# Conquering Cervical Cancer in the Commonwealth: Addressing Myths and Misconceptions

June 2022





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Published by the Commonwealth Secretariat.

#### Introduction



Accurate and reliable health information is a cornerstone of effective public health. Conversely, there is a growing body of evidence demonstrating that misinformation, misconceptions and myths spread fast and have substantial negative impacts on population health, such as by reducing confidence in vaccines or promoting unproven cancer treatments. In light of this, the global movement to eliminate cervical cancer needs to recognise and integrate measures to dispel myths, misconceptions and misinformation surrounding cervical cancer.

The Commonwealth carries a significant cervical cancer burden, particularly in its low- and middle-income countries. The Commonwealth represents over 30 per cent of the world's population but 40 per cent of global cervical cancer incidence and 43 per cent of global mortality resulting from cervical cancer.<sup>1</sup>

If adequate steps are not taken to radically reduce the rising incidence of cervical cancer within the Commonwealth, the number of new cases is expected to rise by 55 per cent (to 324,598) and deaths by 62 per cent (to 186,066) by 2030. This would equate to one woman dying of cervical cancer every three minutes.

In 2021, Commonwealth Health Ministers pledged to ensure that, by 2025, all girls in the Commonwealth would have access by the age of 13 to the human papillomavirus (HPV) vaccine to reduce the incidence of cervical cancer, aligning with a global effort to eliminate cervical cancer by 2030. To achieve this commitment, it is critical that countries increase awareness of and build vaccine confidence in the HPV vaccine.

This document has been developed through the work of the International Taskforce on Cervical Cancer Elimination in the Commonwealth, a recently launched taskforce of advisers and advocates that aims to accelerate national and Commonwealth action on cervical cancer elimination goals. The document comes in response to concerns around a growing body of myths and misconceptions that has the potential to contribute to vaccine hesitancy and affect participation in cervical cancer prevention and control programmes. It compiles some of the most common myths and misconceptions surrounding HPV and cervical cancer and provides a starting point for different actors to develop effective messages to counter these in policy and programmes to eliminate cervical cancer. The document seeks to group these myths and misconceptions into core 'themes' with a common action or message supported by evidence. The information in this document provides a starting point to develop messages that are adapted to national or regional contexts.

Adeweole, I. and Ginsburg, O. (2020) 'The Case for Collective Commonwealth Action on Cervical Cancer'. Cancer Control 22–26.

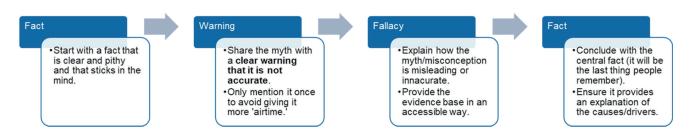
#### Debunking Myths and Misconceptions

Debunking misinformation and dispelling myths and misconceptions is a multi-step and nuanced process. In their *Debunking Handbook* Lewandowsky et al. (2020) provide a helpful framework<sup>2</sup> for developing debunking messages, which can be summarised into the following phases:

- 1. **Pre-bunking**. This is the most effective method. It provides accurate and reliable information from the outset i.e., before a myth, misconception or misinformation is out there to give people the tools and information to spot a myth or misinformation.
- Monitoring. This takes place when a myth, misconception or misinformation has been articulated but is not yet widespread among the general public. This is a good time to emphasise accurate information and prepare debunking materials.
- 3. **Reframing the agenda**. When a myth is starting to gain momentum but not yet dominant, we have the opportunity to promote accurate information to reframe the discussion. Activities often focus on actively promoting accurate information in order to reframe the discussion, e.g. around the accuracy and safety of cervical cancer screening.

4. **Debunking**. This is the process of actively engaging with a conversation to promote facts and dispel a myth or fallacy.

The process of debunking myths, misconceptions or misinformation can be difficult. The 'illusory truth effect' means that, the more people hear information, the more likely they are to trust it, even if it is inaccurate. Even if information or beliefs are proven to be incorrect, they can continue to have an influence on people's decision-making (i.e., misinformation is 'sticky'). As such, debunking needs to happen often and comprehensively and relies on effective, evidence-based and compelling messages:<sup>3</sup>



