The ABCs of HPV and LGBTQ

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Human papillomavirus (HPV) is a group of more than 200 viruses. These are small, nonenveloped viruses that infect the skin or mucous membranes. Approximately 40 of these subtypes are spread through sexual contact, making HPV the most common sexually transmitted disease. Approximately 79 million Americans are infected with HPV. This infection usually occurs in the late teens and early 20s, often with the first sexual encounter.

HPV infections typically are asymptomatic and resolve on their own, but unresolved infections caused by certain subtypes can result in other medical conditions, including genital warts, recurrent respiratory papillomatosis, and cancer. Centers for Disease Control and Prevention (CDC) reports approximately 44,000 HPV-associated cancers occur annually in the United States. HPV infection has been associated with cervical dysplasia and cervical, oropharyngeal, anal, penile, vaginal, and vulvar cancers. It is thought to be responsible for over 90% of all anal and cervical cancers, 68% of all penile cancers, and 70% of all oropharyngeal cancers. Reference Figures 1 and 2.

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Reference
Figures 1 and 2.

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Figure 1: Number of New HPV-Associated Cancer Cases Each Year

FEMALES (24,886)

Vagina
14.4%

Cervix
54.6%

Anus*
16.2%

Oropharynx
10.6%

MALES (19,113)

Cervix
11.9%

Vulva
58.8%

Anus*
6.8%

Oropharynx
68.3%

*Includes anal and rectal squamous cell carcinomas

Figure 2: Rate of HPV-Associated Cancers by Sex and Cancer Type

<table>
<thead>
<tr>
<th>Cancer Type</th>
<th>FEMALES</th>
<th>MALES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cervix</td>
<td>12.2%</td>
<td>7.2%</td>
</tr>
<tr>
<td>Vulva</td>
<td>10.6%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Vagina</td>
<td>9.9%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Penis</td>
<td>1.7%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Oropharynx</td>
<td>1.8%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Anus</td>
<td>1.3%</td>
<td>1.3%</td>
</tr>
</tbody>
</table>

Figure 3: Estimated Annual Number of Cancer Cases Attributable to HPV by Sex, Cancer Type, and HPV Type

<table>
<thead>
<tr>
<th>Cancer Type</th>
<th>FEMALES</th>
<th>MALES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cervix</td>
<td>1,600</td>
<td>100</td>
</tr>
<tr>
<td>Vulva</td>
<td>1,800</td>
<td>200</td>
</tr>
<tr>
<td>Oropharynx</td>
<td>9,900</td>
<td>700</td>
</tr>
<tr>
<td>Vagina</td>
<td>1,400</td>
<td>100</td>
</tr>
</tbody>
</table>


*Includes anal and rectal squamous cell carcinomas
The HPV vaccines were extensive-ly studied in clinical trials and have been proven to be safe and effective in preventing HPV infections associ-ated with cancers. So far, in the US 26% of females 19-26, but the vaccine can be given at age 9. ACIP recommends catch-up vaccination for everyone who has not been vaccinated through age 26. ACIP also recognizes that unvaccinated people ages 27 through 45 may be at increased risk for HPV infection and development of cervical cancer, as they often do not have cervical cancer screening or do not follow up on abnormal test results.1

HPV Vaccine

HPV vaccination can prevent infection with the virus and development of associated diseases, including cancer. An effective HPV vaccine has been available for 14 years. Three vaccines are licensed in the United States: 9-valent, quadrivalent, and bivalent. Since 2016, only the 9-valent is used as it protects against the subtypes shown to cause cancers.

