COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

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

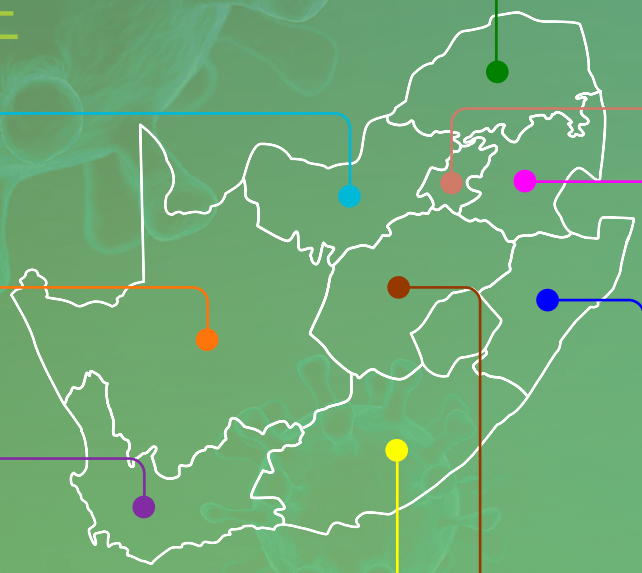
SOUTH AFRICA | WEEK **53** 2020

CUMULATIVE DATA FROM

31 JANUARY 2020 — 02 JANUARY 2021

CASES	PERSONS
1 100 748 IN TOTAL	1 846,2 INCIDENCE RISK*
84 800 THIS WEEK	40 MEDIAN AGE

PROVINCES AT A GLANCE



NORTH WEST
CASES: 41 459 IN TOTAL | 1 009,0 /100,000*

NORTHERN CAPE
CASES: 25 913 IN TOTAL | 2 004,4 /100,000*

WESTERN CAPE
CASES: 218 679 IN TOTAL | 3 121,4 /100,000*

EASTERN CAPE
CASES: 173 592 IN TOTAL | 2 577,8 /100,000*

LIMPOPO
CASES: 27 489 IN TOTAL | 469,7 /100,000*

GAUTENG
CASES: 298 068 IN TOTAL | 1 924,5 /100,000*

MPUMALANGA
CASES: 38 541 IN TOTAL | 823,6 /100,000*

KWAZULU-NATAL
CASES: 213 473 IN TOTAL | 1 851,2 /100,000*

FREE STATE
CASES: 63 534 IN TOTAL | 2 169,2 /100,000*

* **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 2 January 2021 (week 53 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 2 January 2021, a total of 1 100 748 laboratory-confirmed COVID-19 cases had been detected in South Africa. Of these, 96 335 were cases reported since the last report (week 52 report). There was a 9.6% increase in number of new cases detected in week 53 (84 800) compared to the number of new cases detected in week 52 (77 382).
- An additional 2 842 deaths were reported since the last report. The overall case-fatality ratio is 2.7% (29 577/1 100 748).
- In the past week, the KwaZulu-Natal Province reported the highest proportion of the new cases detected (24 891/84 800, 29.4%), followed by the Gauteng Province (21 683/84 800, 25.6%), and the Western Cape Province (19 369/84 800, 22.8%).
- In the past week, five provinces (Limpopo, Mpumalanga, Northern Cape, Gauteng, and Free State) reported an increase in weekly incidence risk, compared to the previous week. The increase in weekly incidence risk ranged from 9.8 cases per 100 000 persons (21.7% increase) in the Free State Province to 30.7 cases per 100 000 persons (68.1% increase) in Limpopo Province.
- In the past week, Western Cape Province reported the highest weekly incidence risk (276.5 cases per 100 000 persons) in week 53, followed by the KwaZulu-Natal Province (215.8 cases per 100 000 persons), the Gauteng Province (140.0 cases per 100 000 persons), and the Eastern Cape Province (86.8 cases per 100 000 persons), this is similar to the previous three weeks.
- 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, Overberg, City of Cape Town and Cape Winelands. 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 three weeks was largely driven by an increase in number of new cases in six districts (eThekwini, iLembe, Ugu, Harry Gwala, uMgungundlovu, and King Cetshwayo). Seven districts, eThekwini, iLembe, Harry Gwala, King Cetshwayo, Ugu, uMkhanyakude, and uThukela districts reported weekly incidence risks above those reported in the first wave peaks.

INCIDENCE RISK FOR WEEK 53

142,2

CASES PER 100 000 PERSONS

29,4%

OF CASES REPORTED IN KWAZULU-NATAL IN WEEK 53

IN WEEK 53, THE HIGHEST WEEKLY INCIDENCE RISK WAS IN CASES AGED 55-59 YEARS (296,4 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. Testing for SARS-CoV-2 using rapid antigen-based tests was implemented during November 2020. 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 or antigen 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 02 January 2021, a total of 1 100 748 laboratory-confirmed COVID-19 cases were reported in South Africa (Figures 1 and 2). This is 96 335 more cases than the number reported in the last report (week 52). The number of new cases detected in week 53 (84 800) was higher than the number of new cases detected in week 52 (77 382), this represented a 9.6% increase in the number of new cases compared to the previous week. In the past week, the KwaZulu-Natal Province reported the highest number of new cases (24 891/84 800, 29.4%), followed by the Gauteng Province (21 683/84 800, 25.6%), and the Western Cape Province (19 369/84 800, 22.8%) (Table 1). Five provinces, Gauteng (298 068/1 100 748, 27.1%), Western Cape (218 679/1 100 748, 19.9%), KwaZulu-Natal Province (213 473/1 100 748, 19.4%), Eastern Cape (173 592/1 100 748, 15.8%), and Free State (63 534/1 100 748, 5.8%) continued to report the majority (967 346/1 100 748, 87.9%) 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 52 to week 53.

The cumulative incidence risk for the country increased from 1 704.0 cases per 100 000 persons in week 52 to 1 846.2 cases per 100 000 persons in week 53. 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 (3 121.4 cases per 100 000 persons), followed

by the Eastern Cape Province (2 577.8 cases per 100 000), the Free State Province (2 169.2 cases per 100 000 persons), Northern Cape Province (2 004.4 cases per 100 000 persons), the Gauteng Province (1 924.5 cases per 100 000 persons), and the KwaZulu-Natal Province (1 851.2 cases per 100 000 persons). The other provinces continued to report cumulative incidence risk below 1 500 cases per 100 000 persons, with Limpopo Province reporting the lowest cumulative incidence risk (469.7 cases per 100 000 persons).

The Western Cape Province reported the highest weekly incidence risk (276.5 cases per 100 000 persons) in week 53, followed by the KwaZulu-Natal Province (215.8 cases per 100 000 persons), the Gauteng Province (140.0 cases per 100 000 persons), and the Eastern Cape Province (86.8 cases per 100 000 persons), this is similar to the previous three weeks. The weekly incidence risk in all the other provinces remained below 80 cases per 100 000 persons. In the past week, six provinces (Limpopo, Mpumalanga, Northern Cape, Gauteng, North West, and Free State) reported an increase in weekly incidence risk, compared to the previous week. The increase in weekly incidence risk ranged from 9.8 cases per 100 000 persons (21.7% increase) in the Free State Province to 30.7 cases per 100 000 persons (68.1% increase) in Limpopo Province (Figure 4). The Western Cape Province 0.7 cases per 100 000 persons (0.3% decrease), the KwaZulu-Natal Province 2.6 cases per 100 000 persons (1.2% decrease), and the Eastern Cape Province 12.7 cases per 100 000 persons (12.7% decrease) reported a decrease in weekly incidence risk, compared to the previous week. Some of the reductions in week 53 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, all provinces have reported increases in number of cases from week 43, exceeding the peak in the first wave in Western Cape, KwaZulu-Natal and Limpopo (Figure 3). Some of these changes could be driven in part by changes in testing practices.

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 52, the estimated doubling time of number of cases decreased in three provinces, KwaZulu-Natal Province (from 35.1 days to 31.0 days, 11.6% decrease), Gauteng Province (from 91.4 days to 67.9 days, 25.8% decrease), and the Free State Province (from 378.5 days to 253.5 days, 33.0% decrease). Similar to the previous week, in the past week, Western Cape Province (from 36.5 days to 42.7 days,17.2% increase), and Eastern Cape Province (from 72.9 days to 110.3 days, 51.2% increase) reported an increase in estimated doubling time of number of cases (Figure 5).

The case-fatality ratio (CFR) is 2.7% (29 577/1 100 748); an additional 2 842 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, 2 842 compared to 2 044. A 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 CFR 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.

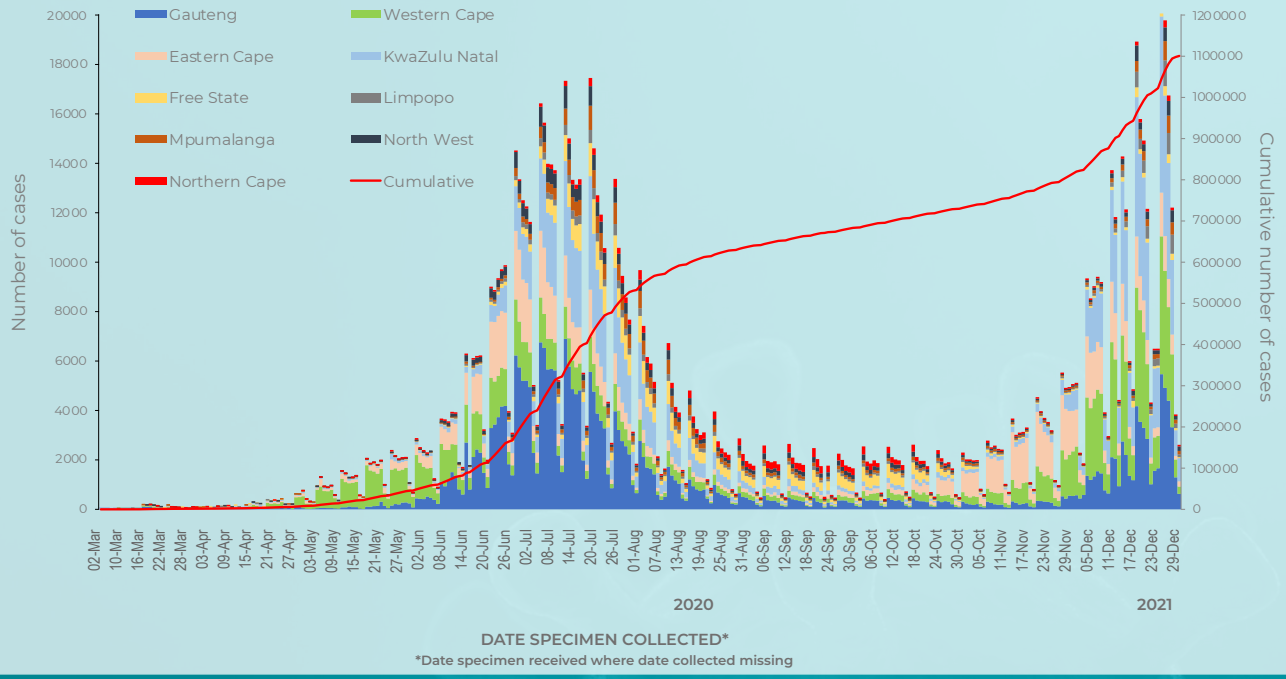


Figure 1. Number and cumulative number of laboratory-confirmed cases of COVID-19 by province and date of specimen collection, South Africa, 3 March 2020- 2 January 2021 (n=1 100 748)

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 2020- 2 January 2021 (n=1 100 748)

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 2020-2 January 2021 (n=1 100 748)

Province	Cumulative cases (n) (percentage, n/ total cases in South Africa)	New cases[1] detected in week 53 (27 December 2020-2 January 2021), 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 53 (cases/100 000 persons)	Tests[4] per 100 000 persons, 27 December 2020- 2 January 2021
Eastern Cape	173 592 (15.8)	5 842 (6.9)	6 734 001	2 577.8	86.8	253.8
Free State	63 534 (5.8)	1 618 (1.9)	2 928 903	2 169.2	55.2	227.0
Gauteng	298 068 (27.1)	21 683 (25.6)	15 488 137	1 924.5	140.0	422.6
KwaZulu-Natal	213 473 (19.4)	24 891 (29.4)	11 531 628	1 851.2	215.8	537.1
Limpopo	27 489 (2.5)	4 436 (5.2)	5 852 553	469.7	75.8	146.0
Mpumalanga	38 541 (3.5)	3 244 (3.8)	4 679 786	823.6	69.3	217.6
North West	41 459 (3.8)	2 718 (3.2)	4 108 816	1 009.0	66.2	128.8
Northern Cape	25 913 (2.4)	999 (1.2)	1 292 786	2 004.4	77.3	319.6
Western Cape	218 679 (19.9)	19 369 (22.8)	7 005 741	3 121.4	276.5	614.4
Unknown	0	0	0			
Total	**1 100 748**	**84 800**	**59 622 350**	**1 846.2**	**142.2**	**372.9**

