



COVID-19 Weekly Epidemiology Brief: Week ending 10 December 2022 (Week 49 of 2022)

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 10 December 2022 (week 49 of 2022). 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 10 December 2022, a total of 4 045 262 laboratory-confirmed COVID-19 cases had been detected in South Africa. Of these, 2 350 were cases reported since the last report (week 48 of 2022). There was a 11.7% decrease in the number of new cases detected in week 49 of 2022 (1 917) compared to the number of new cases detected in week 48 of 2022 (2 172).
- In the past week, Gauteng, KwaZulu-Natal, and Western Cape provinces reported the highest weekly incidence risk (4.6 cases per 100 000 persons), followed by Northern Cape Province (2.6 cases per 100 000 persons) and Mpumalanga Province (2.0 cases per 100 000 persons). The other provinces reported weekly incidences below 2.0 cases per 100 000 persons.
- In the past week, six provinces reported a decrease in weekly incidence risk, ranging from 0.2 cases per 100 000 persons (16.4%) in North West Province to 0.9 cases per 100 000 persons (15.8%) in KwaZulu-Natal Province. Northern Cape Province reported a 0.6 cases per 100 000 persons (30.8%) increase, and Eastern Cape and Western Cape provinces reported no change in weekly incidence.
- The highest weekly incidence risk among cases detected in week 49 of 2022 was reported in the 75-79-year age group (12.4 cases per 100 000 persons), and the lowest weekly incidence risk was in the 5-9-year age group (0.4 cases per 100 000 persons).

