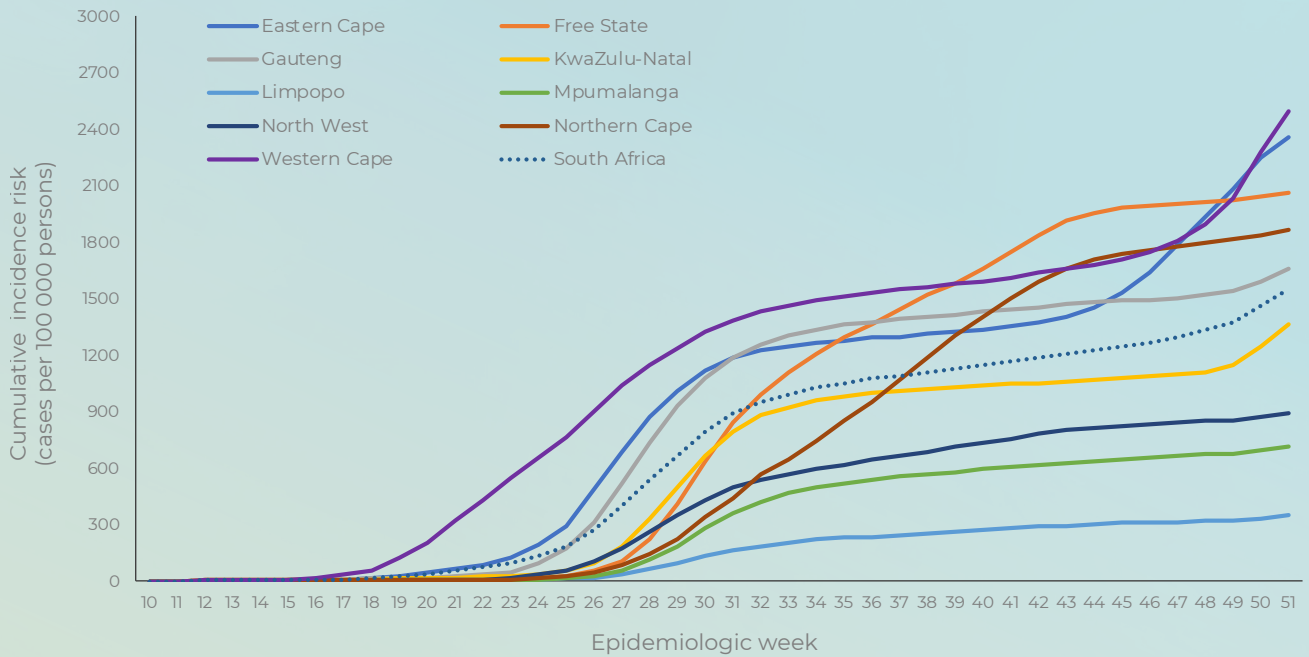


Figure 4. Weekly incidence risk of PCR-confirmed cases of COVID-19 by province and epidemiologic week, South Africa, 3 March-19 December 2020 (n=921 922)

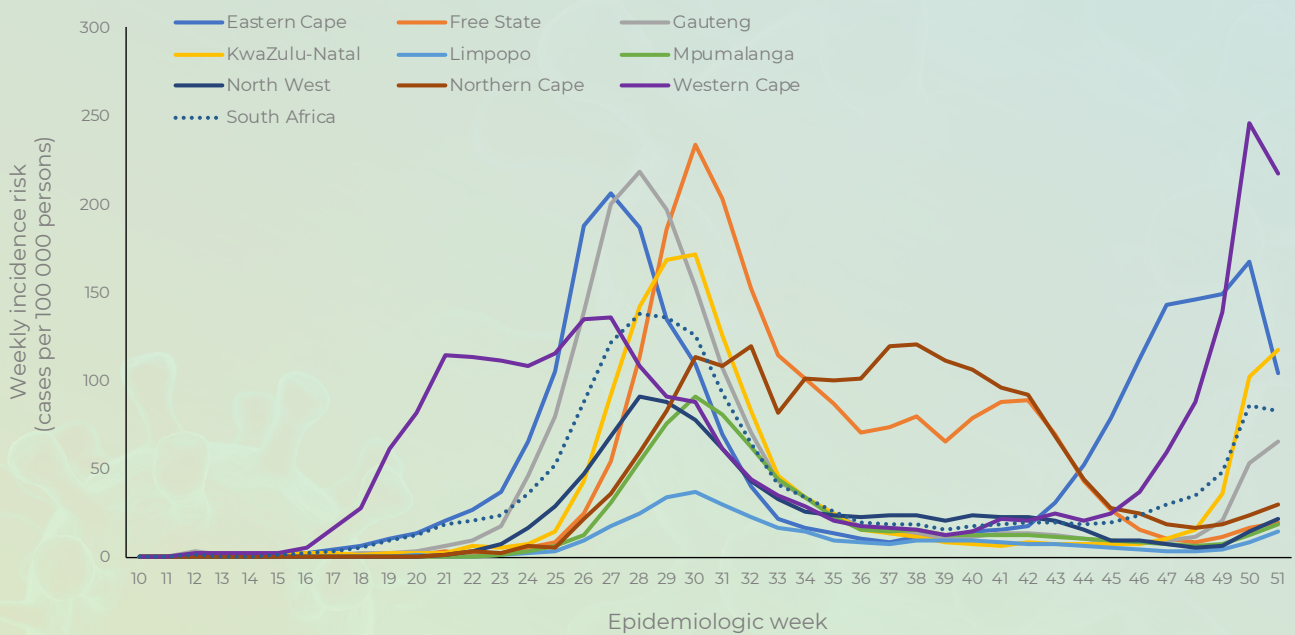
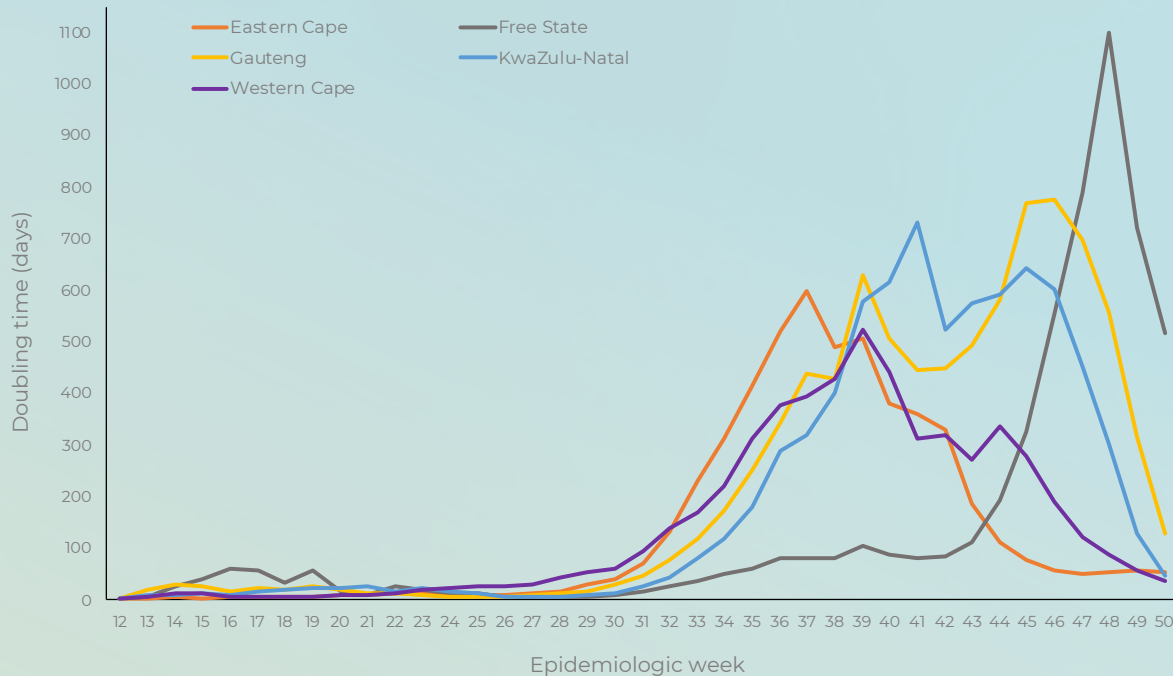


Figure 5. Doubling time of number of PCR-confirmed cases of COVID-19 by province (for 5 provinces with the majority of cases) and epidemiologic week, South Africa, 23 March-12 December 2020 (n= 872 327)



Characteristics of COVID-19 cases in South Africa by age and sex

Cases of COVID-19 were reported across all age groups. The median age of COVID-19 cases in South Africa to date was 40 years with an interquartile range (IQR) of 29-52 years. The distribution of cases varied by age, with highest number of all cases to date in the 35-39-year (112 090/914 866, 12.3%) and 30-34-year (109 760/914 866, 12.0%) age groups (Figure 6). Similarly, among the cases reported in the past week, the highest number of cases was in the 35-39-year-age group (5 582/49 170, 11.4%) followed by the 30-34-year age group (5 423/49 170, 11.0%). The median age for cases reported in week 51 was similar (41 years, IQR 29-54), to that of total cases (40 years). The highest cumulative incidence risk remained among cases aged 50-54 years (3 154.0 cases per 100 000 persons), followed by cases aged 55-59 years (3 036.8 cases per 100 000 persons) and 45-49 years (2 867.1 cases per 100 000 persons). The lowest cumulative incidence risk was reported in the younger age-groups, 185.5 cases per 100 000 persons and 230.4 cases per 100 000 persons in the 0-4- and 5-9-year age groups, respectively (Figure 7 and Table 2). The highest weekly incidence risk among cases detected in week 51 was reported in cases aged 55-59 years (172.2 cases per 100 000 persons), followed by cases in the 50-54-year-age group (171.0 cases per 100 000 persons) and the lowest weekly incidence risk was in

the 0-4-year age group (7.7 cases per 100 000 persons). To date, the majority of COVID-19 cases reported were female (58.0%, 529 928/913 890). This trend continued in the past week where 56.0% (27 487/49 089) of cases were female. The cumulative incidence risk has remained consistently higher among females (1 725.6 cases per 100 000 persons) than among males (1 309.2 cases per 100 000 persons) (Figure 8). The peak cumulative incidence risk was in the 50-54-year-age group (3 330.9 cases per 100 000 persons) for females, and in the 55-59 (2 932.1 cases per 100 000 persons) and 50-54-year-age group (2 909.8 cases per 100 000 persons) for males (Figure 9). In week 51, the highest weekly incidence risk for females was in the 50-54-year-age group (178.4 cases per 100 000 persons), and for males in the 60-64-year-age group (172.7 cases per 100 000 persons). The high prevalence and incidence risk among females could be explained by the fact that females are likely to be more represented in occupations, which put them in close proximity to others and thus exposing them to a higher risk of infection (e.g. teaching and health). This may also be partly explained by varying testing practices by age and sex (data not shown) and by different health seeking behaviour.

