

# The current state of introduction of human papillomavirus vaccination into national immunisation schedules in Europe: first results of the VENICE2 2010 survey

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**The Venice 2 human papillomavirus vaccination survey evaluates the state of introduction of the HPV vaccination into the national immunisation schedules in the 29 participating countries. As of July 2010, 18 countries have integrated this vaccination. The vaccination policy and achievements vary among those countries regarding target age groups, delivery infrastructures and vaccination coverage reached. Financial constraints remain the major obstacle for the 11 countries who have not yet introduced the vaccination.**

## Background

In early 2010, a survey on human papillomavirus (HPV) vaccination status in Europe was conducted within the European Centre for Disease Prevention and Control (ECDC) funded Vaccine European New Integrated Collaboration Effort (VENICE) 2 project [1]. One of the main objectives of the VENICE projects is to collect data on vaccination programmes, including information on status of introduction and implementation of new vaccinations, and to share that information amongst the participating countries. All the 27 European Union (EU) Member States plus Iceland and Norway participate in VENICE 2, which is the continuation of VENICE 1 (n=28 participating countries) [2].

Two surveys on HPV vaccination in Europe had been carried out in early 2007 and 2008 within VENICE 1 [3,4]. This new round-up has updated the status of introduction of HPV vaccination in the 29 countries participating in VENICE 2 and explored the target population, the main modalities of vaccination implementation and provision, the funding mechanism and, when available, the vaccination coverage reached. All 29 countries completed the VENICE 2 online questionnaire.

## Human papillomavirus vaccination introduction

The process of introducing a new vaccine into a national immunisation schedule in the European countries occurs in two steps. A recommendation from a national advisory body is first made, followed by an official decision taken by the national health authorities. As of July 2010, the vaccination advisory bodies in 21 of the 29 countries had made a recommendation in favour of HPV vaccination, compared to 12 out of 27 countries in February 2008. Of those 21 countries, 18 had actually integrated the HPV vaccination in their national immunisation programme (Figure).

The HPV vaccination integration process has occurred in one country in 2006 (Austria), seven countries in 2007 (Belgium, France, Germany, Italy, Portugal, Spain and the United Kingdom), seven countries in 2008 (Denmark, Greece, Ireland, Luxembourg, Norway, Romania, and Sweden) and three countries in 2009 (Latvia, the Netherlands, and Slovenia). Of these 18 countries where routine immunisation had been implemented, nine countries had decided to implement a catch up programme. In two of the 11 countries where no decision of integration has been taken yet, a tentative schedule for the decision of integration or not of the HPV vaccination has been set up.

