Preventive Health Care for Men Who Have Sex with Men

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Men who have sex with men (MSM) comprise at least 4% of males in the United States. MSM may describe themselves as gay, bisexual, or heterosexual. Because current medical practice does not always facilitate discussion of sexual behaviors, this group of men may face barriers to receiving culturally competent, comprehensive health care, including preventive services. Barriers include a lack of a welcoming clinical environment, lack of adequate health insurance, and sexual minority stress. Health issues that have a disproportionate impact on MSM include mental health and behavioral problems, smoking and illicit substance use, and sexually transmitted infections (STIs). Family physicians must be prepared to ask explicit questions about sexual activities to determine risk levels for STIs. MSM should receive the same immunizations routinely recommended for other patients, as well as for hepatitis A and B viruses. Although anal Papanicolaou testing is available to screen for cytologic abnormalities, there are no consistent guidelines about its effectiveness. Preexposure prophylaxis is an option for MSM who are at very high risk of human immunodeficiency virus (HIV) infection. For MSM who are not taking preexposure prophylaxis and report a recent high-risk exposure to HIV, postexposure prophylaxis should be offered immediately, preferably within 72 hours of exposure. Because STIs are commonly asymptomatic, screening should be based on risk rather than symptoms. Screening for hepatitis C virus infection is recommended for HIV-positive MSM at least annually and more often for high-risk individuals. (Am Fam Physician. 2015;91(12):844-851. Copyright © 2015 American Academy of Family Physicians.)



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en who have sex with men (MSM) have been an invisible population in the past in terms of routine health care, although they are estimated to comprise at least 4% of males in the United States.¹ Because men may not always disclose malemale sexual activity, the actual number may be higher.

Recent cultural changes have brought discussions about sexual minorities to the forefront; however, MSM are still less likely to have access to health care and to culturally sensitive clinicians. MSM are also at higher risk of behavioral disorders, smoking and substance use, and sexually transmitted infections (STIs).

The reasons for these health care inequities are multifaceted. Unless the existing barriers are addressed, MSM will continue to face health disparities and a disproportionate burden of disease.

Barriers to Optimal Care LACK OF A WELCOMING ENVIRONMENT

MSM who seek a supportive family physician may be faced with brochures and

websites that lack examples of same-sex couples. At the office front desk, they may be presented with an intake form with the options of "single" or "married" but not "partnered." Staff members may cause discomfort by asking questions based on the assumption that male patients have female partners only.

LACK OF HEALTH INSURANCE COVERAGE

Married persons typically can obtain health insurance through their spouse's employer. Unmarried MSM cannot obtain such coverage unless the employer provides it for unmarried domestic partners (same-sex marriage currently is not an option in several states).

SEXUAL MINORITY STRESS

Sexual minority stress is a concept that encompasses pressures such as stigma, internalized homophobia, and expectations of rejection ($Table\ I^{2-5}$). Sexual minority stress is thought to contribute to mental health problems and risky sexual behaviors. 4,5 $Table\ 2$ provides more details on barriers and interventions. 6,7

Clinical recommendation	Evidence rating	References
Offer vaccinations for hepatitis A and B viruses (if not previously vaccinated) and for human papillomavirus for all MSM through 26 years of age.	С	12, 15, 22
Offer meningococcal vaccine for MSM with at least one other risk factor (e.g., medical, occupational, lifestyle).	С	24
Consider preexposure prophylaxis for MSM at very high risk of contracting human immunodeficiency virus because of factors such as multiple or anonymous sex partners.	С	26, 27
Consider postexposure prophylaxis for MSM who report a recent high-risk exposure to human immunodeficiency virus.	С	27
Screen MSM for sexually transmitted infections at least annually or more often as necessitated by level of risk.	С	12, 15-21

MSM = men who have sex with men.

A = consistent, good-quality patient-oriented evidence; B = inconsistent or limited-quality patient-oriented evidence; C = consensus, disease-oriented evidence, usual practice, expert opinion, or case series. For information about the SORT evidence rating system, go to http://www.aafp.org/afpsort.

Health Issues with Disproportionate Impact Among MSM

Despite the overrepresentation of some health issues in the MSM population, it is important for physicians to focus on MSM as individuals, most of whom will never have mental health issues, use illicit drugs, or contract STIs. Most of what constitutes excellent health care for MSM is the same as for any other patient, regardless of sexual practices.

