



Seasonal influenza vaccination in EU/EEA, influenza season 2010-11

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Abbreviations

ECDC	European Centre for Disease Prevention and Control
EEA	European Economic Area
EMA	European Medicines Agency
EU	European Union
GPs	General Practitioners
HCWs	Health Care Workers
NAP	National Action Plan
MSs	Member States
VENICE	Vaccine European New Integrated Collaboration Effort
CINECA	Consortium of University, Bologna, Italy
VC	Vaccination coverage
WHO	World Health Organization

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ISO 3166-1 Country Codes

AT	Austria
BE	Belgium
BG	Bulgaria
CY	Cyprus
CZ	Czech Republic
DK	Denmark
EE	Estonia
FI	Finland
FR	France
DE	Germany
GR	Greece
HU	Hungary
IS	Iceland
IE	Ireland
IT	Italy
LV	Latvia
LT	Lithuania
LU	Luxembourg
MT	Malta
NL	The Netherlands
NO	Norway
PL	Poland
PT	Portugal
RO	Romania
SK	Slovakia
SI	Slovenia
ES	Spain
SE	Sweden
UK	United Kingdom
ENG	England

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Summary

In Europe, influenza occurs in regular annual epidemics in the winter season. Annual influenza epidemics are associated with high morbidity and mortality. ECDC estimates that on average nearly 40,000 people die prematurely each year from influenza in the EU. Severe illness and complications are more common in certain risk groups; these include those with other chronic medical conditions like diabetes, immunosuppression, or cardiovascular and respiratory diseases, older individuals (often classified as 65 years of age and older). The main public health intervention to prevent influenza is influenza vaccination.

The aim of this survey was to update the data on seasonal influenza immunisation policy changes and to obtain vaccination coverage data in the European Union (EU) member states (MSs), Norway and Iceland for the 2010-11 influenza season.

An electronic based design of the survey was undertaken in November 2011. A standardised questionnaire was developed. Gatekeepers in each MS entered data directly on-line. Of 29 countries invited to participate in the survey 28 responded (FI did not respond).

Of 28 responding countries 19 countries have influenza vaccine recommendation for those aged 65 years and older. DE,GR, IS and NL recommends vaccination for those aged 60 years and older, MT and PL recommends vaccination for those aged 55 years and older and AT,IE for those aged 50 years and older; in SK vaccine is recommended for those aged over 59 years. Seven countries recommend vaccine for children: three of them (AT,EE,PL) for all ages in children; LV and SI for children aged ≥ 6 months- 2 years; MT ≥ 6 months - 4 years and SK for children aged ≥ 6 months – 12 years.

Of 28 responding countries 25 recommend influenza vaccine for health care workers (HCWs); twenty of them have recommendations to vaccinate all HCWs; five recommend vaccination of only some HCWs. Approximately one-third of MSs recommend vaccination for those working in essential (n=8) and military (n=10) services, or for people working in the poultry (n=12) or pig (n=8) industry;

In all 28 countries people with chronic pulmonary, cardiovascular, haematological or metabolic disorders, immunosuppression due to diseases or treatment and renal disease are recommended influenza vaccine; in 25 countries individuals with HIV/AIDS are also recommended vaccine. In 19 countries vaccine is recommended for individuals suffering from hepatic and neurologic diseases and for those with long-term aspirin use (children <18 years old). Nine countries have recommendations to vaccinate those with morbid obesity.

Of 28 responding countries 22 recommend vaccination of pregnant women. Nineteen of them have recommend vaccination of all pregnant women; three recommend vaccination only for those with another clinical risk condition. Thirteen of 22 countries recommend influenza vaccination for pregnant women in either the 2nd or 3rd trimester of pregnancy. In IE vaccine also is recommended for post partum women.

Vaccination coverage and number of influenza vaccine doses was known in nineteen countries for older populations (those aged 55, 60 and 65 years and older). Vaccination uptake varied markedly between countries, ranging from 1.1% in EE to 80.6% in NL. The coverage among health care workers was known in seven countries, ranging from 14% in NO to 63.9% in RO. The coverage for clinical risk groups was known in five countries ranging from 29.4% in PT to 68.9% in NL. The coverage for pregnant women was known in two countries: 3.7% in RO and 36.6% for healthy and 56.6% for those with risk women in ENG.

The coverage for residents of long-term care stay facilities was available in two countries: 82.9% in SK and 85.4% in PT.

There were some changes in seasonal influenza vaccination policy among most countries in comparison with the previous influenza season. In HU there was a change in policy regarding age for vaccination, with the new recommendation to vaccinate those ≥ 65 years of age instead of those ≥ 60 years of age. Poland reported that influenza vaccine was recommended to children < 18 years of age; previously vaccine was not recommended to this age group.

The survey also found that more countries recommended seasonal influenza vaccine to pregnant women in the 2009-2010 season than previously (22 countries in 2010-11 influenza season versus 16 countries in 2009-10 influenza season). Following the influenza pandemic (2009-2010) new risk groups were included to the recommendations for influenza vaccination: neurologic diseases in 19 countries and morbid obesity in 9 countries. Previously reported findings of a substantial gap between official recommendations to vaccinate individuals at risk and actually achieving high vaccination coverage in these groups still exist. Reported vaccination coverage varied greatly between countries. No changes with regard development and adoption of national action plans (as requested by EC 08/07/2009 document) among MSs in comparison to data of previous VENICE survey.

Background

Epidemics of influenza typically occur during the winter months in temperate regions. In Europe, influenza occurs in regular annual epidemics in the winter season. Usually, winter epidemics affect each of the countries for one to two months and, in Europe, last for about 4 months. Sporadic infections also occur outside of the influenza season, though the incidence is very low in the warm summer months. [1]

Annual influenza epidemics are associated with high morbidity and mortality. ECDC estimates that on average nearly 40,000 people die prematurely each year from influenza in the EU. For each death there are many more hospitalisations resulting from complications.[1]

Seasonal influenza causes significant morbidity with the most frequent complication being pneumonia, most commonly secondary bacterial pneumonia. Primary influenza viral pneumonia is an uncommon complication but is associated with a high death rate. Other complications include worsening of pre-existing chronic medical conditions such as chronic bronchitis or chronic heart failure. [2]

Severe illness and complications are more common in certain risk groups; these include those with other chronic medical conditions like diabetes mellitus, immunosuppression, or cardiovascular and respiratory diseases, older individuals (often classified as aged 65 years and older). Some studies pointed to an increased risk of severe disease in very young children and pregnant women. However, severe illness due to influenza occasionally occurs in healthy people outside any of these groups, though this is a rare occurrence.[3]

The main public health intervention to prevent influenza is influenza vaccination.

In 2003, the World Health Assembly recommended (resolution 56.193) increasing seasonal influenza vaccination coverage of all people at high risk, with the goal of attaining at least 50% vaccination coverage of the elderly population by 2006 and 75% by 2010. [4]

On July 13th, 2009 the European Council of ministers recommended that EU Member States (MS) should adopt and implement a national action plan to achieve a vaccination coverage rate of 75% in all at risk groups by the winter season 2014/2015. At risk groups were defined as individuals 65 years of age and older, and people with underlying medical conditions in the following categories: chronic respiratory and cardiovascular diseases; chronic metabolic disorders; chronic renal and hepatic diseases; immune system dysfunctions (congenital or acquired). It was also recommended that MSs should undertake annual uptake surveys in all at risk groups in accordance with guidelines to be issued by the ECDC, and analysis of reasons for non-vaccination. [5]

The VENICE project carried out the first survey to describe seasonal influenza policy, to identify country specific recommendations for different risk groups and to obtain most recent vaccine coverage in early 2008. The first EU wide survey provided baseline information on influenza vaccination programmes among MSs showing variability between countries with regard to groups for whom vaccine was recommended and vaccination coverage and, at the same time, identified common target groups for vaccination. Since then VENICE has been asked to conduct annual influenza vaccination surveys in order to follow up policy changes among countries and to collect the latest available vaccination coverage data. A separate and specific survey relating to the pandemic influenza vaccination programme was conducted in 2010 and is reported separately. In light of this experience VENICE have been asked by ECDC to conduct influenza vaccination survey for 2010-11 influenza season among VENICE participating countries in order to see the policy and vaccination coverage changes after A(H1N1)2009 pandemic.

Objectives

Aim of the study

The aim of this survey was to update the data on seasonal influenza immunisation policy provided in survey conducted previously and to obtain vaccination coverage data in the European Union (EU) member states (MSs), Norway and Iceland for 2010-11 influenza season.

Specific objectives

- To assess seasonal influenza immunisation programmes for the 2010-11 season;
- To identify country specific recommendations for different risk groups for the 2010-11 season;
- To obtain the vaccination coverage data for 2010-11 influenza season for age, risk groups and total population;
- To obtain information in relation to payment for seasonal influenza vaccine during the 2010-11 season;
- To identify policy changes in the MSs anticipated in the near future.

Methodology

Study Design

An electronic based design of the survey was undertaken. This survey was a collaborative study between the European Centre for Disease Prevention and Control (ECDC), VENICE Project and European Union (EU) and European Economic

Area (EEA) Member States (MS). Each MS previously identified and enrolled gatekeepers, who are responsible for conducting all VENICE surveys inside their countries. Currently in the VENICE project there are 27 EU and two EEA (NO and IS) participating countries.

Data collection

A standardised questionnaire was developed using close-ended questions predominantly. Information was sought on population groups recommended influenza vaccination (age, occupation, medical risk or social situation), whether countries had mechanisms in place to monitor influenza vaccine uptake and whether uptake was monitored, the method used to monitor uptake, recent vaccination coverage results by population group, season, payment and administration costs for vaccine, health care setting where vaccine was typically administered, methodology used to promote influenza vaccines and how this activity is supported and finally, information was sought on planned policy or operational changes over the next couple of years (Appendix 1).

Data handling

The electronic questionnaire was developed on VENICE website in September 2011 by CINECA, which was available for all participating countries (<http://venice.cineca.org>). The electronic questionnaire was filled in beginning November by gatekeepers in each country and saved. Non-responders were followed up. The data was analysed in late November 2011. Data were validated by gatekeepers of 19 countries in December 2011 and at the mid of January 2012.

Data processing

Gatekeepers in each MS entered data directly on-line.

Pilot study

The questionnaire was pilot tested by four VENICE project-leading partners: Italian Istituto Superiore di Sanità (ISS), the French Institut de la Veille Sanitaire (INVS), CINECA Consortium of University, Bologna, Italy and the Irish Health Protection Surveillance Centre (HPSC). The piloting of the study was undertaken in late October 2011. After the pilot study, the questionnaire was reviewed and amended as necessary.

Study time

MSs were asked to complete the electronic questionnaire between 27th October and 11th of November 2011. The accompanying letter to MSs explained the objectives and rationale of the study.

Data analysis

The data were analysed using Excel.

The main indicators analysed included:

1. Description of population groups recommended influenza vaccination (age, occupation, medical or social condition risk);
2. Monitoring of influenza vaccine uptake (by country and methodology);

3. Vaccination coverage results by population group, season and method it was measured;
4. Costs associated with programme and who pays (state or individual) and how this impacts on uptake;
5. Usual venues for influenza vaccination;
6. Methodologies used to promote influenza vaccines and how and who supports this activity;
7. Planned policy or operational changes over the next couple of years.

Expected deliverables

The expected output of this survey is development of a technical report to inform policy makers at European, EU and national level as well as those working in the field of influenza vaccination programmes in the member states.

Results

Response rate

Of 29 countries invited to participate in the survey 28 responded. FI did not respond. Data for UK were provided for vaccination policy; vaccination coverage data were provided only for England (ENG hereafter). Nineteen countries validated their data (UK,NO,LU,RO,EE,CZ,CY,SK,FR,NL,GR,LV,LT,ES,DK,PT,BE,IE,HU).

National action plans in member states

Of 28 survey responding countries 18 reported that no national action plan (NAP) was adopted in their country; seven countries updated previously developed plans and two countries reported that its national plan was adopted (table 1) as requested in the European Commission Council Recommendation on Seasonal influenza vaccination EC 08/07/2009*.

Table 1. Action plan development to improve vaccination coverage for seasonal influenza in EU/EEA countries in 2010-11 influenza season.* Seasonal influenza vaccination survey, November 2011. (n=28)

National Action Plan (NAP)	Countries	Total
Yes, plan was adopted	CZ,DK	2
Yes, plan was developed previously and updated according EC recommendation	CY,DE,IS,IE,LT,PT,ENG	7
Plan is under development	-	0
No need to adopt as vaccination coverage meet EC/WHO targets	NL	1
Plan not adopted	BE ,AT,BG,EE,FR,GR,IT,LU, LV,MT,RO,SK,SI,SE,PL,ES,HU,NO	18

* As requested by EC 08/07/2009:

http://ec.europa.eu/health/ph_threats/com/Influenza/docs/seasonflu_rec2009_en.pdf

Of nine countries (CY,CZ,DK,DE,IS,IE,LT,PT,ENG) that have a NAP in place all of these countries reported similar or the same target populations for vaccination as identified in EC 08/07/2009 document. In addition in LT targeted groups for vaccination are defined each year before new influenza season.

Table 2. Target populations identified in NAP*. Seasonal influenza vaccination survey, November 2011. (n=9)

Countries	Target populations identified in NAP
CY	Same as those identified by EC 08/07/2009
CZ	Population according to EU recommendation
DK	Older people, risk groups and pregnant women
DE	Risk groups, elderly, HCW
IS	Age ≥ 60 years; underlying disease; pregnant women and health care workers
IE	Pop ≥ 50 years of age, at risk, HCWs, pig and poultry workers
LT	They are not detailed (risk groups are updated every year)
PT	Risk groups
ENG	Similar to those identified by EC 08/07/2009, but with some additional groups. Full details of eligible groups are provided in appendix 2, table 1.

*National action plan.

Of nine countries that have adopted a NAP in their countries six (CY,CZ,DK,IS,IE, LT) did not specify any vaccination coverage target for their population groups who were recommended influenza vaccination. Three countries (DE,PT,ENG) reported that vaccination coverage targets are included in these plans. Detailed information on vaccination coverage targets are presented in table 3.

Table 3. Vaccination coverage targets specified in NAP.* Seasonal influenza vaccination survey, November 2011. (n=3)

Countries	Vaccination coverage target (%)		Date when these targets must be achieved
DE	70		Data not provided
PT	50		Data not provided
ENG	≥ 65 and < 65 in a risk group	75	2013-14
	Intermediate target	60	2011-12 and 2012-13

*National action plan.

IE-aim to get uptake as high as possible, but target only set for 65 + age group (75%).

Of these nine countries with NAP three countries (CZ,PT,ENG) have detailed specific actions to be undertaken in order to reach their vaccination coverage targets identified in their plans (see table 4).

Table 4. Actions to reach vaccination coverage target identified in NAP. Seasonal influenza vaccination survey, November 2011. (n=3)

Countries	Actions details specified
CZ	Promotion of vaccination by stakeholders, education of HCW and public.
PT	Free vaccine for some risk groups based in social criteria.
ENG	These are set out in a 41 page document "The Seasonal Flu Plan" published by the Department of Health*. Details provided in appendix 2, table2.

* http://www.herefordshire.nhs.uk/docs/Publications/Herefordshire_Seasonal_flu_Plan_2011-12.pdf

All nine countries (CY,CZ,DK,DE,IS,IE,LT,PT,ENG) with a NPA in place reported that they actively implement this plan for seasonal influenza. Activities to increase vaccination coverage among the target populations are a priority in the implementation.

