

# COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

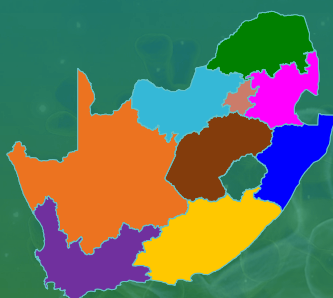


NATIONAL INSTITUTE FOR  
COMMUNICABLE DISEASES

Division of the National Health Laboratory Service

SOUTH AFRICA WEEK 42 2021

## CUMULATIVE DATA FROM



CASES

2 919 632  
IN TOTAL

2 602  
THIS WEEK\*\*

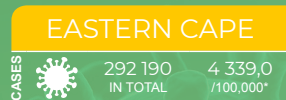


PERSONS

4 896,9  
INCIDENCE RISK\*

39  
MEDIAN AGE

## 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, caused by the SARS-CoV-2 virus, in South Africa. This report is based on data collected up to 23 October 2021 (week 42 of 2021). Note: 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 and numbers are updated weekly as new data become available. The methods and data sources can be found at the end of the report. As of week 36 of 2021, the format of this report has been simplified, more detailed reports will be produced at regular interval.

### Highlights

- As of 23 October 2021, a total of 2 919 632 laboratory-confirmed COVID-19 cases had been detected in South Africa. Of these, 3 039 were cases reported since the last report (week 41 of 2021). There was a 38.3% decrease in the number of new cases detected in week 42 of 2021 (2 602) compared to the number of new cases detected in week 41 of 2021 (4 219).
- An additional 293 deaths were reported since the last report. The overall case-fatality ratio is 3.2% (93 923/2 919 632). The number of deaths reported in the past week was higher than the number reported in the previous week, likely due to batch reporting of historical deaths, 293 deaths compared to 236 deaths.
- In the past week, the KwaZulu-Natal Province reported the highest number of cases detected (546/2 602, 21.0%), followed by the Western Cape Province (494/2 602, 19.0%), and the Gauteng Province (404/2 602, 15.5%), and other provinces reported below 15% of all reported cases each.
- From week 34 of 2021 to date, all provinces have been reporting a week on week decline in incidence. In the past week, compared to the previous week the decrease ranged from 0.1 cases per 100 000 persons (14.5% decrease) in the Limpopo Province to 11.5 cases per 100 000 persons (37.4% decrease) in the Northern Cape Province. Some of the reductions in weekly incidence risk maybe due to delayed reporting or decrease in testing.
- In the past week, the Northern Cape Province reported the highest weekly incidence risk (19.3 cases per 100 000 persons), followed by the Free State Province (10.4 cases per 100 000 persons), and other provinces reported below 10 cases per 100 000 persons.
- The highest weekly incidence risk among cases detected in week 42 of 2021 was reported in the ≥80-year age group (9.9 cases per 100 000 persons), followed by 70-74-year (7.9 cases per 100 000 persons), and the lowest weekly incidence risk was in the 5-9-year age group (1.4 cases per 100 000 persons).

INCIDENCE  
RISK FOR  
CURRENT WEEK

4,4

CASES PER  
100 000  
PERSONS

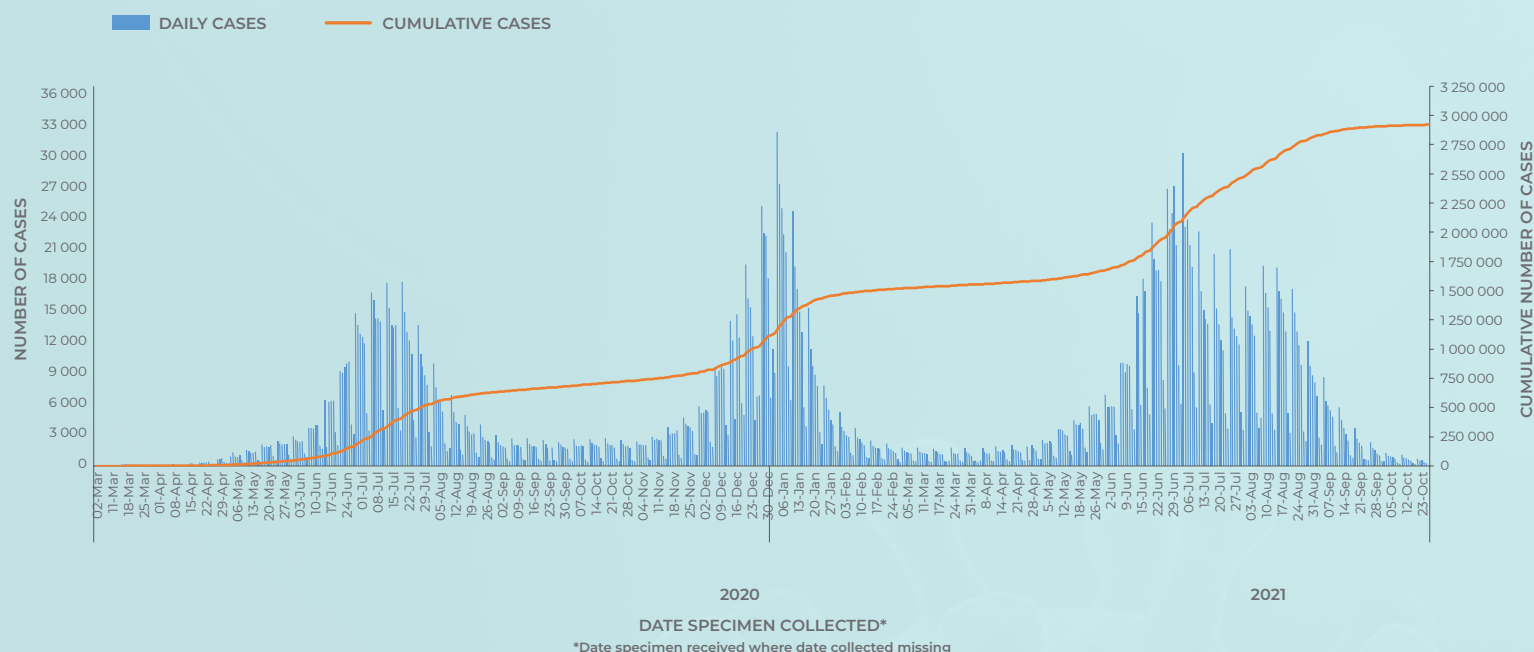
21,0%

OF CASES  
REPORTED IN  
KWAZULU-NATAL IN  
CURRENT WEEK

IN CURRENT  
WEEK, THE  
HIGHEST  
WEEKLY  
INCIDENCE  
RISK WAS IN  
CASES AGED  
80+ YEARS (9,9  
CASES PER 100  
000 PERSONS)

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**Figure 1.** Number and cumulative number of laboratory-confirmed cases of COVID-19 by date of specimen collection, South Africa, 3 March 2020 –23 October 2021 (n=2 919 632)

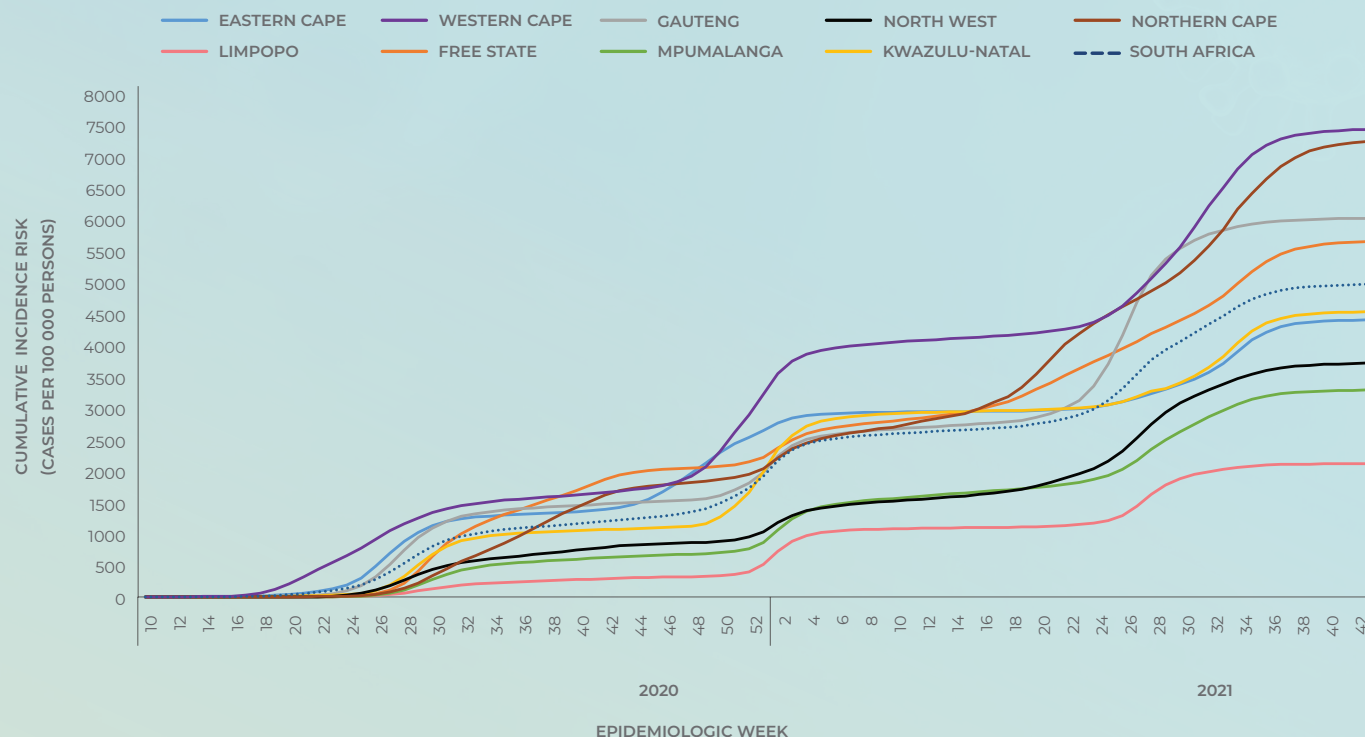
**Table 1.** Number and cumulative/weekly incidence risk of laboratory-confirmed cases of COVID-19 and testing per 100 000 persons by province, South Africa, 3 March 2020 –23 October 2021 (n=2 919 632)

