# Supporting/Supplementary material

Supplement Table 5. Search Strategies.

| **Electronic Bibliographic Database Searches** | | | | |
| --- | --- | --- | --- | --- |
| Concepts | MeSH | CINAHL | PsycINFO | Free-Text |
| MSM/at-risk | Homosexuality, Male  Bisexuality  Unsafe sex NOT pregnancy  Risk-taking | Homosexuality  Homosexuals, male  Bisexuality  Unsafe sex NOT pregnancy  Risk taking behavior | Male homosexuality  Bisexuality  Same sex intercourse  At risk populations  Risk taking  Risk management | Gay  Men who have sex with men  HIV risk  Bisexual |
| Internet | Internet  Social media | Internet | Internet  Social media  Computer mediated communication | Online  World wide web  web |
| **Grey Literature Searches** | | | | |
| * The Agency for Healthcare Research Quality (AHRQ; www.ahrq.gov) * AIDS.gov * The United States Preventative Task Force (USPTF) (www.uspreventiveservicestaskforce.org) * The Centers for Disease Control and Prevention (www.cdc.gov), including the Effective Behavioral Interventions (EBI) Web site (www.effectiveinterventions.org/en/Home.aspx) * The U.K. National Health Service (NHS; [www.nhs.uk/Pages/HomePage.aspx](http://www.nhs.uk/Pages/HomePage.aspx)) , including the National Institute for Health and Care Excellence (NICE; www.nice.org.uk ) * Canadian Agency for Drugs and Technologies in Health (CADTH; www.cadth.ca) * Australian Government Department of Health (www.health.gov.au) * SAMHSA (www.samhsa.gov) * NIH Office of AIDS Research (www.oar.nih.gov) * NIMH HIV Prevention Science Branch (www.nimh.nih.gov/about/organization/dar/hiv-prevention-science-branch/hiv-prevention-science-branch.shtml) * World Health Organization (WHO; www.who.int/en/) * National Library of Medicine AIDS database ([www.nlm.nih.gov/databases/databases\_aids.html](http://www.nlm.nih.gov/databases/databases_aids.html)) * New York State Department of Health HIV/AIDS website (www.health.ny.gov/diseases/aids/) * University of California, San Francisco HIV/AIDS website (hiv.ucsf.edu) * United National Educational, Scientific, and Cultural Organization (UNESCO) HIV/AIDS database ([www2.unescobkk.org/elib/search/searchaids2.htm](http://www2.unescobkk.org/elib/search/searchaids2.htm)) | | | | |

Supplement Table 6. Customized GRADE Assessment Factors and Criteria to Determine Strength of Evidence.

| Factor | Assessment | Rating Change | Criteria for Determination |
| --- | --- | --- | --- |
| **Starting Point** | | | |
| Study design type |  | - | Study design type determined using criteria of Zaza and colleagues[2] |
| **Lower Rating** | | | |
| Risk of bias as determined using critical appraisal tool | Serious limitation | -1 | Items 1, 2, or 8 (**Table 4**) |
| Very serious limitations | -2 | Items 1, 2, 8, plus additional criteria are not satisfied |
| Inconsistency | Important | -1 | The studies do not agree in terms of overall finding. In meta-analysis, there is statistically significant heterogeneity. |
| Directness | Some uncertainty | -1 | The population may not pertain to internet-using MSM in the US |
| Major uncertainty: too uncertain to support an evidence-based conclusion. | -2 | The population clearly does not pertain to internet-using MSM in the US. *Such studies are excluded from the evidence base.* |
| Sparse data | Serious limitation | -1 | Two studies compose the evidence base |
| Very serious limitation: too sparse to support an evidence-based conclusion | -2 | One study composes the evidence base. No conclusions are drawn when only one study addresses a key question due to preclusion of assessment of inconsistency. |
| Lack of robustness | Serious limitation | -1 | For meta-analyses, sensitivity analyses suggest the summary effect size is not stable. Not assessed for analysis of factors associated with testing patterns. |
| Reporting bias | High probability | -1 | For meta-analysis, statistical findings suggest publication bias *and* the adjusted summary effect size is statistically significantly different from the unadjusted effect size. |
| **Increase Rating** | | | |
| Consistency across different evidence types | Increases confidence in findings | +1 | Consistency across meta-analysis and findings within primary research |

Adapted from: Guyatt, G. H., et al. (2008). "GRADE: an emerging consensus on rating quality of evidence and strength of recommendations." BMJ 336(7650): 924-926.

