

# Routine immunization profile Serbia

## Progress towards achieving European Vaccine Action Plan goals, 2017

Goal	Indicator	Status	Goal	Indicator	Status
<b>1</b>	Sustain polio-free status <sup>a</sup> (Current risk)	Yes (Intermediate)	<b>4</b>	Meets vaccination coverage targets DTP3 national immunization coverage $\geq 95\%$ <sup>d</sup> $\geq 90\%$ DTP3 coverage achieved in $\geq 90\%$ of districts <sup>e</sup>	Yes Yes Yes
<b>2</b>	Measles elimination status <sup>b</sup>	Endemic	<b>5</b>	Make evidence-based decisions about introduction of new vaccines* <sup>e</sup> NITAG made a recommendation about PCV NITAG made a recommendation about RV NITAG made a recommendation about HPV	No
	Rubella elimination status <sup>b</sup>	Endemic			NN NN NN
<b>3</b>	Control hepatitis B infection <sup>c</sup>	Validation pending			<b>6</b>

\*New vaccines introduced or not introduced based on NITAG evidence-based recommendations

\*\*Country self-sufficient for procuring routine vaccines

## Demographic, income and health expenditure summary, 2017

Total Population <sup>f</sup>	8 790 574
Live births	92 719
Surviving infants	91 940
<5 years	467 331
<15 years	1 446 414
Neonatal mortality rate (per 1000 live births) <sup>f</sup>	3.7
Infant mortality rate (per 1000 live births) <sup>f</sup>	5
Number of districts <sup>e</sup>	25
GNI (per capita, in USD) <sup>g</sup>	5180
Health spending as % of total government expenditure <sup>g</sup>	12

## Immunization schedule, 2017<sup>e</sup>

Birth	BCG, HepB_Pediatric
4W	HepB_Pediatric
8W	DTaPHibIPV
14W	DTaPHibIPV
20W	DTaPHibIPV
5M	HepB_Pediatric
12M	MMR
18M	DTaPHibIPV
7Y	DT, MMR, OPV
14Y	OPV, Td

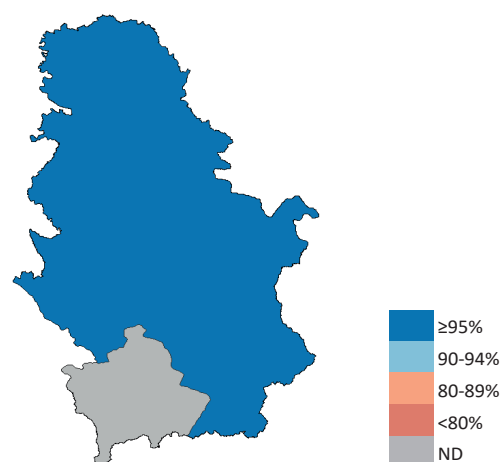


### Vaccine coverage estimates, 2013-2017<sup>d</sup>

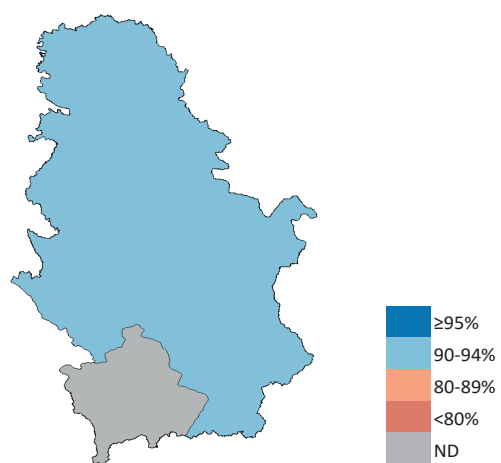
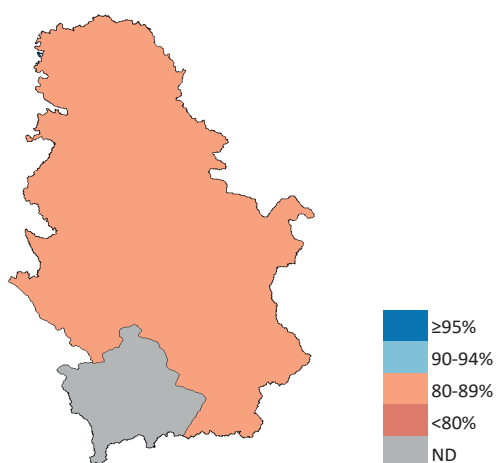
	2013	2014	2015	2016	2017
BCG	97	98	98	98	97
HepB-BD	ND	ND	ND	ND	ND
DTP1	98	97	98	97	98
DTP3	95	93	95	92	95
HepB3	91	92	94	91	93
Hib3	92	94	95	92	95
Pol3	97	93	95	93	95
PCV3	NR	NR	NR	NR	NR
Rotac	NR	NR	NR	NR	NR
RCV1	93	86	86	82	86
MCV1	92	86	86	82	86
MCV2	82	91	86	90	91