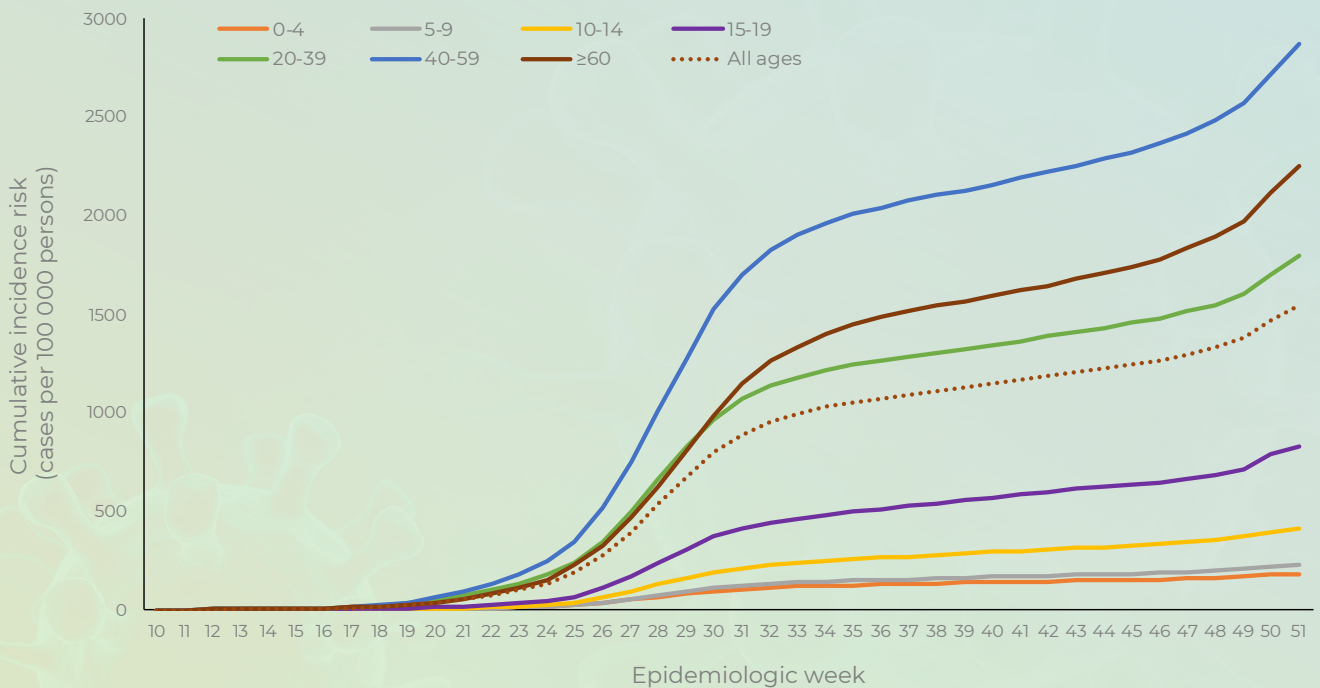
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Figure 6. Number of laboratory-confirmed cases of COVID-19 by age group and sex, South Africa, 3 March-19 December 2020 (n = 907 549, sex/age missing for 14 373)



Figure 7. Cumulative incidence risk of PCR-confirmed cases of COVID-19 by age group in years and epidemiologic week, South Africa, 3 March-19 December 2020 (n= 914 866, 7 056 missing age)



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Figure 8. Cumulative incidence risk by sex and epidemiologic week, South Africa, 3 March-19 December 2020 (n= 913 890, sex missing for 8 032)

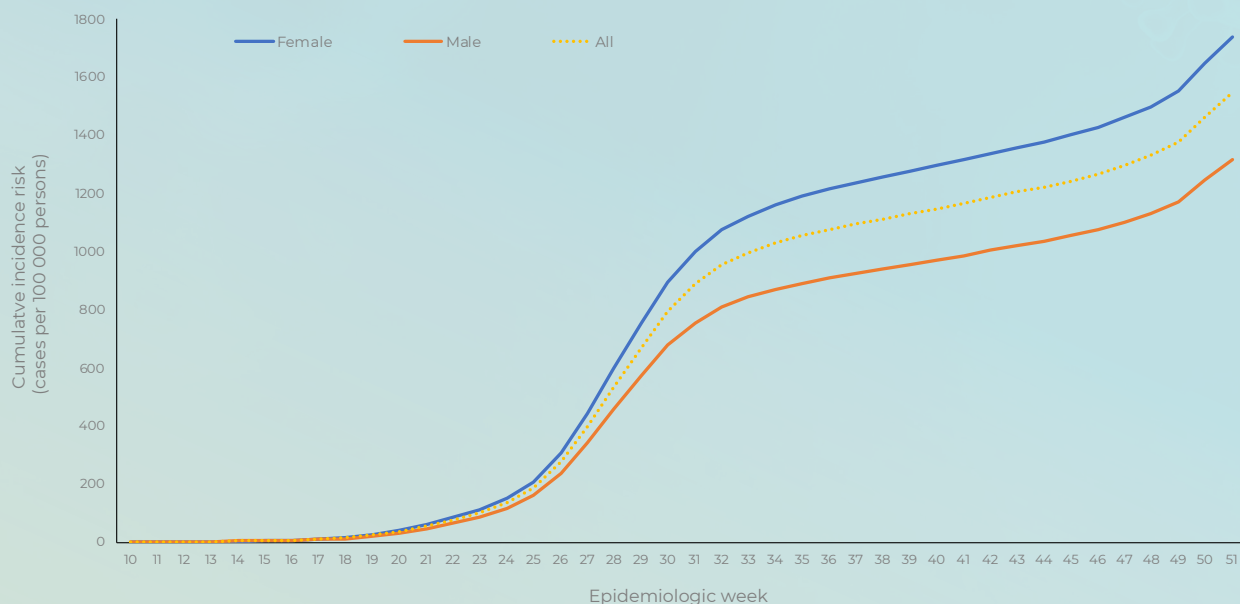
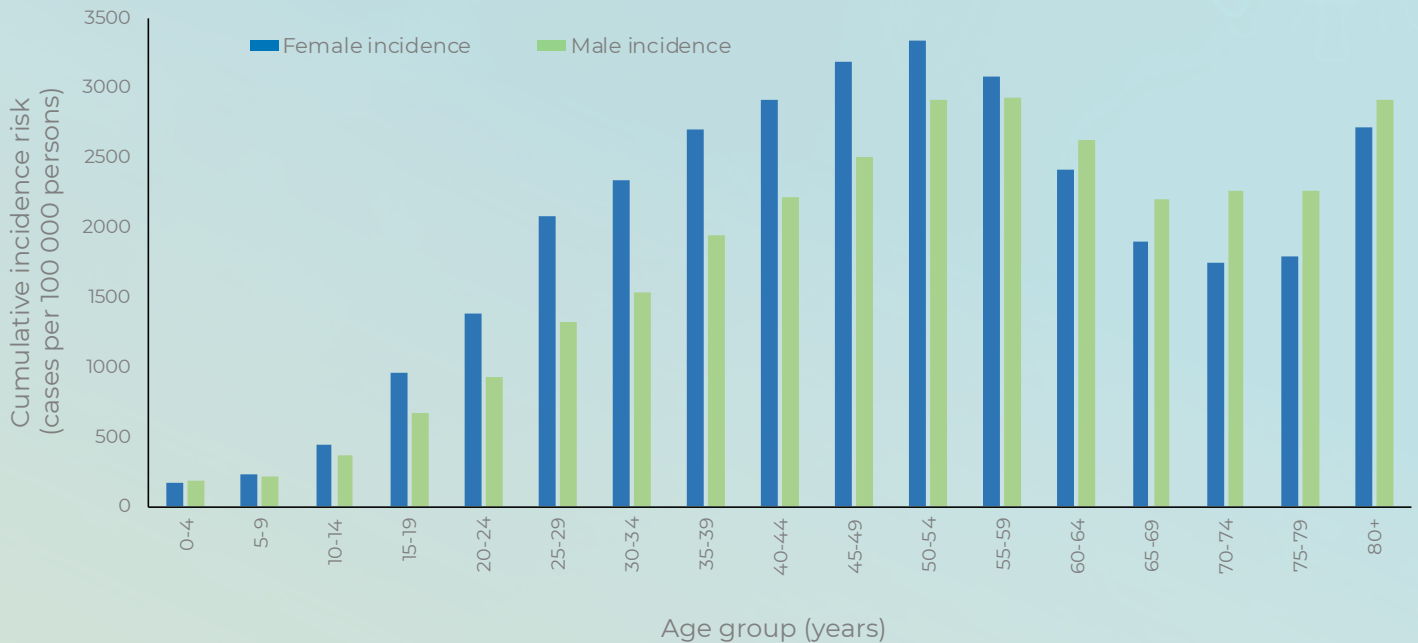


Table 2. Number of laboratory-confirmed cases of COVID-19 and cumulative/weekly incidence risk by age group, South Africa, 3 March-19 December 2020, n= 914 866, 7 056 missing age)

Age group (years)	Cumulative cases (n) (percentage, n/ total cases in South Africa)	New cases ¹ detected in week 51 (13-19 December 2020), n (percentage ² , n/total)	Population in mid-2020 ³ , n	Cumulative incidence risk (cases per 100 000 persons)	Incidence risk of new cases detected in week 51 (cases/100 000 persons)
0-4	10 654 (1.2)	442 (0.9)	5743 450	185.5	7.7
5-9	13 168 (1.4)	527 (1.1)	5715 952	230.4	9.2
10-14	22 837 (2.5)	986 (2.0)	5591 553	408.4	17.6
15-19	39 510 (4.3)	1 927 (3.9)	4774 579	827.5	40.4
20-24	56 095 (6.1)	3 565 (7.3)	4823 367	1 163.0	73.9
25-29	92 792 (10.1)	4 973 (10.1)	5420 754	1 711.8	91.7
30-34	109 760 (12.0)	5 423 (11.0)	5641 750	1 945.5	96.1
35-39	112 090 (12.3)	5 582 (11.4)	4798 293	2 336.0	116.3
40-44	96 383 (10.5)	4 955 (10.1)	3733 942	2 581.3	132.7
45-49	90 877 (9.9)	4 733 (9.6)	3169 648	2 867.1	149.3
50-54	81 097 (8.9)	4 396 (8.9)	2571 263	3 154.0	171.0
55-59	67 152 (7.3)	3 808 (7.7)	2211 309	3 036.8	172.2
60-64	45 204 (4.9)	2 895 (5.9)	1796 316	2 516.5	161.2
65-69	28 649 (3.1)	1 884 (3.8)	1408 665	2 033.8	133.7
70-74	19 748 (2.2)	1 384 (2.8)	1007 174	1 960.7	137.4
75-79	12 634 (1.4)	815 (1.7)	637 062	1 983.2	127.9
≥80	16 216 (1.8)	875 (1.8)	577 273	2 809.1	151.6
Unknown	7 056	340			
Total	921 922	49 510	59 622 350	1 546.3	83.0

¹New cases refer to cases whose samples were collected or received in the current reporting week; ²Percentage=n/total number of new cases (specimen collected or received in current reporting week); ³2020 Mid-year population Statistics South Africa

Figure 9. Cumulative incidence risk by age group and sex, South Africa, 3 March-19 December 2020 (n= 907 549, sex/age missing for 14 373)



Provincial trends of COVID-19 cases

In the past few weeks, a number of provinces have reported an increase in the number of new cases and weekly incidence risks. Trends by district and age group for each province are presented below.

Eastern Cape Province

Of the 158 484 cases reported from the Eastern Cape Province, 141 816 (89.5%) of cases had allocation by district. The Nelson Mandela Bay Metro District (42 732/141 816, 30.1%) followed by the Buffalo City Metro District (25 720/141 816, 18.1%) contributed the majority of cases from the Eastern Cape. In week 51, the Buffalo City (174.1 cases per 100 000 persons), followed by Sarah Baartman (139.9 cases per 100 000 persons), and Chris Hani (118.2 cases per 100 000 persons) districts reported the highest weekly incidence risk (Figure 10). The increasing trend in weekly incidence risk reported from the different districts in recent weeks varied by district,

with Nelson Mandela Bay and Sarah Baartman districts reporting the highest weekly incidence risks in week 47, and Amathole District in week 50, compared to the peaks in the first wave.