Because some health issues have disproportionate impact on the MSM population, physicians must be aware of how to address these issues as appropriate to the individual. For example, approximately 40% of MSM develop major depression during their lifetime, which is

about twice the prevalence in other men.⁸ Generalized anxiety disorder, life dissatisfaction, body dissatisfaction, and eating disorders are also common.⁸⁻¹⁰ MSM are at higher risk of self-directed violence and attempted suicide.^{9,11} Sexual minority youth in particular are more likely to have depression and more than twice as likely to have considered suicide.² MSM are nearly twice as likely as other men to be current smokers.⁹ The use of club drugs (*Table 1*²⁻⁵) prevalent among sexual minority youth is associated with unprotected sex,² and methamphetamine use is associated with unprotected anal sex.³

The Centers for Disease Control and Prevention (CDC) states that certain MSM are at higher risk of STIs (viral and bacterial), including human immunodeficiency

Term	Definition
Bisexual	Men who self-identify as being sexually attracted to men and women
Club drugs ^{2,3}	Drugs such as cocaine, methamphetamine, Ecstasy, LSD, rohypnol, and ketamine; they are primarily associated with use at dance clubs
Gay/homosexual	Men who self-identify as being sexually attracted to men
Heterosexism	Practices or beliefs based on the assumption that all persons are heterosexual; for example, patient intake form that lack options for partners (as opposed to spouses) and assuming that all males have female sex partners
Heterosexual	A person who is sexually attracted to partners of the opposite sex; some MSM may self-identify as being heterosexual
Internalized homophobia ^{4,5}	Negative feelings about homosexuality that are turned inward by persons with same-sex attraction
Men who have sex with men	A term that focuses on behavior rather than labels and is inclusive of all MSM, whether they self-identify as gay/homosexual, bisexual, or heterosexual
Sexual minority stress ^{4,5}	The theory that sexual minorities, including MSM, are stressed by prejudice, expectations of rejection, internalized homophobia, and concealment of their feelings in response to societal expectations; such stres may explain in part the disproportionate incidence of mental health issues in MSM

Barriers	Interventions
Lack of a welcoming environment as perceived by MSM ^{6,7}	Ensure that all office publications, websites, and social media include photos of MSM couples and welcoming symbols, such as rainbow flags and pink triangles Revise intake forms to include MSM-friendly terms such as "partnered" in addition to "married" or "single" Facilitate training for front office staff in orientation sessions and diversity workshops to use gender-neutral, MSM-friendly terminology Address confidentiality concerns with MSM patients; discuss what will be entered in the health record and who will have access to it
Lack of focus on routine health care	Provide MSM with the same comprehensive health care as for all patients, in addition to targeted care for common issues in the population
Lack of awareness of health disparities among MSM	Facilitate training for all staff (including physician assistants, nurses, and others) on issues that are disproportionately represented in the MSM population, including sexually transmitted infections, substance use, and psychological issues
Lack of awareness of community resources	Become familiar with community resources for referral as necessary
Lack of focus on issues of significance to MSM	Screen for depression and other psychological issues and their effect on safer sex practices Inquire about substance use and its effect on safer sex practices Assess risks for HIV and other sexually transmitted infections, including multiple or anonymous sex partners, lack of condom use, and substance use before or during sex Test and treat as appropriate Discuss preexposure or postexposure prophylaxis as appropriate for MSM at high risk of HIV Refer to community resources as appropriate
Lack of a plan for proper follow-up	Remain current on guidelines from the CDC and other authorities Follow up at least annually according to risks and as indicated by guidelines Be prepared to refer to community resources as necessary

CDC = Centers for Disease Control and Prevention; HIV = human immunodeficiency virus; MSM = men who have sex with men. Information from references 6 and 7.

virus (HIV) infection.¹² From the 1980s through the mid-1990s, the rates of unsafe sexual practices and contracted STIs declined in the population, but since then, the rates of early syphilis (primary, secondary, or early latent), gonorrhea, and chlamydia have increased in MSM in almost all industrialized countries.¹² HIV infection is increasing in some urban areas, especially in MSM from racial and ethnic minority groups and in those who use certain nonprescription drugs during sex, particularly methamphetamine and volatile nitrites ("poppers").¹² eTable A presents the disproportionate impact of STIs on MSM.

