



COVID-19 Weekly Epidemiology Brief: Week ending 25 December 2021 (Week 51 of 2021)

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 25 December 2021 (week 51 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.

Highlights

- As of 25 December 2021, a total of 3 413 536 laboratory-confirmed COVID-19 cases had been detected in South Africa. Of these, 105 466 were cases reported since the last report (week 50 of 2021). There was a 29.7% decrease in the number of new cases detected in week 51 of 2021 (89 781) compared to the number of new cases detected in week 50 of 2021 (127 753).
- In the past week, the KwaZulu-Natal Province reported the highest number of cases detected (22 866/89 781, 25.5%), followed by the Western Cape (21 345/89 781, 23.8%) and Gauteng (17 025/89 781, 19.0%) provinces, with other provinces reporting below 15% of all reported cases each.
- In the past week, a decrease in weekly incidence risk was observed in all provinces. Some of this reduction could be due to decreased SARS-CoV-2 testing during the holiday period; as also seen in the 20.4% decrease in total number of tests performed since the previous week. (642.6 tests per 100 000 persons in week 50 vs 511.6 tests per 100 000 persons in week 51). The decrease in weekly incidence risk, ranged from 49% in Gauteng Province (105.1 cases per 100 000 persons decrease) to 7% in Western Cape Province (21.4 cases per 100 000 persons decrease).
- In the past week, the Western Cape Province reported the highest weekly incidence risk (304.7 cases per 100 000 persons), followed by the KwaZulu-Natal Province (198.3 cases per 100 000 persons), Northern Cape Province (180.4 cases per 100 000 persons), and the Free State Province (177.5 cases per 100 000 persons). The other provinces reported below 150 cases per 100 000 persons.
- The highest weekly incidence risk among cases detected in week 51 of 2021 was reported in the ≥80-year age group (342.0 cases per 100 000 persons), and the lowest weekly incidence risk was in the 5-9-year age group (35.2 cases per 100 000 persons).

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

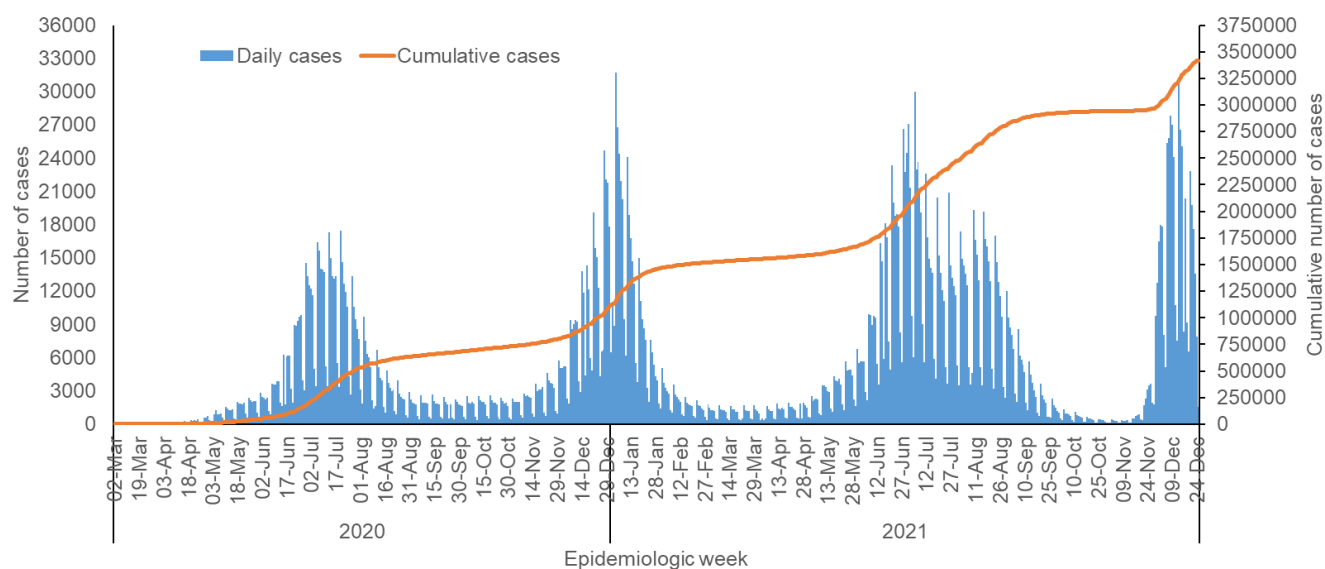


Figure 1. Number and cumulative number of laboratory-confirmed cases of COVID-19 by date of specimen collection, South Africa, 3 March 2020 – 25 December (n= 3 413 536)

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 – 25 December 2021 (n = 3 413 536)

Province	Cumulative cases (n) (percentage, n/total cases in South Africa)	New cases ¹ detected in week 51 (19-25 Dec 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 52 of 2021 (cases/100 000 persons)	Tests ⁴ per 100 000 persons, 19-25 Dec 2021
Eastern Cape	322 642 (9.5)	9 754 (10.9)	6 734 001	4 791.2	144.8	366.1
Free State	187 367 (5.5)	5 199 (5.8)	2 928 903	6 397.2	177.5	596.6
Gauteng	1 125 828 (33.0)	17 025 (19.0)	15 488 137	7 269.0	109.9	618.2
KwaZulu-Natal	600 489 (17.6)	22 866 (25.5)	11 531 628	5 207.3	198.3	536.7
Limpopo	140 098 (4.1)	2 856 (3.2)	5 852 553	2 393.8	48.8	149.8
Mpumalanga	175 144 (5.1)	3 930 (4.4)	4 679 786	3 742.6	84.0	280.1
North West	177 660 (5.2)	4 474 (5.0)	4 108 816	4 323.9	108.9	501.9
Northern Cape	100 971 (3.0)	2 332 (2.6)	1 292 786	7 810.3	180.4	511.8
Western Cape	583 337 (17.1)	21 345 (23.8)	7 005 741	8 326.6	304.7	801.5
Unknown						
Total	3 413 536	89 781	59 622 351	5 725.3	150.6	511.6

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

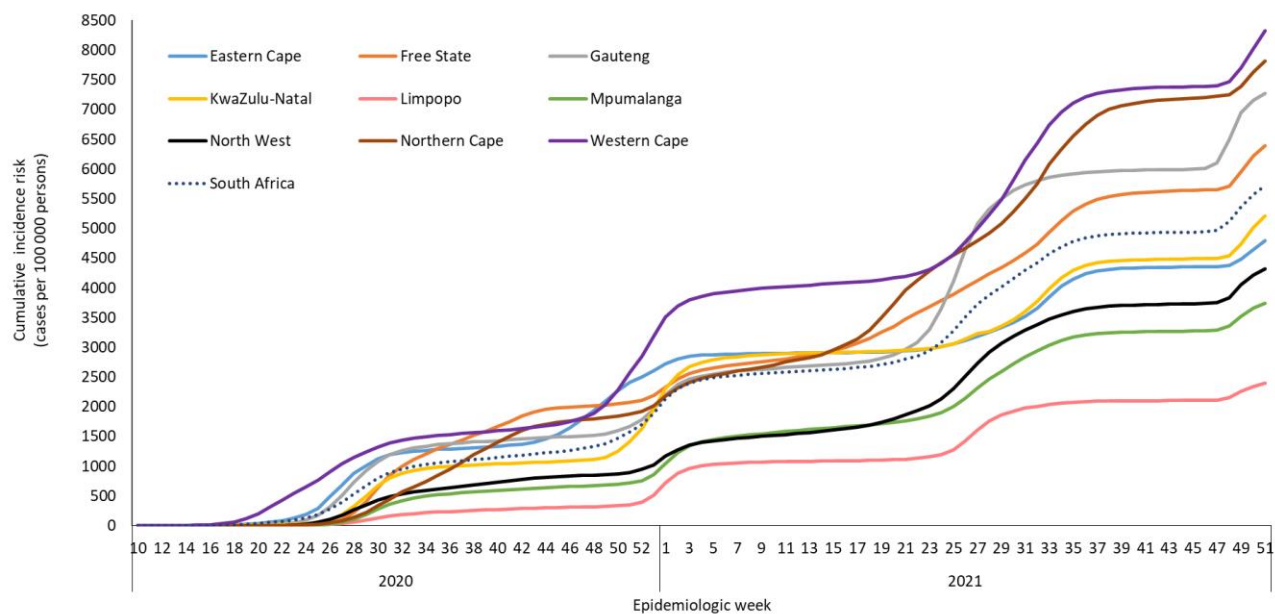


Figure 2: Cumulative incidence risk of laboratory-confirmed cases of COVID-19 by province and epidemiologic week, South Africa, 3 March 2020 – 25 December 2021 (n = 3 413 536)

