

# Seasonal influenza vaccination programme country profile: Norway

## 2012–13 Season

### Background information

Influenza immunisation policy and general facts about Norway	
Volume indices of GDP per capita in 2011 and 2013 (EU-28=100) Source: Eurostat <sup>a</sup>	182 and 186 respectively
Health costs as % of GDP 2011 Source: Eurostat <sup>b</sup>	7.3%
Total population of the country, 2011 Source: Eurostat <sup>c</sup>	4 979 955
Population ≥65, 2011 Source: Eurostat <sup>c</sup>	766 427 (15.4% from the total population)
Population with chronic medical conditions <65 years, 2006 Source: ECDC (based on methodology by Fleming and Elliot, 2006) <sup>d</sup>	na
Number of live births in 2011 <sup>e</sup>	60 220 (1.2% 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 Norway	<a href="http://www.fhi.no/artikler/?id=107303">http://www.fhi.no/artikler/?id=107303</a>
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 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> </ul>
	No recommendation: <ul style="list-style-type: none"> <li>- Long-term aspirin use (children &lt;18 years).</li> </ul>
Pregnancy-related vaccination (including post-partum women)	Recommended: <ul style="list-style-type: none"> <li>- For all pregnant women at second and third pregnancy trimester.</li> <li>- Pregnant women in the first pregnancy trimester with additional medical risk conditions may be considered for vaccination</li> </ul>
	No recommendation: <ul style="list-style-type: none"> <li>- Postpartum women if not vaccinated during pregnancy.</li> </ul>
Healthcare workers	Recommended: <ul style="list-style-type: none"> <li>- For some healthcare workers<sup>a</sup></li> </ul>
Other occupational groups	Recommended: <ul style="list-style-type: none"> <li>- People who take care of pigs and others who are in regular contact with live swine.</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</li> </ul>
Household contacts or carer of:	Recommended: <ul style="list-style-type: none"> <li>- Household contacts of severely immunosuppressed individuals</li> </ul>
	No recommendation: <ul style="list-style-type: none"> <li>- Infants &lt;6months of age;</li> <li>- Individuals with chronic medical conditions;</li> <li>- ≥65 years of age.</li> </ul>

<sup>a</sup> 'Some' means outpatient/inpatient/long-term care facility workers/ front line healthcare workers/ healthcare workers that have direct contact with patients.

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 ( $\geq 65$ years of age) <sup>a</sup>	Out of pocket	Out of pocket
Chronic medical conditions groups (by each Chronic medical conditions group) <sup>a</sup>	Out of pocket	Out of pocket
Pregnancy related vaccination (including post-partum women) <sup>a</sup>	Out of pocket	Out of pocket
Health Care Workers (including staff of long stay care facilities) <sup>a</sup>	Employer	Employer
Other occupational groups <sup>a</sup>	Employer	Employer
Population groups in closed communities <sup>a</sup>	Health care facility	Health care facility
Household contacts or care takers	na	na

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	
	Admin.	Surv.	Admin.	Surv.	Admin.	Surv.	Admin.	Surv.	Admin.	Surv.
Overall population	12	na	12	13	12	na	9	na	10.4	na
Children/adolescents	na	na	na	na	na	na	na	na	na	na
Older population groups: $\geq 65$ years of age*	47	na	51	na	47	42	42	36	44.5	36.2
Chronic medical conditions groups*	47	na	51	33	47	38	42	37	44.5	37.1
Pregnant women <sup>a</sup>	-	-	-	-	NA	NA	NA	NA	NA	NA
Healthcare workers	NA	NA	NA	12	NA	14	NA	12	NA	NA
Staff in long-stay care facilities <sup>b</sup>	-	-	-	-	-	-	NA	na	NA	na
Residents in long stay care facilities <sup>b</sup>	-	-	-	-	-	-	NA	na	NA	na