100 50 0 ND NR

### DTP3 reported coverage by subnational area<sup>†</sup>, 2017<sup>e</sup>



### MCV1 reported coverage by subnational area<sup>†</sup>, 2017<sup>e</sup> MCV2 reported coverage by subnational area<sup>†</sup>, 2017<sup>e</sup>



### Number of reported cases of vaccine-preventable diseases, 2013-2017<sup>e</sup>

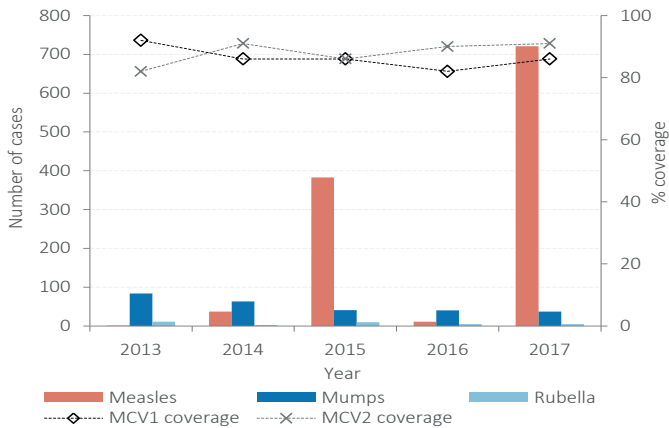
	2013	2014	2015	2016	2017
Measles	1	37	383	11	721
Mumps	84	63	41	40	37
Rubella	11	2	10	5	5
Congenital rubella syndrome	0	0	ND	ND	0
Diphtheria	0	0	0	0	0
Tetanus	2	0	4	4	2
Pertussis	39	281	89	148	285
Hepatitis A	243	114	84	103	100
Varicella	45 305	39 391	39 272	37 738	33 058

### Surveillance with laboratory confirmation of cases, 2017<sup>e</sup>

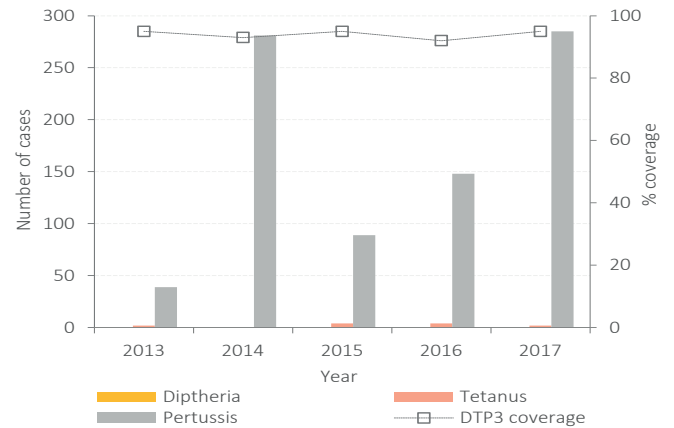
Measles	Yes
Rubella	Yes
Congenital rubella syndrome	No
Rotavirus	No
Invasive meningococcal disease	No
Invasive pneumococcal disease	No
Invasive <i>Haemophilus influenzae</i> disease	No

Note: Case-based surveillance (with laboratory confirmation of cases) assessed for measles, rubella, and congenital rubella syndrome. Hospital-based sentinel surveillance and/or population-based surveillance (both with laboratory confirmation of cases) assessed for rotavirus, invasive meningococcal disease, invasive pneumococcal disease, and invasive *Haemophilus influenzae* disease.