The majority of cases from the Eastern Cape Province were in the 40-59-year old age group (58 491/157 090, 37.2%), followed by the 20-39-year age group (55 853/157 090, 35.6%). In the past week, the 40-59-year age group (205.6 cases per 100 000 persons), followed by ≥60-year age group (204.0 cases per 100 000 persons), 20-39-year age group (109.8 cases per 100 000 persons), and 15-19-year-age group (64.1 cases per 100 000 persons) reported the highest weekly incidence risk. The weekly incidence risk in all other age groups was below 30 cases per 100 000 persons. In the past week, all age groups reported a decrease in weekly incidence risk, compared to week 50 (Figure 11). In week 50, ≥60-year-age group reported the highest weekly incidence risk compared to the peak in the first wave in week 28, whereas the other age groups continued reporting weekly incidence risks below those reported in the first wave.

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Figure 10. Weekly incidence risk of PCR-confirmed cases of COVID-19 by district and epidemiologic week, Eastern Cape Province, 3 March-19 December 2020 (n= 141 816, 16 668 missing district)

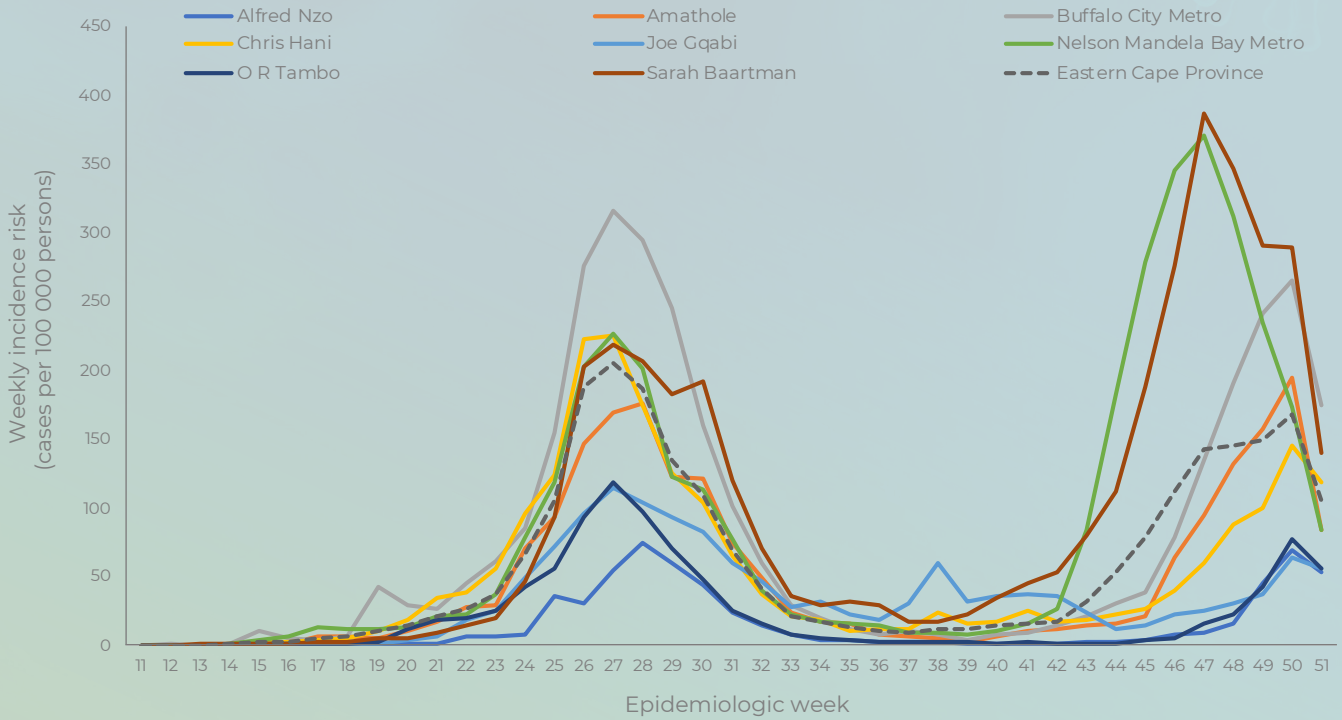
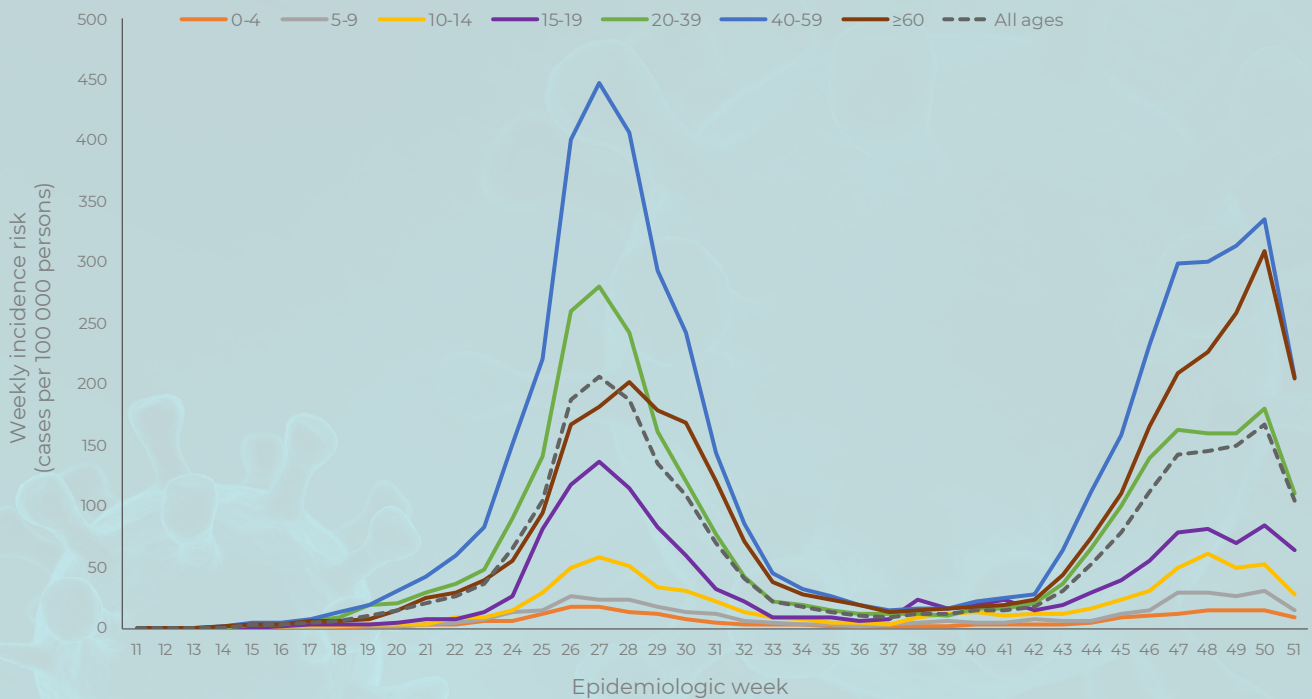


Figure 11. Weekly incidence risk of PCR-confirmed cases of COVID-19 by epidemiologic week, Eastern Cape Province, 3 March-19 December 2020 (by age group in years (n= 157 090, 1 394 missing age))

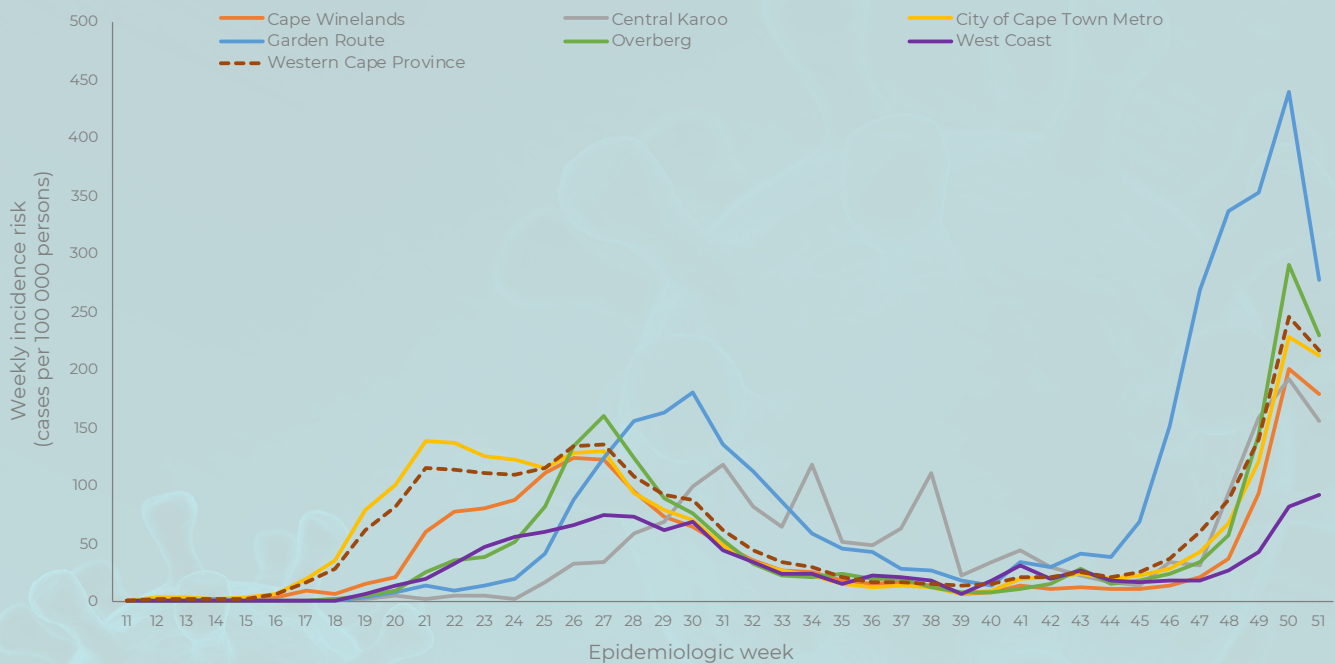


Western Cape Province

Of the 174 664 cases reported from the Western Cape Province, 161 228 (92.3%) of cases had allocation by district. The City of Cape Town District (110 523/161 228, 68.6%) followed by the Garden Route District (21 369/161 228, 13.3%), and the Cape Winelands District (16 676/161 228, 10.3%) contributed the majority of cases, all other districts contributed <10% each. As in the previous seven weeks, the highest weekly incidence risk in week 51 was reported by the Garden Route (276.8 cases per 100 000 persons), followed by the Overberg (228.7 cases per 100 000 persons), and the City of Cape Town (212.4 cases per 100 000 persons) districts (Figure 12). The increasing trend in weekly incidence risk reported from the different districts in recent weeks varied by district, with all the districts reporting the highest weekly incidence risks in week 50 to date, higher than the peaks in the first wave.

