

# Seasonal influenza vaccination programme country profile: Croatia

## 2012–13 Season

### Background information

Influenza immunisation policy and general facts about Croatia	
Volume indices of GDP per capita in 2011 and 2013 (EU-28=100) Source: Eurostat <sup>a</sup>	60 and 61 respectively
Health costs as % of GDP 2011 Source: Eurostat <sup>b</sup>	NA
Total population of the country, 2011 Source: Eurostat <sup>c</sup>	4 284 889
Population ≥65, 2011 Source: Eurostat <sup>c</sup>	758 633 (17.7% from the total population)
Population with chronic medical conditions <65 years, 2006 Source: ECDC (based on methodology by Fleming and Eliot, 2006) <sup>d</sup>	NA
Number of live births in 2011 <sup>e</sup>	41 197 (1% from the total population)
National seasonal influenza recommendations (e.g. age and target group recommendations and guidelines)	Recommendations available
URL link to Immunisation Guidelines for Croatia	
National Action Plan (NAP) as requested by EC	A plan was not developed, but a respective policy is in place
URL link to NAP	na

NA: Not available

na: Not applicable

EUROSTAT links:

<sup>a</sup>GDP per capita 2013 (accessed 15.12.2014): [http://ec.europa.eu/eurostat/statistics-explained/index.php/GDP\\_per\\_capita,\\_consumption\\_per\\_capita\\_and\\_price\\_level\\_indices](http://ec.europa.eu/eurostat/statistics-explained/index.php/GDP_per_capita,_consumption_per_capita_and_price_level_indices)

<sup>b</sup>Health expenditures 2011 (accessed 15.12.2014): [http://ec.europa.eu/eurostat/statistics-explained/index.php/General\\_government\\_expenditure\\_on\\_social\\_protection\\_and\\_health](http://ec.europa.eu/eurostat/statistics-explained/index.php/General_government_expenditure_on_social_protection_and_health)

<sup>c</sup>Total population and those > 65 years of age 2011 (accessed 15.12.2014): <https://ec.europa.eu/CensusHub2/intermediate.do?&method=forwardResult>

<sup>d</sup>Population with chronic medical conditions 2006: [http://www.ecdc.europa.eu/en/publications/Publications/0808\\_GUI\\_Priority\\_Risk\\_Groups\\_for\\_Influenza\\_Vaccinati\\_on.pdf](http://www.ecdc.europa.eu/en/publications/Publications/0808_GUI_Priority_Risk_Groups_for_Influenza_Vaccinati_on.pdf) (Fleming, D.M. and A.J. Elliot, Estimating the risk population in relation to influenza vaccination policy. 2006 May 15; 24(20):4378-85)

<sup>e</sup> Number of live births in 2011 (accessed 15.12.2014): <http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tps00111&plugin=1>

## Seasonal influenza vaccination recommendations and payment mechanism for vaccination

Vaccination recommendations (population groups targeted by vaccination)	
Overall population	No recommendation
Healthy children and adolescents	No recommendation
Older population groups: ≥65 years of age	Recommended
Chronic medical conditions	Recommended: <ul style="list-style-type: none"> <li>- Pulmonary diseases,</li> <li>- Neurologic diseases,</li> <li>- Cardiovascular diseases,</li> <li>- Renal diseases,</li> <li>- Hepatic diseases,</li> <li>- Haematological disorders,</li> <li>- Metabolic disorders,</li> <li>- Immunosuppressed individuals,</li> <li>- HIV/AIDS,</li> <li>- Morbid obesity,</li> <li>- Long-term aspirin use (children &lt;18 years).</li> </ul>
Pregnancy-related vaccination (including post-partum women)	Recommended only for those with other clinical risk indication at any trimester.
	Recommended only for those with other clinical risk indication.
Healthcare workers	Recommended: <ul style="list-style-type: none"> <li>- To all healthcare workers</li> </ul>
Other occupational groups	Recommended: <ul style="list-style-type: none"> <li>- Laboratory workers working in other laboratories (not medical/public health laboratories, but who may work with avian influenza viruses in the environmental/ academic sector)</li> </ul>
Population groups in closed communities	Recommended: <ul style="list-style-type: none"> <li>- For residents of long- term care facilities;</li> </ul>
	No recommendation: <ul style="list-style-type: none"> <li>- For prisoners;</li> <li>- For children in day care centres, boarding schools, etc</li> </ul>
Household contacts or carer of	Recommended: <ul style="list-style-type: none"> <li>- Immunosuppressed individuals;</li> <li>- Individuals with chronic medical conditions;</li> </ul>
	No recommendation: <ul style="list-style-type: none"> <li>- Infants &lt;6months of age;</li> <li>- ≥65 years of age.</li> </ul>