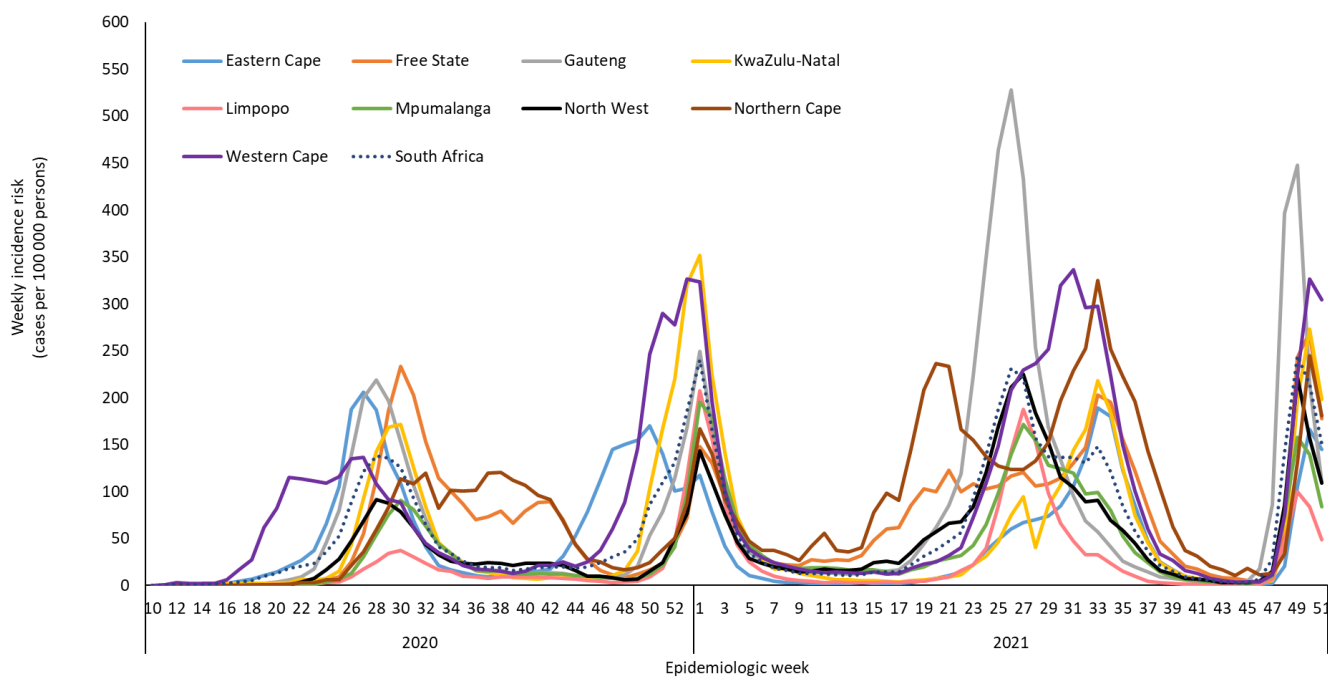


Figure 3: Weekly incidence risk of laboratory-confirmed cases of COVID-19 by province and epidemiologic week, South Africa, 3 March 2020 – 25 December 2021 (n = 3 413 536)

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

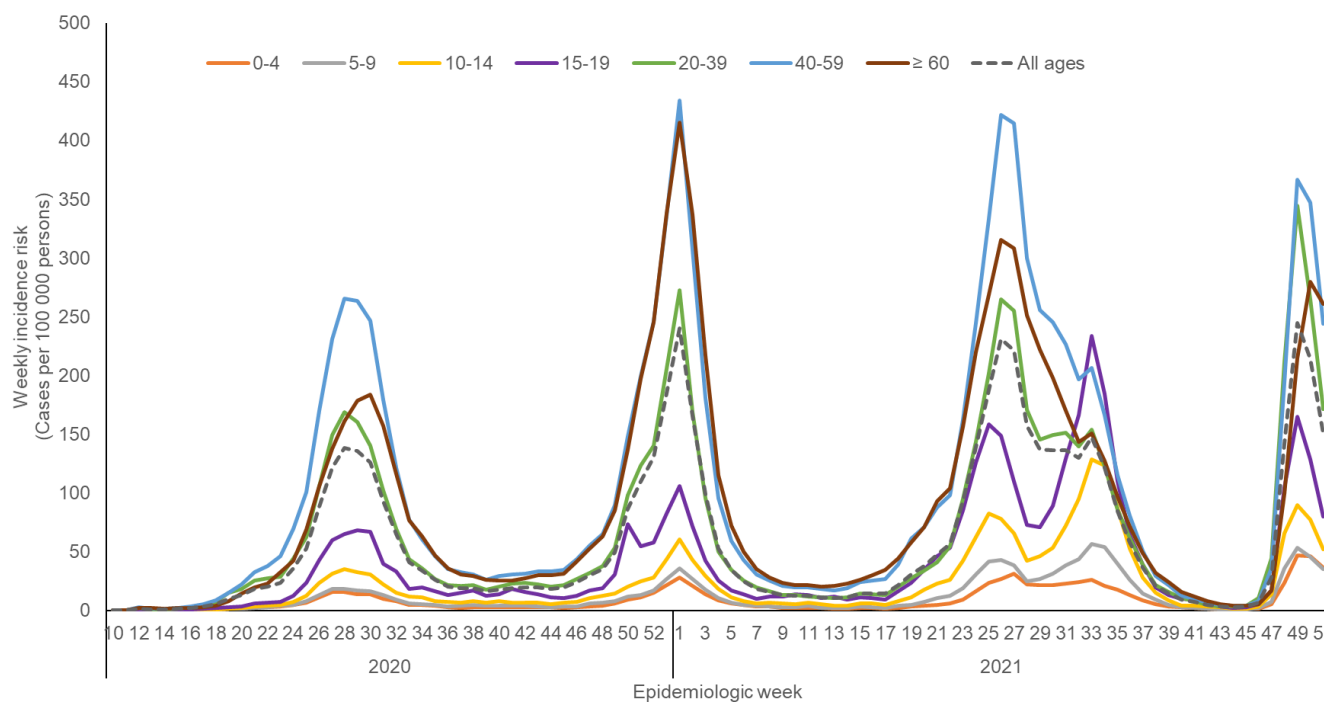


Figure 4: Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, South Africa, 3 March 2020 – 25 December 2021 (n = 3 381 270, 32 266 missing age)

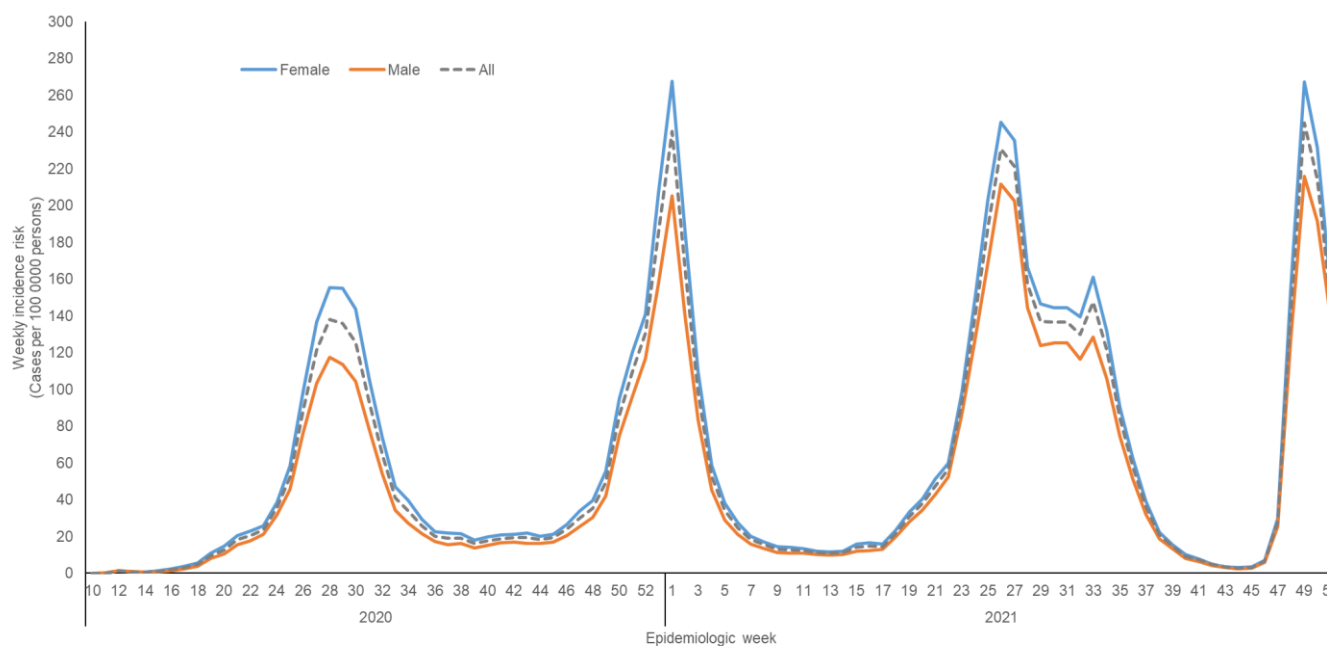


Figure 5. Weekly incidence risk of laboratory-confirmed cases of COVID-19 by sex and epidemiologic week, South Africa, 3 March 2020 – 25 December 2021 (n = 3 376 531, sex missing for 37 005)