Province	Cumulative cases (n) (percentage, n/total cases in South Africa)	New cases <sup>1</sup> detected in week 42 (17-23 Oct 2021), n (percentage <sup>2</sup> , n/total)	Population in mid-2020 <sup>3</sup> , n	Cumulative incidence risk (cases per 100 000 persons)	Incidence risk of new cases detected in week 42 of 2021 (cases/100 000 persons)	Tests <sup>4</sup> per 100 000 persons, 17-23 Oct 2021
Eastern Cape	292 190 (10.0)	193 (7.4)	6 734 001	4 339.0	2.9	192.1
Free State	163 197 (5.6)	305 (11.7)	2 928 903	5 571.9	10.4	320.4
Gauteng	918 952 (31.5)	404 (15.5)	15 488 137	5 933.3	2.6	399.4
KwaZulu-Natal	515 233 (17.6)	546 (21.0)	11 531 628	4 468.0	4.7	295.7
Limpopo	122 190 (4.2)	47 (1.8)	5 852 553	2 087.8	0.8	63.8
Mpumalanga	151 803 (5.2)	157 (6.0)	4 679 786	3 243.8	3.4	180.7
North West	150 502 (5.2)	207 (8.0)	4 108 816	3 662.9	5.0	235.0
Northern Cape	92 272 (3.2)	249 (9.6)	1 292 786	7 137.5	19.3	368.0
Western Cape	513 293 (17.6)	494 (19.0)	7 005 741	7 326.7	7.1	403.2
Unknown						
<b>Total</b>	<b>2 919 632</b>	<b>2 602</b>	<b>59 622 350</b>	<b>4 896.9</b>	<b>4.4</b>	<b>290.5</b>

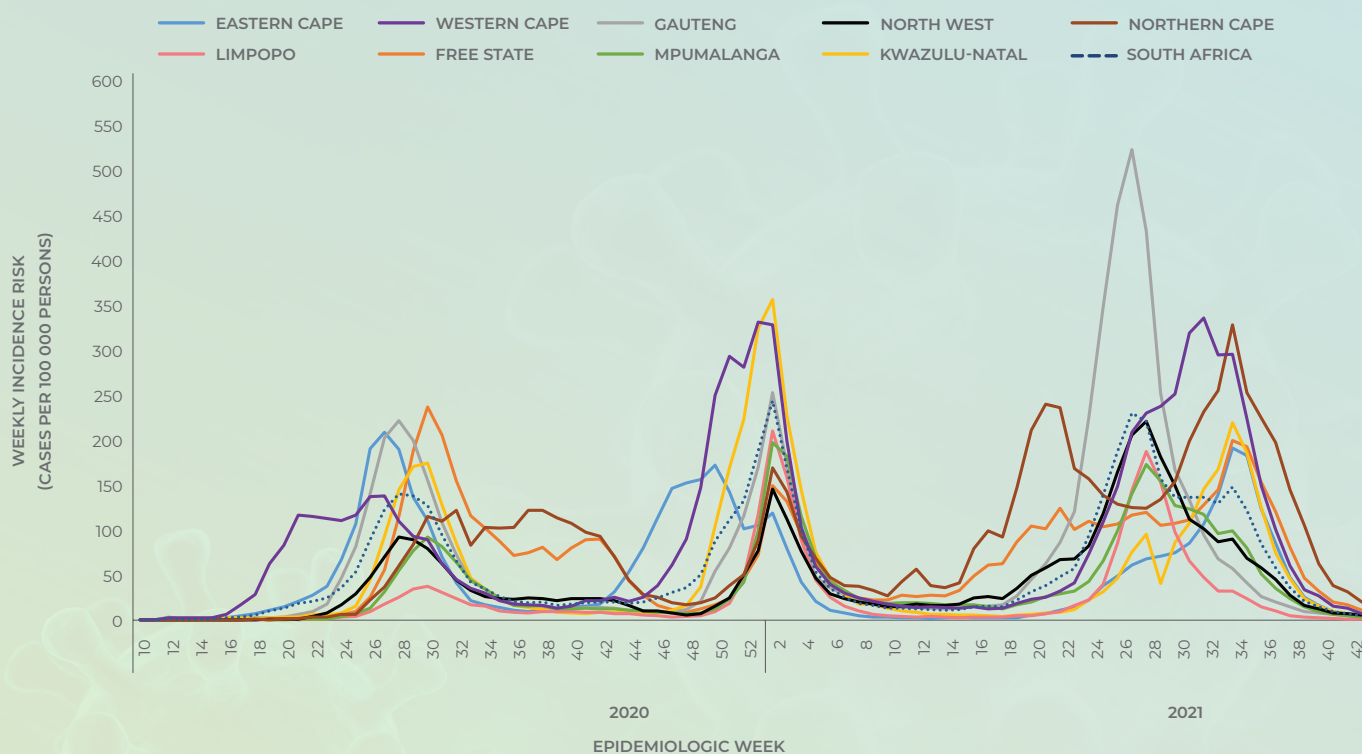
<sup>1</sup>New cases refer to cases whose samples were collected or received in the current reporting week; <sup>2</sup>Percentage=n/total number of new cases (specimen collected or received in current reporting week); <sup>3</sup>2020 Mid-year population Statistics South Africa <sup>4</sup>Data on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

# COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

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**Figure 2.** Cumulative incidence risk of laboratory-confirmed cases of COVID-19 by province and epidemiologic week, South Africa, 3 March 2020 –23 October 2021 (n=2 919 632)

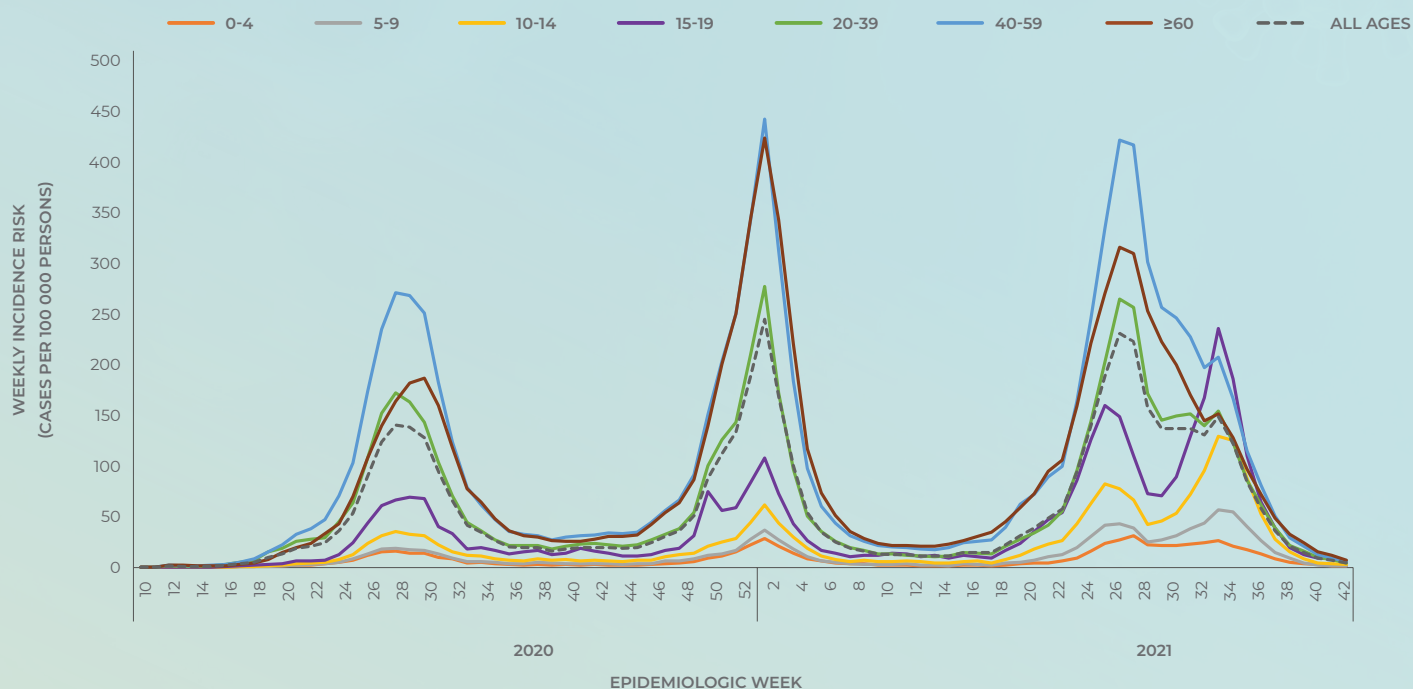


**Figure 3.** Weekly incidence risk of laboratory-confirmed cases of COVID-19 by province and epidemiologic week, South Africa, 3 March 2020 –23 October 2021 (n=2 919 632)

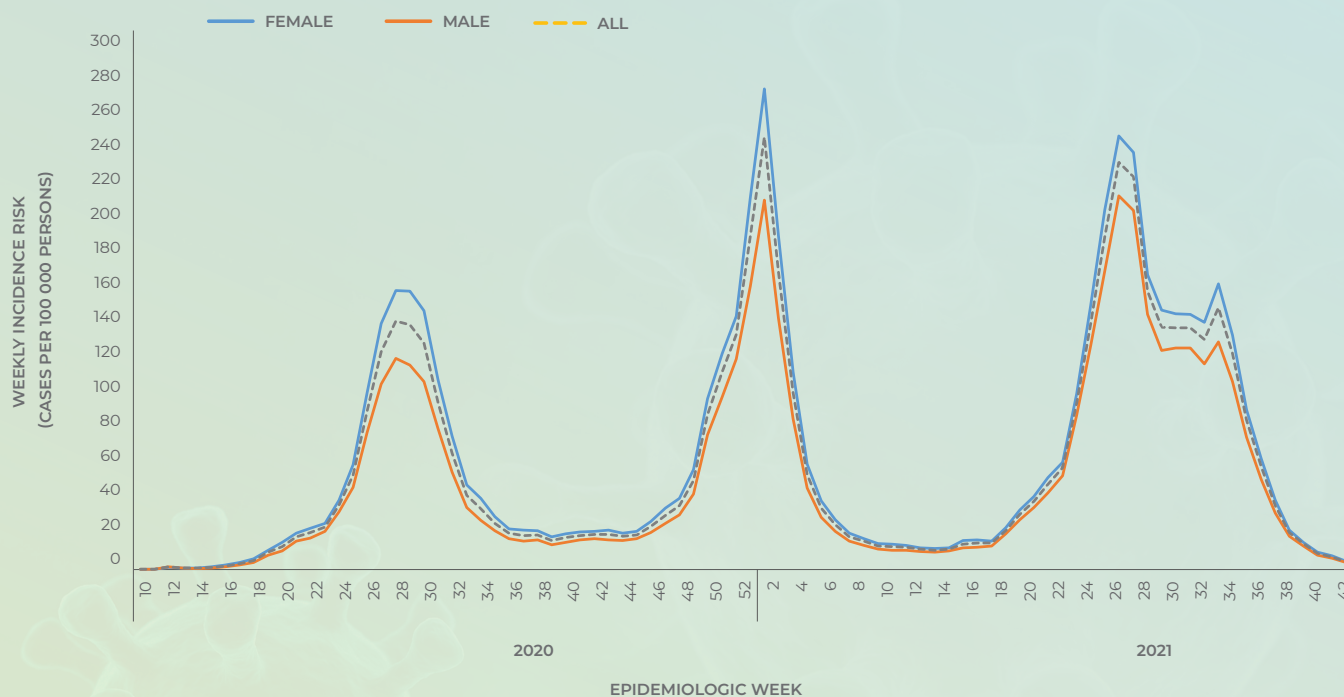
# COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