Payment mechanism for vaccine and its administration for the population groups targeted by seasonal influenza vaccine		
	For vaccine	For administration
Overall population	na	na
Healthy children and adolescents	na	na
Older population groups ( $\geq 50$ ; $\geq 65$ years of age) <sup>a</sup>	National health service	National insurance scheme
Chronic medical conditions groups (by group) <sup>a</sup>	National health service	National insurance scheme
Pregnancy-related vaccination (including post-partum women) <sup>a</sup>	National health service	National insurance scheme
Healthcare workers (including staff of long-stay care facilities) <sup>a</sup>	National health service	National insurance scheme
Other occupational groups <sup>a</sup>	National health service	National insurance scheme
Population groups in closed communities <sup>a</sup>	National health service	National insurance scheme
Household contacts or care givers <sup>a</sup>	National health service	National insurance scheme

na: Not applicable

<sup>a</sup> No co-payment for vaccine and vaccine administration.

**National insurance scheme:** health contributions are paid to the insurance fund and then for this contribution there is a package of services received. It is not by default that you receive the services if you do not pay the insurance contributions.

**National health service:** taxes are paid by a citizen or resident of the country and this person is covered by the health service.

**Out of pocket:** not reimbursed, paid by receiver of vaccine.

## Vaccination coverage rates

Vaccination coverage (%) in population groups targeted by seasonal influenza vaccination the from 2008–09 to the 2012–13 influenza season by method of data collection (administrative and /or survey)										
Population group	Influenza season									
	2008–09		2009–10		2010–11		2011–12		2012–13 <sup>c</sup>	
	Admin.	Surv.	Admin.	Surv.	Admin.	Surv.	Admin.	Surv.	Admin.	Surv.
Overall population	-	-	-	-	-	-	-	-	na	na
Children/adolescents	-	-	-	-	-	-	-	-	na	na
Older population groups: $\geq 65$ years of age	-	-	-	-	-	-	-	-	30	na
Chronic medical conditions groups	-	-	-	-	-	-	-	-	NA	na
Pregnant women <sup>a</sup>	-	-	-	-	-	-	-	-	NA	na
Healthcare workers	-	-	-	-	-	-	-	-	19	na
Staff in long-stay care facilities <sup>b</sup>	-	-	-	-	-	-	-	-	NA	na
Residents in long stay care facilities <sup>b</sup>	-	-	-	-	-	-	-	-	NA	na

na: Not applicable

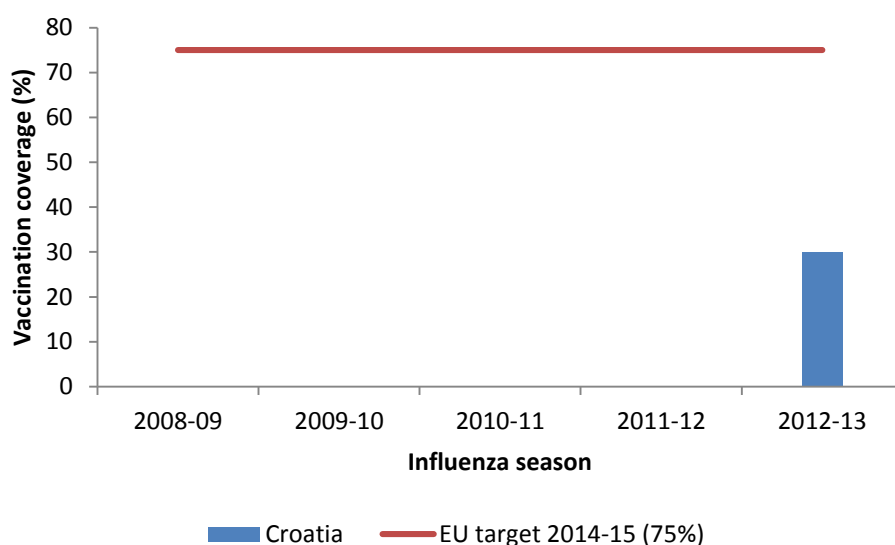
NA: Not available

<sup>a</sup> VENICE started to collect vaccination coverage data for pregnant women after the A(H1N1)pdm09 (2010-11 influenza season).