Adequate funding has been allocated to reach the target coverage percentage for each population by the target date was reported by six countries (CY,DK,DE,IS,IE,PT). In two countries (CZ,LT) funding to reach targets was reported to be not adequate.

With regard influenza vaccination funding in ENG the vast majority of influenza vaccination is carried out by GPs who take decisions about the prioritisation and use of resources of services within their General Practices. Therefore, this was not a question that could be answered at national level. However, there was no evidence to suggest that lack of funding was an issue in the delivery of the seasonal influenza immunisation programme for the 2010-11 season.

Actions are being taken to compensate the lack of funding and/or to secure adequate funding were not specified by countries that have a lack of funding (LT,CZ). CZ responded to this question that there is no compensation for influenza vaccination.

Groups recommended for seasonal influenza vaccine in 2010-11 influenza season

Age groups

Of 28 responding countries seven recommended seasonal influenza vaccine for children without clinical risk condition. All countries reported that they recommended seasonal influenza vaccine to the older population groups (regardless of medical risk condition). However there was variation across the countries with regard to specific age groups (both children and adult) for whom vaccine was recommended. Detailed information is presented in table 5.

Table 5. Age groups for children and adults recommended seasonal influenza vaccination without other clinical risk indication in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011. (n=28)

Age groups		Total
Children		
Not recommended for children of any age	BE,BG,CY,CZ,DK,FR,DE,GR,LU,IS,IE,IT,LT,NL,RO,SE,ES,HU,PT, UK,NO	21
Recommended for all children \geq 6 months - <18 years	AT,EE,PL	3
Recommended for some age groups in children	LV,MT,SK,SI	4
\geq 6 months – 2 years	LV,SI	2
\geq 6 months – 4 years	MT	1
\geq 6 months – 12 years	SK	1
Adults		
Recommended for all adults > 18 years old	EE	1
Recommended for some adult (older) age groups	-	0
\geq 50 years	AT,IE*	2
>55 years	MT,PL	2

≥59 years	SK	1
≥60 years	DE,GR,IS,NL	4
≥65 years	BE,BG,CY,CZ,EE,DK,IT,LV,LT, RO,SE,ES,HU, FR,PT, UK,LU,NO,SI	19

*IE-seasonal influenza vaccine is recommended and provided by National Immunisation programme for all ≥ 65 years of age without risk, but the National Immunisation Advisory Committee recommends the vaccine for any adult ≥ 50 years of age or older- but this has not been implemented or supported by the National Health services that implement the programme (mismatch between official recommendations and actual operational matter).

EE-vaccination against seasonal influenza is recommended for all population of EE aged ≥ 6 months. HU-In the 2010-2011 season was changes in policy to vaccinate those aged ≥65 years instead of those aged ≥60 years in Hungary in comparison to recommendations for previous season. VC was calculated for both groups.

In only three of the 27 responding countries was seasonal influenza vaccination included in the routine immunisation schedule. In ES influenza vaccination is included in the adults schedule and in AT and SI in childhood and adult immunisation schedule (table 6).

Table 6. Inclusion of influenza vaccine in to routine immunisation schedule in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011. (n=27)

Immunisation schedule	Countries	Total
Included in childhood immunisation schedule	-	0
Included in adults' immunisation schedule*	ES	1
Included in childhood and adults' immunisation schedule†	AT,SI	2
Not included, only for at risk groups‡	BE,BG,CY,CZ,DE,DK, GR,IE,IS,IT,EE§,NO, LT,LV,MT,NL,RO,SE,SK,PL,HU,PT, UK,LU	24

FR not responded.

* We mean that there is an official immunisation schedule for adults in the country without clinical risk indication.

†We mean that there is one common official immunisation schedule for children and adults in the country without clinical risk indication.

‡We mean that there is no official immunisation schedule for adults, but there is recommendation who should be vaccinated with regard to age and/or clinical risk indication (e.g. vaccine is recommended for those ≥65 and for those with clinical risk aged ≥6 months).

§ EE-Seasonal influenza not included to the routine national immunisation program.

Clinical risk groups/underlying conditions

Clinical risk groups

All 28 survey participating countries reported that seasonal influenza vaccine was recommended for patients with chronic pulmonary, cardiovascular diseases, haematological or metabolic, immunologic disorders and individuals with renal disease. Nineteen countries had recommendation to vaccinate individuals with hepatic and neurologic disease and any condition affecting respiratory function (table 7). Vaccine for those with morbid obesity was recommended in nine countries.

Table 7. Clinical risk groups recommended influenza vaccine in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011. (n=28)

Clinical risk groups	Recommended	No recommendation
Chronic pulmonary (including asthma) disease	AT,BE,BG,CY,CZ,DK,EE,FR,DE,GR,IS,IE,IT,LV,LT,MT,NL,RO,SK,SI,SE,PL,ES,HU,PT,UK,LU,NO (n=28)	
Cardiovascular (except hypertension) disease	AT,BE,BG,CY,CZ,DK,EE,FR,DE,GR,IS,IE,IT,LV,LT,MT,NL,RO,SK,SI,SE,PL,ES,HU,PT,UK,LU,NO (n=28)	
Renal disease	AT,BE,BG,CY,CZ,DK,EE,FR,DE,GR,IS,IE,IT,LV,LT,MT,NL,RO,SK,SI,SE,PL,ES,HU,PT,UK,LU,NO (n=28)	
Haematological or metabolic disorders (including diabetes mellitus)	AT,BE,BG,CY,CZ,DK,EE,FR,DE,GR,IS,IE,IT,LV,LT,MT,NL,RO,SK,SI,SE,PL,ES,HU,PT,UK,LU,NO (n=28)	
Immunosuppressed due to disease or treatment (including asplenia/splenic dysfunction, organ transplantation, cancer, but other than HIV/AIDS)	AT,BE,BG,CY,CZ,DK,EE,FR,DE,GR,IS,IE,IT,LV,LT,MT,NL,RO,SK,SI,SE,PL,ES,HU,PT,UK,LU,NO (n=28)	
HIV/AIDS	BE,BG,CY,CZ,DK,EE,FR,DE,GR,IS,IE,IT,LV,LT,MT,NL,RO,SI,PL,ES,HU,PT,UK,LU,NO (n=25)	AT,SK,SE (n=3)
Hepatic disease	AT,BE,BG,CY,DK,EE,DE,IS,IE,MT,RO,SK,SI,SE,ES,HU,PT,UK,NO (n=19)	CZ,FR,GR,IT,LV,LT,NL,PL,LU (n=9)
Chronic neurologic diseases or neuromuscular conditions	BE,CY,DE,EE,FR,IE,IS,IT,LT,NL,RO,SE,SI,ES,PT,GR,UK,LU,NO (n=19)	AT,BG,CZ,DK,LV,MT,SK,PL,HU (n=9)
Long-term aspirin use (in children up to 18 years old)	BE,CY,EE,FR,GR,IE,IS,IT,LT,LV,NL,SI,ES,HU,PT,LU (n=16)	AT,BG,CZ,DE,DK,MT,RO,SE,SK,PL,UK,NO (n=12)
Any condition affecting respiratory function	BE,CY,DE,DK,EE,GR,IE,IS,IT,MT,NL,SE,SI,SK,ES,HU,PT,LU,RO (n=19)	AT,BG,CZ,FR,LT,LV,PL,UK,NO (n=9)
Morbid obesity (Body Mass Index (BMI) ≥ 40)	DK,EE,FR,IE,IT,SE,ES,HU,NO (n=9)	AT, BE,BG,CY,CZ,DE,IS,LT,LV,MT,NL,LU,RO,SI,SK,GR,PL,PT,UK (n=19)

DK-Seasonal vaccination is also recommended for other serious diseases if the doctor judges that influenza poses a serious risk of health.

Pregnancy related vaccination

Of 28 responding countries 22 indicated that influenza vaccine was recommended for pregnant women. Nineteen countries recommended vaccination of all pregnant women and three countries recommended it for pregnant women with an additional clinical indication. Nine countries recommended vaccine at any stage of pregnancy and 13 countries recommended vaccine in either the 2nd or 3rd trimester (table 8).

Table 8. Pregnancy related influenza vaccine recommendation EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011. (n=28)

Pregnancy related vaccination	Countries	Total
No recommendation	BG,LV,MT,NL,PL,SK	6
Recommended for all	AT,BE,CY,DE,DK,EE,ES,FR,GR,IS,IT,LT,RO,SI,HU,PT, UK,LU,NO	19
Recommended only for those with other clinical risk indication	CZ,IE,SE*	3
Stages of pregnancy (n=19)		
Any trimester	AT,ES,IE,IS,LT,RO,SI,HU, UK	9
Either 2nd or 3rd trimester	BE,CY,CZ,DE,DK,EE,FR,GR,IT,SE,PT,LU,NO	13
Postpartum women if not vaccinated during pregnancy†		
No recommendation	AT,BE,BG,CY,CZ,DE,DK,ES,FR,GR,IS,LU,EE IT,LT,LV,MT,NL,PL,RO,SE,SI,SK,HU,PT,UK,NO	27
Recommended for all	IE	1

*SE- Influenza vaccination was recommended to pregnant women without underlying conditions not vaccinated with Pandmrix 2000 to prevent A(H1N1)pnd.

† Up to 6 weeks after delivery.

IE-pregnant women or women 6 weeks post partum who were not in risk groups, and who had not already received pandemic influenza vaccine were recommended seasonal influenza vaccine at any stage in pregnancy, or after pregnancy, for the 2010-2011 season http://www.immunisation.ie/en/Publications/ImmunisationNewsletters/PDFFile_16532_en.pdf.

Individuals recommended vaccination by occupation

Health Care Workers (HCWs)

Most countries (n=20) reported that influenza immunisation was recommended for all HCWs; five countries recommended vaccination of only some HCWs; in three countries vaccine was not recommended to this population group. Details presented in a table 9.

Table 9. Influenza vaccine recommendations for HCWs in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011. (n=28)

Recommendation to HCWs	Countries	Total
Not recommended at all to HCWs	CZ,DK,SE	3
Recommended to all HCWs	BE,BG,CY,DE,EE,ES,FR,GR,IE,IS,IT,LT,LV,MT,NL,PL,RO,SI,HU,LU	20
Recommended to some HCWs	AT,SK,PT,NO,UK	5
AT	Staff with close contact with patients. * Staff with no contact with patients, but contact with potentially contaminated material† Staff without close contact with patients or contaminated material‡	1
SK,NO	Staff with close contact with patients. *	2
PT	Staff with close contact and social contact (receptionists, administrative that attend people/patients) with patients. * Staff with no contact with patients, but contact with potentially contaminated material †	1
UK	Health and social care staff directly involved in frontline patient care	1

Definition to describe HCWs:

* Clinical and other staff, including those in primary care, who have regular, clinical contact with patients. This includes staff such as doctors, dentists and nurses, paramedical professionals such as occupational therapists, physiotherapists, radiographers (radiologists), ambulance workers and porters, and students in these disciplines;

† Laboratory and other staff (including mortuary staff) who have direct contact with potentially infectious clinical specimens and may additionally be exposed to pathogens in the laboratory. This includes those in academic (or commercial research) laboratories who handle clinical specimens. They do not normally have direct contact with patients;

‡ Non-clinical ancillary staff who may have social contact with patients, but not usually of a prolonged or close nature. This group includes receptionists, ward clerks and other administrative staff working in hospitals and primary care settings and maintenance staff such as engineers, gardeners, cleaners, etc. These staff may be exposed to other specific occupational risks which require their own surveillance programmes.

Reference: The UK Association of National Health Occupational Physicians (ANHOPS) guidance on Immunisation of healthcare workers defines three categories of healthcare workers
http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1195733758763

Other occupations

Of 28 responding countries influenza vaccination is recommended for essential and military services in eight and ten countries respectively; for poultry industry workers in 12 countries. Five countries recommended vaccination of educational staff. Nine countries reported that vaccine was not recommended to any of these occupational groups (presented in a table 10).

Table 10. Other occupations recommended seasonal influenza vaccine HCWs in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011 (n=28)

Other occupations	Recommended	No recommendation
Essential services (police & firemen)	BG,EE,ES,IT,MT,PL,SI,LU (n=8)	BE,CY,DE,FR,GR,IE,IS,SK,HU, UK,NO (n=11)
Military	BG,DE,EE,ES,GR,IT,MT,SI,SK,LU (n=10)	BE,CY,FR,IE,IS,PL,HU,UK,NO (n=9)
Poultry industry	BE,CY,DE,EE,ES,GR,IE,IS,IT,MT,SI,HU (n=12)	BG,FR,PL,SK, UK,LU,NO (n=7)
Pig industry	BE,CY,EE,IE,IS,SI,HU,NO (n=8)	BG,DE,ES,FR,GR,IT,MT,PL,SK, UK,LU (n=11)
Families that raise pigs, poultry or waterfowl (ducks, swans, geese)	BE,CY,DE,EE,ES,IE,IS,IT,SI (n=9)	BG,FR,GR,MT,PL,SK,HU, UK,LU,NO (n=10)
Airline workers	EE,FR*,PL,SI (n=4)	BE,BG,CY,DE,ES,GR,IE,IS,IT,MT,SK,HU, UK,LU,NO (n=15)
Public transport workers	BG,EE,IT,PL,SI,LU (n=6)	BE,CY,DE,ES,FR,GR,IE,IS,MT,SK,HU, UK,NO (n=13)
All educational staff (e.g. primary/secondary schools, preschool centres, kindergartens, crèches)	EE,IT,PL,SI,LU† (n=5)	BE,BG,CY,DE,ES,FR,GR,IE,IS,MT,SK,HU, UK,NO (n=14)
Border control/ Immigration/custom control	EE,MT,PL,SI (n=4)	BE,BG,CY,DE,ES,FR,GR,IE,IS,IT,SK,HU,UK,LU,NO (n=15)
Energy sector	EE,IT,SI (n=3)	BE,BG,CY,DE,ES,FR,GR,IE,IS,MT,PL,SK,HU,LU,NO (n=15)
Finance and banking sector	EE,PL,SI,LU (n=4)	BE,BG,CY,DE,ES,FR,GR,IE,IS,IT,MT,SK,HU,UK,NO (n=15)
None	AT,CZ,DK,LV,LT,NL,RO,SE,PT (n=9)	

*FR-crew members;

†LU-influenza vaccination is more strongly recommended for educational staff of young children than for other educational staff in Luxembourg. The recommendation for the first category of educational staff relies on the principle of the cocooning strategy (protection of categories at risk) while the recommendation for the other category is only based on socio-economical considerations.

ES-in addition to groups recommended that are specified in a table above vaccine is recommended to persons who work in penitentiaries and other judicial centers.

Individuals recommended vaccine by other population groups

Twenty five of 28 survey participating countries recommended vaccination of residents of long-term care facilities. Household contacts of babies ≤6months of age were recommended vaccine in 11 countries; contacts of those with clinical risk were recommended vaccine in 14

countries; DK and UK recommended vaccination of contacts of immunosuppressed individuals and not those with severe immunosuppression (table 11).