[1]New cases refer to cases whose samples were collected or received in the current reporting week; [2]Percentage=n/total number of new cases (specimen collected or received in current reporting week); [3]2020 Mid-year population Statistics South Africa [4]Data on number of tests conducted sourced from COVID-19 weekly testing report of the same reporting week

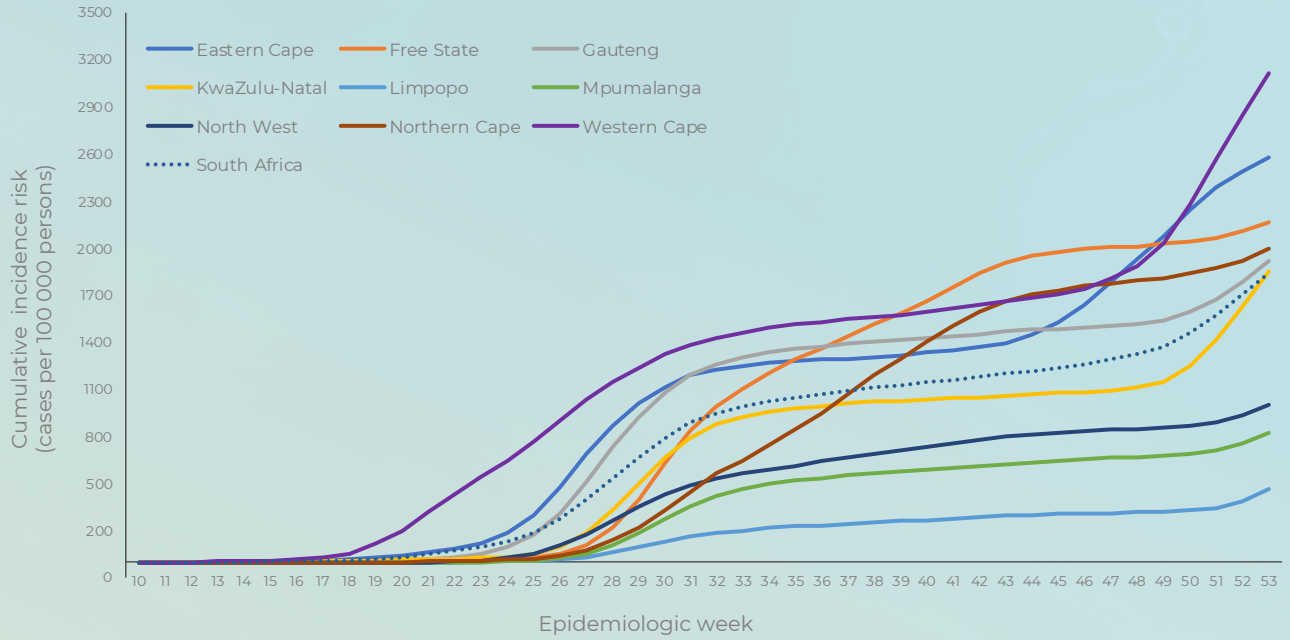


Figure 3. Cumulative incidence risk of laboratory-confirmed cases of COVID-19 by province and epidemiologic week, South Africa, 3 March 2020- 2 January 2021 (n= 1 100 748)

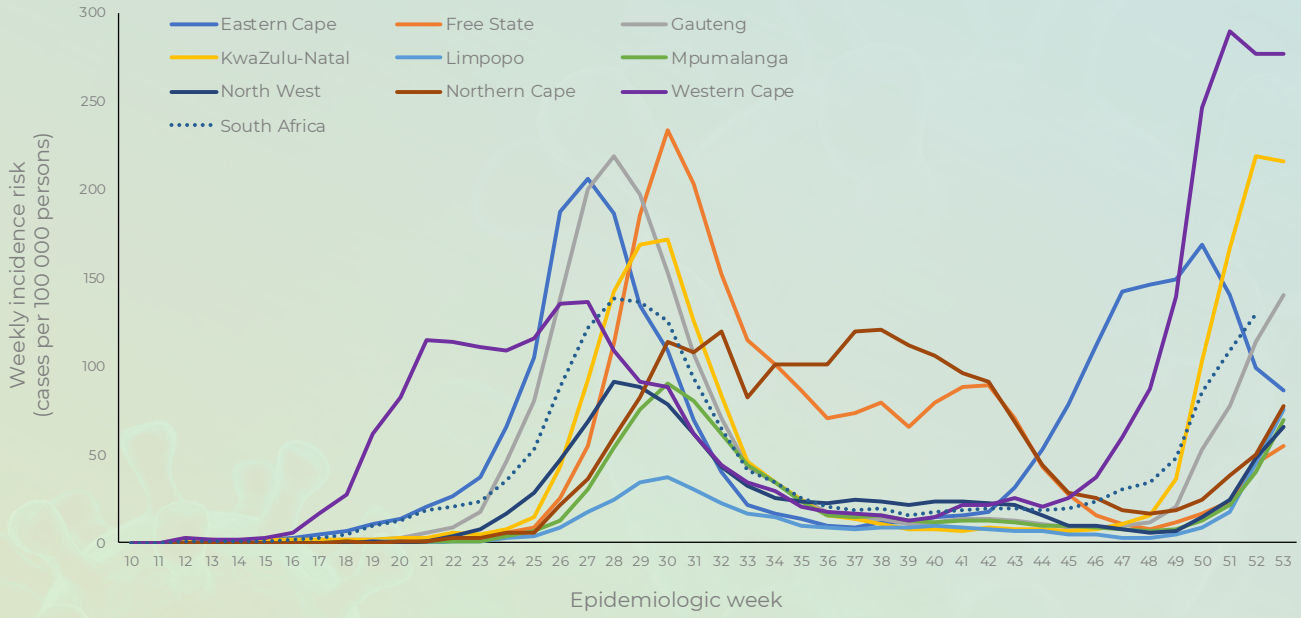


Figure 4. Weekly incidence risk of laboratory-confirmed cases of COVID-19 by province and epidemiologic week, South Africa, 3 March 2020- 2 January 2021 (n=1 100 748)

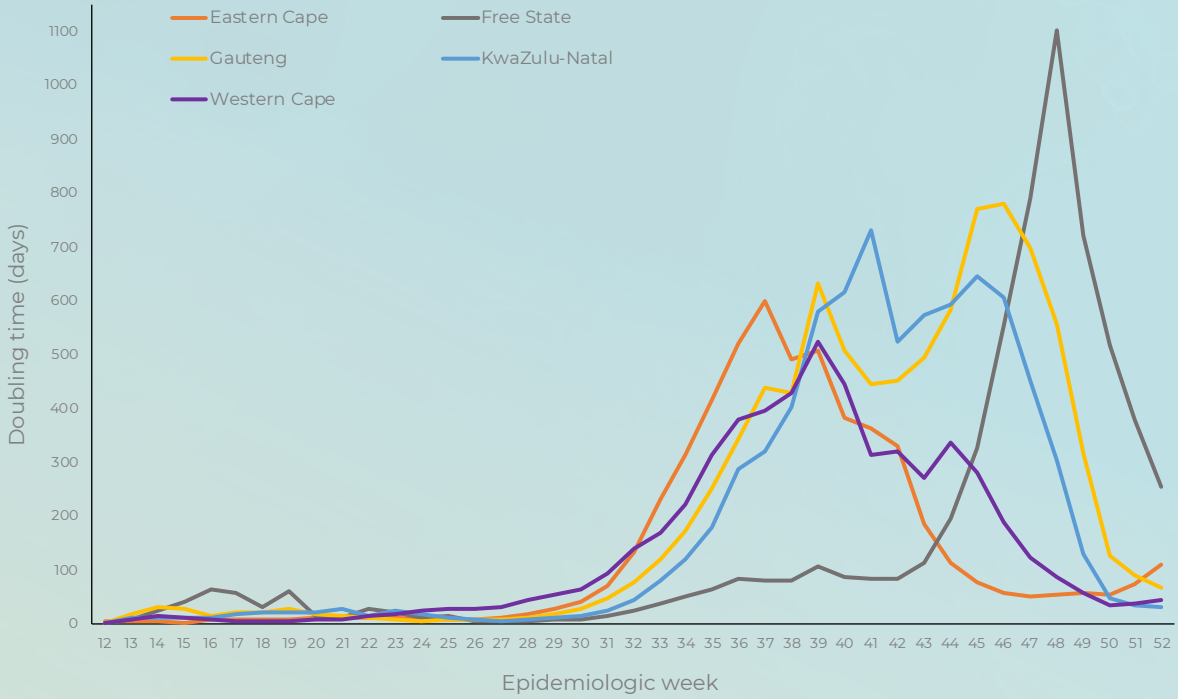


Figure 5. Doubling time of number of laboratory-confirmed cases of COVID-19 by province (for 5 provinces with the majority of cases) and epidemiologic week, South Africa, 23 March-26 December 2020 (n= 1 015 862)

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 (132 107/1 092 171, 12.1%) and 30-34-year (129 239/1 092 171, 11.8%) 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 (9 724/84 113, 11.6%) followed by the 30-34-year age group (9 539/84 113, 11.3%). The median age for cases reported in week 53 was similar (41 years, IQR 30-54), to that of total cases (40 years). The highest cumulative incidence risk remained among cases aged 50-54 years (3 784.2 cases per 100 000 persons), followed by cases aged 55-59 years (3 664.7 cases per 100 000 persons) and 45-49 years (3 412.8 cases per 100 000 persons). The lowest cumulative incidence risk was reported in the younger age-groups, 219.7 cases per 100 000 persons and 269.6 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 53 was reported in cases aged 55-59 years (296.4 cases per 100 000 persons), followed by cases in the 50-54-year-age group (295.9 cases per 100 000 persons) and the lowest weekly incidence risk was in the 0-4-year age group (15.6 cases per 100 000 persons).

To date, the majority of COVID-19 cases reported were female 57.8% (630 280/1 090 514). This trend continued in the past week where 57.4% (48 136/83 911) of cases were female. The cumulative incidence risk has remained consistently higher among females (2 052.0 cases per 100 000 persons) than among males (1 569.1 cases per 100 000 persons) (Figure 8). The peak cumulative incidence risk was in the 50-54-year-age group (3 971.5 cases per 100 000 persons) for females, and in the 55-59 (3 549.0 cases per 100 000 persons) and ≥80-year-age group (3 520.9 cases per 100 000 persons) for males (Figure 9). In week 53, the highest weekly incidence risk for females was in the 50-54-year-age group (302.8 cases per 100 000 persons), and for males in the ≥80-year-age group (297.5 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.

