

HCV in Key Populations: Men Who Have Sex With Men

Incidence and Risk Factors for HCV Infection Among HIV-Infected Men Who Have Sex With Men

Several outbreaks of sexually transmitted HCV infection among HIV-infected men who have sex with men (MSM) have been reported since 2000 ([Wandeler, 2012](#)); ([van de Laar, 2010](#)); ([Urbanus, 2009](#)); ([Matthews, 2007](#)). A recent systematic review reported an HCV incidence of 6.35/1000 person-years among HIV-infected MSM ([Jin, 2017](#)). The determinants of sexually transmitted, incident HCV among HIV-positive MSM have not been thoroughly characterized but risk factors have been identified. Group sex practices that can cause trauma to rectal mucosal tissue (eg, receptive anal intercourse without a condom and receptive fisting) and rectal bleeding are associated with HCV transmission among HIV-infected MSM ([Daskalopoulou, 2017](#)); ([Page, 2016](#)); ([Apers, 2015](#)); ([Vanhommerig, 2015](#)); ([Witt, 2013](#)); ([Wandeler, 2012](#)); ([CDC, 2011](#)); ([Schmidt, 2011](#)); ([Danta, 2007](#)).

The recent proliferation of chemsex (also known as party and play [PNP])—use of crystal methamphetamine, mephedrone, or gamma-hydroxybutyrate, sometimes with phosphodiesterase type 5 inhibitors (which lowers inhibitions, creates feelings of invulnerability, increases stamina, and inhibits ejaculation) before or during sex—has also been associated with incident HCV infection ([Pufall, 2018](#)); ([Hegazi, 2017](#)); ([NHS, 2014](#)). These HCV infections have been occurring especially in men who already have ulcerative and rectal sexually transmitted infections including syphilis, lymphogranuloma venereum, and genital herpes ([Bottieau, 2010](#)); ([van de Laar, 2007](#)); ([Gambotti, 2005](#)); ([Gotz, 2005](#)); ([Browne, 2004](#)); ([Ghosn, 2004](#)).

While it is not completely clear why higher rates of incident HCV have been reported in HIV-infected compared to uninfected MSM, behavioral factors such as serosorting (sex between partners of the same HIV status with the aim of minimizing HIV transmission risk) and increased rates of anal sex without condoms by HIV-infected men have been implicated ([Mao, 2011](#)). In a recent study of 33 HIV/HCV-coinfected MSM, one-third shed HCV in their semen ([Turner, 2016](#)). In addition to being found in semen, rectal shedding of HCV has also been reported in HIV/HCV-coinfected MSM ([Foster, 2017b](#)).

Incidence and Risk Factors for HCV Infection Among HIV-Uninfected Men Who Have Sex With Men

Acute HCV infections have been recently reported among HIV-uninfected MSM who present for pre-exposure prophylaxis (PrEP) ([Hoornenborg, 2017](#)). These HIV-uninfected men became infected with HCV strains known to be circulating in HIV sexual transmission networks. Thus, there is growing concern that with the implementation of PrEP, high-risk HIV-uninfected MSM may be at increased risk of incident HCV through unprotected sexual intercourse with HCV-infected MSM. The risk factors for acute HCV infection in these patients remain unknown but may be similar to those reported in HIV-infected MSM.

Testing

Recommendations for Testing and Prevention of HCV Infection in Men Who Have Sex With Men (MSM)

RECOMMENDED	RATING 
Annual HCV testing is recommended for sexually active HIV-infected adolescent and adult MSM. Depending on the presence of high-risk sexual or drug use practices, more frequent testing may be warranted.	Ila, C
HCV testing at HIV pre-exposure prophylaxis (PrEP) initiation and at least annually thereafter (while on PrEP) is recommended in HIV-uninfected MSM. Depending on sexual or drug use risk practices, more frequent testing may be warranted.	Ila, C
All MSM should be counseled about the risk of sexual HCV transmission with high-risk sexual and drug use practices, and educated about measures to prevent HCV infection or transmission.	Ila, C

Screening for HCV Infection Among MSM

Practitioners treating HIV-infected adolescent and adult MSM should be on high alert for acute HCV infection, which is most often asymptomatic (see the [HCV in Children](#) section). In accordance with US Centers for Disease Control and Prevention sexually transmitted diseases (STDs) screening recommendations, HCV screening should be performed at least annually and may be done more frequently, depending on the presence of local and individual factors such as high HCV prevalence and/or incidence locally, high-risk sexual behavior (eg, unprotected [by a condom] receptive anal intercourse, group sex, fisting, chemsex), and ulcerative STD(s) or STD-related proctitis ([Pufall, 2018](#)); ([Daskalopoulou, 2017](#)); ([Page, 2016](#)); ([Apers, 2015](#)); ([CDC, 2015](#)); ([Vanhommerig, 2015](#)); ([NHS, 2014](#)); ([Witt, 2013](#)); ([Wandeler, 2012](#)); ([CDC, 2011](#)); ([Schmidt, 2011](#)); ([Bottiau, 2010](#)); ([Danta, 2007](#)); ([van de Laar, 2007](#)); ([Gambotti, 2005](#)); ([Gotz, 2005](#)); ([Browne, 2004](#)); ([Ghosn, 2004](#)).