Increased sexual risk-taking in MSM may be traced to a variety of factors, including depression and sexual minority stress ($Table\ 3^{2,7}$). High-risk behavior includes multiple and anonymous sexual contacts,

Table 3. Reasons for Increased Sexual Risk-Taking in MSM

Risk-taking behavior outweighs concerns about consequences

Denial or minimization of potential consequences

Lack of long-term relationships because of fear of societal disapproval⁷

Lack of support from family, friends, and peers, which for young MSM can lead to prostitution or trading sex for basic needs²

Lack of perceived need for barrier contraception

Lack of awareness of consequences of HIV infection

Belief that HIV infection is a manageable condition rather than a lifethreatening disease

Substance use in association with sexual activity

Availability of multiple partners through online sources and apps

Disproportionate prevalence of depression, anxiety, suicidal ideation, and other mental health issues associated with sexual minority stress

HIV = human immunodeficiency virus; MSM = men who have sex with men.
Information from references 2 and 7.

substance use during sex, a recent history of STI, and unprotected receptive anal intercourse.

Management of Health Care for MSM CONDUCTING A CULTURALLY COMPETENT HISTORY

A thorough patient history for MSM includes the same elements as for other male patients, with extra focus on establishing trust through nonjudgmental communication and screening for health issues that are disproportionately represented in the MSM population.

Not all MSM describe themselves as gay or homosexual. Some self-identify as heterosexual, although they have sex with men, and some are bisexual (*Table 1*²⁻⁵). Asking questions about behavior (e.g., "Do you have sex with men, women, or both?") instead of labels (e.g., "Are you gay?") fosters clearer communication between the physician and the patient.

Explicit questions about sexual behavior are necessary to determine risk levels for STIs (*Table 4*). Some physicians prefer to ask these questions face to face, whereas others provide forms for patients to fill out in advance. The latter approach can save time, but the process may be stymied if the patient is hesitant to hand in forms to front desk staff because of confidentiality concerns. The National LGBT (lesbian, gay, bisexual, or transgender) Health Education Center suggests that each physician choose the process that works best for his or her patients.⁶

COUNSELING MSM

Family physicians are able to provide the tools and support for MSM to take positive steps to optimize health outcomes.¹³ This is particularly true for situations in which MSM have been alienated from family structures that traditionally provide emotional and psychological support.⁸ Risks can be significantly reduced through behavioral interventions, such as counseling, small groups, and workshops.¹⁴ Physicians should be ready to refer patients to community-based resources that offer a welcoming, culturally competent environment for MSM.

Because some MSM have experienced discrimination in the health care system, the process of establishing trust may take time. Physicians should begin by explaining the need for several routine questions—including questions about behavioral health, substance use, and sexual activities—and that the questions are being asked only to obtain the information necessary for optimal care. A discussion of confidentiality is helpful, with negotiation about which specific details will be entered into the medical record.

When discussing sexual issues, physicians must be able to define and understand the significance of terms, such as receptive sex (colloquially known as the "bottom" partner) and insertive sex (the "top" partner). Frank discussions about using condoms, choosing less risky behaviors, informing partners of their HIV status, and reducing the number of sex partners should be initiated as appropriate.

Prevention

Prevention for MSM consists of many of the same elements as for other male patients, including dialogue about smoking, substance use, behavioral health, and safer sex practices. In addition, physicians must address the following topics.

IMMUNIZATIONS

MSM should receive the same routine immunizations recommended for other patients. The CDC recommends vaccinations for hepatitis A and B viruses for MSM in whom previous infection or vaccination status cannot be determined.¹² The U.S. Preventive Services Task Force (USPSTF) offers no recommendation for hepatitis A virus but recommends vaccination for hepatitis B virus¹⁵ (*Table* 5^{12,15-21}). The CDC also recommends routine

Table 4. Conducting a Culturally Competent Sexual History for MSM

Questions to ask after a discussion about confidentiality:

In the past year, how many persons have you had sex with?

Do you have sex with men, women, or both?