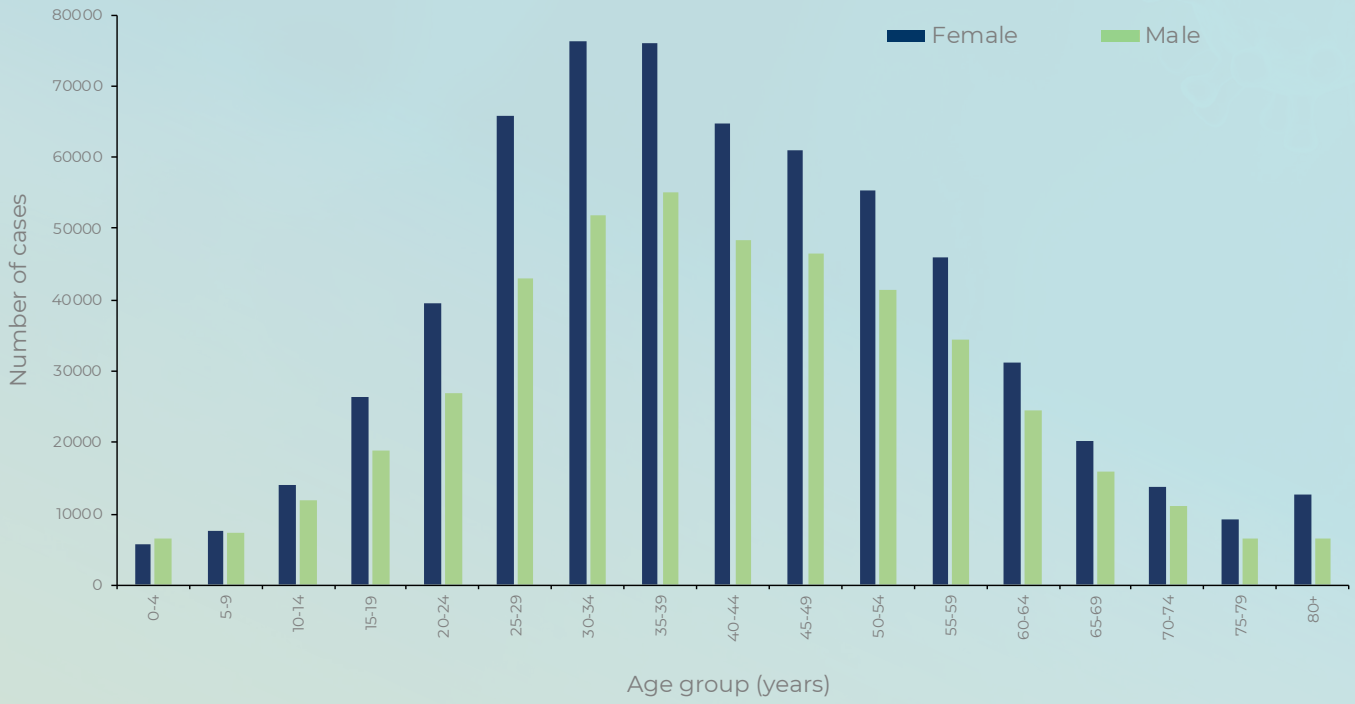


Figure 6. Number of laboratory-confirmed cases of COVID-19 by age group and sex, South Africa, 3 March 2020- 2 January 2021 (n = 1 082 788, sex/age missing for 17 960)

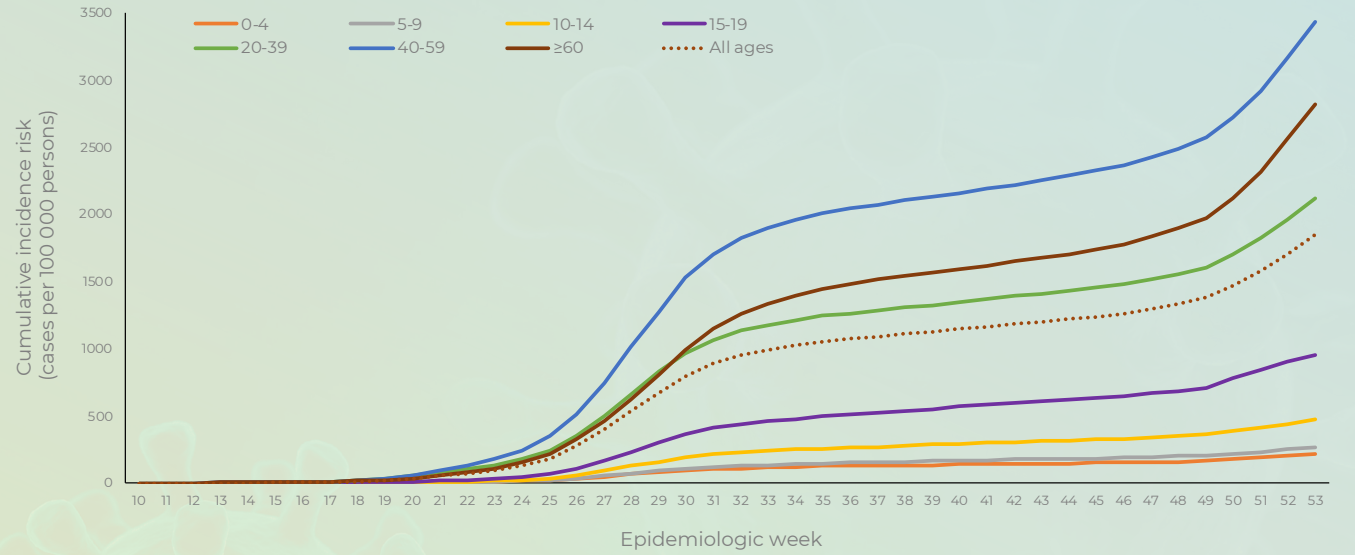


Figure 7. Cumulative incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, South Africa, 3 March 2020- 2 January 2021 (n= 1 092 171, 8 577 missing age)

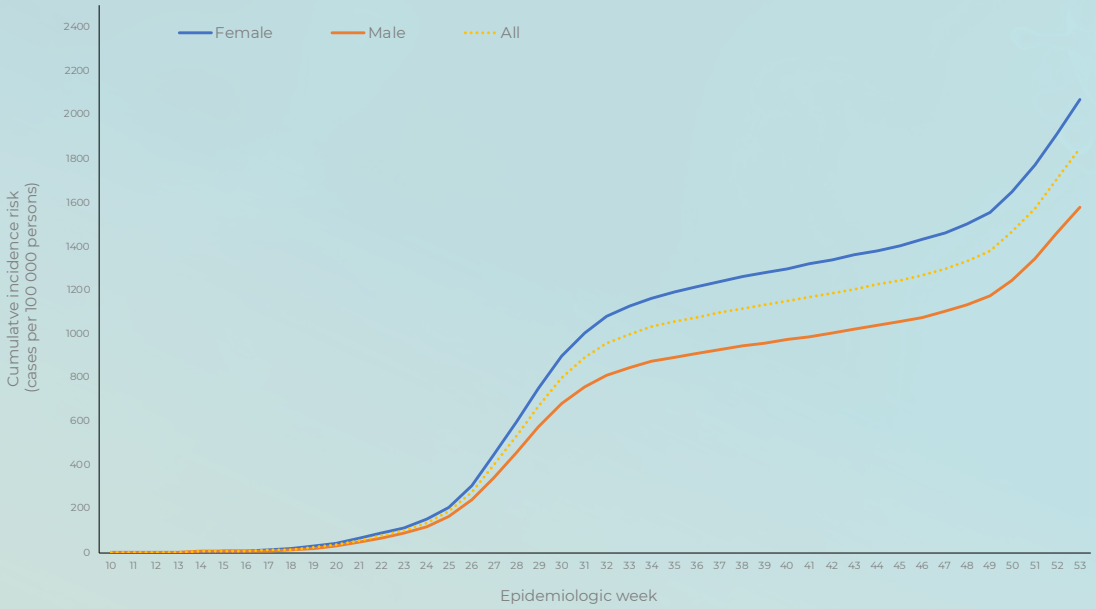


Figure 8. Cumulative incidence risk by sex and epidemiologic week, South Africa, 3 March 2020- 2 January 2021 (n= 1 090 514, sex missing for 10 234)

Table 2. Number of laboratory-confirmed cases of COVID-19 and cumulative/weekly incidence risk by age group, South Africa, 3 March 2020- 2 January 2021, n= 1 092 171, 8 577 missing age)

Age group (years)	Cumulative cases (n) (percentage, n/ total cases in South Africa)	New cases[1] detected in week 53 (27 December 2020- 2 January 2021), 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 53 (cases/100 000 persons)
0-4	12 616 (1.2)	898 (1.1)	5743 450	219.7	15.6
5-9	15 411 (1.4)	1 040 (1.2)	5715 952	269.6	18.2
10-14	26 512 (2.4)	1 700 (2.0)	5591 553	474.1	30.4
15-19	45 801 (4.2)	2 809 (3.3)	4774 579	959.3	58.8
20-24	67 317 (6.2)	5 220 (6.2)	4823 367	1 395.6	108.2
25-29	109 888 (10.1)	8 244 (9.8)	5420 754	2 027.2	152.1
30-34	129 239 (11.8)	9 539 (11.3)	5641 750	2 290.8	169.1
35-39	132 107 (12.1)	9 724 (11.6)	4798 293	2 753.2	202.7
40-44	113 972 (10.4)	8 368 (9.9)	3733 942	3 052.3	224.1
45-49	108 173 (9.9)	8 280 (9.8)	3169 648	3 412.8	261.2
50-54	97 301 (8.9)	7 609 (9.0)	2571 263	3 784.2	295.9
55-59	81 038 (7.4)	6 555 (7.8)	2211 309	3 664.7	296.4
60-64	56 121 (5.1)	5 053 (6.0)	1796 316	3 124.2	281.3
65-69	36 267 (3.3)	3 466 (4.1)	1408 665	2 574.6	246.0
70-74	25 157 (2.3)	2 583 (3.1)	1007 174	2 497.8	256.5
75-79	15 822 (1.4)	1 490 (1.8)	637 062	2 483.6	233.9
≥80	19 429 (1.8)	1 535 (1.8)	577 273	3 365.7	265.9
Unknown	8 577	687			
Total	**1 100 748**	**84 800**	**59 622 350**	**1 846.2**	**142.2**

[1]New cases refer to cases whose samples were collected or received in the current reporting week; [2]Percentage=n/total number of new cases (specimen collected or received in current reporting week); [3]2020 Mid-year population Statistics South Africa

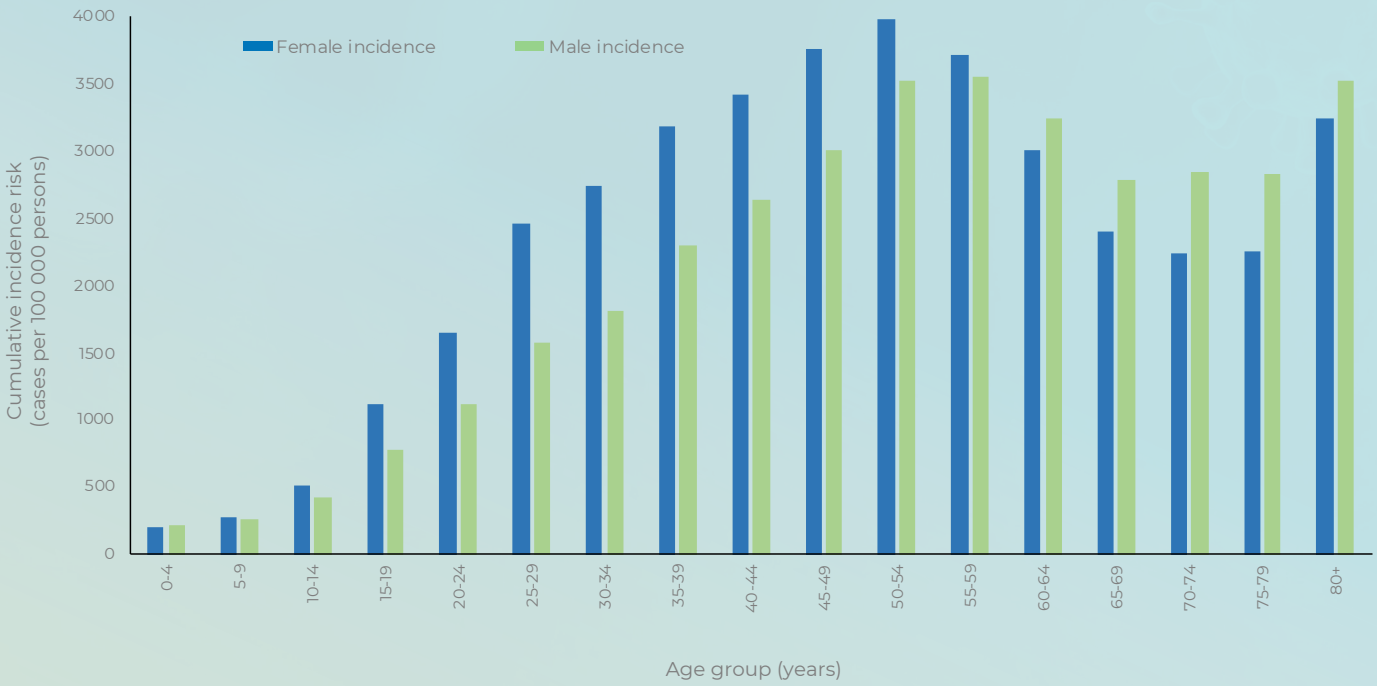


Figure 9. Cumulative incidence risk by age group and sex, South Africa, 3 March 2020- 2 January 2021 (n= 1 082 788, sex/age missing for 17 960)

Provincial trends of COVID-19 cases

In the past few weeks, the majority of provinces have reported an increase in the number of new cases and weekly incidence risks, except for the Eastern Cape where total numbers appear to be going down. Trends by district and age group for each province are presented below.