Screening should be performed using an HCV-antibody test in most instances. However, individuals with self-reported recent high-risk exposures and/or newly elevated alanine aminotransferase (ALT) levels should have HCV screening with both HCV-antibody and HCV-RNA tests due to concern for acute HCV infection. Those found to be chronically HCV infected should be offered antiviral treatment to prevent liver disease progression and transmission to others. These patients should also be counseled about risk factors for HCV transmission and the potential for HCV reinfection after cure ([Ingiliz, 2017](#)); ([Ingiliz, 2014](#)); ([Lambers, 2011](#)). Subsequent care for acute HCV should be as detailed in the [Management of Acute HCV](#) section.

Prevention of HCV Infection

To reduce the risk of sexually transmitted HCV and other STDs, MSM should be counseled to use condoms with all sex acts. They should also be informed about the high risk of HCV transmission associated with sharing any equipment used for preparing and injecting or snorting drugs. If indicated (and available), providers should offer referrals to syringe service programs and culturally competent counseling/drug treatment, and encourage patients to seek testing for sexually transmitted infections if they have been at risk. Among patients who are using opioids, discussion of preventing HCV infection is also an opportunity to provide opioid education and naloxone distribution (OEND), which is an effective intervention to prevent overdose death.

Although PrEP can prevent sexual transmission of HIV, it is not protective against HCV or other sexually transmitted infections. HIV-uninfected MSM who present for PrEP should receive risk reduction counseling. HIV-uninfected MSM on PrEP should also receive at least annual HCV screening for identification of incident infections.

Treatment

Recommendation on Treatment of HCV in Men Who Have Sex With Men (MSM)	
RECOMMENDED	RATING 
Antiviral treatment for HCV-infected MSM should be coupled with ongoing counseling about the risk of HCV reinfection, and education about methods to reduce HCV reinfection risk after cure.	I, B

Because MSM may be at high risk of transmitting HCV to others, HCV infection should be treated both for individual benefit and to prevent HCV transmission. HIV-infected MSM are considered an important population for HCV elimination through treatment as prevention ([Martin, 2015](#)). The population-level benefit of expansion of HCV treatment in populations of HIV-infected MSM has been evaluated in modeling studies ([Martin, 2016](#)); ([Salazar-Vizcaya, 2016](#)). Additionally, real-world data support the potential for HCV treatment as prevention in cohorts of HIV/HCV-coinfected MSM. Analysis of data from the Dutch acute HCV in HIV study group (DAHHS) showed a 50% reduction in acute HCV incidence between 2014 and 2016 within 1 year of expansion of HCV therapy through unrestricted direct-acting antiviral (DAA) availability to HIV-infected MSM ([Boerekamps, 2017](#)).

HCV treatment should be coupled with education addressing the potential for HCV reinfection and risk factors for transmission to reduce the risk of transmission to others and subsequent reinfection after HCV cure. Brief counseling interventions delivered in clinical settings have been shown to reduce HIV transmission risk and may be effective in reducing HCV transmission risk ([Boerekamps, 2017](#)); ([Myers, 2010](#)); ([Richardson, 2004](#)).

Testing for HCV Reinfection

Recommendation on Prevention of HCV Reinfection in Men Who Have Sex With Men (MSM)	
RECOMMENDED	RATING 
At least annual (and risk-based, if indicated) HCV testing with HCV RNA is recommended for sexually active MSM after successful treatment or spontaneous clearance of HCV infection.	Ila, C

High HCV reinfection rates, ranging from 7.3 to 15.2/100 person-years, have been reported after HCV treatment and cure among HIV-infected MSM ([Ingiliz, 2017](#)); ([Martin, 2015b](#)); ([Lambers, 2011](#)). In an analysis of 606 MSM from 8 centers in Europe, an increase in HCV reinfection incidence rates was reported with each subsequent reinfection (HCV reinfection

incidence 7.3/100 person-years for the first reinfection and 18.8/100 person-years for the second reinfection) ([Ingiliz, 2017](#)). For this reason, it is important to provide patients with clear, nonjudgmental, accurate information about reducing their risk for sexually transmitted HCV. This counseling should be ongoing. Additionally, clinicians should monitor and test for HCV reinfection in sexually active MSM after cure, regardless of HIV status. Individuals found to be HCV reinfected should be retreated. HCV treatment in this setting should be as detailed in the [Initial Treatment of HCV](#) section.

