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Human papillomavirus vaccine to prevent cervical cancer globally

Countries with high coverage of human papillomavirus (HPV) vaccine have achieved 73–85% declines in HPV vaccine strains and 41–57% declines in high grade cervical intraepithelial neoplasia within 10 years.¹ However, only 30% of low-income and lower-middle-income countries (LMICs) have introduced HPV vaccination, compared to 85% of high-income countries. Moreover, population-based cervical cancer screening is less common in LMICs. In 2018, half of all new cervical cancers (290 000 of 570 000 worldwide) were in women living in LMICs. A World Health Organization study group used three different models to predict the effect of introducing HPV vaccination of girls at age 9 years, and cervical cancer screening at 35 and/or 45 years old in LMICs.² It was estimated that HPV vaccination alone would reduce cervical cancer by 89% by 2100, from 19.8 to 2.1 cases per 100 000 woman-years, thus preventing 61 million cases of cervical cancer. Adding twice-lifetime screening would reduce the incidence further to 0.7 cases per 100 000 woman-years, preventing an additional 12.1 million cases. All three models gave consistent predictions.² If high uptake of HPV vaccine can be achieved, cervical cancer could be eliminated globally by the end of the century.

References

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Children may be less affected than adults by novel coronavirus (COVID-19)

COVID-19 is a new strain of coronavirus that has infected people from many countries around the world. Initial reports suggest that children are relatively spared by this virus in comparison to adults. The February 2020 World Health Organization-China Joint Mission on Coronavirus Disease¹ found that only 2.4% of cases were in those less than 19 years of age. Furthermore, disease severity was less in infected children compared to the total infected population; only 2.5% of children developed severe disease (compared to 13.8% overall) and 0.2% of children developed critical disease (compared to 6.1% overall). Severe disease was defined as dyspnoea, tachypnoea, hypoxia or infiltrates affecting >50% of the lung fields within 48 h, and critical disease was defined as respiratory failure, septic shock and/or multi-organ failure. Although reported case numbers are quite small, young infants seem to have relatively low rates of being severely affected; one study of nine infected infants found none required intensive care or had significant complications.² Despite this, certain paediatric populations, such as extremely prematurely born babies, are likely to be particularly vulnerable, with one death confirmed in this subgroup.³ Further evidence is likely to emerge with time on just how children as a cohort globally will fare with this epidemic illness.

References

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