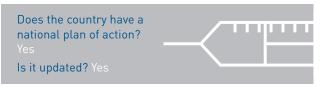


Measles elimination status



Source:European Regional Verification Commission for Measles and Rubella Elimination (RVC) meeting report: www.euro.who.int/6thRVC

National plan of action



Source: Measles and rubella elimination Annual Status Update report, 2016

Measles and rubella immunization schedule, 2016

	Vaccine	Schedule	Year of introduction				
MCV1	MMR	11 months	MCV2	1973			
MCV2	MMR	+1 month	RCV	1973			
M	Measles vaccination in school						

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

 \dot{MMR} = measles-mumps-rubella-containing vaccine; MCV1 = first dose measles-containing vaccine; MCV2 = second dose measles-containing vaccine; RCV = rubella-containing vaccine

Definition used for an outbreak



Source: Measles and rubella elimination Annual Status Update report, 2016



Rubella elimination status



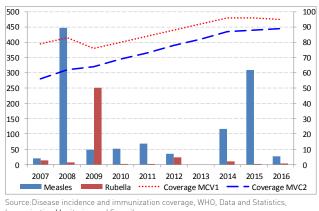
Source:European Regional Verification Commission for Measles and Rubella Elimination (RVC) meeting report: www.euro.who.int/6thRVC $\,$

Demographic information, 2016

Total population	8 569 633
< 1 year old	81 880
< 5 years old	408 354

Source: World Population Prospects: The 2015 Revision, New York, United Nations

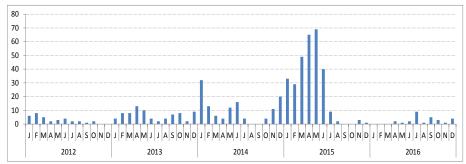
Measles and rubella cases and immunization coverage, 2007–2016



Immunization Monitoring and Surveilance (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, 2012-2016



Source: CISID2 2016



Measles cases by first subnational level, 2016

Measles genotypes by first subnational level, 2016

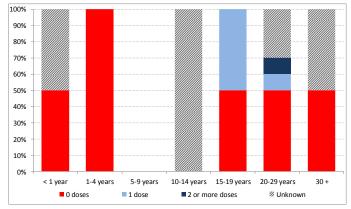




Note: The dots in the maps are placed randomly within the administrative regions.

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, 2016



Source: Measles and rubella elimination Annual Status Update report, 2016

Information on CRS, 2016



Source: Measles and rubella elimination Annual Status Update report, 2016 \mbox{CRS} = congenital rubella syndrome

Sources of infection, 2016

	Measles	Rubella
Imported	14	0
Import-related	10	0
Unknown/ Not reported	0	1
Endemic	3	2

Source: Measles and rubella elimination Annual Status Update report, 2016



Measles incidence, epidemiologic and virologic characteristics. 2012-2016

	Suspecte measles cases	Suspected	C	Confirmed m	ieasles case	S	Discarded as	Measles	Genotypes	
			Labora- tory	Epi- linked	Clincally	Total	non- measles	incidence	detected	
	2012	ND	20	8	7	35	ND	4.2	D4,D9	
	2013	96	68	14	3	76	20	8	D4.D8	
	2014	167	88	4	25	117	50	13.8	B3,D8,D9,H1	
	2015	386	230	12	67	309	74	36	D8	
	2016	53	25	0	2	27	26	3.1	B3, D8	

Source: Measles and rubella elimination Annual Status Update report, 2012-2016 Incidence calculated per 1 million population ND = Data not available; NA= Not applicable

Rubella incidence, epidemiologic and virologic characteristics, 2012-2016

Suspected		Confirmed m	easles cases	i	Discarded as	Rubella	Genotypes
cases	Laboratory	Epi- linked	Clincally	Total	non- rubella	incidence	detected
ND	15	5	3	23	ND	2.7	ND
14	8	0	0	8	6	0.9	ND
22	0	0	11	11	11	1.3	ND
14	1	0	0	1	13	0.1	ND
19	2	1	0	3	16	0.3	ND
	ND 14 22 14	Suspected rubella casesLaboratoryND15148220141	Suspected rubella CasesEpi- linkedND155148022001410	Suspected rubella cases Epi- linked Clincally ND 15 5 3 14 8 0 0 22 0 0 11 14 1 0 0	Laboratory Epi-linked Clincally Total ND 15 5 3 23 14 8 0 0 8 22 0 0 11 11 14 1 0 0 1	Suspected rubella cases Epi-tinked Clincally Total non- rubella ND 15 5 3 23 ND 14 8 0 0 8 6 22 0 0 11 11 11 14 1 0 0 1 13	Suspected rubella cases Epi-tinked Clincally Total as non- rubella Rubella incidence ND 15 5 3 23 ND 2.7 14 8 0 0 8 6 0.9 22 0 0 11 11 11.3 1.3 14 1 0 0 1 1.3 0.1

Source: Measles and rubella elimination Annual Status Update report. 2012-2016 Incidence calculated per 1 million populatio ND = Data not available; NA= Not applicable

Measles surveillance and laboratory performance indicators, 2012-2016

	Discarded non- measles rate	% 1st sub- national unit with ≥ 2 discarded cases	% cases with adequate laboratory investiga- tion	% origin of infection known	# specimen tested for measles	% positive for measles	Rate of viral detection	% WHO and proficient labs
2012	ND	ND	ND	ND	ND	ND	ND	ND
2013	0.3	0%	92%	94%	ND	ND	ND	ND
2014	0.6	0%	74%	83%	416	18.3%	93%	ND
2015	0.9	0%	73%	100%	695	28.5%	79%	100%
2016	0.3	0%	89%	100%	402	5.2%	100%	100%

Source: ASU 2012-2016, MeaNS 2012-2016 and laboratory accreditation results 2012-2016 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, 2012-2016

	Discarded non- rubella rate	% 1st sub- national unit with > 2 discarded cases	% cases with adequate laboratory investiga- tion	% origin of infection known	# specimen tested for rubella	% positive for rubella	Rate of viral detection	% WHO and proficient labs
2012	ND	ND	ND	ND	ND	ND	ND	ND
2013	7%	0%	ND	100%	ND	ND	ND	ND
2014	0.1	0%	52%	91%	67	0%	ND	ND
2015	0.2	0%	93%	100%	329	0%	ND	100%
2016	0.2	0%	95%	67%	409	0.7%	ND	100%

Source: ASU 2012-2016, RubeNS 2012-2016 and laboratory accreditation results 2012-2016

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

RVC comments, based on 2016 reporting

The Regional Verification Commission for Measles and Rubella Elimination (RVC) commends the National Verification Committee (NVC), national health authorities and public health system on sustained interruption of measles and rubella transmission. The RVC anticipates that coverage data from modelling will be used to effectively target efforts to reduce susceptibility. The RVC urges the national health authorities to improve the rate of viral detection of rubella and assure that national and subnational immunization coverage data are available in time for inclusion in future ASUs.

Source: Regional Verification Commission for Measles and Rubella Elimination (RVC) meeting report (www.euro.who.int/6thRVC)

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%