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



**Figure 4.** Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, South Africa, 3 March 2020 -23 October 2021 (n=2 892 338, 27 294 missing age)



**Figure 5.** Weekly incidence risk of laboratory-confirmed cases of COVID-19 by sex and epidemiologic week, South Africa, 3 March 2020 -23 October 2021 (n=2 887 592, sex missing for 32 040)

# COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

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**Table 2.** Number of laboratory-confirmed cases of COVID-19 and cumulative/weekly incidence risk by age group, South Africa, 3 March 2020 –23 October 2021, n=2 892 338, 27 294 missing age)

Age group (years)	Cumulative cases (n) (percentage, n/ total cases in South Africa)	New cases <sup>1</sup> detected in week 42 (17-23 Oct 2021), n (percentage <sup>2</sup> , n/ total)	Population in mid-2020 <sup>3</sup> , n	Cumulative incidence risk (cases per 100 000 persons)	Incidence risk of new cases detected in week 42 of 2021 (cases/100 000 persons)
0-4	38 437 (1.3)	85 (3.3)	5 743 450	669.2	1.5
5-9	56 835 (2.0)	80 (3.1)	5 715 952	994.3	1.4
10-14	105 378 (3.6)	169 (6.6)	5 591 553	1 884.6	3.0
15-19	161 130 (5.6)	239 (9.3)	4 774 579	3 374.7	5.0
20-24	185 162 (6.4)	186 (7.2)	4 823 367	3 838.9	3.9
25-29	272 517 (9.4)	264 (10.3)	5 420 754	5 027.3	4.9
30-34	319 604 (11.1)	249 (9.7)	5 641 750	5 665.0	4.4
35-39	329 061 (11.4)	232 (9.0)	4 798 293	6 857.9	4.8
40-44	282 646 (9.8)	188 (7.3)	3 733 942	7 569.6	5.0
45-49	273 526 (9.5)	199 (7.8)	3 169 648	8 629.5	6.3
50-54	249 267 (8.6)	171 (6.7)	2 571 263	9 694.3	6.7
55-59	208 395 (7.2)	133 (5.2)	2 211 309	9 424.1	6.0
60-64	143 302 (5.0)	111 (4.3)	1 796 316	7 977.5	6.2
65-69	97 854 (3.4)	84 (3.3)	1 408 665	6 946.6	6.0
70-74	70 588 (2.4)	80 (3.1)	1 007 174	7 008.5	7.9
75-79	45 383 (1.6)	40 (1.6)	637 062	7 123.8	6.3
≥80	53 253 (1.8)	57 (2.2)	577 273	9 224.9	9.9
Unknown	27 294	35			
<b>Total</b>	<b>2 919 632</b>	<b>2 602</b>	<b>59 622 350</b>	<b>4 896.9</b>	<b>4.4</b>

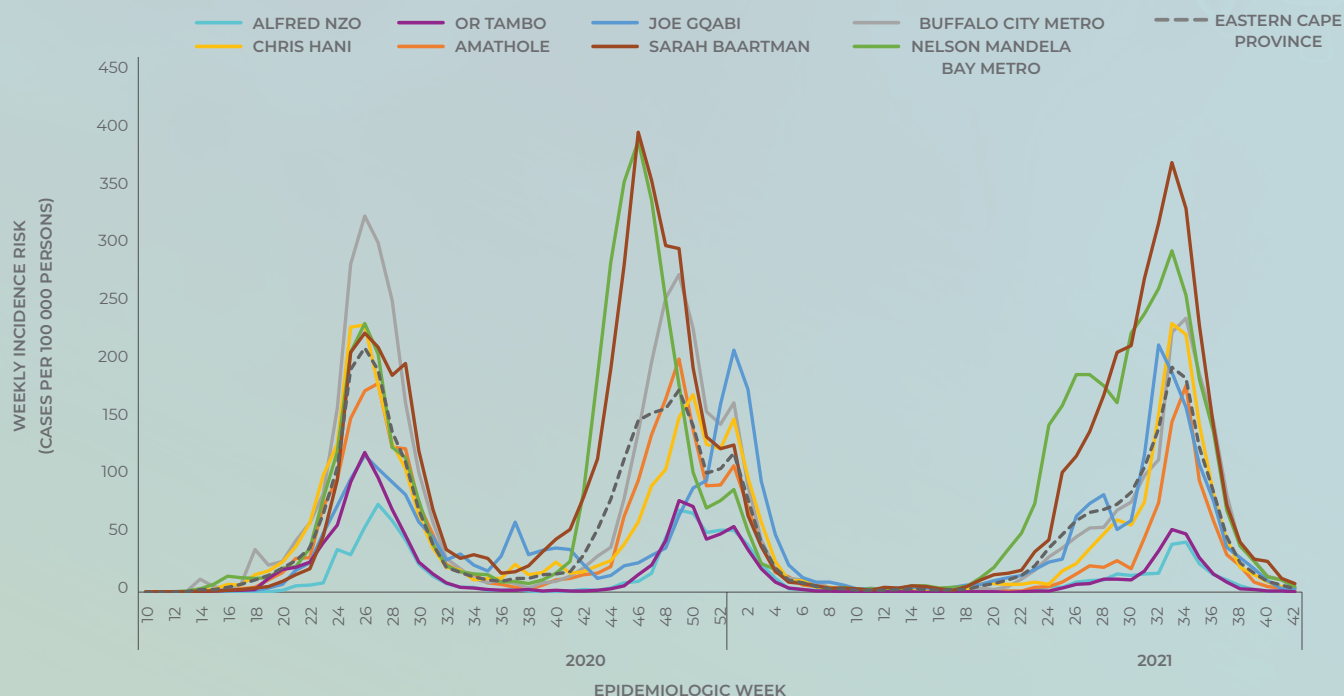
<sup>1</sup>New cases refer to cases whose samples were collected or received in the current reporting week; <sup>2</sup>Percentage=n/total number of new cases (specimen collected or received in current reporting week); <sup>3</sup>2020 Mid-year population Statistics South Africa

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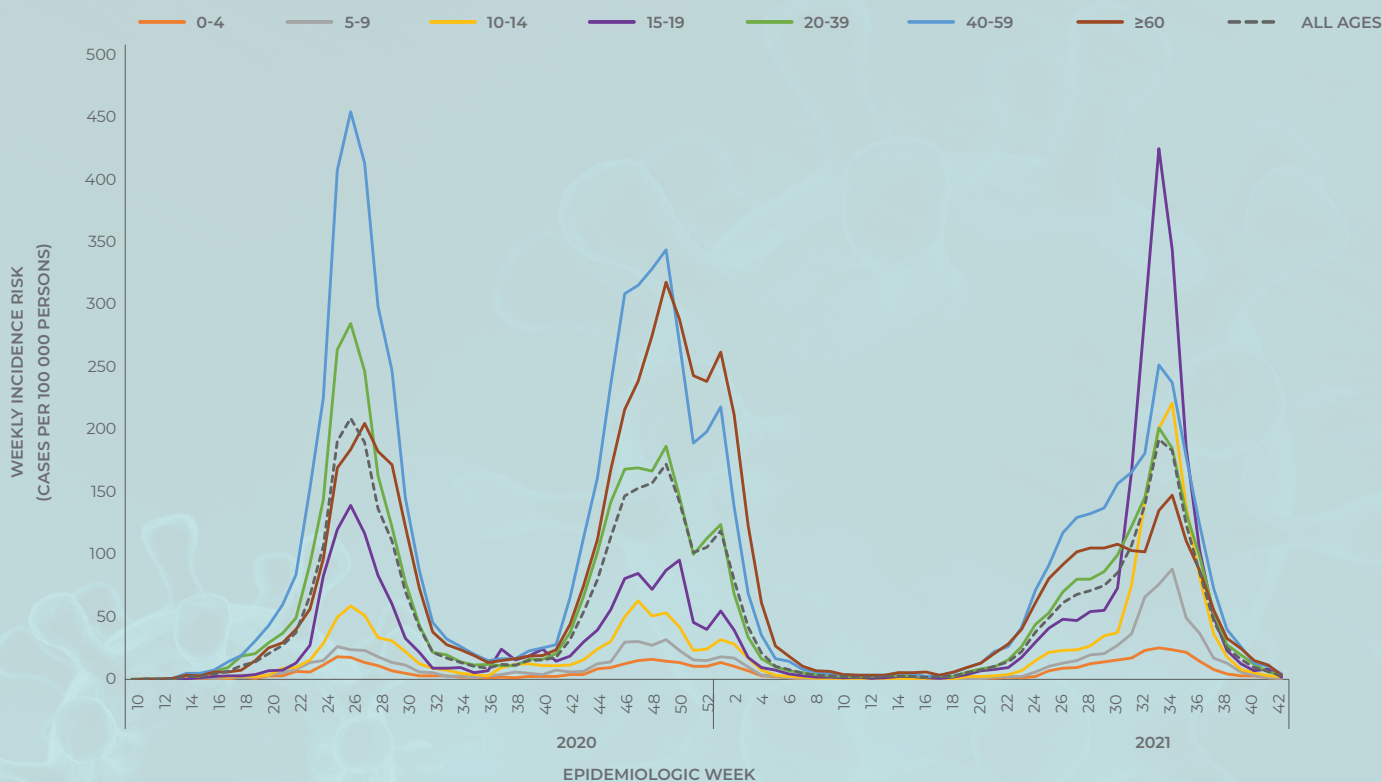
WEEK 42 2021

## Provincial trends of COVID-19 cases

### Eastern Cape Province



**Figure 6.** Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, Eastern Cape Province, 3 March 2020 –23 October 2021 (n=262 535, 29 655 missing district)

