

South African Measles and Rubella Monthly surveillance situational report Measles-Rubella rash surveillance data up to 21 August 2024

1. Summary

From epidemiological week 1 to week 33 of 2024, 178 laboratory-confirmed cases of measles and 2059 cases of rubella were reported in South Africa. Measles transmission has decreased in the Sedibeng district with the last measles case reported in week 30 of 2024. Twenty-one(21) laboratory-confirmed measles cases were reported from epidemiological week 30 (21 July 2024) to week 33 from seven provinces, Eastern Cape 3 cases, Free State 1, Gauteng 8 cases, KwaZulu-Natal 2 cases, Limpopo 1 case, Northern Cape 2 cases and Western Cape 4 cases.

Rubella virus infections increased in the Gauteng province in West Rand, City of Johannesburg and Ekurhuleni districts and continued to circulate in Eastern Cape, KwaZulu-Natal in Uthugela district, Northern Cape in Francis Baart and circulation remain sustained in Western Cape province.

Overall, increasing numbers of suspected measles and rubella cases are being submitted to the National Institute for Communicable Diseases for laboratory confirmation. In parallel, clinical cases with fever and rash are being reported mostly in areas where laboratory-confirmed rubella cases have been detected.

Measles Surveillance

A total of 178 laboratory-confirmed measles cases were reported between epidemiological week 1 and week 33 of 2024 in South Africa, Figure 1. From epidemiological week 1 to week 33 majority of laboratory-confirmed measles cases were reported in Gauteng provinces (Table 1). The last measles case in Sedibeng district was reported in week 30 after laboratory-confirmed measles cases contacts were vaccinated and vaccination campaigns done in schools. Sporadic measles cases have been reported in the City of Johannesburg, City of Tshwane, Ekurhuleni and West Rand districts from week 14 to week 33. Measles cases increased in the City of Johannesburg and Ekurhuleni in epidemiological weeks 26 and 27.



Table 1: Number of laboratory-confirmed measles and rubella cases by province in South Africa, 01 January to 21 August 2024

PROVINCE	Measles cases	Rubella cases
Eastern Cape	28	513
Free State	4	26
Gauteng	89	371
KwaZulu-Natal	9	139
Limpopo	3	3
Mpumalanga	11	13
North West	0	17
Northern Cape	8	214
Western Cape	26	763
South Africa	178	2059

Measles cases affected mostly children in age groups 1-4 years and 5-9 years (Table 2). Most children reported with measles infection were in the age groups that should have been vaccinated during the measles vaccination campaign in 2023. The increase in measles cases in Gauteng province is caused by clusters detected of siblings in families and an outbreak reported previously in Sedibeng district.

Table 2: Measles cases by age group in South Africa, 01 January to 21 August 2024

Province	0-6 months	7-11 months	1-4 years	5-9 years	10-14 years	15-49 Years	>= 50 Years	Unknown	Total
EASTERN CAPE	0	1	5	14	3	2	0	3	28
FREE STATE	1	0	1	1	0	0	0	1	4
GAUTENG	8	4	15	30	4	9	0	19	89
KWAZULU-NATAL	0	0	4	2	1	0	0	2	9
LIMPOPO	0	0	1	0	0	1	0	1	3
MPUMALANGA	0	0	6	0	3	1	0	1	11
NORTH WEST	0	0	0	0	0	0		0	0
NORTHERN CAPE	0	0	1	6	1	0	0	0	8
WESTERN CAPE	0	0	4	6	3	3	0	6	26
South Africa	9	5	37	63	15	16	0	33	178

