Measles and rubella elimination country profile
Turkey

World Health Organization
REGIONAL OFFICE FOR **Europe**

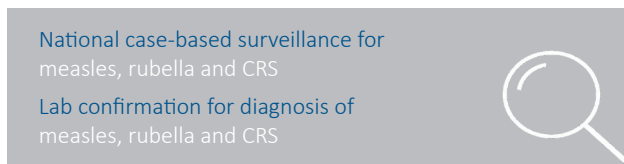## Measles elimination status
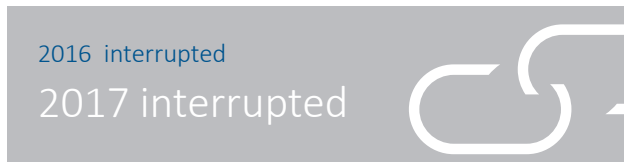
2016 interrupted
2017 interrupted

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

Rubella elimination status

2016 endemic
2017 endemic

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	80 745 020
< 1 year old	1 314 452
< 5 years old	6 728 071

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

Measles and rubella immunization schedule, 2017

	Vaccine	Schedule	Year of introduction	
MCV1	MMR	12 months	MCV2	1998
MCV2	MMR	6 years	RCV	2006
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

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

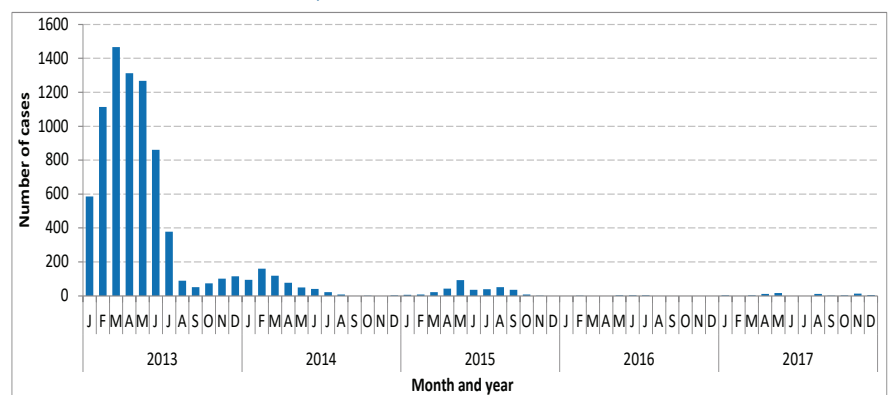Source: Measles and rubella elimination Annual Status Update report, 2017

Measles and rubella cases and immunization coverage, 2008–2017
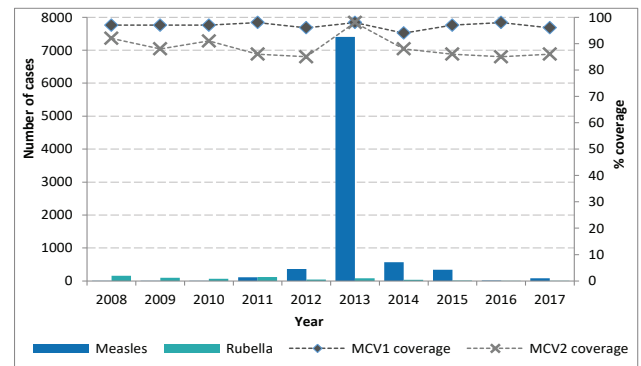
Source: Disease incidence and immunization coverage (WUENIC), WHO, Data and Statistics, Immunization Monitoring and Surveillance and communication with the country (http://www.who.int/immunization/monitoring_surveillance/data/en/)
MCV1 = first dose of measles-containing vaccine
MCV2= second dose of measles-containing vaccine

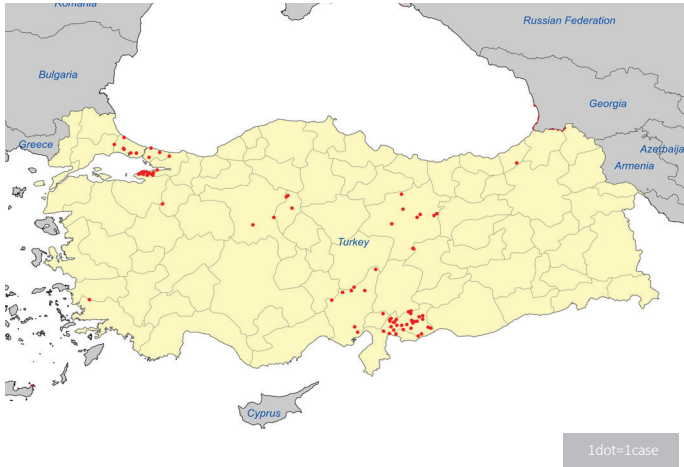## Confirmed measles cases by month of onset, 2013-2017