Table 2. Number of laboratory-confirmed cases of COVID-19 and cumulative/weekly incidence risk by age group, South Africa, 3 March 2020 – 25 December 2021, n = 3 413 536, 37 005 missing age)

Age group (years)	Cumulative cases (n) (percentage, n/total cases in South Africa)	New cases ¹ detected in week 51 (19-25 Dec 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 51 of 2021 (cases/100 000 persons)
0-4	48 022 (1.4)	2 091 (2.4)	5 743 450	836.1	36.4
5-9	67 595 (2.0)	2 013 (2.3)	5 715 952	1 182.6	35.2
10-14	123 308 (3.6)	2 895 (3.3)	5 591 553	2 205.3	51.8
15-19	186 792 (5.5)	3 830 (4.3)	4 774 579	3 912.2	80.2
20-24	226 261 (6.7)	6 252 (7.0)	4 823 367	4 690.9	129.6
25-29	333 354 (9.9)	9 130 (10.3)	5 420 754	6 149.6	168.4
30-34	384 251 (11.4)	10 118 (11.4)	5 641 750	6 810.8	179.3
35-39	389 127 (11.5)	9 912 (11.2)	4 798 293	8 109.7	206.6
40-44	330 035 (9.8)	8 330 (9.4)	3 733 942	8 838.8	223.1
45-49	314 777 (9.3)	7 579 (8.5)	3 169 648	9 931.0	239.1
50-54	282 470 (8.4)	6 827 (7.7)	2 571 263	10 985.7	265.5
55-59	234 475 (6.9)	5 751 (6.5)	2 211 309	10 603.4	260.1
60-64	161 576 (4.8)	4 505 (5.1)	1 796 316	8 994.9	250.8
65-69	109 983 (3.3)	3 341 (3.8)	1 408 665	7 807.6	237.2
70-74	79 490 (2.4)	2 648 (3.0)	1 007 174	7 892.4	262.9
75-79	50 819 (1.5)	1 693 (1.9)	637 062	7 977.1	265.8
≥80	58 935 (1.7)	1 974 (2.2)	577 273	10 209.2	342.0
Unknown	32 266 (0.0)	892 (0.0)			
Total	3 413 536 (100.0)	89 781 (100.0)	59 622 350	5 725.3	150.6

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

Provincial trends of COVID-19 cases

Eastern Cape Province

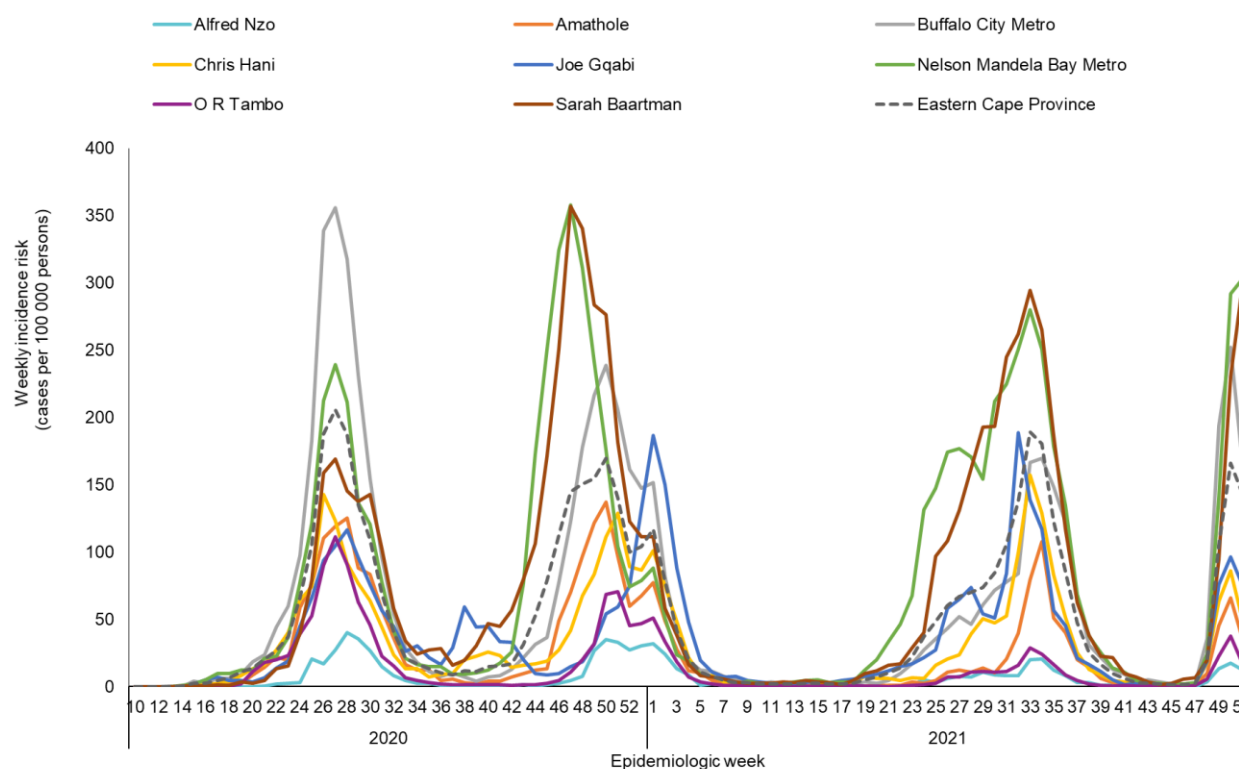


Figure 6: Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemic week, Eastern Cape Province, 3 March 2020 – 25 December 2021 (n = 251 975, 70 667 missing district)

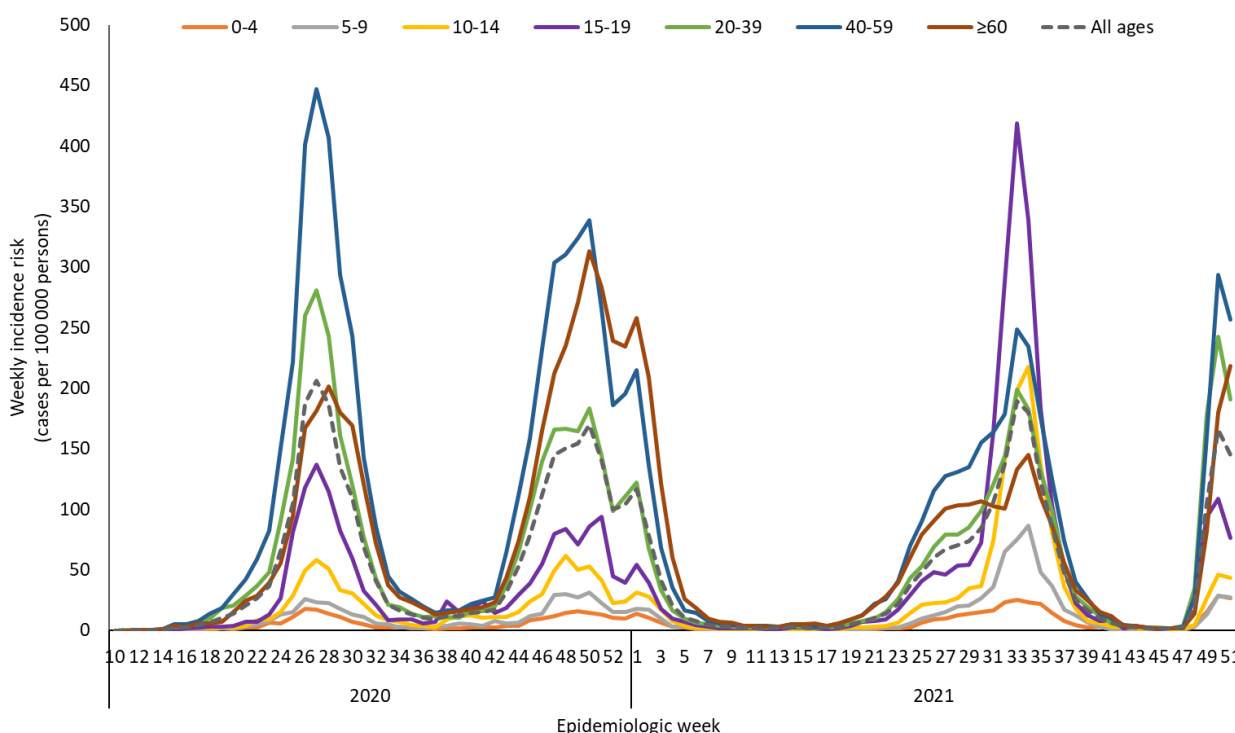


Figure 7: Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemic week, Eastern Cape Province, 3 March 2020 – 25 December 2021 (n = 319 189, 3 453 missing age)

