

HPV VACCINATION & ANAL CANCER SCREENING FOR HIGH-RISK POPULATIONS

Thorne Harbour Health's position

Human papillomavirus (HPV) vaccinations should be freely available for men who have sex with men and all people living with HIV, as they are both high-risk populations for HPV. A national screening program for anal cancer should also be implemented for these high-risk groups.

Summary

- Men who have sex with men and people living with HIV are high risk populations for HPV.
- Persistent infection with high-risk strains of HPV is associated with 80–90% of anal cancers and 40–50% of penile cancers.
- HPV vaccination is highly effective at preventing HPV infection and also significantly reduces the risk of high-grade anal cancer in men who have sex with men.
- Despite expert recommendations, the National Immunisation Program Schedule does not currently include HPV vaccination for these high-risk Australian populations and the subsequent cost is a barrier to uptake.
- Stop-gap initiatives that include HPV vaccination for men who have sex with men in Victoria and South Australia are due to end on 31 October 2019 and 31 July 2019, respectively. A stop-gap initiative in New South Wales ended on 31 December 2018.
- The Federal Government should immediately rectify this key gap in the National Immunisation Program Schedule; if not, the states and territories should step in and establish, or extend existing catch-up programs, as some have already.
- An anal screening program for men who have sex with men and all people living with HIV should be implemented to reduce the burden of anal cancer in these high-risk populations.

Background

Human papillomavirus (HPV)

HPV is one of the most common sexually transmitted infections.¹ There are many strains of HPV, and while most HPV infections are transient and asymptomatic, some strains can cause genital warts, and persistent infection with high-risk strains of HPV can cause cancers. While HPV is widely known for causing cervical cancer, it is also associated with 80–90% of anal cancers and 40–50% of penile cancers,² and has been associated with throat cancers.

Vaccination

HPV vaccination is highly effective at preventing HPV infection (with the strains covered by specific vaccines) in the general population and the same is true of high-risk populations.³ Quadrivalent HPV vaccination reduces the risk of high-grade anal cancer by 75% in men who have sex with men between 16–26 years of age.⁴

The efficacy of HPV vaccination decreases as people age upon exposure to strains of HPV prior to their having been vaccinated against them; however, vaccination could still be of benefit by protecting against infection with strains to which one has not yet been exposed.⁵

Emerging evidence also indicates that HPV vaccination has a therapeutic effect when used to treat HPV-related cancers. Funding should be provided for further research exploring the therapeutic use of HPV vaccination and its ability to reduce the recurrence of HPV-related cancers.⁶

High-risk populations

Men who have sex with men are several times more likely to have HPV infection compared to heterosexual men;⁷ they are also more likely to have infection with multiple HPV strains and for infection to persist for a longer time.⁸ The prevalence of high-risk strains of HPV in HIV-positive women⁹ and men who have sex with men¹⁰ is also roughly twice that of those who are HIV-negative. There remains a lack of evidence about HPV rates in trans and gender diverse people whether they are people living with HIV or not.

The high prevalence and persistence of multiple and cancer-causing high-risk strains of HPV in men who have sex with men and people living with HIV corresponds with an increased risk of anal and genital warts and some cancers in these populations:

- Men who have sex with men are roughly 10 times more likely to have anal and genital warts than the general population.¹¹
- HIV-negative men who have sex with men are 5–20 times more likely, HIV-positive women are 10 times more likely, and HIV-positive men who have sex with men are over 50 times more likely than the general population to get anal cancer.¹²

Screening for anal cancer

Anal cancer is now the most common non-AIDS related cancer for people living with HIV in Australia.¹³ The incidence of anal cancer among men who have sex with men in Australia is currently similar to that of cervical cancer in women prior to the introduction of the cervical screening program.¹⁴ This is significant, because HIV-positive women are *not* any more likely to develop invasive cervical cancer than HIV-negative women, due to Pap testing and treatment of cancer precursors.¹⁵ Taken together this suggests that in addition to promoting uptake of HPV vaccination in men who have sex with men and people who are HIV-positive, that members of these high-risk groups would benefit greatly from a targeted population-based anal screening program. A protocol to deal with positive findings will need to be developed.

Current practice

Australia's National Immunisation Program Schedule includes HPV vaccination for everyone aged 12–13 years of age; introduced for girls in 2007,¹⁶ and expanded to include boys in 2013,¹⁷ this national program has resulted in a dramatic reduction in the incidence of infections with wart and cancer-causing strains of HPV in Australia.

The Australian Technical Advisory Group on Immunisation¹⁸ and the National Centre for Immunisation Research and Surveillance¹⁹ both recommend that men who have sex with men and immunocompromised people (including people living with HIV), be vaccinated against HPV. However, it remains that HPV vaccination is not on the National Immunisation Program Schedule for either of these high-risk populations. This means HPV vaccines are not freely available to these high-risk groups, and this cost acts as a barrier to uptake.²⁰ This remains the case despite recommendations to the contrary, despite provisions in the National Immunisation Program Schedule for other vaccines for other defined risk groups, and despite men who have sex with men and people living with HIV being at greater risk of certain HPV-related cancers than the general population.

The only Australian state or territory-based vaccination programs for groups at high risk of HPV-related disease currently in place are in Victoria and South Australia; however, both are limited to men who have sex with men. The Victorian scheme is due to end on 31 October 2019²¹ and the South Australian program is due to end on 31 July 2019.²² A stop-gap HPV vaccination program in New South Wales ended on 31 December 2018.²³ State-based catch up programs should be expanded to include people living and recently diagnosed with HIV, and extended to ensure sufficient uptake in men who have sex with men is achieved.

Conclusion

Making HPV vaccines freely available to at risk populations will reduce health inequities that exist between them and the general population, and contribute to Australia meeting its international obligation to fulfil the right to the highest attainable standard of health.²⁴

The National Immunisation Program Schedule should provide a time-limited catch up HPV vaccination program for men who have sex with men. If the Federal Government fails to act in a timely manner, then states and territories should take urgent action to implement catch up HPV vaccination programs for men who have sex with men as part of their own immunisation schedules. This is time sensitive, as the cost effectiveness of the catch up program will continue to decline over time following the implementation of the national HPV vaccination program for boys in 2013.²⁵

HPV vaccination should also be freely available to people living and recently diagnosed with HIV not already vaccinated against HPV, and funding should be provided for research that further explores the therapeutic use of HPV vaccination in the treatment of HPV-related cancers, as emerging evidence indicates it can reduce cancer recurrence.²⁶

In addition, an anal screening program for men who have sex with men and all people living with HIV should be implemented to reduce the burden of anal cancer in these high-risk populations.

Recommendations

1. Make HPV vaccinations freely available under the National Immunisation Program Schedule for high-risk groups, namely men who have sex with men and all people living with HIV.
2. If the addition of a HPV vaccination catch up program to the National Immunisation Program Schedule is delayed, such a program should be implemented in states and territories lacking it.
3. Extend state-based HPV vaccination catch up programs for men who have sex with men in Victoria, New South Wales and South Australia, and expand them to include all people living with HIV.
4. Fund trials of the therapeutic use of HPV vaccines in the treatment of HPV-related cancers.
5. Implement a national screening program for anal cancer for men who have sex with men and all people living with HIV to reduce the prevalence of anal cancer in these high-risk populations.

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