Eastern Cape Province

Of the 173 592 cases reported from the Eastern Cape Province, 154 656 (89.1%) of cases had allocation by district. The Nelson Mandela Bay Metro (44 738/154 656, 28.9%) followed by the Buffalo City Metro (28 179/154 656, 18.2%) contributed the majority of cases from the Eastern Cape. In week 53, the Joe Gqabi (140.9 cases per 100 000 person), followed by the Buffalo City (116.5 cases per 100 000 persons), Sarah Baartman (113.7 cases per 100 000 persons), and Chris Hani (90.2 cases per 100 000 persons) districts reported the highest weekly incidence risk (Figure 10). The trend in weekly incidence risk reported in recent weeks varied by district, with Nelson Mandela Bay and Sarah Baartman districts reporting the highest weekly incidence risks in week 47, Amathole District in week 50, and Joe Gqabi District in week 53, all at a higher level 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 (63 408/ 171 923, 36.9%), followed by the 20-39-year age group (60 294/171 923, 35.1%). In the past week, the ≥60-year age group (195.7 cases per 100 000 persons), followed by 40-59-year age group (164.9 cases per 100 000 persons), and 20-39-year age group (92.9 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, compared to week 52 (Figure 11). From week 50, ≥60-year-age group reported a higher 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.

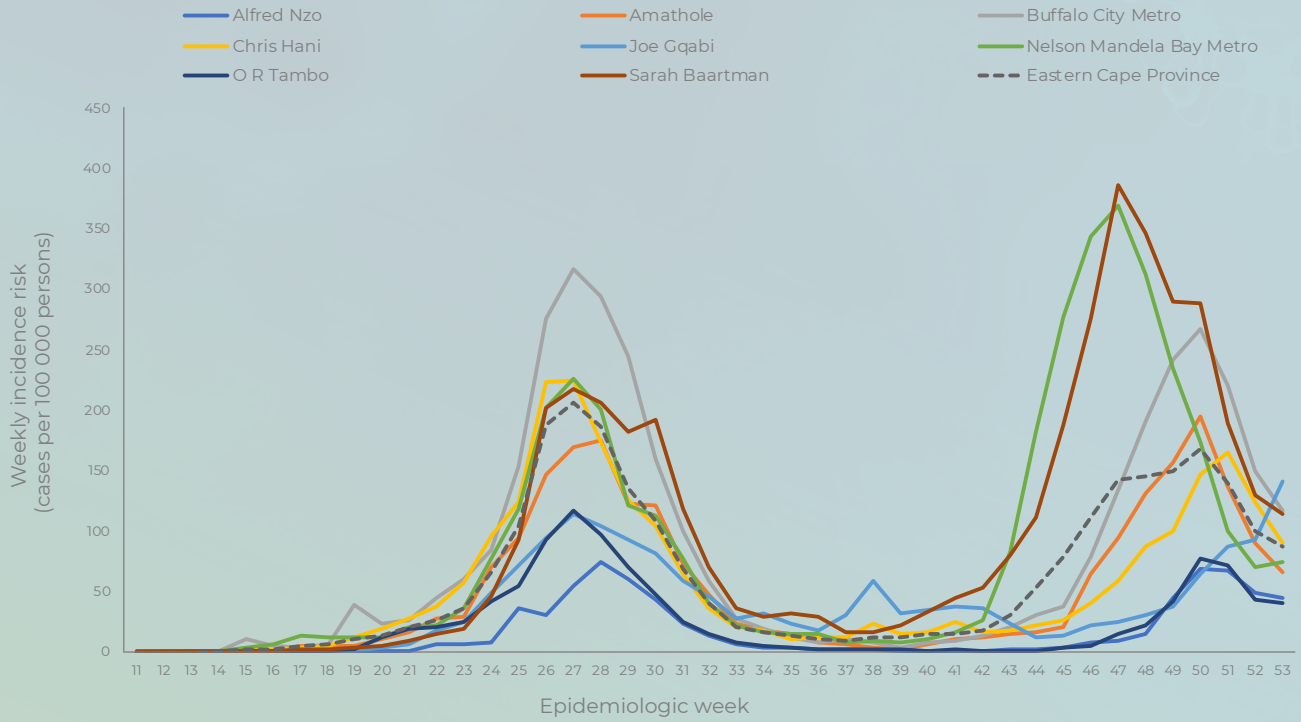


Figure 10. Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, Eastern Cape Province, 3 March 2020- 2 January 2021 (n= 154 656, 18 936 missing district)

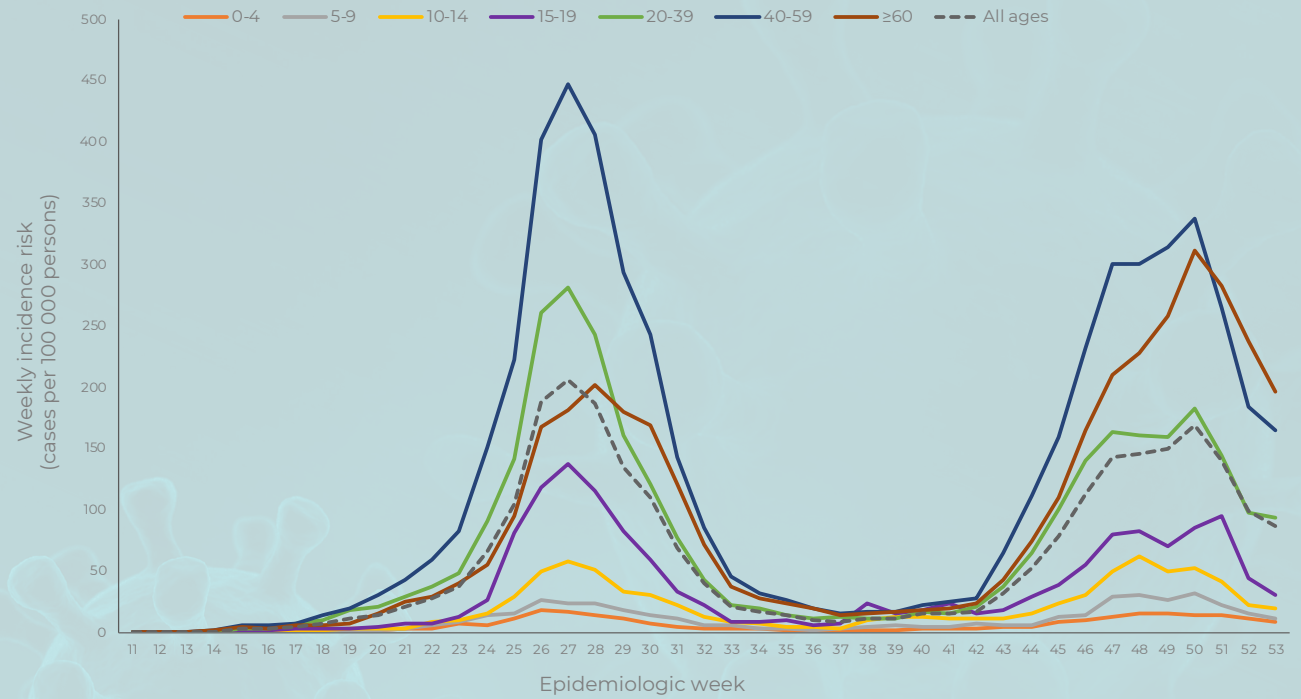


Figure 11. Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, Eastern Cape Province, 3 March 2020 – 2 January 2021 (n= 171923, 1 669 missing age)

Western Cape Province

Of the 218 679 cases reported from the Western Cape Province, 202 053 (92.4%) of cases had allocation by district. The City of Cape Town District (136 220/202 053, 67.4%) followed by the Garden Route District (24 924/202 053, 12.3%), and the Cape Winelands District (23 043/202 053, 11.4%) contributed the majority of cases, all other districts contributed <10% each. In the past week, the highest weekly incidence risk was reported by the Overberg (417.1 cases per 100 000 persons), followed by the Cape Winelands (278.1 cases per 100 000 persons), Garden Route (255.6 cases per 100 000 persons), and the City of Cape Town (243.0 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 from week 50 to week 53, 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 (89 111/217 892, 40.9%), followed by the 40-59-year age group (80 773/217 892, 37.1%). In the past week, the ≥60-year age group (507.1 cases per 100 000 persons), followed by 40-59-year age group (470.1 cases per 100 000 persons), 20-39-year age group (289.6 cases per 100 000 persons), and 15-19-year-age group (110.8 cases per 100 000 persons) reported the highest weekly incidence risk. The weekly incidence risk in all other age groups remained below 40 cases per 100 000 persons. In the past week, three age groups (0-4, 20-39 and 40-49 year olds) reported an increase in weekly incidence risk, compared to week 52, and other age groups reported a decrease in weekly incidence risk possibly related to reporting delays (Figure 13). From week 51 to week 53, all age groups reported the highest weekly incidence risks compared to the peaks in the first wave in different weeks.

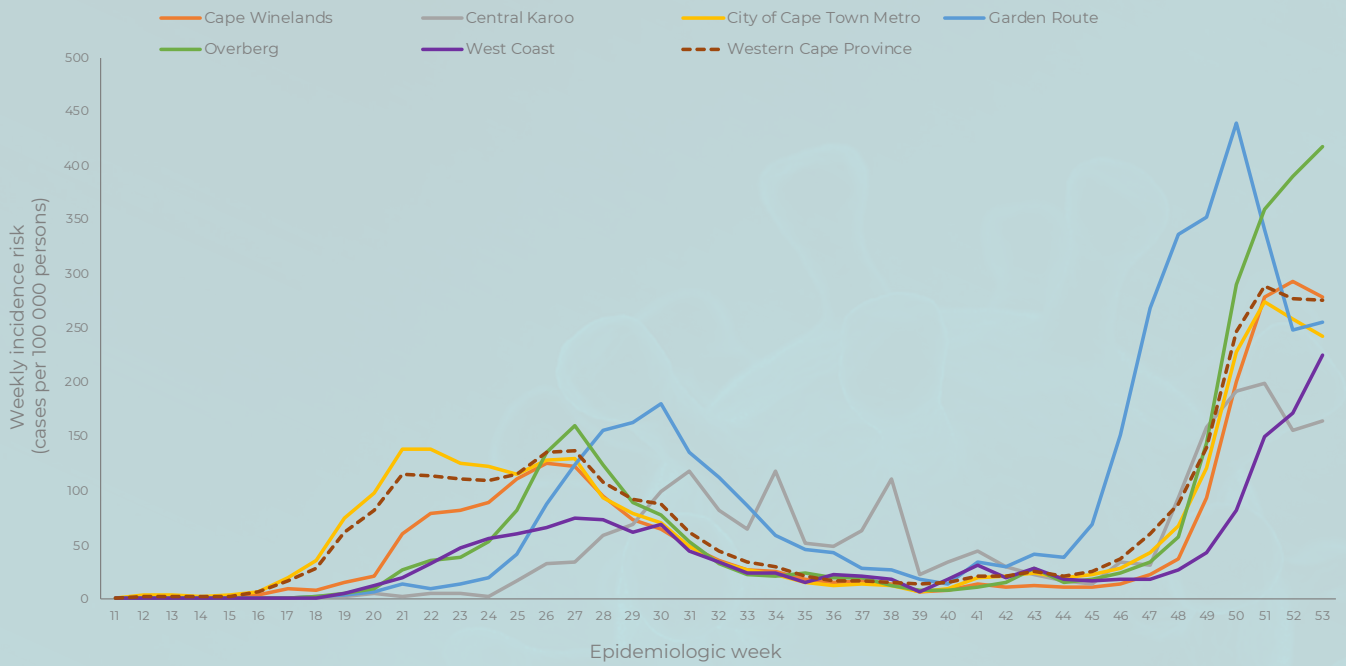


Figure 12. Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, Western Cape Province, 3 March 2020- 2 January 2021 (n= 202 053, 16 626 missing district)

