

Preventing HPV-associated cancer by maximizing vaccine uptake



Disclaimer

- *Unapproved products or unapproved uses of approved products may be discussed by the faculty; these situations may reflect the approval status in one or more jurisdictions*
- *The presenting faculty have been advised by USF Health and touchIME to ensure that they disclose any such references made to unlabelled or unapproved use*
- *No endorsement by USF Health and touchIME of any unapproved products or unapproved uses is either made or implied by mention of these products or uses in USF Health and touchIME activities*
- *USF Health and touchIME accept no responsibility for errors or omissions*

Expert panel



Prof. Eduardo Franco OC

McGill University
Montreal, Canada



Prof. Lynette Denny GCOB (silver)

University of Cape Town
Cape Town, South Africa



Prof. Daniel Kelly OBE

European Cancer Organisation,
HPV Action Network
Cardiff, UK



Agenda

The benefits of HPV vaccination: Preventing adult cancers from a young age

Who should be vaccinated against HPV and why?

How can barriers to HPV vaccine uptake be overcome?








The benefits of HPV vaccination: Preventing adult cancers from a young age

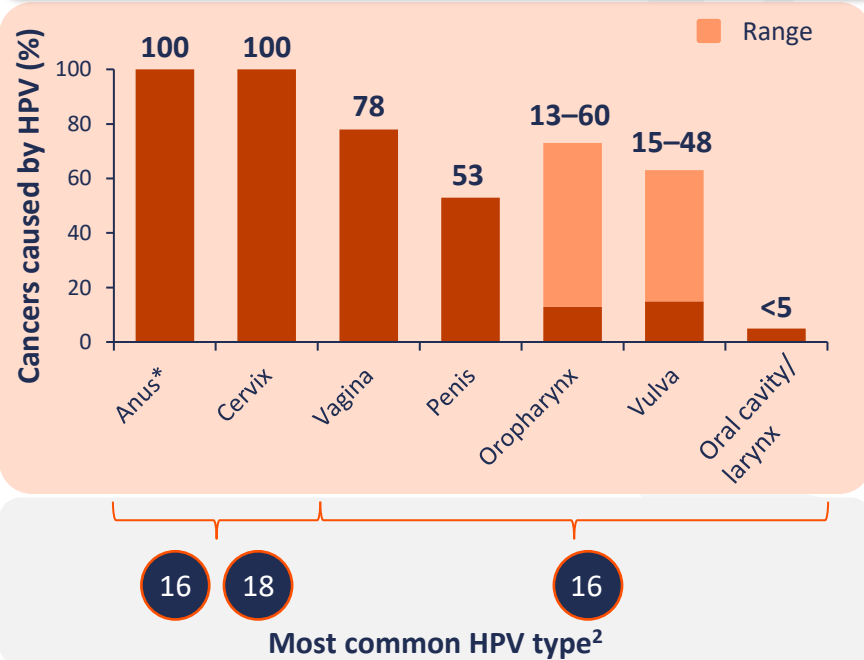


HPV is a DNA virus that can cause cancer

What is HPV?

-  ~80% of people acquire HPV in their lifetime¹
-  Mainly transmitted through sexual contact via skin–skin or skin–mucosa^{2,3}
-  70–90% of infections are asymptomatic and spontaneously resolve within 1–2 years²
-  >200 types of HPV; 12–14 types are high risk/oncogenic, including HPV 16 and 18^{1,2}
-  HPV causes ~5% of cancers worldwide⁴

Most cervical, anal and vaginal cancers are caused by HPV infection^{2,5}



*Squamous cell carcinoma only. DNA, deoxyribose nucleic acid; HPV, human papillomavirus.

1. Szymonowicz KA, Chen J. *Cancer Biol Med.* 2020;17:864–78; 2. World Health Organization. *Wkly Epidemiol Rec.* 2022;97:645–72; 3. Petca A, et al. *Exp Ther Med.* 2020;20:186; 4. Szymonowicz KA, Chen J. *Cancer Biol Med.* 2020;17:864–78; 5. de Martel C, et al. *Lancet Glob Health.* 2020;8:e180–90.



Who should be vaccinated against HPV and why?