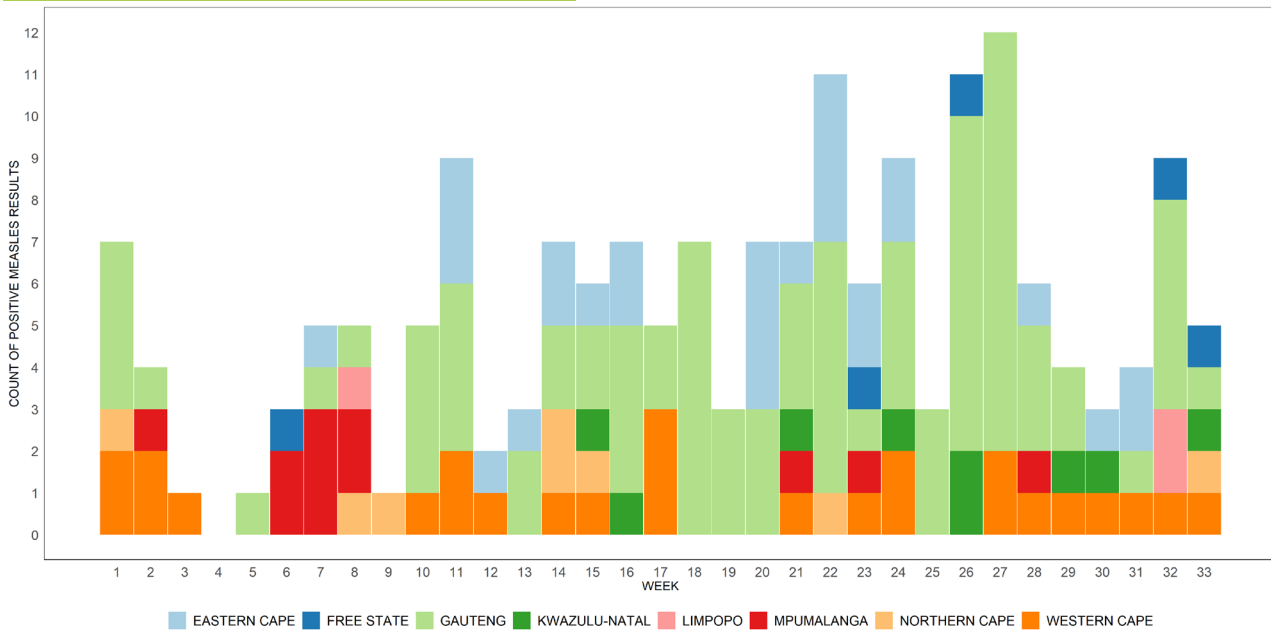


Figure 1. The epidemiological curve showing the number of laboratory-confirmed measles cases by Province in South Africa, from epidemiological week 1–33, 2024 by specimen collection dates.

2. Rubella surveillance

Rubella serology testing is conducted at several NHLS laboratories and the NICD. Rubella testing at the NICD is done to differentiate the infection of rubella and measles from fever-rash surveillance samples from patients who meet the suspected measles/rubella case definition. Data reported in the situation report is for samples tested at NICD from measles and rubella rash surveillance.

From week 1 to week 33 of 2024, 2059 laboratory-confirmed rubella cases have been reported in South Africa, Table 1 and Figure 2. As shown in Table 3, the Western Cape reported 763 cases, the Eastern Cape reported 513 cases, while the Northern Cape and Gauteng reported 214 and 371 cases, respectively.

Rubella circulation had increased in Eastern Cape, Gauteng, Kwazulu-Natal and Northern Cape provinces in recent epidemiological weeks, with sustained circulation in Western Cape, Northern Cape and Eastern Cape provinces, Figure 2. In Gauteng, Western Cape, and Eastern Cape provinces all districts are affected, in Northern Cape province, four districts are affected which are Pixley Ka Seeme, Namakwa, Frances Baard and ZF Mgcawu. In Kwazulu-Natal, one district is mostly affected, namely Uthukela, while sporadic cases have been reported among other districts.