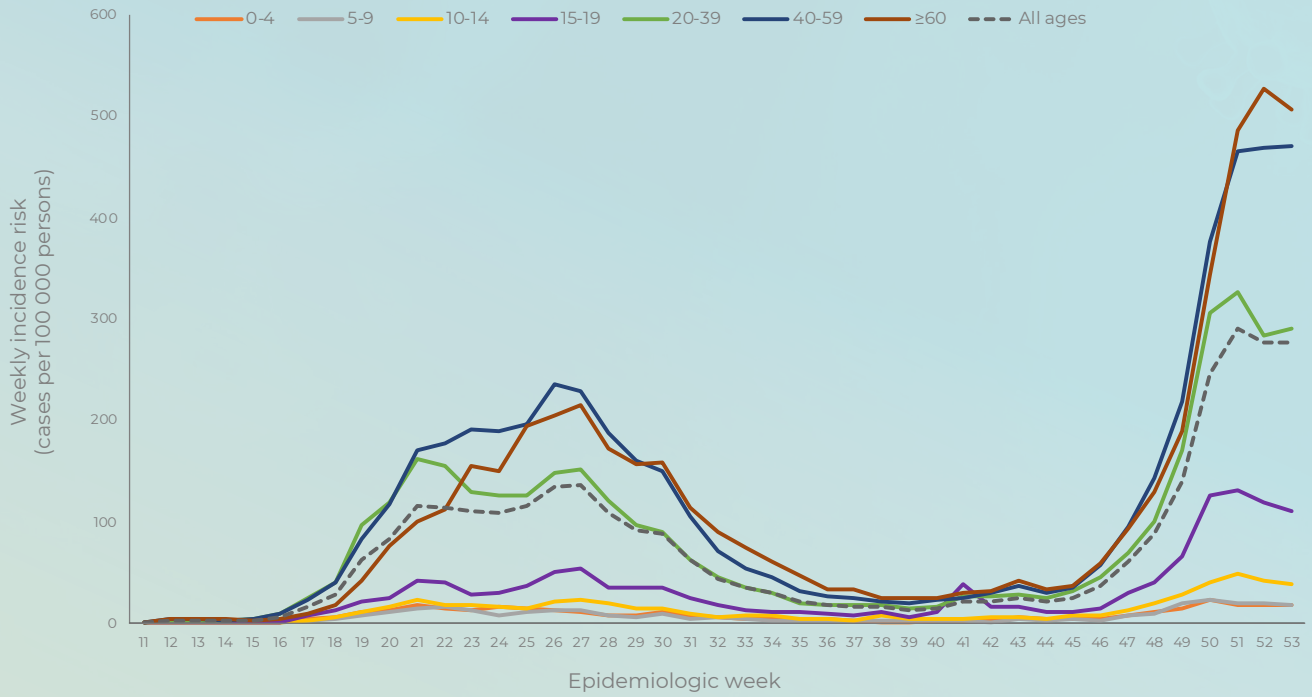


Figure 13. Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, Western Cape Province, 3 March 2020- 2 January 2021 (n= 217 892, 787 missing age)

Gauteng Province

Of the 298 068 cases reported from the Gauteng Province, 264 898 (88.9%) had allocation by district. The City of Johannesburg Metro (105 859/264 898, 40.0%), followed by the City of Tshwane Metro (66 692/264 898, 25.2%), and the Ekurhululeni Metro (54 882/264 898, 20.7%) contributed the majority of cases, all other districts contributed below 15% each. In week 53, the City of Tshwane (173.6 cases per 100 000 persons), followed by the West Rand District (121.9 cases per 100 000 persons), and the City of Johannesburg Metro (110.4 cases per 100 000 persons) reported the highest weekly incidence risk. All the districts reported an increase in number of new cases and weekly incidence risk from week 48 to date, except the West Rand District (1.8 cases per 100 000 persons, 1.4% decrease) which showed a decrease in week 53. 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 (127 289/295 044, 43.1%), followed by 40-59-year-age group (107 512/295 044, 36.4%). Similar to the previous three weeks, in the past week, all age groups reported an increase in weekly incidence risk, compared to the previous week (Figure 15).

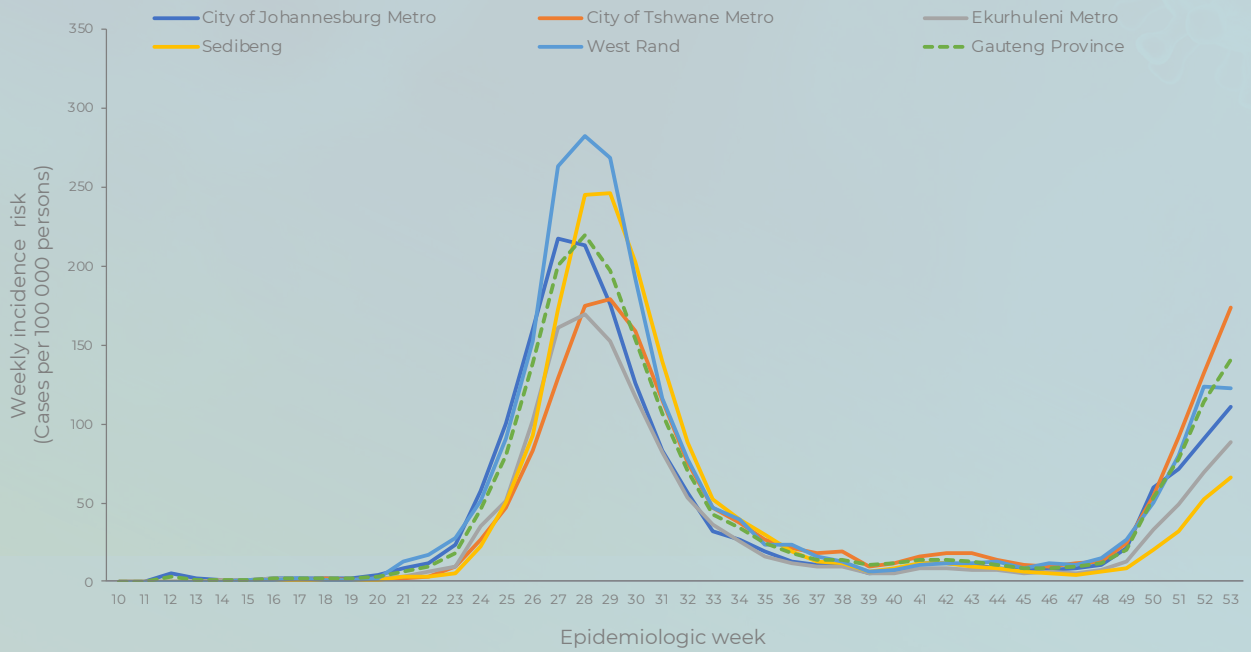


Figure 14. Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, Gauteng Province, 3 March 2020- 2 January 2021 (n= 264 898, 33 170 missing district)

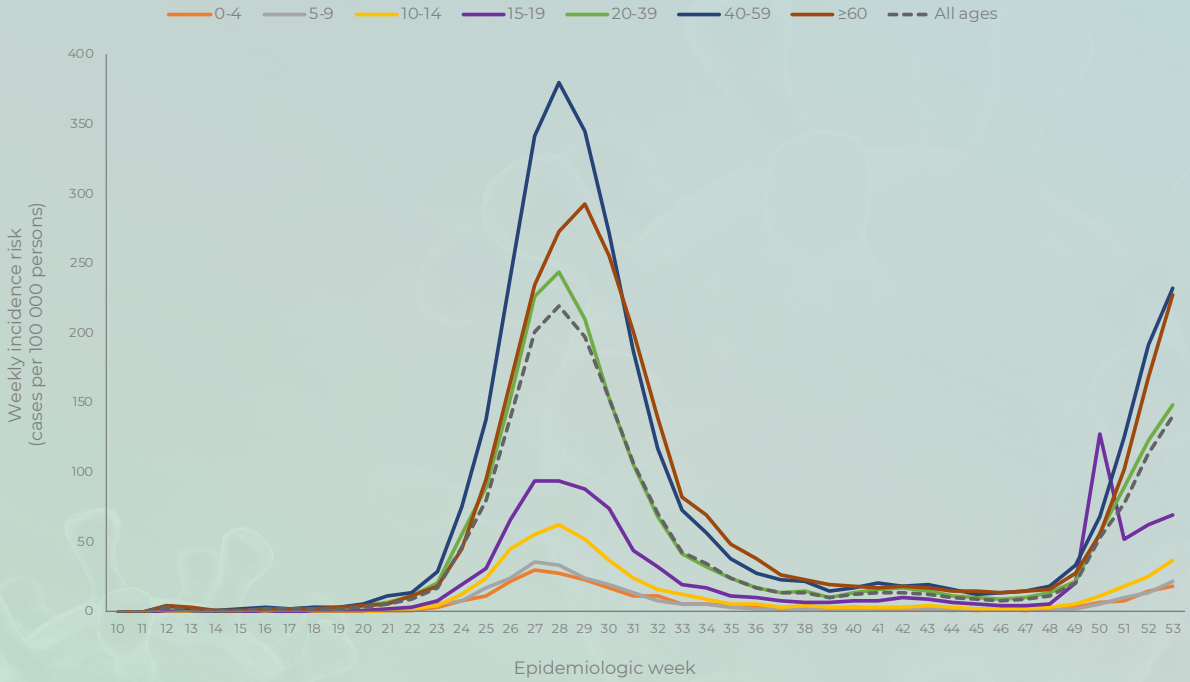


Figure 15. Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, Gauteng Province, 3 March 2020- 2 January 2021 (n= 295 044, 3 024 missing age)

KwaZulu-Natal Province

Of the 213 473 cases reported from KwaZulu-Natal Province, 165 874 (77.7%) had allocation by district. The eThekwini Metro (86 217/165 874, 52.0%) followed by uMgungundlovu Metro (17 904/165 874, 10.8%) contributed the majority of cases. In week 53, eThekwini Metro (275.9 cases per 100 000 persons), followed by King Cetshwayo (170.1 cases per 100 000 persons), uMgungundlovu (155.8 cases per 100 000 persons), Ugu (133.5 cases per 100 000 persons), iLembe (118.5 cases per 100 000 persons), and Harry Gwala (107.2 cases per 100 000 persons) districts reported the highest weekly incidence risk. In the past week, four districts reported a decrease in weekly incidence risk (eThekwini, iLembe, Ugu, and Harry Gwala), compared to week 52, and possibly related to reporting delays.

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 seven districts reported weekly incidence risks higher than those reported in the first peaks; eThekwini Metro (300.4 vs 165.8 cases per 100 000 persons), iLembe District (150.2 cases vs 96.2 per 100 000 persons), Harry Gwala District (132.9 vs. 85.2 cases per 100 000 persons), King Cetshwayo (170.1 vs 121.9 cases per 100 000 persons), Ugu (148.7 vs 107.0 cases per 100 000 persons), uThukela (99.0 vs 94.5 cases per 100 000 persons), and uMkhanyakude (63.8 vs 61.7 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 (83 711/211 747, 39.5%), followed by 40-59-year-age group (75 510/211 747, 35.7%). In week 52, all age groups reported weekly incidence risks higher than those reported in the first wave peaks, except the 15-19-year-age group which continued reporting weekly incidence risks below the first peak. In the past week, all age groups reported a decrease in weekly incidence risk, except 20-39-year-age group which reported an increase in weekly incidence risk, compared to the previous week (Figure 17).

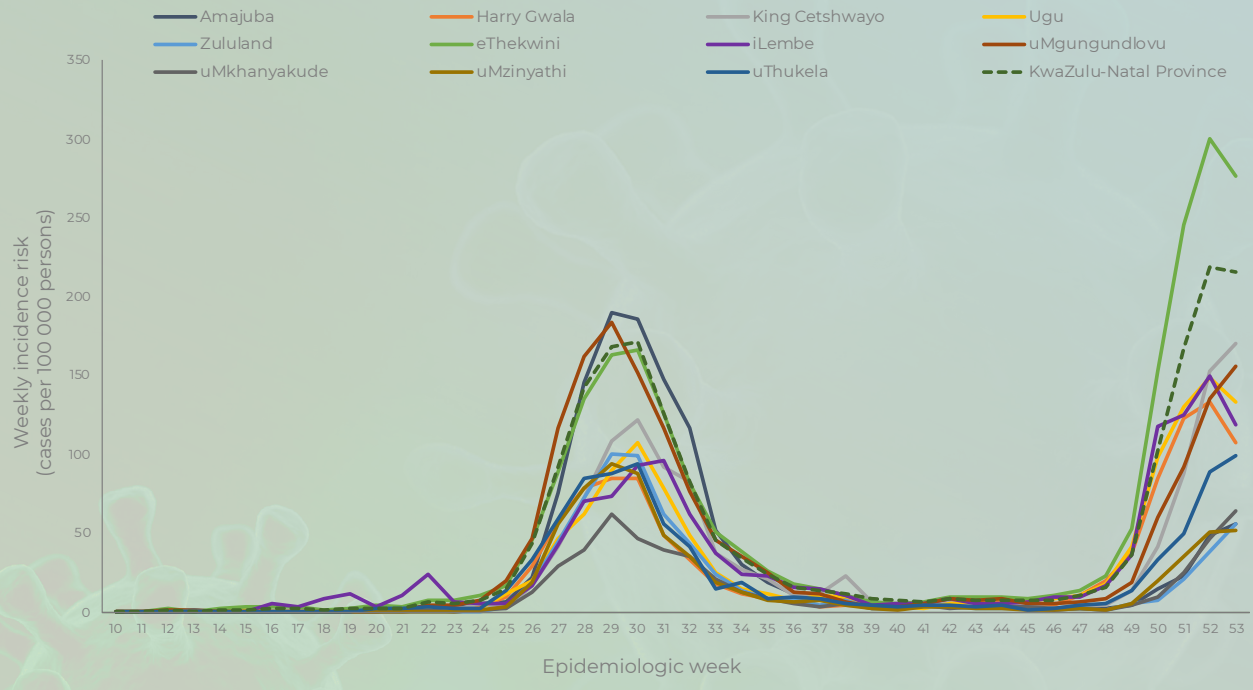


Figure 16. Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, KwaZulu-Natal Province, 3 March 2020- 2 January 2021 (n= 165 874, 47 599 missing district)