na: Not applicable

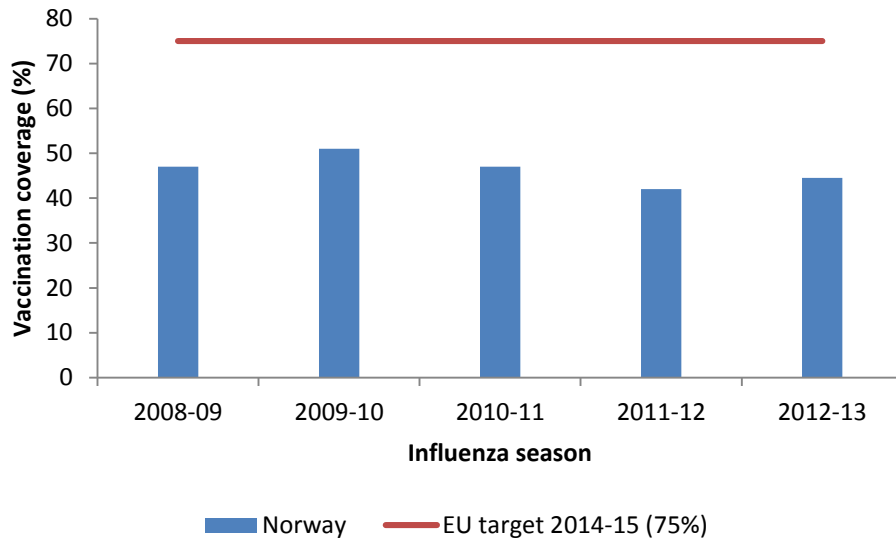
NA: Not available

<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.

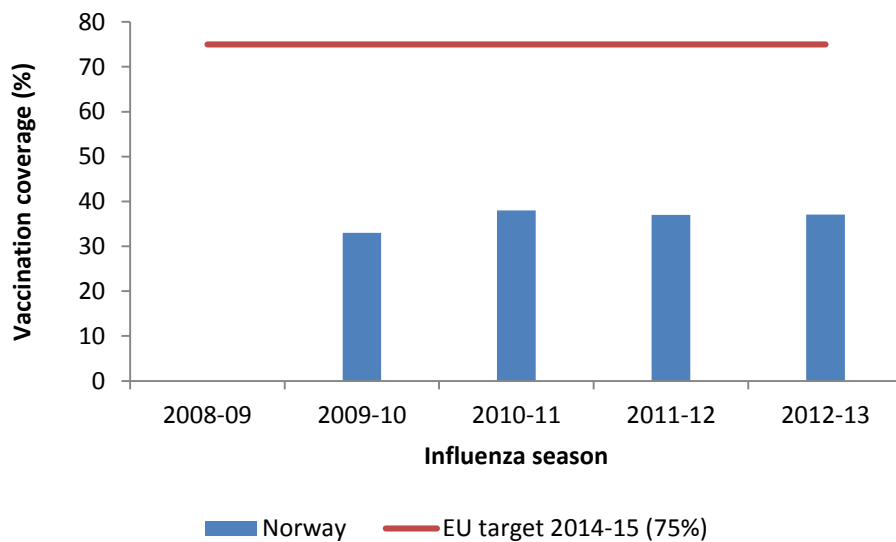
\*Vaccination coverage measured by administrative method for those aged  $\geq 65$  years and chronic medical conditions together from 2008-09 to 2012-13.

**Figure 1. Seasonal influenza vaccination coverage among those  $\geq 65$  years of age and among those with chronic medical conditions together from the 2008–09 to the 2012–13 influenza season**

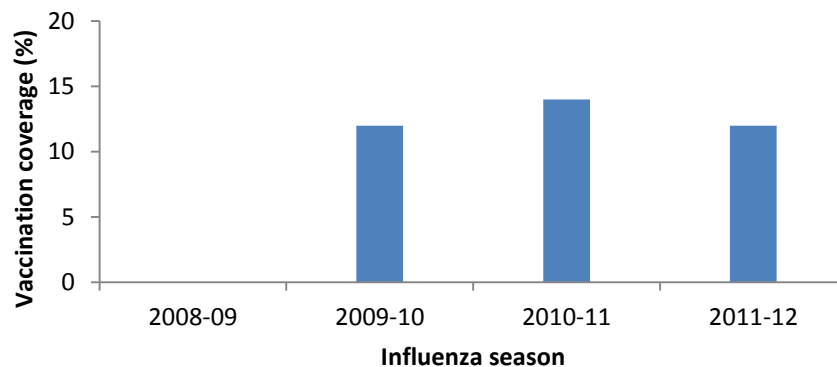


*Vaccination coverage measured by administrative method for those aged  $\geq 65$  years and chronic medical conditions together.*