The majority of cases from the Western Cape Province were in the 20-39-year old age group (72 963/174 017, 41.9%), followed by the 40-59-year age group (63 763/174 017, 36.6%). In the past week, the ≥60-year age group (360.2 cases per 100 000 persons), followed by 40-59-year age group (245.4 cases per 100 000 persons), 20-39-year age group (247.6 cases per 100 000 persons), and 15-19-year-age group (98.4 cases per 100 000 persons) reported the highest weekly incidence risk. The weekly incidence risk in all other age groups was below 40 cases per 100 000 persons. In the past week, all age groups reported a decrease in weekly incidence risk, except ≥60-year-age group (17.0 cases per 100 000 persons, 5.0% increase) which reported an increase in weekly incidence risk, compared to week 50. (Figure 13). In week 50, all age groups reported the highest weekly incidence risks compared to the peaks in the first wave in different weeks.

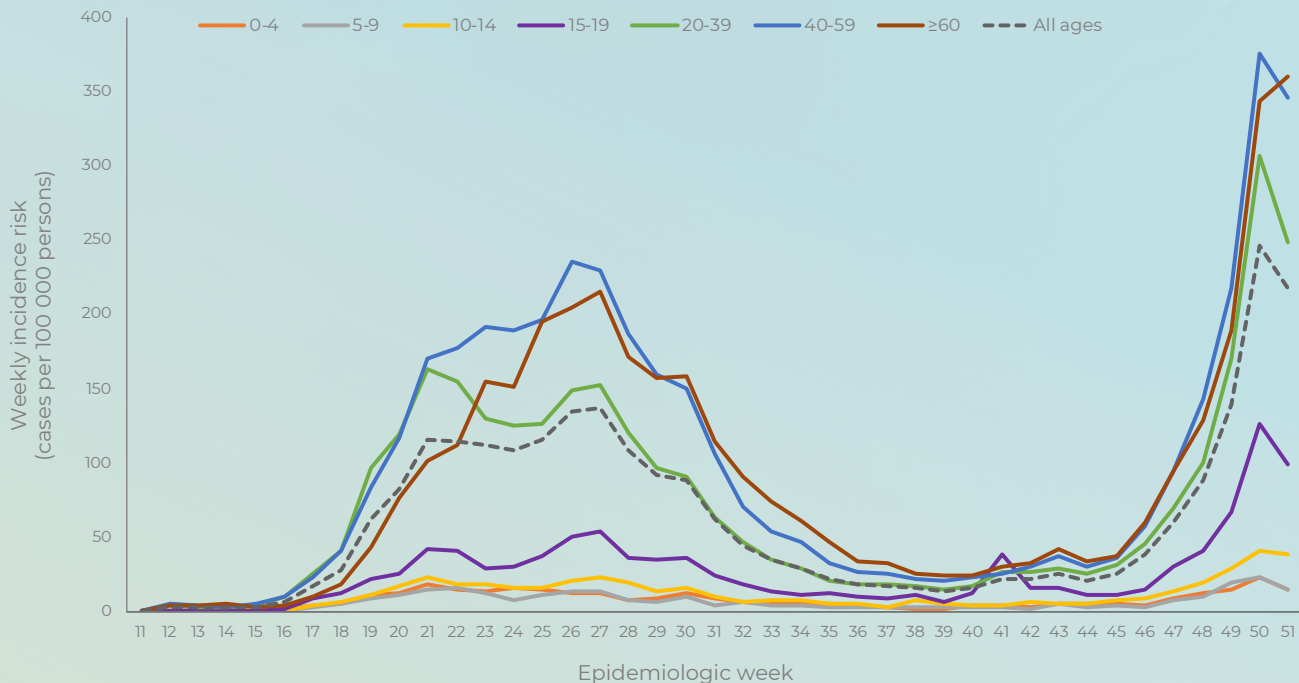
Figure 12. Weekly incidence risk of PCR-confirmed cases of COVID-19 by district and epidemiologic week, Western Cape Province, 3 March-19 December 2020 (n= 161 228, 13 436 missing district)



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Figure 13. Weekly incidence risk of PCR-confirmed cases of COVID-19 by age group in years and epidemiologic week, Western Cape Province, 3 March-19 December 2020 (n= 174 017, 647 missing age)



Gauteng Province

Of the 256 595 cases reported from the Gauteng Province, 230 394 (89.8%) had allocation by district. The City of Johannesburg Metro (93 598 /230 394, 40.6%), followed by the City of Tshwane Metro (54 786/230 394, 23.8%), and the Ekurhululeni Metro (48 253/230 394, 20.9%) contributed the majority of cases, all other district contributed below 15% each. In week 51, the City of Tshwane (79.8 cases per 100 000 persons), followed by the West Rand District (68.1 cases per 100 000 persons), and the City of Johannesburg Metro (62.0 cases per 100 000 persons) reported the highest weekly incidence risk. All the districts reported a gradual increase in number of new cases and weekly incidence risk from week 48 to date, with the City of Tshwane Metro showing sharp increase in week 51. The increase in numbers and incidence risk reported recently from all the districts remained below that reported during the first peak (Figure 14).

The majority of cases from Gauteng Province were in the 20-39-year-age group (109 689/253 995, 43.2%), followed by 40-59-year-age group (92 682/253 995, 36.5%). In the past week, all age groups reported an increase in weekly incidence risk, except 0-4-year-age group (0.2 cases per 100 000 persons, 2.4% reduction) and 15-19-year-age group (82.3 cases per 100 000 persons, 64.9% reduction) which reported a decline in weekly incidence risk, compared to the previous week (Figure 15). The incidence risk (126.8 cases per 100 000 persons) in week 50 for the 15-19-year-age group was much higher than that reported for this age group during the peak in week 28 (94.2 cases per 100 000 persons). Incidence in this age group has reduced in week 51. Weekly incidence shows an increasing trend week on week in all other age groups.

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Figure 14. Weekly incidence risk of PCR-confirmed cases of COVID-19 by district and epidemiologic week, Gauteng Province, 3 March-19 December 2020 (n= 230 394, 26 201 missing district)

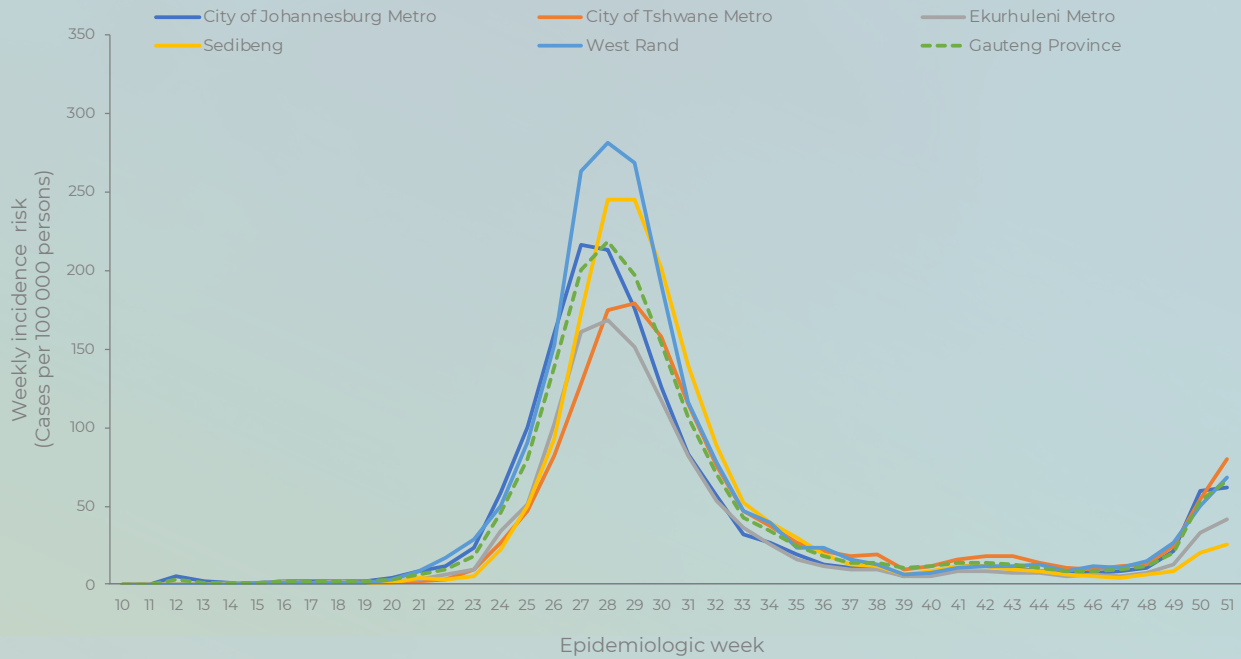
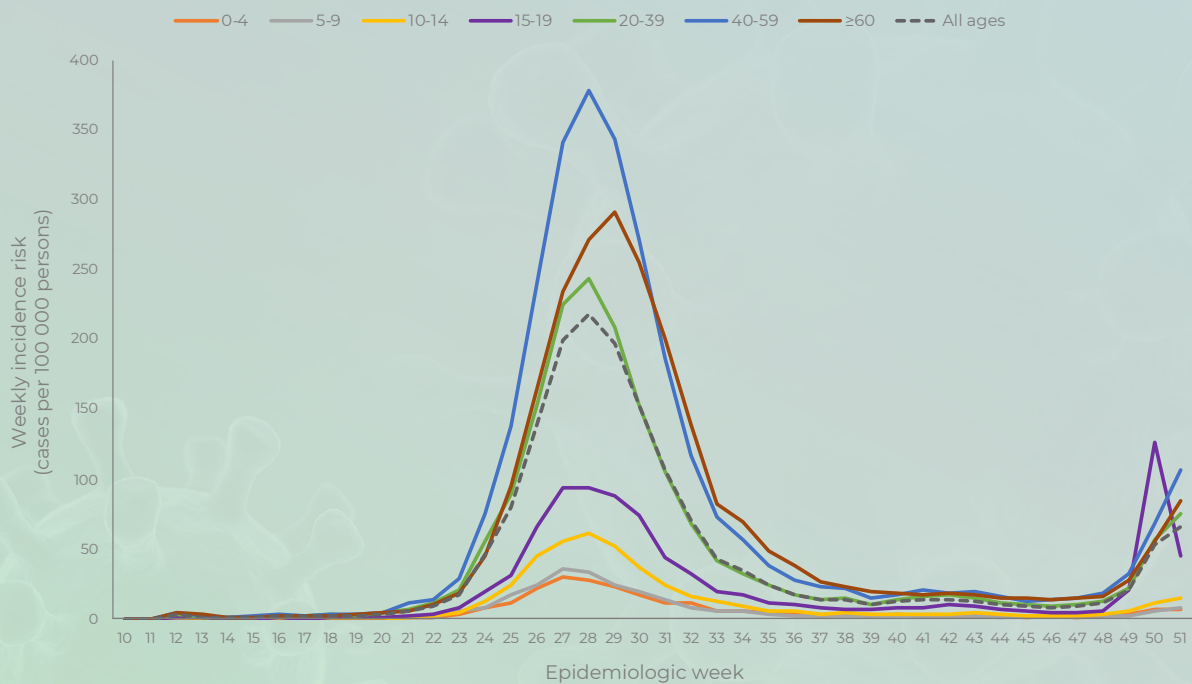


Figure 15. Weekly incidence risk of PCR-confirmed cases of COVID-19 by age group in years and epidemiologic week, Gauteng Province, 3 March-19 December 2020 (n= 253 995, 2 600 missing age)