Do you have oral sex? Anal sex? Other types of sex?

Do you have receptive sex (the bottom partner), insertive sex (the top partner), or both?

Do you have sex after using drugs or alcohol?

Do you ever have sex with strangers or people you do not know well?

Have you had any sexually transmitted infections in the past? Tell me about your use of condoms. Are there times you do not use condoms? If so, why not?

Tell me about your support system. With whom do you live? Are you in a committed, monogamous relationship? Do you have family support? Close friends?

Have you experienced domestic abuse, rape, or other physically dangerous situations?

Are you currently involved in a relationship that is abusive or that you have other concerns about?

Do you have any concerns about your sexual practices that I have not asked about?

NOTE: For risk stratification, see Figure 1.

MSM = men who have sex with men.

Condition	Intervention	CDC ¹²	USPSTF
STIs in lower-risk patients (e.g., in monogamous relationships, using condoms consistently)	Screening for exposure, counseling	Annually as outlined below	Do not routinely screen men who are not at increased risk16
STIs in high-risk patients (e.g., multiple sex partners, inconsistent condom use, substance use during sex)	Screening for exposure and disease, counseling	Three to six months for MSM who have multiple or anonymous partners, or who use illicit drugs with sex	Screening as outlined below is recommended for men engaging in high-risk sexual behavior
Chlamydia	Pharyngeal NAAT	Not recommended	No recommendation because of insufficient evidence ¹⁷
	NAAT of a rectal swab Urethral test (NAAT of urine sample)	Annually in men who have had receptive anal intercourse in the previous year Annually in men who have had insertive intercourse in the previous year	No recommendation because of insufficient evidence ¹⁷ No recommendation because of insufficient evidence ¹⁷
Gonorrhea	Pharyngeal NAAT	Annually for men who have had receptive oral intercourse in the previous year	No recommendation because of insufficient evidence ¹⁷
	NAAT of a rectal swab Urethral test (NAAT of urine sample)	Annually in men who have had receptive anal intercourse in the previous year Annually in men who have had insertive intercourse in the previous year	No recommendation because of insufficient evidence ¹⁷ No recommendation because of insufficient evidence ¹⁷
Hepatitis A or B virus infection	Screening and vaccination	Vaccination recommended for all MSM in whom previous infection or vaccination cannot be documented	No recommendation for hepatitis A virus; screening recommended for hepatitis B virus, with vaccination for high-risk adults ¹⁵
Hepatitis C virus infection	Screening	Screening is recommended for those with HIV infection and those who have injected drugs (past or present)	Screening recommended for person at high risk, including those with multiple sex partners and those who have unprotected sex ¹⁸
Herpes simplex virus 2 infection	Type-specific serologic testing	Evaluation if status is unknown	Not recommended for asymptomatic patients ¹⁹
HIV infection	HIV serologic testing (type 1 and 2 antibody)	At least annually	One-time screening with repeated screening at least annually for those at very high risk ²⁰
Syphilis	Serologic testing	Annually	Recommended for MSM who engage in high-risk sexual behavior; no evidence as to screening frequency ²¹

human papillomavirus (HPV) vaccination for all males, including MSM, through 26 years of age.²² Because HPV infection commonly occurs shortly after the first sexual experience, vaccination must be early.²³ Meningococcal vaccine is recommended for MSM who have at least one other risk factor (e.g., medical, occupational, lifestyle).²⁴

Information from references 12, and 15 through 21.

ANAL HEALTH ISSUES

Although anal Papanicolaou (Pap) testing is available, there is no consistent evidence about its effectiveness. The CDC states that evidence is limited about the need to screen for anal cytologic abnormalities. The New York State Department of Health recommends

baseline cytology and annual anal cancer screening for MSM who are HIV-positive.²⁵ Directions for performing an anal Pap test are available on the New York State Department of Health AIDS Institute's website at http://www.hivguidelines.org/clinical-guidelines/adults/anal-dysplasia-and-cancer/.

SEXUALLY TRANSMITTED INFECTIONS, PREP, AND PEP

Prevention of STIs in MSM is similar to that of other males in terms of condom use, awareness of a partner's STI status, and avoidance of high-risk behaviors, such as multiple sex partners and substance use during sex. MSM in monogamous relationships or who routinely follow safer sex practices are at lower risk of STIs.

