Measles and rubella elimination country profile
Bulgaria

World Health Organization
REGIONAL OFFICE FOR Europe

Measles elimination status

2016 eliminated

2017 eliminated

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

Rubella elimination status

2016 interrupted

2017 interrupted

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

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

Demographic information, 2017

Total population	7 084 571
< 1 year old	61 484
< 5 years old	320 467

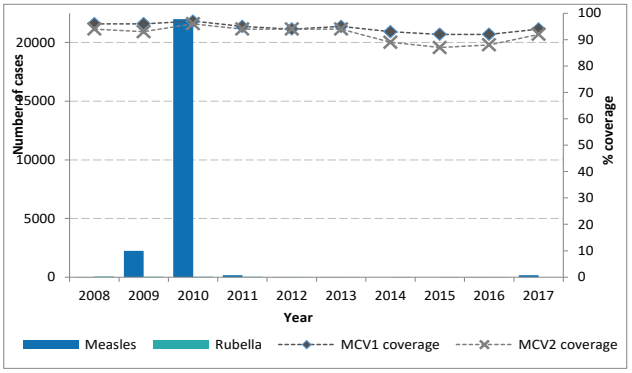
Source: World Population Prospects: The 2017 Revision, New York, United Nations

Measles and rubella immunization schedule, 2017

	Vaccine	Schedule	Year of introduction	
MCV1	MMR	13 months	MCV2	1983
MCV2	MMR	12 years	RCV	1992
Measles vaccination in school				No

Source: Immunization schedule, WHO, Data and Statistics, Immunization Monitoring and Surveillance (http://www.who.int/immunization/monitoring_surveillance/data/en/) and communication with the country
MMR = measles-mumps-rubella vaccine; MCV1 = first dose measles-containing vaccine; MCV2 = second dose measles-containing vaccine; RCV = rubella-containing vaccine

Measles and rubella cases and immunization coverage, 2008–2017



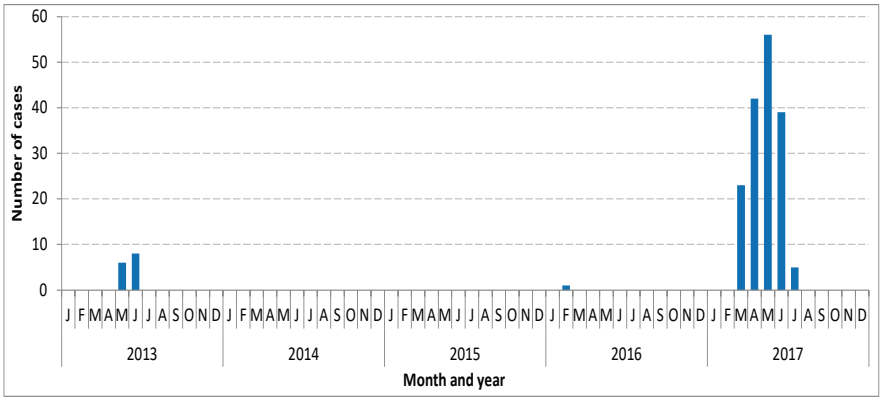
Source: Disease incidence and immunization coverage (WUENIC), WHO, Data and Statistics, Immunization Monitoring and Surveillance (http://www.who.int/immunization/monitoring_surveillance/data/en/)
MCV1 = first dose of measles-containing vaccine
MCV2= second dose of measles-containing vaccine

Definition used for an outbreak

2 or more measles or rubella cases which are temporarily related and epidemiologically or virologically linked, or both