Western Cape Province

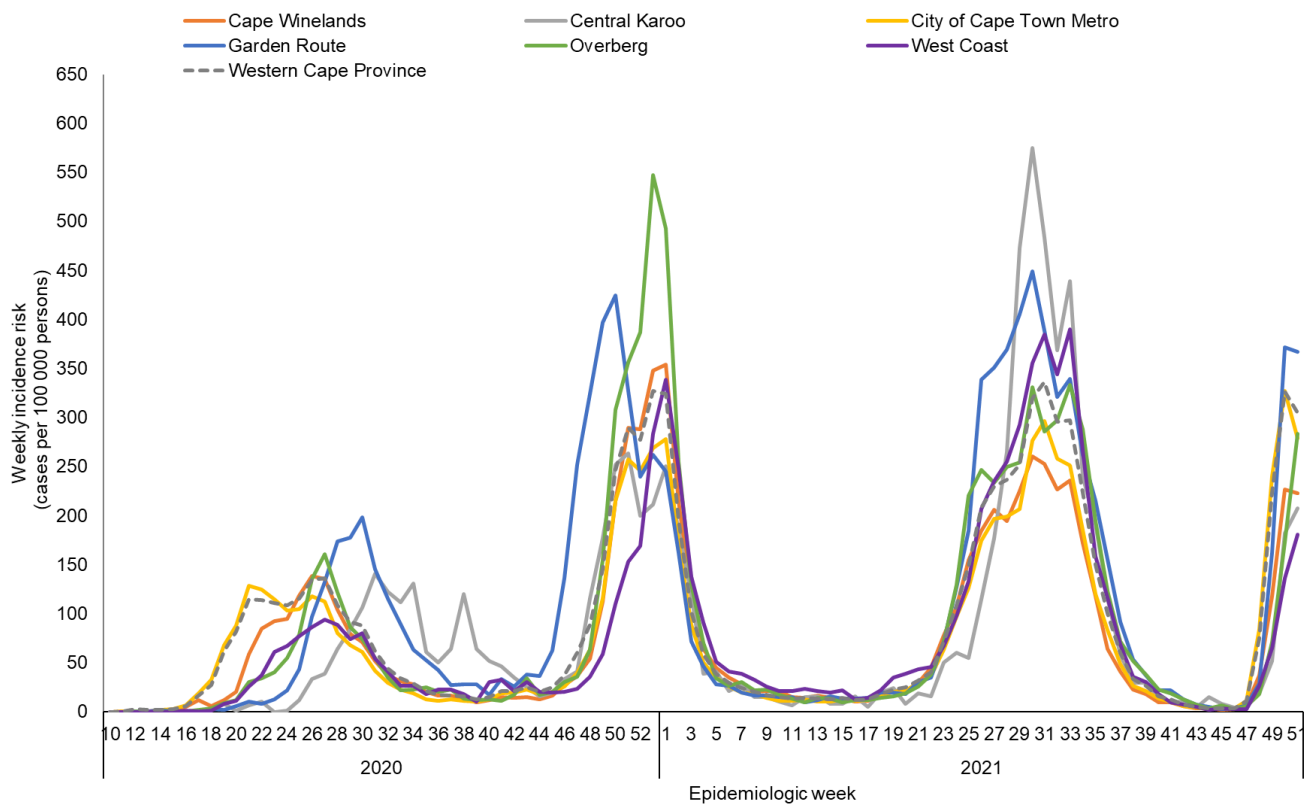


Figure 8: Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, Western Cape Province, 3 March 2020 – 25 December 2021 (n = 529 185, 54 152 missing district)

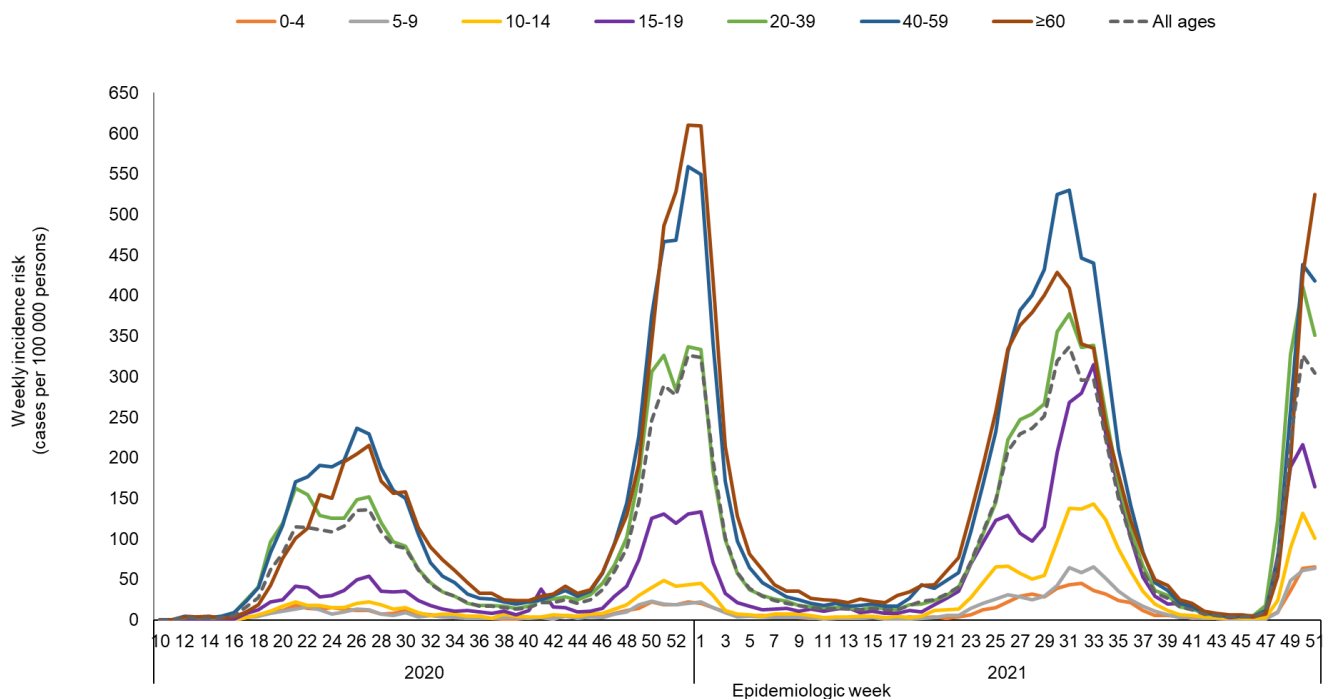


Figure 9: Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, Western Cape Province, 3 March 2020 – 25 December 2021 (n = 581 695, 1 642 missing age)

Gauteng Province

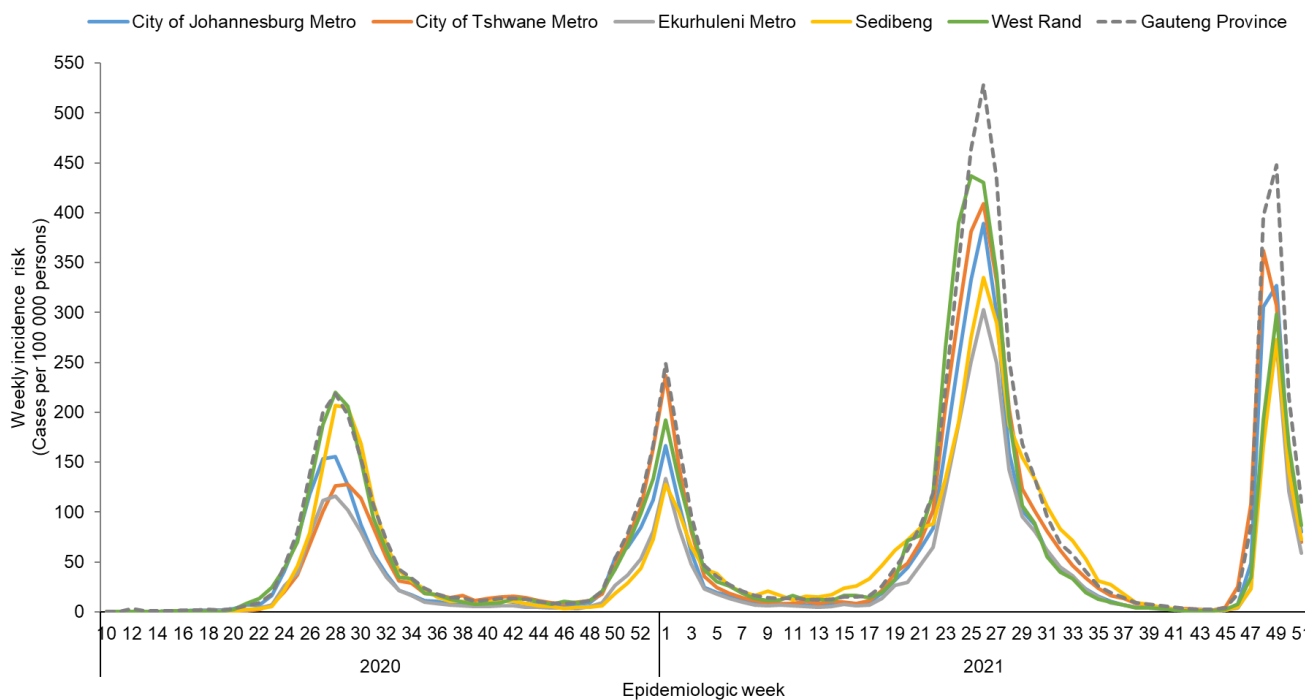


Figure 10: Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, Gauteng Province, 3 March 2020 – 25 December 2021 (n = 769 749, 356 079 missing district)