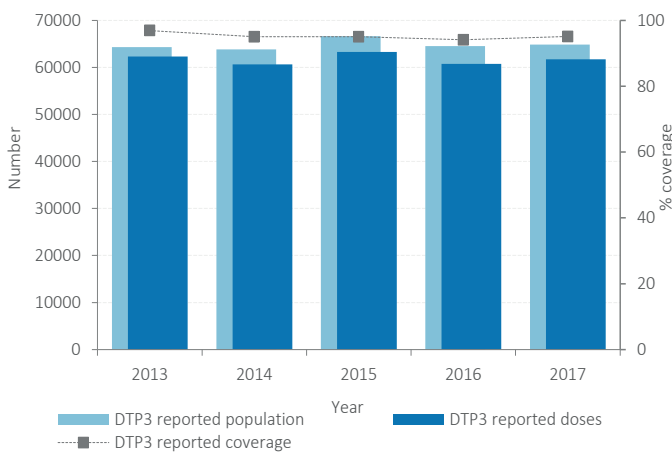
### Number of reported measles, mumps and rubella cases<sup>e</sup> and MCV coverage estimates<sup>d</sup>, 2013-2017



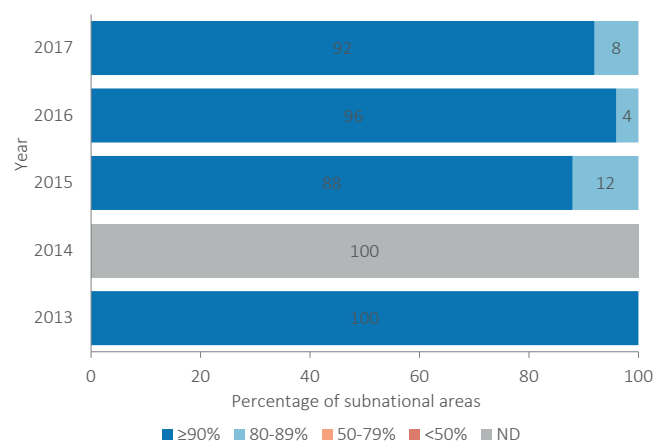
### Number of reported diphtheria, tetanus and pertussis cases<sup>e</sup> and DTP3 coverage estimates<sup>d</sup>, 2013-2017



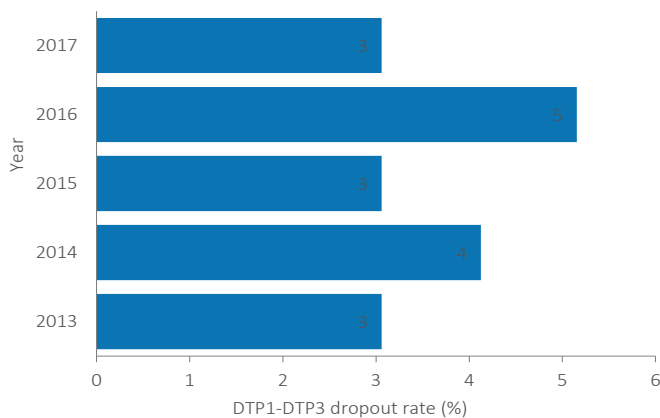
### Reported target population, reported number of DTP3 doses administered and DTP3 reported coverage<sup>e</sup>, 2013-2017



### Percentage of districts by DTP3 reported coverage<sup>e</sup>, 2013-2017



### DTP1-DTP3 dropout rate, 2013-2017<sup>d</sup>



Note: Dropout rate is calculated using WUENIC

### Immunization system characteristics, 2017

Sustained access to WHO accredited polio, measles, and rubella laboratories <sup>h</sup>	Yes
NITAG in place that meets six WHO criteria <sup>e</sup>	No
National system in place to monitor AEFIs <sup>e</sup>	Yes
Communication plan in place to respond to vaccine safety-related events <sup>e</sup>	No
Vaccine hesitancy assessment performed within last 5 years <sup>e</sup>	ND
Mandatory proof of immunization at school entry <sup>e</sup>	Yes