Supplement Table 7. Summary of Included Studies.

| **Study** | **Target Population** | **Recruitment Strategy and Sampling Method** | **Participant Inclusion Criteria** | **Age (Years)**1 | **Ethnicity / Race**1 | **Education** | **Income** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Akin et al. 2008[23] | MSM, Hispanic in Miami-Dade County  (n=470) | In-person or Internet-based recruitment from venues and Web sites catering to or geared to Hispanic MSM  Enrolled 10/2003 – 02/2005 | Men  At least 18 years old  Self-identified as Hispanic/Latino  Had sex with a man last 5 years  South Florida resident  Approached by staff  Visited field offices for screening and enrollment | Mean 32 | 100% Hispanic, immigrants from Latin American countries | 69% (325/470) Greater than High School | 57% (268/470) >$1,500/month |
| Barriers to Online Prevention Research (BOPR)  Sullivan, et al. 2011[24] | MSM, internet-using  (n=9005) | Banner ads on their MySpace pages; displayed to viewers based on self-reported demographic information  Ads placed 3/19/2009 – 4/16/2009 | Men  At least 18 years old  U.S. residents  MySpace pages indicating they are gay, bisexual, or unsure  Had sex with a man in the previous year | Mean 24, Median 21 (Range 18-80) years  68% (n=6157) 18-24 16% (n=1446) 25-29  6% (n=573) 30-34  7% (n=623) 35-45  2% (n=206) >45 | n=8552 reported:  41% (n=3473) White, non-Hispanic  15% (n=1293) Black, non-Hispanic  33% (n=2809) Hispanic  2% (n=208) Asian / Pacific Islander  2% (n=184) Native American / Alaska Native  5% (n=452) Multiracial  2% (n=133) Other | n=8357 reported:  8% (n=628) Less than high school  35% (n=2914) High school or GED  42% (n=3531) Some college/associate degree  15% (n=1284) College/ postgraduate | Not reported |
| CyBER/ M4M  Rhodes et al. 2010[25] | MSM  (n=210) | During random two-hour shifts, educators entered one of five predetermined geographically oriented chat rooms and announced their purpose and offered HIV information and availability to answer questions. Educators were in chat rooms an average of 6 to 12 hours per week.  Recruitment and intervention over 18 months in 2004 and 2005 | Chatters who contacted educators were invited to participate in study | Mean 31 (SD 11) years | n=202 reported:  56% (n=114) White  38% (n=76) Black or African American  3% (n=6) Hispanic or Latino  0.5% (n=1) Asian  1% (n=2) American Indian/Alaska Native  2% (n=3) Multiracial/ethnic | 79% (n=160) Some college or higher | n=210  Annual Income  20% (n=41) <$10,000  15% (n=30) $10,000-$19,999  28% (n=56) $20,000-$39,999  22% (n=45) $40,000-$59,999  6% (n=13) $60,000-$79,999  8% (n=17) ≥$80,000 |
| Dew and Chaney 2005[26] | MSM who use internet chat  (n=513) | Researchers entered chat rooms, introduced selves and survey, and provided survey access through link  Ethnically diverse chat rooms (e.g., geared to Asian or Latino users) were oversampled  Recruitment dates NR | Men  At least 18 years old | Mean 36 (SD 11) | n=511 reported:  81% (n=416) Caucasian  6% (n=31) African American  5% (n=27) Hispanic  2% (n=11) Asian  2% (n=10) Native American  3% (n=15) Other | 22% (n=113) Trade school or High School  48% (n=246)  Associates degree or Bachelor’s degree  25% (n=128) Graduate degree(s) | Median income range $20,000 - $39,999 |
| Fernandez et al. 2007[27] | MSM Hispanic who live in Miami-Dade County, Florida, and who use chat rooms  (n=294 internet-recruited) | Internet sampling: Researchers entered chat rooms to recruit potential participants (every 5th screen name) by inviting them to look at the project web site and inviting them to field offices for full screening and enrollment  Recruitment 10/15/2003 to 12/19/2004 | Men  At least 18 years old  Self-identified as Hispanic or Latino  Had sex with a man last 5 years  Resident of South Florida  Approached by research staff  Visited one of assessment sites for screening and enrollment | Mean 32 | 100% Hispanic | 6.5% (n=190) Less than High School  75% (n=145) Greater than High School  26% (n=77) Some College  7% (n=23) Vocational Graduate  30% (n=87) (College Graduate)  11% (n=120) Post-College Schooling | Income <$1500/month 42.2%  Income <$2500/month 72.8% |
