

Expert reaction to Cochrane review on the HPV vaccine for cervical cancer prevention in girls and women, as published in the *Cochrane Database of Systematic Reviews**

Prof Margaret Stanley FMedSci, Emeritus Professor of Epithelial Biology and Research Visitor in the Department of Pathology, University of Cambridge, said:

“This intensive and rigorous Cochrane analysis of the published clinical trials undertaken with the commercially available HPV vaccines provides reassuring and solid evidence of the safety of these vaccines in young women, with no differences between vaccinated and unvaccinated girls and women in terms of reported serious side effects. It reinforces the evidence that preventing infection by vaccination in young women, with the most important cancer causing HPVs 16 and 18, reduces cervical precancers dramatically. These cervical precancers are the obligate precursors to the life threatening cancer; prevent the precancer and you prevent the cancer. In every clinical trial reviewed in this study the vaccines prevented the development of almost all HPV16/18 caused precancers. These clinical trial results are now being replicated in real life in countries with national HPV vaccination programmes such as the UK – dramatic reductions in the high grade precancers have been shown in Scotland in 20-25 year old women vaccinated at school when they were 12-15.”

Dr David Elliman, Consultant in Community Child Health, and RCPCH paediatrician (Royal College of Paediatrics and Child Health), said:

“An expert group under the umbrella of the respected Cochrane Collaboration has reviewed all the trials of HPV vaccines. They looked at how well the vaccines worked and how safe they were. After carefully examining all the data, and only including all that which was likely to be accurate and unbiased, they reviewed 26 trials covering 73,428 girls or women. Data on boys and men were not included.

“They concluded that both the vaccines that have been in common use (the bivalent vaccine Cervarix and the quadrivalent vaccine Gardasil) were highly effective at preventing infection with the HPV viruses in the vaccines and to a lesser extent reduced infection with some other HPV strains. They also found that the vaccines were highly effective at reducing the incidence of precancerous changes in the cervix, associated with the vaccine strains, that can lead on to cancer. (Because it takes a long time after infection with the virus before cancer develops, there are no published data on this yet.) Changes due to other strains were also reduced, but less so. The main effects were seen in younger females, especially those who were known not to be already infected with HPV.

“The group also looked at the incidence of side effects, following the vaccines. They found that, as expected, a number of people had local reactions but there were no serious side effects following the vaccine.”

Prof Helen Bedford, Professor of Children's Health, UCL Great Ormond Street Institute of Child Health, said:

"HPV vaccine was introduced 10 years ago for 13-14 year old girls to prevent infection with human papillomavirus (HPV) which can lead to cancer of the cervix, a condition that claims the lives of over 800 women in the UK each year.

"This important review of high quality studies shows that HPV vaccines are effective in preventing changes in the cervix that can lead to cancer, particularly when given to young women. It also provides reassuring evidence of the safety of HPV vaccines.

"This study provides solid evidence of the effectiveness of HPV vaccines. This, together with early evidence of reduction in cervical cancer in Finland¹, confirms the ground breaking value of this cancer preventing vaccine."

1 Luostarinen T et al. 'Vaccination protects against invasive HPV-associated cancers'. Int J Cancer, 2018; 142 (2186-2187)

*** 'Prophylactic vaccination against human papillomaviruses to prevent cervical cancer and its precursors' by Marc Arbyn et al. will be published in the *Cochrane Database of Systematic Reviews* at 00:01 UK time on Wednesday 9 May 2018, which is also when the embargo will lift.**

Declared interests

Prof Margaret Stanley: "Professor Margaret Stanley has acted as consultant and advisor to Glaxo Smith Kline Biologicals and Merck."

Dr David Elliman: "No interests."

Prof Helen Bedford: "I have no conflicts of interest."