


# Measles and rubella elimination country profile

## Estonia

### 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](http://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	1 year	MCV2	1994
MCV2	MMR	13 years	RCV	1993
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/](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

2 or more confirmed cases which are temporally related (with dates of rash onset occurring between 7 and 18 days apart for measles, and 12 and 46 days apart for rubella) and epidemiologically or virologically linked or both




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



### Rubella elimination status

2016 eliminated  
2017 eliminated



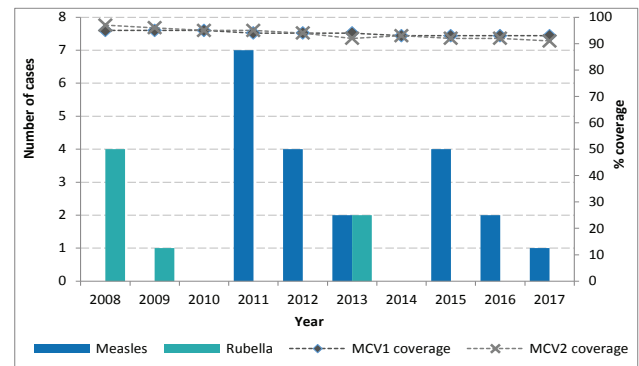
Source: European Regional Verification Commission for Measles and Rubella Elimination (RVC) meeting report: [www.euro.who.int/7thrv](http://www.euro.who.int/7thrv)

### Demographic information, 2017

Total population	1 309 632
< 1 year old	12 763
< 5 years old	66 958

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

### Measles and rubella cases and immunization coverage, 2008–2017

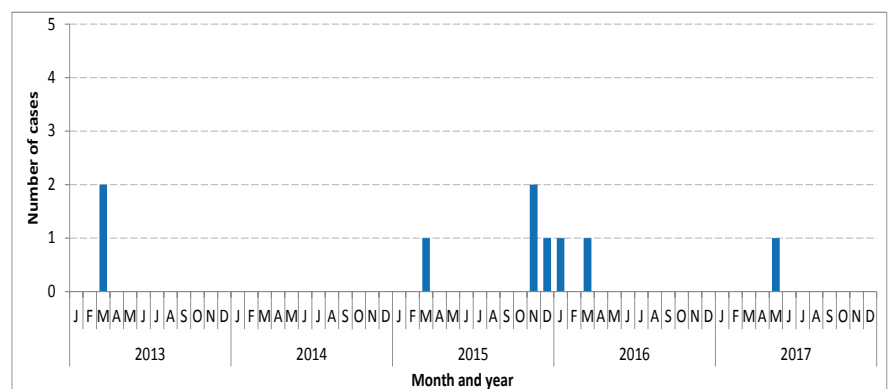


Source: Disease incidence and immunization coverage (WUENIC), WHO, Data and Statistics, Immunization Monitoring and Surveillance

([http://www.who.int/immunization/monitoring\\_surveillance/data/en/](http://www.who.int/immunization/monitoring_surveillance/data/en/))

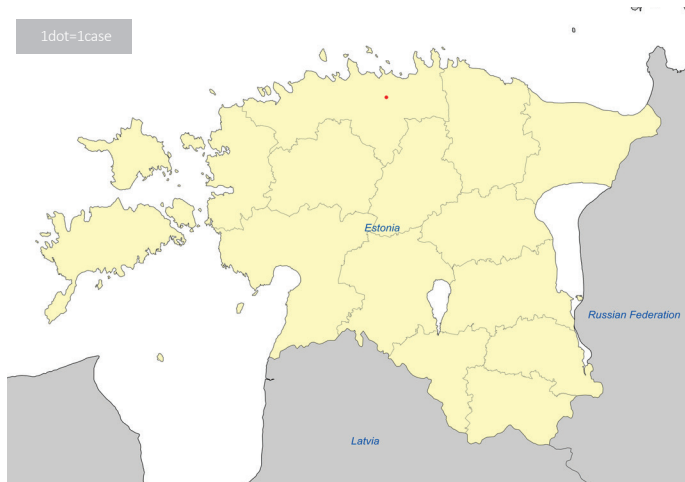
MCV1 = first dose of measles-containing vaccine  
MCV2 = second dose of measles-containing vaccine