Table 11. Other population groups recommended seasonal influenza vaccine in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011 (n=28)

	Recommended	No recommendation
Long-term care facilities		
Residents of long-term care facilities	AT,BE,BG,CY,CZ,DE,EE,ES,FR,GR,IE,IS,IT,LT,MT,NL,PL,RO,SI,SK,HU,PT, UK,LU,NO (n=25)	DK,LV,SE (n=3)
Household contacts of		
Babies ≤6 months of age	AT,BE,EE,GR,IE,IT,LT,SI,PT*,FR*,LU (n=11)	BG,CY,CZ,DE,DK,ES,FR,IS,LV,MT,NL,PL,RO,SE,SK,HU,UK,NO (n=17)
Persons with clinical risk indication	AT,BE,BG,CY,EE,ES,GR,IE,IS,IT,LT,NL,SI,LU (n=14)	CZ,DE,DK,FR,LV,MT,PL,RO,SE,SK,HU,PT, UK,NO (n=14)
Immunosuppressed individuals	AT,BE,BG,CY, DK ,EE,ES,GR,IE,IS,IT,LT,NL,SI, UK ,LU (n=16)	CZ,DE,FR,LV,MT,PL,RO,SE,SK,HU,PT,NO (n=12)
The elderly (e.g. those ≥65)	AT,BE,BG,EE,ES,GR,IE,IS,LT,LU (n=10)	CY,CZ,DE,DK,FR,IT,LV,NO,MT,NL,PL,RO,SE,SI,SK,HU,PT,UK (n=18)

*FR,PT-Households members of infants <6 months with risk factor.

DK - Only to household contacts of seriously immunosuppressed individuals, in whom vaccination is not thought to give an adequate response.

Payment scheme and funding mechanism applied for influenza vaccination

Of seven countries that recommended seasonal influenza vaccine for children without other clinical risk two countries provided both vaccine and vaccine administration free to all, one country partly funded the cost for all and in three countries full cost of vaccination was borne by paediatric recipients. In one country (which) vaccine was paid by the recipient but administration of vaccine was free.

Of 27 countries that recommended seasonal influenza vaccine for older population, 13 countries offered both vaccine and administration of vaccine free of charge for all older recipients. In addition in two countries vaccine was free for this specific population group, but administration of vaccine was free only for some. Detailed information is presented in table 12. Vaccines are funded by National health insurance fund and MoH in most countries.

Countries marked in *Italic* and **bold** in a tables below (table 12,13,14 and 15) in this section means that payment mechanism for vaccine itself and administration was different (e.g. vaccine was free, but administration partly funded).

Table 12. Payment scheme and funding mechanism for child and adult influenza vaccinations with no clinical risk in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011.

Payment scheme	For vaccine itself	For vaccine administration
Children (n=5)		
Free for all	MT,SK	MT,SK, <i>PL</i>
Full cost paid by recipient	AT,EE,SI, <i>PL</i>	AT,EE,SI,
Partly funded for all	LV	LV
Adults (older population) (n=28)		
Free for all	CY,DK, <i>IE,IS</i> ,IT,LT,MT,RO,SK,ES,HU,UK,LU,ENG,SI	CY, <i>CZ</i> ,DK,IT,LT,MT,RO,SK,PL,ES,HU,UK,LU,ENG, <i>PT</i> , SI
Free for some	DE,GR,NL,SE,PL, FR, <i>PT</i>	DE,GR, <i>IE,IS</i> ,NL,SE, FR
Full cost paid by recipient	AT,BG,EE, NO	AT,BG,EE, NO
Partly funded for all	BE, <i>CZ</i> ,LV	BE,LV
Funding for children's vaccination (n=4)		
National health insurance fund	LV,SK,PL	
Ministry of Health	MT	
Funding for adults vaccination (n=23)		
National health insurance fund	CZ,DE,DK,GR,IS,IT,LT,LV,SK,ES,LU,FR	
Other:	CY,IE,MT,NL,SE,PL,HU,UK*,RO,BE*,PT	
Ministry of Health	CY,RO, MT,NL, HU, PT	
The public health service (HSE)	IE	
Local government	PL, SE†	

*UK,BE –did not specify;

† The 21 counties who are economically responsible for health care;

CY-The vaccine was free for all adults over 65 years of age being vaccinated in the Public Sector.

DE- Influenza vaccine also paid by private Health insurance fund (approximately 12% of German population belong to private HI).

NL-Vaccine is not recommended for adults < 60 years without clinical risk factor. Only for health care workers. For the latter the employer pays the vaccine and vaccination. Everybody can get a flu shot on own costs.

Among the 28 participating countries, 14 indicated that vaccine was and its administration was free to all for those with clinical risk; in two countries vaccine was free, but administration of vaccine was free for some; four countries reported that recipients from these groups must pay full cost and its administration for influenza vaccine (table 15). In one country recipients must pay for vaccine, but its administration is free.

Of 22 countries that recommend vaccine for pregnant women 14 countries provide both vaccine and its administration free of charge for all pregnant women. In two countries vaccine is free for all but administration free applies for some. Two countries offer vaccine administration free of charge for all but vaccine is partly funded for all in one country and full cost must be paid in another (table 13). Vaccines are funded by National health insurance fund and MoH or public health service in most countries.

Table 13. Payment scheme and funding mechanism in risk group's for influenza vaccination in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011. (n=28)

Payment scheme	For vaccine itself	For vaccine administration
Clinical risk groups (n=28)		
Free for all	DE,DK,RO,ES,FR, <i>IE</i> ,LT, <i>IS</i> ,IT,MT,NL,SI,SK,HU, UK,LU	CZ ,DE,DK,ES,FR,IT,LT, MT,NL, <i>PL</i> ,RO,SI,SK,HU, UK,LU
Free for some	CY,GR,SE,PT†	CY, GR, <i>IE</i> , <i>IS</i> ,SE
Full cost paid by recipient	AT,BG,EE, <i>PL</i> ,NO	AT,BG,EE,NO
Partly funded for all	BE, CZ ,LV	BE,LV,PT
Pregnancy related vaccinations (n=22)		
Free for all	DE,DK,ES,FR, <i>IE</i> , <i>IS</i> ,IT,LT,RO,HU, UK	CZ ,DE,DK,ES,FR,IT,LT,RO,HU, UK
Free for some	CY,GR,SE	CY,GR, <i>IE</i> , <i>IS</i> ,SE,LU
Full cost paid by recipient	AT,EE,SI,LU,NO	AT,EE,SI,NO
Partly funded for all	BE, CZ ,PT	BE,PT
Funding for clinical risk groups (n=24)		
National health insurance fund	CZ,DE,DK,FR,GR,IS,IT,LV,LT,PL,SI,SK,ES,LU, BE	
Other:	CY,IE,MT,NL,SE, UK,RO,PT,HU,SE	
Ministry of Health	CY,RO,MT,NL,PT,HU	
Health Services Executive (public health service)	IE	
The counties economically responsible for health care	SE	
Funding for pregnancy related vaccinations (n=18)		
National health insurance fund	CZ,DE,DK,ES,FR,GR,IS,IT,LT,LU, BE	
Other:	CY,IE,SE, UK,RO,PT,HU	
Ministry of Health	CY,RO,PT,HU	
Health Services Executive(public health service)	IE	
The counties economically responsible for health care	SE	

*UK –did not specify;

† PT-free for some if included in social criteria.

CY-The vaccine was free for all people at risk being vaccinated in the Public Sector that were entitled free Medical care according to their financial income. Regarding the immunization in the Private sector it was not free unless individuals had private health insurance.

SK- According to health insurance companies decision the vaccination against influenza in the season 2010-2011 was free for the entire population regardless of health status or profession so it was fully reimbursed also for pregnant women from the national insurance fund.

DE- Influenza vaccine also paid by private Health insurance fund (approximately 12% of German population belong to private Hi). For pregnant women with underlying diseases vaccination is recommended from 1st trimester onwards.

Of 25 countries that recommend vaccine to HCWs 15 countries offered both vaccine and administration free of charge for all HCWs; five countries offered both vaccine and administration free of charge for some; in one country vaccine was free for all, but

administration of vaccine was free only for some. In 14 countries the cost of vaccines are funded by national health insurance funds or employers.

Funding for vaccination of other occupations is presented in a table 14. Of 18 countries seven provide vaccine and its administration free to all, and four countries free to some. One country provides vaccine free to all, but administration of vaccine is free only to some. One country provides vaccine administration free to all, but vaccine itself is free only to some. In 14 countries vaccines are funded by national health insurance funds, government or employers.

Table 14. Payment scheme for HCWs and other occupations in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011

Payment scheme for	For vaccine itself	For vaccine administration
Health Care Workers (HCWs) (n=25)		
Free for all	DE,ES, IS ,IT,LT,MT,NL,RO,SK,HU,PT, BE,SI,UK,NO,PL	DE,ES,IT,LT,MT,NL,RO,SK,HU,PT, BE,SI,UK,NO,PL
Free for some	CY,EE,FR,GR,IE	CY,EE,FR,GR,IE, IS
Full cost paid by recipient	AT	AT
Different schemes adopted	BG*,LU†	BG*,LU†
Other	LV‡	LV‡
Other occupations (n=18)		
Free for all	DE,ES, IE ,IT,MT,SK,HU,NO	DE,ES,IT,MT, PL ,SK,HU,NO
Free for some	CY,EE,GR, PL ,LU	CY,EE,GR, IE ,LU
Full cost paid by recipient	IS	IS
Partly funded for all	BE,FR	BE,FR
Other	SI‡	SI‡
Different schemes adopted	BG§	BG§
Funding for HCWs (n=22)		
National health insurance fund	ES,FR,IS,IT,SK,LT	
Paid by employer	DE,EE,NL,UK,NO, PT ±, SI,PL	
Paid by government	GR,IE,MT	
Ministry of Health	CY, PT ±,RO	
Paid by public health	HU	
No response	BE‡	
Other	LV‡	
Funding for other occupations (n=16)		
National health insurance fund	DE,ES,FR,GR,SK	
Paid by employer	EE,IT,PL ,NO ,BE	
Paid by government	CY,IE,MT ,LU	
Paid by public health	HU	
No response	SI	

*BG- Full cost paid by recipient or by the employer in some hospitals.

†LU-free of charge for some, paid by recipients for others.

‡LV,BE,SI-did not specify;

§BG-Sometimes paid by the employer, sometimes by the recipient.

±PT-Vaccine Partly funded for all but free for some based in social criteria. Vaccine administration free for all.

Comments for HCWs

DK-Vaccination of health care workers is not offered for free nationally. It's up to the regions/hospitals to decide whether they will offer influenza vaccination to health care workers.

CY-The vaccine was free for all HCW employed by the government when being vaccinated in the Public Sector. For the non - public servant HCWs, it was administered for free by the Public Sector only if they were entitled free Medical care according to their financial income.

FR-Free vaccination is currently being generalised to all HCW.

DE-HCWs also paid by health insurances.

IE-Seasonal influenza vaccine is supplied to all HCWs (whether in public or private health care units) free of charge from HSE stock. The administration of the vaccine is then arranged by the individual unit (usually via occupational health or local GP).

SK-As the vaccination against influenza was free for the entire population everybody had it free regardless the health status or profession.

SE-Local recommendations may exist.

Comments for other occupations

CY-The vaccine was free for all people at risk being vaccinated in the Public Sector that were entitled free Medical care according to their financial income. Regarding the immunization in the Private sector it was not free unless for those who had private health insurance.

FR-For the vast majority the part not borne by the social security is reimbursed by private insurances.

DE-Influenza vaccine also paid by private Health insurance (HI) fund (Approximately 12% of German population belong to private HI). Vaccination is recommended for all people in institutions or organization with public access or persons who care for unvaccinated patients. The recommendation does not specify certain public settings explicitly.

SK-As the vaccination against influenza was free for the entire population everybody had it free regardless the health status or profession.

Of 25 countries that recommend vaccine to residents of long-term care stay facilities 14 offer vaccine and its administration free to all; three countries administer vaccine free for all (CZ,PL,PT), however vaccine itself is free only for some in PT, partly funded for all in CZ and full cost must be paid by recipients in PL (table 15). Vaccination is funded by national insurance funds in 12 countries and by MoH in six of these countries.

Table 15. Payment scheme for residents of long-stay care facilities and household contacts in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011 .

Payment scheme	For vaccine itself	For vaccine administration
Residents of long-term care stay facilities (n=25)		
Free for all	CY,DE,ES,IS,IT,LT,MT, NL,RO,SK,HU,UK,LU,NO	CY, CZ ,DE,ES,IS,IT,LT, MT,NL, PL ,RO,SK,HU, PT , UK,LU,NO
Free for some	BG,FR,GR,IE,SI, PT	BG,FR,GR,IE,SI
Full cost paid by recipient	AT,EE, PL	AT,EE
Partly funded for all	BE, CZ	BE
Household contacts (n=18)		
Free for all	ES,IT,NL, UK	ES,IT,NL,PT, UK
Free for some	CY,DK,GR,IE,PT	CY,DK,GR,IE
Full cost paid by recipient	AT,BG,EE,IS,LT,SI,LU	AT,BG,EE,IS,LT,SI,LU
Partly funded for all	BE,FR	BE,FR

Funding for residents of long-term care facilities (n=22)	
National Health insurance fund	CZ,DE,ES,FR,GR,IS,IT,LT,PL,SI,SK, LU
Other:	BG,CY,IE,MT,NL,HU, UK,NO,RO, BE*
Ministry of Health	CY,RO, MT, NL ,PT,HU
The cost is paid sometimes by the MoH	BG
Health Services Executive	IE
Health Care Facility	NO
Funding for household contacts (n=10)	
National (statutory) Health insurance fund	DK,ES,FR,GR,IT, BE
Not specified	PT
Other:	CY,IE,NL, UK *
Health Services Executive	IE
Ministry of Health	CY,NL

*BE,UK-did not specify.

CY-The vaccine was free for all people being vaccinated in the Public Sector that were entitled free Medical care according to their financial income.

DE- Influenza vaccine also paid by private Health insurance (HI) fund (approximately 12% of German population belong to private HI).

LT-Vaccine was free for household's contacts if they belong to risk group

NL-Recommended by the health Council but not paid for by the Ministry of health

SK-The only mandatory vaccination against influenza is for SK-people homed in social care facilities with fully reimbursement by the health insurance companies. The officially recommended groups should cover the vaccination partially by themselves until a health insurance company makes a different decision.

Vaccination coverage data

Measured by administrative method

Overall 22 countries provided VC calculated for different age and population groups using administrative methods:

BG,CY,DK,EE,HU,IS,IE,IT,LV,LT,LU,MT,NL,NO,PL,PT,RO,SK,ES,FR,ENG,SE. Influenza VC among older population (≥ 55 years of age) was measured in 18 countries in the 2010-11 season. The VC varied from 1.1% in EE to 80.6% in NL. VC for clinical risk groups was reported by two countries (NL,ENG) and was 68.9% and 50.4% respectively. In addition NO provided vaccination coverage of 47% for both clinical risk groups and those aged ≥ 65 , combined together. Estimates of coverage for residents in nursing homes were provided by two countries (SK,PT) and VC reported was 82.9% and 85.4% respectively. Two countries (ENG and RO) provided VC data for pregnant women. In ENG VC among healthy pregnant women was 36.6% and 56.6% among at risk pregnant women and in RO VC among pregnant women was 3.7%. Five countries were able to provide VC data for HCWs with a wide range reported, from 21.1% in ES to 63.9% in RO. Details are presented in table 16.