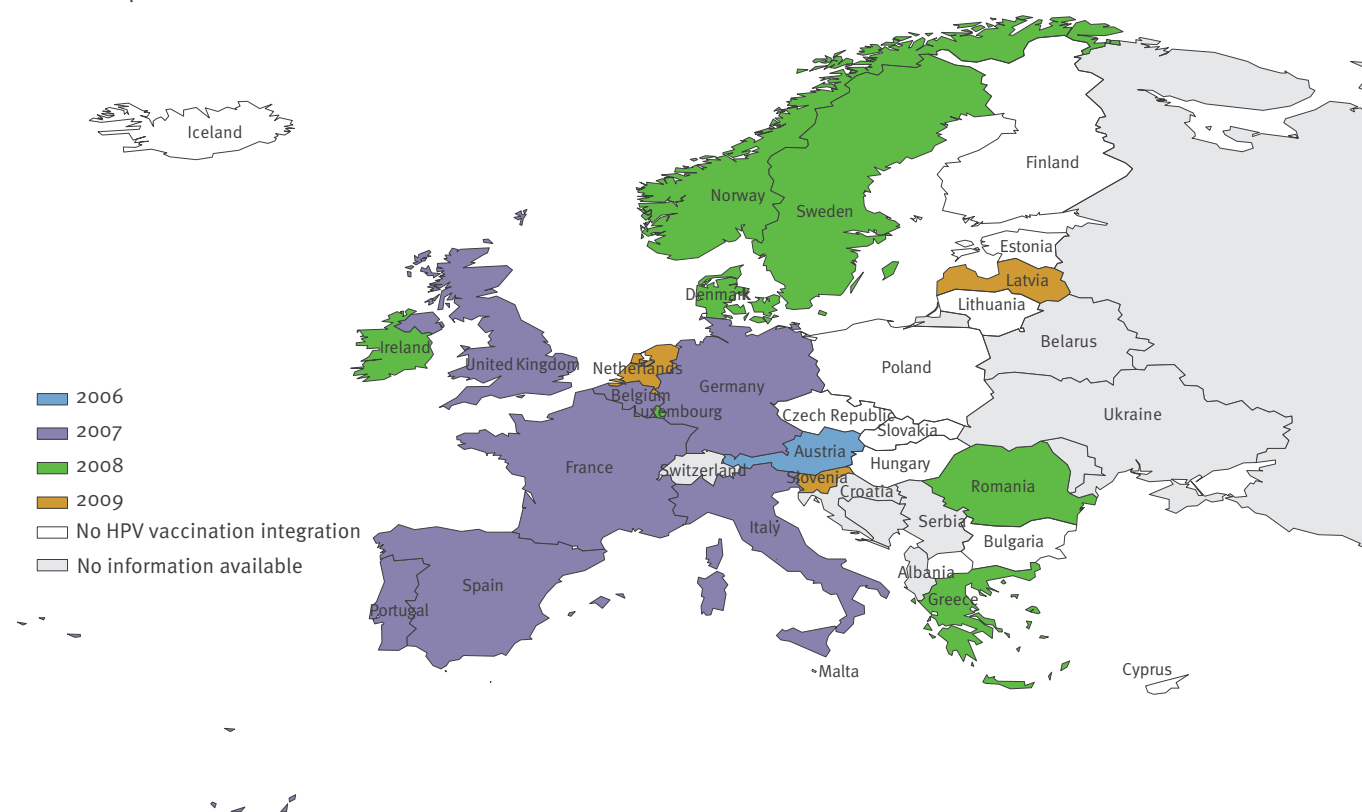
At least one *ad hoc* study to support the decision process about HPV vaccine introduction was undertaken by 12 of the surveyed countries (seven completed and five ongoing) and six countries plan to carry out such a study. Studies included disease burden evaluations, mathematical modelling projects or

economical assessments. Respectively 11 and 17 countries have either completed or are currently conducting

HPV mathematical modelling studies or economical assessments to support the decision-making process

**FIGURE**

Human papillomavirus vaccination integration in the national immunisation schedules in Europe



HPV: human papillomavirus.

**TABLE 1**

Vaccination policy and target population (routine immunisation) in Europe, 2010 VENICE 2 human papillomavirus vaccination survey

Countries (N=18) <sup>a</sup>	Gender	Target age group	Coverage (3 doses, %)	Date of start
Austria	Female /Male	Girls/Women - Boys/Men before sexual debut	-	November 2006
Belgium	Female	12-18	-	November 2007
Denmark	Female	12	58 (2010)	January 2009
France	Female	14	24 (2008)	July 2007
Germany	Female	12-17	-	March 2007
Greece	Female	12-15	-	January 2008
Ireland	Female	12-13	-	May 2010
Italy	Female	11	56 (2009)	July 2007 – November 2008 <sup>b</sup>
Latvia	Female	12	-	September 2010
Luxemburg	Female	12	17 (2009)	March 2008
Netherlands	Female	12	-	April 2010
Norway	Female	12	30 (2010)	August 2009
Portugal	Female	13	81 (2009)	October 2008
Romania	Female	12	-	November 2009
Slovenia	Female	11-12	-	September 2009
Spain	Female	11-14	-	January 2008
Sweden	Female	10-12	-	January 2010
United Kingdom	Female	12	80 (2009)	September 2008

<sup>a</sup> The 18 countries that have human papillomavirus in the national immunisation schedule.

<sup>b</sup> Depending on the region.

for the introduction of the HPV vaccination. A Health Technology Assessment has been fully performed by six countries, partially by one country and planned but not performed yet by two countries [5-9].

### Vaccination policy targets

The adopted vaccination policy targeted only females in all the countries where HPV vaccine has been introduced except in Austria, where both females and males are targeted. A striking feature is the heterogeneity in the target populations for both routine and catch-up vaccination strategies. Adolescents aged 12 years were chosen as target population for routine vaccination in eight of the 18 countries (Austria, Denmark, Latvia, Luxemburg, the Netherlands, Norway, Romania and the United Kingdom), while girls aged 11 (Italy), 13 (Portugal), 14 (France) or an age range including several birth cohorts were chosen in the seven other states. Age ranges for catch-up vaccination were even more heterogeneous: only two countries (Belgium and Luxembourg) opted for the same age group (13-18 years) for catch-up campaigns (Tables 1 and 2).

