

Seasonal influenza vaccination programme country profile: Germany

2012–13 Season

Background information

Influenza immunisation policy and general facts about Germany	
Volume indices of GDP per capita in 2011 and 2013 (EU-28=100) Source: Eurostat ^a	122 and 122 respectively
Health costs as % of GDP 2011 Source: Eurostat ^b	7.0%
Total population of the country, 2011 Source: Eurostat ^c	80 219 695
Population ≥65, 2011 Source: Eurostat ^c	16 518 121 (20.6% from the total population)
Population with chronic medical conditions <65 years, 2006 Source: ECDC (based on methodology by Fleming and Elliot, 2006) ^d	6 832 000 (8.5% from the total population)
Number of live births in 2011 ^e	662 685 (0.8% 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 Germany	www.stiko.de/en
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:

^aGDP 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

^bHealth expenditures 2011 (accessed 15.12.2014): http://ec.europa.eu/eurostat/statistics-explained/index.php/General_government_expenditure_on_social_protection_and_health

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

^dPopulation with chronic medical conditions 2006:
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)

^eNumber 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: ≥60 years of age	Recommended
Chronic medical conditions	Recommended: <ul style="list-style-type: none"> - Pulmonary diseases; - Neurologic diseases; - Cardiovascular diseases; - Renal diseases; - Hepatic diseases; - Haematological disorders; - Metabolic disorders; - Immunosuppressed individuals; - HIV/AIDS.
	No recommendation: <ul style="list-style-type: none"> - Morbid obesity - Long-term aspirin use (children <18 years).
Pregnancy-related vaccination (including post-partum women)	Recommended: Vaccination is recommended to all pregnant women in the 2nd and 3rd trimester; to women with other clinical risk indication also in the 1st trimester.
	No recommendation: Postpartum women if not vaccinated during pregnancy.
Healthcare workers	Recommended: To all healthcare workers
Other occupational groups	Recommended: <ul style="list-style-type: none"> - Laboratory workers working in other laboratories (not medical/public health laboratories, but who may work with avian influenza viruses in the environmental/academic sector); - Wildlife environmentalists (workers who work with birds directly e.g. bird ringing); - Poultry industry workers.
Population groups in closed communities	Recommended: <ul style="list-style-type: none"> - For residents of long- term care facilities;
	No recommendation: <ul style="list-style-type: none"> - For prisoners; - For children in day care centres
Household contacts or carer of:	Recommended: <ul style="list-style-type: none"> - Immunosuppressed individuals. - Individuals with chronic medical conditions;
	No recommendation: <ul style="list-style-type: none"> - Infants <6months of age; - ≥65 years of age.

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 (≥ 50 ; ≥ 65 years of age) ^a	National insurance scheme; Private insurance; Employer	National insurance scheme; Private insurance; Employer
Chronic medical conditions groups (by group) ^a	National insurance scheme; Private insurance; Employer	National insurance scheme; Private insurance; Employer
Pregnancy-related vaccination (including post-partum women) ^a	National insurance scheme; Private insurance	National insurance scheme; Private insurance
Healthcare workers (including staff of long-stay care facilities) ^a	Employer; National insurance scheme; Private insurance	Employer; National insurance scheme; Private insurance
Other occupational groups	Employer; National insurance scheme; Private insurance	Employer; National insurance scheme; Private insurance
Population groups in closed communities	National insurance scheme; Private insurance	National insurance scheme; Private insurance
Household contacts or care givers ^a	na	na

na: Not applicable

a 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	na	29.8	na	26.6	na	32.2	na	28.8	na	30.2
Children/adolescents	na	na	na	na	na	na	na	na	na	na
Older population groups: ≥ 60 years of age	NA	52.8	NA	47.5	NA	54.3	NA	52.6	NA	50.0
Chronic medical conditions groups	NA	43.3	NA	39.8	NA	46.2	NA	42.9	NA	41.5
Pregnant women ^a	-	-	-	-	NA	NA	NA	NA	NA	23.2
Healthcare workers	NA	30.5	NA	27.3	NA	25.8	NA	NA	NA	NA
Staff in long-stay care facilities ^b	-	-	-	-	-	-	NA	NA	NA	NA
Residents in long stay care facilities ^b	-	-	-	-	-	-	NA	NA	NA	NA

na: Not applicable

NA: Not available

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

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

Figure 1. Seasonal influenza vaccination coverage among those ≥ 60 years of age from the 2008–09 to the 2012–13 influenza season