| Frontiers in Prevention  Balan et al. 2013[28] | MSM, internet-using, ‘bare-backing’ interest, HIV negative, from New York City metropolitan area  (n=89) | IMs and e-mails from ‘barebacking’ Web sites were sent to users that directed them to study web site and directed them to call for eligibility screening. Aimed to oversample HIV-negative men and to sample similar proportions of European-American, African-American, Latino, and Asian/Pacific Islander men.  Recruitment April 2005 – March 2006 | Men  At least 18 years old  Self-identified as “barebacker” or “into barebacking” (undefined in screener)  Resident of New York City Metro area  Use one of 6 popular barebacking Internet sites  Use Internet to seek sexual partners at least 2 times per month for the past few months  Had intentional condomless anal sex with man met over the internet | Mean 32 (SD 10) years, range 18-63 | 27% (n=24) White/European-American  21% (n=19)  African-American  25% (n=22) Latino  18% (n=16) Asian/Pacific Islander  2% (n=2) Native American  7% (n=6) Other | Level of education mean (SD) 14.85 (3.06) years; range 2-20 years | Income median (IQR) $25,000 ($34,250); range $0-$100,001 |
| Grov et al. 2013[29] | MSM with new oral or anal sex partner at last sexual encounter  (n=2865) | Banner Ads on eight gay-oriented Web sites with links to consent form and then survey  Recruitment 2004 - 2005 | Men  Had sex within the last year  Most recent oral or anal sexual encounter was with another man with whom he had not previously had sex  U.S. resident | Median 38 (range 18 to 78) years  22% (n=629) 18-29  34% (n=973) 30-39  33% (n=938) 40-49  11% (n=325) >50 | n=2819 reported  80% (n=2268) White, non-Hispanic  4% (n=117) Black, non-Hispanic  9% (n=244) Hispanic/Latino  3% (n=72) Asian/Pacific Islander  4% (n=118) Mixed/Other | Not reported | Not reported |
| Healthy Young Men’s Study (HYM)  Kubicek et al. 2011[30] | MSM, aged 18-24  (n=499) | Recruited from public venues using stratified probability sampling design  Recruitment dates NR | Men  Have sex with men  Aged 18-24 years  Self-identified as gay, bisexual or uncertain; and/or had sex with another man  LA county residents and expected to live in LA for next 6 months  Caucasian, African American, or Latino-Mexican descent | 29% (n=143) 18-19  37% (n=186) 20-21  34% (n=170) 22-24 | 38% (n=188) Caucasian  23% (n=115) African American  39% (n=196) Mexican descent | Not reported | Not reported |
| HIVBIGDEAL pilot study  Chiasson 2009[31] | MSM  (n=1003) | Banner ads on subscription gay sexual meeting site (unspecified)  Recruitment October 2005 | Men  Have sex with men  At least 18 years old  For analysis: Reported sex on baseline and follow-up questionnaires | n=830  22% (n=183) 18-29  36% (n= 299) 30-39  42% (n=349) >40 | n=943 reported:  72% (n= 692) White  6% (n=61) Black  14% (n=137) Hispanic  5% (n=40) Asian and Other  2% (n=13) Multiple | N=968 reported  49% (n=474) No college degree  51% (n=494) College degree or higher | Not reported |