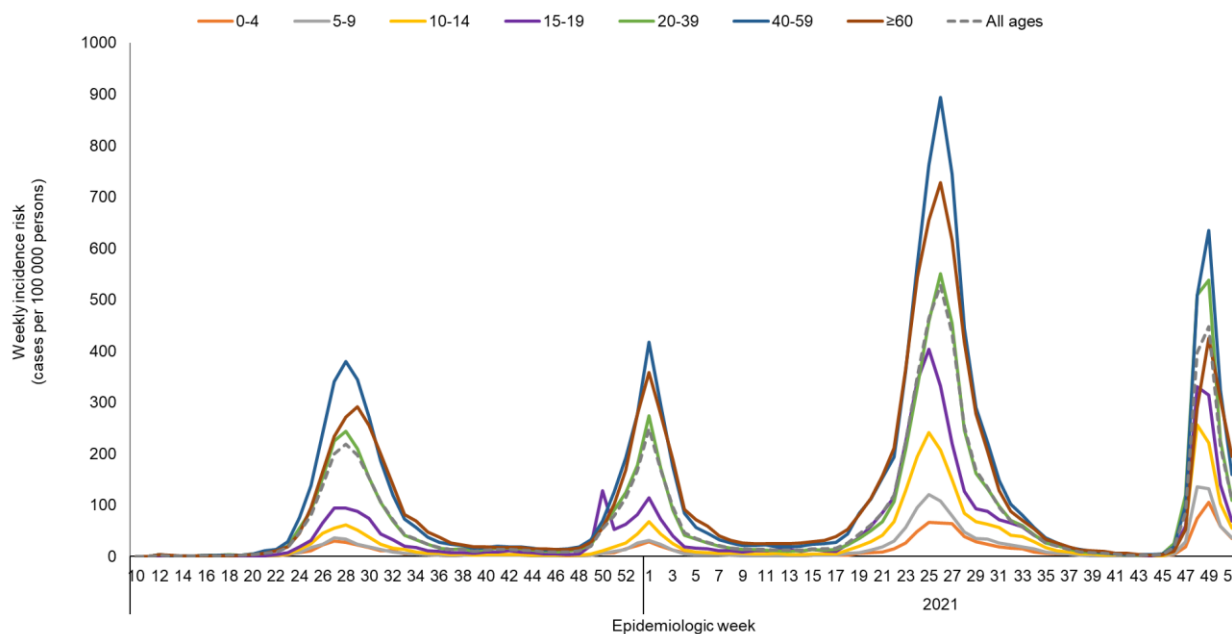


Figure 11: Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, Gauteng Province, 3 March 2020 – 25 December 2021 (n = 1 114 360, 11 468 missing age)

KwaZulu-Natal Province

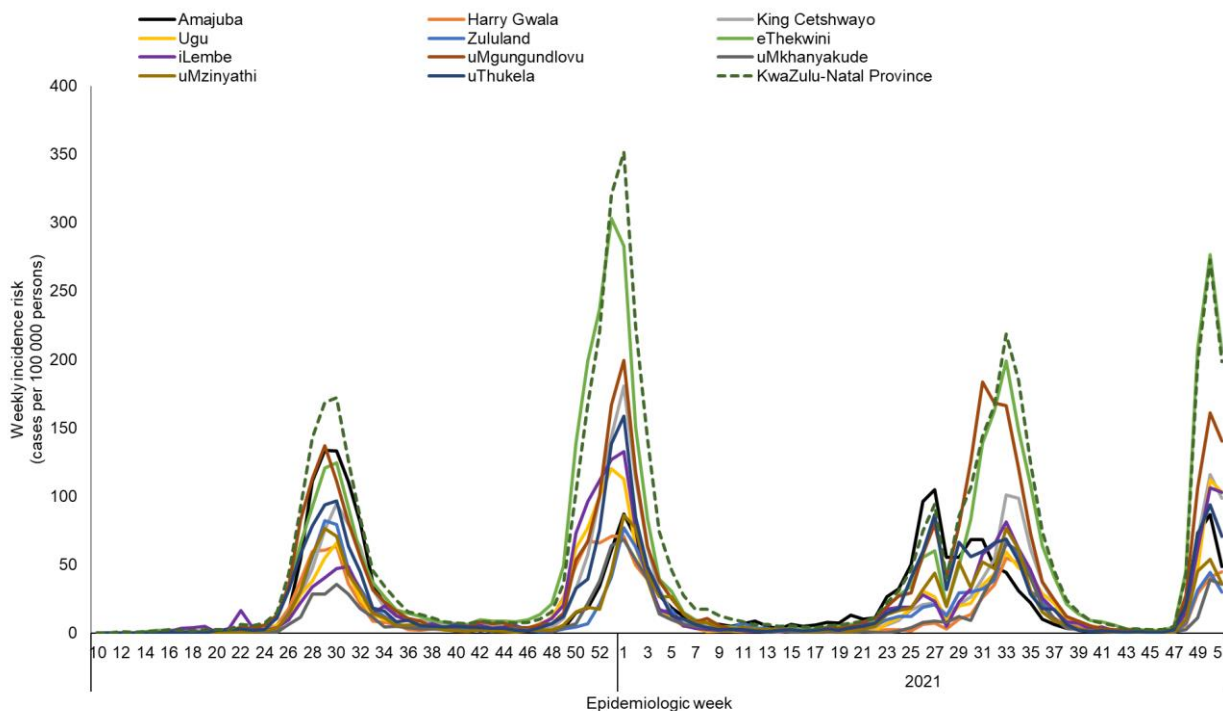


Figure 12: Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, KwaZulu-Natal Province, 3 March 2020 – 25 December 2021 (n = 328 924, 271 565 missing district)

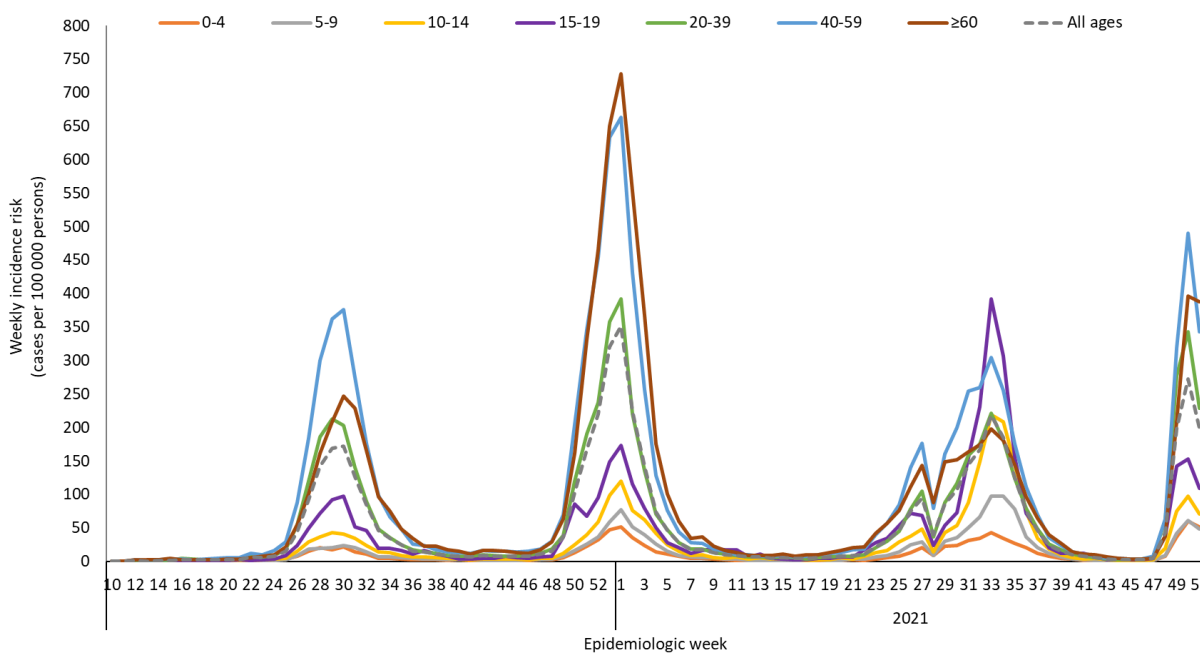


Figure 13: Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, KwaZulu-Natal Province, 3 March 2020 – 25 December 2021 (n = 592 819, 7 670 missing age)

