

Letter to CMAJ in response to:

Abby Lippman, Ryan Melnychuk, Carolyn Shimmin, and Madeline Boscoe. Human papillomavirus, vaccines and women's health: questions and cautions. CMAJ 2007; 0: cmaj.070944v1

The following letter can be accessed via the link:

<http://www.cmaj.ca/cgi/eletters/177/5/484#15927>

HPV vaccines and women's health: *Eppur si muove*

We were disturbed by unfounded criticisms by Lippman et al. about HPV vaccination recently published in CMAJ [1]. We have followed the development and testing of HPV vaccines and new cervical cancer screening technologies, such as HPV testing, with much appreciation for the science propelling the evidence that will ultimately revolutionize cervical cancer control. The points of disagreement between our views, as McGill University epidemiologists working on cervical cancer etiology and prevention, and those in the commentary [1] are simply too many to fit in a letter. We trust that arguments against the commentary's ill-conceived conclusions will be given by eminent groups such as the Society of Obstetricians and Gynaecologists of Canada and Society of Gynaecologic Oncologists of Canada, as well as by Canada's National Advisory Committee on Immunization, all of which issued favourable positions concerning HPV vaccination. To summarize, we echo the concluding remarks from the meta-analysis of Rambout and Colleagues [2]: "Vaccination appears to be well tolerated and safe. Data to help reconcile the gap between the impressive vaccine efficacy demonstrated in these trials and the potential effectiveness of vaccination at reducing the global burden of cervical cancer and death from the disease should be forthcoming from phase IV trials currently underway".

As with most new vaccines, cost is a concern. With time, competition and economies of scale make vaccination policies more affordable. A paradigm change in cervical cancer screening based on the use of HPV testing technology is likely to take place in synergy with HPV vaccination and will help the case for cost-effectiveness [3]. Surely there are lessons to be learned but adjustments in policies can be made as the emerging science produces its dividends. What cannot be dismissed, however, is the fact that the quality and quantity of evidence already accrued in favour of HPV vaccination is just as good, if not better, than that for preventive strategies in any other area of cancer control. Seemingly cautious arguments to the effect that we do not know enough about vaccination of girls and adolescents are irrelevant and untenable. The vaccines have been (i) thoroughly tested in women at risk of HPV exposure (ages 15- 25 years) and proven safe and efficacious; (ii) immunobridging studies have shown that the immune response in adolescents is stronger than that in young and old adults; and (iii) to be of maximal benefit in reducing cervical cancer burden in the future vaccination should focus on pre-exposure prophylaxis.

The argument about herd immunity is not yet one that we can use in cervical cancer prevention. Eventually, phase IV trials may point to policy revisions and male vaccination could become a complementary prevention strategy in the future. As for the argument that cervical cancer will not develop in most women infected with oncogenic HPVs, it ignores basic cancer

epidemiology. Most smokers will not develop lung cancer, yet we hold smoking cessation in high esteem as cancer prevention target. More importantly, one can develop lung cancer despite never having smoked but an infection with an oncogenic HPV type is a necessary precursor for cervical cancer. Incidentally, safe sex is practically an oxymoron when it comes to preventing HPV infection; condom use is not protective [4].

Finally, we take issue with the argument that there is no cervical cancer epidemic in Canada to justify a sense of urgency in adopting new policies. Low fertility, universal access to care, and intensive screening with the relatively inefficient Pap test have collectively contributed to keep cervical cancer rates low in Canada, but the enormous cost and morbidity resulting from frequent screening and management of cervical cancer precursors are seldom appreciated. By analogy, childhood cancer mortality has declined but not fast enough. We believe one would not be arguing against a new federal policy that could reduce cancer risk in children by 50%-70%. Cervical cancer strikes relatively young women compared with other cancers. The 400 Canadian women who die of cervical cancer every year suffer unbearable pain, loss of function and form, and see their dignity slip away as the disease progresses and treatment fails. Pelvic exenteration, a heroic act by gynecology oncologists trying to rescue cervical cancer patients with locally advanced disease, is one of the most gruesome and complex among all surgical procedures and is psychologically devastating. No health economic analysis can assign a proper value to these procedures or, to the patient, the avoidance of what brought them so much suffering.

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Conflict of Interest:

ELF has served as advisor to several companies involved with HPV diagnostics or vaccines. ELF and MHM have received unconditional research grants from Merck-Frosst.