| HIVBIGDEAL RCT  Margolis et al. 2012[32] | MSM  (n=8040) | Banner Ad or e-mail on 4 gay-oriented sexual networking sites  Recruitment April 2008-June 2008 | Men  At least 18 years old  U.S. resident  Valid email address  Reported enough information to assess HIV testing history and history with at least one anal or vaginal sexual partner  Reported oral or anal sex with a man | Median 39 (SD 11.7) (range 18 to 81)  n=8039 reported:  15% (n=1196) 18-24 years  85% (n=6843) ≥25 | n=8,004 reported:  82% (n=6578) White  3% (n=211) Black  8% (n=679) Hispanic  2% (n=152) Asian or Native Hawaiian / Other Pacific Islander  5% (n=384) Mixed/ Other | Not college graduate 46% (n=3655)  College graduate 54% (n=4363) | Not reported |
| Horvath et al. 2006[33] | MSM, rural  (n=663) | Banner ads on gay.com primary method; also used internet chat rooms, Internet bulletin boards, Internet groups, advertisements, and in-person referrals  Project enrollment January 2002 through June 2003. | Men  At least 18 years old  Self-identify as bisexual or gay or reporting sex with a man in the last year  Live in rural area (population <75,000 and >60 minutes from urban area) | 33% (n=216) 18-24  27% (n=178) 25-34  23% (n=149) 35-44  18% (n=120) >45 | n=656 reported:  90% (n=588) White  10% (n=68) Non-White | Reported for n=661  17% (n=110) High school or less  40% (n=265) Technical degree or some college  43% (n=286) College degree | Reported for n=559  30% (n=180) <$15,0000  25% (n=150) $15,000-$24,999  36% (n=216) $25,000-$49,999  19% (n=113) ≥$50,000 |
| Horvath et al. 2008[34] | MSM  (n=2716) | Banner Ads throughout high-subscription-volume Web site, PlanetOut  September to November 2005 | Men  At least 18 years  U.S. Resident  Had sex with a man in past 3 months | n=2713 reported:  36% (n=979) 18-24  25% (n=690) 25-29  27% (n=724) 30-39  9% (n=249) 40-49  3% (n=71) ≥50 | 27% (n=728) White  16% (n=445) Black  25% (n=683) Latino  19% (n=512) Asian  13% (n=348) Other | Not reported | 21% (n=560) <$10,000  25% (n=648) $10,001-$25,000  28% (n=729) $25,001-$45,000  26% (n=677) ≥$45,001 |
| Horvath et al. 2010[35] | MSM  (n=1725) | Banner Ads to “Participate in University Research on Sex and Alcohol and Earn $30” posted on two unnamed Web sites targeted to gay and bisexual men to meet sex partners  3.5 months in 2008 | Men  At least 18 years old  Ever had sex with a man | 7% (n=121) 18-20  41% (n=707) 21-30  24% (n=414) 31-40  28% (n=483) 41-70 | 1725 reported:  76% (n=1311) White  15% (n=259) Hispanic  8% (n=138) Other | 11% (n=190) High school or less  37% (n=638) Technical/some college  34% (n=587) College degree  18% (n=311) Graduate degree | Not reported |
| Horvath et al. Diary Studies  Horvath et al. 2006[36] | MSM in Western states  (n=45) | Chat room profile on gay.com with link to study website; Ad on back page of The Stranger, a Seattle LGBT-oriented newspaper  Recruitment dates NR | Men  At least 18 years old  Have sex with man 2-4 times monthly  Have daily access to internet and use it >twice weekly  Daily-checked email | 22% (n=10) 18-23  11% (n=5) 24-27  38% (n=17) 28-36  29% (n=13) ≥37 | 76% (n=34) White  24% (n=11) Non-White | 20% (n=9) High school or less  33% (n=15) Technical/some college  27% (n=12) College degree  20% (n=9) Graduate degree | <$15,0000 24% (n=11)  58% (n=26) $15,000-$49,999  18% (n=8) ≥50,000 |
| Jozkowski et al. 2010[37] | MSM  (n=25,159) | Recruitment email with link to study website sent to U.S. residents with accounts at an MSM-focused internet-based social and sexual networking site.  Recruitment July 2009 | Questionnaire completers who answered the questionnaire item on circumcision status  At least one current male sex partner | n=24,900  14% (n=3560) 18-23  18% (n=4435) 24-29  23% (n=5762) 30-39  28% (n=6970) 40-49  13% (n=3318)50-59  3% (n=855) 60+ | n=25,027 reported:  82% (n=20,650) White  4% (n=1014) Black  7% (n=1857) Hispanic/ Latino  3% (n=729) Asian/ Pacific Islander  3% (n=777) Other | (n=25,104)  11% (n=2817) High school or less  34% (n=8485) Some college or associates degree  32% (n=8112) Bachelor’s degree  15% (n=3826) Master’s degree  7% (n=1625) Professional  1% (n=239) Other | Not reported |
