


Measles and rubella elimination country profile

Montenegro

Measles elimination status

2016 eliminated
2017 eliminated




Source: European Regional Verification Commission for Measles and Rubella Elimination (RVC) meeting report: www.euro.who.int/7thrv

Measles and rubella surveillance

National case-based surveillance for measles, rubella and CRS

Lab confirmation for diagnosis of measles, rubella and CRS



Source: WHO/UNICEF Joint Reporting Form on Immunization, 2017

Measles and rubella immunization schedule, 2017

	Vaccine	Schedule	Year of introduction	
MCV1	MMR	13 months	MCV2	1994
MCV2	MMR	6 years	RCV	1994
Measles vaccination in school				Yes

Source: Immunization schedule, WHO, Data and Statistics, Immunization Monitoring and Surveillance (http://www.who.int/immunization/monitoring_surveillance/data/en/)

MMR = measles-mumps-rubella vaccine; MCV1 = first dose measles-containing vaccine; MCV2 = second dose measles-containing vaccine; RCV = rubella-containing vaccine

Definition used for an outbreak


There is no "classic" definition of a measles outbreak in Montenegro as country is in the elimination phase. Defining and outbreak is based on several parameters with the main one being number of endogenous cases, burden of the healthcare services and other

Source: Measles and rubella elimination Annual Status Update report, 2017



Rubella elimination status

2016 eliminated
2017 eliminated



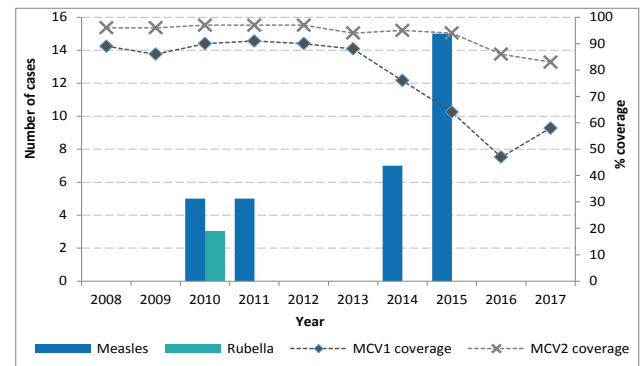
Source: European Regional Verification Commission for Measles and Rubella Elimination (RVC) meeting report: www.euro.who.int/7thrv

Demographic information, 2017

Total population	628 960
< 1 year old	6880
< 5 years old	35 780

Source: World Population Prospects: The 2017 Revision, New York, United Nations

Measles and rubella cases and immunization coverage, 2008–2017

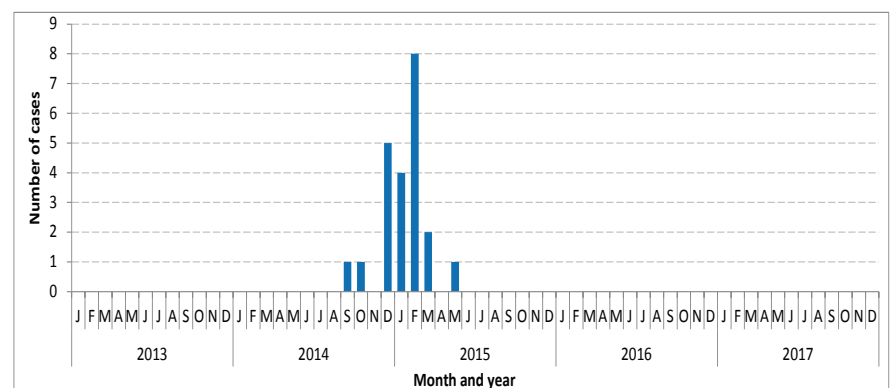


Source: Disease incidence and immunization coverage (WUENIC), WHO, Data and Statistics, Immunization Monitoring and Surveillance

(http://www.who.int/immunization/monitoring_surveillance/data/en/)

MCV1 = first dose of measles-containing vaccine
MCV2 = second dose of measles-containing vaccine

Confirmed measles cases by month of onset, 2013-2017



Source: CISID 2017

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Measles incidence, epidemiologic and virologic characteristics, 2013-2017