Preexposure prophylaxis (PrEP) is an option for MSM who are at very high risk of HIV and less likely

to follow safer sex practices. These include men who use recreational drugs or alcohol during sex, inject drugs, exchange sex for money or services, use condoms inconsistently, or have sex with HIV-infected partners, ²⁶ in addition to men who have multiple or anonymous partners.

Before prescribing PrEP, the physician must ensure that patients understand that regular monitoring of medication adherence, HIV status, and adverse effects before and during treatment is necessary. Although PrEP can provide significant protection from HIV infection, it is not a substitute for safer sex practices.²⁷

For MSM who are not taking PrEP and who report a recent high-risk exposure to HIV, postexposure prophylaxis (PEP) should be offered immediately, preferably within 72 hours of exposure. PEP consists of a

Medication	Indications	Contraindications	Comments
Fixed dose of Truvada (300 mg of tenofovir disoproxil fumarate [TDF] and 200 mg of emtricitabine [FTC])	All of the following: Adult man No acute or established HIV infection Any male sex partners in the past six months Not in a monogamous partnership with a recently tested, HIV-negative man And at least one of the following: Any anal sex without condoms (receptive or insertive) in the past six months Any sexually transmitted infection diagnosed or reported in the past six months In an ongoing sexual relationship with an HIV-positive male partner	Acute or chronic HIV infection: HIV infection: HIV infection should be assessed every three months Renal failure: renal function should be assessed at baseline and monitored at least every six months	Data are insufficient on the use of preexposure prophylaxis in adolescent local laws and regulations may affect health care decision making by minor Physicians should encourage patients to use other prevention methods in addition to preexposure prophylaxis because medication adherence has been inconsistent in trials

Highly active antiretroviral As soon as possible but no If the exposures are not isolated and Daily PrEP may be
therapy taken for 28 days later than 72 hours after the person is not infected with HIV, protective than refollowing a high-risk an isolated HIV exposure consider beginning PrEP immediately episodes of poster prophylaxis

Screening in Men Who Have Sex with Men Screen for previous immunizations for human papillomavirus and hepatitis A and B viruses Screen for hepatitis C virus if at risk Screen annually for behavioral disorders and substance use Screen for STIs as outlined below Monogamous relationship and/or consistent condom use? No Lower-risk patient High-risk patient Evaluate the patient annually Assess the patient every three to six to determine if sexual months according to risk, especially behavior has changed and for men who have multiple increased the risk level sex partners or who engage in substance use during sex Offer annual HIV testing and STI screening Test for HIV at least annually if at risk Consider preexposure prophylaxis for men who continue to engage in high-risk sexual behavior Evaluate the need for postexposure prophylaxis after a high-risk sexual encounter Oral intercourse Insertive anal Receptive anal (lower risk) intercourse intercourse (higher risk) (highest risk) Use oral NAAT Use urine NAAT Use anal NAAT to screen for to screen for to screen for gonorrhea and gonorrhea and gonorrhea chlamydia chlamydia

Figure 1. Screening in men who have sex with men. (HIV = human immunodeficiency virus; NAAT = nucleic acid amplification testing; STI = sexually transmitted infection.)

28-day course of antiretroviral medications.²⁷ *Tables 6* and 7 provide details of PrEP and PEP regimens.²⁷

Screening for STIs

Screening recommendations for STIs in MSM are listed in *Table 5*,^{12,15-21} and an algorithm is presented in *Figure 1*. Because STIs are often asymptomatic, screening should be based on risk rather than symptoms,²⁸ and include pharyngeal, rectal, urethral, and genital examination, as appropriate.²⁹ The CDC recommends that MSM be screened for STIs annually or more often (e.g., every three to six months) if participating in high-risk sexual behavior ¹²; the USPSTF recommends HIV screening at least annually for those at very high risk.²⁰ The USPSTF also recommends screening for syphilis,²¹ hepatitis B

virus infection,¹⁵ and hepatitis C virus infection in high-risk persons.¹⁸ Because sexual behaviors can vary over time, physicians must ensure frequent communication to determine the level of risk.⁸

Sexual transmission of hepatitis C virus is possible; therefore, the CDC recommends screening in persons with newly diagnosed HIV infection, especially MSM.¹²

Data Sources: A PubMed search was completed in Clinical Queries using the key terms MSM, men who have sex with men, gay, homosexual, and LGBT. The search included meta-analyses, randomized controlled trials, clinical trials, and reviews. Also searched were the Agency for Healthcare Research and Quality Clinical Guidelines and Evidence Report, Cochrane Database of Systematic Reviews, Effective Health Care, Institute for Clinical Systems Improvement, National Guideline Clearinghouse, and U.S. Preventive Services Task Force. Search dates: April 2014 to December 2014.