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

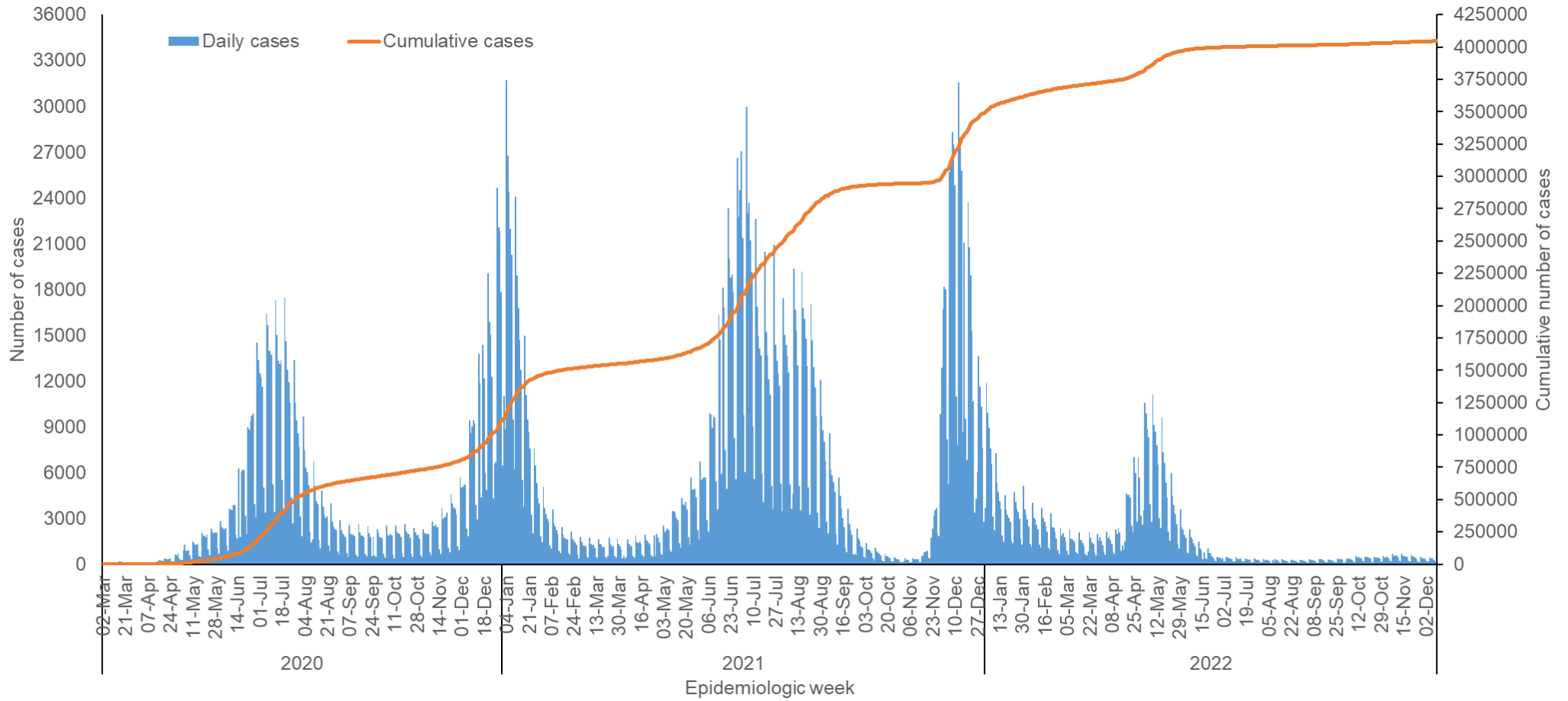


Figure 1. Number and cumulative number of laboratory-confirmed cases of COVID-19 by date of specimen collection, South Africa, 3 March 2020 – 10 December 2022 (n= 4 045 262)

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 – 10 December 2022 (n = 4 045 262)

Province	Cumulative cases (n) (percentage, n/total cases in South Africa)	New cases ¹ detected in week 49 of 2022 (4 - 10 December), n (percentage ² , n/total)	Population in mid- 2021 ³ , n	Cumulative incidence risk (cases per 100 000 persons)	Incidence risk of new cases detected in week 49 of 2022 (cases/100 000 persons)	Tests ⁴ per 100 000 persons, 4 - 10 December 2022
Eastern Cape	366 037 (9.0)	89 (4.6)	6 676 590	5 482.4	1.3	15.9
Free State	217 322 (5.4)	41 (2.1)	2 932 441	7 411.0	1.4	16.3
Gauteng	1 343 930 (33.2)	723 (37.7)	15 810 388	8 500.3	4.6	44.1
KwaZulu-Natal	725 279 (17.9)	534 (27.9)	11 513 575	6 299.3	4.6	38.5
Limpopo	160 678 (4.0)	27 (1.4)	5 926 724	2 711.1	0.5	4.7
Mpumalanga	203 920 (5.0)	94 (4.9)	4 743 584	4 298.9	2.0	19.5
North West	203 634 (5.0)	51 (2.7)	4 122 854	4 939.2	1.2	10.8
Northern Cape	115 738 (2.9)	34 (1.8)	1 303 047	8 882.1	2.6	17.1
Western Cape	708 724 (17.5)	324 (16.9)	7 113 776	9 962.7	4.6	25.3
Unknown	0	0				
Total	4 045 262	1 917	60 142 978	6 726.1	3.2	27.6

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) ³2021 Mid-year population Statistics South Africa ⁴Data on number of tests conducted sourced from COVID-19 weekly testing report of the same reporting week