In most of the countries, virtually all HPV vaccinations were performed in the public sector, either in public health centres (Denmark, Italy, Netherlands and Portugal), school health services (Ireland, Norway, Slovenia, Sweden) or both (Latvia, Romania, Spain and United Kingdom). Five countries provided HPV vaccinations mainly through the private sector and one country combined both public and private structures. Of the nine countries with catch-up campaigns, HPV vaccination was mainly administered through public health infrastructures in four countries, through the private sector in three countries or through both channels and/or school health services in two countries.

Routine vaccination was offered free of charge in most countries (15/18), partially at the expense of the vaccinee or private insurance in two countries (Belgium and France) and fully at the vaccinee's expenses in one country (Austria). For catch-up campaigns, vaccination was offered free of charge in seven out of nine coun-

tries and partially at the expenses of the vaccinee or private insurance in the two remaining countries.

### Reasons for not introducing human papillomavirus vaccination

The main reason provided by the countries who had not introduced HPV vaccination into their national immunisation schedule was financial constraints. Indeed, nine of the 11 concerned countries quoted a lack of funding for the vaccination or a prohibitive vaccine cost. Two of those 11 countries also mentioned uncertainty on the duration of protection and insufficient anticipated epidemiological impact beyond the current screening programme as contributing reason.

### Vaccination coverage data

Thirteen countries of the 18 where HPV vaccination has been introduced declared that a vaccination monitoring system had been implemented. However, only seven of these 13 countries provided vaccination coverage data. Indeed, half of the six remaining countries who had not provided any data yet have only recently introduced HPV vaccination into their national immunisation schedule (2009). Coverage for routine vaccination with three doses varied between 17% and 81% in 2010. Three countries reached a vaccination coverage between 17% and 30% (France, Luxemburg and Norway), two at 56% and 58% (Denmark and Italy) and two at 80% and 81% (Portugal and the United Kingdom). For the catch-up vaccination programmes, apart from one country with a coverage of 73% (Denmark), the five other countries with available data reached a vaccination coverage between 29% and 56% (France, Luxemburg, the Netherlands, Portugal, and the United Kingdom).

### Conclusions

This survey, thanks to the participation of all the countries involved in VENICE 2, provided a comprehensive overview of the status of HPV vaccination introduction throughout Europe. Several interesting aspects have emerged: since the last survey, 13 additional countries have integrated HPV vaccination into their national immunisation programme. The vast majority

**TABLE 2**

Vaccination policy and target population (catch-up programme) in Europe, 2010 VENICE 2 human papillomavirus vaccination survey

Countries (N=9) <sup>a</sup>	Gender	Target age group	Coverage (3 doses, %)	Date of start
Belgium	Female	13-18	-	May 2008
Denmark	Female	15, 16, 17	73 (2010)	October 2008
France	Female	15-23	30 (2008)	July 2007
Italy	Female	14/15/16/17/24 <sup>b</sup>	-	July 2007- January 2010 <sup>b</sup>
Luxemburg	Female	13-18	29 (2009)	March 2008
Netherlands	Female	13-16	45 (2009)	March 2009
Portugal	Female	17	56 (2009)	January 2009
Romania	Female	12-24	-	January 2010
United Kingdom	Female	13-17	32 (2009)	September 2008

<sup>a</sup> The nine countries that have catch-up immunisation programme.

<sup>b</sup> Depending on the region.

of the countries with no HPV vaccination routine were from the eastern part of the EU for which the cost appears to be a major impediment. In the 18 countries where HPV vaccination has been introduced, 50% have implemented catch-up campaigns. Preadolescent females have been chosen as target populations but the selected age differed. The majority of the countries fully subsidise the HPV vaccine and two thirds of the countries use public health infrastructures or school health services to offer routine HPV vaccination to the target population. According to available data, only two countries have so far reached a vaccination coverage above 60% for routine vaccination and only one country a vaccination coverage above 60% for catch-up vaccination programme. Further analysis of the collected data is currently ongoing, focusing on sub-national HPV vaccination characteristics and other determinants underlying the decision to introduce HPV vaccination.

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