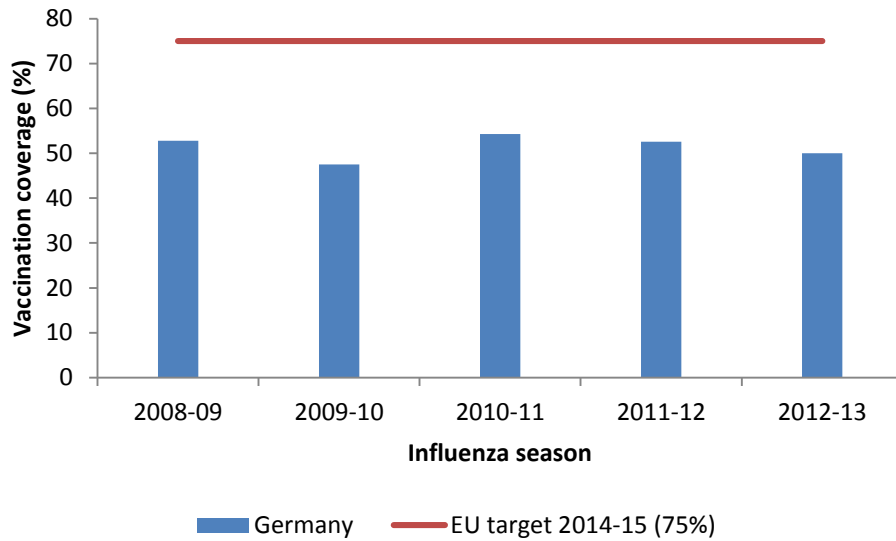


Figure 2. Seasonal influenza vaccination coverage among adults (≥ 18 years) with chronic medical conditions from the 2008–09 to the 2012–13 influenza season

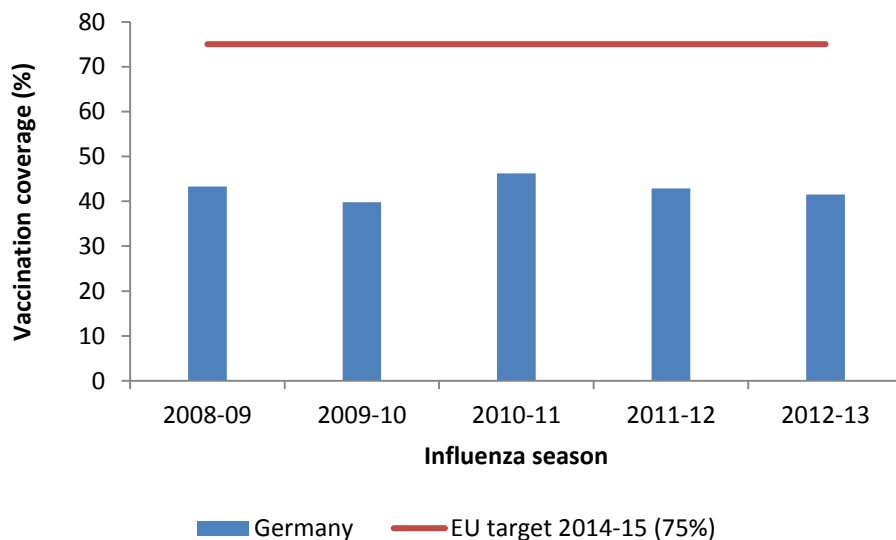
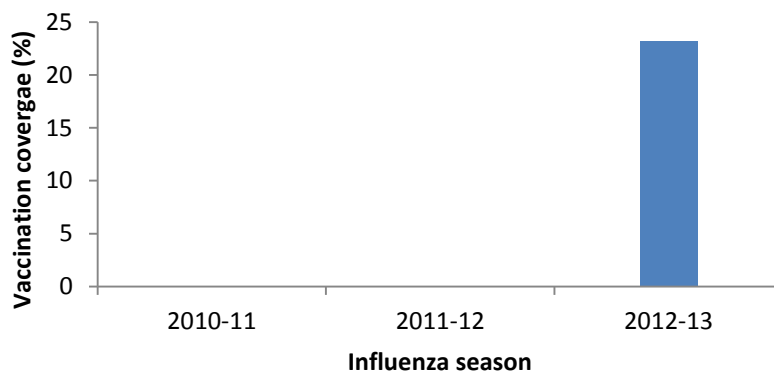
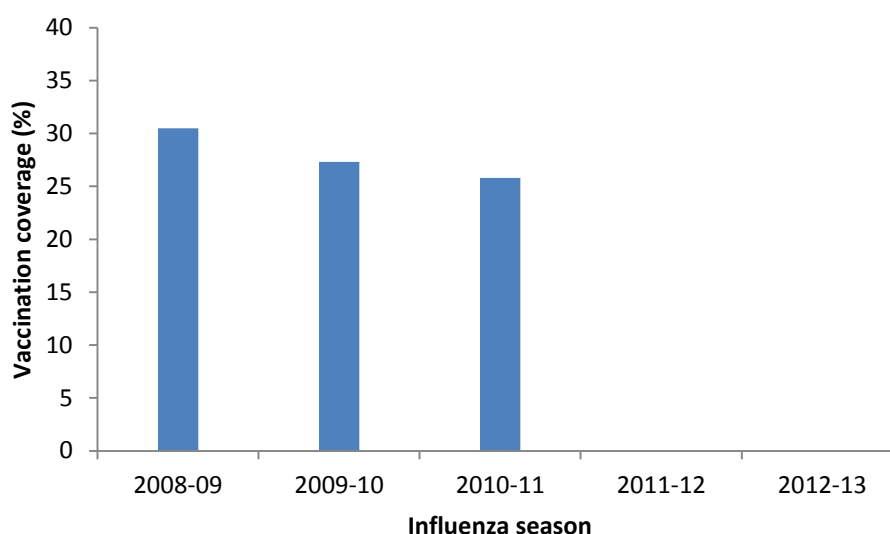


Figure 3. Seasonal influenza vaccination coverage among pregnant women from the 2010–11 to 2012–13 influenza season



Note: VENICE started to collect vaccination coverage data for pregnant women after the A(H1N1)pdm09 (2010–11 influenza season).

