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# Vaccination guidelines for gay and bisexual men

*Abstract: While gay and bisexual men should be vaccinated according to the most recent guidelines, this population also has needs that extend beyond those guidelines. This article explores current vaccination recommendations for gay and bisexual men and provides strategies to reduce barriers to vaccination in this population.*

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Gay and bisexual men have unique health needs that can present challenges to primary care providers who lack the knowledge necessary to provide appropriate care. Nurse practitioners (NPs) working in primary care settings must understand the significant role sexual orientation can play in promoting health. Gay and bisexual men are at higher risk for acquiring sexually transmitted infections (STIs), hepatitis A, hepatitis B, and human papillomavirus (HPV).[1] The Gay and Lesbian Medical Association (GLMA) has identified these issues as salient to gay and bisexual men's health and have emphasized them as major health concerns for this population.[2] Some of these conditions are vaccine-preventable and, with the appropriate implementation of vaccines, can be reduced or even eliminated in this population. The current vaccination schedule for all adults depends on the patient's vaccination history, risk factors, and prior exposures to communicable diseases.

General recommendations include vaccination against influenza, tetanus-diphtheria or tetanus-diphtheria-pertussis (Td or Tdap), varicella, and HPV.[3] There are additional recommendations for higher-risk adults. Gay and bisexual men should also receive vaccinations for HPV, hepatitis A, and hepatitis B. Although beyond the scope of this article, gay and bisexual men who are not in a long-term, mutually monogamous relationship should also have an annual test for HIV infection and annual testing for syphilis, gonorrhea, and chlamydia.[1]

## Ascertaining patients' sexual orientation

Approaching the subject of sexuality with patients can be sensitive. Clinicians should avoid any assumptions about their patients' sexual orientation and should use language that is neutral and nonjudgmental. Instead of asking patients if they are married or have a girlfriend, NPs should be more direct. Asking the patient to "Tell me about your sexual practices" or asking "Do you have sexual relationships with men, women, or both?" are both open-ended and nonjudgmental approaches that can yield great detail about one's sexual history and allow the NP to begin constructing an appropriate plan of care.[4]

## The general adult vaccination schedule

The current vaccination schedule for all adults is dependent on the patient's vaccination history, risk factors, and prior exposures to communicable diseases. All adults should be vaccinated against Tdap, varicella, and influenza.[3] Adults who have completed the Tdap series should be given a Td

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booster every 10 years. Adults without evidence of immunity to varicella should receive two doses of single-antigen varicella vaccine.[3] Immunity to varicella is evidenced by completion of the series, being born in the United States before 1980, or healthcare provider confirmed history of the disease.[3]

***Gay and bisexual men are at higher risk for acquiring STIs, hepatitis A, hepatitis B, and human papillomavirus (HPV).***

Healthy, nonpregnant adults younger than 50 should be annually vaccinated for influenza using either the live attenuated intranasal vaccine or trivalent inactivated vaccine.[3] Adults born in 1957 or after should have documented evidence of at least one or more doses of the measles, mumps, and rubella (MMR) vaccine.[5] (See *General adult vaccination schedule*.)

## Specific vaccination recommendations for gay and bisexual men

The Centers for Disease Control and Prevention recommend that in addition to completion of the general adult vaccination schedule, gay and bisexual men should be vaccinated against hepatitis A, hepatitis B, and HPV. (See *Additional vaccination recommendations for gay and bisexual men*.)

**Hepatitis A and Hepatitis B.** Hepatitis A and B both result in possibly life-threatening inflammation of the liver. Hepatitis A is communicated through the fecal-oral route. It can be spread by contaminated water or foods and/or oral contact with anal tissue during sexual activity.[6] Hepatitis B is communicated through contact with blood, semen, vaginal fluids, and other body fluids infected with the virus. It is commonly spread through sexual contact, exposure through tattoos or acupuncture, shared needles during injection drug use, and shared personal items (for example, razors).[7] The vaccine for hepatitis A is administered in two doses that are 6 to 12 months apart.[3] The vaccine for hepatitis B is administered in three doses; the second dose should be administered 1 month after the first, and the third dose should be administered 2 months after the second (and at least 4 months after the first).[3] A combination vaccine that elicits immunity to both hepatitis A and hepatitis B is also available. This vaccine should be administered at 0, 1, and 6 months.[3]