Free State Province

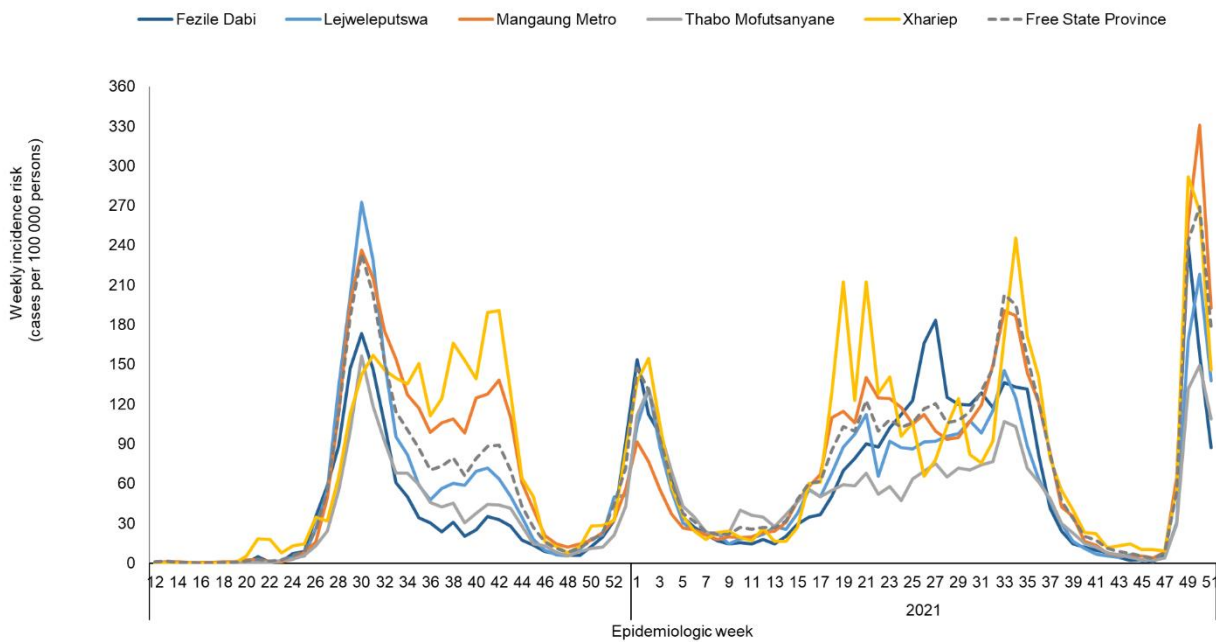


Figure 14: Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, Free State Province, 3 March 2020 – 25 December 2021 (n = 158 167, 29 168 missing district)

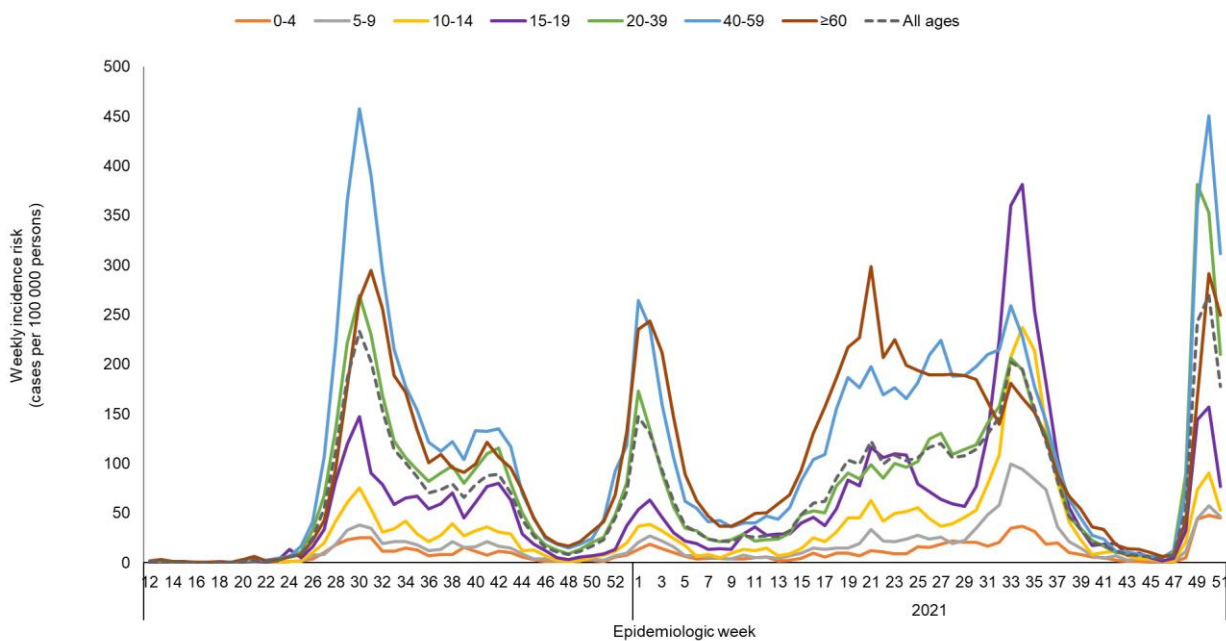


Figure 15: Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, Free State Province, 3 March 2020 – 25 December 2021 (n = 186 626, 741 missing age)

Limpopo Province

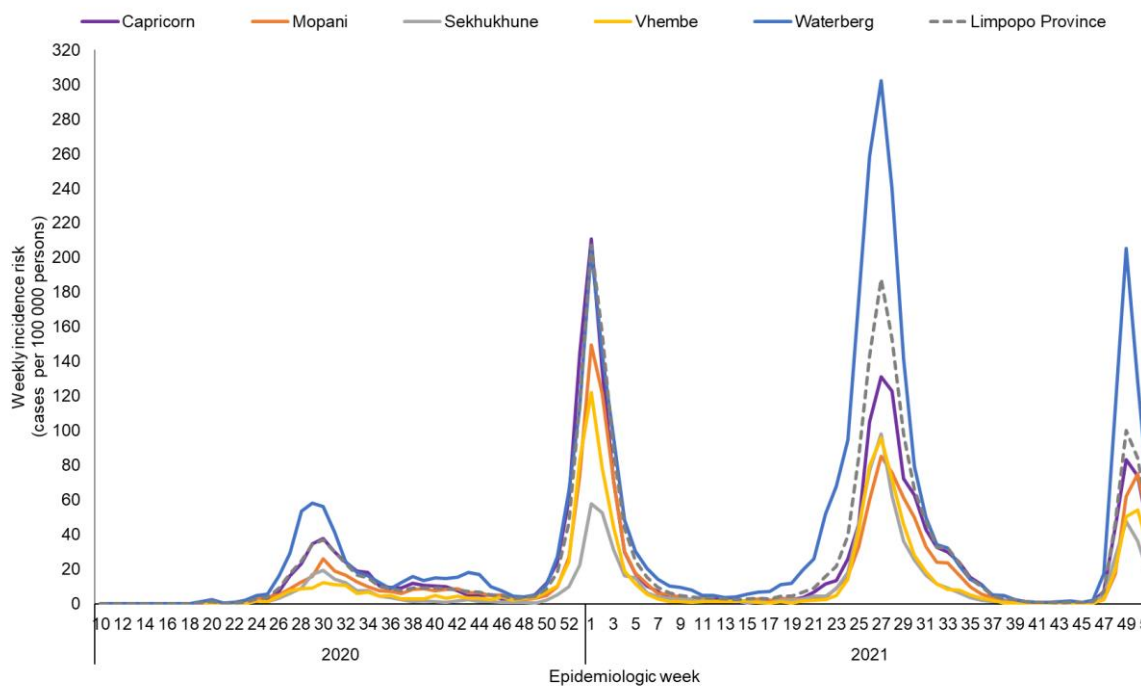


Figure 16: Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, Limpopo Province, 3 March 2020 – 25 December 2021 (n = 99 516, 40 582 missing district)

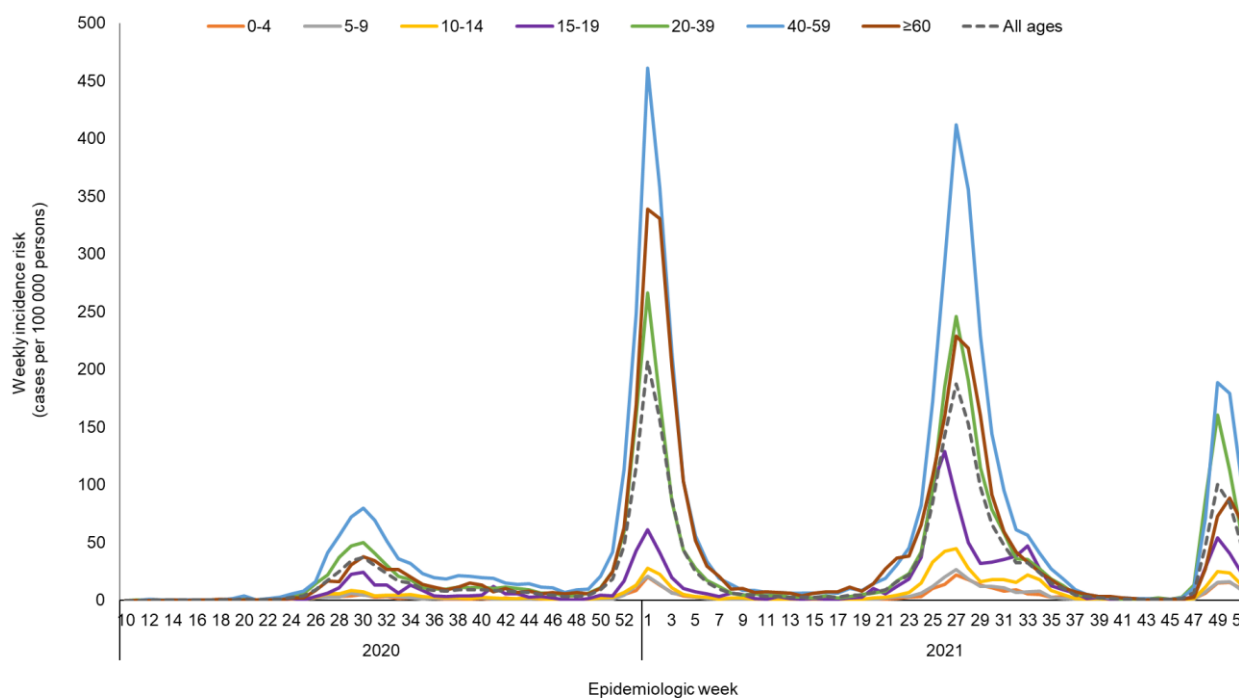


Figure 17: Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, Limpopo Province, 3 March 2020 – 25 December 2021 (n = 139 397, 701 missing age)