Note: The six WHO NITAG criteria are 1. legislative or administrative basis for the advisory group; 2. formal written terms of reference; 3. at least five different areas of expertise represented among core members; 4. at least one meeting per year; 5. circulation of the agenda and background documents at least one week prior to meetings; 6. mandatory disclosure of any conflict of interest

## Vaccine stockouts by administrative level<sup>a</sup>, 2013-2017

	2013	2014	2015	2016	2017
BCG	ND	ND	No	No	No
DTP	ND	ND	No	No	No
HepB	ND	ND	No	No	No
Hib	ND	ND	No	No	No
Pneumo	ND	ND	No	No	No
Rota	NR	NR	NR	NR	NR
OPV	ND	ND	Both	No	No
IPV	ND	ND	No	No	No
Measles	ND	ND	Both	No	No
HPV	*	*	*	NR	NR
TT	ND	ND	No	No	No

Legend:

- No stockout
- Subnational level stockout only
- National level stockout only
- Stockout at both levels
- NR
- ND

\*Data on HPV stockouts have only been collected in JRF since 2016

## Abbreviations

AEFI	Adverse event following immunization	MCV1	measles-mumps-rubella vaccine, first dose
BCG	Bacille Calmette-Guerin vaccine for tuberculosis	MCV2	measles-mumps-rubella vaccine, second dose
CRS	congenital Rubella Syndrome	MMR	measles-mumps-rubella vaccine
DT	diphtheria-tetanus-containing vaccine	ND	Data not available
DTP	diphtheria-tetanus-pertussis-containing vaccine	NITAG	National Immunization Technical Advisory Group
DTP1	diphtheria-tetanus-pertussis-containing vaccine, first dose	NN	No NITAG
DTP3	diphtheria-tetanus-pertussis-containing vaccine, third dose	NR	Not relevant as vaccine not included in immunization schedule
GNI	Gross national income	OPV	oral polio vaccine
HepB	hepatitis B	PCV	pneumococcal conjugate vaccine
HepB3	hepatitis B vaccine, third dose	PCV3	pneumococcal conjugate vaccine, third dose
HepB-BD	hepatitis B vaccine, birth dose	Pol3	polio-containing vaccine, third dose
Hib	Haemophilus influenzae type b	RCV1	rubella-containing vaccine, first dose
Hib3	Haemophilus influenzae type b vaccine, third dose	Rotac	rotavirus vaccine-complete series
HPV	human papillomavirus	Td	tetanus-diphtheria-containing vaccine
IPV	inactivated polio vaccine	TT	tetanus toxoid vaccine
MCV	measles-containing vaccine	W,M,Y	Weeks, Months, Years

## Data sources

- a European Regional Commission for Certification of Poliomyelitis eradication (RCC) meeting report: [www.euro.who.int/32ndRCC](http://www.euro.who.int/32ndRCC)
- b European Regional Verification Commission for Measles and Rubella Elimination (RVC) meeting report: [www.euro.who.int/7thRVC](http://www.euro.who.int/7thRVC)
- c European Vaccine Action Plan 2015-2020 Midterm report
- d WHO/UNICEF Estimates of National Immunization Coverage (WUENIC): ([http://www.who.int/immunization/monitoring\\_surveillance/data/en/](http://www.who.int/immunization/monitoring_surveillance/data/en/))
- e WHO/UNICEF Joint Reporting Form on immunization (JRF)
- f World Population Prospects: The 2017 Revision, New York, United Nations
- g World Bank, World Development Indicators
- h Polio Laboratory Network: [www.euro.who.int/poliolabnetwork](http://www.euro.who.int/poliolabnetwork) & Personal communication based on annual accreditation process of the European Measles and Rubella Laboratory Network

## 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.