| Khosropour et al. 2013[38] | MSM, internet-using, with mobile phone  (n=710) | Banner ads on social networking and internet dating sites: Facebook, MySpace, Black Gay Chat, Adam4Adam  Recruitment August to December 2010 | Men  At least 18 years  Had sex with man last 12 months  Had mobile phone with texting  Willing to receive at-home HIV test  No plans to move outside U.S. during next year  Race/ethnicity white non-Hispanic, black non-Hispanic, or Hispanic  Returned HIV test kit sent as part of study  Tested negative on HIV test kit sent as part of study | 37% (n=263) 18-24  37% (n=262) 25-34  15% (n=107) 35-44  11% (n=78) 45-54 | 66% (n=470) White  15% (n=106) Black  19% (n=134) Hispanic | 18% (n=130) High school or less  83% (n=580) Greater than high school or GED | Not reported |
| Khosropour and Sullivan 2013[39] | MSM  (n=6104) | Banner advertisements placed on social networking and internet dating websites (including Facebook, MySpace, Black Gay Chat, Adam4Adam).  Recruitment August to December 2010 | Men  At least 18 years old  Reported sex with a male during the last 12 months  Subset of those who completed condom receipt and use questions | 12% (n=728) 18-19  30% (n=1830) 20-24  29% (n=1765) 25-34  15% (n=937) 35-44  10% (n=640) 45-54  3% (n=204) 55+ | 45% (n=2737) White, Non-Hispanic  23% (n=1407) Black, Non-Hispanic  15% (n=903) Hispanic  4% (n=225) Asian/ Pacific Islander  2% (n=135) Native American/Alaska Native  8% (n=458) Multiracial  4% (n=239) Other | 4% (n=221) Less than high school  21% (n=1099) High school or GED  38% (n=2029) Some college/associate degree  37% (n=1973) College/postgraduate | 34% (n=1632) ≤$14,999  30% (n=1417) $15,000-$39,999  20% (n=956) $40,000-$74,999  16% (n=762) ≥$75,000 |
| MINTS-II  Wilkerson et al. 2010[40] | MSM  (n=2578) | Banner advertisements in Spanish and English on Gay.com that linked to study website, where potential participants answered questions to screen for inclusion criteria.  Men of color were oversampled so that the final sample contained approximately equal numbers of Asian, Latino, Black and White men.  Recruited for 3 months during 2005 | Men  At least 18 years  Had sex with at least one other man  U.S. residents  HIV-negative | n=2575 reported:  37% (n=959) 18-24  26% (n=664) 25-29  26% (n=670) 30-39  11% (n=282) >40 | 25% (n=638) Latino American  19% (n=496) Asian American  16% (n=408) Black or African American  27% (n=701) White  13% (n=335) Other | 14% (n=351)  ≤12 years (High School or Less)  60% (n=1556)  13-16 years  26% (n=671) ≥17 years | Not reported |
| MINTS-II Latino  Rosser et al. (2009) [41] | Latino MSM  (n=1026) | Banner advertisements in Spanish and English on Gay.com that linked to study website, where potential participants answered questions to screen for inclusion criteria.  Recruited November-December 2002 | Latino men  At least 18 years  Had sex with at least one other man U.S. residents | Mean 28 (SD 9) | 100% Latino | 20% (n=205) High school or less  80% (n=798) More than high school | Gross annual income  14% (n=108) $1-$10000  17% (n=133) $10,001-$20,000  23% (n=182) $20,001-$30,000  17% (n=135) $30,001-$40,000  11% (n=88) $40,001-$50,000  5% (n=37) $50,001-$60,000  4% (n=28) $60,001-$70,000  9% (n=69) >$70,000 |
