

HPV vaccines indicator

Burden & epidemiology

Number of new cases per year (last 3-5 years)

Cervical cancer is the fourth most common cancer in terms of incidence in women, with an estimated 660,000 new cases in 2022 ^{1, 2}

Cervical cancers account for over 90% of HPV-related cancers in women. ³

Country-level data: Please refer to the country reports in the HPV Centre. ⁴

Proportion of the population affected by the disease or infected with the antigen

Cervical cancer is the most common cancer type in 25 countries and the leading cause of cancer death in 37 countries, mainly in sub-Saharan Africa as well as South America and South-Eastern Asia. ²

The estimated global HPV prevalence between 1995 and 2009 was 11.7% (95% CI 11.6%-11.7%). ⁵

Highest prevalence of cervical HPV among women is in sub-Saharan Africa (24%), followed by Latin America and the Caribbean (16%), Eastern Europe (14%), and South-East Asia (14%).

Prevalence in men is highly variable based on sexual trends. 6, 7

Serogroup or serotype distribution (for serogroup- or serotype-specific vaccines)

Currently 12 HPV types are defined as high-risk (oncogenic) and cause cancer in humans (types 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59); type 68 is classified as probably causing cancer. Oncogenic risk varies by type, with type HPV16 being the most oncogenic. 8

The most common HPV genotypes found in invasive cervical cancer are HPV16 and HPV18, together accounting for about 77% of cases. Other significant high-risk types include HPV31, 33, 35, 45, 52, and 58, which collectively contribute to nearly 95% of cases globally. 9

To note that 2010 data is seen as a historical baseline. Given that the existing _HPV vaccines cover HPV-16 and HPV-18 types, measuring the "natural" seroprevalence burden for these two types (16 and 18) will no longer be possible, as they start to disappear due to vaccination. 10

A more recent metaanalysis of HPV among men showed a global pooled prevalence of 31% (95% CI 27–35) for any HPV. Pooled prevalence estimates were similar for the regions of Europe and Northern America, Sub-Saharan Africa, Latin America and Oceania, while estimates for Eastern and South-Eastern Asia were half that of the other regions. 11

Number of deaths from the disease per year

Cervical cancer was the fourth leading cause of cancer deaths in women in 2022, with around 350 000 deaths worldwide. 12

Case Fatality ratio (number of deaths / number of new cases, in %)

Cervical cancer mortality rates were six times higher in low HDI countries versus very high HDI countries.

CFR differing by country income level and health system capacity. No single global estimate available. 13

Outbreak, epidemic or pandemic risk

Not applicable for HPV

Contribution of the vaccine to achievement of the national, regional or global disease goals

The HPV vaccine plays a critical role in the global strategy to eliminate cervical cancer by 2030. By targeting high-risk HPV types, widespread HPV vaccination programs are integral to reducing the incidence of the disease. The World Health Organization's (WHO) global strategy against cervical cancer sets ambitious goals: vaccinating 90% of girls by age 15, screening 70% of women by age 35 and again by 45, and treating 90% of women with pre-cancerous lesions. ¹⁴

Sources

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