### Human Papillomavirus Prevalence in the General Population

#### **Key facts**

- HPV infections are very common. According
  to the International Agency for Research on
  Cancer (IARC), in many industrialised countries
  the prevalence of HPV infections in young
  adult females can range between 30 and 80
  per cent, and the lifetime probability of ever
  encountering HPV is as high as 80–90 per cent.<sup>1</sup>
- The risk of HPV infection increases significantly after first sexual debut.<sup>2</sup>
- HPV infection normally has no signs or symptoms, so it is very difficult to determine if someone has a current infection.<sup>2</sup>
- More than 90 per cent of people infected with HPV will clear their infection eventually<sup>2,3</sup> but, given the number of HPV infections, governments and communities need to take steps to protect people.
- The HPV vaccine is safe and effective in protecting populations from the HPV strains most closely associated with cervical cancer development.
- 1 HPV Information Centre (2015) 'HPV Prevention at a Glance'. https:// hpvcentre.net/hpvatqlance.php (accessed 30 April 2022).
- 2 WHO (2022) 'Cervical Cancer'. Fact Sheet, 22 February. https://www.who. int/news-room/fact-sheets/detail/cervical-cancer (accessed 30 April 2022)
- 3 Denny, L., Herrero, R., Levin, C. and Kim, J. (2015) Cervical Cancer in Cancer: Disease Control Priorities 3rd Edn. Washington DC: The International Bank for Reconstruction and Development www.ncbi.nlm.nih.gov/books/NBK343648/ (accessed 30 April 2022).

#### Some people say

Some of the misconceptions surrounding HPV are as follows:

- HPV is a rare condition, so women and girls don't need to worry.
- People won't catch HPV if they are healthy.
- Women and girls will have symptoms and know if you have been infected with HPV.
- People need to have a lot of sexual partners to be susceptible to HPV infection.

# More than 95 Per Cent of Cervical Cancers are Caused by Human Papillomavirus Infection<sup>1</sup>

#### **Key facts**

- Almost all cases of cervical cancer are caused by HPV.<sup>1</sup>
- HPV types 16 and 18 are responsible for at least 70 per cent of cervical cancer cases globally, while a further five types are responsible for a further 20 per cent of the global burden.<sup>2</sup> In total, IARC has identified 13 types that are linked to cervical cancer.
- The HPV vaccines are a safe and effective way of reducing risk of infection with higher-risk HPV strains.
- All available HPV vaccines protect against HPV types 16 and 18.<sup>3</sup>
- The most common types of cervical cancer are not hereditary.<sup>4</sup>

#### Some people say

Some of the misconceptions surrounding cancer and HPV infection are as follows:

- HPV infection is responsible for only a small percentage of cervical cancers. Cervical cancer cannot be prevented.
- HPV infection will always cause cancer.
- If a woman's mother or grandmother had cervical cancer, she will have it too.

- 1 WHO (2022) 'Cervical Cancer'. Fact Sheet, 22 February. https://www.who. int/news-room/fact-sheets/detail/cervical-cancer (accessed 30 April 2022)
- 2 Cogliano, V., Baan, R., Straif, K. et al. (2005) 'Carcinogenicity of Human Papillomaviruses'. *Lancet Oncology* 6(4): 204.
- 3 CDC 'Human Papillomavirus (HPV) Vaccination: What Everyone Should Know'. https://www.cdc.gov/vaccines/vpd/hpv/public/index.html (accessed 30 April 2022).
- 4 American Cancer Society (2020) 'Risk Factors for Cervical Cancer'. https://www.cancer.org/cancer/cervical-cancer/causes-risks-prevention/risk-factors.html (accessed 30 April 2022).

#### Human Papillomavirus Vaccines are Safe and Effective in Preventing HPV Infections, Precancerous Lesions and Invasive Cancers

#### **Key facts**

- The HPV vaccine protects against the most common cancer-causing strains of HPV but not against all. It can also provide some protection from developing HPV-related cancers at other sites.<sup>1</sup>
- The HPV vaccine is safe. Over 12 years of vaccine safety monitoring and more than 160 studies have shown that HPV vaccines have a favourable safety profile, including no impacts on future fertility for girls who are vaccinated.<sup>2,3,4</sup>
- Studies show that the HPV vaccine reduced the incidence of cervical cancer by 90 per cent among vaccinated women compared with unvaccinated women.<sup>4</sup>
- Because of the time between initial HPV infection (prevented by vaccines) and the development of cervical cancer, initial studies used pre-cancer as an endpoint. Most experts expected that this would ultimately result in prevention of cancer and following 10 years of research we now have clear evidence of the vaccine's preventive effect.
- A combination of HPV vaccination and screening provides the best protection against cervical cancer.<sup>5</sup>
- 1 United States National Cancer Institute (2021) 'Human Papillomavirus Vaccines'. https://www.cancer.gov/about-cancer/causes-prevention/ risk/infectious-agents/hpv-vaccine-fact-sheet#why-is-hpvvaccination-important (accessed 30 April 2022).
- 2 CDC (2020) 'Human Papillomavirus (HPV) Vaccine: Safety Information'. https://www.cdc.gov/vaccinesafety/vaccines/hpv-vaccine.html (accessed 30 April 2022).
- 3 WHO (2020) 'Human Papilloma Virus Vaccines and Infertility' ACVS meeting of 4–5 December 2019, in WHO Weekly Epidemiological Record of 24 January 2020, https://www.who.int/groups/global-advisory-committee-on-vaccine-safety/topics/human-papillomavirus-vaccines/infertility (accessed 30 April 2022).
- 4 Lei, J., Ploner, A., Elfström et al. (2020) 'HPV Vaccination and the Risk of Invasive Cervical Cancer'. The New England Journal of Medicine 383:1340– 1348.
- 5 CDC 'Human Papillomavirus (HPV) Vaccination: What Everyone Should Know'. https://www.cdc.gov/vaccines/vpd/hpv/public/index.html (accessed 30 April 2022).

