Elimination of HPV Cancers as a Public Health Problem, Starting with Cervical Cancers in the US

What’s Known

• Vaccination, screening and follow-up care can prevent almost all cervical cancer, making it the first cancer that could be eliminated in the US.2

• In many geographic areas vaccines have eliminated diseases, including polio, as a public health problem.

• Several organizations in the US and around the world have issued statements calling for cervical cancer elimination as a public health problem.3

• The World Health Organization has set a draft cervical cancer elimination goal at 4 cases per 100,000 women per year.4 Some have proposed an elimination goal of 1 case per 100,000 for the US overall and for individual states.

What’s Possible

• Vaccination could largely eliminate HPV infections that cause 90% of HPV cancers.2

• Australia could reach the cervical cancer elimination target of 4 cases per 100,000 by 2028 and the target of 1 case per 100,000 by 2066, according to mathematical modelling.5

• “Micro-elimination” may be possible for smaller units including states, health systems, and specific age cohorts.

• Several states have cervical cancer rates close to 4 per 100,000 as well as high cervical screening rates and high vaccination rates, e.g. Massachusetts, New Hampshire, North Dakota, and Vermont.

Elimination is defined as zero, or near zero, cases in a defined geographical area.
What Are the Challenges

• The public health definition of elimination differs from the lay definition. The public may think that elimination equals zero cases. A single message is needed that motivates everyone without getting too complicated.

• Messaging needs to respect survivors. It may be hurtful to say that cervical cancer has been eliminated even as new cases happen.

• Some rare types of cervical cancer are not caused by HPV, and screening is not 100% effective.

• Elimination efforts may divert resources to “prevent the last case” (e.g., divert resources away from preventing more common or deadly cancers).

• Once HPV vaccination rates get high enough, routine cervical cancer screening may no longer be recommended. Yet vaccination alone will only prevent 90% of cervical cancers, leaving the incidence of the remaining 10% unchanged.

• Cervical cancer elimination is not foreseeable for low- and middle-income countries where most cervical cancers occur, due to difficulties with broad implementation of effective screening and vaccination programs and temporary vaccine shortages.

• It will be much easier to largely eliminate cervical cancer than the other HPV cancers, for which no effective screening tests exist, and for which a larger proportion of cases are not caused by HPV.

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3 http://hpvroundtable.org/get-involved/eliminate/