Table 16. Vaccination coverage measured by administrative method in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011.(n=28)

Country	Vaccination coverage (%) influenza season 2010-11
Entire population	
BG	3.41
CY	11.9
EE	1.3
IS	14.9
IT	17.2
LV	0.5
NL	21.3
PL	3.1
RO	5.6
SK	9.1
LT	3
HU	10.2
NO	12
Vaccination coverage was not measured	AT,BE,CZ,DK,FR,DE,GR,IE,MT,SI,SE,ES,PT,ENG,L U
Children	
≥6 months-4 years	
PL	1.01
≥6 months- <10 years	
FR	13,8
≥6 months -14 years	
EE	0.9
≥6 months -15 years	
SK	4.3
5-14 years	
PL	1.76
10-19 years	
FR	16.7
Vaccine not recommended for this group	BG,CY,DK,FR,GR,IT,LT,NL,RO,SE,HU,LU,ENG,NO
Vaccination coverage was not measured for this group	AT,BE,CZ,DE,IS,IE,LV,MT,SI,ES,PT
Older age groups	
≥50 year age group	
Vaccine not recommended for group	BG,CY,CZ,DK,FR,DE,GR,IS,IT,LV,LT,NL,RO,SE,PL, ES,HU,PT,LU,ENG,NO
Vaccine recommended for this group but coverage was not measured	AT,EE,IE,MT,SK,SI, BE
≥55 year age group	
MT	56
Vaccine not recommended for group	BG,CY,CZ,DK,FR,DE,GR,IS,IT,LV,LT,MT,NL,RO,SE, ES,HU,PT,LU,ENG,NO

Vaccine recommended for this group but coverage was not measured	AT,EE,IE,SK,SI,PL, BE
	≥59 year age group
SK	23.8
	≥60 year age group
MT	56
NL	80.6
HU	29.7
Vaccine recommended for this group but coverage was not measured	AT,EE,DE,GR,IS,IE,SI,PL, BE
Vaccine not recommended for group	BG,CY,CZ,DK,FR,IT,LV,LT,RO,SE,ES,PT,LU,ENG,NO
	≥65 year age group
DK	50
SE	54
EE	1.1
FR	53.8
IE	60.1
IT	60.2
LV	1.5
LT	9.23
MT	56
PL	9.28
RO	19.1
ES	56.9
ENG	72.8
HU	29.7
LU	45.1
Vaccine not recommended for this group	-
Vaccine recommended for this group but coverage was not measured	AT,BE,BG,CY,CZ,DE,GR,SK,SI, SE, IS,PT,NO
Other age groups	
	15-49 years
EE	1.4
	50-64 years
	1.6
SK	16-54 years
	4.3
FR*	20-64 years
	29.9
IE	≥ 75 years
	64
	70-74 years
	59.3
	65-69 years

	50.7
Health Care Workers	
ES	21.1
RO	63.9
ENG	34.7
HU	41.2
PT	34.1
Vaccine recommended for this group but coverage was not measured	AT,BG,CY,CZ,EE,FR,DE,GR,IS,IE,IT,LV,LT,MT,NL,SK,SI,PL,LU,NO, BE
Vaccine not recommended for group	DK,SE
Clinical risk groups	
NL	68.9
ENG	50.4
Vaccination coverage was not measured for at risk group	AT,BE,BG,CY,CZ,DK,EE,DE,GR,IS,IE,IT,LV,LT,MT,RO,SK,SI,SE,PL,ES,HU,LU,NO,PT
Pregnant women	
RO	3.7
ENG	36.6 (healthy) 56.6 (at risk)
Vaccination was recommended but vaccine coverage was not measured for this group	AT,BE,CY,CZ,DK,EE,FR,DE,GR,IS,IE,IT,LT,SK,SI,SE,ES,HU,PT,LU,NO
Vaccine not recommended for group	BG,LV,MT,NL,PL
Residents in social care facilities (n=1)	
SK	82.9
PT (residents in nursing homes)	85.4
Staff in nursing homes	
PT	27.3
All clinical risk groups and ≥65 together	
NO	47

*FR- no data available for the total population of <65 years clinical risk groups.

CZ-there are only existing data about sales of vaccine from manufacturers and data from health insurance companies about VC from health insurance system.

IE-uptake reported for age groups ≥ 65 years reflects VC in those with medical cards or GP visit cards (this group do not have to pay for vaccine or administration of vaccine).VC is based on claims from GPs for payment.

NL-Vaccination is recommended for 60 years and older and clinical risk groups. Vaccination coverage 68.9% is for Dutch risk groups ≥60 years + any age ≥6 months with clinical risk factor.

MT provides vaccination free to all residents in private and public homes for the elderly and to the staff working in public homes. Vaccination is made available usually around mid October-end of October to all those groups we listed who are entitled free of charge. By the beginning of December if we have and we always do have supply remaining we offer it free of charge to the rest of the population.

Estimated by survey methods

Four countries (FR,PT,NO,DE) estimated VC using survey methods.

Details on the type of survey and estimates of VC among different age and risk groups for 2010-11 influenza season are presented in table 2. VC estimated by survey method among older population (≥ 65 years) varied from 42% in NO to 61% in FR. The reported VC in clinical risk groups varied from 29.4% in PT to 46.4% in FR respectively; in HCWs from 14% in NO to 27.6% in FR. The Netherlands has information to estimate vaccine coverage by survey method; however, these data were not available at the time of the survey (data usually only available a year after survey).

Table 17. Vaccination coverage estimated by survey methods in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011. (n=4)

Countries	Vaccination coverage (%) influenza season 2010-11
Entire population	
PT	17.5
Children	
PT	≥ 6 months- <15 years
	9.6
Older age groups	
	≥ 60 year age group
DE**	50.6
	≥ 65 year age group
FR	61
NO	42
PT	48.3
	$\geq 65-74$ years
	39%
NO	≥ 75 years
	48
Other age groups	
	15-44 years
	7.4
PT	45-64 years
	17
NO	≥ 15 years
	16
Health care workers	
DE**	25.8
FR	27.6
NO	14
Clinical risk groups	
DE**	41
FR	46.6
NO	38

PT*	29.4
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Vaccination coverage for some clinical risk groups in PT: pulmonary disease -27.7%; diabetes – 42.3%; cardiovascular disease- 37.6; cancer- 24.9%; neurological diseases-34.7%;liver disease-30.3%.

*PT- cancer included.

DE-data provided 15/11/2012.

Vaccination coverage monitoring

Existing mechanisms to monitor vaccination coverage

Of 28 survey responding countries seasonal influenza vaccination coverage was measured for the entire population in 20 countries (BG,CY,CZ,DE,EE,FR,IS,IT,LT,LV,NL,PL,RO,SI,SK,HU,PT, UK,LU,NO). The following countries do not measure vaccination coverage among entire population: AT,BE,DK,ES,GR,IE,MT,SE.

Three countries (DE,IT,SK) have a mechanism for monitoring seasonal influenza vaccination coverage for all groups for whom vaccination is recommended. Eight countries reported that do not have mechanism to monitor vaccine coverage for any group (AT,BE,BG,CY,EE,GR,IS,PL).Seventeen 17 countries reported that they had mechanisms to monitor vaccination coverage for some (but not all) population groups (CZ,DK,ES,FR,IE,LT,LV,MT,NL,SE,SI,HU,PT, UK,LU,NO, RO).

Table 18. Mechanism to monitor vaccination coverage by population groups in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011. (n=17)

Population groups	Have mechanism to monitor vaccination coverage	Do not have mechanism to monitor vaccination coverage	Unknown /Not applicable*
Age group			
Any age group whom vaccine is recommended by age (e.g. those aged >65; <6 months of age- 4 years)	CZ,DK,ES,FR,IE,LT,LV, NL,SI,SE,HU,PT, UK,LU,RO	MT,NO	
If no, specify	MT->55 years of age	NO-not for all age groups.	
Occupational setting			
HCWs			
All HCWs	ES,HU,PT, UK,NO,RO	CZ,DK,FR,IE,LT,LV,MT,SE, SI	NL,LU
If yes, specify:			
Hospitals	UK		
Laboratory staff			
Long-term care facilities (nursing homes and other chronic-care facilities)			
Out-patient care clinics			
Primary health care	UK		

settings			
Other occupations			
Military		CZ,DK,IE,LV,LT,MT,NL,SI, ES,SE, PT,NO,RO	FR,LU, HU*
Essential services (police& firemen)		CZ,DK,IE,FR,LV,LT,MT,NL ,SI,ES,SE, PT,NO,RO	LU, HU*
Veterinary services		CZ,DK,IE,FR,LV,LT,MT,NL ,SI, SE, LU,NO,RO,PT	ES *,HU*
Poultry industry		CZ,DK,IE,FR,LV,LT,MT,NL ,SI,ES,SE,HU,PT,LU,NO, RO	
Pig industry		CZ,DK,IE,FR,LV,LT,MT,NL ,SI, SE,HU,PT,LU,NO, RO	ES*
Families that raise pigs/poultry/wild fowl (geese, ducks, swans)		CZ,DK,IE,FR,LV,LT,MT,NL ,SI,ES,SE, PT,LU,NO, RO	HU*
Airline workers		CZ,DK,IE,FR,LV,LT,MT,NL ,SI, SE, PT,NO,RO	LU, ES* HU*
Public transport workers		CZ,DK,IE,FR,LV,LT,MT,NL ,SI, SE, PT,NO,RO	LU, ES* HU*
Educational staff		CZ,DK,IE,FR,LV,LT,MT,NL ,SI, SE,PT,NO,RO	LU, ES* HU*
Custom staff/ Border/immigration staff		CZ,DK,IE,FR,LV,LT,MT,NL ,SI, SE,PT,NO,RO	LU, ES*, HU*
Energy sector workers		CZ,DK,IE,FR,LV,LT,MT,NL ,SI, SE,PT,RO,NO	LU ,ES*, HU*
Finance and banking workers		CZ,DK,IE,FR,LV,LT,MT,NL ,SI, SE,PT,NO,RO	LU, ES*, HU*
Other, specify:	NO- all at risk and ≥ 65 together;		
Clinical risk			
Chronic pulmonary (including asthma) disease	FR,NL,PT, UK	CZ,DK,IE,LV,LT,MT,SI,ES, SE,HU,LU,NO,RO	
Cardiovascular (except hypertension) disease	FR,NL,SI,PT, UK	CZ,DK,IE,LV,LT,MT,ES,SE ,HU,LU,NO,RO	
Renal disease	FR,NL,SI,PT, UK	CZ,DK,IE,LV,LT,MT,ES,SE ,HU,LU,NO,RO	
Hepatic disease	SI,PT, UK	CZ,DK,IE,FR,LV,LT,MT,NL ,ES,SE,HU,LU,NO,RO	
Haematological or metabolic disorders (including diabetes mellitus)	FR,NL,SI, UK, PT [†]	CZ,DK,IE,LV,LT,MT,ES,SE ,HU, LU,NO,RO	
Chronic neurologic diseases or neuromuscular conditions	FR,NL,SI,PT, UK	CZ,DK,IE,LV,LT,MT,ES,SE , LU,NO,RO	HU*
Immunosuppressed due to disease or treatment	FR,NL,SI, UK	CZ,DK,IE,LV,LT,MT,ES,SE ,HU,PT,LU,NO,RO	

HIV/AIDS	FR,NL,SI, UK	CZ,DK,IE,LV,LT,MT,ES,SE, HU,PT,LU,NO,RO	
Long-term aspirin use (in children up to 18 years old)	SI	CZ,DK,IE,FR,LV,LT,MT,NL, ES,SE,HU,PT,LU,NO,RO	
Pregnancy	SI, UK,RO	CZ,DK,IE,FR,LV,LT,MT,NL, ES,SE,PT,LU,NO, HU	
Any condition affecting respiratory function	NL	CZ,DK,IE,FR,LV,LT,MT,SI, ES,SE,HU,PT,LU,NO,RO	
Other population groups			
Residents of long-term care facilities (nursing homes and other chronic-care facilities)	PT	DK,ES,FR,IE,LT,LV,MT,NL, SE,SI,HU,LU,NO,RO,CZ	
Household contacts of persons for whom vaccination is recommended		CZ,DK,ES,FR,IE,LT,LV,MT, NL,SE,SI,HU,PT,LU,NO, RO	

*-Not applicable.

† -Diabetes mellitus.

Two countries (AT,NL) reported that their country had chronic disease registers, covering all chronic diseases and conditions. Most countries (n=17) did not have any chronic disease registers. Nine countries reported that they had chronic disease registers for some diseases. Detailed information presented in table 19.

Table 19. Chronic disease register(s) in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011. (n=28)

Chronic disease registry	Countries	Total
There is no any chronic disease register	CZ,DE,EE,ES,FR,GR,IE,IS,IT,MT, PL,RO,SE,PT, UK,LU,NO	17
There is chronic diseases register for some chronic disease/conditions	BE,BG,CY,DK,LT,LV,SI,SK,HU	9
There is chronic disease register that cover all chronic disease and conditions	AT,NL	2

Existing chronic disease registers for some disease:

BE, CY,LV,LT-cancer;

BG-HIV/AIDS; diabetes;

LV-Tuberculosis, diabetes, mental disorders, occupational diseases, alcohol dependent, multiple sclerosis, congenital disorders, HIV/AIDS;

LT- Tuberculosis and lung diseases, mental illnesses, occupational diseases.

SK-oncologic diseases, diabetes Mellitus 1. type, hereditary heart impairment, heart diseases, chronic lung diseases, hereditary development impairment;

SI-diabetes;

HU-chronic pulmonary, including asthma.

Numerator assessment

Of 28 responding countries 25 countries (BE,BG,CY,DK,EE,FR,DE,HU,IS,IE,IT,LV,LT,LU,MT,NL,

NO,PL,PT,RO,SK,SI,ES,SE,ENG) use administrative record data, surveys or pharmaceutical data to measure the numerator for assessing influenza vaccination coverage. The type of numerator used for assessment and the time when it was last conducted for each country is detailed in table 20. AT, CZ,GR did not use (or reported as unknown if these methods were used) any of methods described below in table 14.