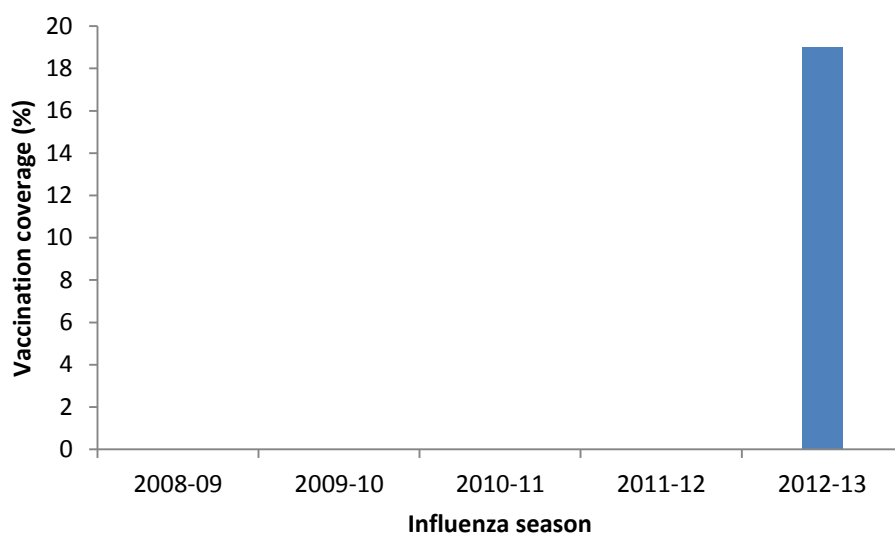
<sup>b</sup> VENICE started to collect vaccination coverage data for staff and residents in long-stay care facilities for the influenza season 2011-12.

<sup>c</sup> Croatia participated in the seasonal influenza survey for first time in 2014; vaccination coverage data available only for 2012-13 influenza season.

**Figure 1. Seasonal influenza vaccination coverage among those  $\geq 65$  years of age in the 2012–13 influenza season**



**Figure 2. Seasonal influenza vaccination coverage among healthcare workers in the 2012–13 influenza season**



## Methods to monitor vaccination coverage, safety and effectiveness

Monitoring of vaccination coverage during the 2012–13 influenza season	
Method used to monitor influenza vaccination coverage	
Administrative method only	
Method used (administrative, survey) to monitor vaccination coverage by population group	
Administrative	Survey
Adults: aged $\geq 65$ years old; Healthcare workers;	na

na: Not applicable

**Details on administrative method used (medical records vs. immunisation registry; manual vs. electronic) by population group**

Medical records		Immunisation registry	
Manual	Electronic	Manual	Electronic
Adults: aged $\geq 65$ years old; Individuals with chronic medical conditions;	na	na	na

na: Not applicable

**Numerator assessment**

Pharmaceutical data	Administrative data	Frequency of numerator assessment
Not used	Aggregate collection of number of vaccines administered	Annually (in February)

**Denominator assessment by population groups and data source**

Population group	Data source for population group
Entire population	Used. Census data
Children and adolescents	Used. Census data
Adults	Used. Census data
Individuals with medical/risk conditions (clinical risk groups)	Not used
Pregnant women	Used. Health service statistics reports
Healthcare workers	Used. Health service statistics reports
Essential public sector workers	Not used
Prisoners	Not used
Residents of long-term care institutions	Not used
Educational institutions	Not used
Other, please specify	Not used

**Details for survey method used for the 2012–13 influenza season**

Type of the survey	Survey mode	Sampling strategy	Sample size
na	na	na	na

na: Not applicable

**Scientific studies conducted for vaccination coverage; vaccine safety and vaccine effectiveness**

Studies on influenza vaccine effectiveness; Product-specific safety studies I 2010-11; was not published at the time of the survey.

**Vaccine safety monitoring (adverse events following immunisation AEFV)**

Data collected at the national and at the regional level	Data linkage with immunisation registry	Details collected	Status of reporting	AEFV reported to
Yes	No	Yes, case based data including age, sex and suspected symptoms should be reported	Mandatory	Croatian Institute of Public Health and Agency for Medical Products and Medical Devices of Croatia

Monitoring of influenza vaccine break-through <sup>a</sup> infections in vaccinated individuals		
Data collected	Data linkage with immunisation registry	Details collected
There is such a system in place	not possible	Yes, case based data should be reported to the national level

<sup>a</sup> Break-through infection is defined as laboratory-confirmed influenza infection >14 days after seasonal influenza vaccination in the current season (i.e. vaccine failure).

