Men benefit from vaccinating girls against HPV but remain at risk of some cancers

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HPV4 (Gardasil) vaccine. Credit: UMich

Men benefit indirectly from vaccinating girls against human papillomavirus (HPV), but remain at risk of cancers associated with the virus, finds a study from The Netherlands published in *The BMJ* this week.

Human papillomavirus is one of the most common sexually transmitted infections and many countries vaccinate girls to protect them against cervical cancer in later life.

Studies indicate that the vaccine is also effective in preventing certain cancers in men as well as women, prompting calls to vaccinate not only girls but also boys against HPV. Only a few countries have so far

recommended universal vaccination of boys. These include Australia, Austria, two Canadian provinces, and the United States.

Johannes Bogaards and Johannes Berkhof at VU University Medical Centre in Amsterdam, with colleagues, set out to estimate the benefits to men if boys are vaccinated along with girls against HPV.

They used data from the Dutch national cancer registry and epidemiological studies to assess the impact on cancers associated with the virus (anal, penile, and some throat cancers) among heterosexual men and in men who have sex with men.

Before HPV vaccination, about 15 quality adjusted life years or QALYs (a combined measure of quality and quantity of life) per thousand men were lost to preventable cancers associated with HPV in The Netherlands.

This burden would fall by 37% if the vaccine uptake among girls remains at the current level of 60% - and around 800 boys would need to be vaccinated to prevent one additional case of cancer among men.

If vaccine uptake among girls increases to 90%, the burden of HPV related cancer in men would fall by 66% - and over 1,700 boys would need to be vaccinated to prevent one additional case.

The authors point out that these numbers are substantially less favourable than those that motivated vaccination of girls to protect women against cervical cancer. And they say the efficiency of vaccinating boys "needs ultimate assessment in a health economic evaluation."

They suggest that authorities "should, first and foremost strive to vaccinate as many girls as possible" but say inclusion of boys into preadolescent HPV vaccination programmes is warranted "once the

incremental costs of vaccination conform to society's willingness to pay in comparison with the incremental health effects."

And they conclude that protection of women "should no longer be the sole public health objective of any HPV vaccination programme."

In an accompanying editorial, Karen Canfell, Director of Cancer Research at Cancer Council NSW in Australia, says the findings "reinforce those of prior analyses that found that adding boys to established vaccination programmes in girls becomes less cost effective as female coverage increases."

She argues that although the shift in focus in richer countries towards considering vaccination of boys is appropriate, the current priority in low and middle income countries should be cervical cancer prevention via the development of integrated programmes for vaccinating young girls and screening older women.

"Based on experience in developed countries, this will also provide benefits for men through indirect vaccine protection," she concludes.

More information: Direct benefit of vaccinating boys along with girls against oncogenic human papillomavirus: bayesian evidence synthesis, The *BMJ*, www.bmj.com/cgi/doi/10.1136/bmj.h2016

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