Measles and rubella elimination country profile
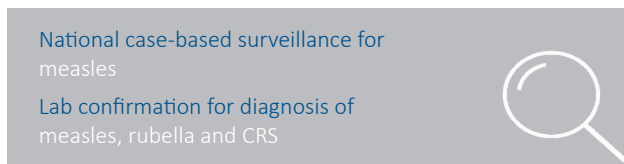# Ukraine

Measles elimination status

2016 endemic
2017 endemic

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)
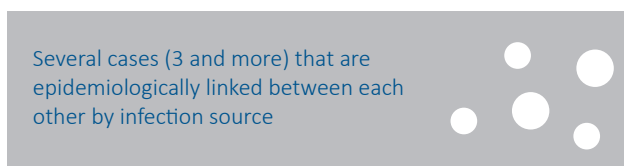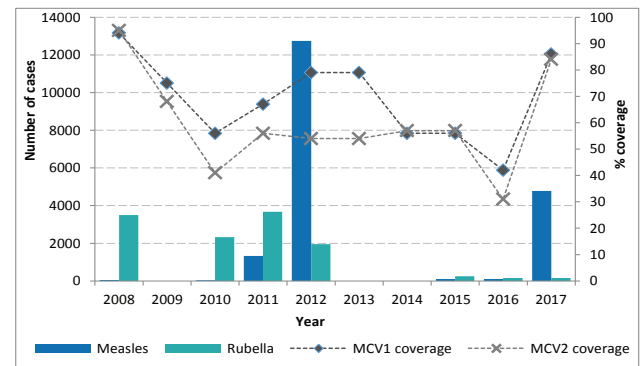meeting report: www.euro.who.int/7thrvc

Measles and rubella surveillance

National case-based surveillance for measles

Lab confirmation for diagnosis of measles, rubella and CRS

Source: WHO/UNICEF Joint Reporting Form on Immunization, 2017

Demographic information, 2017

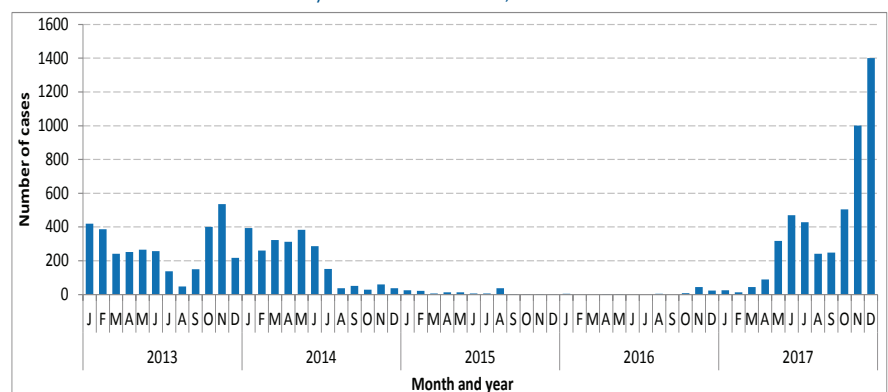|	
Total population	44 222 947
< 1 year old	429 937
< 5 years old	2 303 013

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	2001
MCV2	MMR	6 years	RCV	2003
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/)
 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

Several cases (3 and more) that are epidemiologically linked between each other by infection source

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
(http://www.who.int/immunization/monitoring_surveillance/data/en/)
MCV1 = first dose of measles-containing vaccine
MCV2= second dose of measles-containing vaccine

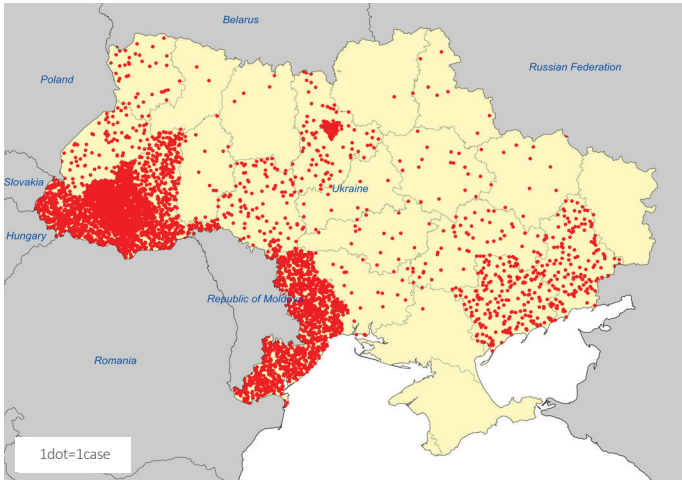## Confirmed measles cases by month of onset, 2013-2017