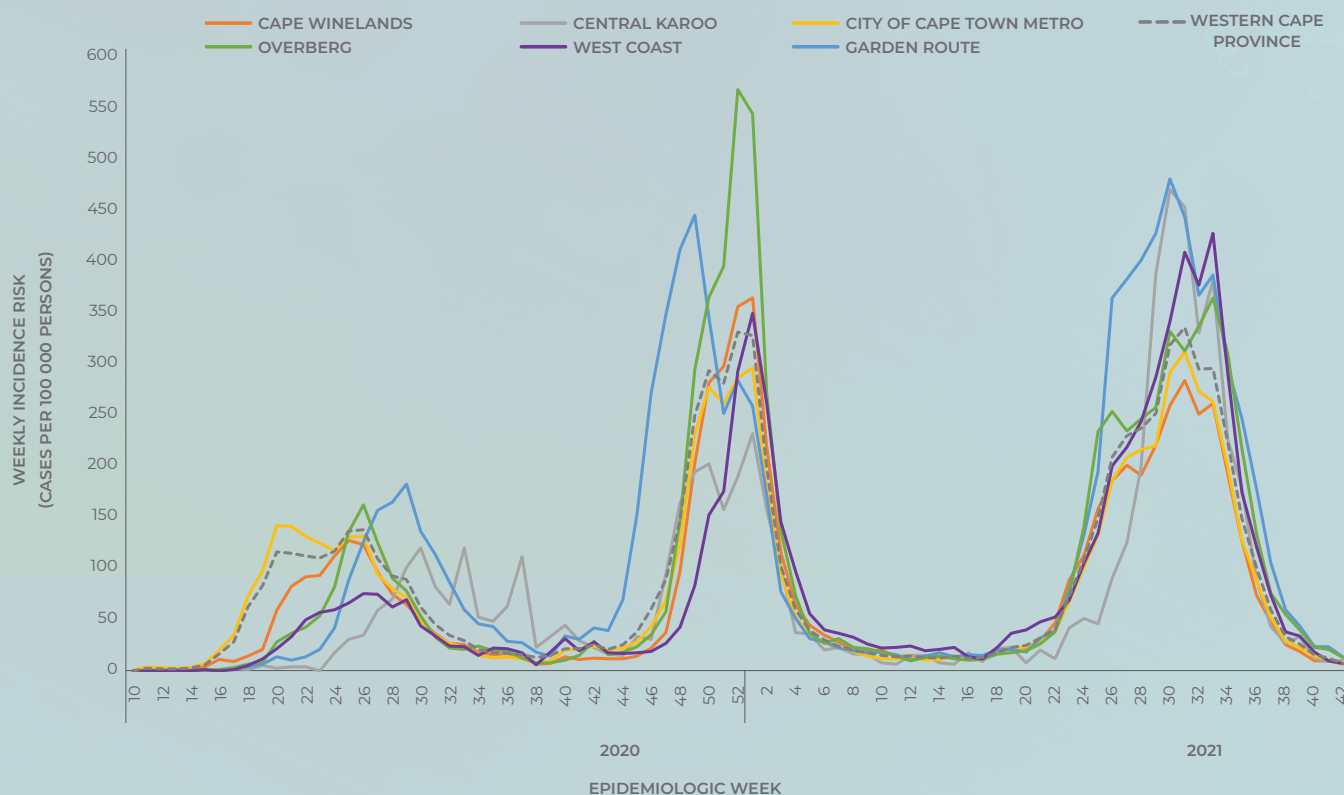


**Figure 7.** Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, Eastern Cape Province, 3 March 2020 –23 October 2021 (n=289 109, 3 081 missing age)

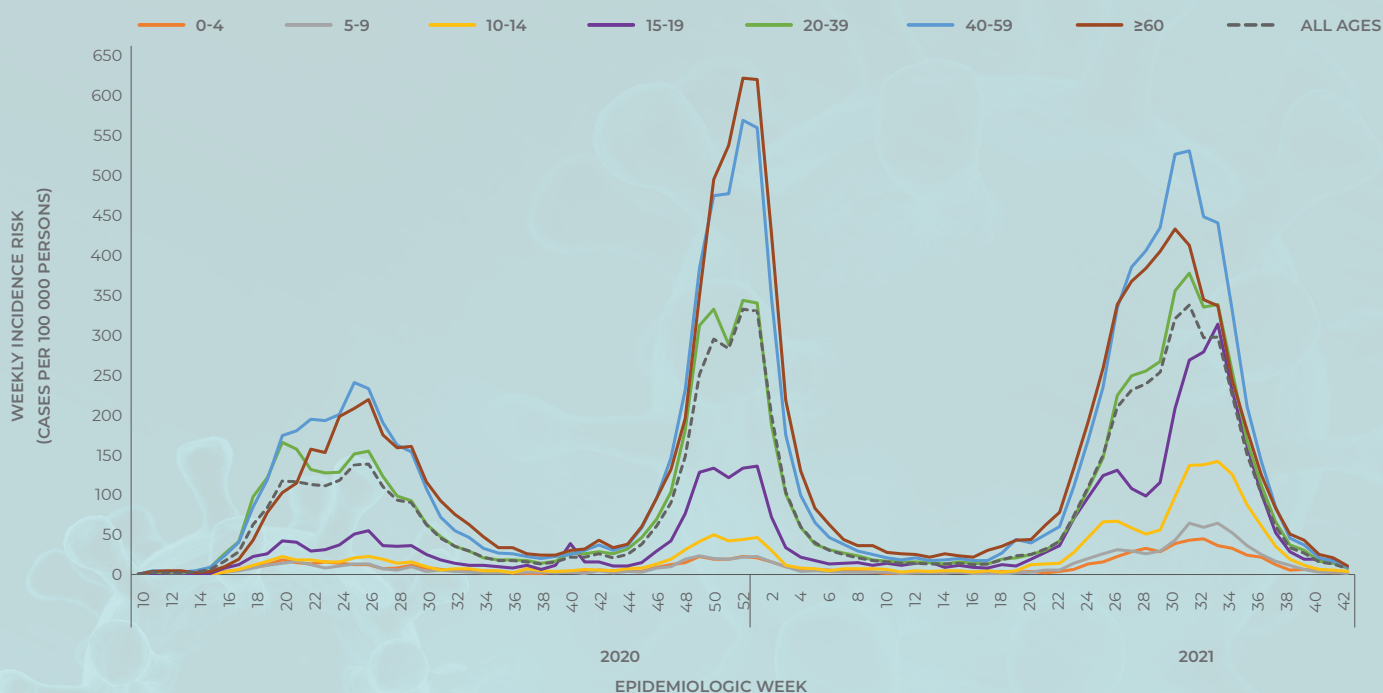
# COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

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## Western Cape Province



**Figure 8.** Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, Western Cape Province, 3 March 2020 –23 October 2021 (n=490 165, 23 128 missing district)

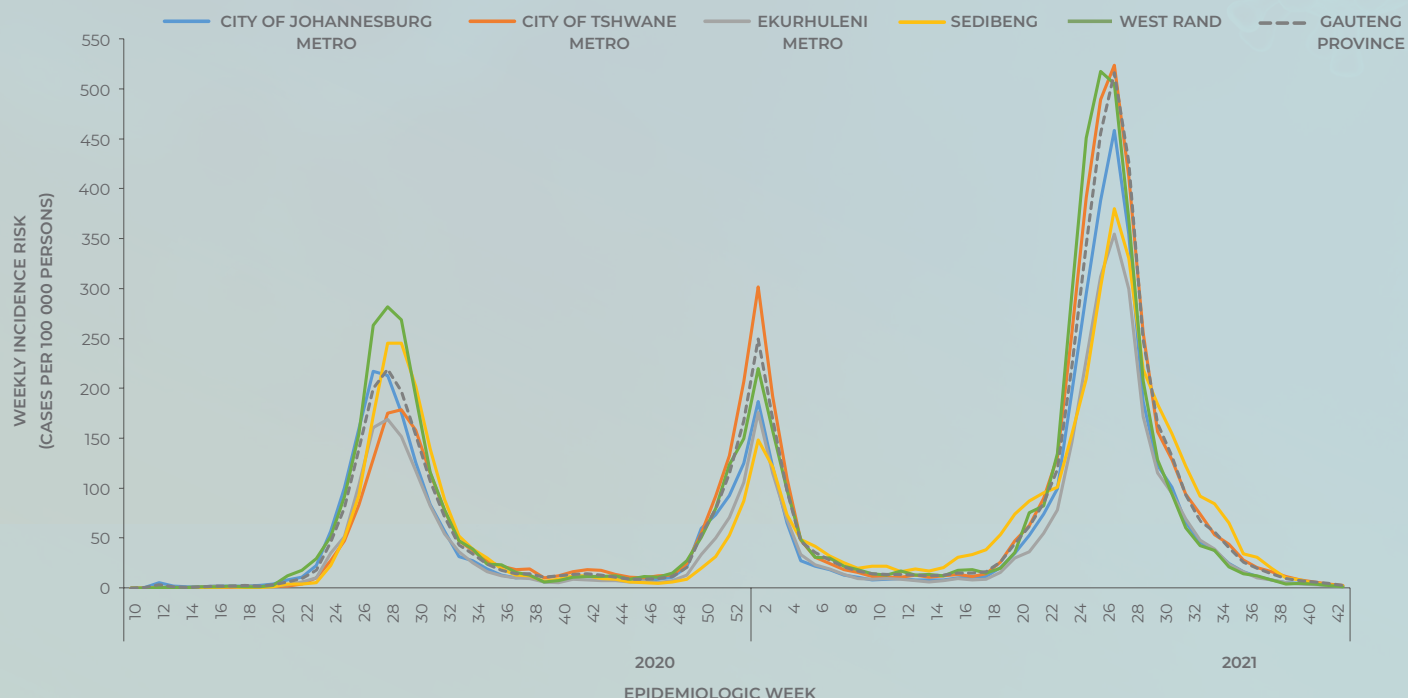


**Figure 9.** Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, Western Cape Province, 3 March 2020 –23 October 2021 (n=511 808, 1 485 missing age)