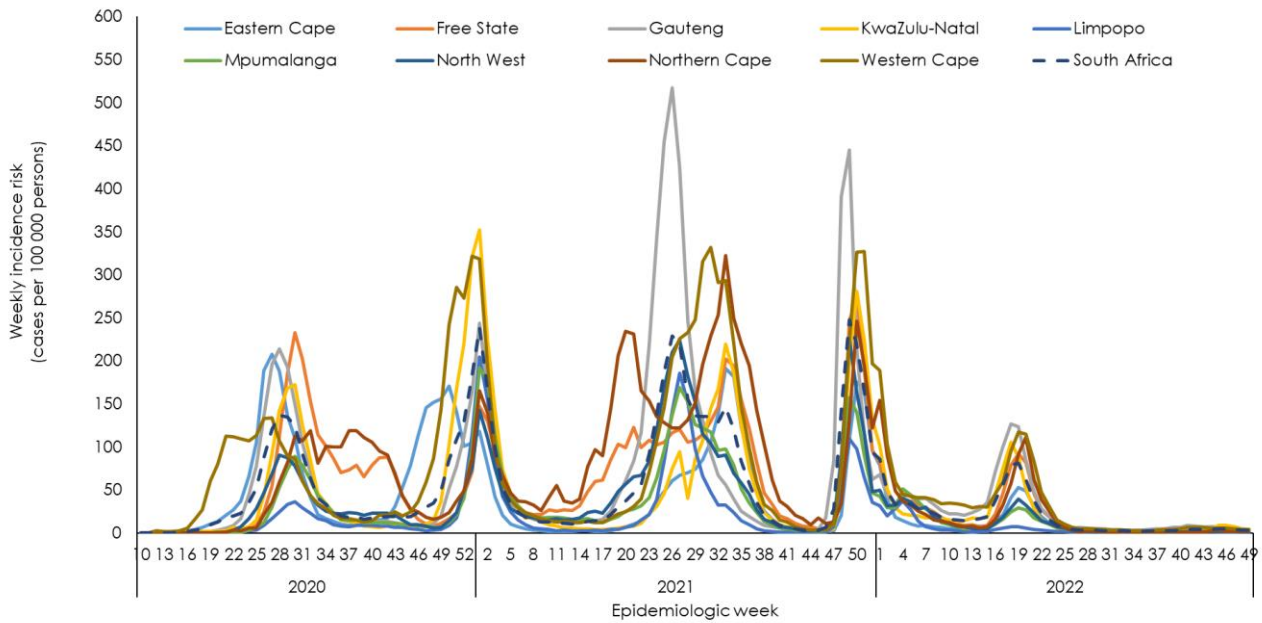


Figure 2: Weekly incidence risk of laboratory-confirmed cases of COVID-19 by province and epidemiologic week South Africa 3 March 2020 – 10 December 2022 (n = 4 045 262)

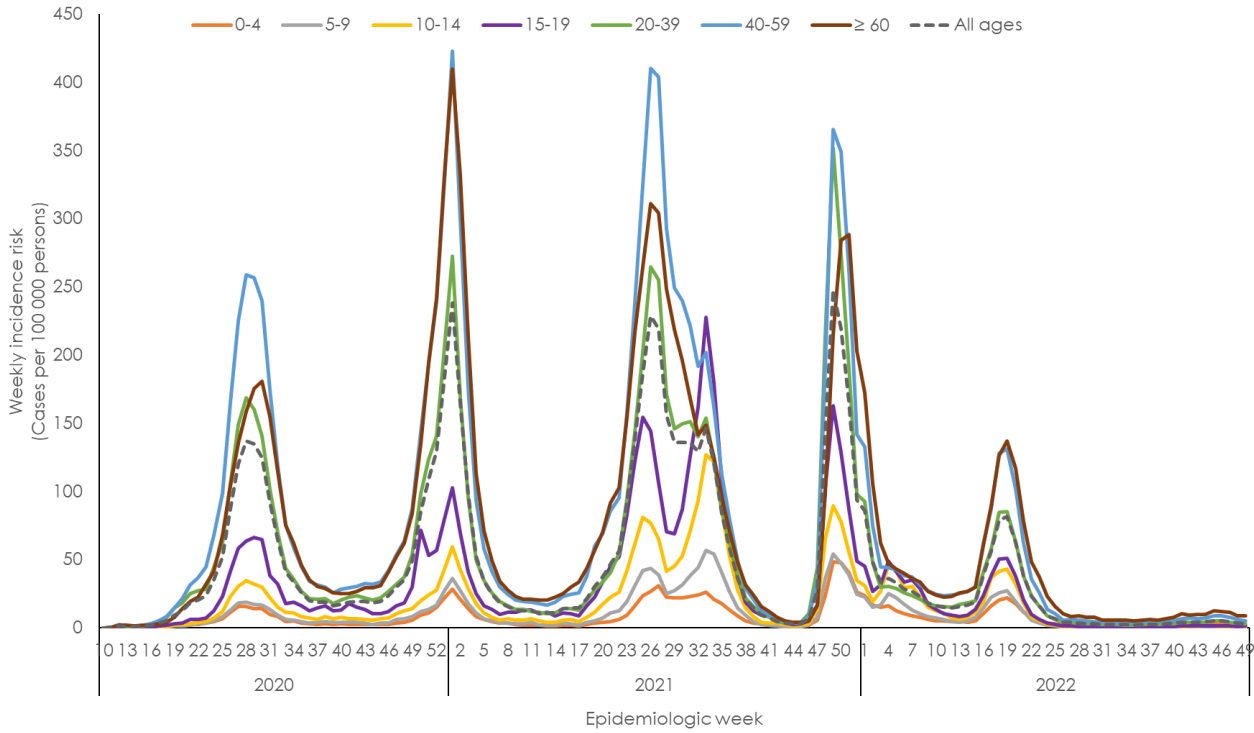


Figure 3: Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week South Africa 3 March 2020 – 10 December 2022 (n = 4 007 976, 37 286 missing age)