Table 20. Method/s to use for vaccination coverage assessment in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011. (n=25)

Country	Method/Last conducted (month, year)
Health record data	
Administrative records	
DK	Nov 2011
EE	Dec 2010
FR	NK
IE	Sep 2011
IT	Jun 2011
MT	Apr 2011
PL	Dec 2010
RO	May 2011
SK	Aug 2010
ES	Mar 2011
HU	May 2011
PT	Apr 2011
LU	2011
LV	Sep 2011
Unknown	AT
No	BE,BG,CY,CZ,DE,GR,IS,LT,NL,SI,SE,NO
Medical records (excluding computerised records)	
PL	Dec 2010
SK	Aug 2010
No	BE,BG,CY,DK,EE,FR,DE,GR,IS,IE,IT,LT,MT,NL,RO,SI,ES,SE,HU,PT, ENG,LU,NO
Unknown	AT,LV,CZ
Computerised medical records (not specific to immunisation)	
IT	Jun 2011
NL	Jul 2011
ENG	Dec 2011
Unknown	AT,LV,CZ
No	BE,BG,CY,DK,EE,FR,DE,GR,IS,IE,LT,PL,RO,SK,SI,MT,SE,HU,PT,LU,NO
Immunisation registry (routinely collected information)	
DK	Nov2011
IS	NK
IT	Jun 2011
LV	Dec 2011
LT	Dec 2011

ES	Mar 2011
PT	Apr 2011
Unknown	AT
No	BE,BG,CY,CZ,EE,FR,DE,GR,IE, MT,NL,PL,RO,SK,SI,SE,HU, ENG,LU,NO
Immunisation survey (active collection of immunisation data)	
DE	Jun 2010
SI	Sep 2010
NO	Apr 2011
PT	Apr 2011
Unknown	AT
No	BE,BG,CY,CZ,DK,EE,FR,GR,IS,IE,IT,LV,LT, MT,NL,RO,ES,SE,HU,PL,SK, ENG,LU
Survey type	
Household survey, in person	
No	AT,BE,BG,CY,CZ,DK,EE,FR,DE,GR,IS,IE,IT,LV,LT,MT, NL,PL,RO,SK,SI,ES,SE,HU,PT, ENG,LU,NO,PT
Individual interview, in person	
BE	NK 2009
No	AT,BG,CY,CZ,DK,EE,FR,DE,GR,IS,IE,IT,LV,LT, MT,NL,PL,RO,SK,SI,ES,SE,HU,PT, ENG,LU,NO
Telephone survey	
FR	Apr 2010
DE	Jun 2010
NO	Apr 2011
PT	Apr 2011
No	CZ,AT,BE,BG,CY,DK,EE,GR,IS,IE,IT,LV,LT, MT,NL,PL,RO,SK,SI,ES,SE,HU, ENG,LU
Mail survey	
CY	May 2007
SE	Mar 2009
No	AT,BE,BG,CZ,DK,EE,FR,DE,GR,IS,IE,IT,LV,LT, MT,NL,PL,RO,SK,SI,ES,HU,PT, ENG,LU,NO
Pharmaceutical data	
Pharmaceutical distribution data (from industry)	
BE	Aug 2011
IS	Aug 2011
SK	Jun 2011
PT	Jun 2011
LU	2011
Unknown	AT,CZ
No	BG,CY,DK,EE,FR,DE,GR,IE,IT,LV,LT, MT,NL,PL,RO,SI,ES,SE,HU, ENG,NO
Pharmaceutical distribution data (from national purchaser)	
BG	Mar 2011
CY	Jan 2011

IS	Aug 2011
MT	May 2011
PL	NK 2010
SK	Jun 2011
SI	Sep 2010
NO	Apr 2011
PT	April 2011
Unknown	AT,CZ, BE
No	DK,EE,FR,DE,GR,IE,IT,LV,LT,NL,RO,ES,SE,HU, ENG,LU
Pharmaceutical sales data (from private pharmacies)	
BE	Aug 2011
CY	Jan 2011
PT	Jun 2011
Unknown	AT
No	BE,BG,DK,EE,FR,DE,GR,IS,IE,IT,LV,LT, MT,NL,PL,RO,SK,SI,ES,SE,HU, ENG,LU,NO, CZ
Prescription data	
DE	Sep 2011
HU	May 2011
LU	2011
Unknown	AT, BE
No	BG,CY,DK,EE,FR,GR,IS,IE,IT,LV,LT, MT,NL,PL,RO,SK,SI,ES,SE, ENG,NO, CZ,PT

NK-not known

The details on survey methods that were used in four countries provided in table 21.

Table 21. Details for survey method used assessing vaccination coverage in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011.(n=3)

Country	Sampling strategy	Specified probability sampling method	Sample size	Response rate
FR	Probability sampling	Multistage	1040	82
PT	Probability sampling	Stratified (assessment, LQAS*)	2710	84.1
NO	Probability sampling	Stratified (assessment, LQAS*)	2000	20

*Lot quality assessment sampling.

Type of administrative method for numerator assessment

Nineteen countries reported that they assess numerator. Ten of them (BG,DK,EE,FR,IE,IT,LV,NO,PL,ES) use one type of administrative method and six countries use two (CY,HU,LT,LU,RO,SK). SI assesses numerator data using three methods; and PT and SE use four methods to assess the numerator. The following eight countries reported that they do not routinely use administrative methods to measure the numerator (AT, BE,CZ, DE, GR, IS,MT,NL) (table 22).

Table 22. Administrative method used for vaccination coverage assessment in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011. (n=27)

Administrative method	Countries	Total
Numerator not assessed	AT,BE,CZ,DE,GR,IS,MT,NL	8
Numerator assessed	BG,CY,DK,EE,FR,HU,IE,IT,LV,LT,PL,RO,SK,SI,ES,SE,PT,NO,LU	19
Aggregate collection of number of vaccines administered	HU,LV,RO,SI,SE,PT	6
Aggregate collection of number of vaccines distributed (industry)	SK,PT,LU	3
Aggregate collection of number of vaccines distributed (national purchaser)	BG,CY,LT,SI,NO	5
Aggregate collection of number of vaccines sales (private pharmacies)	CY,SE,PT	3
Payment/ reimbursement claims	DK,FR,IE,LV,SE,LU	6
Number of people vaccinated	EE,HU,IT,LT,PL,RO,SK,SI,ES,SE,PT	11

NO-Aggregate collection of number of doses distributed from wholesalers in Norway.

Twenty countries collect data for numerator assessment annually or at the end of influenza season, most of them in spring (table 23). Four countries (DK,IE,LT and ENG) assess vaccination coverage more frequently (monthly or weekly).

Table 23. Interval of vaccination coverage assessment in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011. (n=28)

Interval at which numerator data assessed	Country	Comments
Annually	BG	March-April
	CZ	End of April
	DE	Whole year
	EE	January
	ES	March each year
	IS	April each year
	MT	End of April following year
	NL	April-June
	PL	December
	SE	Different counties use different methods
	SK	After the influenza season - May, June every year
Once, at the end of flu season	CY,FR,LV,RO,SI,PT,LU,NO,HU	
Monthly	DK,IE,LT	
Weekly	ENG	
Never	AT,GR	
Other	BE,IT	

BE-HIS each 4 years.

IT-preliminary data in January 2011 and definitive data in June 2011.

Denominator assessment

Five countries reported that they can measure denominator data for some HCWs categories; one country (DE) reported that data on denominator for military and emergency service workers are available. Five countries have denominator data for individuals with medical conditions, two MSs (SK,PT) assess denominator data in residents of long-term care facilities (nursing homes and other chronic-care facilities) (table 24).

Table 24. Denominator availability in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011. (n=28)

Population group	Denominator available	Denominator not available	
Age group			
Any age group whom vaccine is recommended by age (e.g. those aged >65; <6 months of age- 4 years)	DE,DK,EE,ES,FR, HU,IE,IS,IT, LT,LV,MT,NL,PL,SE,SI,SK, ENG,LU,NO,PT	AT,BE,BG,CY,CZ,GR,RO	
If no, specify:			
BG- The number of the whole population (7504868 in 2010)			
CZ- coverage data include only total data that include risk groups + age group65+			
RO- only for those > 65 years			
CY- Not applicable			
Occupation groups			
	DE,ES,HU,RO,PT,EN	AT,BE,BG,CY,CZ,DK,EE,FR,GR,IE,IS,IT,LT,LV,MT,NL,PL,SE,SI,SK,LU,NO	
HCWs			
Denominator for all HCWs	DE,ES,HU,RO,PT		
Primary health care settings	ENG		
Hospital personnel	ENG		
Laboratory staff			
Long-term care facilities personnel (nursing homes and other chronic-care facilities)			
Outpatient care clinics personnel			
Other occupational groups			Not applicable
Police	DE	ES	HU, PT, RO
Firemen	DE	ES	HU, PT,RO
Military personnel	DE	ES,	HU, PT,RO
Poultry industry personnel*		HU,ES	PT,RO
Pig industry personnel*		HU,ES	PT,RO
Veterinary services personnel*			ES, HU, PT,RO
Families that raise pigs/poultry/wild fowl (geese, ducks, swans)*		ES	HU,PT,RO

Airline workers*			ES, HU, PT,RO
Public transport workers*			ES, HU, PT,RO
Educational staff*			ES, HU, PT,RO
Border/immigration*			ES, HU, PT,RO
Custom*			ES, HU, PT,RO
Energy sector*			ES, HU, PT,RO
Finance and banking*			ES, HU, PT,RO
Medical condition categories			
	FR,DE, NL,RO,ENG	AT,BE,BG,CY,CZ,DK,EE,GR,IS, ES,IE,IT,LV,LT,MT,PL,SK,SI,SE,PT‡,LU,NO, HU	
Chronic pulmonary (including asthma) disease patients†	FR,DE, ENG	HU,RO	
Cardiovascular (except hypertension) disease patients†	FR,DE, ENG	HU,RO	
Renal disease patients†	FR,DE, ENG	HU,RO	
Hepatic disease patients†	DE, ENG	FR, HU,RO	
Hematological or metabolic disorders (including diabetes mellitus) patients†	FR,DE, ENG	HU,RO	
Immunosuppressed due to disease or treatment†	FR, ENG	DE,HU,RO	
HIV/AIDS patients†	FR	DE,HU,RO	
Long-term aspirin users (in children up to 18 years old) †		FR,DE,HU,RO	
Pregnant women†	DE, RO, ENG	FR, HU	
Any condition affecting respiratory function	NL	FR,DE,HU,RO	
Chronic neurologic diseases or neuromuscular conditions†	FR,DE, ENG	RO	HU
Other group categories			
	LT,SK,NO	AT,BE,BG,CY,CZ,DK,EE,FR,DE,GR,HU,IS,IE,IT,LV,MT,NL,PL,RO,SI,ES,SE,PT,LU	
Population of residents of long-term care facilities (nursing homes and other chronic-care facilities)	SK,PT	LT,NO	
Number of household contacts of persons for whom vaccination is recommended		LT,SK,NO	
Population other category, specify:	LT- 0-17, 18-64, >=65 age groups NO§	SK	

*DE-unknown.

†NL-unknown.

‡ PT- Assess coverage in these groups by survey. Denominators are derived from a sample. Not total numbers.

§NO-it has been estimated that persons belonging to the risk groups and persons \geq 65 amount to about 19% of the total.

Vaccine procurement

The total number of doses of seasonal influenza vaccine purchased, distributed and used for the 2010-11 influenza season varied widely across countries (data are provided in a table 25). Twelve countries were not able to provide these data.

Table 25. Vaccine procurement in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011. (n=28)

Country	Purchased doses	Distributed doses	Used doses
BE	3150000	2650000	2550000
BG	256395	NK	NK
CY	100800	95440	95440
HU	1305000	1275000	NK
IS	60000	47590	NK
IE	769640	759930	712700
IT	11040568	NK	NK
LT	105508	105508	90747
MT	85000	85000	78000
NL	4266110	4025990	3789949
RO	1300000	1300000	1205917
SK	596370	NK	496943
ES	NK	10000000	9000000
PT	2 200 000	2 200 000	1 600 000
UK	14,859,000 (ENG: 12,412,000)	14,517,000	ENG: 9,497,000
NO	NK	583480	NK
No, of doses purchased, distributed or used are unknown: AT,CZ,DK,EE,FR,DE,GR,LV,PL,SI,SE,LU (n=12)			

NK-not known

NL- Figures provided above are the totals of vaccine purchased, distributed and used only for the national program in NL.

UK- Purchased and distributed doses includes those used privately as well as for the national programme. Used doses only includes doses given in the national programme. No information is held on the number of private doses given.

Vaccination sites

Both public and private health sectors are used for vaccine administration in 26 countries. In IT vaccination is carried out only in the public sector and in EE vaccine is administered only in the private sector (table 26). Six countries provided information on the proportion of influenza vaccinations administered in public and/or private sector. Twenty two countries did not provide these data.

Table 26. Health sector(s) and proportion for administration of influenza vaccine in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011. (n=28)

Country	Health Sector	Proportion public (%)	Proportion private (%)
CY	Both public and private	57.3	42.7
IE	Both public and private	10	90
ES	Both public and private	95	5
PT	Both public and private	55	45
LU	Both public and private	5	95
EE	Private	-	100
AT	Both public and private	NK	NK
BE	Both public and private	NK	NK
BG	Both public and private	NK	NK
CZ	Both public and private	NK	NK
DK	Both public and private	NK	NK
FR	Both public and private	NK	NK
DE	Both public and private	NK	NK
GR	Both public and private	NK	NK
HU	Both public and private	NK	NK
IS	Both public and private	NK	NK
IT	Public	NK	-
LV	Both public and private	NK	NK
LT	Both public and private	NK	NK
MT	Both public and private	NK	NK
NL	Both public and private	NK	NK
PL	Both public and private	NK	NK
RO	Both public and private	NK	NK
SK	Both public and private	NK	NK
UK	Both public and private	NK	NK
SI	Both public and private	NK	NK
NO	Both public and private	NK	NK
SE	Both public and private	NK	NK

NK-not known

Two countries (NL,SK) reported that if vaccine was administered in private health sector there was full refund for both vaccine and administration fee to private institution. Six countries reported full refund for vaccine and administration to private sector for vaccination of those at risk. Three countries refund private sector for vaccine, but no refund for vaccine administration provided (table 27).

Table 27. Refund from the government/insurance fund (or corresponding body) to private institution for influenza vaccination in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011. (n=25)

Refund from the government/insurance fund (or corresponding body)	For vaccine itself	For vaccine administration
Full refund for all vaccinated individuals	NL,SK	NL,SK
Full refund for those at risk (e.g. ≥ 65; clinical risk groups)	DE,DK, ES,IS,MT ,SI,LU,LT,BE	CZ ,DE,DK, FR ,SI,LU,LT,BE
No refund to private sector at all	AT,CY,EE, FR,IE ,LV,PL,SE,UK,NO,RO	AT, BG ,CY,EE, ES,IS ,LV, MT ,PL,SE,NO,RO,UK
Partial refund for those at risk (e.g. ≥65; clinical risk groups)	CZ ,GR	GR
Other	BG	IE

BG-The vaccine is paid by the recipient.

IE- full refund for those at risk and eligible for full refund (with medical cards or GP visit cards). most elderly over 70 years are eligible for free administration.

PT – for the ones vaccine is not free, it is partly paid by the recipient.

The principal outlets for seasonal influenza vaccination reported by all countries were primary health care settings (table 28).

Table 28. Principal outlets for seasonal influenza vaccination in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011. (n=28)

Health care setting	Vaccine administered	Vaccine not administered
Primary care (General Practitioners)	AT,BE,BG,CY,CZ,DE,DK,EE,ES,FR,GR,HU,IE,IS,IT,LT,LV,MT,NL,PL,RO,SE,SI,SK,PT, UK,LU,NO (n=28)	-
Hospital	AT,BE,CY,DE,EE,ES,GR,HU,IE,IS,IT,LT,MT,SE,SK,PT, UK,NO (n=18)	BG,CZ,DK,FR,LV,NL,PL,RO,SI,LU (n=10)
Outpatient care clinics*	AT,BE,BG,CY,DE,EE,ES,GR,IE,IS,IT,LT,PL,SE,SK,PT,NO (n=17)	CZ,DK,FR,HU,LV,MT,NL,RO,SI,LU (n=10)
Occupational health services	AT,BE,DE,EE,ES,GR,HU,IE,IS,LT,PL,SE,SI,SK,PT, UK,NO (n=17)	BG,CY,CZ,DK,FR,IT,LV,MT,NL,RO,LU (n=11)

*UK-did not respond.

Other outlets for vaccination:

BG-Immunization services.

CZ-Private vaccination centres.

DK-Private vaccination clinics.

LT-Nursing homes and other chronic-care facilities.

MT-Community settings, institutions.

NL-Homes for the elderly.

SI-Home for elderly people.
 SE-Private vaccination clinics.
 NO-Public health services.
 PT- Pharmacies.

Promoting of seasonal influenza vaccination 2010-11 influenza season

Communication with public

Specific information materials (table 29) for the general public existed in 24 countries. Specific information for other population groups- pregnant women or individuals with chronic medical conditions existed in 10 and 13 countries respectively.

