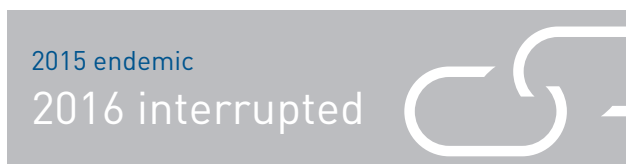


# Measles and rubella elimination country profile Switzerland

## Measles elimination status



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

## Rubella elimination status



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

## National plan of action



Source: Measles and rubella elimination Annual Status Update report, 2016  
ND= Data not available

## Demographic information, 2016

Total population	8 379 477
< 1 year old	85 760
< 5 years old	428 839

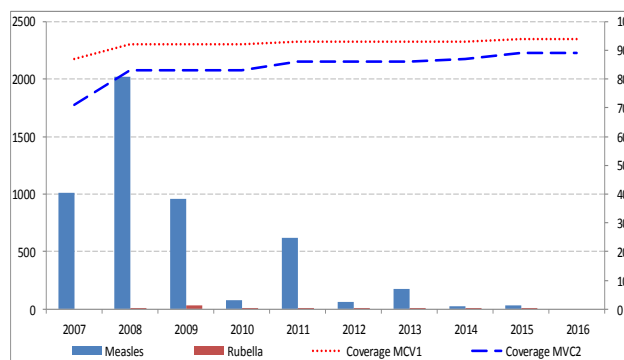
Source: World Population Prospects: The 2015 Revision, New York, United Nations

## Measles and rubella immunization schedule, 2016

	Vaccine	Schedule	Year of introduction	
MCV1	MMR	12 months	MCV2	1996
MCV2	MMR	15-24 months	RCV	1973
Measles vaccination in school				ND

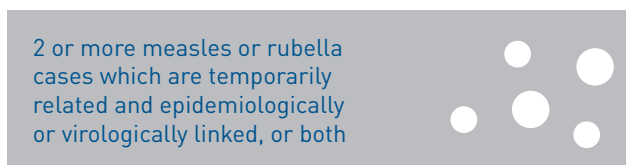
Source: Immunization schedule, WHO, Data and Statistics, Immunization Monitoring and Surveillance ([http://www.who.int/immunization/monitoring\\_surveillance/data/en/](http://www.who.int/immunization/monitoring_surveillance/data/en/))  
MMR = measles-mumps-rubella-containing vaccine; MCV1 = first dose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

## Measles and rubella cases and immunization coverage, 2007–2016



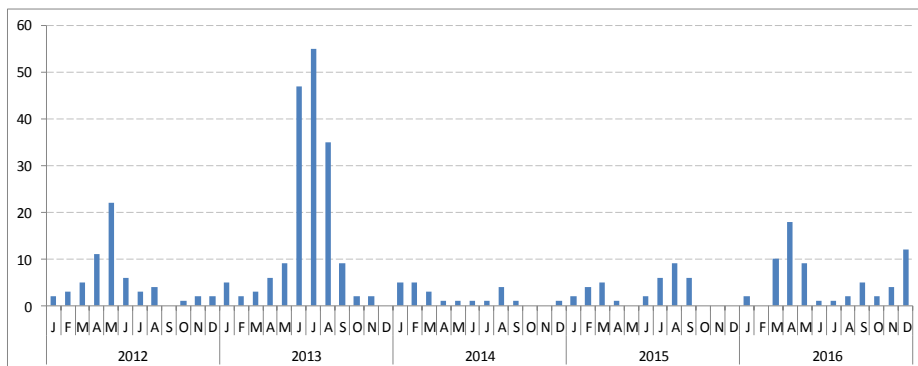
Source: Disease incidence and immunization coverage, WHO, Data and Statistics, Immunization Monitoring and Surveillance ([http://www.who.int/immunization/monitoring\\_surveillance/data/en/](http://www.who.int/immunization/monitoring_surveillance/data/en/))  
MCV1 = first dose of measles-containing vaccine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