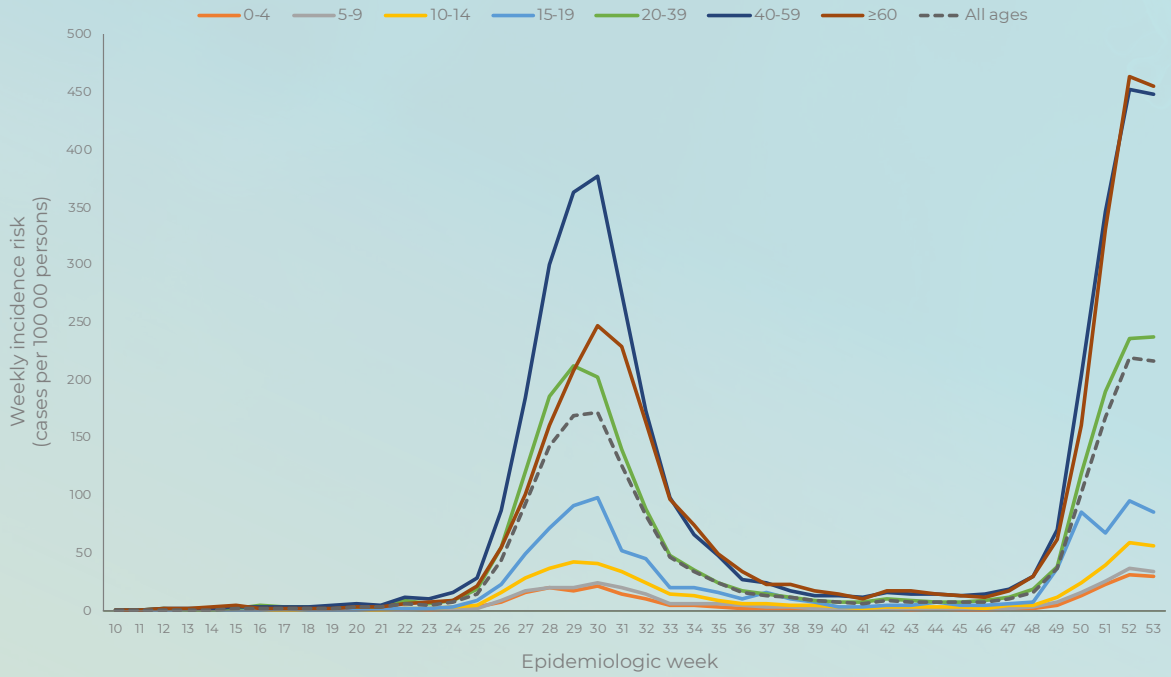


Figure 17. Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, KwaZulu-Natal Province, 3 March 2020- 2 January 2021 (n= 211 747, 1 726 missing age)

Free State Province

Of the 63 534 cases reported from the Free State Province, 58 264 (91.7%) had allocation by district. The Mangaung Metro (23 614/58 264, 40.5%), followed by the Lejweleputswa (14 105/58 264, 24.2%), and the Thabo Mofutsanyane (10 136/58 264, 17.4%) districts contributed the majority of cases, all other districts contributed below 15% each. In week 53, the Fezile Dabi District (78.2 cases per 100 000 persons), followed by the Xhariep District (71.8 cases per 100 000 persons) and Mangaung Metro (51.1 cases per 100 000 persons) reported the highest weekly incidence risk. All the districts reported an increase in number of new cases and weekly incidence risk from week 50 to date, except the Lejweleputswa District showed a decrease in week 53. 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 the Free State Province were in the 20-39-year-age group (24 501 / 63 359, 38.7%), followed by 40-59-year-age group (22 771/63 359, 35.9%). In the past week, all age groups reported an increase in weekly incidence risk, except the 5-9-year-age group showed a decrease in weekly incidence risk, compared to the previous week (Figure 19).

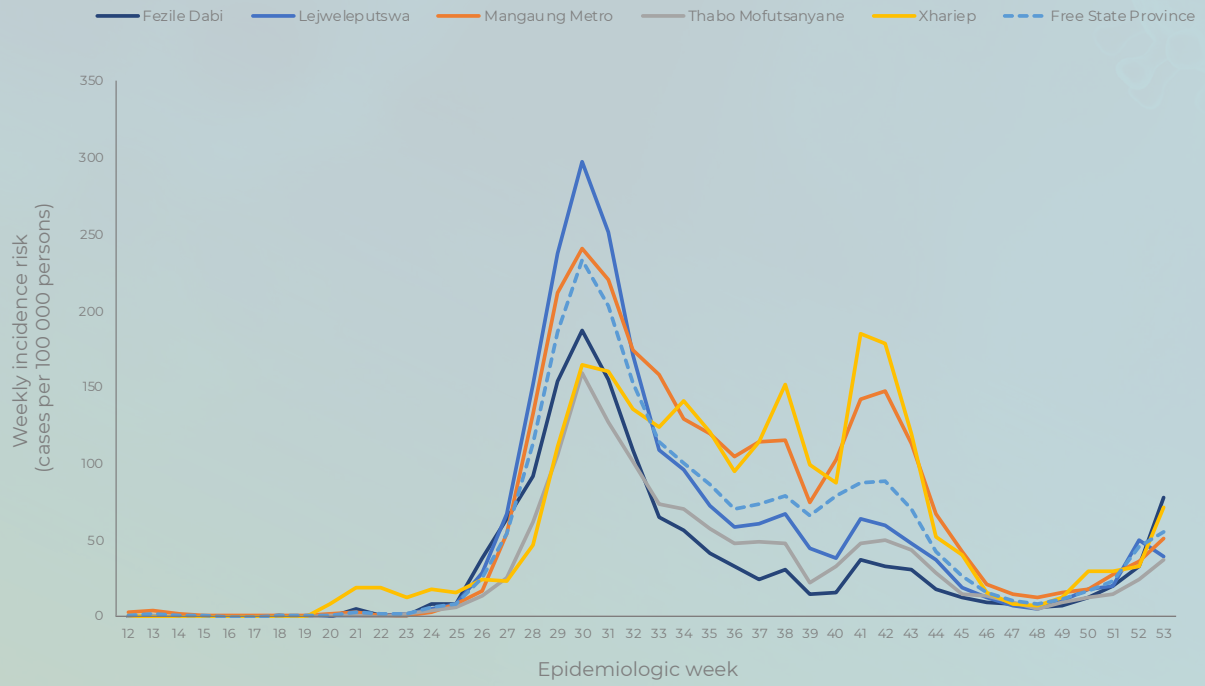


Figure 18. Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, Free State Province, 3 March 202- 2 January 2021 (n= 58 264, 5 270 missing district)

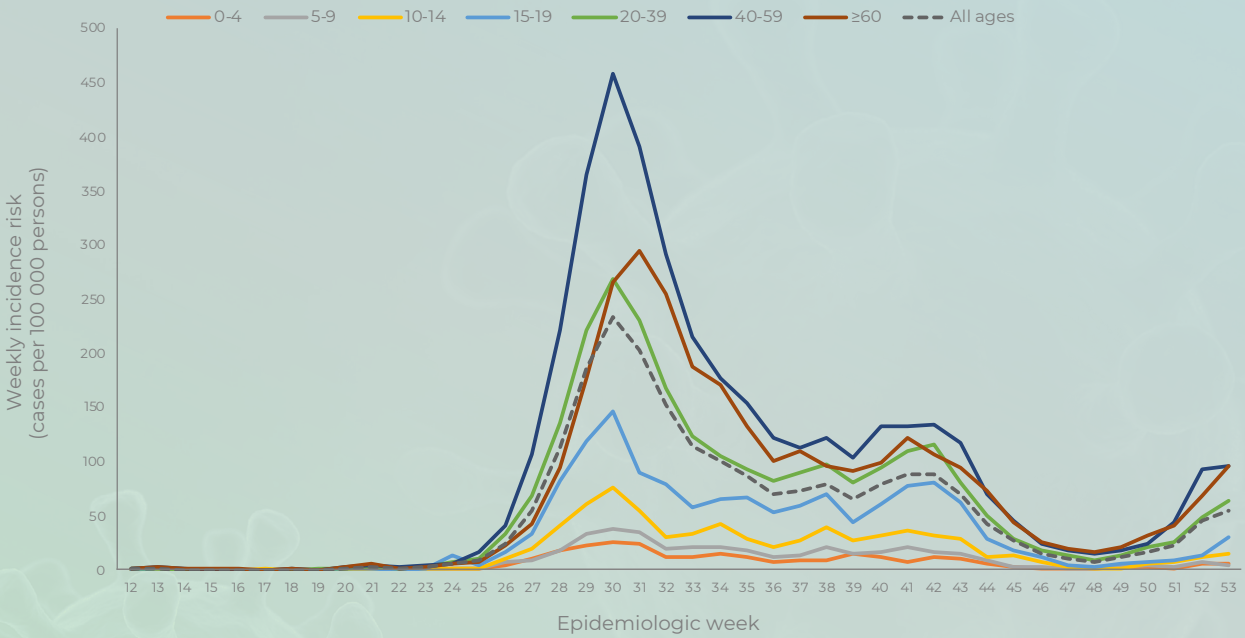


Figure 19. Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, Free State Province, 3 March 2020- 2 January 2021 (n= 63 359, 175 missing age)

Limpopo Province

Of the 27 489 cases reported from the Limpopo Province, 24 638 (89.6%) had allocation by district. The Capricorn (8 449/24 638, 34.3%), followed by the Waterberg (5 157/24 638, 20.9%), and the Mopani (4 202/24 638, 17.1%) districts contributed the majority of cases, all other districts contributed below 16% each. In week 53, the Capricorn (124.5 cases per 100 000 persons), followed by the Waterberg (83.3 cases per 100 000 persons), and the Vhembe (66.7 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 49 to week 50, then sharp increase from week 51 to date. The weekly incidence risk reported in week 53 exceeds those reported in the first peak in the Vhembe District (66.7 vs 15.0 cases per 100 000 persons), Capricorn District (124.5 vs 47.3 cases per 100 000 persons), Waterberg (83.3 vs 60.2 cases per 100 000 persons), and Mopani (49.5 vs 28.7 cases per 100 000 persons) (Figure 20).

The majority of cases from Limpopo Province were in the 20-39-year-age group (11 120/27 394, 40.6%), followed by 40-59-year-age group (10 671/27 394, 39.0%). In the past week, all age groups reported an increase in weekly incidence risk, compared to the previous week (Figure 21). In week 53, all age groups reported weekly incidence risks higher than those reported during the first peaks in week 30, except the 10-14-year-age group which continued to report weekly incidence risk below the first wave peak (Figure 21).