### Confirmed measles cases by month of onset, 2013-2017



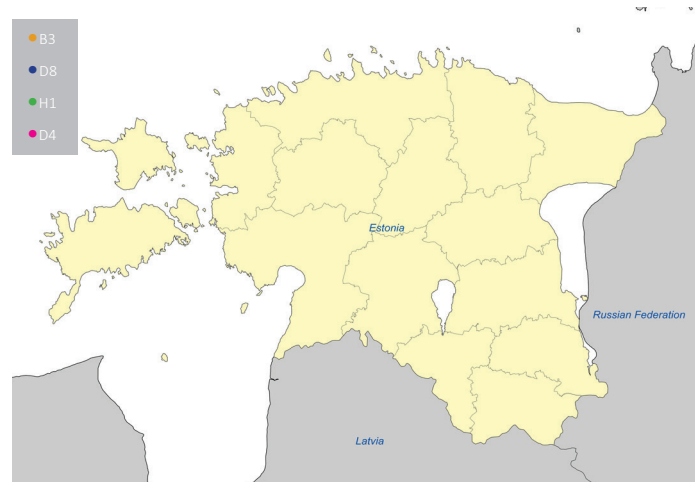
Source: CISD 2017

### Measles cases by first subnational level, 2017



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

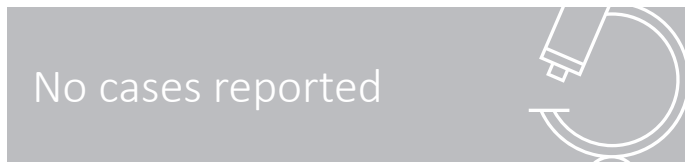
### Measles genotypes by first subnational level, 2017



Source: MeaNS 2017  
(Note: no subnational genotype information available)

Note: The dots in the maps are placed randomly within the administrative regions.  
Map disclaimer: The boundaries and names shown and the designations used on the maps do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

### Information on CRS, 2017



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

### Sources of infection, 2017

	Measles	Rubella
Imported	1	0
Import-related	0	0
Unknown/ Not reported	0	0
Endemic	0	0

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

### 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 Estonia in 2017 and confirmed that measles and rubella elimination has been sustained. The RVC would appreciate more information on additional tested specimens that were not considered as suspected cases in the ASU. The RVC strongly recommends genotyping of detected viruses and inclusion of data in future ASUs.

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

# Measles and rubella elimination country profile

## Estonia

### 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	206	2	0	0	2	36	0	ND
2014	305	0	0	0	0	39	0	NA
2015	328	4	0	0	4	41	0.8	ND
2016	77	2	0	0	2	10	0	D8
2017	40	1	0	0	1	39	0.8	ND

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

### Measles surveillance and laboratory performance indicators, 2013-2017

	Discarded non-measles rate	% 1st sub-national unit with $\geq 2$ 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	2.7	80%	>90%	100%	206	ND	ND	ND
2014	0.8	100%	>90%	NA	305	0%	NA	ND
2015	3.1	100%	100%	100%	328	8.9%	100%	100%
2016	0.8	60%	100%	100%	77	17%	50%	100%
2017	2.9	60%	100%	100%	44	2.3%	ND	100%

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 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	539	1	1	0	2	8	1.5	ND
2014	640	0	0	0	0	10	0	NA
2015	670	0	0	0	0	14	0	NA
2016	477	0	0	0	0	12	0	NA
2017	21	0	0	0	0	21	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 surveillance and laboratory performance indicators, 2013-2017

	Discarded non-rubella rate	% 1st sub-national unit with $\geq 2$ 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	0.6	0%	>90%	100%	539	ND	ND	ND
2014	3	80%	>90%	NA	640	2%	NA	ND
2015	1.1	80%	100%	NA	670	0%	NA	79%
2016	0.9	40%	100%	NA	477	0%	NA	100%
2017	1.6	40%	100%	NA	114	0%	NA	100%

Source: ASU 2013-2017  
ND = Data not available; NA= Not applicable  
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### 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:  $\geq 80\%$