Vaccine 37 (2019) 6133

Contents lists available at ScienceDirect

Vaccine

journal homepage: www.elsevier.com/locate/vaccine

Letter to the Editor

Letter to the editor

Dear Editor

The paper by Dillner et al. reports on "decline of HPV infections in Scandinavian cervical screening populations after introduction of HPV vaccination programs" [1]. The authors compared the prevalence of HPV-types before and after HPV vaccination in 2006–2008 and 2012–2013, respectively. In women aged 18–26 years, they found decreases in Denmark, Norway and Sweden in the vaccine types HPV 6/11/16/18. In Denmark and Norway a decrease was seen also in any high-risk HPV. In women aged 27–50 years, both decreases and increases were observed.

In Denmark and Norway, women born in 1993 and 1997, respectively, were the first birth cohorts offered HPV vaccination. As cervical screening commences at age 23 years in Denmark and age 25 years in Norway, these women had not yet reached screening age in 2012–13, and would only contribute to the study if they were screened opportunistically at younger ages. In Sweden organized HPV vaccination started in 2012. The authors acknowledged this "*the birth cohorts with the highest vaccination coverage had not yet reached the screening ages in Denmark and Norway and that Sweden had no birth cohorts at all with high vaccination coverage*" (p.3827,1).

An equal number of samples were collected consecutively in the two age groups (1). We estimated from Table 6 HPV vaccination coverage in the 2012–13 study population assuming equal size of each contributing birth cohort. We found very low vaccination coverages in the younger age group; 16% for Denmark, 4% for Sweden and less than 1% for Norway. The older age group was virtually unvaccinated.

When calculating relative risks (RR) for HPV-prevalence before and after HPV vaccination we found a 30% decrease (RR 0.70; 95%CI (0.57–0.85) and 95%CI (0.57–0.86)) on HPV 6/11/16/18 in the younger age group in Denmark (coverage of 16%), and in Sweden (coverage of 4%). In Norway, the decrease was 16% (RR 0.84; 95% CI (0.72–0.98)), even though the examined cohort was practically unvaccinated. For any high-risk HPV in the older age group, there was a 28% decrease in Denmark (RR 0.72; 95%CI (0.59–0.88)) where the examined cohort was also practically unvaccinated. The decline in HPV infections did not follow the pattern of HPV vaccination coverage, nor was it specific for vaccine HPV-types.

We agree with the authors that the population-based design and potential for comparison over time are extremely important, and that organized cervical screening programs are an optimal source for monitoring the impact of HPV vaccination. We also agree that "*only a small proportion of women of the screening ages had been vaccinated*" (p.3827,1). We wonder therefore how the authors could state that "*it seems likely that it [the decrease in HPV-prevalence] could be related to the ongoing HPV vaccination programs*" (p. 3828,1). In our view, with the limited overlap between HPV vaccinated and examined women and the irregular pattern observed, the presented data do not support suggestions on causality. We will with great anticipation welcome a follow-up study on the HPV-prevalence in Scandinavia when the HPV vaccinated birth cohorts have reached screening age.

Conflict of interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

[1] Dillner J, Nygård M, Munk C, Hortlund M, Hansen BT, Lagheden C, et al. Decline of HPV infections in Scandinavian cervical screening populations after introduction of HPV vaccination programs. Vaccine 2018;36:3820–9. https://doi.org/10.1016/j.vaccine.2018.05.01.

Lise Holst Thamsborg *
George Napolitano
Department of Public Health, University of Copenhagen, Oester Farimagsgade 5, 1014 Copenhagen K, Denmark
* Corresponding author.
E-mail addresses: lith@sund.ku.dk (L.H. Thamsborg), gena@sund.ku.dk (G. Napolitano)

Elsebeth Lynge
Nykoebing Falster Hospital, Hospitalsvej, 4800 Nykoebing Falster, Denmark
Department of Public Health, University of Copenhagen, Oester Farimagsgade 5, 1014 Copenhagen K, Denmark
E-mail address: elsebeth@sund.ku.dk

https://doi.org/10.1016/j.vaccine.2019.04.032