**HPV.** HPV is the most common STI in the United States. Morbidities associated with persistent infection include

### General adult vaccination schedule*[3,4,11]

| Vaccination | Administration considerations | Possible adverse reactions |
|---|---|---|
| Influenza** | 1 dose annually (ages ≥ 19) | Soreness, erythema, and edema at injection site; fever; headache, itching; fatigue |
| Td/Tdap | Boost with Td every 10 years*** (ages ≥ 19) | Soreness, erythema, or edema at injection site; mild fever; headache; fatigue |
| Varicella | 2 doses, 4 weeks apart**** (ages ≥ 19) | Soreness or edema at injection site; fever; mild rash up to 1 month after vaccination |
| MMR | 1-2 doses***** | Fever, mild rash, lymphedema, angioedema (peripheral and facial edema) |

* Additional vaccinations may be necessary depending on patient risk factors.[2]

** Administer the trivalent inactivated vaccine in immunocompromised patients; consider high-dose influenza virus vaccine for stronger immune response in those ≥ 65 years of age.[10]

*** Substitute one-time dose of Tdap for Td booster, then boost with Td every 10 years.[2]

**** Adults without evidence of immunity to varicella should receive two doses of single-antigen varicella vaccine.[2] Immunity to varicella is evidenced by completion of the series, being born in the United States before 1980, or healthcare provider confirmed history of the disease.[2]

***** Adults born before 1957 are considered immune. Those born in 1957 or after should have one or more doses of the vaccine documented. High-risk individuals (students in postsecondary institutions, healthcare workers, and international travelers) should have two doses, with the second administered at least 28 days after the first.

**Additional vaccination recommendations for gay and bisexual men***

| Vaccination | Administration considerations | Possible adverse reactions[11] |
|---|---|---|
| Hepatitis A | 2 doses, 6 to 12 months apart** (ages ≥ 19) | Soreness at injection site; headache; anorexia; fatigue |
| Hepatitis B | 3 doses,** second dose 1 month after the first, third dose 2 months after the second, but at least 4 months after first (ages ≥ 19) | Soreness at injection site; low-grade fever |
| HPV | 3 doses, second dose 1-2 months after the first, third dose 6 months after the first dose (ages ≤ 26) | Soreness, erythema, or edema at injection site; mild-to-moderate fever; headache; syncope |

* These vaccinations are safe for HIV-infected patients.[3]

** If using hepatitis A and hepatitis B (recombinant) vaccine, give three doses at 0, 1, and 6 months.[2]

genital warts, cervical, vulvar, and vaginal cancer, and up to 95% of anal cancers.[8] Current data indicate that up to 75% of gay and bisexual men are infected with HPV, and receptive anal intercourse can provide a mechanism for infection.[9] In October 2009, the FDA approved the HPV quadrivalent recombinant prophylactic HPV vaccine for males ages 9 through 26.[10] The vaccine is designed to elicit immunity to HPV types 6/11/16/18 and consists of three doses. The second dose is administered 1 to 2 months after the first, and the third is administered 6 months (at least 24 weeks) after the first dose.[3]

## Possible vaccination adverse reactions

Any vaccine can cause adverse reactions. However, most adverse reactions associated with vaccines are minor and usually subside within a few days.[11] The most common adverse reactions associated with adult vaccinations are pain, erythema and edema at the injection site, fever, headache, malaise, and fatigue. The document *Medical Management of Vaccine Reactions in Adult Patients* authored by the Immunization Action Coalition is an easily accessible and useful two-page resource for primary care providers that lists therapeutic interventions for the most common vaccine-associated adverse reactions, including anaphylaxis.[12]

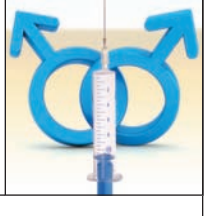
## Vaccination contraindications

The vaccines discussed in this article have contraindications that prohibit their use in certain patients. Allergic reaction from a previously administered vaccine is a contraindication for its future use.[5] In addition, Tdap is contraindicated in patients who sustained an unspecific encephalopathy within 7 days of administration of the vaccine.[5] MMR should not be given to patients who are pregnant or who are severely immunocompromised; for example, it would be contraindicated in an HIV-infected patient with severe immune deficiency.[5] Pregnancy and immunodeficiency are also contraindications to the varicella and live attenuated influenza vaccines.[5] Egg allergy is another contraindication to the injectable trivalent influenza vaccine.[5,13]