| Mustanski 2007[42] | MSM  (n=113) | Link to study web page (including informed consent form and questionnaire) posted on casual sex-seeking website for MSM, web site for sexually addicted individuals, Kinsey Institute website, and an internet-based comprehensive listing of gay and lesbian university organizations.  A few weeks later, a randomly selected sub-sample of questionnaire completers were contacted and invited to participate in a daily diary study.  Recruitment dates not reported | Men  Agreed to daily diary study participation  Reported they were not in exclusive or monogamous relationships | 48% (n=54) 18-24  12% (n=14) 25-29  20% (n=23) 30-39  20% (n=22) >40 | 85% (n=96) White, Non-Hispanic  4% (n=5) Black  3% (n=3) Hispanic  8% (n=9) Other | 7% (n=8) High school completed  52% (n=59) Some college or technical school  41% (n=46) College graduate or higher | 30% (n=33) Lower  54% (n=60) Middle  16% (n=18) Upper |
| Online Health and Technology Survey  Baseline  Wagenaar, et al. 2012[43] | MSM  (n=5980) | Study banner advertisements target to on MySpace.com users who reported male gender, age 18 or older, and sexual orientation of gay, bisexual, or unsure.  Recruitment March and April 2009 | Men  At least 18 years old  HIV-negative  Reported at least one male sexual partner in the previous 12 months  Provided informed consent  For follow-up:  White, Black, or Hispanic[39] | 68% (n=4083) 18-24  16% (n=957) 25-29  7% (n=401) 30-34  7% (n=404) 35-45  2% (n=135) >45 | 43% (n=2582) White, Non-Hispanic  13% (n=778) Black, Non-Hispanic  32% (n=1897) Hispanic  11% (n=664) Other  1% (n=59) Unknown | 7% (n=421) Less than high school  34% (n=2017) High school or GED  42% (n=2557) Some college, associate’s, or technical degree  15% (n=918) College, post graduate, or professional school  1% (n=67) Don’t know or prefer not to answer | Not reported |
| Project SPIN  Grov, et al. 2008[44] | MSM, internet-using, sexually compulsive, in New York City  (n=183) | Pop-up and banner ads shown to Grindr users logged in to their accounts, with links to survey  Recruitment period 2 days in December 2012 | Men  At least 18 years old  New York City area resident  Reported having sex with men  Did not report being HIV-positive. | Mean 36 (SD 8) (Range 19-63) | 60% (n=109) White/European  19% (n=34) African American  1% (n=2) Arab/Middle Eastern  2% (n=4) Asian/Pacific Islander  19% (n=34) Hispanic/Latino | 10% (n=19) High school or less  26% (n=47) Some college or Associates Degree  40% (n=73) Bachelor’s Degree  23% (n=42) Graduate School | 19% (n=35) <$10,000  16% (n=29) $10,000-$19,999  14% (n=25) $20,000-$29,999  16% (n=30) $30,000-$39,999  7% (n=12) $40,000-$49,999  15% (n=28) $50,000-$74,999  13% (n=23) >$75,000 |
| Rendina Jimenez, et al. 2013[45] | MSM  (n=1351) | Advertisement on free online sexual networking site for MSM, Grindr, linked to informed consent information and survey.  Recruitment during 2 days in December 2012 | Men  Male sex at birth  Male gender identity  At least 18 years old  U.S. resident  Reported sex with another man in last 90 days  Not HIV positive or in a known serodiscordant relationship  Identified as gay or bisexual | Mean 30 (range 18 to 67) years | 49% (n=666) White  12% (n=155) Black  21% (n=279) Hispanic /Latino  6% (n=86) Asian/Pacific Islander  10% (n=133) Multiracial  2% (n=32) Other | Not reported | Not reported |
| Rucinski et al. 2013[46] | MSM  (n=329) | Banner ads placed on social and sexual networking websites geared to MSM (Gay.com, Black Gay Chat Live, Men4Now, Next Magazine, Gay Ad Network, Logo); targeted to New York City residents by IP address.  Recruitment in October and November 2011 | Male  Age 18-40 years  Full or part-time New York City residents | 65% (n=213) 18-30  35% (n=116) 31-40 | n=324 reported:  51% (n=166) White, non-Hispanic  19% (n=60) Black, non-Hispanic  15% (n=49) Hispanic  15% (n=49) Other | 23% (n=75) Some college or less  42% (n=137) 4-year degree  35% (n=116) Graduate degree | Not reported |
