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Original article

Papillomavirus vaccination in France according to 2008 to 2012 Vaccinoscopie® data

Vaccination papillomavirus en France : état des lieux d'après les données de Vaccinoscopie® 2008–2012

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Abstract

Vaccination against human papillomavirus infections (HPV), introduced in the French vaccinal schedule in 2007, was recommended until the end of 2012 for 14-year-old girls, with a catch-up policy until 23 years of age. We followed the evolution of this vaccine coverage rate (VC) during these 5 years in the Vaccinoscopie® survey.

Method. – We present the analysis of data collected in 2012 from a sample of 1136 mothers of girls 14 to 16 years of age. They answered a self-administered questionnaire on Internet and reported all vaccinations mentioned in their daughter's health record.

Results. – In 2012, respectively 12.9%, 33.6%, and 48.1% of girls 14, 15 and 16 years of age had begun HPV vaccination (≥ 1 dose received) and respectively 4.3%, 23.6%, and 40.5% of them had received a complete vaccination schedule (3 doses), i.e. 31.7% of 14–16-year-old girls had started the vaccination schedule and 22.9% were fully vaccinated. VC for ≥ 1 dose had decreased between 2009 and 2012 (−14 points in 14-year-old girls, −16 points in 15-year-old girls, and −11 points between 2009 and 2012 in 16-year-old girls). Regional VCs were heterogeneous.

Conclusion. – HPV VC is clearly insufficient. It is essential that physicians concerned by HPV vaccination be mobilized and take every opportunity to inform, reassure, and vaccinate teenage girls. HPV vaccination has been recommended for girls between 11 and 14 years of age since 2013, which could help improve adherence to vaccination.

Keywords: Papillomavirus; Teenage girls; Vaccination; Vaccine coverage rates

Résumé

La vaccination contre les infections à papillomavirus humains (HPV), intégrée au calendrier vaccinal français depuis 2007, était recommandée jusqu'à fin 2012 chez les adolescentes de 14 ans, avec une politique de rattrapage jusqu'à 23 ans. Nous avons suivi l'évolution de cette couverture vaccinale (CV) ces cinq années dans le cadre de l'enquête Vaccinoscopie®.

Méthodes. – Cet article présente l'analyse des données recueillies en 2012 auprès d'un échantillon de 1136 mères d'adolescentes âgées de 14 à 16 ans. Elles répondaient à un questionnaire auto-administré sur Internet et reportaient toutes les vaccinations figurant dans le carnet de santé de leur fille.

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Résultats. – En 2012, respectivement 12,9 %, 33,6 % et 48,1 % des adolescentes âgées de 14, 15 et 16 ans avaient initié la vaccination HPV (≥ 1 dose reçue) et respectivement 4,3 %, 23,6 % et 40,5 % d'entre elles avaient reçu une vaccination complète (3 doses), soit des données cumulées pour les 14–16 ans de 31,7 % de vaccinations initiées, 22,9 % de vaccinations complètes. La CV pour ≥ 1 dose avait diminué entre 2009 et 2012 (−14 points chez les 14 ans, −16 points chez les 15 ans et −11 points entre 2009 et 2012 chez les 16 ans). Les CV régionales étaient hétérogènes.

Conclusion. – Cette CV est nettement insuffisante. Il est fondamental que les médecins impliqués dans la vaccination HPV se mobilisent et saisissent toute occasion pour informer, rassurer et vacciner les jeunes filles. Depuis 2013, la vaccination HPV est recommandée entre 11 et 14 ans, ce qui pourrait contribuer à améliorer l'adhésion à cette vaccination.

Mots clés : Adolescentes ; Couverture vaccinale ; Papillomavirus ; Vaccination

1. Introduction

The burden of human papillomavirus (HPV) infections is important: in France 48,000 cases of condyloma are managed every year [1], 24,000 diagnoses of precancerous lesions (Cervical Intraepithelial Neoplasia grade 2–3 [CIN 2–3]) are made [2], and it is estimated that in 2011, 2810 new cervical cancers were diagnosed. These cancers caused a thousand deaths [3].

