

Seasonal influenza vaccination programme country profile: Denmark

2012–13 Season

Background information

Influenza immunisation policy and general facts about Denmark	
Volume indices of GDP per capita in 2011 and 2013 (EU-28=100) Source: Eurostat ^a	126 and 124 respectively
Health costs as % of GDP 2011 Source: Eurostat ^b	8.4%
Total population of the country, 2011 Source: Eurostat ^c	5 560 628
Population ≥65, 2011 Source: Eurostat ^c	933 781 (16.8% from the total population)
Population with chronic medical conditions <65 years, 2006 Source: ECDC (based on methodology by Fleming and Eliot, 2006) ^d	452 000 (8.1% from the total population)
Number of live births in 2011 ^e	58 998 (1.1% 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 Denmark	
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

NA: Not available

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_Vaccination.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)

^e 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"> - Pulmonary diseases; - Neurologic diseases; - Cardiovascular diseases; - Renal diseases; - Hepatic diseases; - Haematological disorders; - Metabolic disorders; - Immunosuppressed individuals; - HIV/AIDS; - Morbid obesity
	No recommendation: <ul style="list-style-type: none"> - Long-term aspirin use (children <18 years).
Pregnancy-related vaccination (including post-partum women)	Recommended: <ul style="list-style-type: none"> - For all pregnant women in second and third trimester; - For pregnant women with chronic medical conditions in first pregnancy trimester.
	No recommendation: <ul style="list-style-type: none"> - Postpartum women if not vaccinated during pregnancy.
Healthcare workers	No recommendation: Vaccine was not recommended to healthcare workers nationally; however most regions and municipalities offer healthcare workers influenza vaccination free of charge.
Other occupational groups	
Population groups in closed communities	No recommendation: <ul style="list-style-type: none"> - For residents of long- term care facilities; - For prisoners; - For children in day care centers
Household contacts or carer of:	Recommended: <ul style="list-style-type: none"> - Immunosuppressed individuals.
	No recommendation: <ul style="list-style-type: none"> - Infants <6months of age; - Individuals with chronic medical conditions; - ≥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 health service	National health service
Chronic medical conditions groups (by group) ^a	National health service	National health service
Pregnancy-related vaccination (including post-partum women) ^a	National health service	National health service
Healthcare workers (including staff of long-stay care facilities) ^a	Employer ^b	Employer ^b
Other occupational groups	na	na
Population groups in closed communities	na	na
Household contacts or care givers ^a	National health service	National health service

na: Not applicable

NA: Not available

^a No co-payment for vaccine and vaccine administration. The vaccine providers get both the expenses for the vaccine and the administration reimbursed.

^b The Employer pays for the vaccine and the administration even if the recommendation is not national.

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	na	na	na	na	na	na	na	na	na
Children/adolescents	na	na	na	na	na	na	na	na	na	na
Older population groups: ≥ 65 years of age	53.7	na	52	na	50	na	51	na	46	na
Chronic medical conditions groups	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pregnant women ^a	-	-	-	-	NA	NA	NA	NA	NA	NA
Healthcare workers	NA	NA	NA	NA	NA	NA	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