Mpumalanga Province

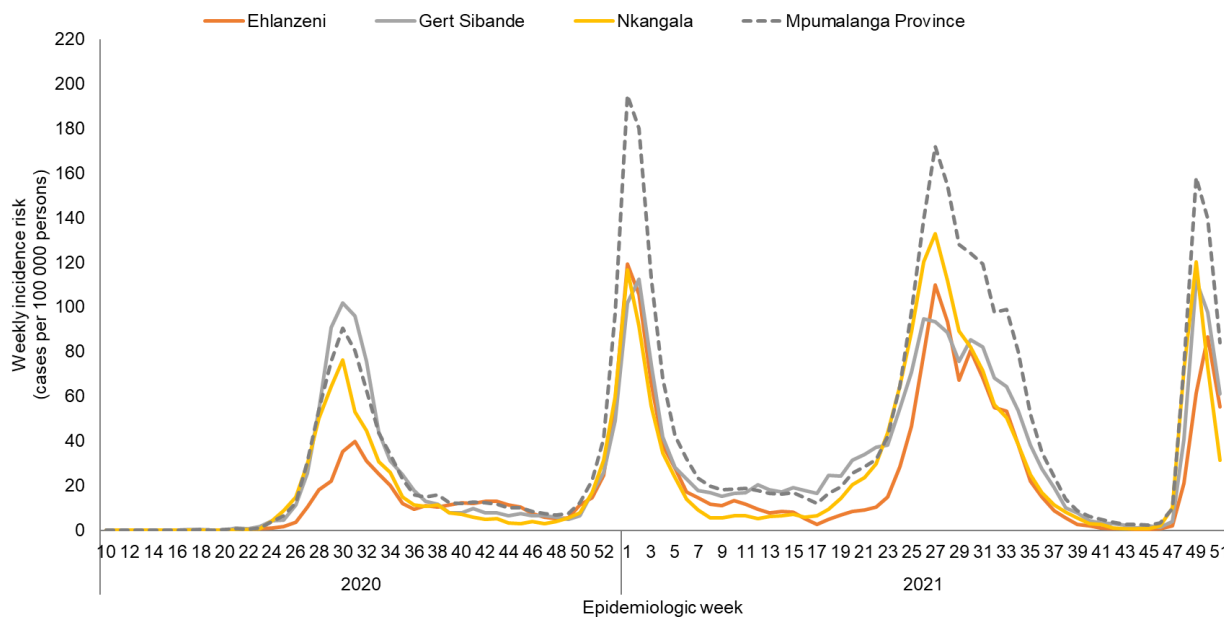


Figure 18: Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, Mpumalanga Province, 3 March 2020 – 25 December 2021 (n = 111 488, 63 656 missing district)

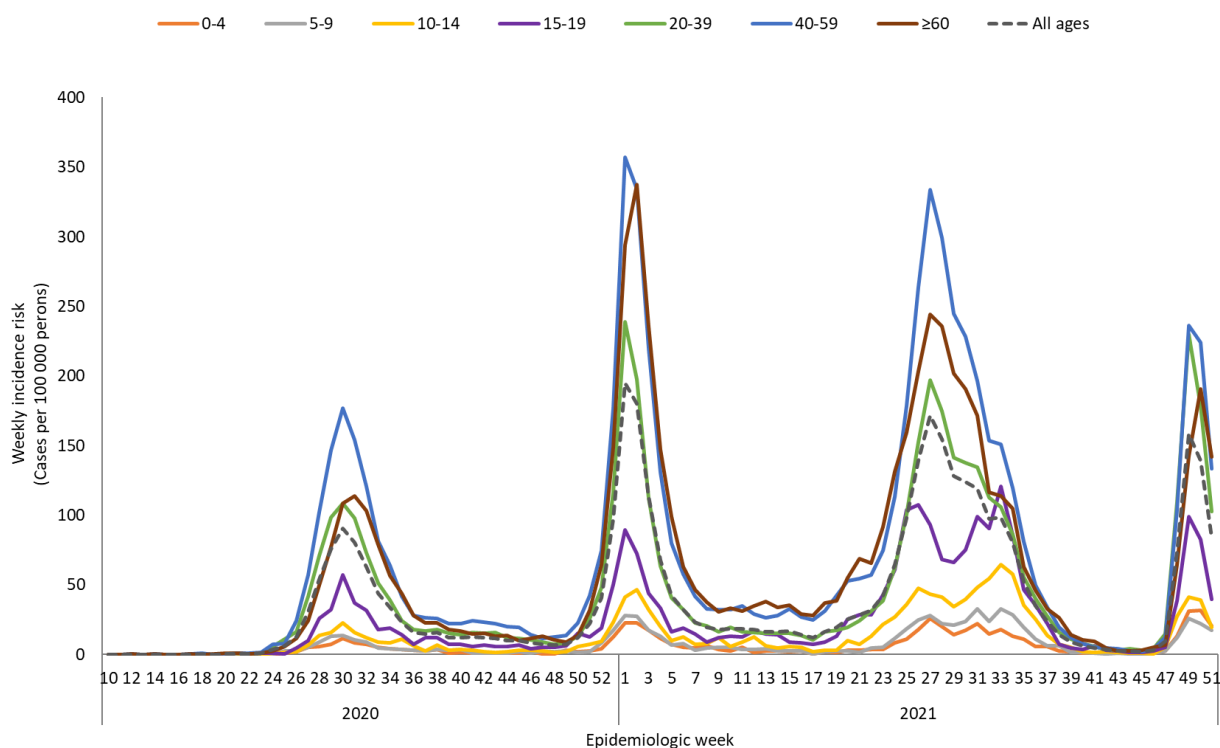


Figure 19: Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group and epidemiologic week, Mpumalanga Province, 3 March 2020 – 25 December 2021 (n = 171 499, 3 645 missing age)

North West Province

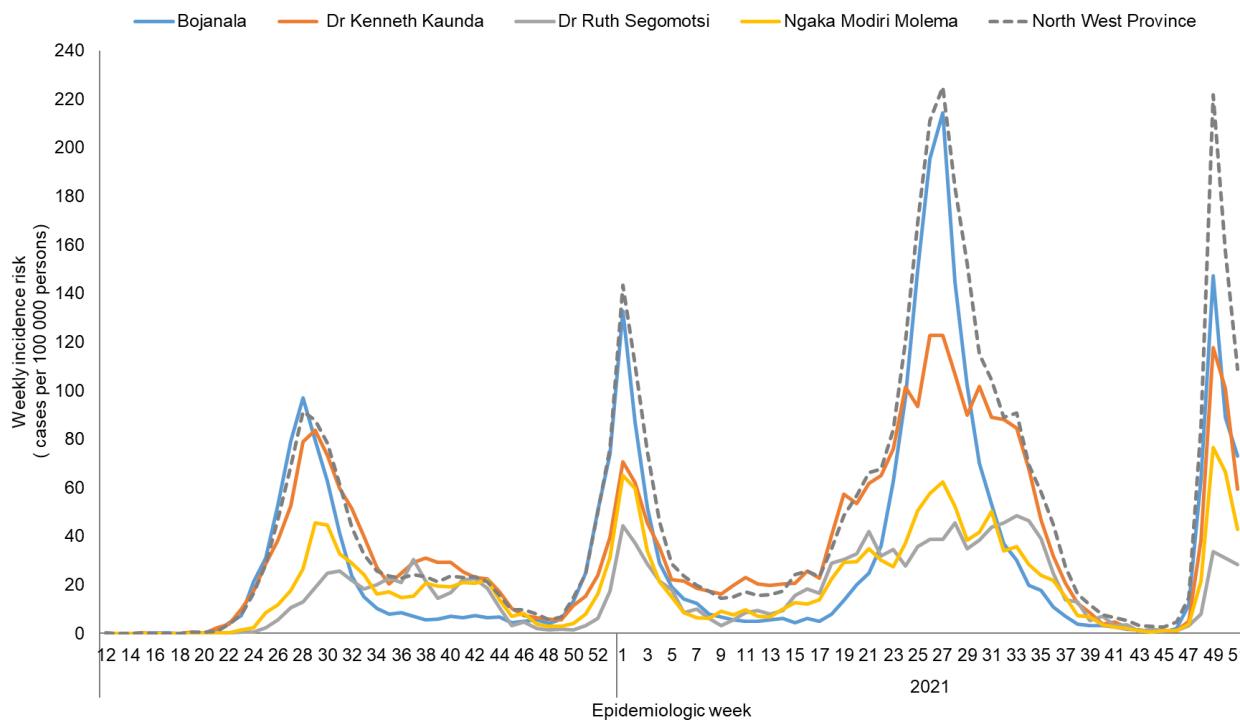


Figure 20: Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, North West Province, 3 March 2020 – 25 December 2021 (n = 106 039, 71 607 missing district)