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

Confirmed measles cases by month of onset, 2013-2017



Source: CISID 2017

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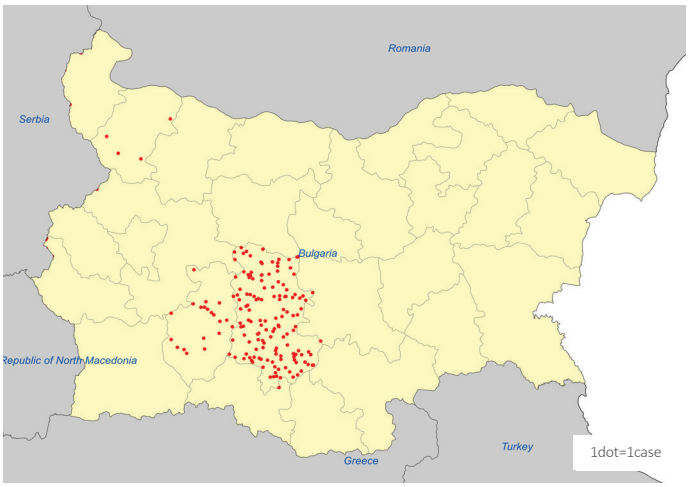
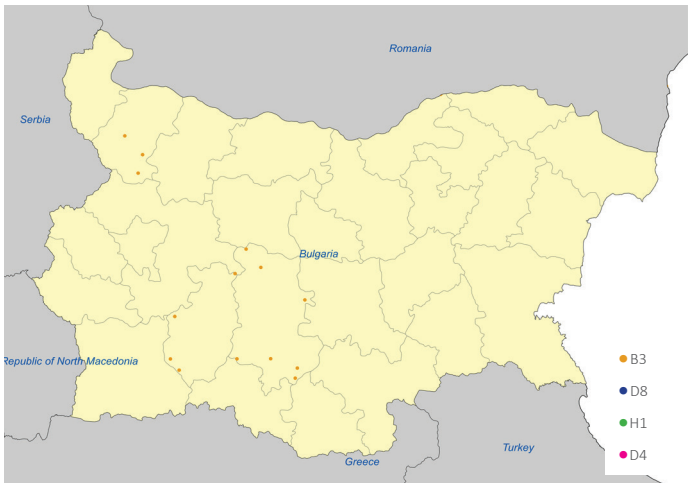
Measles cases by first subnational level, 2017



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

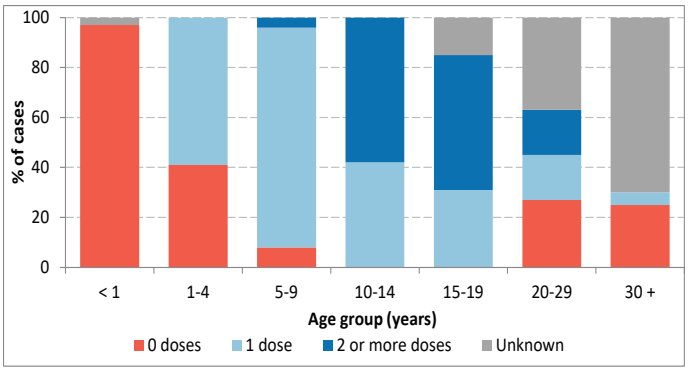
Measles genotypes by first subnational level, 2017



Source: MeaNS 2017

Note: 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.

Measles cases by age group and vaccination status, 2017



Source: Measles and rubella elimination Annual Status Update report, 2017
Note: Excludes imported cases

Sources of infection, 2017

	Measles	Rubella
Imported	3	0
Import-related	162	0
Unknown/ Not reported	0	0
Endemic	0	0

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

Information on CRS, 2017

No cases reported

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

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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	19	13	1	0	14	5	1.6	D8
2014	3	0	0	0	0	3	0	NA
2015	10	0	0	0	0	10	0	NA
2016	2	1	0	0	1	1	0	H1
2017	205	122	36	7	165	40	22.8	B3

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 ≥ 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	0.1	11%	100%	100%	ND	ND	100%	100%
2014	0	0%	100%	NA	3	0%	NA	100%
2015	0.1	0%	100%	NA	10	0%	NA	100%
2016	0	0%	100%	NA	2	50%	100%	100%
2017	0.6	3.6	80.5%	100%	165	73.9%	100%	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	13	0	1	9	10	3	1.4	ND
2014	8	1	0	6	7	1	1	ND
2015	16	0	0	5	5	11	0.7	ND
2016	5	0	0	2	2	3	0.3	ND
2017	3	0	0	0	0	3	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 ≥ 2 discarded cases	% cases with adequate laboratory investigtion	% origin of infection known	# specimen tested for rubella	% positive for rubella	Rate of viral detection	% WHO and proficient labs
2013	0	11%	100%	100%	ND	ND	0%	100%
2014	0	0%	38%	0%	3	33.3%	NA	100%
2015	0.2	0%	100%	NA	11	0%	NA	100%
2016	0	0%	100%	NA	3	0%	NA	100%
2017	0	0%	100%	NA	3	0%	NA	100%

Source: ASU 2013-2017
ND = Data not available; NA= Not applicable
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RVC comments, based on 2017 reporting

The Regional Verification Commission for Measles and Rubella Elimination (RVC) welcomes recent steps taken to improve vaccination coverage and encourages continued activities to further increase and sustain high routine vaccination coverage at all administrative levels. Surveillance performance and sensitivity need to be strengthened and better documented.

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

Surveillance performance indicators and targets

a. Rate of discarded cases: at least 2 discarded measles or rubella cases per 100 000 population
b. % cases with adequate laboratory investigation: ≥ 80%
c. % origin of infection known: ≥ 80%
d. Rate of viral detection: ≥ 80%

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