#### Some people say

Some of the misconceptions are as follows:

- HPV vaccination will prevent women and girls from being infected with all strains of HPV.
- Vaccination with HPV means women don't need to participate in screening.
- HPV vaccines have strong side effects or are too new to be classified as safe.
- There is enough data on the impact of HPV vaccines on cervical cancer risks.
- HPV vaccines were only tested against pre-cancer and haven't been shown to be prevent cancer.

## Vaccinating girls aged 9–14 could prevent 30–40 per cent of cervical cancer deaths between 2015 and 2030<sup>1</sup>

#### **Key facts**

- HPV vaccines work best if delivered prior to exposure to the virus. To prevent cervical cancer, the World Health Organization(WHO) recommends vaccinating girls aged 9–14, when most have not started sexual activity.<sup>1</sup>
- Lesbian and bisexual women are an oftenoverlooked risk group for HPV infection, even though the virus can be transmitted between female sex partners. Given the prevalence of HPV in the general population, all girls between the ages of 9 and 14 should be vaccinated.<sup>2</sup>
- The HPV vaccine is safe. Over 12 years of vaccine safety monitoring and more than 160 studies have shown that HPV vaccines have a favourable safety profile, including no impacts on future fertility for girls who are vaccinated.<sup>3,4,5</sup>
- The average age at diagnosis for cervical cancer is about 47 years and 70 per cent of cancers are diagnosed in women under the age of 60 who have not participated in regular cervical cancer screening.

#### Some people say

Some of the misconceptions surrounding cancer and HPV vaccination are as follows:

- HPV infection affects only young people.
- LGBTQ individuals do not need to be vaccinated.
- 9-14 years is too young to vaccinate girls.
- HPV vaccination can affect a qirl's fertility in later life.
- Cervical cancer is diagnosed only in older women and so there is no need to vaccinate girls.

- 1 WHO (2022) 'Cervical Cancer'. Fact Sheet. https://www.who.int/news-room/fact-sheets/detail/cervical-cancer (accessed 30 April 2022).
- McRee, A., Katz, M., Paskett, E. and Reiter, P. (2014) 'HPV Vaccination among Lesbian and Bisexual Women: Findings from a National Survey of Young Adults'. *Vaccine* 32(37): 4736–4742.
- 3 CDC (2020) 'Human Papillomavirus (HPV) Vaccine: Safety Information'. https://www.cdc.gov/vaccinesafety/vaccines/hpv-vaccine.html (accessed 30 April 2022)..
- 4 WHO (2020) 'Human Papilloma Virus Vaccines and Infertility' ACVS meeting of 4–5 December 2019, in WHO Weekly Epidemiological Record of 24 January 2020, https://www.who.int/groups/global-advisory-committee-on-vaccine-safety/topics/human-papillomavirus-vaccines/infertility (accessed 30 April 2022).
- 5 Lei, J., Ploner, A., Elfrström et al. (2020) 'HPV Vaccination and the Risk of Invasive Cervical Cancer'. The New England Journal of Medicine 383:1340–1348.

## HPV Infection is a Normal Part of Becoming a Sexually Active Adult

#### **Key facts**

- The vaccine is most effective if administered before sexual debut as it is possible for HPV to be passed on from first sexual debut.<sup>1</sup> As a result, HPV infection is not a result of sexual promiscuity.
- Research suggests that two in five women would be worried what people thought of them if they were told they had HPV. Cervical cancer services need to help address this stigma.<sup>2</sup>
- The HPV vaccine does not lead to increased sexual activity or increased sexual debut in either men or women.<sup>3</sup> In a study conducted among 15,037 participants, no significant difference was observed in sexual activity between vaccinated and non-vaccinated girls.
- WHO estimates that it takes 15–20 years to develop cervical cancer for women with normal immune systems, or 5–10 years for women with weaker immune systems (like those living with untreated HIV).<sup>1</sup> As a result, cervical cancer can develop in women who have not recently been sexually active.
- HPV vaccines offer protection against cervical and other HPV-associated cancers but not against other sexually transmitted infections.<sup>4</sup>
- While important in the protection against sexually transmitted diseases, condoms offer only very limited protection against transmission of HPV.