## Definition used for an outbreak



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

## Confirmed measles cases by month of onset, 2012–2016



Source: CISID2 2016



# Measles and rubella elimination country profile Switzerland

## Measles cases by first subnational level, 2016



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

## Measles genotypes by first subnational level, 2016

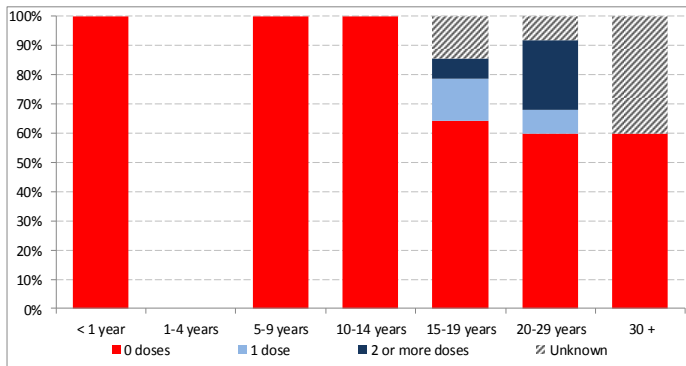


Source: MeaNS 2016

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



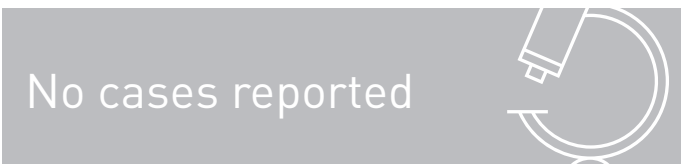
Source: Measles and rubella elimination Annual Status Update report, 2016

## Sources of infection, 2016

	Measles	Rubella
Imported	12	0
Import-related	43	0
Unknown/ Not reported	3	0
Endemic	7	0

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

## Information on CRS, 2016



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

# Measles and rubella elimination country profile Switzerland

## Measles incidence, epidemiologic and virologic characteristics, 2012-2016

	Suspected measles cases	Confirmed measles cases				Discarded as non-measles	Measles incidence	Genotypes detected
		Laboratory	Epi-linked	Clinically	Total			
2012	ND	28	5	12	45	ND	4.7	D4
2013	212	113	21	42	176	33	19.7	D8
2014	68	14	2	7	23	45	1.7	B3,D8,H1
2015	65	33	5	3	41	30	3.5	B3,D8,H1
2016	101	52	9	4	65	36	6.4	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

## Measles surveillance and laboratory performance indicators, 2012-2016

	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
2012	0.2	ND	80%	86.3%	ND	ND	ND	ND
2013	0.3	0%	78.9%	92%	ND	ND	25%	ND
2014	0.2	0%	86.4%	91.2%	57	66.7%	80%	ND
2015	0.1	0%	91.8%	82.9%	56	76.8%	33.3%	100%
2016	0.8	11.5%	94.6%	95.4%	88	73.9%	50%	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 incidence, epidemiologic and virologic characteristics, 2012-2016

	Suspected rubella cases	Confirmed measles cases				Discarded as non-rubella	Rubella incidence	Genotypes detected
		Laboratory	Epi-linked	Clinically	Total			
2012	ND	3	0	0	3	ND	0.4	ND
2013	41	6	0	0	6	35	0.6	ND
2014	39	4	0	0	4	35	0.5	ND
2015	26	3	0	0	3	23	0.4	ND
2016	0	0	0	0	0	2	0	NA

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 surveillance and laboratory performance indicators, 2012-2016

	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
2012	NA	ND	97.8%	66.7%	ND	ND	ND	ND
2013	NA	NA	82.9%	50%	ND	ND	ND	ND
2014	NA	NA	92.3%	75%	36	100%	ND	ND
2015	NA	NA	88.5%	66.7%	23	95.7%	ND	100%
2016	NA	NA	NA	NA	28	92.9%	NA	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 interruption of endemic measles transmission in Switzerland. The RVC commends the national health authorities and encourages them to continue with awareness campaigns for vaccination against measles to close immunity gaps among adults. However, the RVC urges improvement of the quality of measles and rubella surveillance and increasing of MRCV2 at subnational (cantonal) level. The RVC urges the national health authorities and public health system to strengthen activities in line with WHO resolutions and guidelines to achieve and document elimination of rubella as well.

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

## 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%