Table 29. Specific information materials for the public in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011. (n=28)

	Information exist	Information do not exist
Specific information to general public	BG,CY,CZ,DE,EE,ES,FR,GR,HU, IE,IS,IT,LT,MT,NL,PL,RO, SE,SI,SK,PT,UK,LU,NO (n=24)	AT,BE,DK,LV (n=4)
Specific info to pregnant women*	CY,DE,DK,FR,IE,IS,IT,SI,UK,NO (n=10)	AT,BE,BG,CZ,EE,ES,GR,HU, LT,LV,MT,NL,PL,RO,SE,SK,LU (n=17)
Specific info to persons with chronic medical conditions*	CY,DE,DK,FR,GR,IE, IS,IT,MT,NL,SI,UK,NO (n=13)	AT,BE,BG,CZ,EE,ES,HU, LT,LV,PL,RO,SE,SK,LU (n=14)
Specific information to other groups*	DE,DK,IE,IT,MT,UK (n=6)	AT,BE,BG,CY,CZ,EE,ES,FR,GR, HU,IS,LT,LV,NL,PL,SE, SI,SK,LU,NO, RO (n=21)

*PT-did not respond.

DK-older people and obese.

MT-children < 5 years.

IT-other groups included in National recommendations.

DE,IE-HCWs.

Media campaigns (radio, TV or news papers) were used in 22 countries during 2010-11 influenza season. Detailed information is specified in table 30.

Table 30. Mass media campaigns to promote the seasonal influenza vaccine for the public in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011.

Mass media campaigns	Used	Total
Radio	BG,CY,CZ,EE,ES,FR,HU,IE,IS,LT,MT,RO,SE,SI,SK,PT,LU	17
TV	BG,CY,DK,EE,ES,FR,GR,HU,LT,MT,RO,SE,SK,LU,PT	15
News papers	BG,CY,DE,DK,EE,ES,FR,IE,IS,LT,MT,SE,SI,SK,PT,LU	16
Leaflets	BG,CY,CZ,DE,DK,EE,ES,FR,HU,IE,IS,IT,LT,NL,PL,SI,SK,UK,NO	19
Posters	BG,CY,CZ,DE,DK,EE,ES,FR,IE,LT,MT,NL,SK,UK,LU,NO	16
Website	CY,CZ,DE,DK,EE,ES,GR,HU,IE,IS,IT,LT,MT,NL,RO,SE,SI,SK,PT,UK,LU,NO	22
Other: press conference	MT,UK	2

Media campaigns were sponsored by the national health authorities in 22 countries and by the pharmaceutical sector in five countries (BG,EE,LT,PL,UK). Details are presented in a table 31.

Table 31. Sponsors of the media campaign for the public in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011.

	Sponsored	Total
National/regional health authorities	BG,CY,DE,DK,EE,ES,FR,GR,IE,IS,IT,LT,MT,NL,PL,RO,SE,SI,SK,UK,LU,NO	22
Pharmaceutical sector	BG,EE,LT,PL,UK	5
Public service announcement*	DK,HU,MT,PT	4

* Advertisement content and production is provided by government or industry, including national health authority, with air time (radio, TV) or space (newspapers, magazines) provided by media company at no charge.

Other:

SK-Public Health Authority of SR has annually carried out the Press Conference on influenza.
CZ-Unknown

Communication with health professionals

Specific information materials (table32) for health professionals regarding seasonal influenza vaccination (e.g. leaflets, posters) existed in nine countries for the 2009-10 pandemic influenza season. Professional medical societies were most common source of information.

Table 32. Mass media campaigns to promote the seasonal influenza vaccine for HCWs in EU/EEA countries in 2010-11 influenza season. Seasonal influenza vaccination survey, November 2011. (n=24)

Mass media campaigns	Used	Did not use
Specific information to HCW	BG,CY,CZ,DE,GR,IE,RO,ES,ENG (n=9)	AT,BE,DK,EE,FR,HU,IS,IT, LV,LT,MT,NL,PL,SK, SI,SE,LU,NO,PT (n=19)
If used,specify:		
Radio (HCW)*	IE	CZ,DE,RO,ES,GR,ENG
TV (HCW)*	IE	CZ,DE,RO,ES,GR,ENG
News papers (HCW)*	ES	CZ,DE,RO,IE,GR,ENG
Leaflets (HCW)*	DE,IE,ES,ENG	CZ,GR,RO
Posters (HCW)*	DE,IE,ENG	CZ,GR,RO,ES
Website (HCW)*	DE,GR,IE,RO,ENG	CZ,ES
Professional medical societies	BG,CY,DE,IE,RO,ES,ENG	CZ,GR
National medical publication of HCWs*	DE,IE	CZ,GR,RO,ES,ENG

*CY,BG-did not specify.

Other:

CY-with Circulars from the Ministry of Health.

CZ-scientific seminars for HCWs.

MT-emails to all doctors and circulars(paper based and web based) to all staff working in government.

Future changes for influenza season 2011-12

Significant policy or operational changes occurring in the near future were foreseen in four countries. Eleven countries requested some technical support from ECDC/WHO. Details are presented in a table 33 and table 34.

Table 33. Changes occurring for 2011-12 influenza season in EU/EEA countries. Seasonal influenza vaccination survey, April 2011. (n=28)

Countries	Policy, operational or technical changes in 2011-12 season
CZ	Publication of official national recommendations
IE	In the 2011/2012 season we extended recommendations- to all pregnant women
SK	There are 3 health insurance companies. Two of them will cover the vaccine for all their clients fully. The biggest health ins. comp. will reimburse the vaccine only in accordance with legislation
PT	people>60;obesity
No changes	AT,BE,BG,CY,DK,EE,FR,DE,GR,HU,IS,IT, LV,LT,MT,NL,PL,RO,SI,ES,SE, UK,LU,NO

Table 34. Assistance or technical support from ECDC for seasonal influenza. Seasonal influenza vaccination survey, April 2011. (n=28)

Countries	Assistance or technical support from ECDC
CZ	Materials for campaigns; Workshops;
DK,ES	Evidence for effectiveness of influenza vaccinations in risk groups, pregnant women and older people; Evidence for an increased risk of complications in pregnant women with influenza infection;
EE	Consultations of experts; Scientific materials;
DE	Up-to-date meta analysis about vaccine effectiveness;
GR	Administrative method in order to estimate coverage;
IE	General updates and advice is always welcome;
LV	European guidelines on coverage data collection and assessment;
MT	To help set up a monitoring system to assess vaccination coverage within different groups;
PT	Effectiveness of vaccine; length of immunity from vaccine.
LU	Promoting influenza immunization; reducing fears about vaccines.
No	AT,BE,BG,CY,FR,HU,IS,IT,LT,NL,PL,RO,SK,SI,SE,UK,NO

Conclusions

1. Seasonal influenza vaccine was recommended in 2010-11 influenza season:

- Of 28 responding countries 19 countries had influenza vaccine recommendations for those aged 65 years and older. DE,GR, IS and NL recommended vaccination for those aged 60 years and older, MT and PL recommended vaccination for those aged 55 years and older and AT,IE for those aged 50 years and older; in SK vaccine was recommended for those aged over 59 years. Seven countries recommended vaccine for children: three of them (AT,EE,PL) for children of all ages; LV and SI for children aged ≥ 6 months- 2years; MT ≥ 6 months -4 years and SK for children aged ≥ 6 months – 12 years.
- Of 28 responding countries 25 recommended influenza vaccine for HCWs; twenty of them had recommendations to vaccinate all HCWs; five recommended vaccination for only some HCWs. Approximately one-third of MSs recommended vaccination for those working in essential (n=8) and military (n=10) services, or for people working in the poultry (n=12) or pig (n=8) industry;
- In all 28 countries people with chronic pulmonary, cardiovascular, haematological or metabolic disorders, immunosuppression due to disease or treatment, and renal diseases were recommended influenza vaccine; in 25 countries individuals with HIV/AIDS were also recommended vaccine. In 19 countries vaccine was recommended for individuals suffering from hepatic and neurologic diseases and for those with long-term aspirin use (children <18 years old). Nine countries had recommendations to vaccinate those with morbid obesity;
- Of 28 responding countries 22 recommended vaccination of pregnant women. Nineteen of them recommended vaccination of all pregnant women; three only those pregnant women with an other clinical risk. Thirteen of 22 countries recommended influenza vaccination for pregnant women in either the 2nd or 3rd trimester of pregnancy. In IE vaccine was also recommended for post partum women.

2. Monitoring influenza vaccine coverage:

- Most countries have mechanisms to monitor vaccination coverage among all or some of the groups targeted for vaccination. For risk groups recommended vaccine; three countries (DE, IT, SK) had mechanisms to monitor vaccine coverage for all risk groups; 17 could monitor only some risk groups; and eight countries did not have a mechanism for monitoring any risk group. Of the 17 countries able to monitor some risk groups all were able to monitor VC in older age groups. NO has a mechanism to monitor vaccine coverage among those aged 65 years and older and clinical risk groups combined together. FR,NL,PT and UK have mechanisms to monitor vaccine coverage in some clinical risk groups; PT among residents of long-term care facilities;
- Of 28 responding countries 25 countries (except AT,CZ,GR) use different methods (health records or pharmaceutical data, or surveys) for numerator measurement. The most common type of administrative methods used are the number of people vaccinated (n=11), aggregate data on the number of vaccines administered or from

reimbursement claims (n=6). Twenty countries estimate the numerator annually or at the end of influenza season;

- Six countries have denominator data for HCWs; five countries have denominator data for some clinical risk groups and two countries have denominator data for residents of long term care facilities.

3. Vaccination coverage measured by administrative or estimated by survey methods:

- Was known in nineteen countries for older populations (those aged 55,60 and 65 years and older) and ranges from 1.1% in EE to 80.6% in NL between countries;
- The coverage among health care workers was known in seven countries, ranging from 14% in NO to 63.9% in RO;
- The coverage for clinical risk groups was known in five countries ranging from 29.4% in PT to 68.9% in NL;
- The coverage for pregnant women was known in two countries: 3.7% in RO and 36.6% for healthy pregnant women and 56.6% for those pregnant women with additional clinical risk in ENG;
- The coverage for residents of long-term care stay facilities was available in two countries: 82.9% in SK and 85.4% in PT.

4. Payment and administration for vaccines:

- In 15 countries vaccine is free for all and in six countries free for older population recipients (aged 55,60 and 65 years and older) ;
- In 16 countries vaccine is free for all and in 4 countries free for some of those with chronic illness; in five countries full cost must be paid by recipient;
- In 11 countries vaccine is free to all and in three countries free to some pregnant women. In five countries full cost for vaccine must be paid by recipient;
- In 16 countries vaccine is free for HCWs recipients; in 14 of them it is funded by employer or national insurance fund;
- In 14 countries vaccine costs are free for all and in six countries vaccine is free for some recipients in long term care stay facilities.
- Vaccines and its administration to recipient (free for all, partly funded for all or free for some) are funded by National health insurance funds or MoH in most countries.

5. Promoting vaccination in all countries:

- Most countries (n=24) have specific information materials for general public. In 22 countries media campaigns are sponsored by national health authority and in 5 campaigns are sponsored by pharmaceutical sector.

References

- [1] ECDC. The hard facts are often overlooked: Influenza remains a threat.
http://ecdc.europa.eu/en/healthtopics/seasonal_influenza/key_messages/Pages/key_messages_2.aspx . 2-14-2012.

Ref Type: Online Source

- [2] Atkinson W HSWCNRe. Influenza. In: The Centre for Disease Control and Prevention, editor. Epidemiology and Prevention of Vaccine-Preventable Diseases (The Pink book). 10th Edition, 2nd Printing (March 2008) ed. Atlanta, 2008: p. 235-55.

- [3] ECDC. Influenza comes every winter and affects many people.
http://ecdc.europa.eu/en/healthtopics/seasonal_influenza/key_messages/Pages/key_message_1.aspx . 2-14-2012.

Ref Type: Online Source

- [4] Prevention and control of influenza pandemics and annual epidemics, 56th WHA, Resolution of the World Health assembly WHA 56.19, (2003).

- [5] European Commission. Proposal for a Council recommendation on seasonal influenza vaccination. 7-13-2009.

Ref Type: Online Source

Appendices

Appendix 1. Questionnaire

National seasonal influenza vaccination survey for 2010-11 influenza season in EE/EEA,
September 2011

COUNTRY:

GATEKEEPER: _____

Name of Person who fills questionnaire (if different from above):

Title: _____

Contact email: _____

Contact Phone Number: _____

All questions for seasonal influenza vaccination coverage and vaccination policy refer to the 2010-11 influenza season.

VACCINATION COVERAGE DATA, INFLUENZA SEASON 2010-11

For attention of those countries that recommend seasonal influenza vaccine for children without other clinical risk (e.g. vaccine is recommended to all children >6 months – 4 years)
- if vaccination coverage data are available for children please indicate it below as requested.

Q1. Please indicate vaccination coverage data measured by administrative method

Entire population

Vaccination coverage (%) _____

Vaccination coverage was not measured for entire population

Children

Vaccine not recommended for this group

Vaccine recommended for some or all children but vaccination coverage was not measured for this group

Vaccination coverage was measured for this group

Age group for which vaccination coverage measured (specify) _____

Vaccination coverage (%) _____

Age group vaccination coverage measured (specify) _____

Vaccination coverage (%) _____

Age group vaccination coverage measured (specify) _____

Vaccination coverage (%) _____

Older age groups

≥50 year age group

Vaccine not recommended for this group

Vaccine recommended for this group but vaccination coverage was not measured for this group

Vaccination coverage was measured for this group

Vaccination coverage (%) _____

≥55 year age group

Vaccine not recommended for this group

Vaccine recommended for this group but vaccination coverage was not measured for this group

Vaccination coverage was measured for this group

Vaccination coverage (%) _____

≥60 year age group

Vaccine not recommended for this group

Vaccine recommended for this group but vaccination coverage was not measured for this group

Vaccination coverage was measured for this group

Vaccination coverage (%) _____

≥65 year age group

Vaccine not recommended for this group

Vaccine recommended for this group but vaccination coverage was not measured for this group

Vaccination coverage was measured for this group

Vaccination coverage (%) _____

Other age groups

Please indicate age group vaccination coverage measured _____

Vaccination coverage (%) _____

Please indicate age group vaccination coverage measured _____

Vaccination coverage (%) _____

Please indicate age group vaccination coverage measured _____

Vaccination coverage (%) _____

Health care workers

Vaccine is recommended but vaccination coverage was not measured for this group

Vaccine not recommended for this group

Vaccination coverage was measured for this group

Vaccination coverage (%) _____

Clinical risk groups

Vaccination coverage was measured for all at risk group

Vaccination coverage (%) _____

Vaccination coverage was not measured for at risk group

Q2. What was the vaccination coverage among other groups for which vaccination coverage data are available in your country but not mentioned above?

Please indicate group _____

Vaccination coverage (%) _____

Please indicate group _____

Vaccination coverage (%) _____

Please indicate group _____

Vaccination coverage (%) _____

Additional comment (specifying question it relates to) _____

Q3. Please indicate vaccination coverage data estimated by survey methods

Q4. Was the survey carried out in your country to estimate vaccination coverage for seasonal influenza?

Yes

No

If yes, please indicate estimated vaccination coverage for following groups: This part opens only if answer is "yes". If no go to Q6.