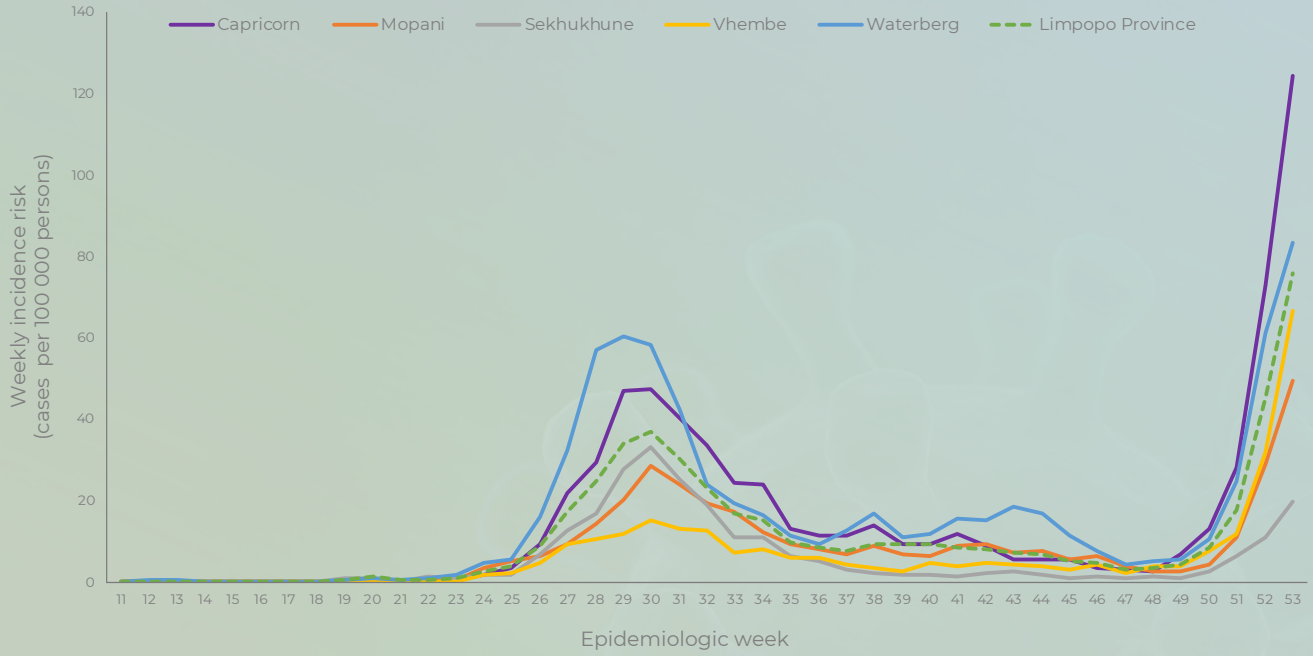


Figure 20. Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, Limpopo Province, 3 March 2020- 2 January 2021 (n= 24 638, 2 851 missing district)

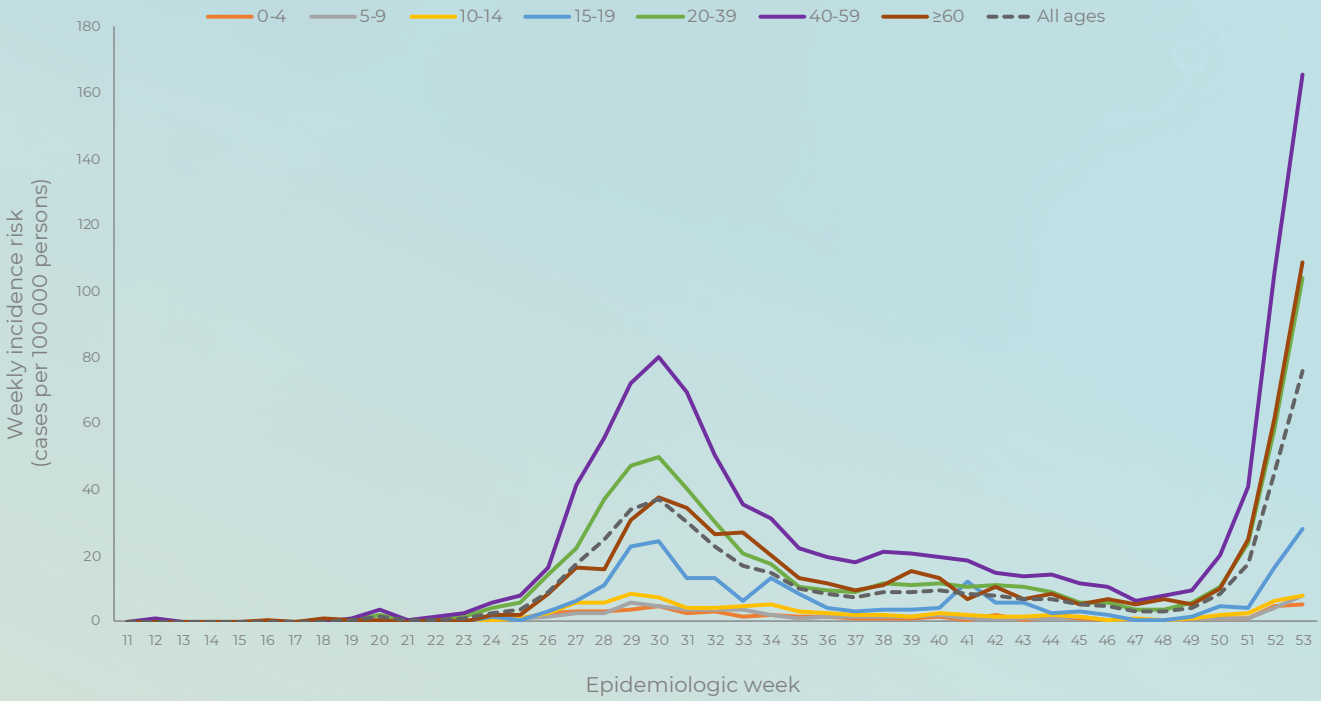


Figure 21. Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, Limpopo Province, 3 March 2020- 2 January 2021 (n= 27 394, 95 missing age)

Mpumalanga Province

Of the 38 541 cases reported from the Mpumalanga Province, 34 101 (88.5%) had allocation by district. All the districts contributed similar number of cases Ehlanzeni (12 289/34 101, 36.0%), Nkangala (11 793/34 101, 34.6%) and the Gert Sibande (10 019/34 101, 29.4%) districts. In week 53, the Ehlanzeni District (64.8 cases per 100 000 persons), followed by the Nkangala District (53.2 cases per 100 000 persons) reported the highest weekly incidence risk. All the districts reported an 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 (16 567/38 058, 43.6%), followed by 40-59-year-age group (13 644/38 058, 35.9%). In the past week, all age groups reported an increase in weekly incidence risk, compared to the previous week (Figure 23).

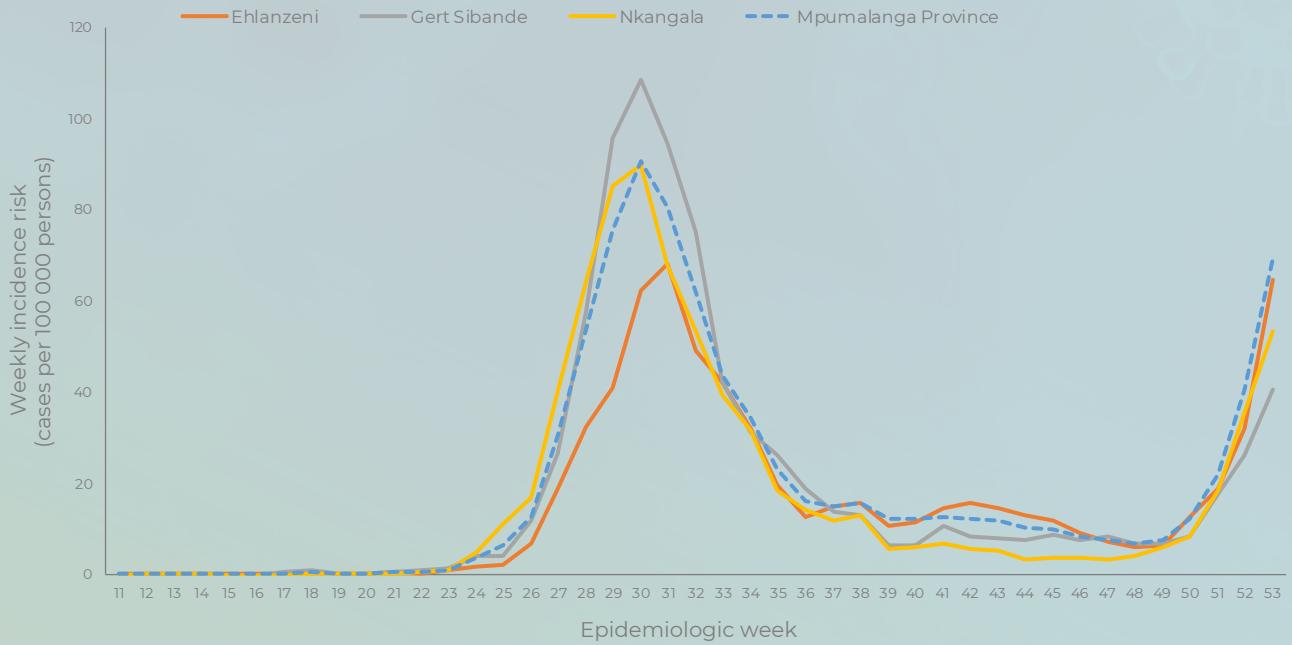


Figure 22. Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, Mpumalanga Province, 3 March 2020- 2 January 2021 (n= 34 101, 4 440 missing district)

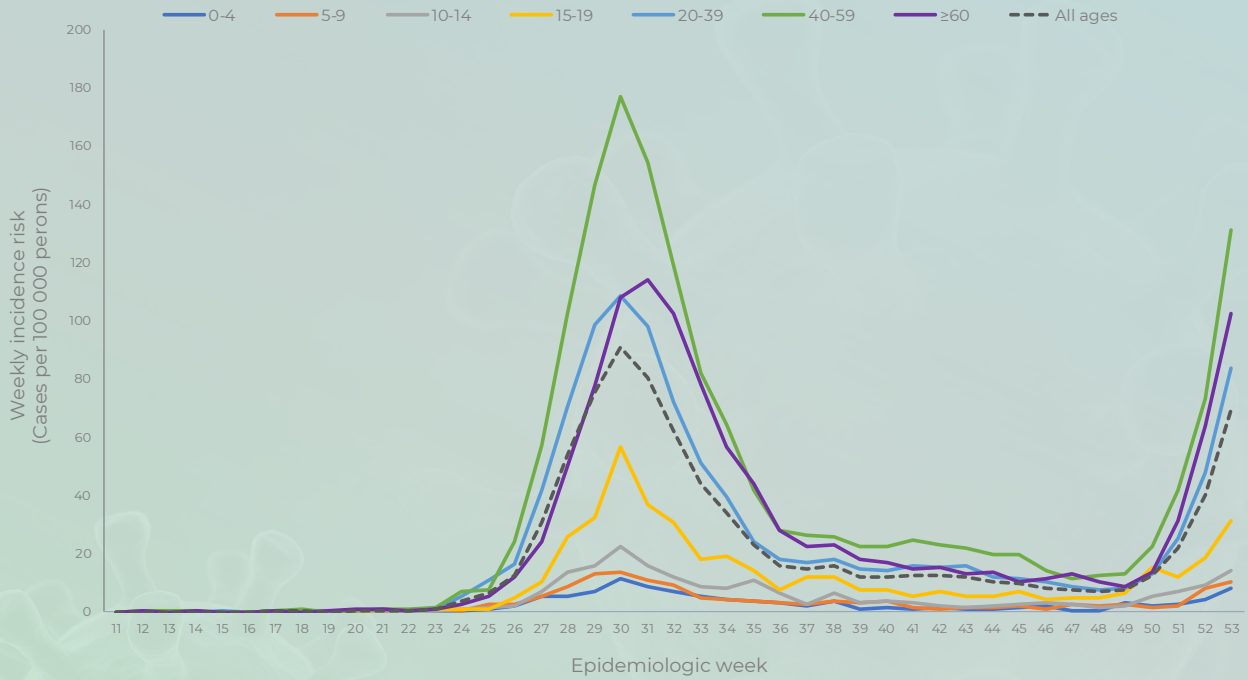


Figure 23. Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group and epidemiologic week, Mpumalanga Province, 3 March 2020- 2 January 2021 (n= 38 058, 483 missing age)

North West Province

Of the 41 459 cases reported from the North West Province, 34 865 (84.1%) had allocation by district. The Bojanala Platinum District (16 637/34 865, 47.7%), followed by the Dr Kenneth Kaunda District (9 536/34 865, 27.5%) contributed the majority of cases, all other districts contributed below 20% each. In week 53, the Bojanala Platinum District (78.5 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 to date. 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 (17 368/41 074, 42.3%), followed by 20-39-year-age group (15 788/41 074, 38.4%). In the past week, 40-59-year-age group (121.1 cases per 100 000 persons), followed by ≥60-year-age group (94.3 cases per 100 000 persons), and 20-39-year-age group (81.0 cases per 100 000 persons) reported the highest weekly incidence risk, and other age groups reported below 30 cases per 100 000 persons. In the past week, all age groups reported an increase in weekly incidence risk, compared to the previous week (Figure 25).