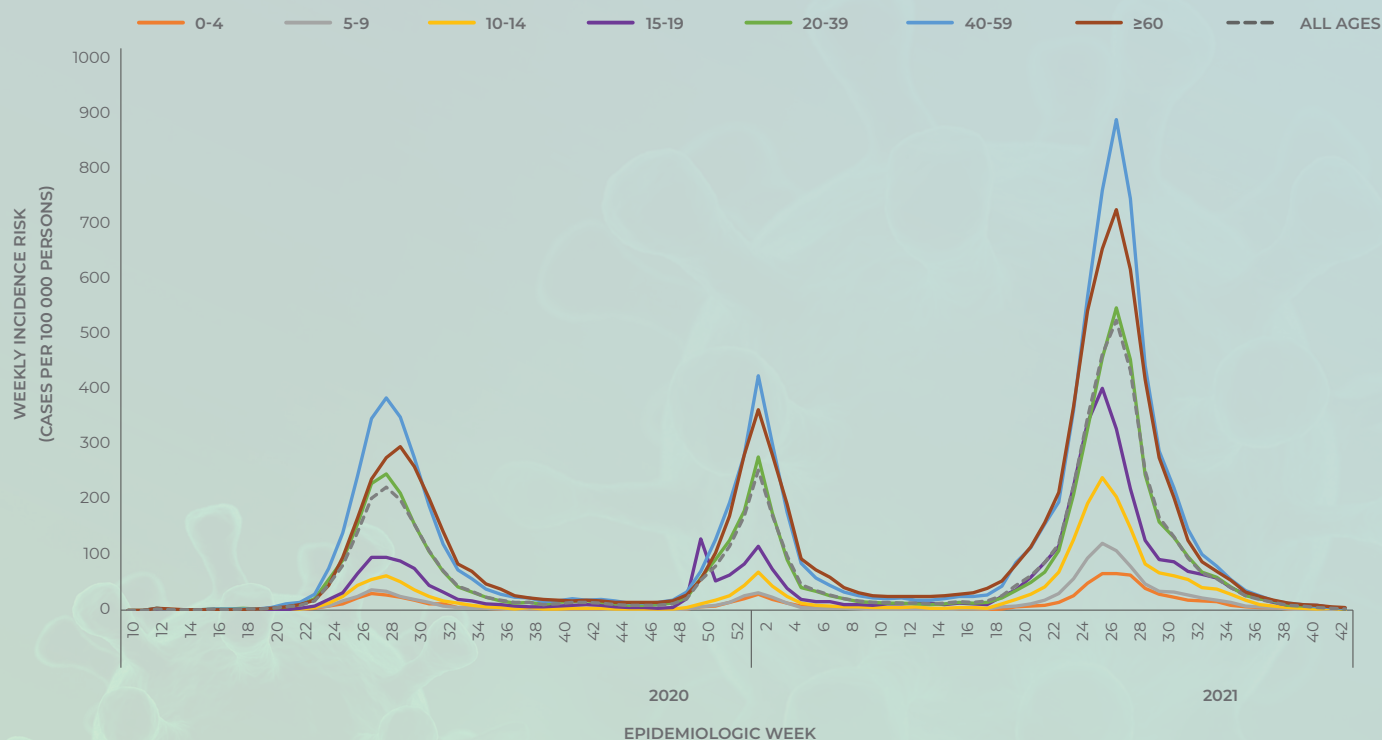
# COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

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## Gauteng Province



**Figure 10.** Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, Gauteng Province, 3 March 2020 –23 October 2021 (n=787 933, 131 019 missing district)

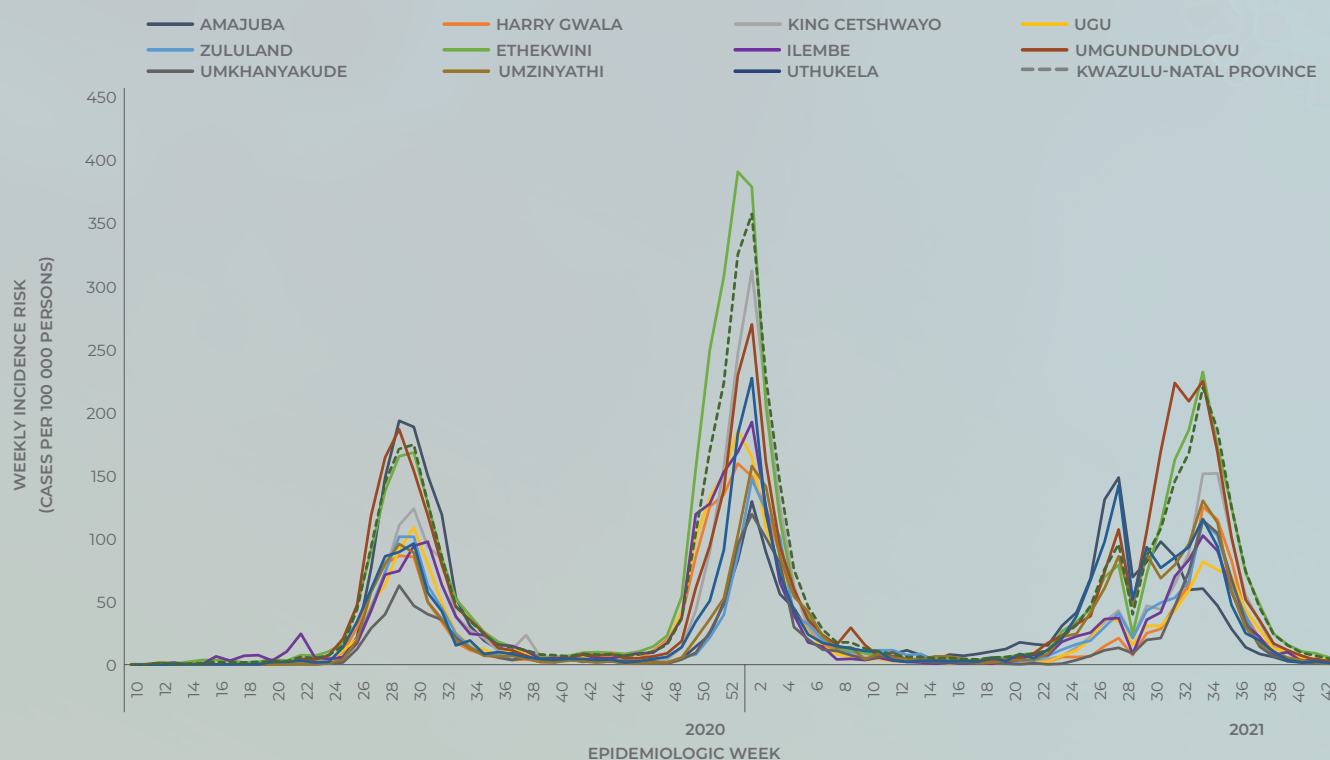


**Figure 11.** Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, Gauteng Province, 3 March 2020 –23 October 2021 (n=909 617, 9 335 missing age)

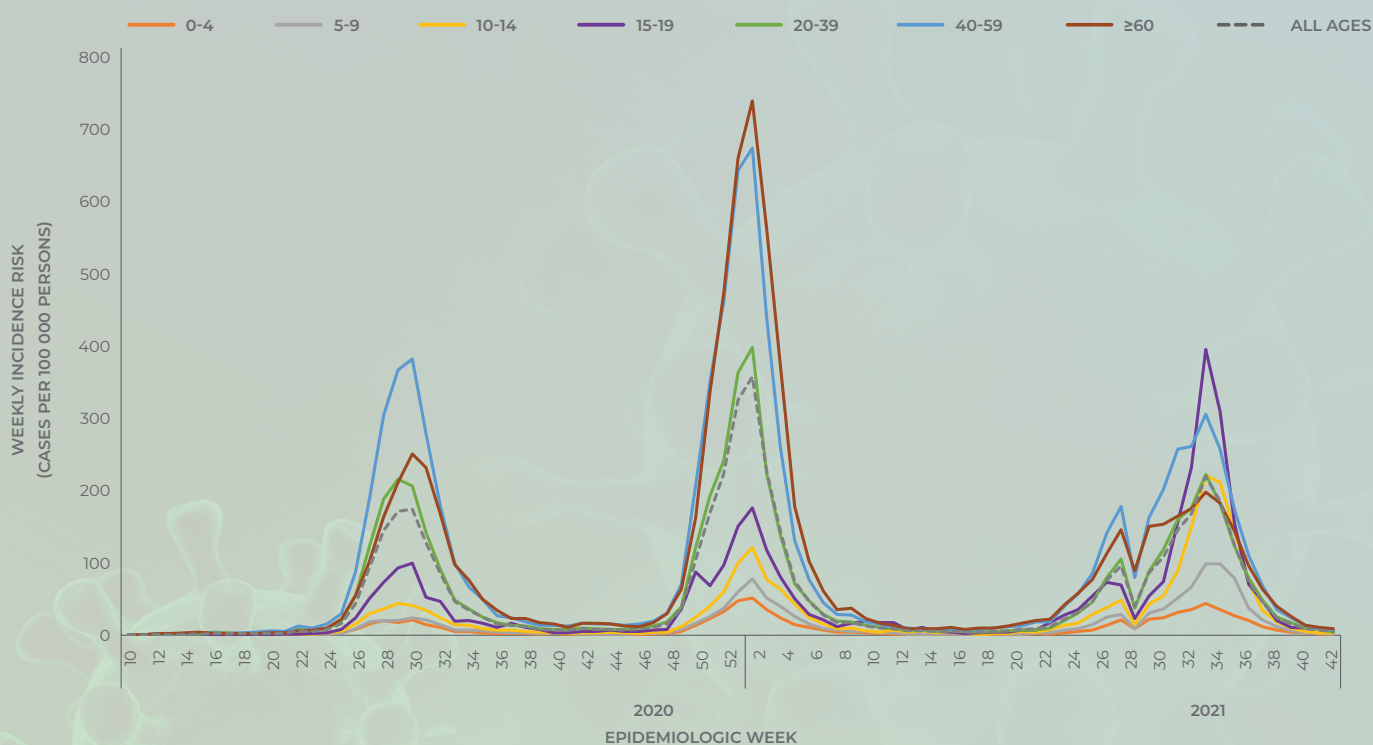
# COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

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## KwaZulu-Natal Province



**Figure 12.** Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, KwaZulu-Natal Province, 3 March 2020 –23 October 2021 (n=384 669, 130 564 missing district)

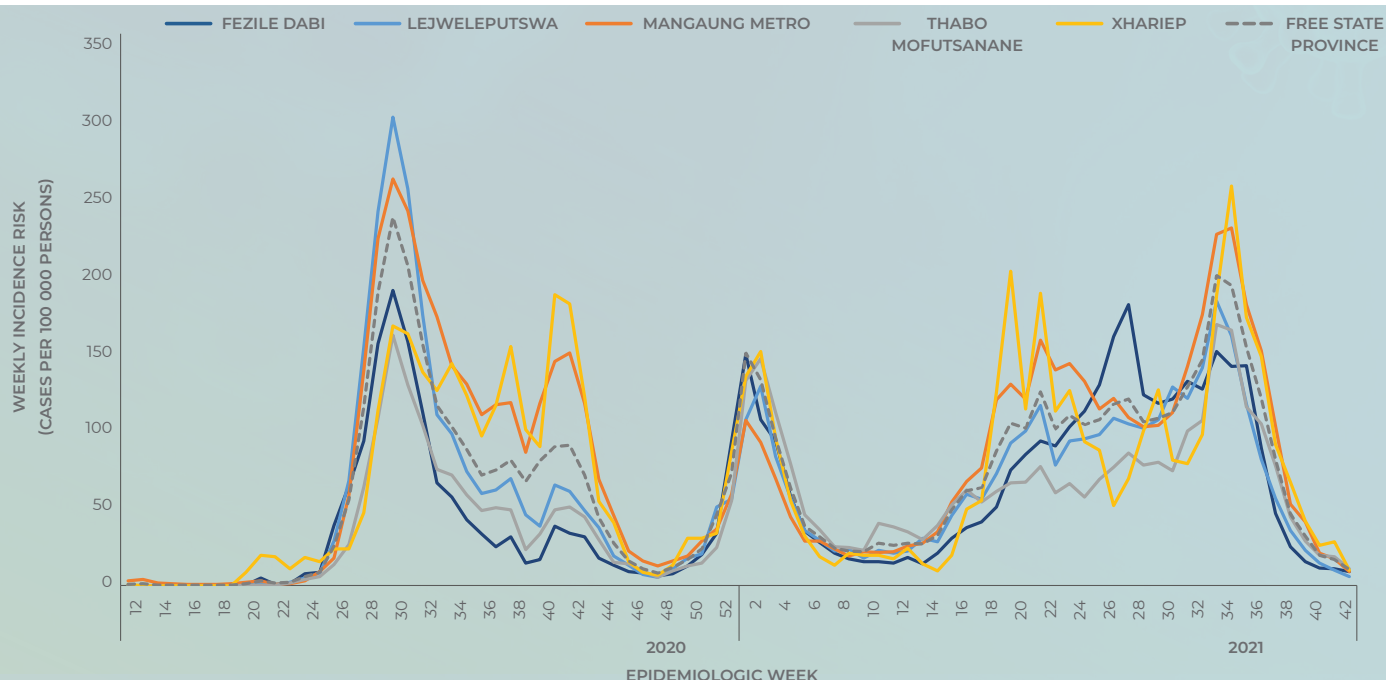


**Figure 13.** Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, KwaZulu-Natal Province, 3 March 2020 –23 October 2021 (n=508 898, 6 335 missing age)