## Vaccine procurement and delivery

Influenza vaccine procurement and delivery, 2012–13 influenza season		
Number of doses		
Purchased	Distributed	Used
450 000	445 000	288 440

NK: Not known

Type of vaccine/Product Name	Target groups
<b>Trivalent inactivated non-adjuvanted vaccines (TIV)</b>	
Used	
Sanofi Pasteur	Older adults (e.g. ≥60/65 years); Those with medical condition/s; Residents of long-stay care facilities; Healthcare workers
<b>Trivalent inactivated adjuvanted vaccines (aTIV)</b>	
Not used	
<b>Trivalent live attenuated nasal vaccine (LAIV)</b>	
Not used	
<b>Quadrivalent attenuated nasal vaccine (LAIV)</b>	
Not used	
<b>Quadrivalent inactivated non-adjuvanted vaccine (QIV)</b>	
Not used	

## Promoting seasonal influenza vaccination

Promoting seasonal influenza vaccination during the 2012–13 influenza season	
Promotion activities with the general public and healthcare workers	Source of information (if yes)
<b>General public</b>	
Yes	Radio; TV; Newspapers; Leaflets; Website
<b>Population over 65</b>	
Yes	Radio; TV; Newspapers; Leaflets; Website
<b>Pregnant women</b>	
Yes	Radio; TV; Newspapers; Leaflets; Website
<b>Chronic medical conditions</b>	
Yes	Radio; TV; Newspapers; Leaflets; Website
<b>Healthcare workers</b>	
Yes	Professional medical societies;

*All population through media*

## Use of antiviral agents for treatment and chemoprophylaxis of influenza

Recommendations and/or guidelines (policy document) on antiviral use	
Recommendations available	
Use of antiviral agents for treatment and chemoprophylaxis of influenza during the 2012–13 influenza season	
Use of antivirals for <u>treatment</u> for in-patients and out-patients who are at higher risk of developing influenza complications	
For in-patients who:	
<ul style="list-style-type: none"> <li>- have severe, complicated influenza-like illness (ILI);</li> <li>- have progressive influenza-like illness;</li> <li>- require hospitalisation due to influenza-like illness.</li> </ul>	na
For out-patients who are at higher risk of developing influenza complications on the basis of their age or underlying medical conditions:	
<ul style="list-style-type: none"> <li>- Children &lt; 2 years;</li> <li>- Children &lt; 5 years;</li> <li>- Adults aged ≥65 years;</li> <li>- Individuals belonging to risk groups.</li> <li>- Women who are pregnant or postpartum (within 6 weeks after delivery).</li> <li>- Residents of nursing homes and other chronic-care facilities.</li> </ul>	na
Use of antivirals for <u>post-exposure</u> prophylaxis	
For family or other close contacts of a person at higher risk for influenza complications who have not been vaccinated with influenza vaccine at the time of exposure;	na
For unvaccinated healthcare workers with occupational exposure and who did not use personal protective equipment at the time of exposure	na
Use of antivirals for <u>pre-exposure</u> prophylaxis	
For individuals who are at high risk (e.g. severely immunosuppressed patients) for influenza-related complications who cannot otherwise be protected during times when a high risk for exposure exists	na
Use of antivirals for <u>control of influenza outbreaks</u>	
For individuals in long-term care facilities/care for immunocompromised individuals if not vaccinated or if the circulating influenza strain does not match the vaccine strains	na
For unvaccinated healthcare staff who provide care to individuals at high risk of developing complications in long-term care facilities/ care for immunocompromised patients if not vaccinated or if the circulating influenza strain does not match the vaccine strains	na
For all health care staff regardless of whether they received an influenza vaccination if the circulating influenza strain does not match the vaccine strains	na
Prisoners	na
Educational institutions	na
Existence of antiviral resistance surveillance system	
Antiviral resistance surveillance system	There is an antiviral resistance surveillance system in place



Country profiles are based on the [Seasonal Influenza Vaccination in Europe](#) report produced by the European Centre for Disease Prevention and Control (ECDC) and the Vaccine European New Integrated Collaboration Effort III (VENICE III). The data are from the seasonal influenza vaccination survey for 2012–13 season in EU/EEA countries. Results above use the same data as was available when the report was published. During the validation process in June 2015, minor changes were introduced in some country profiles. Therefore, data may be different to those available in the report.