Entire population

Vaccination coverage (%) _____

Vaccination coverage was not estimated for entire population

Children

Vaccine not recommended this group

Vaccination coverage was not estimated for this group

Vaccination coverage was estimated for this group

Age group for which vaccination coverage estimated (specify) _____

Vaccination coverage (%) _____

Age group vaccination coverage estimated (specify) _____

Vaccination coverage (%) _____

Age group vaccination coverage estimated (specify) _____

Vaccination coverage (%) _____

Older age groups

≥50 year age group

Vaccine not recommended this group

Vaccination coverage was not estimated for this group

Vaccination coverage was estimated for this group

Vaccination coverage (%) _____

≥55 year age group

Vaccine not recommended this group

Vaccination coverage was not estimated for this group

Vaccination coverage was estimated for this group

Vaccination coverage (%) _____

≥60 year age group

Vaccine not recommended this group
Vaccination coverage was not estimated for this group
Vaccination coverage was estimated for this group

Vaccination coverage (%) _____

≥65 year age group
Vaccine not recommended this group
Vaccination coverage was not estimated for this group
Vaccination coverage was estimated for this group

Vaccination coverage (%) _____

Other age groups
Please indicate age group vaccination coverage estimated _____
Vaccination coverage (%) _____

Please indicate age group vaccination coverage estimated _____
Vaccination coverage (%) _____

Please indicate age group vaccination coverage estimated _____
Vaccination coverage (%) _____

Health care workers
Vaccine not recommended this group
Vaccination coverage was not estimated for this group
Vaccination coverage was estimated for this group

Vaccination coverage (%) _____

Clinical risk groups (chronic diseases/underlying conditions)
Vaccine not recommended this group
Vaccination coverage was not estimated for this group
Vaccination coverage was estimated for this group

Vaccination coverage (%) _____

Q5. What was the vaccination coverage among other groups for which vaccination coverage data was estimated conducting survey but not mentioned above?

Please indicate group _____
Vaccination coverage (%) _____

Please indicate group _____
Vaccination coverage (%) _____

Please indicate group _____
Vaccination coverage (%) _____
Additional comment (specifying question it relates to) _____

ACTION PLANS IN MEMBER STATES

Q6. Did your country adopt an National Action Plan (hereinafter plan) to improve vaccination coverage for seasonal vaccination as requested by EC 08/07/2009?
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:348:0071:0072:EN:PDF>

Yes, plan was adopted

Yes, plan was developed previously and updated according EC recommendation

Plan is under development

No need to adopt as vaccination coverage meet EC/WHO targets

| Plan not adopted

If Yes got to Q7.

If No go to Q13.

Q7. If your country has an adopted action plan does it identify target populations for vaccination?

Yes

No

If Yes, what are those populations? _____

Q8. Does this plan include specific guidelines on target coverage percentage for each population by a specific date (e.g. 2015)?

Yes

No

If Yes, what is the coverage percentage? ____.(%)

Q9. Does this plan identify specific actions to reach the target coverage percentage by the target date?

Yes

No

If Yes, what are they? _____

Q10. Is your country actively implementing its National Action Plan for seasonal influenza?

Yes

No

Q11. Are activities to increase vaccination coverage among the target populations a priority in the implementation?

Yes

No

If No, what actions are being taken to ensure that these activities are a priority? _____

Q12. Has adequate funding been allocated to reach the target coverage percentage for each population by the target date?

Yes

No

If No, what actions are being taken to compensate for the lack of funding and/or to secure adequate funding? _____

Additional comment (specifying question it relates to) _____

GROUPS RECOMMENDED FOR SEASONAL INFLUENZA VACCINE in 2010-11 influenza season
Individuals recommended vaccination by age

Children

Q13. For which of the following children's age groups without other clinical risk indication (chronic diseases/underlying conditions) was seasonal influenza vaccine recommended (tick that applies)?

- Not recommended for children of any age
- Recommended for all children > 6 months - <18 years
- Recommended for some paediatric age groups

If recommended to some paediatric age group, specify (tick all that applies): This sub question opens only if answer is "recommended for some age groups"

- >6 months – 2 years
- >6 months – 3 years
- >6 months – 4 years
- >6 months – 12 years
- Other
- If other, specify age group _____

Q14. If vaccine was recommended for children without other clinical risk indication (chronic diseases/underlying conditions) what payment scheme was applied to seasonal influenza vaccine for them? This question opens only if answer is "recommended for children"

- For vaccine itself
- Free for all
 - Free for some
 - Partly funded for all
 - Full cost paid by recipient
 - Other
- Other, specify _____

- For vaccine administration
- Free for all
 - Free for some
 - Partly funded for all
 - Full cost paid by recipient
 - Other
- Other, specify _____

Q14a. If influenza vaccination is free (to all, some or partly funded) who funds this vaccination? This question opens only if answer is "free for all, some, partly funded"

- National (statutory) Health insurance fund
 - Private Health insurance
 - Other
- Other, specify _____

Adults (older age groups)

Q15. For which of the following adult's age groups (including elderly) without other clinical risk indication (chronic diseases/underlying conditions) was seasonal influenza vaccine recommended (tick that applies)?

- Not recommended for adults of any age
- Recommended for all adults >18 years old
- Recommended for some adult (older) age groups

If recommended to some adult age group, specify (tick that applies): This sub question opens when answer is "recommended for some adult age groups"

- >50 years
- >55 years
- >60 years
- ≥ 65 years
- Other

If other, specify age group_____

Q16. If vaccine was recommended for adults without other clinical risk indication (chronic diseases/underlying conditions) (e.g. for those aged >65) what payment scheme was applied to seasonal influenza vaccine for them? This question opens only if answer is "recommended for adults"

For vaccine itself

- Free for all
- Free for some
- Partly funded for all
- Full cost paid by recipient
 - Other

Other, specify_____

For vaccine administration

- Free for all
- Free for some
- Partly funded for all
- Full cost paid by recipient
 - Other

Other, specify_____

Q16a. If influenza vaccination is free (to all, some or partly funded) who funds this vaccination? This question opens only if answer is "free for all, some, partly funded"

- National (statutory) Health insurance fund
- Private Health insurance
- Other

Other, specify_____

Q17. Was the seasonal influenza vaccine included in the ROUTINE immunisation schedule during the 2010-11 influenza season? (tick that apply)

- Included in childhood immunisation schedule
- Included in adults' immunisation schedule*(link to definition below)
- Included in childhood and adults' immunisation schedule**
(link to definition below)

Not included, only for at risk groups*** (link to definition below)

* We mean that there is an official immunisation schedule for adults in the country without clinical risk indication.

* *We mean that there is one common official immunisation schedule for children and adults in the country without clinical risk indication.

***We mean that there is no official immunisation schedule for adults, but there is recommendation who should be vaccinated with regard to age and/or clinical risk indication (e.g. vaccine is recommended for those >65 and for those with clinical risk aged >6 months).

Additional comment (specifying question it relates to) _____

Individuals recommended vaccination by clinical risk groups/underlying conditions

Clinical risk groups (chronic diseases, underlying conditions)

Q18. For which of the following clinical risk groups was seasonal influenza immunisation recommended?

- Chronic pulmonary (including asthma) disease
Recommended | No recommendation | Recommended against
- Cardiovascular (except hypertension) disease
Recommended | No recommendation | Recommended against
- Renal disease
Recommended | No recommendation | Recommended against
- Hepatic disease
Recommended | No recommendation | Recommended against
- Haematological or metabolic disorders (including diabetes mellitus)
Recommended | No recommendation | Recommended against
- Immunosuppressed due to disease or treatment (including asplenia/ splenic dysfunction, organ transplantation, cancer, but other than HIV/AIDS)
Recommended | No recommendation | Recommended against
- HIV/AIDS
Recommended | No recommendation | Recommended against
- Chronic neurologic diseases or neuromuscular conditions
Recommended | No recommendation | Recommended against
- Long-term aspirin use (in children up to 18 years old)
Recommended | No recommendation | Recommended against
- Any condition that can compromise respiratory function
Recommended | No recommendation | Recommended against
- Morbid obesity (Body Mass Index (BMI) >40)
Recommended | No recommendation | Recommended against

Other recommendation

If other, specify: _____

Q19. What payment scheme was applied for these clinical risk groups?

For vaccine itself

- Free for all
- Free for some
- Partly funded for all

- Full cost paid by recipient
 - Other
- Other, specify_____
- For vaccine administration
- Free for all
- Free for some
- Partly funded for all
- Full cost paid by recipient
 - Other
- Other, specify_____

Q19a. If influenza vaccination is free (to all, some or partly funded) who funds this vaccination? This question opens only if answer is “free for all, some, partly funded”

- National (statutory) Health insurance fund
- Private Health insurance
- Other
- Other, specify_____

Q20. If different payment schemes were applied to these groups, please specify_____

Pregnancy related vaccination

Q21. Was the seasonal influenza vaccine recommended to pregnant women?

- Recommended for all
- Recommended only for those with other clinical risk indication
- No recommendation
- Recommended against

Q21a. If recommended please indicate stages of pregnancy at which vaccine was recommended? This sub question opens only if answer is “recommended for all or only with other clinical risk indication”

- Any trimester
- Either 2nd or 3rd trimester

Q22. Was the seasonal influenza vaccine recommended to postpartum* women if not vaccinated during pregnancy?

- Recommended for all
- Recommended only for those with other clinical risk indication
- No recommendation
- Recommended against

* Up to 6 weeks after delivery. If in your country postpartum different, please specify_____

Q23. What payment scheme was applied for vaccination of pregnant and/or postpartum women?

- For vaccine itself
- Free for all
- Free for some

- Partly funded for all
- Full cost paid by recipient
 - Other
- Other, specify _____
- For vaccine administration
- Free for all
- Free for some
- Partly funded for all
- Full cost paid by recipient
 - Other
- Other, specify _____

Q20a. If influenza vaccination is free (to all, some or partly funded) who funds this vaccination? This question opens only if answer is “free for all, some, partly funded”

- National (statutory) Health insurance fund
- Private Health insurance
- Other
- Other, specify _____

Q24. If different payment schemes were applied to these groups (pregnant versus postpartum), please specify _____

Additional comment (specifying question it relates to) _____

Individuals recommended vaccination by occupation

Health care workers

Q25. Which groups of Health Care Workers (HCWs) were recommended seasonal influenza vaccine? (tick that apply)

Not recommended at all to HCWs

Recommended to all HCWs

Recommended to some HCWs:

Q.25a. If recommended to some, specify: This sub question opens only if answer is “recommended for all or only with other clinical risk indication”

Staff with close contact with patients. * (link to definition below)

Recommended | No recommendation | Recommended against

Staff with no contact with patients, but contact with potentially contaminated material ** (link to definition below)

Recommended No recommendation Recommended against

Staff without close contact with patients or contaminated material*** (link to definition below)

Recommended No recommendation Recommended against

Other

Other, specify _____

Q26. What payment scheme was applied to HCWs whom influenza vaccine was recommended? (tick that apply)

For vaccine itself

- Free for all

- Free for some
 - Partly funded for all
 - Full cost paid by recipient
 - Other
- Other, specify _____

- For vaccine administration
- Free for all
 - Free for some
 - Partly funded for all
 - Full cost paid by recipient
 - Other
- Other, specify _____

Q26a. If influenza vaccination is free (to all, some or partly funded) who funds this vaccination? This question opens only if answer is “free for all, some, partly funded”

- National (statutory) Health insurance fund
 - Paid by employer
 - Paid by government
 - Paid by public health
 - Private Health insurance
 - Other
- Other, specify _____

Q27. If different payment schemes were applied for some of these groups, please specify _____

Definition to describe HCWs:

* Clinical and other staff, including those in primary care, who have regular, clinical contact with patients. This includes staff such as doctors, dentists and nurses, paramedical professionals such as occupational therapists, physiotherapists, radiographers (radiologists), ambulance workers and porters, and students in these disciplines;

** Laboratory and other staff (including mortuary staff) who have direct contact with potentially infectious clinical specimens and may additionally be exposed to pathogens in the laboratory. This includes those in academic (or commercial research) laboratories who handle clinical specimens. They do not normally have direct contact with patients;

*** Non-clinical ancillary staff who may have social contact with patients, but not usually of a prolonged or close nature. This group includes receptionists, ward clerks and other administrative staff working in hospitals and primary care settings and maintenance staff such as engineers, gardeners, cleaners, etc. These staff may be exposed to other specific occupational risks which require their own surveillance programmes.

Reference: The UK Association of National Health Occupational Physicians (ANHOPS) guidance on Immunisation of healthcare workers defines three categories of healthcare workers

http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1195733758763

Additional comment (specifying question it relates to) _____

Other occupations

Q28. In which other occupational settings was influenza immunisation recommended for workers?

Police
 Recommended No recommendation Recommended against
 Firemen
 Recommended No recommendation Recommended against
 Military
 Recommended No recommendation Recommended against
 Veterinary services
 Recommended No recommendation Recommended against
 Poultry industry
 Recommended No recommendation Recommended against
 Families that raise pigs, poultry or waterfowl (ducks, swans, geese)
 Recommended No recommendation Recommended against
 Airline workers
 Recommended No recommendation Recommended against
 Public transport workers
 Recommended No recommendation Recommended against
 All educational staff (e.g. primary/secondary schools, preschool centres, kindergartens, crèches)
 Recommended No recommendation Recommended against
 Educational staff of only young children (e.g. preschool centres, kindergartens, crèches)
 Recommended No recommendation Recommended against
 Border control
 Recommended No recommendation Recommended against
 Immigration/custom control
 Recommended No recommendation Recommended against
 Energy sector
 Recommended No recommendation Recommended against
 Finance and banking sector
 Recommended No recommendation Recommended against
 None
 Other, specify: _____

Q29. What payment scheme was applied to occupational groups mentioned above? (tick that apply) This question opens only if answer is “recommended for all or some”

For vaccine itself
 Free for all
 Free for some
 Partly funded for all
 Full cost paid by recipient
 Other
 Other, specify _____

For vaccine administration
 Free for all
 Free for some
 Partly funded for all
 Full cost paid by recipient
 Other
 Other, specify _____

Q29a. If influenza vaccination is free (to all, some or partly funded) who funds this vaccination? This question opens only if answer is "free for all, some, partly funded"

- National (statutory) Health insurance fund
- Paid by employer
- Paid by government
- Paid by public health
- Private Health insurance
- Other

Other, specify _____

Q30. If different payment schemes were applied for some of these groups, please specify _____

Q31. If different payment schemes were applied for some of these groups, please specify _____

Additional comment (specifying question it relates to) _____

Individuals recommended vaccine by other population groups

Q32. Was influenza vaccine recommended to residents of long-term care facilities (nursing homes and other chronic-care facilities)?

Recommended No recommendation Recommended against

Q33. What payment scheme was applied to residents of long-term care facilities if vaccine was recommended? This question opens only if answer is "recommended"

For vaccine itself

- Free for all
- Free for some
- Partly funded for all
- Full cost paid by recipient
- Other

Other, specify _____

For vaccine administration

- Free for all
- Free for some
- Partly funded for all
- Full cost paid by recipient
- Other

Other, specify _____

Q33a. If influenza vaccination is free (to all, some or partly funded) who funds this vaccination? This question opens only if answer is "free for all, some, partly funded"

- National (statutory) Health insurance fund
- Private Health insurance
- Other

Other, specify _____

Q34. Was influenza vaccine recommended to the following household contacts of:

Babies <6 months of age

Recommended No recommendation Recommended against

Persons with clinical risk indication

Recommended No recommendation Recommended against

Immunosuppressed individuals

Recommended No recommendation Recommended against

The elderly (e.g. those >65)

Recommended No recommendation Recommended against

Other, specify: _____

Q35. What payment scheme was applied to household contacts if vaccine was recommended? This question opens only if answer is "recommended to all or some"

For vaccine itself

Free for all

Free for some

Partly funded for all

Full cost paid by recipient

Other

Other, specify _____

For vaccine administration

Free for all

Free for some

Partly funded for all

Full cost paid by recipient

Other

Other, specify _____

Q35a. If influenza vaccination is free (to all, some or partly funded) who funds this vaccination? This question opens only if answer is "free for all, some, partly funded"

National (statutory) Health insurance fund

Private Health insurance

Other

Other, specify _____

Q36. If different payment schemes were applied for some of these groups, please specify _____

Additional comment (specifying question it relates to) _____

MONITORING VACCINATION COVERAGE

Q37. Does your country measure seasonal influenza vaccination coverage among the entire population?

