Global elimination of cervical cancer is achievable—with commitment

On Sept 6, 2019, WHO called on countries in the South-East Asia region to accelerate their efforts towards cervical cancer elimination. Cervical cancer is a substantial burden in South-East Asia, with an estimated 158 000 new cases and 95 766 deaths reported in 2018. Improvements in screening, diagnosis, and treatment are urgently needed, but widespread vaccination against human papillomavirus (HPV) will have the largest effect towards eliminating the disease.

A modelling study published in *The Lancet Oncology* showed that if HPV vaccination and screening are quickly implemented in low-income and middle-income countries (LMICs), 12·5–13·4 million cervical cancer cases could be avoided by 2069. In *The Lancet Public Health*, researchers showed how a national immunisation scheme with early adoption and high coverage, along with a national HPV screening programme, was on track to eliminate cervical cancer in Australia (<4 cases per 100 000 by 2028 and <1 case per 100 000 by 2066). Crucially, long-term maintenance of these programmes, with support from the government and communities, would be required to sustain low cervical cancer incidence and mortality.

Among countries in South-East Asia, Bhutan, Maldives, Sri Lanka, and Thailand have introduced national HPV vaccination; however, one glaring omission is India, which has the largest population in the region. In this issue of *The Lancet Oncology*, Rengaswamy Sankaranarayanan and colleagues highlight barriers to implementing a national HPV vaccination programme in India and the status of prevention efforts there. Although the HPV vaccine was licensed in India in 2008, state government-sponsored vaccination programmes in the states of Andhra Pradesh and Gujarat and a clinical trial were suspended in 2010 after the deaths of several girls who were vaccinated. Despite evidence refuting a causal link between the deaths and the vaccine, and against recommendations from the Indian National Technical Advisory Group on Immunisation, availability and uptake of the HPV vaccine has been severely hindered since then. Moreover, because cervical cancer incidence has fallen in parts of India, arguments have been inappropriately made that vaccination and screening are not needed.

Similar to HPV vaccination, in South-East Asia, only Bhutan, Indonesia, Maldives, Sri Lanka, and Thailand have widespread or national cervical cancer screening programmes. Bangladesh will soon join this group as they roll out a population-based programme as part of a national strategy for cervical cancer prevention and control in 2017–22. Importantly, Bangladesh plans to screen ever-married women aged 30–60 years at 5-year intervals with a goal of 40% coverage. For comparison, the UK screens all women from the age of 25 years, and has a target coverage of 80%. Bangladesh is a low-resource country and this plan is an encouraging start, but whether it is ambitious enough to achieve cervical cancer control remains to be seen.

Even with high screening and vaccination coverage, cervical cancer elimination will take time, and substantial numbers of women will require treatment for the disease; thus, improvements here are also needed. Promising results from clinical trials with various immune checkpoint inhibitors have been reported recently. Moreover, preclinical work has suggested the potential of E6/E7-targeted CRISPR-Cas9 to treat cervical cancer, and a trial is ongoing. Inevitability, the high costs of novel treatments are likely to impede access in LMICs, and is not a trivial issue. For example, to overcome costs of the HPV vaccine itself, both Indian and Chinese pharmaceutical companies are trialling generic HPV vaccines to provide more affordable alternatives to currently available formulations.

National, publicly funded HPV vaccination programmes, high uptake of vaccination and screening, and access to high-quality diagnosis and treatment, are essential to tackle the global burden of cervical cancer. Disparities that persist in terms of access to vaccination and screening will delay worldwide elimination—a stark warning for countries of all income levels. A failure to alleviate these disparities is inexcusable and puts millions of women's lives at risk. Political commitment for evidence-led, well-funded, accessible prevention programmes combined with education and awareness campaigns to combat dangerous misinformation will bring countless societal and economic benefits. We strongly encourage those in positions of influence to use all the tools at their disposal to achieve this. ■ *The Lancet Oncology*

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For the **WHO call to increase efforts towards cervical cancer elimination in South-East Asia** see http://www.searo.who.int/mediacentre/releases/2019/1720/en/

For the **modelling study** see **Articles** *Lancet Oncol* 2019; **20:** 394–407

For the **study on cervical cancer elimination in Australia** see **Articles** *Lancet Public Health* 2019; **4:** e19–27

For the **study by Sankaranarayanan and colleagues** see **Policy Review** *Lancet Oncol* 2019; **20:** e636–43

For **Bangladesh's National Plan for cervical cancer control** see http://www.searo.who.int/bangladesh/cervical-cancer-prevention/en/

For **results of nivolumab and pembrolizumab in cervical cancer treatment** see https://ascopubs.org/doi/abs/10.1200/JCO.19.00739, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6726684/, and https://ascopubs.org/doi/full/10.1200/JCO.18.01265

For **CRISPR-Cas9 targeting of HPV E6/E7** see https://www.sciencedirect.com/science/article/pii/S1525001619303958#bib2