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# Association between online vaccine-related informationseeking in mothers and HPV vaccine upake in their daughters

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### **Background:**

There is widespread concern about online vaccine misinformation. The aim of this study was to investigate the association between seeking vaccine-related information on the Internet and HPV vaccination uptake.

#### **Methods:**

Data were obtained from the 2015, 2016, 2017 and 2018 Vaccinoscopie® studies, a pluriannual web-based survey conducted on a nationally representative quota sample of mothers to monitor the dynamics of vaccine coverage, perception and attitudes towards vaccination in France. Mothers of girls aged 14-15 years were asked to state all vaccinations reported on the vaccinal pages of their child's healthcare records. We computed univariate and multivariate logistic regression models, with the outcome variable "HPV vaccination" defined as equal to 1 if the daughter received at least one dose of HPV vaccine, and equal to 0 otherwise; and the dependant variable "Internet use" defined as equal to 1 if the mother responded "Internet" (alone or combined with other sources) to the question "When in doubt about a vaccine, what source(s) of information do you turn to to decide whether or not to have your child vaccinated?", and equal to 0 otherwise.

#### **Results:**

Over the 4 years, a total of 2038 mothers answered the self-administered online questionnaire. Overall, 96.1% declared their need to search for information, 23.9% of whom used the Internet as a source. Maternal Internet use was associated with lower HPV vaccination uptake in their daughters (Odds Ratio=0.49, 95%CI: 0.38-0.64). The association remained after adjusting for several potential counfounders, including area of residence, household socio-profesional category and income, maternal level of education, perception of HPV vaccine utility, physician recommendation and use of other sources of information (adjusted OR=0.68, 95%CI: 0.48-0.96).

## **Conclusions:**

Specific information campaigns are required to educate and empower parents to better use online information and guide them to reputable sources when they seek information on vaccination.

### **Main messages**

The findings of this study suggest that the use of online sources on information is negatively associated with HPV vaccination. Action is warranted to direct parents to use more correct online sources of information on vaccination.