Re: Cost-Effectiveness of Cervical Cancer Screening With Human Papillomavirus DNA Testing and HPV-16,18 Vaccination

Goldhaber-Fiebert et al. (1) presented a convincing model for the natural history of cervical cancer. The results of this study should be considered by all policy makers in taking decisions about the preventive strategies for cervical cancer.

The evaluation of this model was made by comparing the observed incidence curve by age of cervical cancer onset with the predicted incidence curve. In industrialized countries, this incidence curve is the result of a complex interaction involving the clinical history of the disease, sexual behaviors, and the screening habits of the different cohorts of women. The model reproduces the observed curve perfectly, and this reproduction is the result of a mixture of five populations with different cervical cancer screening behaviors and age distributions. The sum of these five populations produces the observed figures of screening behaviors by age in the United States and the number of invasive cancers that occurred (2).

The preventive strategies proposed are based mainly on two interventions: vaccination and screening. Both of these interventions have two main factors that determine their effectiveness: the technical characteristics of vaccine and screening test (ie, the protection against infection and the types of human papillomaviruses that the vaccine is directed against and the sensitivity and specificity of the test) and the compliance of the population (ie, the vaccine coverage and test uptake).

To better understand the role that each factor plays in determining effectiveness and also to have a valid target that is sensitive to the model characteristics, we believe that the proportion of cancer occurring in screened women, in unscreened people, and in vaccinated and unvaccinated women should be one of the most important outcomes to be presented for validation of a model for the natural history of cervical cancer. Given the structure of the model, it should be very easy to provide this output. Unfortunately, for the United States, there are few data on screening history for invasive cervical cancers (3,4) that could be used to validate the model; however, these data are available for other countries (5–7).

All of these studies conclude that lack of participation in screening is still a major risk factor for invasive cancer in industrialized countries. Will lack of participation still be the major failure for the future preventive programs?

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References

Notes
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