Yes

No

Q38. For which groups for whom vaccination is recommended do you have a mechanism for monitoring seasonal influenza vaccination coverage?

All

None
Some

if Some, please specify groups for which you do have mechanism to monitor uptake in the following table (answer yes or no for each sub-group within each category):

Age group	Yes/No
Any age group whom vaccine is recommended by age (e.g. those aged >65; <6 months of age- 4 years) If no, specify_____	
Occupational setting	Yes/No
HCWs	
If yes, specify: All, Some	
Hospitals	
Laboratory staff	
Long-term care facilities (nursing homes and other chronic-care facilities)	
Out-patient care clinics	
Primary health care settings	
Non of HCWs	
Military	
Police	
Firemen	
Veterinary services	
Poultry industry	
Pig industry	
Families that raise pigs/poultry/wild fowl (geese, ducks, swans)	
Airline workers	
Public transport workers	
Educational staff	
Border/immigration staff	
Custom staff	
Energy sector workers	
Finance and banking workers	
Other, specify:	
Medical condition	Yes/No
Chronic pulmonary (including asthma) disease	
Cardiovascular (except hypertension) disease	
Renal disease	
Hepatic disease	
Haematological or metabolic disorders (including diabetes mellitus)	
Chronic neurologic diseases or neuromuscular conditions	
Immunosuppressed due to disease or treatment	
HIV/AIDS	
Long-term aspirin use (in children up to 18 years old)	
Pregnancy	
Any condition	
Other, specify:	
Other groups	
Residents of long-term care facilities (nursing homes and other chronic-care facilities)	

Household contacts of persons for whom vaccination is recommended	
---	--

Q39. Which of the following method/s does your country use to measure the numerator in assessing influenza vaccination coverage? (you can tick more than one)

Health record data

Medical records (excluding computerised records)

Last conducted: | MM/YYYY | Never

Computerised medical records (not specific to immunisation)

Last conducted: | MM/YYYY | Never Immunisation registry (routinely collected information)

Last conducted: | MM/YYYY | Never

Immunisation survey (active collection of immunisation data)

Last conducted: | MM/YYYY | Never

Survey type

Household survey, in person

Last conducted: | MM/YYYY | Never

Individual interview, in person

Last conducted: | MM/YYYY | Never

Telephone survey

Last conducted: | MM/YYYY | Never

Mail survey

Last conducted: | MM/YYYY | Never

Pharmaceutical data

Pharmaceutical distribution data (from industry)

Last conducted: | MM/YYYY | Never

Pharmaceutical distribution data (from national purchaser)

Last conducted: | MM/YYYY | Never

Pharmaceutical sales data (from private pharmacies)

Last conducted: | MM/YYYY | Never

Prescription data

Last conducted: | MM/YYYY | Never

Other, specify: _____

Q40. If administrative method used please indicate which of the following are used to measure the numerator in assessing influenza vaccination coverage (you can tick more than one)

Aggregate collection of number of vaccines administered

Aggregate collection of number of vaccines distributed (industry)

Aggregate collection of number of vaccines distributed (national purchaser)

Aggregate collection of number of vaccines sales (private pharmacies)

Payment/ reimbursement claims

Other

If other, specify:

Q41. If survey method used, what sampling strategy was used?

Non probability sampling

- Quotas
- Convenience
- Other
- If other, please specify _____
- Probability sampling (random)
- Simple random
- Systematic
- Stratified (assessment, LQAS*)
- Multistage
- Cluster (EPI)
- Other
- Other, specify _____
- *Lot Quality Assessment Sampling

Q42. What was the sample size?
 Number of respondents, specify _____

Q43. What was response rate to the survey?
 Specify (%) _____

Q44. What is the most frequent interval at which numerator data for assessing influenza vaccination coverage is collected?

- Never
- Monthly
- Every two months
- Every three months
- Once, at the end of flu season
- Annually, specific date/time of year _____
- Other, specify: _____

Q45. Which of the following population/denominator data does your country have to assess vaccination coverage?

Age group	Yes/No
Any age group whom vaccine is recommended by age (e.g. those aged >65; <6 months of age- 4 years) If no, specify _____	
Occupation groups	Yes/No
Denominator for all HCWs	
Primary health care settings	
Hospital personnel	
Laboratory staff	
Long-term care facilities personnel (nursing homes and other chronic-care facilities)	
Outpatient care clinics personnel	
Police	
Firemen	
Military personnel	
Poultry industry personnel	
Pig industry personnel	
Veterinary services personnel	
Families that raise pigs/poultry/wild fowl (geese, ducks, swans)	

Airline workers	
Public transport workers	
Educational staff	
Border/immigration	
Custom	
Energy sector	
Finance and banking	
Occupation group population data, other specify:	
Medical condition categories	Yes/No
Chronic pulmonary (including asthma) disease patients	
Cardiovascular (except hypertension) disease patients	
Renal disease patients	
Hepatic disease patients	
Hematological or metabolic disorders (including diabetes mellitus) patients	
Immunosuppressed due to disease or treatment	
HIV/AIDS patients	
Long-term aspirin users (in children up to 18 years old)	
Pregnant women	
Patients with any condition (e.g., cognitive dysfunction, spinal cord injuries, seizure disorders, or other neuromuscular disorders) that can compromise respiratory function or the handling of respiratory secretions or that can increase the risk for aspiration	
Chronic neurologic diseases or neuromuscular conditions	
Medical category population other, specify:	
Other group categories	Yes/No
Population of residents of long-term care facilities (nursing homes and other chronic-care facilities)	
Number of household contacts of persons for whom vaccination is recommended	
Population other category, specify:	

VACCINE PROCUREMENT

Q46. What was the total number of doses of seasonal influenza vaccine purchased in your country for influenza season 2010-11?

Number doses _____

Unknown

Q47. What was the total number of doses of seasonal influenza vaccine distributed in your country for influenza season 2010-11?

Number doses _____

Unknown

Q48. What was the total number of doses of seasonal influenza vaccine used in your country for influenza season 2010-11?

Number doses _____

Unknown

VACCINATION SITES

Q49. In what Health Sector(s) is seasonal influenza vaccine administered?
(Check that apply)

Public

Private

Q50. Influenza vaccinations administered per private and public sectors

a. (Estimated percentage of influenza vaccinations administered in the PUBLIC sector (The input is of type "number") _____

b. Estimated Percentage of influenza vaccinations administered in the PRIVATE sector (The input is of type "number")_____

Q51. If vaccine is administered by private health sector (e.g. private family doctor, general practitioner or private hospital) does the private institution get a refund from the government/insurance fund (or corresponding body)?

For vaccine itself

Full refund for all vaccinated individuals

Partial refund for all vaccinated individuals

Full refund for those at risk (e.g.>65; clinical risk groups)

Partial refund for those at risk (e.g.>65; clinical risk groups)

No refund to private sector at all

Other

If other, specify_____

For vaccine administration

Full refund for all vaccine administrations

Partial refund for all vaccine administrations

Full refund for those at risk (e.g.>65; clinical risk groups)

Partial refund for those at risk group (e.g.>65; clinical risk groups)

No refund to private sector at all

Other

If other, specify_____

Q52. What were the principal outlets for seasonal influenza vaccination?

Primary health care settings (General Practitioners)

Hospital settings

Outpatient care clinics

Occupational health services

Vaccination in other health service setting for general public

Other

Other, specify _____

PROMOTING OF SEASONAL INFLUENZA VACCINATION 2010-11 INFLUENZA SEASON

Communication with public

Q53. Did your country prepare a specific information campaign to inform the following groups about seasonal influenza vaccination?

- | | | |
|----|---|----------|
| a. | General public | Yes No |
| b. | Pregnant women | Yes No |
| c. | Persons with chronic medical conditions | Yes No |
| d. | Other groups | Yes No |

(If yes, please specify:_____)

Q54. If yes, which of the following did your country use to inform public? (tick all that apply) (check list)

Radio

TV

News papers

Leaflets

Posters

Website

Other

Other, specify _____

Q55. If yes, who sponsored the media campaigns for public for pandemic influenza vaccination programme? (tick all that apply) (check list)

National/regional health authorities

Pharmaceutical sector

Public service announcement*

Other

Other, specify _____

* Advertisement content and production is provided by government or industry, including national health authority, with air time (radio, TV) or space (newspapers, magazines) provided by media company at no charge.

Additional comment (specifying question it relates to) _____

Communication with health professionals

Q56. Did your country prepare a specific information campaign for HCWs about seasonal influenza vaccination?

Yes

No

Q57. If yes, which of the following did your country use for HCWs? (tick all that apply) (check list)

Radio

TV

News papers

Leaflets

Posters

Website

Professional medical societies

National medical publication of HCWs

Other

Other, specify _____

FUTURE CHANGES

FOR INFLUENZA SEASONS 2011-12 OR 2012-13

Q58. Are there significant policy, operational or technical changes occurring in the near future (e.g., lowering the age at which immunisation is recommended for older persons, introducing immunisation of very young children etc.)?

Yes

2011-12 season, specify: _____

2012-13 season, specify: _____

No

Q59. Are there any areas where you would wish assistance or technical support from ECDC?

Yes

Specify: _____

No

Thank you very much for your time.– if you have enquiries please contact Jolita Mereckiene
(jolita.mereckiene@hse.ie)

Appendix 2. Details on national action plan for England.

Table 1. Target populations for influenza vaccination in NAP*in England. Seasonal influenza vaccination survey, November 2011. (n=1)

Eligible groups	Further detail
All patients aged 65 years and over	
Chronic respiratory disease aged six months or older	Asthma that requires continuous or repeated use of inhaled or systemic steroids or with previous exacerbations requiring hospital admission. Chronic obstructive pulmonary disease (COPD) including chronic bronchitis and emphysema; bronchiectasis, cystic fibrosis, interstitial lung fibrosis, pneumoconiosis and bronchopulmonary dysplasia (BPD). Children who have previously been admitted to hospital for lower respiratory tract disease.
Chronic heart disease aged six months or older	Congenital heart disease, hypertension with cardiac complications, chronic heart failure, individuals requiring regular medication and/or follow-up for ischaemic heart disease.
Chronic kidney disease aged six months or older	Chronic kidney disease at stage 3, 4 or 5, chronic kidney failure, nephrotic syndrome, kidney transplantation.
Chronic liver disease aged six months or older	Cirrhosis, biliary artesia, chronic hepatitis.
Chronic neurological disease aged six months or older	Stroke, transient ischaemic attack (TIA). Conditions in which respiratory function may be compromised (e.g. polio syndrome sufferers). Clinicians should consider on an individual basis the clinical needs of patients including individuals with cerebral palsy, multiple sclerosis and related or similar conditions; or hereditary and degenerative disease of the nervous system or muscles; or severe neurological disability.
Diabetes aged six months or older	Type 1 diabetes, type 2 diabetes requiring insulin or oral hypoglycaemic drugs, diet controlled diabetes.

<p>Immunosuppression aged six months or older</p>	<p>Immunosuppression due to disease or treatment. Patients undergoing chemotherapy leading to immunosuppression. Asplenia or splenic dysfunction, HIV infection at all stages. Individuals treated with or likely to be treated with systemic steroids for more than a month at a dose equivalent to prednisolone at 20mg or more per day (any age) or for children under 20kg a dose of 1mg or more per kg per day.</p> <p>It is difficult to define at what level of immunosuppression a patient could be considered to be at a greater risk of the serious consequences of flu and should be offered flu vaccination. This decision is best made on an individual basis and left to the patient's clinician. Some immunocompromised patients may have a suboptimal immunological response to the vaccine.</p> <p>Consideration should also be given to the vaccination of household contacts of immunocompromised individuals, i.e. individuals who expect to share living accommodation on most days over the winter and therefore for whom continuing close contact is unavoidable. This may include carers (see below).</p>
<p>Pregnant women</p>	<p>Pregnant women at any stage of pregnancy (first, second or third trimesters).</p>
<p>People living in long-stay residential care homes or other long-stay care facilities where rapid spread is likely to follow introduction of infection and cause high morbidity and mortality. This does not include, for instance, prisons, young offender institutions, or university halls of residence.</p>	<p>Vaccination is recommended.</p>
<p>Carers</p>	<p>Those who are in receipt of a carer's allowance, or those who are the main carer, or the carer of an elderly or disabled person whose welfare may be at risk if the carer falls ill.</p> <p>(Please note – this category refers to individual carers entitled to a free flu vaccine on the NHS, not professional health and social care workers who should be vaccinated by their employer as part of an occupational health programme.)</p>

*NAP- National Actions Plan

Table 2. Actions to reach vaccination coverage target groups in NAP in England. Seasonal influenza vaccination survey, November 2011. (n=1)

Country	Action details specified
ENG	ANP contains the following advice for increasing vaccine coverage*:
	Increasing vaccine uptake among clinical risk groups – a good practice guide
	The following arrangements may enable GPs to increase the uptake of seasonal flu vaccine among their patients in clinical risk groups.
	Ensure all practice staff are fully informed of the arrangements for the campaign as set out in the annual CMO letter sent in the spring.
	Identify a named influenza champion in each practice to co-ordinate the programme, link with the PCT influenza co-ordinator and respond to patient queries.
	Share best practice with the PCT so that it can be disseminated to practices with lower uptake.
	Be able to identify the patients who fall into a clinical risk group.
	Have robust call and reminder systems in place.
	Have sufficient vaccine stock and appointment slots available to ensure all those eligible have the opportunity to receive the vaccine.
	Chase up patients who don't respond to invitations to attend for vaccination, ideally by phone (some practices also now have texting systems in place and this could also be used).
	Consider a domiciliary visit to the home of patients who do not respond to letters or phone calls or who are unable to get to the practice.
	Ensure that patients have up to date, accurate information available, e.g. attach a copy of the 'is your child at risk' leaflet to repeat prescriptions for at-risk children or attach other relevant leaflets to repeat prescriptions for other groups, for example, pregnant women; some practices also have a stamp that they use on repeat prescriptions reminding patients to have their seasonal flu vaccine.
	Respond to any objections the patient may have to receiving the vaccine and point out the increased risk that seasonal flu poses to them and the benefits of having the vaccine.
	Make sure that systems are in place to ensure the GP practice receives and records details of anyone who receives the vaccine outside the practice (individuals in risk groups, pregnant women and others may get the vaccine from their employer, at-risk children/adults/pregnant women may be offered it in hospital/special school, community paediatrician clinic, secure children's units etc).
	Consider increasing access arrangements at the surgery, e.g. evening and Saturday morning clinics for seasonal flu vaccine in addition to routine clinics and appointment availability for the vaccine outside of these clinics.
	Put an alert on the computer records of those eligible to receive the vaccine and provide it opportunistically to those presenting at the surgery for other reasons when appropriate to do so.
	Regularly review those on the flu vaccine list who have not yet received the vaccine.

* [http://www.herefordshire.nhs.uk/docs/Publications/Herefordshire Seasonal flu Plan 2011-12.pdf](http://www.herefordshire.nhs.uk/docs/Publications/Herefordshire_Seasonal_flu_Plan_2011-12.pdf)