Source: CISID 2017

Measles cases by first subnational level, 2017

1dot=1case

Source: Measles and rubella elimination Annual Status Update report, 2017
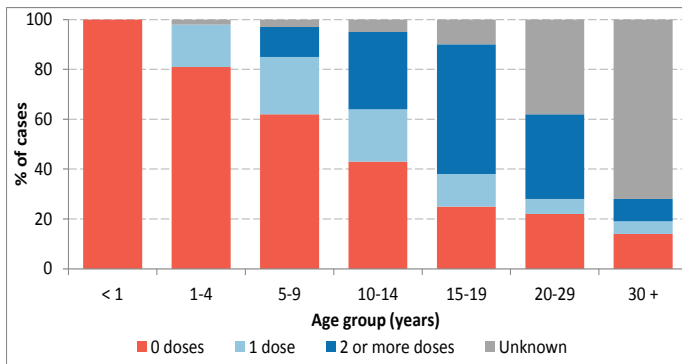
Measles genotypes by first subnational level, 2017

- B3
- D8
- H1
- D4

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.
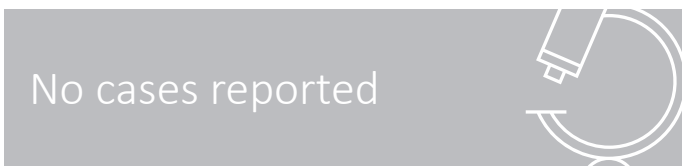
Measles cases by age group and vaccination status, 2017

Legend: ■ 0 doses ■ 1 dose ■ 2 or more doses ■ Unknown

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

Sources of infection, 2017

	Measles	Rubella
Imported	1	0
Import-related	0	0
Unknown/ Not reported	0	0
Endemic	4781	160

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
2017	1-9Y	MMR	57%
2017	6-9Y	MMR	67%

Source: Supplementary immunization activities, WHO, Data and Statistics, Immunization Monitoring and Surveillance (http://www.who.int/immunization/monitoring_surveillance/data/en/)
MMR = measles-mumps-rubella vaccine
ND = Data not available

Measles and rubella elimination country profile
Ukraine

World Health Organization
REGIONAL OFFICE FOR **Europe**

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	3978	1300	0	2009	3309	669	72.8	D4,D8
2014	2800	857	520	939	2326	474	50.8	D4,D8
2015	235	35	0	70	105	130	2.4	ND
2016	638	47	21	34	102	536	2.4	D8
2017	5410	1984	926	1872	4782	628	112.3	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	1.5	ND	39.3%	ND	1 007	61.9%	14	100%
2014	1.1	ND	51.4%	ND	517	39.9%	4	100%
2015	7.8	ND	82.3%	1.9%	326	10.7%	0	100%
2016	1.3	ND	100%	39.2%	638	7.4%	0	100%
2017	1.5	12%	50.1%	100%	2712	73.2%	24.2%	62.1%

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	2193	362	0	909	1271	922	28	2B
2014	2013	304	122	915	1341	672	29	ND
2015	600	15	0	232	247	353	5.8	ND
2016	330	2	0	146	150	180	3.5	ND
2017	350	7	12	141	160	190	3.8	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

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	2	ND	28.5%	ND	478	29.7%	ND	100%
2014	1.5	ND	42.2%	ND	450	30%	ND	100%
2015	0.8	ND	56.3%	ND	338	4.4%	ND	100%
2016	0.5	ND	100%	ND	632	0.3%	ND	100%
2017	0.4	ND	19.4%	100%	68	10.3%	ND	80.9%

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

RVC comments, based on 2017 reporting

The Regional Verification Commission for Measles and Rubella Elimination (RVC) commends Ukraine on efforts to increase immunization coverage, but with ongoing measles outbreak still urges further steps to achieve and maintain universal high vaccination coverage with 2 doses of MRCV. Surveillance sensitivity, laboratory testing and genotyping needs to be strengthened and better documented in ASU.

Source: 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%