WHO HPV vaccination campaign to prevent cervical cancer

Primary target group



Girls aged 9–14 years, before becoming sexually active



Vaccinating over 80% of girls will also reduce risk of HPV infection in boys

Secondary target groups



Females aged ≥ 15 years



- Boys
- Older males
- Men who have sex with men



Only recommended if:

- Feasible and affordable
- Does not divert resources from vaccination of primary target group

Implementing this strategy could prevent ~60 million cervical cancer cases and 45 million deaths over the next 100 years

WHO position on HPV vaccination schedules

Recommended schedule



Two doses



- Primary target group
- Older age groups for which vaccines are licensed



- ≥ 6 months between doses
- No maximum recommended interval between doses

Alternative schedules



Single dose



- Girls and boys aged 9–20 years (off label)
- *HPV vaccines are licensed as two- or three-dose schedules*



Immunocompromised or HIV-infected persons



- At least two doses, three if possible
- Regardless of age or antiretroviral therapy status
- ≥ 6 months between doses

There is currently no evidence to suggest that a booster dose is needed after the primary vaccination

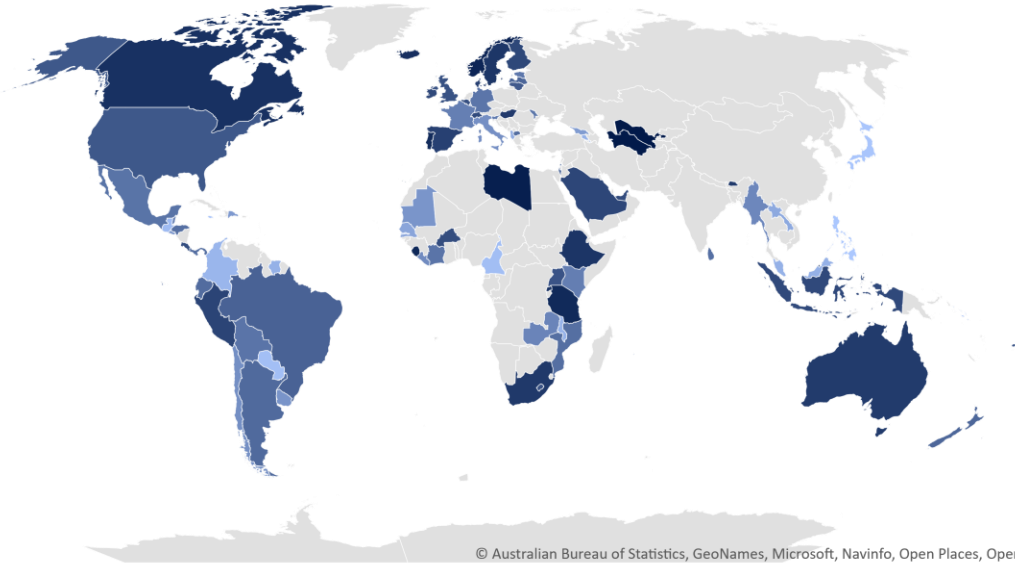


**How can barriers to HPV vaccine uptake
be overcome?**



HPV vaccination coverage varies globally

2021 or 2022 official and administrative HPV vaccination coverage data from WHO member states with available data, based on last dose given to females^{*†}



Coverage (%)

100

0

Countries coloured
in grey did not
report data

© Australian Bureau of Statistics, GeoNames, Microsoft, Navinfo, Open Places, OpenStreetMap, TomTom, Zenrin

Powered by Bing

^{*}Data represent official or administrative HPV vaccination coverage reported annually through the WHO/United Nations Children's Fund Joint Reporting Form on Immunization. Data are updated as country data is received. WHO immunization coverage estimates are also displayed. National, regional and global data are updated annually on 15 July. Data from 2022 are used where available, otherwise data are reported from 2021. Where possible, official data are reported rather than administrative. [†]In most countries, administrative data percentages are calculated as are the number of doses administered to the target population, divided by the total estimated number of people in the target population.

HPV, human papillomavirus; WHO, World Health Organization. WHO. HPV vaccination coverage. Available at: <https://bit.ly/3Pmxdn> (accessed 21 June 2023).

Barriers to HPV vaccination exist at an international and individual level¹⁻³

National/international barriers



Access to
healthcare



Availability



Supply



Costs



Cold chain
capacity



Government
commitment

Individual barriers



Safety
concerns



Stigmas, e.g.
link with sexual
activity



Poor vaccine
awareness

HPV, human papillomavirus.

1. Black E, Richmond R. *Vaccines (Basel)*. 2018;6:61; 2. Oyediji O, et al. *Vaccines(Basel)*. 2021;9:1360; 3. Nguyen NY, et al. *Ann Glob Health*. 2020;86:118.