Figure 4. 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	
Survey method only	

Method used (administrative, survey) to monitor vaccination coverage by population group	
Administrative	Survey
na	1) Individuals with underlying chronic diseases: telephone survey 2) Elderly: Telephone survey 3) Pregnant women: Face-to-Face

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
na	na	na	na

na: Not applicable

Numerator assessment		
Pharmaceutical data	Administrative data	Frequency of numerator assessment
Not used	Not used	Not used

Denominator assessment by population groups and data source	
Population group	Data source for population group
Entire population	Not used
Children and adolescents	na
Adults	Not used
Individuals with medical/risk conditions (clinical risk groups)	Not used
Pregnant women	Not used
Healthcare 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	Not used

na: Not applicable

Details for survey method used for the 2012–13 influenza season			
Type of the survey	Survey mode	Sampling strategy	Sample size
Individual, pregnant women*	Face-to-face	Non-probability: following snowballing techniques. Application of weighting factors.	1,025 pregnant women
Individual, adults	By telephone (mobile or landline)	Nationwide cross-sectional survey using computer assisted telephone interviewing. Telephone numbers were randomly generated through the method of Waksberg, adopted by Gabler and Häder for Germany. Application of weighting factors.	1,519 adults

*Survey was only conducted for the season 2012-13.

Scientific studies conducted for vaccination coverage; vaccine safety and vaccine effectiveness
<p>1) Studies on vaccination coverage:</p> <ul style="list-style-type: none"> - Methods: Utilization of reimbursement claims data, telephone surveys, face-to-face interviews following snowballing techniques - Publications: <p>Coverage among pregnant women: http://www.ncbi.nlm.nih.gov/pubmed/24928791</p> <p>Coverage among target groups: http://www.ncbi.nlm.nih.gov/pubmed/23113995</p> <p>2) Studies on vaccine effectiveness:</p> <ul style="list-style-type: none"> - Methods: sentinel surveillance (test-negative design), screening method; - Publications: <p>Test-negative design: http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=20701</p> <p>Screening method: http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19561</p> <p>3) Studies on vaccine safety</p> <ul style="list-style-type: none"> - Method: The self-controlled case series methodology - Publication (GBS & flu vaccination 2009/10): http://www.ncbi.nlm.nih.gov/pubmed/24817531

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	Yes, case based data with a personal identifier and suspected symptoms should be reported	Mandatory	Local public health office -> regulatory authority

Monitoring of influenza vaccine break-through ^a infections in vaccinated individuals		
Data collected	Data linkage with immunisation registry	Details collected
Yes	Not possible	Case based data should be reported to the national level

^a 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
13 322 945	NK	NK

NK: Not known

Type of vaccine/Product Name	Target groups
Trivalent inactivated non-adjuvanted vaccines (TIV)	
Used	
Abbott; Baxter; GlaxoSmithKline; Pfizer/CSL Australia; Sanofi Pasteur; Novartis (non adjuvanted)	Children and adolescents; 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
Trivalent inactivated adjuvanted vaccines (aTIV)	
Crucell (virosomal vaccines); Novartis (adjuvanted/Squalene (MF59))	Older adults (e.g. ≥60/65 years)
Trivalent live attenuated nasal vaccine (LAIV)	
Astra Zeneca	Other target group: Preferential recommendation for use of LAIV in children aged 2-6 years with medical conditions, for children aged 7-18 with chronic medical conditions either LAIV or TIV should be used.
Quadrivalent attenuated nasal vaccine (LAIV)	
Not used	
Quadrivalent inactivated non-adjuvanted vaccine (QIV)	
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)
General public	
No	na
Population over 65	
Yes	Leaflets; Posters; Website
Pregnant women	
Yes	Leaflets; Posters; Website
Chronic medical conditions	
Yes	Leaflets; Posters; Website
Healthcare workers	
Yes	Leaflets; Posters; Website; National medical publications

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"> - have severe, complicated influenza-like illness (ILI); - have progressive influenza-like illness; - require hospitalisation due to influenza-like illness. 	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"> - Adults aged ≥ 65 years; - Individuals belonging to risk groups. - Women who are pregnant or postpartum (within 6 weeks after delivery). 	Recommended
<ul style="list-style-type: none"> - Children < 2 years; - Children < 5 years; - Residents of nursing homes and other chronic-care facilities. 	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.