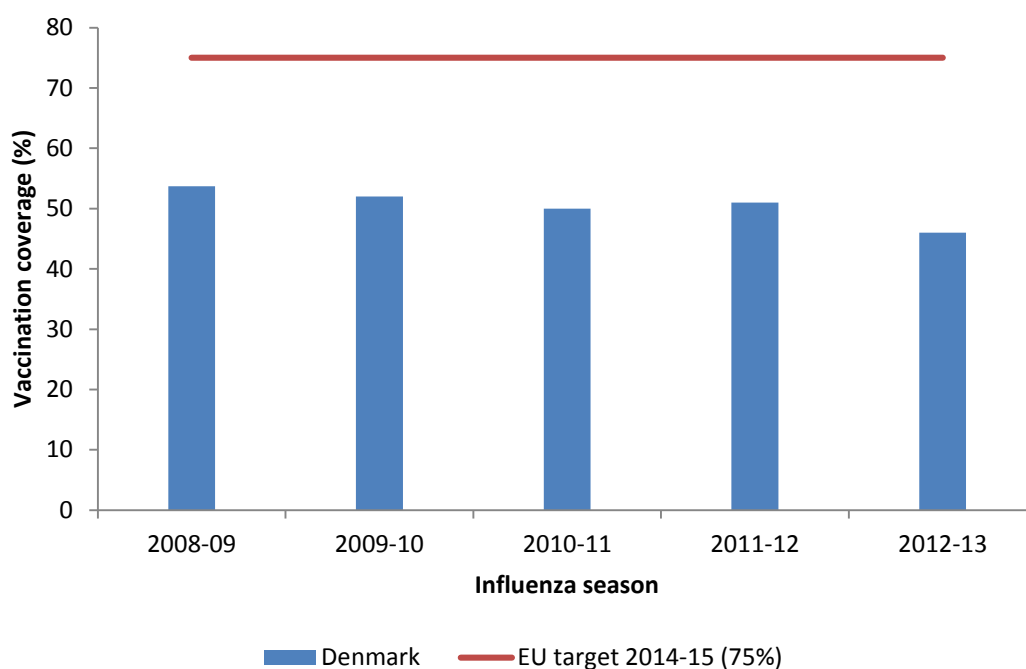
na: Not applicable

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 ≥ 65 years of age from the 2008–09 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	
Administrative method only	

Method used (administrative, survey) to monitor vaccination coverage by population group	
Administrative	Survey
Adults aged ≥ 65 years old	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
na	na	na	Adults aged ≥ 65 years old

na: Not applicable

Numerator assessment		
Pharmaceutical data	Administrative data	Frequency of numerator assessment
Not used	Payment/reimbursement claims	Monthly

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	Used. National population registry/ies
Adults	Used. National population registry/ies
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

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	
Effectiveness:	http://www.ncbi.nlm.nih.gov/pubmed/22277542
Safety:	http://www.ncbi.nlm.nih.gov/pubmed/22782418
Safety:	http://www.ncbi.nlm.nih.gov/pubmed/22551713

Vaccine safety monitoring (adverse events following immunisation AEFV)				
Data collected at the national level	Data linkage with immunisation registry	Details collected	Status of reporting	AEFV reported to
Yes	Possible	Yes, case based data with a personal identifier, vaccination date, vaccine and suspected symptoms reported	Mandatory*	To the Danish Health and Medicines Authority

* Mandatory for health care workers, but citizens can also report suspected adverse events.

Monitoring of influenza vaccine break-through ^a infections in vaccinated individuals		
Data collected at the national and at the regional level	Data linkage with immunisation registry	Details collected
There is no such system ^b	There is no such system in place to routinely monitor break-through infection in DK, but it is possible to do it by data-linkage	na

na: Not applicable

^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).

^b There is no such system in place to routinely monitor break-through infection in DK, but it is possible to do it by data-linkage.

Vaccine procurement and delivery

Influenza vaccine procurement and delivery, 2012–13 influenza season		
Number of doses		
Purchased	Distributed	Used
575 000	575 000	NK

NK: Not known

Type of vaccine/Product Name	Target groups
Trivalent inactivated non-adjuvanted vaccines (TIV)	
Used	
GlaxoSmithKline; Sanofi Pasteur	Older adults (e.g. ≥ 65 years); Those with medical condition/s; Pregnant women; Other target group: The vaccines may be given to all individuals on their own cost.
Trivalent inactivated adjuvanted vaccines (aTIV)	
Not used	
Trivalent live attenuated nasal vaccine (LAIV)	
Not 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	Radio; TV; Newspapers; Leaflets; Posters; Website
Pregnant women	
Yes	Radio; TV; Newspapers; Leaflets; Posters; Website
Chronic medical conditions	
Yes	Radio; TV; Newspapers; Leaflets; Posters; Website
Healthcare workers	
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"> - 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.