NOTE: This article updates a previous article on this topic by Knight.³⁰

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REFERENCES

- Centers for Disease Control and Prevention. HIV in the United States: at a glance. http://www.cdc.gov/hiv/statistics/basics/ataglance.html. Updated March 12, 2015. Accessed April 13, 2015.
- Committee On Adolescence. Office-based care for lesbian, gay, bisexual, transgender, and questioning youth. *Pediatrics*. 2013;132(1):198-203.
- Rajasingham R, Mimiaga MJ, White JM, Pinkston MM, Baden RP, Mitty JA. A systematic review of behavioral and treatment outcome studies among HIV-infected men who have sex with men who abuse crystal methamphetamine. AIDS Patient Care STDS. 2012;26(1):36-52.
- Meyer IH. Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: conceptual issues and research evidence. *Psychol Bull*. 2003;129(5):674-697.
- Safren SA, Blashill AJ, O'Cleirigh CM. Promoting the sexual health of MSM in the context of comorbid mental health problems. *AIDS Behav*. 2011;15(suppl 1):S30-S34.
- 6. National LGBT Health Education Center; National Association of Community Health Centers. Taking routine histories of sexual health: a system-

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- wide approach for health centers. August 2014. http://www.lgbthealth education.org/wp-content/uploads/COM827_SexualHistoryToolkit_ August2014_v7.pdf. Accessed December 29, 2014.
- GLMA (Gay & Lesbian Medical Association). Guidelines for care of lesbian, gay, bisexual, and transgender patients. http://glma.org/_ data/n_0001/resources/live/GLMA%20guidelines%202006%20 FINAL.pdf. Accessed April 16, 2015.
- Mayer KH, Bekker LG, Stall R, Grulich AE, Colfax G, Lama JR. Comprehensive clinical care for men who have sex with men: an integrated approach. *Lancet*. 2012;380(9839):378-387.
- Blosnich JR, Farmer GW, Lee JG, Silenzio VM, Bowen DJ. Health inequalities among sexual minority adults: evidence from ten U.S. states, 2010 [published correction appears in Am J Prev Med. 2014;47(1):103]. Am J Prev Med. 2014;46(4):337-349.
- Brown TA, Keel PK. The impact of relationships, friendships, and work on the association between sexual orientation and disordered eating in men. Eat Disord. 2013;21(4):342-359.
- King M, Semlyen J, Tai SS, et al. A systematic review of mental disorder, suicide, and deliberate self harm in lesbian, gay and bisexual people. BMC Psychiatry. 2008;8:70.
- Centers for Disease Control and Prevention. Sexually transmitted diseases treatment guidelines, 2010: special populations. http://www.cdc.gov/std/treatment/2010/specialpops.htm. Updated August 18, 2014. Accessed April 13, 2015.
- Centers for Disease Control and Prevention (CDC). HIV testing and risk behaviors among gay, bisexual, and other men who have sex with men—United States. MMWR Morb Mortal Wkly Rep. 2013;62(47): 958-962.
- Johnson WD, Diaz RM, Flanders WD, et al. Behavioral interventions to reduce risk for sexual transmission of HIV among men who have sex with men. Cochrane Database Syst Rev. 2008;(3):CD001230.
- U.S. Preventive Services Task Force. Final recommendation statement. Hepatitis B, non pregnant adolescents and adults: screening, May 2014. http://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/hepatitis-b-virus-infectionscreening-2014. Accessed April 14, 2015.
- U.S. Preventive Services Task Force. USPSTF recommendations for STI screening. February 2014. http://www.uspreventiveservicestaskforce. org/Page/Name/uspstf-recommendations-for-sti-screening. Accessed April 14, 2015.
- U.S. Preventive Services Task Force. Final recommendation statement: gonorrhea and chlamydia: screening. September 2014. http://www. uspreventiveservicestaskforce.org/Page/Document/Recommendation StatementFinal/chlamydia-and-gonorrhea-screening. Accessed April 14, 2015.
- 18. U.S. Preventive Services Task Force. Final recommendation state-