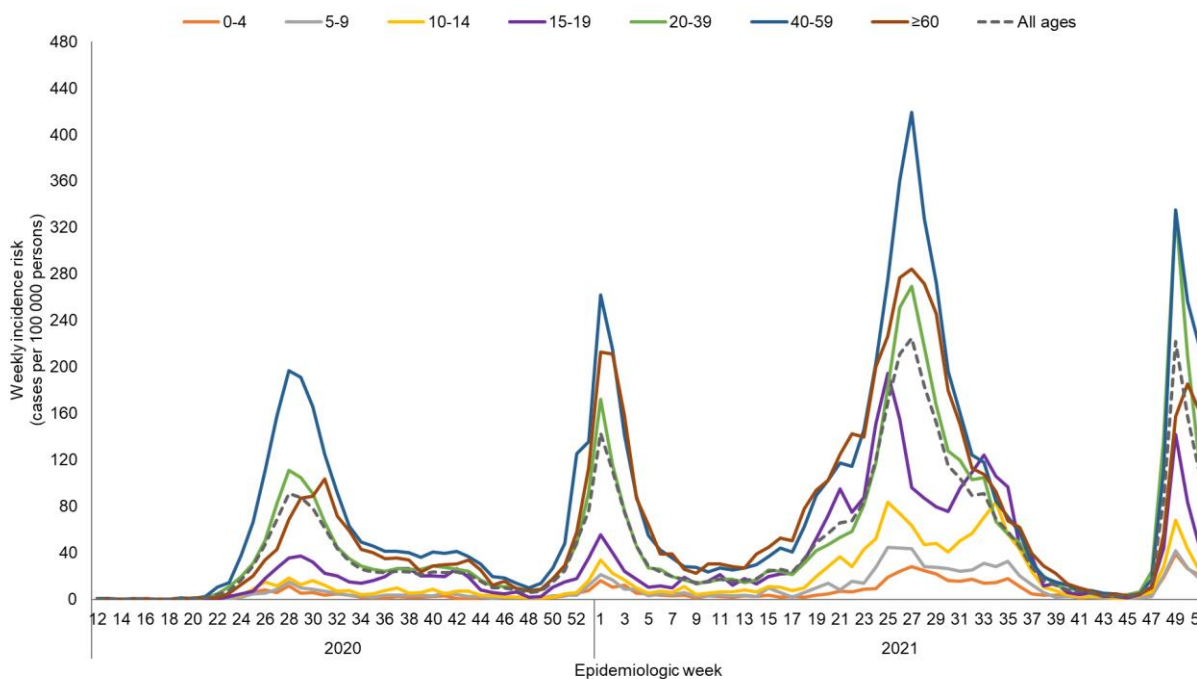


Figure 21: Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, North West Province, 3 March 2020 – 25 December 2021 (n = 175 386, 2 274 missing age)

Northern Cape Province

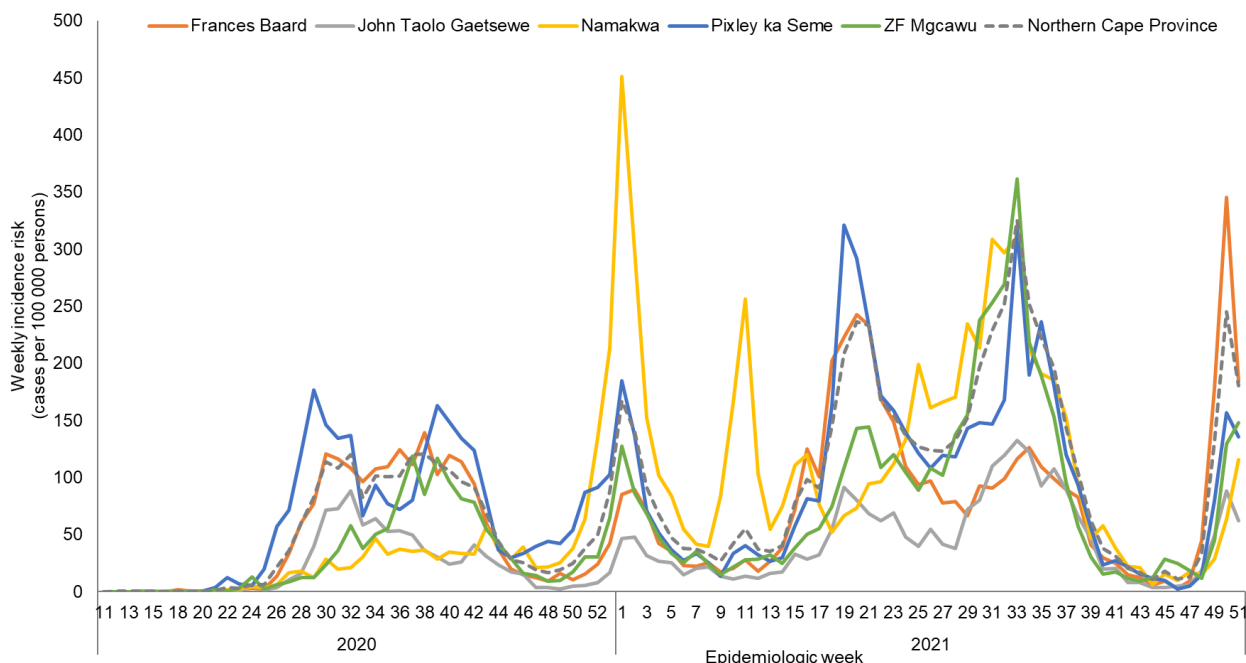


Figure 22: Weekly incidence risk of laboratory-confirmed cases of COVID-19 by district and epidemiologic week, Northern Cape Province, 3 March 2020 – 25 December 2021 (n = 74 459, 24 180 missing district)

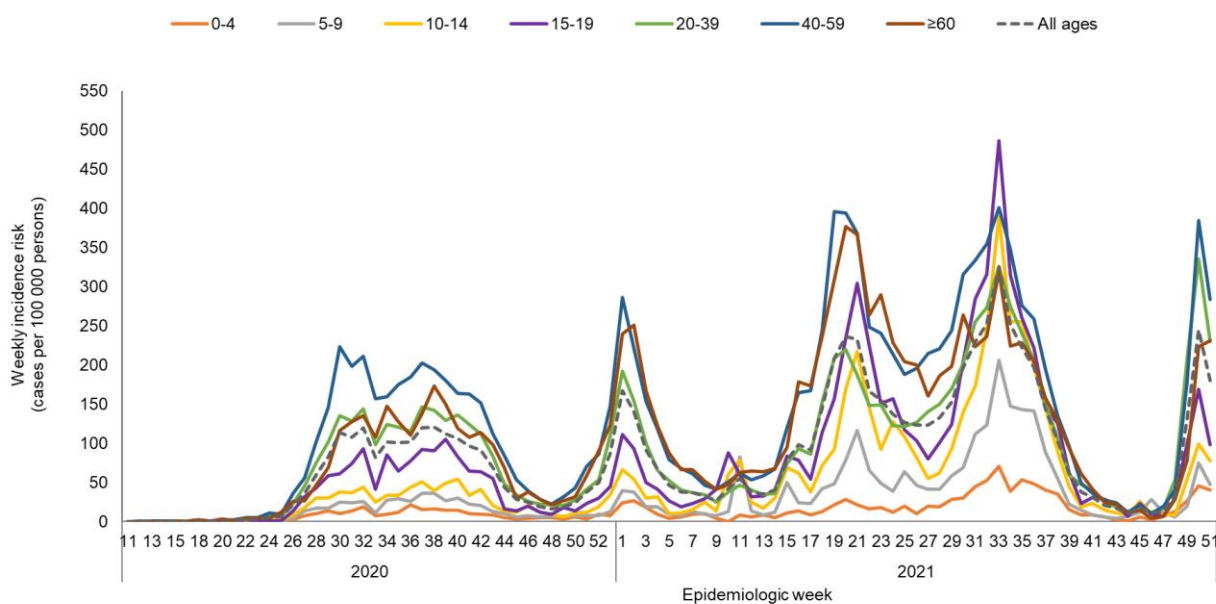


Figure 23: Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week, Northern Cape Province, 3 March 2020 – 25 December 2021 (n = 97 982, 657 missing age)

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. 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 persons. 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.

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. Differences in health-seeking behaviour by age group and sex could also contribute to the observed differences in case numbers between groups. 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.