KwaZulu-Natal Province

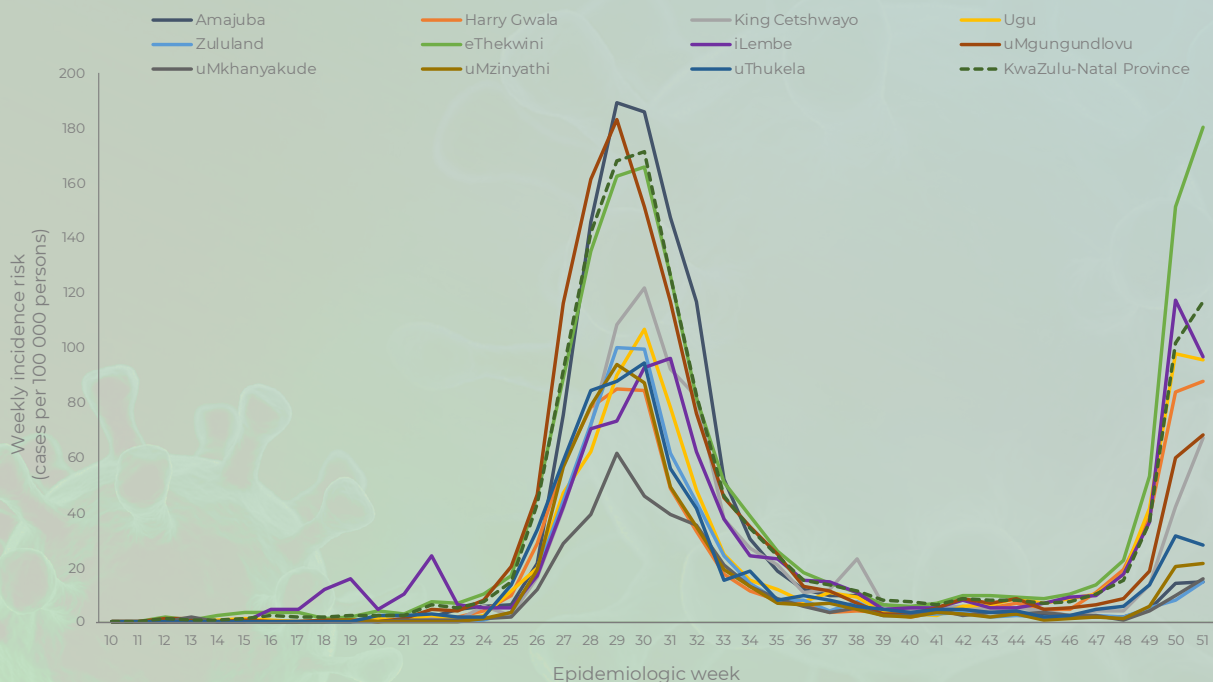
Of the 157 432 cases reported from KwaZulu-Natal Province, 122 704 (77.9%) had allocation by district. The eThekweni Metro (60 545/122 704, 49.3%) followed by uMgungundlovu Metro (14 271/122 704, 11.6%) contributed the majority of cases. In week 51, eThekweni Metro (180.3 cases per 100 000 persons), followed by iLembe District (96.6 cases per 100 000 persons), Ugu District (95.4 cases per 100 000 persons), Harry Gwala District (87.9 cases per 100 000 persons), uMgungundlovu (68.4 cases per 100 000 persons), and King Cetshwayo (67.2 cases per 100 000 persons) reported the highest weekly incidence risk. In the past week, all the districts reported an increase in weekly incidence risk, except Ugu (2.5 cases per 100 000 persons, 2.5% reduction) and iLembe (20.7 cases per 100 000 persons, 17.7% reduction) which report a decline in weekly incidence risk, compared to week 50.

Following the decline in number of cases after the first wave, an increasing trend in weekly incidence risk which varied by districts, has been reported since week 48. During this period three districts reported weekly incidence risks higher than those reported in the first

peaks; eThekweni Metro (180.3 vs 165.7 cases per 100 000 persons), iLembe District (117.3 cases vs 96.2 per 100 000 persons) and Harry Gwala District (87.9 vs. 85.7 cases per 100 000 persons). All other districts continued reporting weekly incidence risks below those reported during the first peaks (Figure 16).

The majority of cases from KwaZulu-Natal Province were in the 20-39-year-age group (62 902/156 212, 40.3%), followed by 40-59-year-age group (55 836/156 212, 35.7%). In week 50, there was a peak in weekly incidence risk in individuals aged 15-19 years in KwaZulu-Natal Province. In week 51, 40-59-year-age group (252.0 cases per 100 000 persons), followed by ≥60-year-age group (226.3 cases per 100 000 persons), and 20-39-year-age group (133.0 cases per 100 000 persons) reported the highest weekly incidence risk. In the past week, all the age groups reported an increase in weekly incidence risk, except 15-19-year-age group (41.0 cases per 100 000 persons, 47.8% reduction) which reported a decline, compared to the previous week. The increase ranged from 0.7 cases per 100 000 persons (4.5% increase) in 5-9-year-age group to 67.7 cases per 100 000 persons (42.6% increase) in ≥60-year-age group (Figure 17).

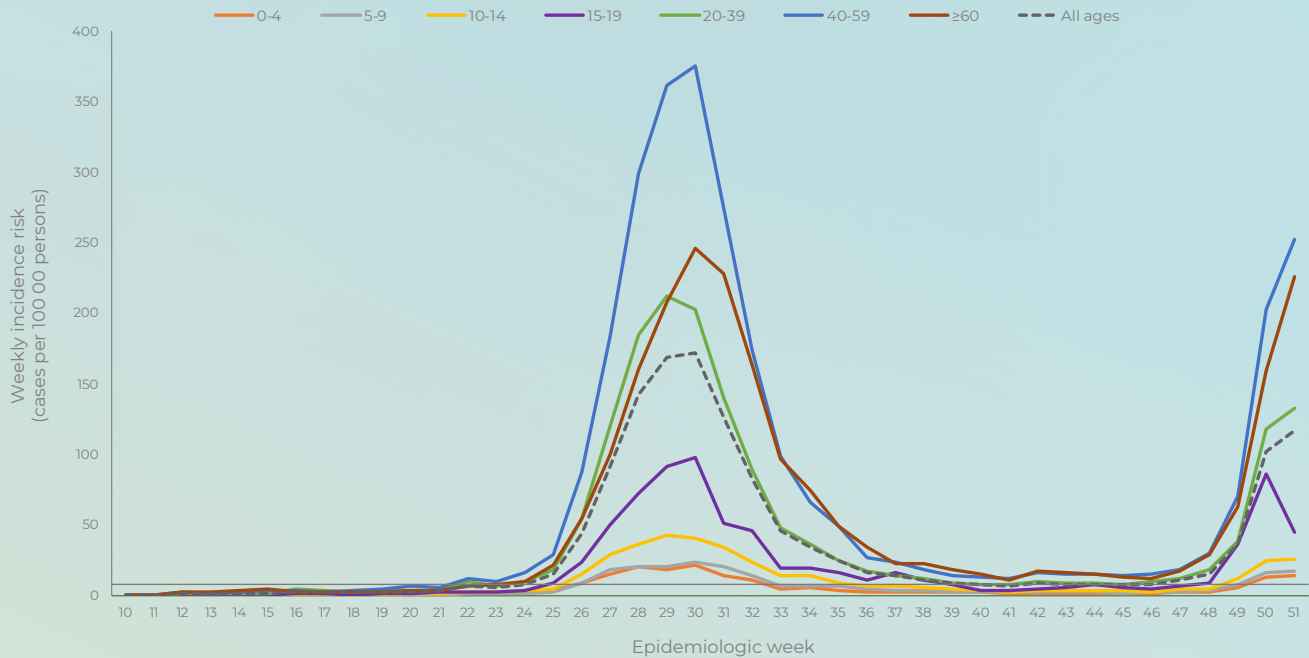
Figure 16. Weekly incidence risk of PCR-confirmed cases of COVID-19 by district and epidemiologic week, KwaZulu-Natal Province, 3 March-19 December 2020 (n= 122 704, 34 728 missing district)



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Figure 17. Weekly incidence risk of PCR-confirmed cases of COVID-19 by age group in years and epidemiologic week, KwaZulu-Natal Province, 3 March-19 December 2020 (n= 156 212, 1 220 missing age)



Free State Province

Of the 60 457 cases reported from the Free State Province, 55 636 (92.0%) had allocation by district. The Mangaung Metro (22 831/55 636, 41.0%), followed by the Lejweleputswa (13 494/55 636, 24.3%), and the Thabo Mofutsanyane (9 629/55 636, 17.3%) districts contributed the majority of cases, all other districts contributed below 15% each. In week 51, the Mangaung Metro (26.2 cases per 100 000 persons), followed by the Xhariep District (23.9 cases per 100 000 persons) reported the highest weekly incidence risk. All the districts reported a gradual increase in number of new cases and weekly incidence risk from week 50 to date. The increase in numbers and incidence risk reported recently from all the districts remained below that reported during the first peak (Figure 18).

The majority of cases from Free State Province were in the 20-39-year-age group (23 360/60 286, 38.7%), followed by 40-59-year-age group (21 612/60 286, 35.8%). In the past week, four age groups (15-19, 20-39, 40-59 and ≥60 age groups) reported an increase in weekly incidence risk, compared to the previous week. The increase ranged from 1.2 cases per 100 000 persons (16.7% increase) in 15-19-year age group to 12.0 cases per 100 000 persons (49.0% increase) in 40-59-year-age group (Figure 19).

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Figure 18. Weekly incidence risk of PCR-confirmed cases of COVID-19 by epidemiologic week, Free State Province, 3 March-19 December 2020 by district (n= 55 636, 4 821 missing district)