## Increasing vaccination rates in gay and bisexual men

Immunization rates in the gay and bisexual male population against hepatitis A, hepatitis B, and HPV remain low.[10,14-16] Specific barriers to vaccination that have been identified in gay and bisexual males include the following:

***Immunization rates in the gay and bisexual male population against hepatitis A, hepatitis B, and HPV remain low.***



a low level of general knowledge about vaccine-preventable diseases (including transmission and sequalae of infection); lack of information regarding the vaccination process (including locations for vaccination administration and costs); limited access to healthcare and limited provider communication with patients regarding stigmatized behavior.[10,14,15]

These data indicate the need for strong public health outreach efforts to educate gay and bisexual men regarding

vaccine-preventable diseases. One possible way to effectively reach this population could be through social media and computer-based education. Computer-based delivery of education using "cues to action" has been an effective way to educate gay and bisexual men about vaccine-preventable diseases and the vaccination process; it also prompts them to seek follow-up by linking them with resources and has been shown to be effective at filling information gaps and raising awareness.[17-19]

***NPs need to maintain open, nonjudgmental communication with their patients to accurately obtain sexual history.***

Use of social media, specifically the social media website Facebook, has been used effectively as a means for outreach and education. The National Vaccination Information Center (NVIC) posted nearly 3,000 articles and news alerts on their Facebook page in 2011.[20] In addition, that same year, the page generated 37 million unique views, suggesting it may be a popular mechanism for disseminating information about vaccines. NVIC currently has 69,080 "likes,"and there are a wide variety of educational materials that are conveyed on the page.[21]

For example, informational videos profiling various vaccinations are posted on the page in addition to several articles and informational postings debunking vaccination myths and other misinformation and nonfacts about vaccines.[21] NPs should proactively seek out new ways to reach high-risk populations, including gay and bisexual men. Use of Internet-based media to provide resource linkage and to spread information about risks and vaccinations is one such emerging mechanism NPs should embrace. NPs can serve as leaders on preventive task forces and partner with key informants in the gay community to identify which social media outlet gay and bisexual men are most likely to use and which strategies might be most beneficial to reach these high-risk individuals.

Providing vaccinations at social events aimed toward the gay community is another effective strategy that has been used to successfully immunize gay and bisexual men. For example, no-cost vaccinations have been provided to large numbers of gay and bisexual men at gay pride events.[16] In fact, data suggest men with higher risk factors are even more likely to consent to vaccination at these events[16]; therefore, NPs should partner with community health leaders to bring effective vaccination campaigns to events likely to attract considerable numbers of gay and bisexual men. Outreach should not stop at gay pride events, however. Researchers also suggest providing no-cost vaccinations in other community settings, including STI clinics, drug treatment programs, prisons, universities, and community resource centers.[16]

Research has shown that sexual history is infrequently discussed in clinicians' encounters with patients.[22] However, to correctly assess risk and provide appropriate vaccination-related education and guidance, NPs should conduct a thorough sexual history and refrain from making assumptions about any patient's sexual orientation or sexual behaviors.[4] Although discussion of sexual activity with a patient can be sensitive for both the patient and NP, using a direct approach is best.[4] The NP should not apologize for asking questions related to a patient's sexual history and should use an open-ended approach to initiate conversation.[4]

While a comprehensive discussion about strategies to improve vaccination rates in gay and bisexual men is beyond the scope of this article, promoting information through social media and effectively communicating with patients about their risks, sexual history, and vaccination needs are two ways NPs can promote vaccination among this group.

## Connecting with the community

While gay and bisexual men should be vaccinated according to the most recent adult vaccination guidelines, they also have needs that extend beyond those guidelines. In addition to the general recommendations for vaccinations in adults, gay and bisexual men should be vaccinated against hepatitis A, hepatitis B, and HPV. Improving the ways in which gay and bisexual men receive information about vaccine-preventable diseases and the vaccination process, including social media and the Internet, is essential. NPs can also provide vaccinations directly to this population by teaming with community health leaders and key community informants to offer services at gay pride and other events that are likely to attract large numbers of gay and bisexual men. In addition, NPs need to maintain open and nonjudgmental communication with their patients to accurately obtain sexual history and help patients make informed decisions regarding their care.

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