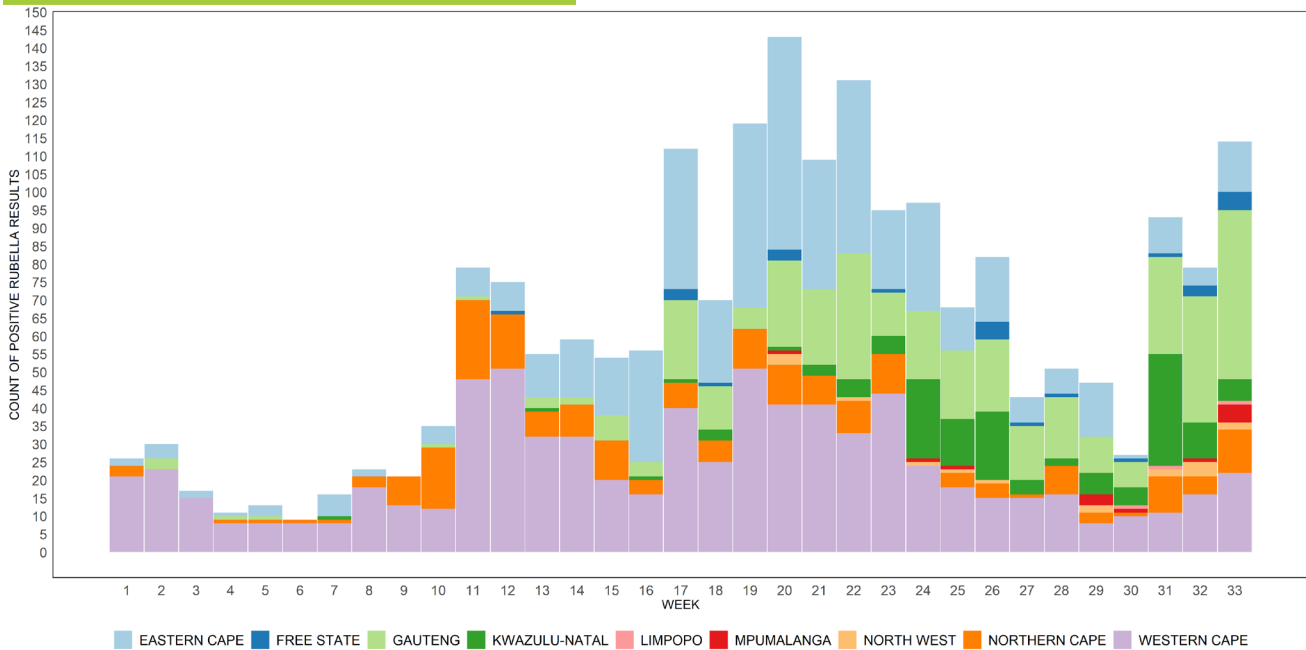


Figure 2. The epidemiological curve of the number of laboratory-confirmed rubella cases by Province in South Africa, from epidemiological week 1- 33, 2024 by specimen collection dates.

Rubella infection affected mostly children from 1 year to 12 years. Fifty-seven(57) rubella cases were aged between 15 to 49 years of which 35 patients were females of childbearing age (Table 3). Rubella infection poses a risk of congenital rubella syndrome if they are infected in the first trimester of the pregnancy. Rubella cases were mostly reported in children aged between 5 and 9.

Table 3: Number of rubella laboratory-confirmed cases by age group, epidemiological week 1-33, 2024

PROVINCE	0-6 Months	7-11 Months	1-4 Years	5-9 Years	10-14 Years	15-49 Years	>= 50 Years	UNKNOWN	Total
EASTERN CAPE	0	2	100	263	71	7	0	70	513
FREE STATE	0	0	6	8	1	0	0	11	26
GAUTENG	0	0	42	158	28	5	2	136	371
KWAZULU-NATAL	0	0	14	64	8	1	0	52	139
LIMPOPO	0	0	0	0	0	1	0	2	3
MPUMALANGA	0	0	0	4	2	0	0	7	13
NORTH WEST	0	0	0	8	3	1	0	5	17
NORTHERN CAPE	0	0	26	103	34	14	0	37	214
WESTERN CAPE	1	4	205	324	77	28	0	124	763
SOUTH AFRICA	1	6	393	932	224	57	2	444	2059



Conclusion

Measles clusters have been reported in areas with low measles vaccination coverage in Gauteng province. Measles circulation in the Sedibeng district decreased after vaccinating measles contacts and in schools where measles cases were detected. Routine measles vaccination should be strengthened and measles catch-up doses continue in healthcare facilities for the children who missed their scheduled doses. Vaccinating children with the measles vaccine protects them from severe illness caused by measles virus infection, including severe pneumonia, encephalitis, blindness, deafness, and death.

Rubella cases have increased in Eastern Cape, Gauteng, KwaZulu Natal, Western Cape and Northern Cape provinces leading to suspected measles outbreaks in KwaZulu-Natal and Northern Cape provinces. Both suspected measles outbreaks in both KwaZulu-Natal and Northern Cape provinces were confirmed to be rubella cases by the National Measles Reference Laboratory at the National Institute for Communicable Diseases. Health awareness is recommended in the areas where rubella cases are circulating to inform the population how to prevent rubella infection risk. Although rubella infections cause mild disease in adults and children, pregnant women in their first trimester of pregnancy who acquire rubella for the first time are at risk of passing rubella onto their foetus, with consequential congenital rubella syndrome. Healthcare workers should collect urine, throat swabs, and blood sample specimens for diagnostic testing (serology and PCR detection) on infants with suspected CRS. A good clinical history should be obtained from their mothers regarding fever/rash illness during pregnancy. A completed case investigation form for congenital rubella syndrome should be completed along with the submission of clinical samples to the NICD for testing.

Measles, acute rubella, and congenital rubella syndrome are notifiable medical conditions. Strengthening surveillance for measles and rubella is recommended to increase the chance of detecting outbreaks and monitoring the effectiveness of routine vaccination programs. Clinicians are encouraged to be on the lookout for measles and rubella cases. Samples should be collected from clinically suspected measles and rubella patients and sent to the NICD as part of the measles and rubella elimination surveillance for laboratory confirmation.

Diagnostic testing for fever-rash surveillance includes a completed measles-rubella case investigation form (found at <https://www.nicd.ac.za/wp-content/uploads/2023/10/Measles-Rubella-CIF.pdf>) and blood for serological testing together with a throat swab or urine for PCR testing. Measles and rubella suspected cases samples should be sent to the NICD for laboratory confirmation. Based on details in the case investigation form and results of serological testing, PCR for measles and/or rubella will be done.