Table 2. Number of laboratory-confirmed cases of COVID-19 and cumulative/weekly incidence risk by age group South Africa 3 March 2020 – 10 December 2022 n = 4 007 976, 37 286 missing age)

Age group (years)	Cumulative cases (n) (percentage n/total cases in South Africa)	New cases ¹ detected in week 49 of 2022 (4 - 10 December) n (percentage ² n/total)	Population in mid-2021 ³ n	Cumulative incidence risk (cases per 100 000 persons)	Incidence risk of new cases detected in week 49 of 2022 (cases/100 000 persons)
0-4	67 609 (1.7)	102 (5.4)	5 708 956	1 184.3	1.8
5-9	88 197 (2.2)	22 (1.2)	5 663 296	1 557.3	0.4
10-14	156 800 (3.9)	33 (1.7)	5 671 023	2 764.9	0.6
15-19	221 646 (5.5)	69 (3.7)	4 909 941	4 514.2	1.4
20-24	263 510 (6.6)	89 (4.7)	4 739 305	5 560.1	1.9
25-29	387 554 (9.7)	134 (7.1)	5 324 134	7 279.2	2.5
30-34	448 200 (11.2)	171 (9.0)	5 630 643	7 960.0	3.0
35-39	453 909 (11.3)	185 (9.8)	4 985 251	9 105.0	3.7
40-44	384 929 (9.6)	147 (7.8)	3 881 731	9 916.4	3.8
45-49	366 359 (9.1)	157 (8.3)	3 254 138	11 258.3	4.8
50-54	329 992 (8.2)	173 (9.2)	2 625 390	12 569.3	6.6
55-59	273 979 (6.8)	134 (7.1)	2 243 823	12 210.4	6.0
60-64	193 451 (4.8)	129 (6.8)	1 815 810	10 653.7	7.1
65-69	133 684 (3.3)	99 (5.2)	1 422 604	9 397.1	7.0
70-74	98 325 (2.5)	94 (5.0)	1 024 345	9 598.8	9.2
75-79	64 597 (1.6)	80 (4.2)	647 265	9 980.0	12.4
≥80	75 235 (1.9)	72 (3.8)	595 323	12 637.7	12.1
Unknown	37 286	27			
Total	4 045 262	1 917	60 142 978	6 726.1	3.2

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) ³2021 Mid-year population Statistics South Africa

Methods

Testing for SARS-CoV-2 began on 28 January 2020 at the NICD and after the first case was confirmed in early March 2020, testing was expanded to a larger network of private and NHLS laboratories. Respiratory specimens were submitted from persons under investigation (PUI). Initially, tested individuals were those who had travelled to countries with COVID-19 transmission but the PUI definition was changed over time. Community symptom screening and referral for PCR testing was implemented in April 2020 but the strategy was changed to a more targeted approach in May 2020. Community screening was 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 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 towards the end of October 2020 and results of reported rapid antigen-based tests were included in this report until the week 27 report (week starting 3 July 2022). However, as of the week 28 report (week starting 10 July 2022), this report was updated to only include reported PCR tests due to incomplete and delayed reporting of antigen-based tests and a case of COVID-19 was defined as any person, resident in South Africa, with a single positive SARS-CoV-2 PCR. We excluded specimens collected outside South Africa. Date of specimen receipt in the laboratory was used when date of specimen collection was missing. For reports published from week 2 of 2022 onwards, we used 2021 mid-year population estimates to calculate incidence risk (cumulative and weekly incidence). For historical reports published from week 41 of 2020 to week 1 of 2022, 2020 mid-year population estimates were used, and reports published from epidemiologic week 10 (during the start of COVID-19 epidemic in South Africa) to week 41 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. Until the week 29 of 2020 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 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.