#### Some people say

Some of the myths and misconceptions surrounding cancer and HPV vaccination are as follows:

- Only promiscuous people get HPV.
- The HPV vaccine is needed only if a woman is sexually active.
- People cannot catch HPV if they use a condom.
- The HPV vaccine increases promiscuity or risky sexual behaviour.
- Risks of cervical cancer are lower if women have not been sexually active for a long time.
- HPV vaccine will protect against other infections.

<sup>1</sup> WHO (2022) 'Cervical Cancer'. Fact Sheet. https://www.who.int/news-room/fact-sheets/detail/cervical-cancer (accessed 30 April 2022).

<sup>2</sup> Music, R. (2019) 'Raising Awareness of HPV – a View from Jo's Cervical Cancer Trust'. Public Health England blog, 30 May. https://phescreening. blog.gov.uk/2019/05/30/raising-awareness-of-hpv-a-view-from-jos-cervical-cancer-trust/?msclkid=bef20df7b00411eca06af11702a85e5e (accessed 31 May 2022).

<sup>3</sup> Brouwer, A., Delinger, R., Eisenbert, M. et al. (2019) 'HPV Vaccination Has Not Increased Sexual Activity or Accelerated Sexual Debut in a College-Aged Cohort of Men and Women'. BMC Public Health 19: 821.

<sup>4</sup> Radecki Breitkopf, C., Finney Rutton, L., Findley, V. et al. (2016) 'Awareness and Knowledge of Human Papillomavirus (HPV), HPV-Related Cancers, and HPV Vaccines in an Uninsured Adult Clinic Population'. *Cancer Medicine* 5(11): 3346–3352.

#### Cervical Cancer Screening is a Safe and Effective Way to Identify Pre-Cancer or Cancer at an Early Stage when Treatment is Easier and Has Fewer Side-Effects

#### **Key facts**

- HPV vaccination does not replace cervical cancer screening. Countries with the HPV vaccine also need population-based screening programmes to identify and treat precancerous lesions and invasive cancers.<sup>1</sup>
- Cervical cancer screening is conducted among women who have no symptoms and may feel perfectly healthy.<sup>1</sup> This is because HPV can remain dormant for long periods of time so, even if you have not been sexually active for a long time, you can still have the virus. That is why it is important to have regular screenings.
- WHO recommends that countries use HPV tests to screen as this saves more lives and is more cost-effective.<sup>1</sup> Screening with an HPV test should start from 30 years in the general population and 25 years for women with HIV.<sup>1</sup>
- Recent developments mean that women can painlessly collect their own sample using a small swab, overcoming many barriers to cervical screening.<sup>1</sup>
- The average age at diagnosis of cervical cancer is 53 and so screening prior to this point increases the chances of identifying cancer early.<sup>2</sup>
- There is no data to show a link between conducting HPV tests and loss of fertility in women, and treatment of early-stage disease can be carried out while preserving fertility.<sup>3,4</sup> However, it is much more difficult to achieve this with later-stage cancers.

#### Some people say

Some of the myths and misconceptions surrounding the safety of cervical cancer screening are as follows:

- HPV vaccination means women don't need cervical cancer screening.
- Women don't need to get screened if they don't have symptoms.
- Screening is painful and can damage a woman's fertility.

<sup>1</sup> WHO (2022) 'Cervical Cancer'. Fact Sheet https://www.who.int/news-room/fact-sheets/detail/cervical-cancer (accessed 30 April 2022).

<sup>2</sup> Arbyn, M., Weiderpass, E., Bruni, L. et al. (2020) 'Estimates of Incidence and Mortality of Cervical Cancer in 2018: A Worldwide Analysis'. *Lancet Global Health* 8(2): e191–e203.

<sup>3</sup> Cancer Research UK (2020) 'Fertility and Cervical Cancer'. https://www.cancerresearchuk.org/about-cancer/cervical-cancer/living-with/fertility (accessed 31 May 2022).

<sup>4</sup> Nohr, B., Krüger Kjaer, S., Soylu, L. and Jensen, A. (2019) 'High-Risk Human Papillomavirus Infection in Female and Subsequent Risk of Infertility: A Population-Based Cohort Study'. Fertility and Sterility 111(6): 1236–1242.

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