Last reviewed: October 24, 2022

Related References

Apers L, Vanden-Berghe W, De Wit S, et al. [Risk factors for HCV acquisition among HIV-positive MSM in Belgium](#). *J Acquir Immune Defic Syndr*. 2015;68(5):585-593.

Boerekamps A, van den Berk GE, Lauw FN, et al. [Declining hepatitis C virus \(HCV\) incidence in Dutch human immunodeficiency virus-positive men who have sex with men after unrestricted access to HCV therapy](#). *Clin Infect Dis*. 2017;66(9):1360-1365. doi:<https://doi.org/10.1093/cid/cix1007>.

Bottieau E, Apers L, Van Esbroeck M, Vandenbrouaene M, Florence E. [Hepatitis C virus infection in HIV-infected men who have sex with men: sustained rising incidence in Antwerp, Belgium, 2001-2009](#). *Euro Surveill*. 2010;15(39):19673.

Browne R, Asboe D, Gilleece Y, et al. [Increased numbers of acute hepatitis C infections in HIV positive homosexual men: is sexual transmission feeding the increase?](#). *Sex Transm Infect*. 2004;80(4):326-327.

[Centers for Disease Control and Prevention \(CDC\). Sexual transmission of hepatitis C virus among HIV-infected men who have sex with men--New York City, 2005-2010](#). *MMWR Morb Mortal Wkly Rep*. 2011;60(28):945-950.

[Centers for Disease Control and Prevention \(CDC\). 2015 sexually transmitted diseases treatment guidelines, special populations](#); 2015. Available at: <https://www.cdc.gov/std/tg2015/specialpops.htm>. Accessed June 8, 2021.

Danta M, Brown D, Bhagani S, et al. [Recent epidemic of acute hepatitis C virus in HIV-positive men who have sex with men linked to high-risk sexual behaviours](#). *AIDS*. 2007;21(8):983-991.

Daskalopoulou M, Rodger AJ, Phillips AN, et al. [Condomless sex in HIV-diagnosed men who have sex with men in the UK: prevalence, correlates, and implications for HIV transmission](#). *Sex Transm Infect*. 2017;93(8):590-598.

Foster AL, Gaisa MM, Hijdra RM, et al. [Shedding of Hepatitis C Virus Into the Rectum of HIV-infected Men Who Have Sex With Men](#). *Clin Infect Dis*. 2017;64(3):284-288.

Gambotti L, Batisse D, Colin-de-Verdiere N, et al. [Acute hepatitis C infection in HIV positive men who have sex with men in Paris, France, 2001-2004](#). *Euro Surveill*. 2005;10(5):115-117.

Ghosn J, Pierre-Francois S, Thibault V, et al. [Acute hepatitis C in HIV-infected men who have sex with men](#). *HIV Med*. 2004;5(4):303-306.

Götz HM, van Doornum G, Niesters HG, Hollander JGden, Thio HB, de Zwart O. [A cluster of acute hepatitis C virus infection among men who have sex with men--results from contact tracing and public health implications](#). *AIDS*. 2005;19(9):969-974.

Hegazi A, Lee M, Whittaker W, et al. [Chemsex and the city: sexualised substance use in gay bisexual and other men who have sex with men attending sexual health clinics](#). *Int J of STD AIDS*. 2017;28(4):362-366.

Hoornenborg E, Achterbergh RCA, Schim van-der-L, et al. [MSM starting preexposure prophylaxis are at risk of hepatitis C virus infection](#). *AIDS*. 2017;31(11):1603-1610.

Ingiliz P, Krznaric I, Stellbrink H-J, et al. [Multiple hepatitis C virus \(HCV\) reinfections in HIV-positive men who have sex with men: no influence of HCV genotype switch or interleukin-28B genotype on spontaneous clearance: HCV reinfection in HIV-positive MSM](#). *HIV Med*. 2014;15(6):355-361.

Ingiliz P, Martin TC, Rodger A, et al. [HCV reinfection incidence and spontaneous clearance rates in HIV-positive men who have sex with men in Western Europe](#). *J Hepatol*. 2017;66(2):282-287.

Jin F, Matthews GV, Grulich AE. [Sexual transmission of hepatitis C virus among gay and bisexual men: a systematic review](#). *Sex Health*. 2017;14(1):28-41.