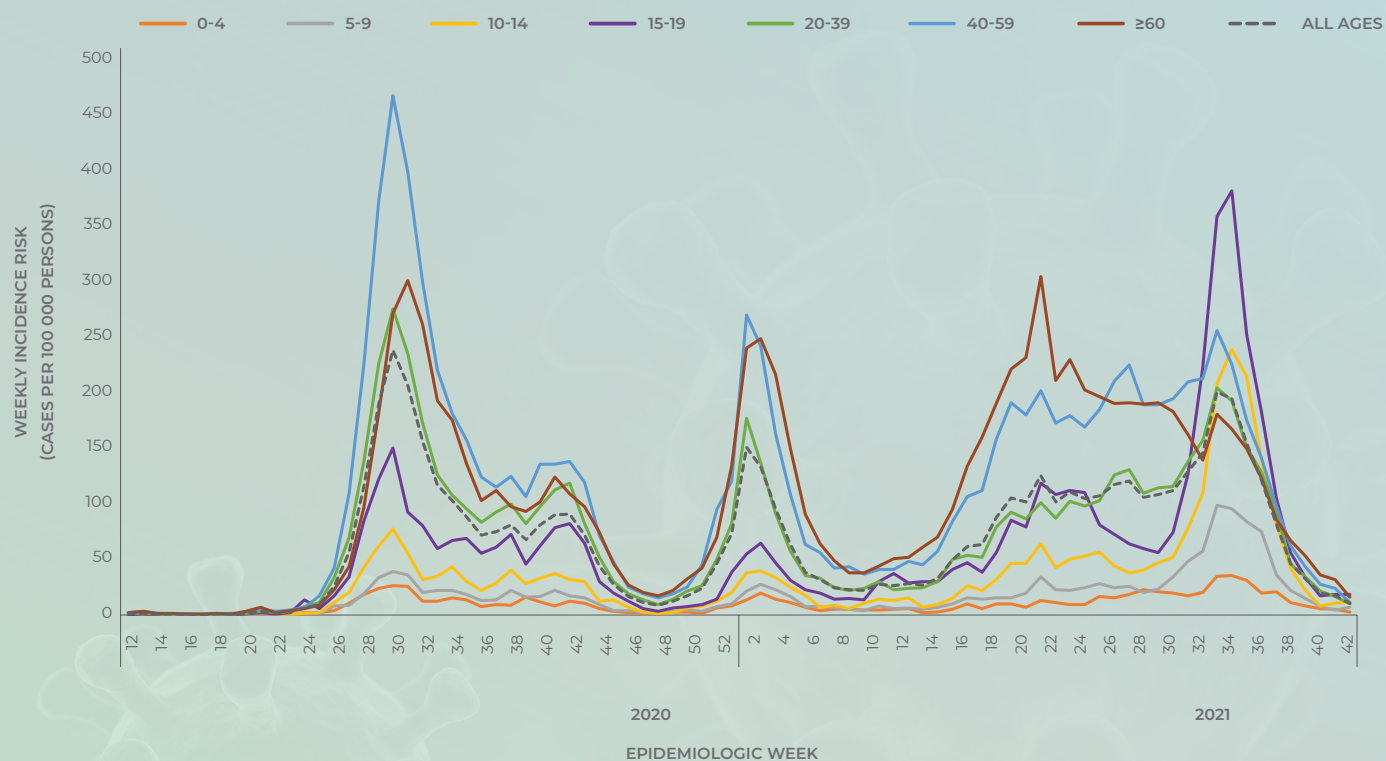
# COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

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## Free State Province



**Figure 14.** Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, Free State Province, 3 March 2020–23 October 2021 (n=152 266, 10 931 missing district)

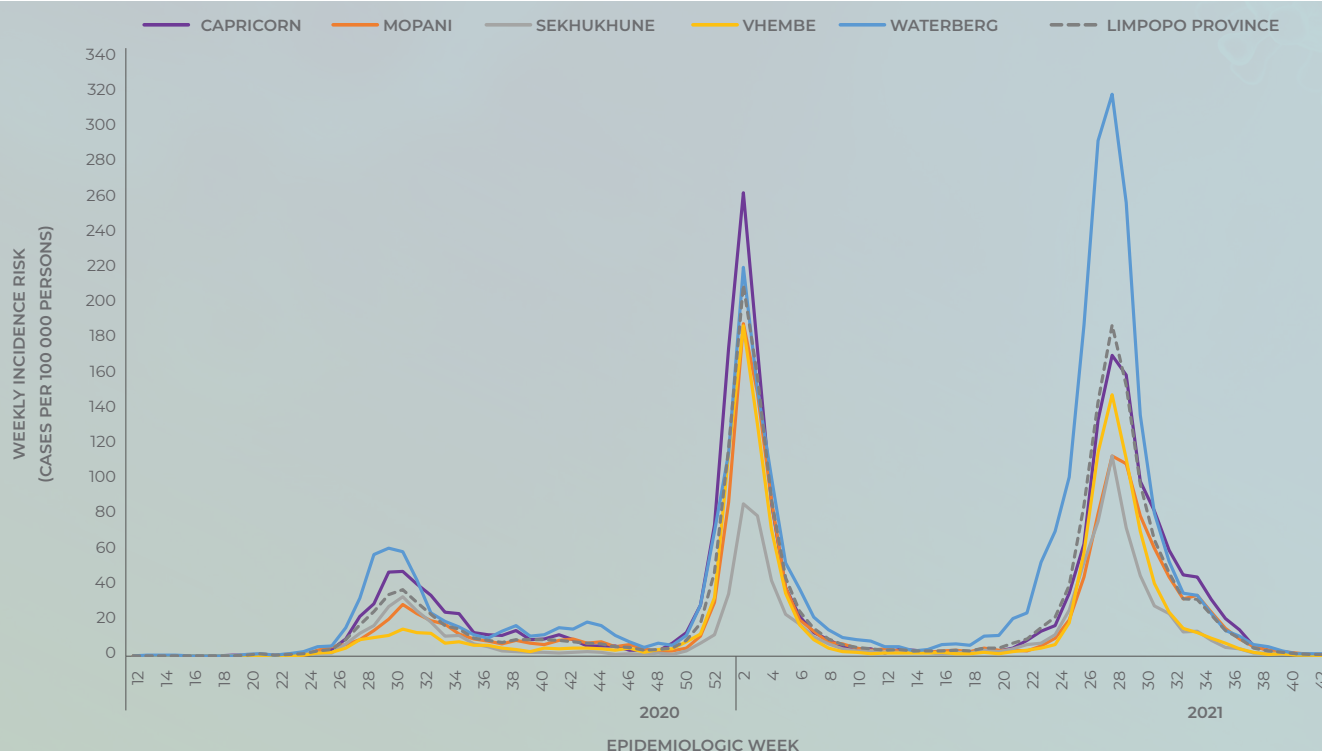


**Figure 15.** Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, Free State Province, 3 March 2020–23 October 2021 (n=162 544, 653 missing age)

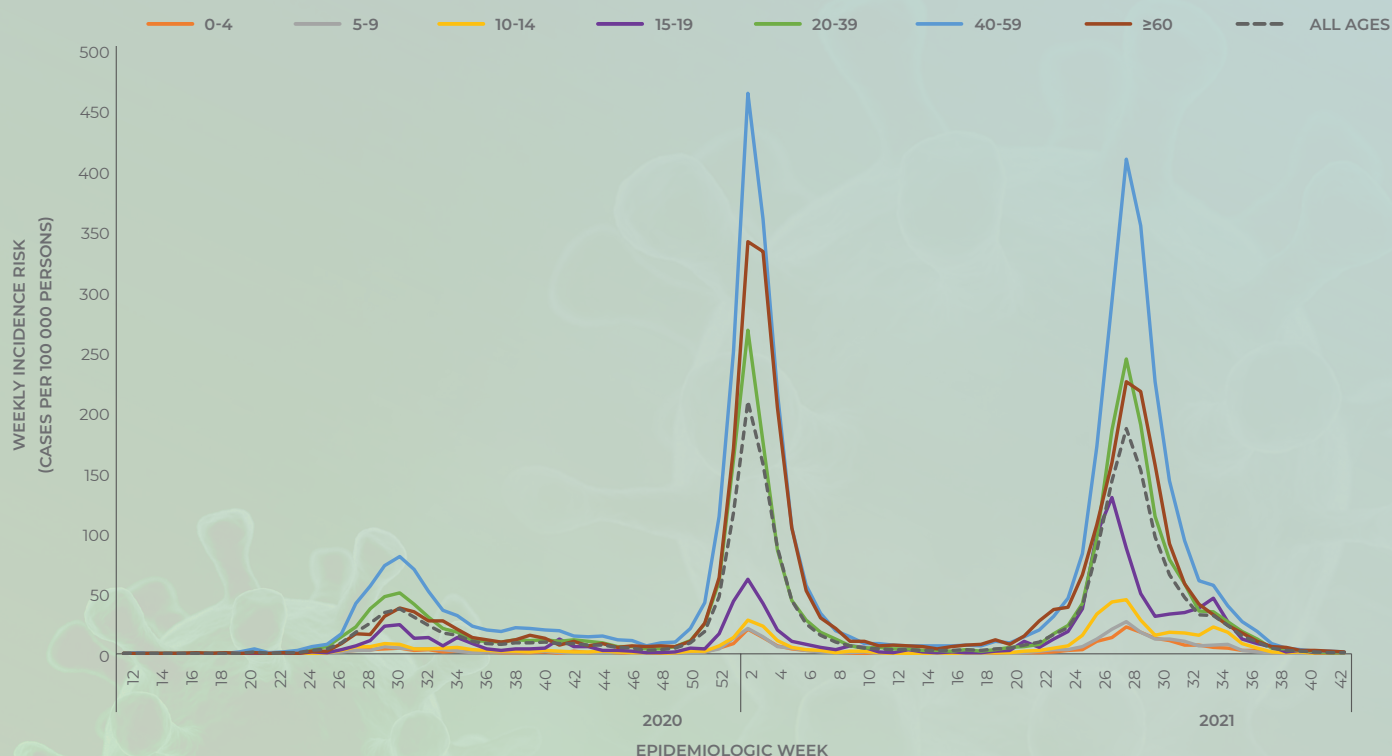
# COVID-19 WEEKLY EPIDEMIOLOGY BRIEF

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## Limpopo Province



**Figure 16.** Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, Limpopo Province, 3 March 2020 –23 October 2021 (n=106 404, 15 786 missing district)