- ment: hepatitis C: screening. June 2013. http://www.uspreventive servicestaskforce.org/Page/Document/RecommendationStatement Final/hepatitis-c-screening. Accessed April 14, 2015.
- U.S. Preventive Services Task Force. Final recommendation statement: Genital herpes: screening. March 2005. http://www.uspreventive servicestaskforce.org/Page/Document/RecommendationStatement Final/genital-herpes-screening. Accessed April 14, 2015.
- U.S. Preventive Services Task Force. Final recommendation statement: human immunodeficiency virus (HIV) infection: screening. April 2013. http://www.uspreventiveservicestaskforce.org/Page/Document/ RecommendationStatementFinal/human-immunodeficiency-virus-hivinfection-screening. Accessed April 14, 2015.
- U.S. Preventive Services Task Force. Final recommendation statement: syphilis infection: screening. July 2004. http://www.uspreventive servicestaskforce.org/Page/Document/RecommendationStatement Final/syphilis-infection-screening. Accessed April 14, 2015.
- Centers for Disease Control and Prevention (CDC). Recommendations
 on the use of quadrivalent human papillomavirus vaccine in males—
 Advisory Committee on Immunization Practices (ACIP), 2011. MMWR
 Morb Mortal Wkly Rep. 2011;60(50):1705-178.
- 23. Zou H, Tabrizi SN, Grulich AE, et al. Early acquisition of anogenital human papillomavirus among teenage men who have sex with men. *J Infect Dis.* 2014;209(5):642-651.
- Centers for Disease Control and Prevention. Recommended adult immunization schedule—United States—2015. http://www.cdc.gov/ vaccines/schedules/downloads/adult/adult-combined-schedule.pdf. Accessed April 13, 2015.
- 25. Eaman E, Ludwig MJ, Safranek S. Clinical inquiries. Does anal cancer screening reduce morbidity and mortality in men who have sex with men? *J Fam Pract*. 2012;61(7):427-428.
- 26. The Fenway Institute. Introducing the "PrEP Package" for enhanced HIV prevention: A practical guide for clinicians. October 2012. http:// www.lgbthealtheducation.org/wp-content/uploads/12-1.125_ PrEPdocuments_clinicians_v3.pdf. Accessed September 7, 2014.
- Centers for Disease Control and Prevention, U.S. Public Health Service. Preexposure prophylaxis for the prevention of HIV infection in the United States—2014. http://www.cdc.gov/hiv/pdf/PrEPguidelines2014. pdf. Accessed September 8, 2014.
- 28. Mayer KH. Sexually transmitted diseases in men who have sex with men. *Clin Infect Dis.* 2011;53(suppl 3):S79-S83.
- Carter JW Jr, Hart-Cooper GD, Butler MO, Workowski KA, Hoover KW. Provider barriers prevent recommended sexually transmitted disease screening of HIV-infected men who have sex with men. Sex Transm Dis. 2014;41(2):137-142.
- 30. Knight D. Health care screening for men who have sex with men. *Am Fam Physician*. 2004;69(9):2149-2156.