Source: CISID 2017

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Measles cases by first subnational level, 2017

1dot=1case

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

Measles genotypes by first subnational level, 2017

- B3
- D8
- H1
- D9

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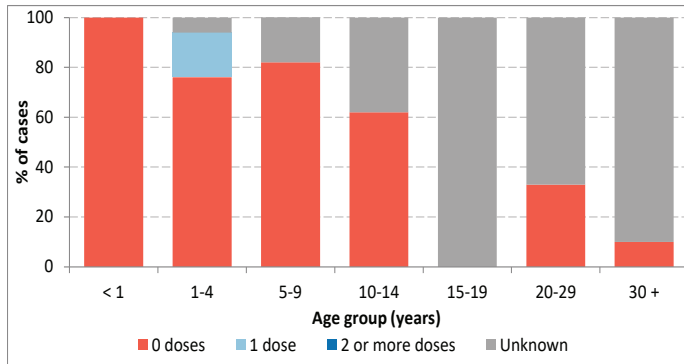
Source: Measles and rubella elimination Annual Status Update report, 2017
Note: Excludes imported cases

Sources of infection, 2017

	Measles	Rubella
Imported	11	0
Import-related	3	0
Unknown/ Not reported	29	2
Endemic	41	0

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

Information on CRS, 2017

No cases reported
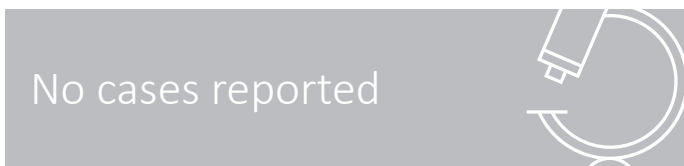
Source: Measles and rubella elimination Annual Status Update report, 2017
CRS = congenital rubella syndrome

Supplementary immunization activities

Year	Target age	Vaccine used	% Coverage
2012-2017	All ages (refugees)	MMR	90% (2017)*
2013-2017	<15 years (children in high-risk districts)	M&MMR	13 678 (2017)**
2012-2017	1980-1991 birth cohort - Military personnel - Healthcare workers	M&MMR M&MMR	63 633 (2017)** 17 117 (2017)**
2013-May 2017	40-66 months (children in kindergarten)	MMR	45.8% (2016)
2013-March 2017	9-11 months	M	81 247 (2017)**

Source: Supplementary immunization activities, 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; M = measles vaccine
ND = Data not available
* Includes routine doses and SIA doses **Number of vaccination doses provided

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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	17 809	7389	16	0	7405	10 404	87.3	D4,D8
2014	4876	562	3	0	565	4311	7.4	B3,D8,H1
2015	3492	342	0	0	342	3150	4.3	B3,D8
2016	2217	9	0	0	9	2208	0.1	D8
2017	2642	79	5	0	84	2558	0.9	B3,D4,D8

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	13.6	85.2%	99.8%	47.9%	32 640	24.6%	50%	100%
2014	5.6	67.9%	99.5%	50.8%	8198	11.7%	50%	100%
2015	3.9	64.2%	100%	23.1%	4370	9.7%	87.5%	100%
2016	2.8	59.3%	100%	66.7%	3067	3.4%	50%	100%
2017	3.3	66.7%	103.9%	65.5%	2829	2.8%	83.3%	84.8%

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	ND	81	0	0	81	ND	1	NA
2014	136	39	0	0	39	97	0.5	NA
2015	135	16	0	0	16	132	0.2	1H
2016	300	7	0	0	7	293	0.1	1H
2017	2642	2	0	0	2	2640	0	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

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	13.6	ND	100%	ND	4710	2.2%	ND	100%
2014	5.6	ND	100%	ND	2947	2.1%	ND	100%
2015	3.9	ND	100%	ND	2950	1.6%	ND	100%
2016	2.8	ND	100%	ND	2660	2.7%	ND	100%
2017	3.3	66.7%	99.3%	0%	2708	0.1%	ND	86.9%

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) commends Turkey on the improved quality of surveillance compare to previous years and on the high quality of the ASU. However, the RVC would appreciate if more data on the temporal and spatial (subnational) development of immunization coverage in Turkey would be included in next annual status update, to allow better understanding of population immunity. The RVC is concerned regarding the possible size of the susceptible population in some parts of country, and the risk of future outbreaks. In the same time, the RVC highly commend the efforts and achievements of Turkey in the provision of immunization services to refugees.

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%