Lambers FA, Prins M, Thomas X, et al, et al. [Alarming incidence of hepatitis C virus re-infection after treatment of sexually acquired acute hepatitis C virus infection in HIV-infected MSM](#). *AIDS*. 2011;25(17):F21-F27.

Mao L, Kippax SC, Holt M, Prestage GP, Zablotska IB, de Wit JBF. [Rates of condom and non-condom-based anal intercourse practices among homosexually active men in Australia: deliberate HIV risk reduction?](#). *Sex Transm Infect*. 2011;87(6):489-493.

Martin NK, Vickerman P, Dore GJ, Hickman M. [The hepatitis C virus epidemics in key populations \(including people who inject drugs, prisoners and MSM\): the use of direct-acting antivirals as treatment for prevention](#). *Curr Opin HIV AIDS*. 2015;10(5):374-380.

Martin TCS, Singh GJ, McClure M, Nelson M. [HCV reinfection among HIV-positive men who have sex with men: a pragmatic approach](#). *Hepatology*. 2015;61(4):1437-1437.

Martin NK, Thornton A, Hickman M, et al. [Can hepatitis C virus \(HCV\) direct-acting antiviral treatment as prevention reverse the HCV epidemic among men who have sex with men in the United Kingdom? Epidemiological and modeling insights](#). *Clin Infect Dis*. 2016;62(9):1072-1080.

Matthews GV, Hellard M, Kaldor J, Lloyd A, Dore GJ. [Further evidence of HCV sexual transmission among HIV-positive men who have sex with men: response to Danta et al](#). *AIDS*. 2007;21(15):2112 - 2113.

Myers JJ, Shade SB, Rose CDawson, et al. [Interventions delivered in clinical settings are effective in reducing risk of HIV transmission among people living with HIV: results from the Health Resources and Services Administration \(HRSA\)'s special projects of national significance initiative](#). *AIDS Behav*. 2010;14(3):483-492.

[ChemSex and hepatitis C: a guide for healthcare providers](#); 2014. Available at: <https://www.chelwest.nhs.uk/services/hiv-sexual-health/professionals/links/ChemSex-Hep-C-Guide.pdf>. Accessed June 13, 2019.

Page EE, Nelson M. [Hepatitis C and sex](#). *Clin Med (Lond)*. 2016;16(2):189-192.

Pufall EL, Kallan MJ, Shahmanesh M, et al, et al. [Sexualized drug use \('chemsex'\) and high-risk sexual behaviours in HIV-positive men who have sex with men](#). *HIV Med*. 2018;19(4):261-270.

Richardson JL, Milam J, McCutchan A, et al. [Effect of brief safer-sex counseling by medical providers to HIV-1 seropositive patients: a multi-clinic assessment](#). *AIDS*. 2004;18(8):1179-1186.

Salazar-Vizcaya L, Kouyos RD, Zahnd C, et al, et al. [Hepatitis C virus transmission among human immunodeficiency virus-infected men who have sex with men: modeling the effect of behavioral and treatment interventions](#). *Hepatology*. 2016;64(6):1856-1869.

Schmidt AJ, Rockstroh JK, Vogel M, et al. [Trouble with bleeding: risk factors for acute hepatitis C among HIV-positive gay men from Germany--a case-control study](#). Jin X, ed. *PLoS ONE*. 2011;6(3):e17781.

Turner SS, Gianella S, Yip MJ-S, et al. [Shedding of hepatitis C virus in semen of human immunodeficiency virus-infected](#)

[men](#). *Open Forum Infect Dis*. 2016;3(2).

Urbanus AT, van de Laar TJ, Stolte IG, et al. [Hepatitis C virus infections among HIV-infected men who have sex with men: an expanding epidemic](#). *AIDS*. 2009;23(12):F1-F7.

van de Laar TJW, van der Bij AK, Prins M, et al. [Increase in HCV incidence among men who have sex with men in Amsterdam most likely caused by sexual transmission](#). *J Infect Dis*. 2007;196(2):230-238.

van de Laar TJ, Matthews GV, Prins M, Danta M. [Acute hepatitis C in HIV-infected men who have sex with men: an emerging sexually transmitted infection](#). *AIDS*. 2010;24(12):1799-1812.

Vanhommerig JW, Lambers FA, Schinkel J, et al. [Risk factors for sexual transmission of hepatitis C virus among human immunodeficiency virus-infected men who have sex with men: a case-control study](#). *Open Forum Infect Dis*. 2015;2(3):ofv115.

Wandeler G, Gsponer T, Bregenzer A, et al. [Hepatitis C virus infections in the Swiss HIV cohort study: a rapidly evolving epidemic](#). *Clin Infect Dis*. 2012;55(10):1408-1416.

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.
