

**The current status of HPV and rotavirus vaccines in national immunisation schedules in the EU – preliminary results of a VENICE survey**

Y Kudjawi<sup>1</sup>, D Lévy-Bruhl (d.levybruhl@invs.sante.fr)<sup>1</sup>, L Pastore Celentano<sup>2,3</sup>, D O' Flanagan<sup>4</sup>, S Salmaso<sup>2</sup>, P Lopalco<sup>3</sup>, N Mullins<sup>4</sup>, S Bacci<sup>2</sup> on behalf of the VENICE working group\*

1. Institut de Veille Sanitaire (National Institute of Public Health, INVS), Paris, France
2. Istituto Superiore di Sanità (National Institute of Health, ISS), Rome, Italy
3. European Centre for Disease Prevention and Control (ECDC), Stockholm, Sweden
4. Health Protection Surveillance Centre, Dublin, Ireland

In the second half of 2006, two vaccines against rotavirus infections and one against human papillomavirus (HPV) infection were granted licensing authorisations by the European Medicines Agency (EMA). A second HPV vaccine is currently under evaluation by EMA and is expected to be licensed this year.

With the availability of these new vaccines, European countries are facing one question: should they be integrated into the national or, where applicable, regional immunisation schedules? Although the products were shown to be safe and effective in phase II and III randomised clinical trials, the decision to adopt a universal immunisation strategy is not an easy one.

The alleged added benefit of the HPV vaccination in the prevention of cervical cancer when compared with high coverage regular screening is questionable. Diarrhoea due to rotavirus infections is very common in infants and young children, with an estimated 80% cumulative risk of developing the disease before the age of five years [1]. However, rotavirus-related deaths are very rare. In 2005, it was estimated that 231 deaths due to rotavirus had occurred in the then-25 European Union Member States' total population of 23,598,000 children aged five years and under [2].

The decision to include these vaccines in the national immunisation programmes should therefore be based on thorough epidemiological and economical analyses – ideally, modelling exercises. With the aim of promoting the exchange of information, tools and expertise, the Vaccine European New Integrated Collaboration Effort (VENICE)\* working group carried out a survey to monitor the decision-making process across the EU.

After a pilot survey had been completed in five volunteer countries, two questionnaires, one for each vaccine, were posted in January 2007 on a secured section of the VENICE website. Questions covered the availability of relevant epidemiological data as well as studies or analyses already carried out or planned to support the decision on the vaccines' introduction. Among these, the development of mathematical models or economic assessments was considered. The willingness of the participating countries to exchange developed tools was also investigated.

In each country, a 'gatekeeper' (appointed to act as a national contact point for the VENICE project) was asked to fill in both questionnaires or have them filled in by the relevant experts. All EU Member States (except Malta and Estonia for the HPV survey and only Malta for the rotavirus survey) and two EEA/EFTA countries (Iceland and Norway) completed both questionnaires.

The full analysis is still ongoing, but some conclusions regarding the decision process can already be highlighted, keeping in mind the rapidly evolving situation.

## HPV

## vaccination

As of the end of March 2007, the decision to include the HPV vaccination in the immunisation programme had already been taken in four countries: Austria, Germany, France and Italy. In Italy, the vaccine will be given to 12-year-old girls. In France, 14-year-old females are targeted and a catch-up is recommended for those up to 23 years of age who are not yet sexually active or have only recently started their sexual life. In Germany, the target population consists of girls aged 12 to 17 years [3]. In Austria, the target population includes females, preferably before the beginning of sexual activity, but the vaccination of persons of both sexes is seen as being useful in principle [4]. In Italy, the vaccine is offered free of charge to the targeted population, whereas in the three other countries the decision regarding the reimbursement of the vaccine is still pending.

In two countries (Greece and Slovakia), an expert advisory committee has recommended including HPV vaccination in the national immunisation schedule but no formal decision has yet been taken by the national authorities. Nine countries answered that the issue was currently under examination by their national immunisation advisory body. In seven states, such investigation is planned for the future, while in the remaining five the question was not under consideration at all.

## Rotavirus

## vaccination

As of the end of March 2007, five countries have taken a decision regarding the rotavirus vaccination. In Austria, Belgium and Luxembourg, the vaccine has been included in the national immunisation schedule, although in Austria the decision to offer the vaccine free of charge has not yet been taken. France and Germany, on the other hand, decided not to recommend universal infant immunisation.

In Slovakia, an expert advisory body recommended including the vaccination in the national programme, but no decision has yet been taken by the national authorities. In Spain, the advisory body recommended not to include the vaccine in the national immunisation programme. In Poland, the decision is currently under examination by the national immunisation advisory body. In 11 countries, such investigations are planned for the future, while in nine states the question is not under consideration at all.

To our knowledge, this survey is the first to investigate prospectively the decision-making process regarding the integration of a newly available vaccine into the European national immunisation schedules. It is therefore impossible to compare the current situation with what happened with previous vaccines. Nevertheless, the fact that few countries have, by the end of March, chosen universal immunisation for HPV or rotavirus vaccines may indicate that these are difficult decisions. Further analysis of the questionnaires and follow-up of the situation will help to understand this process and to identify the main constraints in integrating the new vaccines into the universal immunisation schedules.

*\* The Vaccine European New Integrated Collaboration Effort (VENICE, <http://venice.cineca.org>) project, supported by the European Commission's Directorate General for Health and Consumer Protection (DG SANCO), was launched in January 2006 with the aim of establishing a European network of experts involved in national immunisation programmes [5]. Its main objective is to encourage the use of standard approaches to the monitoring and evaluation of immunisation programmes.*

### Acknowledgements

*We thank all national experts who filled in the questionnaires and we are especially grateful to Eva Appelgren (ISS, Roma) and Luca De Mattè (Cineca, Italy) for their contribution to the implementation of the survey.*

References:

1. Parashar UD, Alexander JP, Glass RI. Prevention of Rotavirus gastroenteritis among infants and children. Recommendations of the ACIP. MMWR. 2006; 55; (RR-12):1-13.

2. Soriano-Gabarro M, Mrukowicz J, Vesikari T, Verstraeten T. Burden of rotavirus disease in European Union countries. *Pediatr Infect Dis J*. 2006 Jan; 25(Suppl):S7-S11.
3. Deleré Y, Meyer C, Reiter S. Universal immunisation with human papillomavirus (HPV) vaccine among females aged 12-17 recommended in Germany. *Euro Surveill* 2007; 12(4):E070405.2. Available from: <http://www.eurosurveillance.org/ew/2007/070405.asp#2>
4. Austrian Vaccination Plan 2007. Available from: <http://www.bmgfj.gv.at/cms/site/detail.htm?thema=CH0016&doc=CMS1038913010412>
5. Pastore Celentano L, Lopalco PL, O'Flanagan D, Levy-Bruhl D, Ferro A, Tridente, G, Appelgren E, Salmaso S. VENICE: Europe's new network for vaccination. *Euro Surveill*. 2007 Jan 18; 12(1):E070118.3. Available from: <http://www.eurosurveillance.org/ew/2007/070118.asp#3>