STI	Impact
Gonorrhea and chlamydia	Rectal and pharyngeal infections are more likely to be asymptomatic and less likely to be diagnosed ^{A1} MSM with rectal gonorrhea are more likely to be HIV-positive, to use recreational drugs, and to have partners with unknown HIV status ^{A1}
Hepatitis A and hepatitis B viruses	Approximately 10% of new hepatitis A virus infections and 20% of new hepatitis B virus infections are in MSM^{A2}
Hepatitis C virus	Hepatitis C virus risk factors for MSM include HIV infection and having unprotected receptive anal intercourse with multiple partners ^{A3} Of the 170 million persons with hepatitis C virus infection, 4 to 5 million are coinfected with HIV ^{A4}
Herpes simplex virus	More common in MSM and may facilitate transmission and acquisition of HIVA5
HIV/AIDS	MSM accounted for 63% of all new diagnoses of HIV infections in the United States in 2010, in addition to 54% of persons living with HIV A6 The HIV diagnosis rate among MSM is 44 times that of other men A6 HIV rates are disproportionately growing among young men of color, especially black MSM 13 to 24 years of age A7,A8
HPV and anal cancer	Most anal cancers are caused by HPV infection ^{A9} MSM are about 17 times more likely to develop anal cancer than other men ^{A10} Anal cancer is more common in men who are HIV-positive ^{A10}
Proctitis, proctocolitis, and enteritis	Infectious proctitis, which occurs most often in persons who participate in receptive anal intercourse, can be caused by gonorrhea, chlamydia, herpes simplex virus, syphilis, and lymphogranuloma venereum ^{A11} Proctocolitis can be acquired orally or through oral-anal contact, whereas enteritis is transmitted only through oral-anal contact ^{A12}
Syphilis	The number of syphilis cases in the MSM population increased 46% between 2008 and 2012 among cases in which the sex of the partner was known ^{A13} Minority MSM were disproportionately represented in syphilis data ^{A13}

HIV = human immunodeficiency virus; HPV = human papillomavirus; MSM = men who have sex with men; STIs = sexually transmitted infections. Information from:

- A1. Mayer KH. Sexually transmitted diseases in men who have sex with men. Clin Infect Dis. 2011;53(suppl 3):S79-S83.
- A2. Centers for Disease Control and Prevention. Viral hepatitis: information for gay and bisexual men. October 2013. http://www.cdc.gov/hepatitis/Populations/PDFs/HepGay-FactSheet.pdf. Accessed September 6, 2014.
- A3. Witt MD, Seaberg EC, Darilay A, et al. Incident hepatitis C virus infection in men who have sex with men: a prospective cohort analysis, 1984-2011. Clin Infect Dis. 2013;57(1):77-84.
- A4. Bradshaw D, Matthews G, Danta M. Sexually transmitted hepatitis C infection: the new epidemic in MSM? Curr Opin Infect Dis. 2013;26(1):66-72.

 A5. Mayer KH, Bekker LG, Stall R, Grulich AE, Colfax G, Lama JR. Comprehensive clinical care for men who have sex with men: an integrated approach. Lancet. 2012;380(9839):378-387.
- A6. Centers for Disease Control and Prevention. CDC fact sheet: HIV and AIDS in America: a snapshot. November 2014. http://www.cdc.gov/nchhstp/newsroom/docs/HIV-and-AIDS-in-America-A-Snapshot-508.pdf. Accessed April 13, 2015.
- A7. Centers for Disease Control and Prevention. HIV in the United States: at a glance. http://www.cdc.gov/hiv/statistics/basics/ataglance.html. Updated December 3, 2013. Accessed September 6, 2014.
- A8. Beyrer C. Strategies to manage the HIV epidemic in gay, bisexual, and other men who have sex with men. Curr Opin Infect Dis. 2014;27(1):1-8.

 A9. Schwartz LM, Castle PE, Follansbee S, et al. Risk factors for anal HPV infection and anal precancer in HIV-infected men who have sex with men.

 J Infect Dis. 2013;208(11):1768-1775.
- A10. Centers for Disease Control and Prevention. Gay and bisexual men's health. Sexually transmitted diseases. http://www.cdc.gov/msmhealth/STD. htm. Accessed September 8, 2014.
- A11. Davis TW, Goldstone SE. Sexually transmitted infections as a cause of proctitis in men who have sex with men. Dis Colon Rectum. 2009;52(3):507-512.
- A12. Centers for Disease Control and Prevention. 2010 STD treatment guidelines. Proctitis, proctocolitis, and enteritis. Updated August 18, 2014. http://www.cdc.gov/std/treatment/2010/proctitis.htm. Accessed September 7, 2014.
- A13. Centers for Disease Control and Prevention. Sexually transmitted disease surveillance 2012. Atlanta, Ga.: U.S. Department of Health and Human Services; 2013. http://www.cdc.gov/std/stats12/Surv2012.pdf. Accessed September 6, 2014.