	Suspected measles cases	Confirmed measles cases				Discarded as non-measles	Measles incidence	Genotypes detected
		Laboratory	Epi- linked	Clinically	Total			
2013	10	0	0	0	0	10	0	NA
2014	65	7	0	ND	7	60	6.5	ND
2015	19	13	2	0	15	4	16	ND
2016	3	0	0	0	0	3	0	NA
2017	6	0	0	0	0	6	0	NA

Source: Measles and rubella elimination Annual Status Update report, 2013-2017
Incidence calculated per 1 million population
ND = Data not available; NA= Not applicable

Rubella incidence, epidemiologic and virologic characteristics, 2013-2017

	Suspected rubella cases	Confirmed rubella cases				Discarded as non-rubella	Rubella incidence	Genotypes detected
		Laboratory	Epi- linked	Clinically	Total			
2013	7	0	0	0	0	7	0	NA
2014	7	0	0	0	0	7	0	NA
2015	8	0	0	0	0	8	0	NA
2016	0	0	0	0	0	0	0	NA
2017	6	0	0	0	0	6	0	NA

Source: Measles and rubella elimination Annual Status Update report, 2013-2017
Incidence calculated per 1 million population
ND = Data not available; NA= Not applicable

RVC comments, based on 2017 reporting

The Regional Verification Commission for Measles and Rubella Elimination (RVC) concluded that endemic transmission of both measles and rubella remained interrupted in Montenegro in 2017 and confirmed that measles and rubella elimination has been sustained. The RVC commends the recent nomination and accreditation of a National Measles and Rubella Reference Laboratory in Montenegro. However, the RVC is extremely concerned over the continuing low vaccination coverage, resulting in a dangerous accumulation of susceptible children across the country and creating a high risk for re-establishing endemic transmission. The RVC urges efforts to increase vaccination coverage and close existing immunity gaps.

Source: European Regional Verification Commission for Measles and Rubella Elimination (RVC) meeting report: www.euro.who.int/7thrv

Surveillance performance indicators and targets

- Rate of discarded cases: at least 2 discarded measles or rubella cases per 100 000 population
- % cases with adequate laboratory investigation: $\geq 80\%$
- % origin of infection known: $\geq 80\%$
- Rate of viral detection: $\geq 80\%$

Supplementary immunization activities

Year	Target age	Vaccine used	% Coverage
2017	1-6Y	MMR	88%
2016	0-12Y	MMR	30.3%
2016	0-12Y	MMR	68.4%

Source: Supplementary immunization activities, WHO, Data and Statistics, Immunization Monitoring and Surveillance (http://www.who.int/immunization/monitoring_surveillance/data/en/)
MMR = measles-mumps-rubella vaccine
ND = Data not available

Measles surveillance and laboratory performance indicators, 2013-2017

	Discarded non-measles rate	% 1st sub-national unit with ≥ 2 discarded cases	% cases with adequate laboratory investigation	% origin of infection known	# specimen tested for measles	% positive for measles	Rate of viral detection	% WHO and proficient labs
2013	1.6	33.3%	100%	NA	ND	ND	NA	ND
2014	0.8	19%	91.6%	100%	7	0%	0	ND
2015	9.5	9.5%	100%	100%	19	79%	0	0%
2016	4.8	30.4%	100%	NA	30	0%	NA	0%
2017	0	14.3%	100%	NA	0	NA	NA	0%

Source: ASU 2013-2017
ND = Data not available; NA= Not applicable
A proficient laboratory is WHO accredited and/or has an established quality assurance programme with oversight by a WHO accredited laboratory

Rubella surveillance and laboratory performance indicators, 2013-2017

	Discarded non-rubella rate	% 1st sub-national unit with ≥ 2 discarded cases	% cases with adequate laboratory investigation	% origin of infection known	# specimen tested for rubella	% positive for rubella	Rate of viral detection	% WHO and proficient labs
2013	1.1	33.3%	100%	NA	ND	ND	NA	ND
2014	1.1	19%	100%	NA	0	0%	0	ND
2015	1.3	14.3%	100%	NA	8	0%	0	0%
2016	12.9	73.9%	100%	NA	72	0%	NA	0%
2017	0	19%	100%	NA	0	NA	NA	0%

Source: ASU 2013-2017
ND = Data not available; NA= Not applicable
A proficient laboratory is WHO accredited and/or has an established quality assurance programme with oversight by a WHO accredited laboratory

Information on CRS, 2017

No cases reported

Source: Measles and rubella elimination Annual Status Update report, 2017
CRS = congenital rubella syndrome