**Figure 2. Seasonal influenza vaccination coverage among those with chronic medical conditions from the 2009–10 to the 2012–13 influenza season**



**Figure 3. Seasonal influenza vaccination coverage among healthcare workers from the 2009–10 to 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	
Combination of administrative and survey methods	

Method used (administrative, survey) to monitor vaccination coverage by population group	
Administrative	Survey
Entire population; Individuals with medical/risk conditions (clinical risk groups) and adults aged $\geq 65$ years, measured together	Adults: aged $\geq 65$ years old; Individuals with medical/risk conditions (clinical risk groups); Health care workers;

Details on administrative method used (medical records vs. immunisation registry; manual vs. electronic) by population group			
Medical records		Immunisation registry	
Manual	Electronic	Manual	Electronic
No	No	No	No

Numerator assessment		
Pharmaceutical data	Administrative data	Frequency of numerator assessment
Vaccine data by sales and distribution from pharmacies and number of doses distributed from national purchaser - entire population; Number of doses distributed from national purchaser intended for medical/risk conditions and persons 65 years and older together;	Aggregate collection of number of vaccines distributed (national purchaser); Aggregate collection of number of vaccines sales (private pharmacies); Aggregated number of doses distributed from all wholesalers	Once, at the end of influenza season

Denominator assessment by population groups and data source	
Population group	Data source for population group
Entire population	Used. National population registry/ies
Children and adolescents	na
Adults	Not used
Individuals with medical/risk conditions (clinical risk groups)	Not used
Pregnant women	Not used
Health care workers	Not used
Essential public sector workers	Not used
Prisoners	Not used
Residents of long term care institutions	Not used
Educational institutions	Not used
Other, please specify	It has been estimated that persons belonging to the medical risk groups and persons $\geq 65$ years of age together is about 19% of the total population.

Details for survey method used for the 2012–13 influenza season			
Type of the survey	Survey mode	Sampling strategy	Sample size
Individual	By telephone	Probability sampling; Stratified (assessment, LQAS <sup>a</sup> )	2 000

Scientific studies conducted for vaccination coverage; vaccine safety and vaccine effectiveness
Not performed

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	Not possible	Case based data including age, sex and suspected symptoms should be reported	Mandatory	Norwegian Institute of Public Health on behalf of Norwegian Medicines Agency

Monitoring of influenza vaccine break-through <sup>a</sup> infections in vaccinated individuals		
Data collected at the national and at the regional level	Data linkage with immunisation registry	Details collected
There is such a system in place	Not possible	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
645 894	541 771	526 134

Type of vaccine/Product Name	Target groups
<b>Trivalent inactivated non-adjuvanted vaccines (TIV)</b>	
Used	
Abbott; GlaxoSmithKline; Sanofi Pasteur	Children and adolescents; Healthy adults; Older adults (e.g. ≥60/65 years); Those with medical condition/s; Pregnant women; Residents of long stay care facilities; Health Care Workers; Other occupational groups
<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>	
No	na
<b>Population over 65</b>	
Yes	Leaflets; Website;
<b>Pregnant women</b>	
Yes	Leaflets; Website;
<b>Chronic medical conditions</b>	
Yes	Leaflets; Website;
<b>Healthcare workers</b>	
No	na

na: Not applicable

## 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>	Recommended
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>- Adults aged <math>\geq 65</math> 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>	Recommended
<ul style="list-style-type: none"> <li>- Children &lt; 2 years;</li> <li>- Children &lt; 5 years;</li> </ul>	No recommendation
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.	No recommendation
For unvaccinated healthcare workers with occupational exposure and who did not use personal protective equipment at the time of exposure	No recommendation
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	No recommendation
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	No recommendation
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	No recommendation
For all health care staff regardless of whether they received an influenza vaccination if the circulating influenza strain does not match the vaccine strains	No recommendation
Prisoners	No recommendation
Educational institutions	No recommendation
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. 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.