HPV vaccine should be given before exposure to the virus. CDC’s Advisory Committee on Immunization Practices (ACIP) recommends HPV vaccination for girls and boys at age 11 or 12, but the vaccine can be given at age 9. ACIP recommends catch-up vaccination for everyone who has not been vaccinated through age 26. ACIP also recognizes that unvaccinated people ages 27 through 45 may be at risk for developing infection from HPV subtypes they had not been exposed to before, and recommends patients and providers discuss and make the decision on vaccinating.1

The HPV vaccines were extensive-ly studied in clinical trials and have been proven to be safe and effective in preventing HPV infections associated with cancers. So far, in the US 26% of females 19-26, but the vaccine can be given at age 9. ACIP recommends catch-up vaccination for everyone who has not been vaccinated through age 26. ACIP also recognizes that unvaccinated people ages 27 through 45 may be at risk for developing infection from HPV subtypes they had not been exposed to before, and recommends patients and providers discuss and make the decision on vaccinating.1

General trends among all five respondents seem to illustrate one pressing issue with regards to HPV vaccine as a potential preventative measure for cancer: a lack of information due to a perceived bias against them as members of the LGBTQ community. All three male respondents have not received the vaccination to the best of their knowledge, while the sole transgender male respondent who received Gardasil in his early adolescence, as did the sole female re-spondent. Statistically speaking, it is not surprising that these are the only two to have received the HPV vaccination. In a 2017 cohort study published in LGBT Health, 56% of female respondents to stemming greater than or equal to one dose of the vaccination, in contrast to 8% of male respondents, with a significant-ly lower rate of vaccinates engaging completely heterosexual men. This lack of vaccination is perplexing, as HPV is nondiscriminatory in infection. All five of the respondents expressed surprise at the ability of HPV to cause cancers other than cervical cancer, as most of the information and medical literature on the subject solely focuses on vaccination for preven-tion of cervical cancer.

Reference

3. Studies have shown the LGBTQ community to be at increased risk for developing some of these cancers. Approximately 30% of this community does not have a regular provider or may not discuss health issues due to fear of discrimi-nation. Gay men are at an increased risk of anal cancer caused by HPV compared to heterosexual men, with HIV-positive gay men being at the highest risk. Lesbian women are at risk for HPV infection and development of cervical cancer, as they often do not have cervical cancer screening or do not follow up on abnormal test results.3

4. HPV vaccination is one of the most important breakthroughs in mod-ern sexual health, and the potential benefit of cancer prevention for the LGBTQ community cannot be over-stated. The LGBTQ community has faced intentional and unintentional discrimination and marginalization among the American medical establish-ment, and in their wake, misin-for-cation and lack of accurate medical information has grown.4 The same holds true for HPV vaccination. Five members of the LGBTQ commu-nity were interviewed to ascertain the identified attitudes within the LGBTQ community towards modern prevention strategies and illuminate potential target areas to provide edu-cation and help increase vaccination.

James* identifies as a homosexual male and is a 24-year-old first-gen-eration Haitian American. He seemed interested in the potential for HPV vaccination as a cancer preventative measure but showed reluctance to receiving the vaccine since his primary care physician (PCP) had not recommended it. James is financially independent from both of his parents, possess-es his own health coverage through his employer, and is not currently engaged in any significant relationship, despite frequent casual sexual contact with other males. James uses contraceptives measures when having anal penetrative sex, but not oral sex, and was unaware that HPV infection of the throat is pos-sible. James also stated that he has no prescription for the pre-exposure prophylaxis (PrEP) for HIV, but only received treatment after informing his doctor of his potential benefit based on his sexual habits: “My doctor didn’t know what PrEP was. I had to educate him on it. He’s on it now. He doesn’t seem comfort-able talking about gay sex.” When questioned about perceived dis-crimination, James, as did all other respondents, felt very strongly that discrimination and was unsure whether he would be interested in the potential of HPV to cause var-ioust forms of cancer, having been diagnosed with genital warts four years ago. He discloses his previ-ous status to his potential partners. Despite this, Chris has not dis-closed his diagnosis to his PCP but could not provide adequate reason-ing for why. Chris still resides with his parents and is not financially inde-pendent from them, relying on his father’s insurance for cover-age. He was unaware that men can be vaccinated for HPV, that there are various virus types, and that HPV vaccination covers more than just sexually transmitted types. Chris did not feel that he was discrimi-nated against by his PCP and has a good relationship with him; he does feel, however, that the focus in most LGBTQ-centric advertising campaigns is primarily about HIV and sexual assault against trans in-dividuals. “My doctor is great, but it probably doesn’t hurt that he’s also gay. He got me on PrEP and I get tested every three months for STDs. I trust him completely.”