The genotypes responsible in the cervical cancers, according to collected Europeans data, are 16 (66%), 18 (7%), 33 (6%), 45 (4%), and 31 (3%) [4], which shows that genotypes 16 and 18 are responsible for 73% of cervical cancers [3]. The authors of a study made in France [5] reported that these 2 genotypes were identified in 82% of cervical cancers, in 64% of CIN 2/3, and that the 4 genotypes (6, 11, 16, and 18) but especially genotype 6 were implicated in 88% of condylomas.

The cross protections mentioned for other genotypes (31, 33, 45) related to relationship of genotypes 16 with 31 and 33, or 18 with 45 may increase the protection beyond the 2 main oncogenic types [6].

HPV vaccination was introduced in the French vaccinal schedule in 2007. The vaccinal recommendations, issued on March 9, 2007 [7], targeted 14-year-old girls (between 14th and 15th birthday) with a catch-up policy for young women between 15 and 23 years of age (between the 15th and 24th birthday), and at the latest in the year following initiation of sexual activity. HPV vaccination has been recommended for all girls, 11 to 14 years of age, with a catch-up policy for young women between 15 and 19 years of age, since the end of 2012 [8,9].

This vaccination may be performed with either of the 2 available vaccines [9]. The vaccinal schedule includes 3 injections, with a 0-1-6 scheme for the bivalent vaccine, or 0-2-6 for the quadrivalent vaccine; these vaccines are not interchangeable.

In France, the media coverage of adverse effects, time-related to vaccination, raised concerns on the vaccine safety and had a negative impact on vaccinal coverage. The French Agency for the safety of Health Products (AFSSAPS) confirmed, on February 24, 2011 [10], that "4 years after they became available on the market, no data could raise any doubt on the benefit/risk ratio of Gardasil® and Cervarix®, and on the recommendation for vaccination at 14 years of age", but the trust in HPV vaccination has not been restored yet and the controversy could have prevented obtaining an effective vaccinal coverage rate (VC).

This is why it is especially important to monitor the evolution of this coverage.

We report the results of the Vaccinoscopie® survey specifically targeted on HPV vaccination of French teenage girls.

2. Method

The Vaccinoscopie® survey allows following the evolution of VC year by year, and also to collect data concerning the perception and attitude of mothers concerning vaccination.

The various Vaccinoscopie® surveys have all been made at the same period (between September and November) every year since the beginning of the project in 2008, and use the same method previously described for the 2011 survey [11,12]. Only the size of samples and the age range of children studied may have changed from one year to the next according to the specificity of the required analyses. Furthermore, compared to 2011, the 2012 survey did not include any analysis on the specificity of the 4 regional healthcare agencies (French acronym ARS).

The study conducted in 2012 is the 5th Vaccinoscopie® survey and was made on a national sample of 10,000 mothers: 6750 mothers of infants 0–35 months of age, 1000 mothers of children 6 years of age, and 2250 mothers of teenagers 14 to 16 years of age (750 mothers for each age group: 14, 15, and 16 years of age). The data was collected on Internet via a self-administered questionnaire, between September 15 and November 22, 2012.

As in previous years, the responding mothers were recruited by Internet thanks to the "Institut des Mamans" panel (institute of specialized study on target mothers and families, www.institutdesmamans.com) including 80,000 mothers and pregnant women in 2012, and its partners. Any individual answering the questionnaire was eligible as long as he lived in Metropolitan France and that he had not lived abroad.

The mothers were asked to answer questions concerning their perception/attitude and behavior concerning vaccination in general, and to state all vaccinations mentioned on the vaccinal pages of their child's healthcare records (in the order these were mentioned, so as to minimize the risk of making mistakes). Each mother answered for only one of her children, randomly selected by the first letter of the child's first name.

Since 2011 and to minimize the risk of error, mothers have been invited to identify visually the child's healthcare record format (several models of healthcare records being used) so as to be guided adequately when completing the data.

The chosen sampling method, as in previous surveys, was the one of quotas, allowing for a representativeness of the sample by giving it a structure similar to that of the global population. The