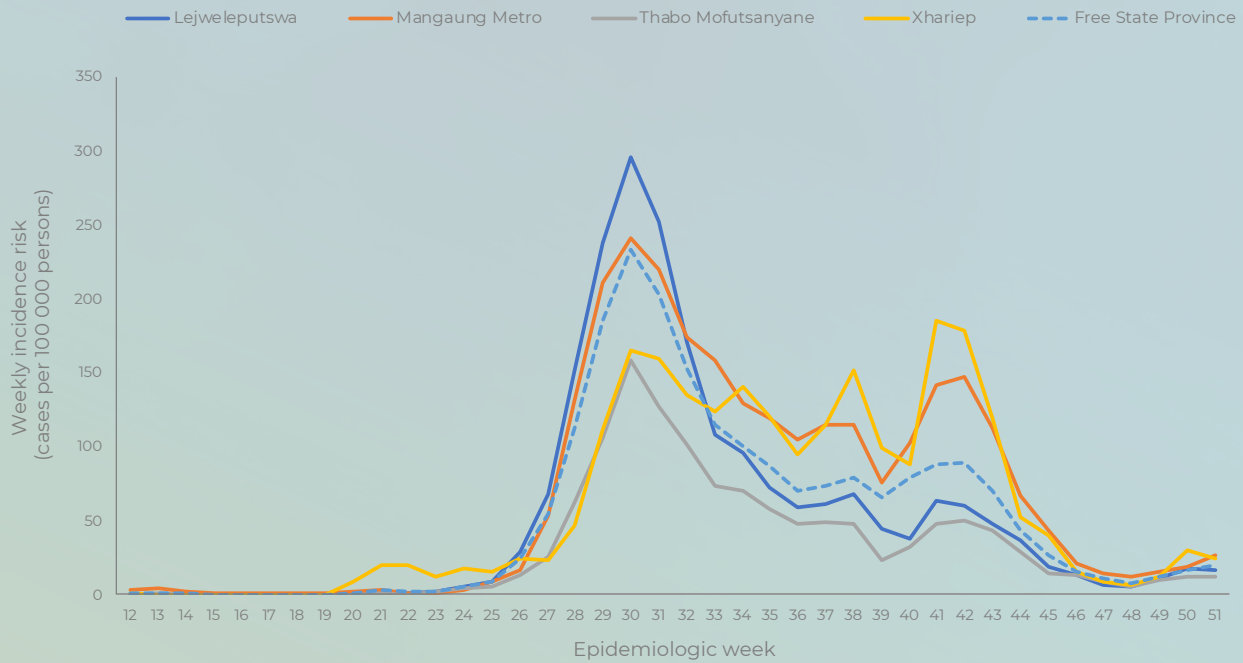
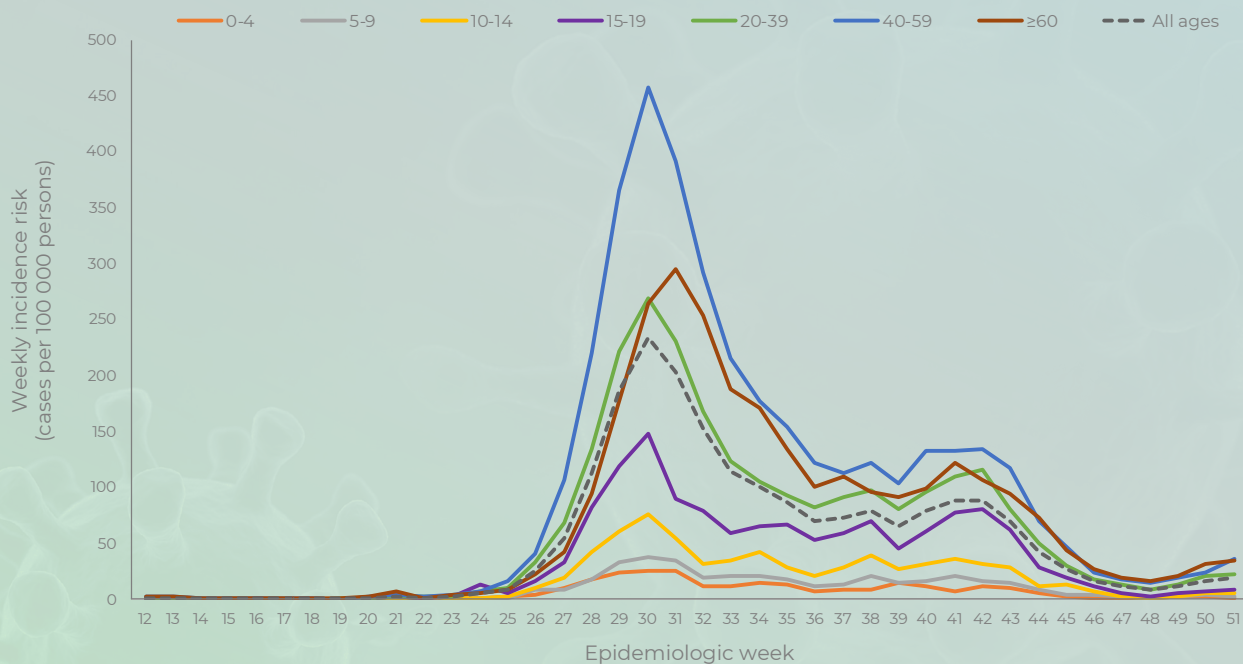


Figure 19. Weekly incidence risk of PCR-confirmed cases of COVID-19 by epidemiologic week, Free State Province, 3 March-19 December 2020 by age group in years (n= 60 286, 171 missing age)



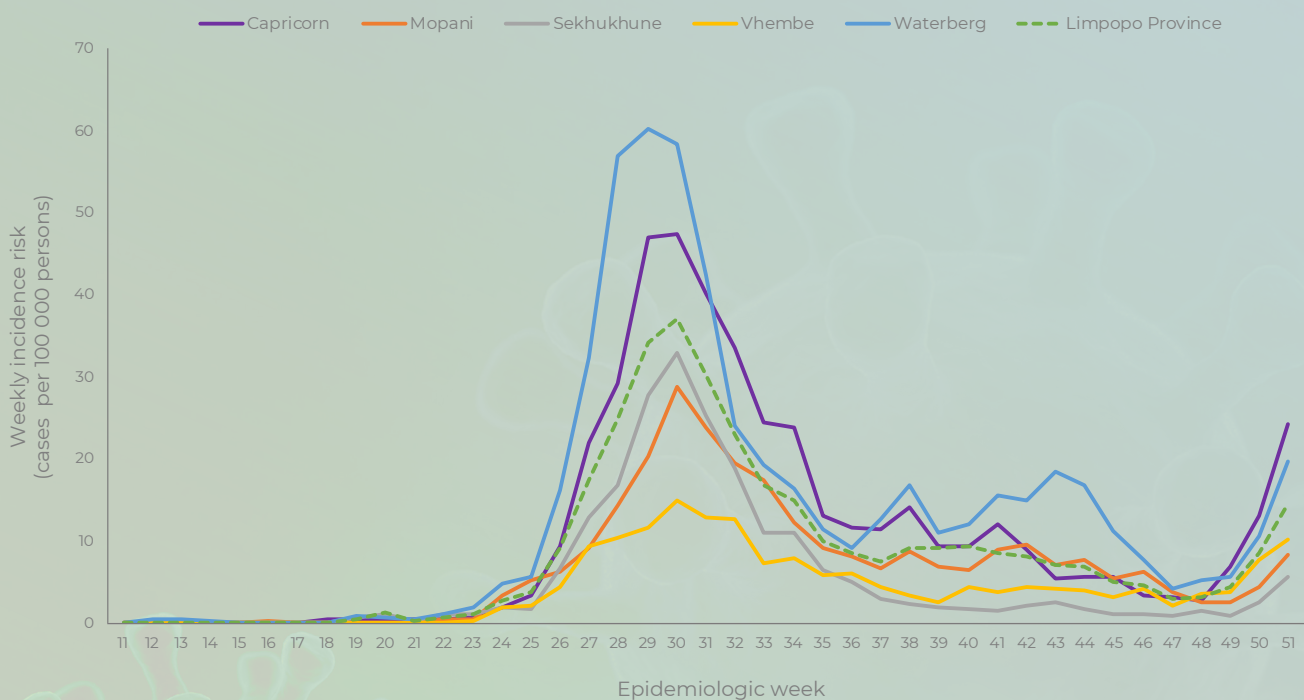
Limpopo Province

Of the 20 220 cases reported from the Limpopo Province, 18 116 (89.6%) had allocation by district. The Capricorn (5 815/18 116, 32.1%), followed by the Waterberg (4 045/18 116, 22.3%), and the Mopani (3 239/18 116, 17.9%) districts contributed the majority of cases, all other districts contributed below 15% each. In week 51, the Capricorn (24.2 cases per 100 000 persons), followed by the Waterberg districts (19.7 cases per 100 000 persons) reported the highest weekly incidence risk. All the districts reported a gradual increase in number of new cases and weekly incidence risk from week 50 to date, with Capricorn and Waterberg showing sharp increase

in week 51. The increase in numbers and incidence risk reported recently from all the districts remained below that reported during the first peak (Figure 20).

The majority of cases from Limpopo Province were in the 20-39-year-age group (8 134 / 20 143, 40.4%), followed by 40-59-year-age group (7 814 / 20 143, 38.8%). In the past week, three age groups (20-39, 40-59 and ≥60 age groups) reported an increase in weekly incidence risk, compared to the previous week. The increase ranged from 8.8 cases per 100 000 persons (83.1% increase) in 20-39-year age group to 14.4 cases per 100 000 persons (71.5% increase) in 40-59-year-age group (Figure 21).

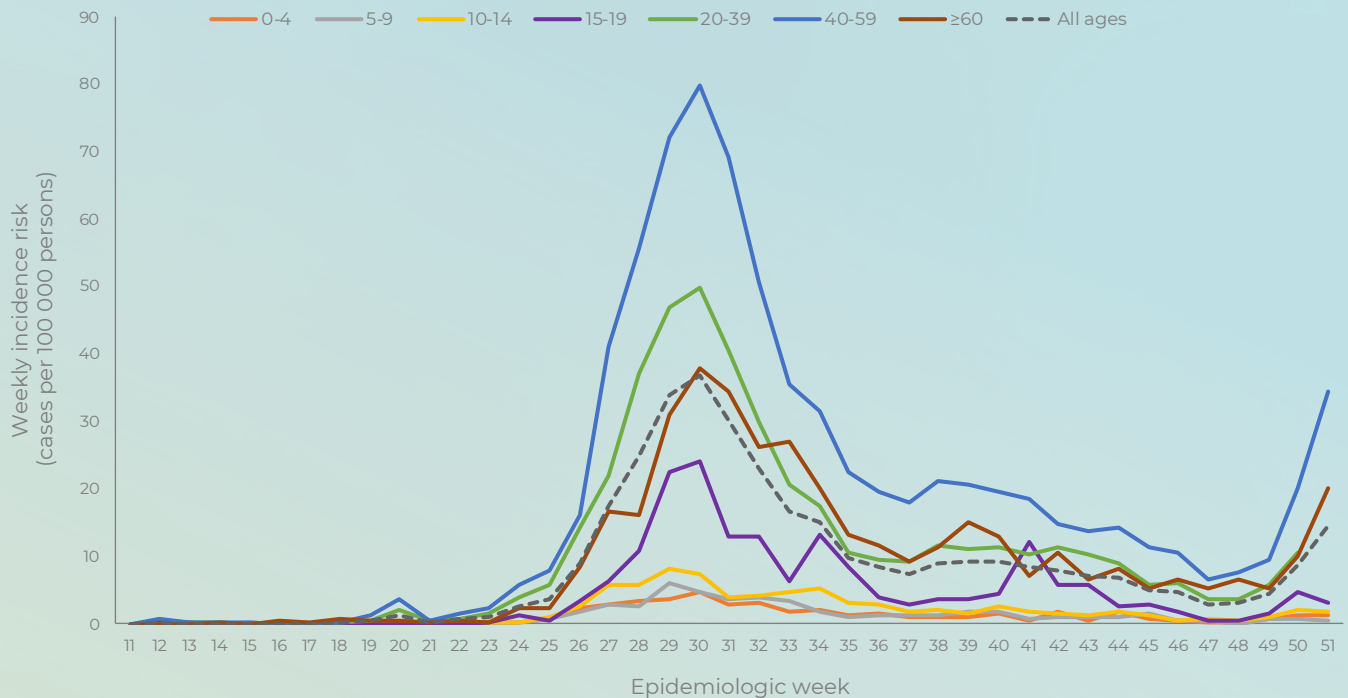
Figure 20. Weekly incidence risk of PCR-confirmed cases of COVID-19 by epidemiologic week, Limpopo Province, 3 March-19 December 2020 by district (n= 18 116, 2 104 missing district)



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Figure 21. Weekly incidence risk of PCR-confirmed cases of COVID-19 by epidemiologic week, Limpopo Province, 3 March-19 December 2020 by age group in years (n= 20 143, 77 missing age)



Mpumalanga Province

Of the 33 228 cases reported from the Mpumalanga Province, 29 931 (90.1%) had allocation by district. All the districts contributed similar number of cases Ehlanzeni (10 495/29 931, 35.1%), Nkangala (10 282/29 931, 34.4%) and the Gert Sibande (9154/29 931, 30.6%) districts. In week 51, the Ehlanzeni District (17.4 cases per 100 000 persons), followed by the Gert Sibande District (15.1 cases per 100 000 persons) reported the highest weekly incidence risk. All the districts reported a gradual increase in number of new cases and weekly incidence risk from week 50 to date. The increase in numbers and incidence risk reported recently from all the districts remained below that reported during the first peak (Figure 22).