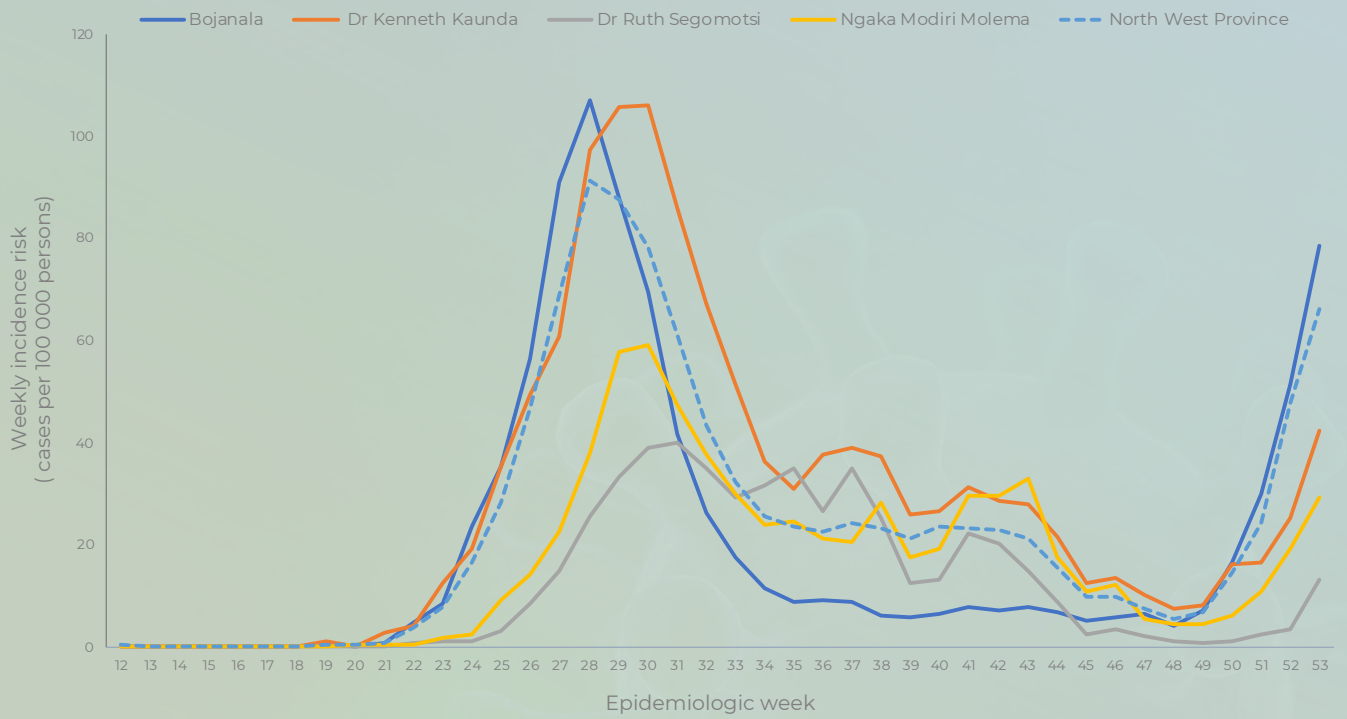


Figure 24. Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, North West Province, 3 March 2020- 2 January 2021 (n= 34 865, 6 594 missing district)

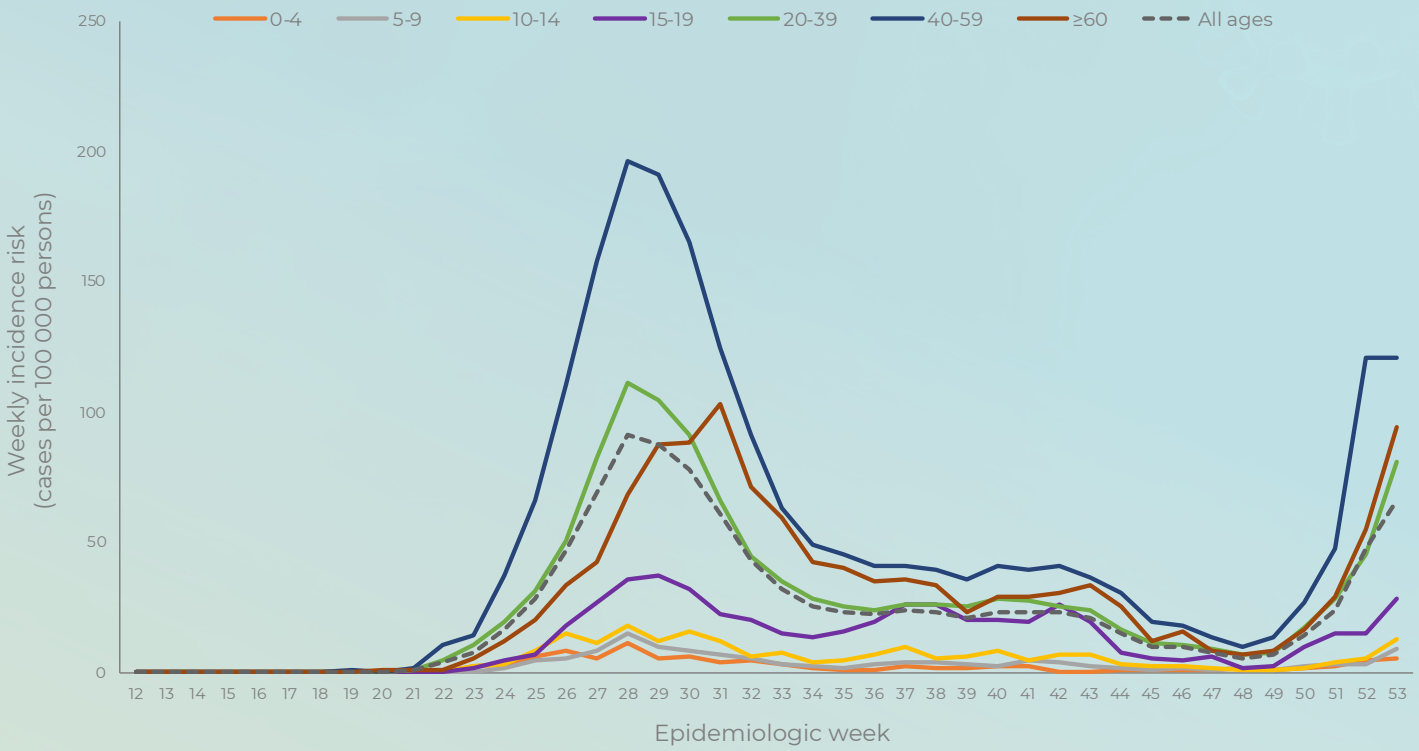


Figure 25. Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, North West Province, 3 March 2020- 2 January 2021 (n= 41 074, 385 missing age)

Northern Cape Province

Of the 25 913 cases reported from the Northern Cape Province, 21 858 (84.3%) had allocation by district. The Frances Baard (8 110/21 858, 37.1%), followed by the Pixley ka Seme (5 725/21 858, 26.2%) district contributed the majority of cases, all other districts contributed below 20% each. In week 53, the Namakwa (186.8 cases per 100 000 persons), followed by Pixley ka Seme (105.7 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, with the Namakwa District showing a sharp increase from week 51 to date.

The increase in numbers and incidence risk reported recently from all the districts remained below that reported during the first peak, except the Namakwa District which in week 53 reported a weekly incidence risk higher than that reported during the first peak (186.8 vs 62.3 cases per 100 000 persons) (Figure 26).

The majority of cases from Northern Cape Province were in the 20-39-year-age group (10 170/25 680, 39.6%), followed by 40-59-year-age group (8 827/25 680, 34.4%). In the past week, all age groups reported an increase in weekly incidence risk, except 0-4-year age group which reported a decrease in weekly incidence, compared to the previous week (Figure 27).

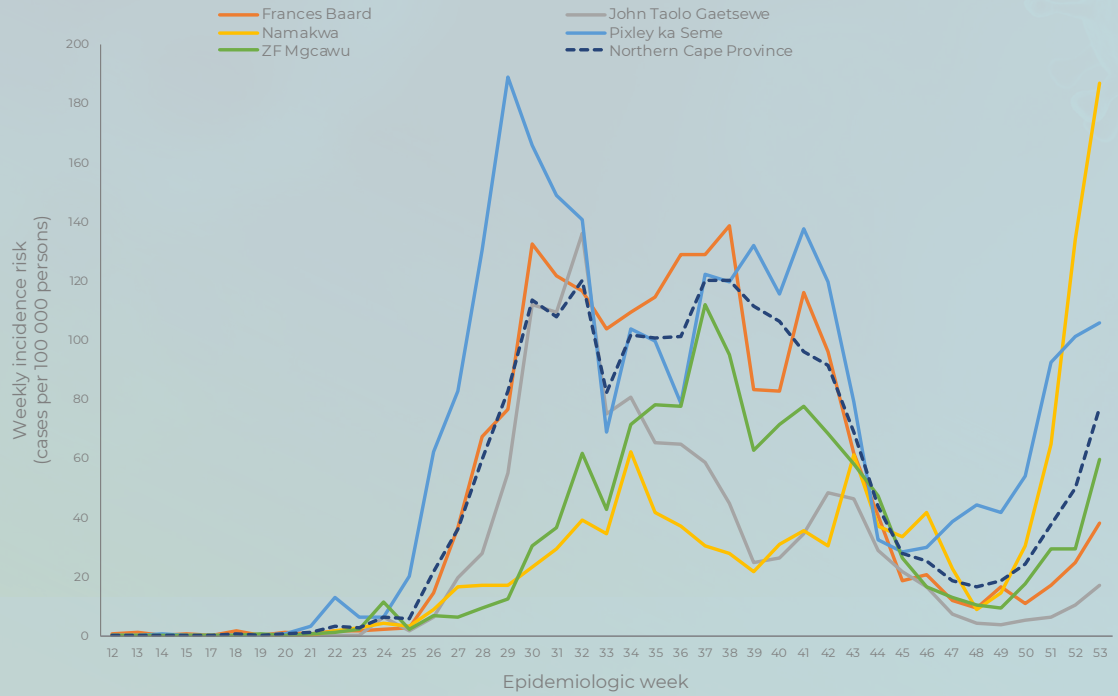


Figure 26. Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, Northern Cape Province, 3 March 2020- 2 January 2021 (n= 21 858, 4 055 missing district)

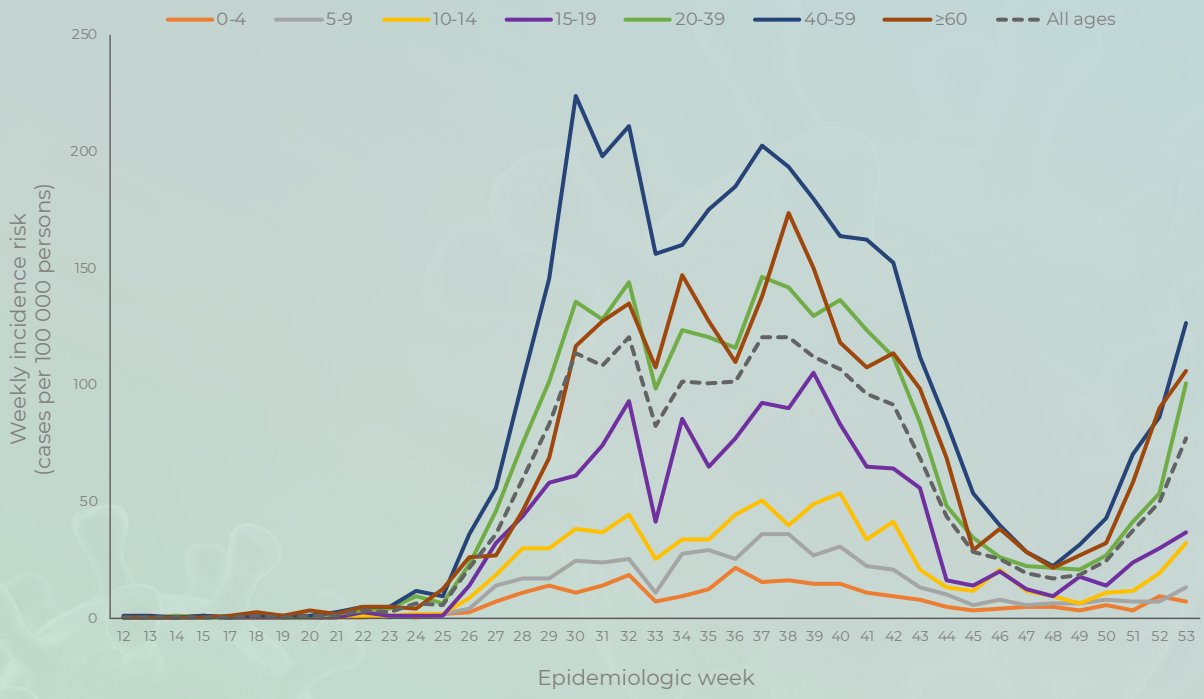


Figure 27. Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, Northern Cape Province, 3 March 2020- 2 January 2021 (n= 25 680, 233 missing age)

Limitations

This report is based on laboratory-based surveillance of laboratory-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 CFR 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, 1 100 748 cases, including 29 577 deaths have been reported. In the past three weeks increases in number of cases have been noted from all provinces except the Eastern Cape Province (where numbers appear to be going down) and the Western Cape Province (where trends may be related to delays in reporting). 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 people outdoors or in well-ventilated spaces, consistent and correct use of masks, proper hand hygiene and physical distancing.