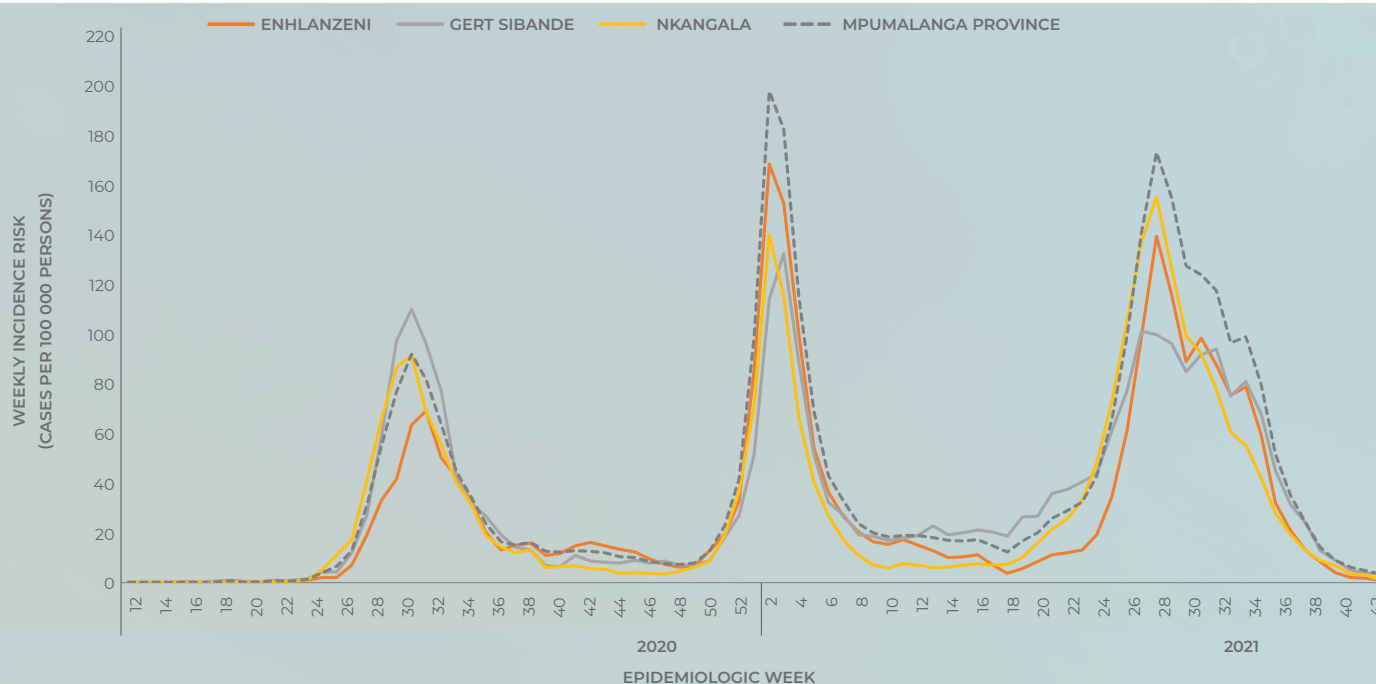


**Figure 17.** Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, Limpopo Province, 3 March 2020 –23 October 2021 (n=121 511, 679 missing age)

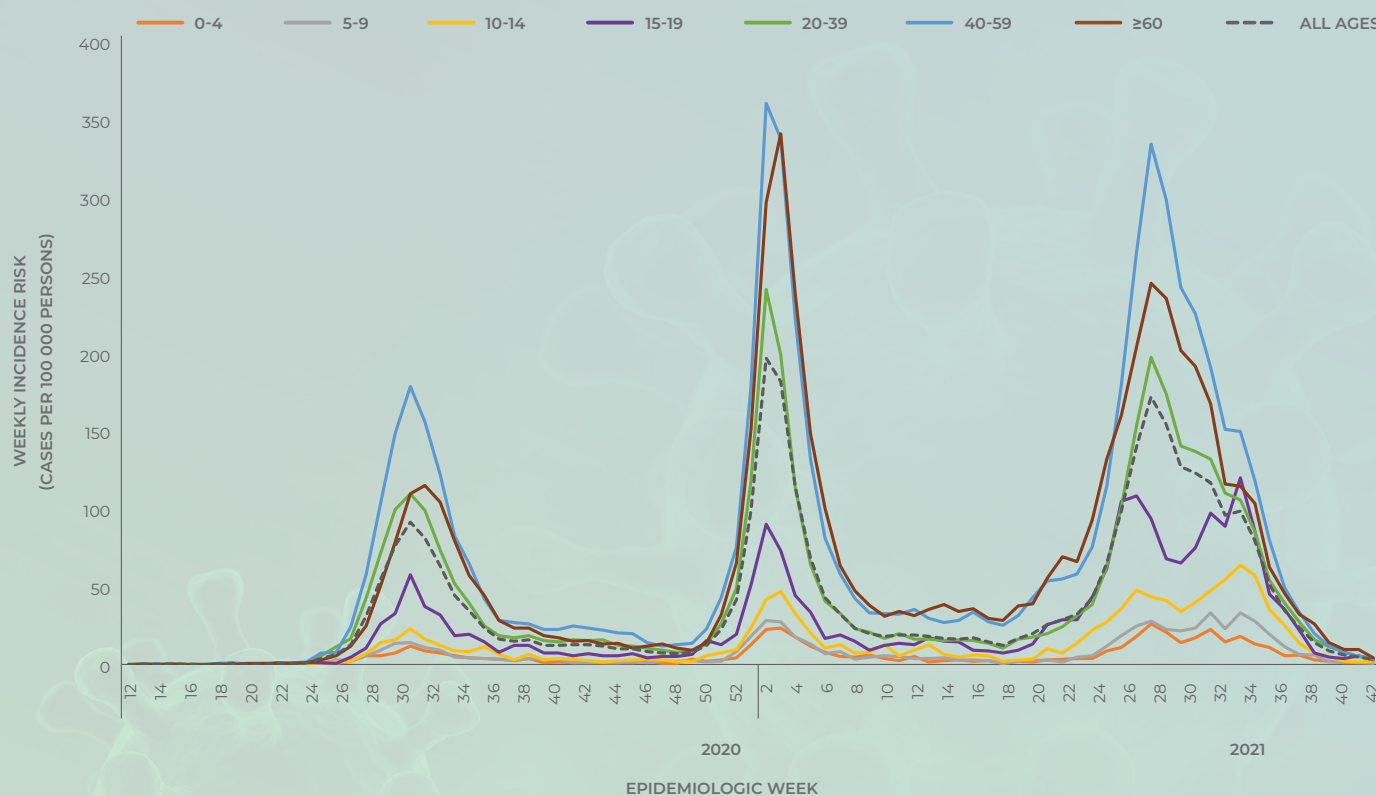
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## Mpumalanga Province



**Figure 18.** Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, Mpumalanga Province, 3 March 2020 -23 October 2021 (n=118 026, 33 777 missing district)

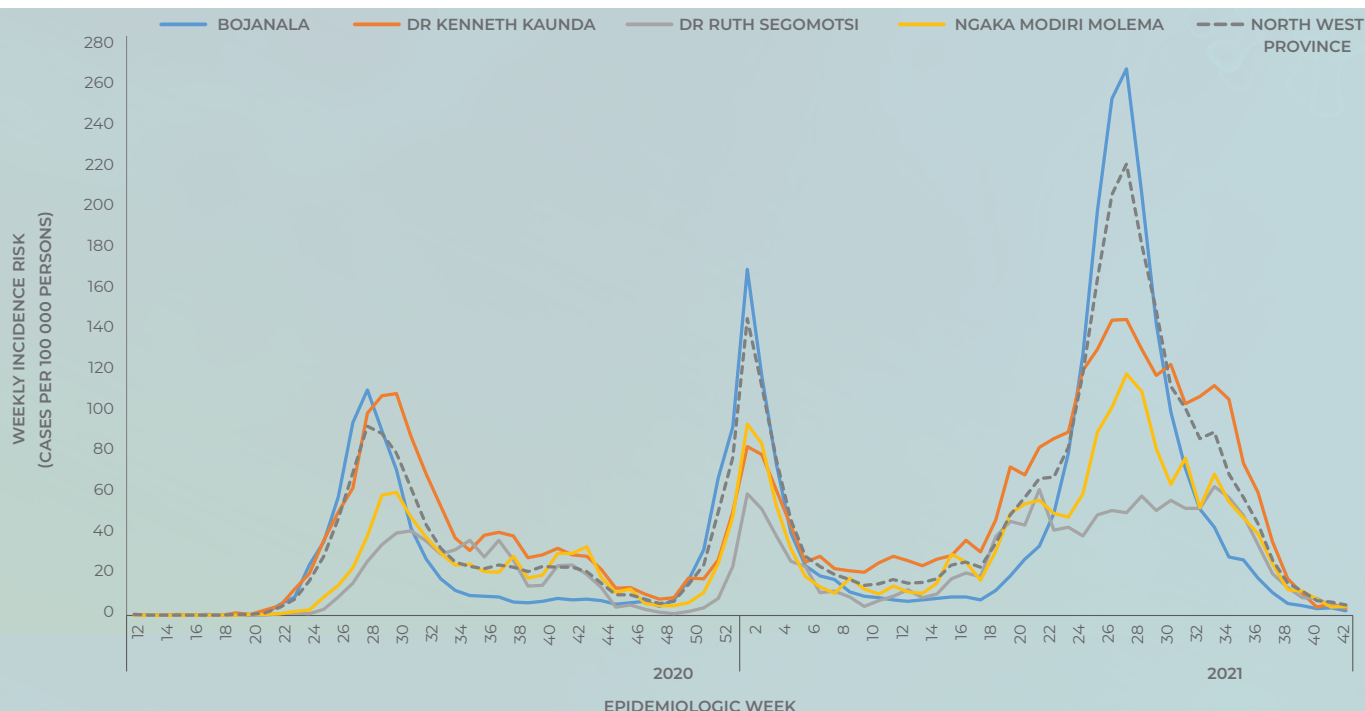


**Figure 19.** Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group and epidemiologic week, Mpumalanga Province, 3 March 2020-23 October 2021 (n=148 664, 3 139 missing age)