The majority of cases from Mpumalanga Province were in the 20-39-year-age group (14 331/32 838, 43.6%), followed by 40-59-year-age group (11 766/32 838, 35.8%). In the past week, four age groups (5-9, 20-39, 40-59 and ≥60 age groups) reported an increase in weekly incidence risk, compared to the previous week. The increase ranged from 0.2 cases per 100 000 persons (14.3% increase) in 5-9-year age group to 13.5 cases per 100 000 persons (98.0% increase) in ≥60-year-age group (Figure 23).

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Figure 22. Weekly incidence risk of PCR-confirmed cases of COVID-19 by epidemiologic week, Mpumalanga Province, 3 March-19 December 2020 by district (n= 29 931, 3 297 missing district)

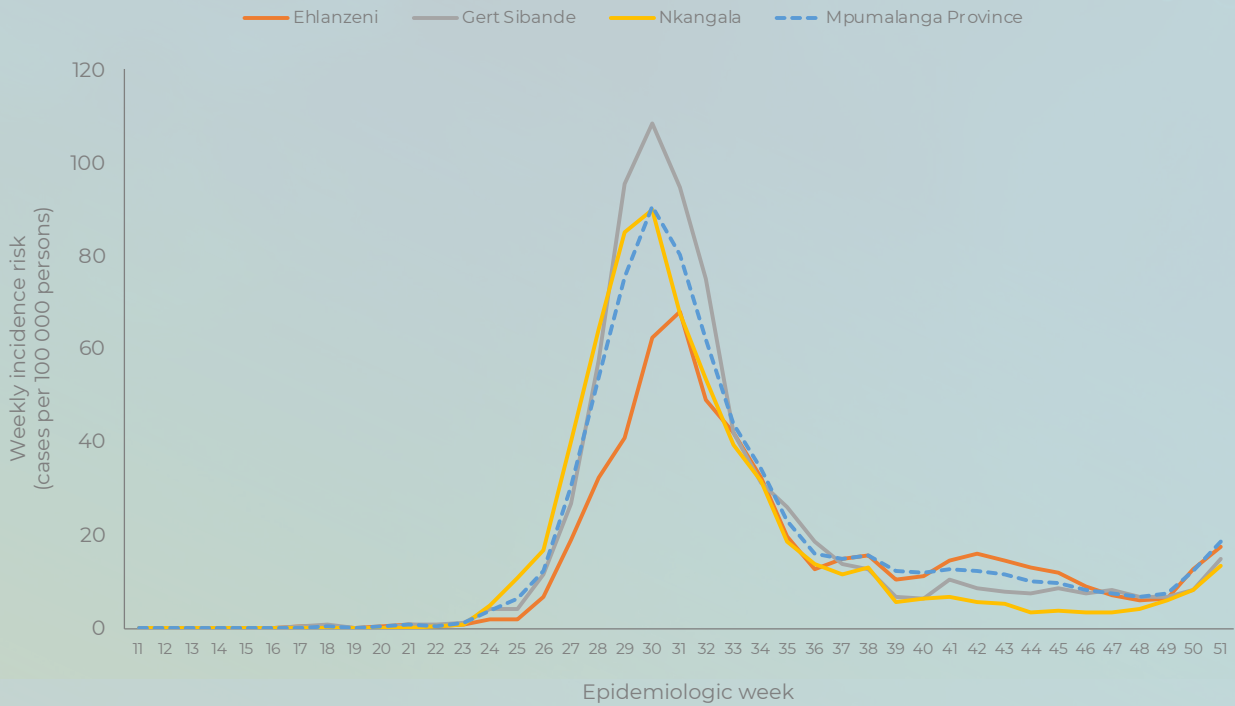
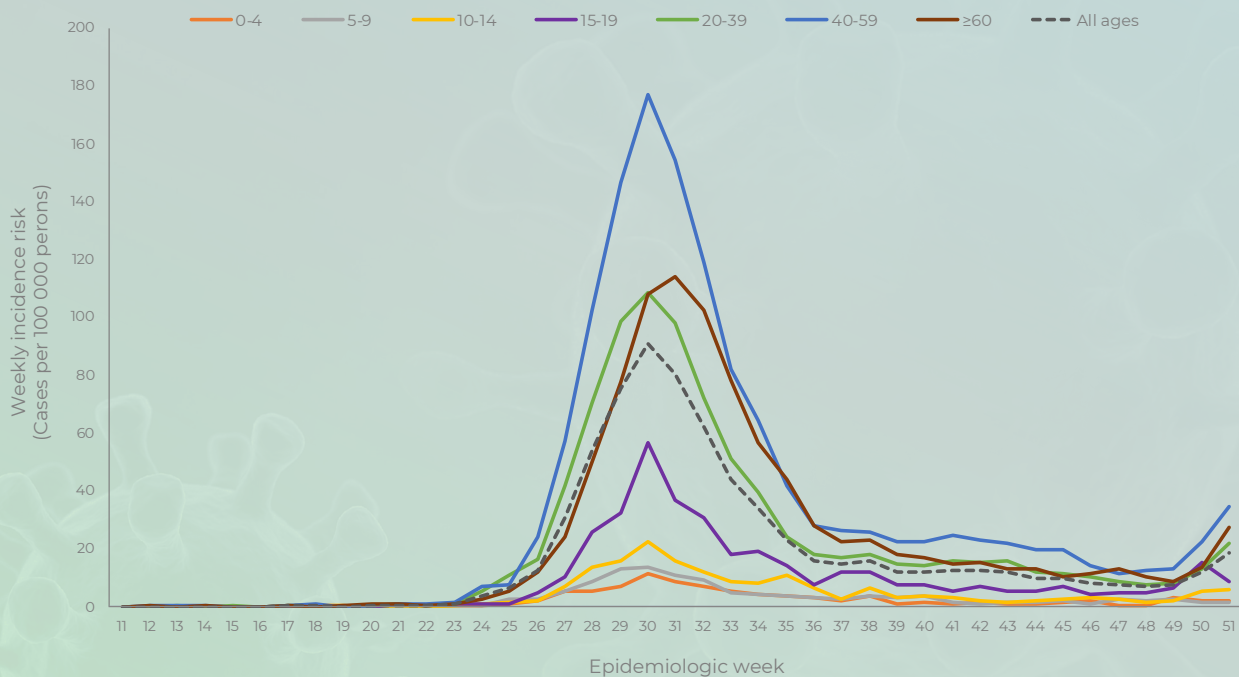


Figure 23. Weekly incidence risk of PCR-confirmed cases of COVID-19 by epidemiologic week, Mpumalanga Province, 3 March-19 December 2020 by age group in years (n= 32 838, 390 missing age)



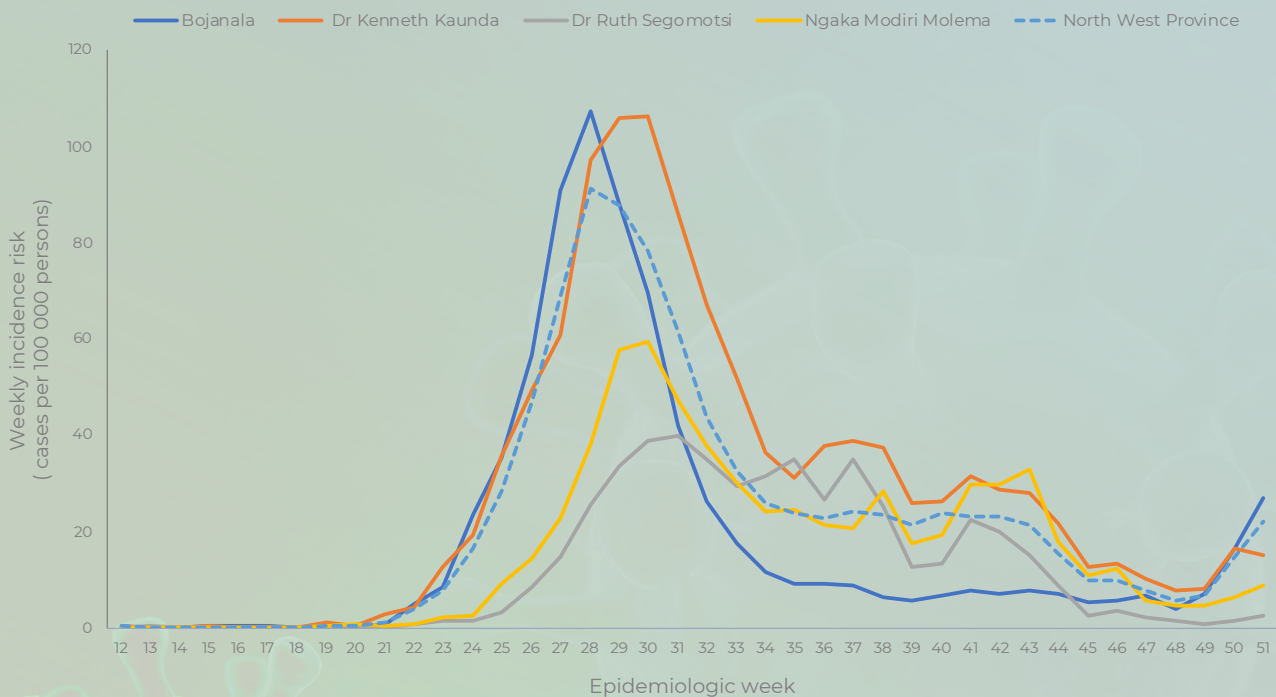
North West Province

Of the 36 678 cases reported from the North West Province, 31 199 (85.1%) had allocation by district. The Bojanala Platinum District (14 069/31 199, 45.1%), followed by the Dr. Kenneth Kaunda District (8 982/31 199, 28.8%) contributed the majority of cases, all other district contributed below 20% each. In week 51, the Bojanala Platinum District (27.0 cases per 100 000 persons), followed by the Dr Kenneth Kaunda District (15.0 cases per 100 000 persons) reported the highest weekly incidence risk. All the districts reported a gradual increase in number of new cases and weekly incidence risk from week 50 to date, with Bojanala Platinum District showing a sharp increase in week 51. The increase

in numbers and incidence risk reported recently from all the districts remained below that reported during the first peak (Figure 24).

The majority of cases from North West Province were in the 40-59-year-age group (15 305/36 347, 42.1%), followed by 20-39-year-age group (14 016/36 347, 38.6%). In the past week, all age groups reported an increase in weekly incidence risk, except 5-9-year-age group (0.3 cases per 100 000 person, 10.0% reduction) which showed a decrease in weekly incidence risk, compared to the previous week. The increase ranged from 0.5 cases per 100 000 persons (28.6% increase) in 0-4-year age group to 16.8 cases per 100 000 persons (61.6% increase) in 40-59-year-age group (Figure 25).