Chris* identifies as a homosexual male and is 21 and Caucasian. He also has frequent casual sex with other males and seemed distressed at the potential of HPV to cause var-ioust forms of cancer, having been diagnosed with genital warts four years ago. He discloses his previ-ous status to his potential partners. Despite this, Chris has not dis-closed his diagnosis to his PCP but could not provide adequate reason-ing for why. Chris still resides with his parents and is not financially inde-pendent from them, relying on his father’s insurance for cover-age. He was unaware that men can be vaccinated for HPV, that there are various virus types, and that HPV vaccination covers more than just sexually transmitted types. Chris did not feel that he was discrimi-nated against by his PCP and has a good relationship with him; he does feel, however, that the focus in most LGBTQ-centric advertising campaigns is primarily about HIV and sexual assault against trans in-dividuals. “My doctor is great, but it probably doesn’t hurt that he’s also gay. He got me on PrEP and I get tested every three months for STDs. I trust him completely.”

*The identity of each respondent has been changed to protect their anonymity.

Like James and Chris, David was not open to the idea of vaccination, as he felt it was generally unnec-essary since he is in a committed relationship and does not have any sexual contact outside of his wife, who is already vaccinated. David has not disclosed his previous sexual history with males to his wife but was tested for sexually transmitted diseases before having children. David felt incredibly strongly that the LGBTQ community continues to face discrimination stemming from the HIV epidemic and panic of the 1980s, but noted that it only seemed to affect patients based on their perceived sexual preferences. David noted that as someone who presents as heterosexual, he feels he is better cared for than other members of the LGBTQ communi-ty. He could not provide any specific instances of perceived discrimi-nation or episodes of marginalization, or lack of empathy displayed by the medical community towards trans-gender individuals.
HPV vaccine is an important cancer preventative measure for all. It is safe and effective, but vaccination rates are low, especially among males. HPV vaccination is one of the most important breakthroughs in modern sexual health, as millions of Americans are infected with HPV, often during the first sexual encounter.

Studies have identified several HPV-associated cancer sites that may disproportionately affect LGBTQ populations. Interviews with members of the LGBTQ community revealed a lack of knowledge on HPV infection and distrust of the medical community. Due to the increased risk of these cancers among the LGBTQ community, it is important for patients, friends, family members, and the medical community to reach out and provide support and education on HPV to help increase vaccination in the LGBTQ community.

References

Author Bios
Brandon Gallagher is a student at psychology at Valencia College and an LGBTQ activist. During his time as a student at Harriscorn Area Community College, he served as president on the administration board for Allies, the college’s LGBTQ organization, leading various public seminars on sexual health and ethics, advocating comprehensive sex education, and organizing fundraising raisers for Alder Health Services in Harriscorn.

JoAnn Adkins (joadkins@pa.gov) is a registered nurse and a senior infection preventionist for the Pennsylvania Patient Safety Authority. She has an extensive background in critical care nursing, infection prevention and control, and emergency preparedness. Roberts has authored and co-authored many infection prevention and control articles, including publications in Clinical Infectious Diseases, Infection Control and Hospital Epidemiology, and the Journal of the Pediatric Infectious Diseases Society, as well as abstracts in the Infections Diseases Society of America, Society for Healthcare Epidemiology of America, and Southwestern Pennsylvania Organization of Nurse Leaders. She is a Fellow and faculty member of the Association for Professionals in Infection Control and Epidemiology (APIC), and a 2019 recipient of APIC’s Heroes of Infection Prevention Award for Education. Roberts is a member of the APIC Three Rivers Chapter and serves on the executive committee for the Allegheny County Immunization Coalition.