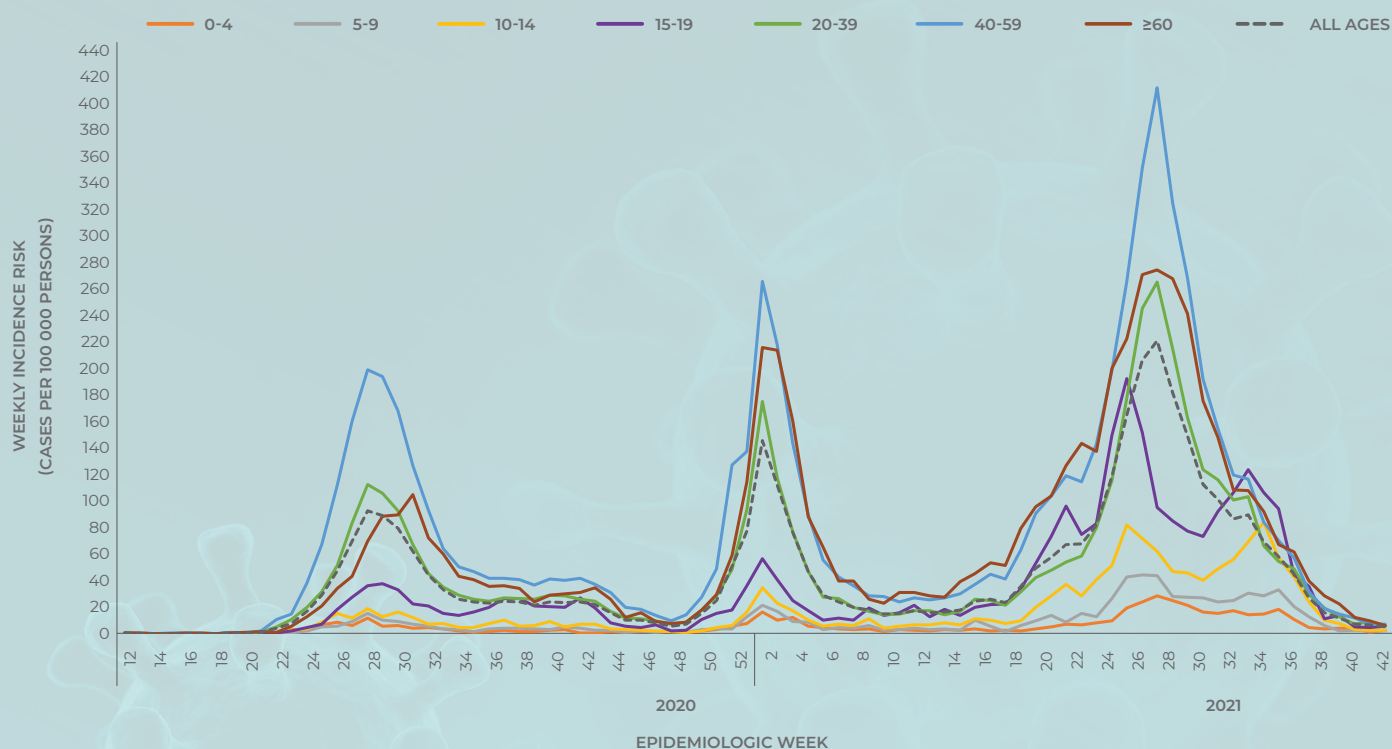
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## North West Province



**Figure 20.** Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, North West Province, 3 March 2020 –23 October 2021 (n=123 792, 26 710 missing district)

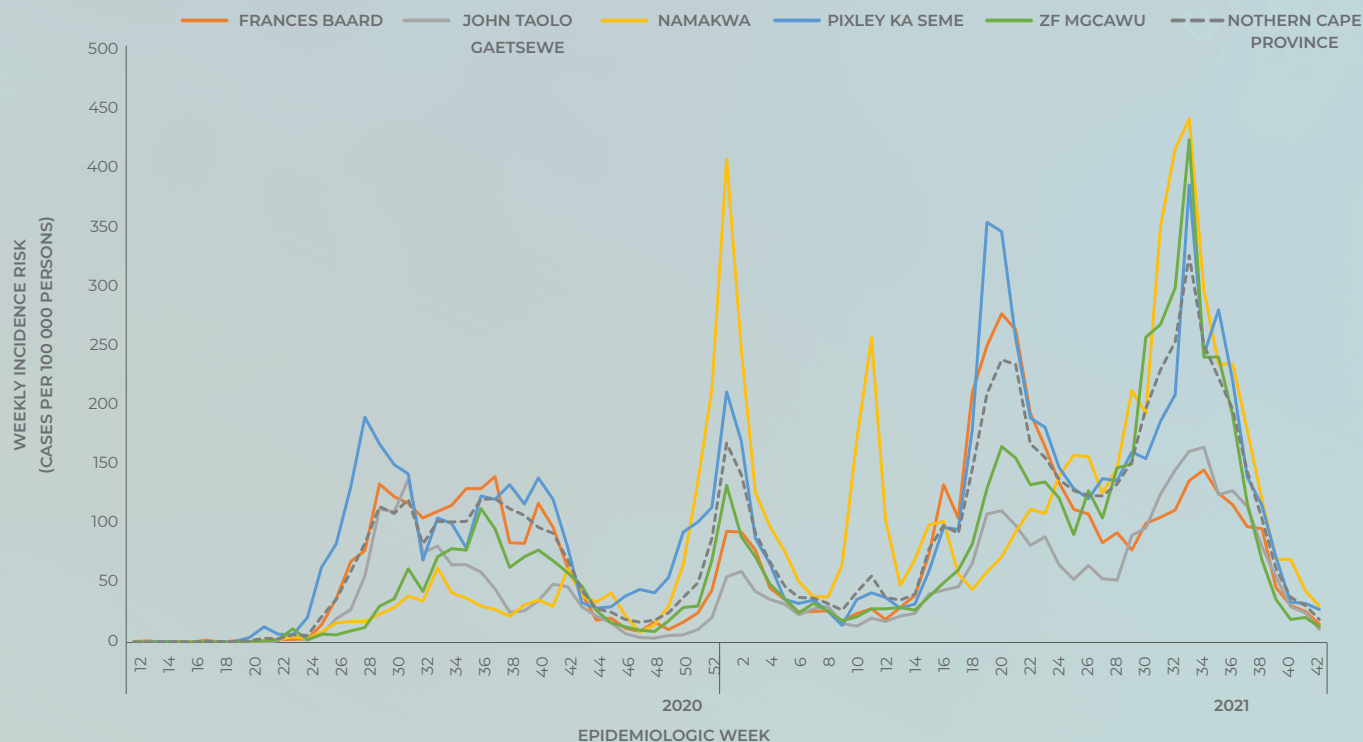


**Figure 21.** Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, North West Province, 3 March 2020 –23 October 2021 (n=148 534, 1 968 missing age)

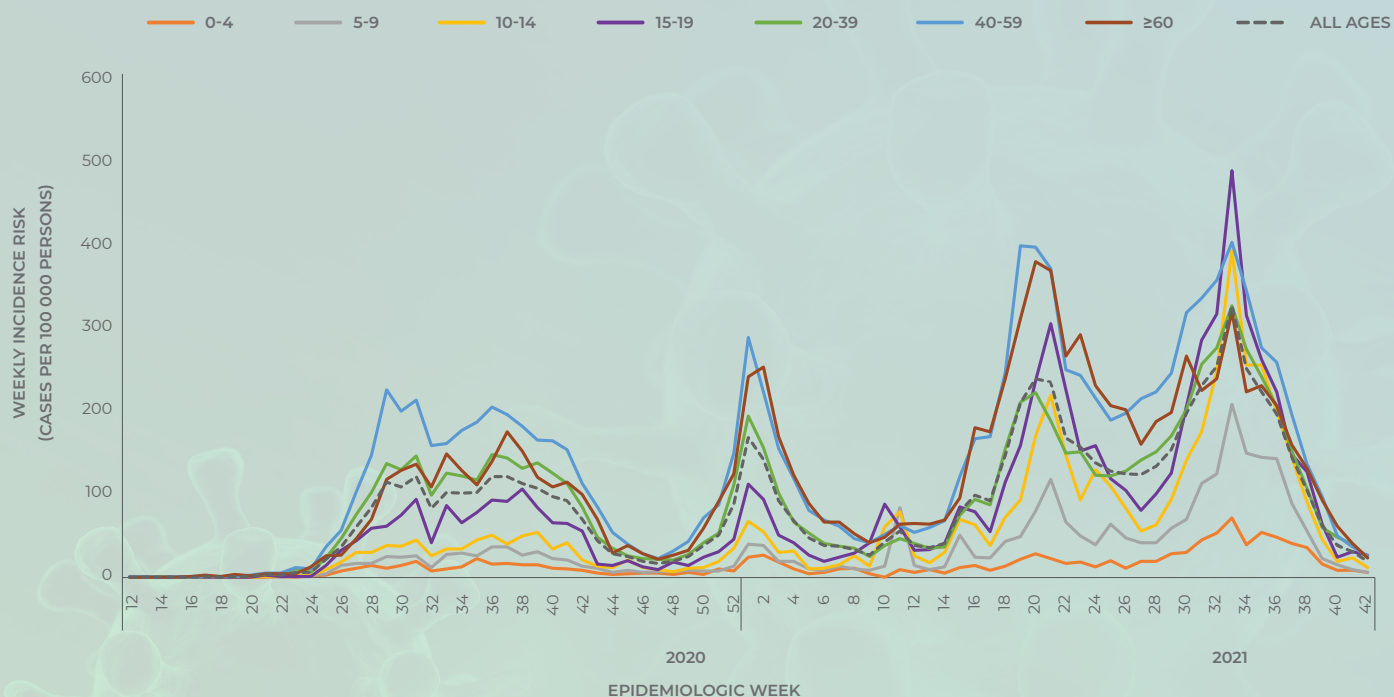
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## Northern Cape Province



**Figure 22.** Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, Northern Cape Province, 3 March 2020-23 October 2021 (n=77 160, 15 112 missing district)



**Figure 23** Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, Northern Cape Province, 3 March 2020-23 October 2021 (n=91 653, 619 missing age)

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## 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 of 2020 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 of 2020, 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 of 2020 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.

## 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 (number of deaths/number of diagnosed cases) reported here is subject to numerous limitations: it is likely to be an underestimation as reporting of deaths may be delayed 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. 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. Differences in health-seeking behaviour by age group and sex could also contribute to the 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. Changes in testing strategy during the different times of the epidemic may also affect the number of cases reported, leading to a decrease in number of positive cases if testing is only conducted for severe cases or certain risk groups.