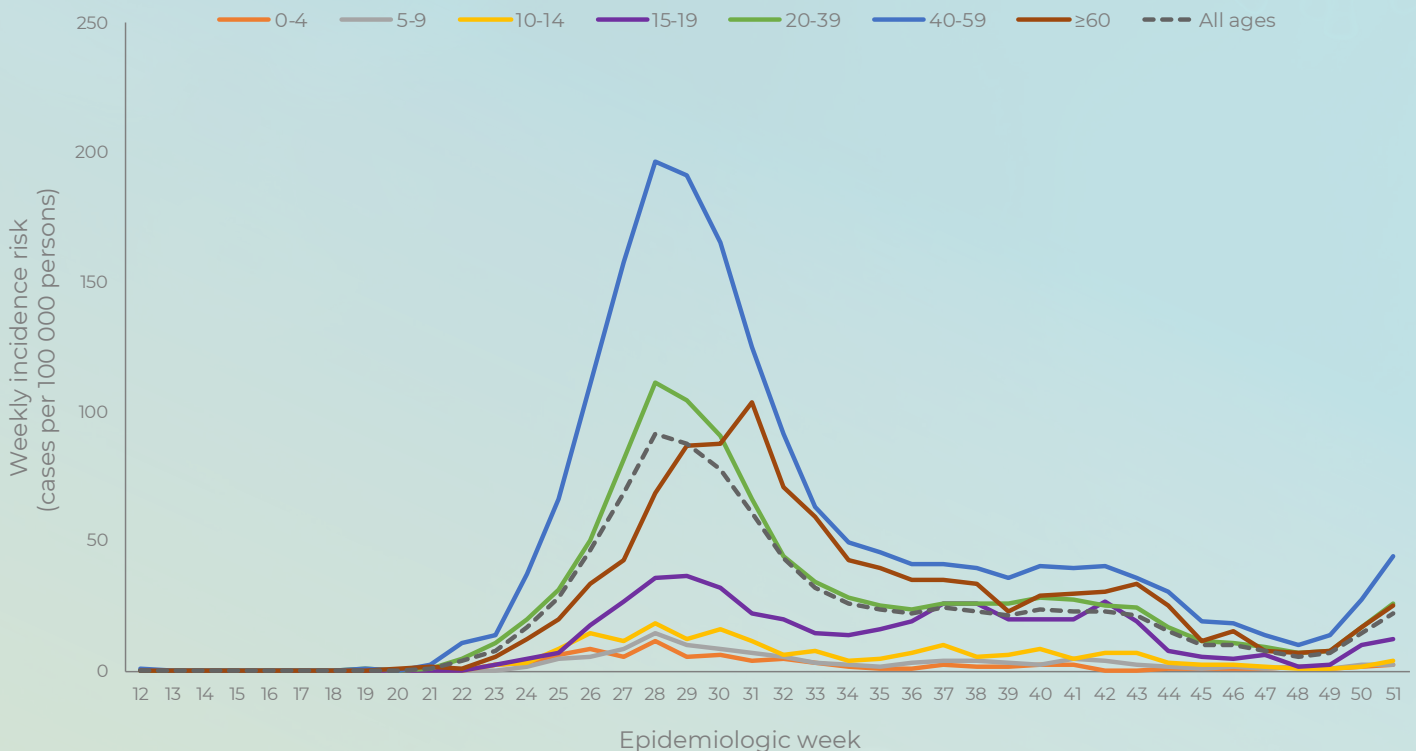
Figure 24. Weekly incidence risk of PCR-confirmed cases of COVID-19 by epidemiologic week, North West Province, 3 March-19 December 2020 by district (n= 31 199, 5 479 missing district)



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Figure 25. Weekly incidence risk of PCR-confirmed cases of COVID-19 by epidemiologic week, North West Province, 3 March-19 December 2020 by age group in years (n= 36 347, 331 missing age)



Northern Cape Province

Of the 24 164 cases reported from the Northern Cape Province, 20 363 (84.3 %) had allocation by district. The Frances Baard (7 844/20 363, 38.5%), followed by the Pixley ka Seme (5 265/20 363, 25.9%) districts contributed the majority of cases, all other districts contributed below 20% each. In week 51, the Pixley ka Seme (82.5 cases per 100 000 persons), followed by the Namakwa (40.7 cases per 100 000 persons) districts reported the highest weekly incidence risk. All the districts reported a gradual increase in number of new cases and weekly incidence risk from week 50 to date, except the John Taolo Gaetsewe District which continued with a decreasing trend of weekly incidence risk since the first wave. The increase in numbers and incidence risk reported recently from all the districts remained below that reported during the first peak (Figure 26).

The majority of cases from Northern Cape Province were in the 20-39-year-age group (9 489/23 938, 39.6%), followed by 40-59-year-age group (8 240/23 938, 34.4%). In the past week, four age groups (15-19, 20-39, 40-59 and ≥60 age groups) reported an increase in weekly incidence risk, compared to the previous week. The increase ranged from 1.9 cases per 100 000 persons (13.3% increase) in 15-19-year age group to 12.9 cases per 100 000 persons (30.3% increase) in 40-59-year-age group (Figure 27).

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Figure 26. Weekly incidence risk of PCR-confirmed cases of COVID-19 by epidemiologic week, Northern Cape Province, 3 March-19 December 2020 by district (n= 20 363, 3 801 missing district)

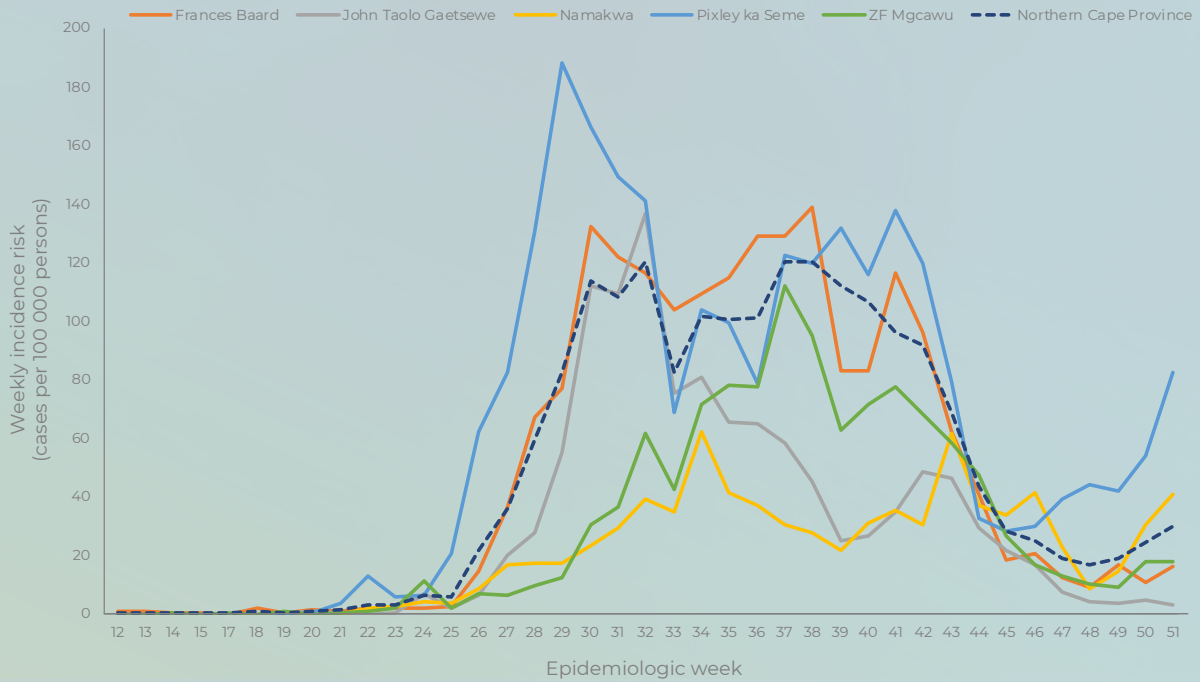
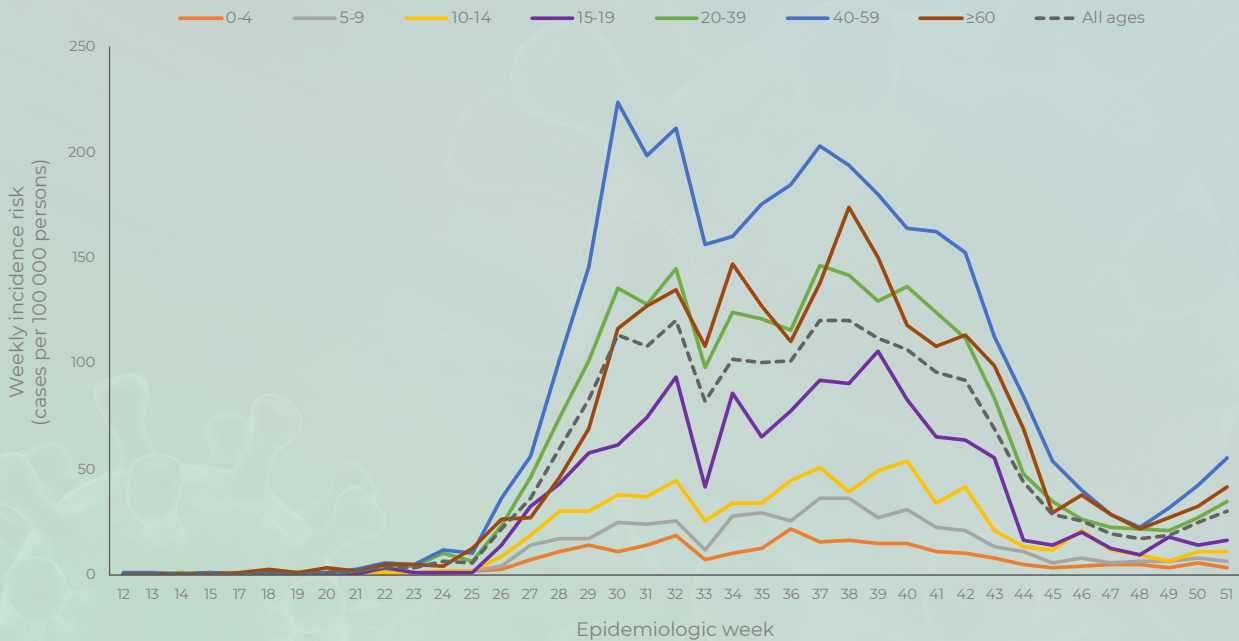


Figure 27. Weekly incidence risk of PCR-confirmed cases of COVID-19 by epidemiologic week, Northern Cape Province, 3 March-19 December 2020 by age group in years (n= 23 938, 226 missing age)



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 reporting of 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. The reported doubling time estimates are affected by the number of tests conducted; if fewer tests are performed, this will also increase the doubling time estimate. Delays in reporting may result in incomplete data for recent weeks, leading to an apparent reduction in number of cases.

Conclusions

To date, 921 922 cases, including 24 691 deaths have been reported. Nationally, the weekly incidence risk of cases per 100 000 persons has been increasing gradually since week 46, due to an increase in number of new cases reported from Western Cape, Eastern Cape, KwaZulu-Natal and to a lesser extent Gauteng provinces. However, in the past week increases in number of cases have been noted from all provinces except the Eastern Cape Province and the Western Cape Province. Travel during the festive season could result in changes in trends reported in different provinces during this period. Interprovincial travel at the current time where increases in cases are observed in several provinces could potentially increase the spread of COVID-19. It is important that during the festive season, people ensure to maintain measures to prevent the spread of COVID-19. These measures include limiting the number and size of social gatherings, meeting others outdoors or in well-ventilated spaces, consistent and correct use of masks, proper hand hygiene and physical distancing.