| Schnarrs et al. 2012[47] | MSM, Latino  (n=1880) | Email sent to all users of a large online social and sexual online networking site for MSM, linking to study website  Recruitment dates NR | Men  Has sex with men  Have not responded from IP address previously | n=1861  24% (n=446) 18-24  18% (n=335) 25-29  29% (n=547) 30-39  22% (n=406) 40-49  6% (n=108) 50-59  1% (n=19) >60+ | 100% (n=1880) Latino | n=1874  1% (n=24) <High school  14% (n=265) High school / GED  38% (n=712) Some college / Associate’s  29% (n=551) Bachelor’s  11% (n=205) Master’s  5% (n=102) Doctoral  1% (n=15) Other | Not reported |
| Stephenson et al. 2010[48] | MSM  (n=402) | MySpace Ads with photos of men of various ages and ages shown to men at least 18 years old indicating sexual orientation as gay, bisexual, or unsure, in the United States  Recruitment dates not reported | Men  Age 18-35 years  Had sex with at least one man in the last year | 68% (n=273) 18-24  21% (n=84) 25-29  11% (n=44) 30-35 | 48% (n=193) White/Caucasian  15% (n=61) Black/African American  37% (n=150) Hispanic | 5% (n=19) <High school/GED  27% (n=108) High school/GED  69% (n=275) Some college or higher | Not reported |
| Stephenson et al. 2014[49] | MSM  (n=355 US residents) | Banner advertisements on Facebook.com targeted men who said they were interested in men on their Facebook profiles, and linked potential participants to Internet-based survey.  Recruitment October 1 to November 30 2010 | Men  At least 18 years  Reported sex with men in the last year | n=354 reported  60% (n=213) 18-24  17% (n=60) 25-34  8% (n=28) 35-44  15% (n=53) >45 | 83% (n=295) White  17% (n=60) Other | 29% (n=103 ) ≤12 years  71% (n=252) >12 years | Not reported |
| Wagenaar, Sullivan, et al. 2012[50] | MSM  (n=1154 US residents) | Banner ads on Facebook linked to study website.  Ads displayed October 1 to November 30 2010. | Men At least 18 years old  U.S. residents  At least one male sex partner in the last year | 43% (n=500) 18-24  16% (n=183) 25-29  14% (n=163) 30-39  17% (n=191) 40-49  11% (n=117) >50  Median 26 (IQR 20) | 48% (n=557) White non-Hispanic  33% (n=381) Black/ non-Hispanic  9% (n=108) Hispanic  9% (n=108) Other | 22% (n=253) High school or less  78% (n=901) More than high school | Not reported |
| Wall et al. 2010[51] | MSM  (n=6046) | Internet advertisements on sites MySpace  Data collected between March and April 2009 | Men  At least 18 years old  U.S. residents  Unknown or negative HIV status | 84% (n=5099) 18-29  11% (n=643) 30-39  4% (n=230) 40-49  1% (n=74) >50 | 43% (n=2583) White/ Caucasian (non-Hispanic)  13% (n=799) Black/African American (non-Hispanic)  32% (n=1942) Hispanic  1% (n=722) Other/ Unknown | 24% (n=1465) Less than high school graduate  34% (n=2046) High School or GED  43% (n=2589) Some college, associate’s degree, or technical school  15% (n=919) College, postgraduate, or professional school | Not reported |
| Welles et al. 2011[52] | MSM, used internet to find sex partners  (n=682 US residents) | Banner advertisements and featured links on Google and other search engines, web sites geared to gay and Black men, and New York and Washington weekly LGBT newsletters.  Data collection dates NR. | Male  At least 18 years old  U.S. residents  Literate in English language  Sex with another man in past 12 months | 20% (n=136) 18-25  33% (n=228) 26-35  26% (n=177) 36-45  21% (n=141) >45 | Not Reported | 11% (n=75) ≤High school  35% (n=238) Some college / post high school  31% (n=213) College graduate  22% (n=152) Graduate or professional school | 21% (n=143) Lower  42% (n=284) Middle  33% (n=226) Upper  4% (n=29) Prefer not to answer |
| WHBS New York  Navejas 2013[53]; Navejas et al. 2012[54] | MSM  Overall survey  (n=1700)[53]  Subgroup who reported sex with a main or casual partner in the past 12 months  (n=1124)[54] | Banner advertisements rotated through various social network sites, some geared toward MSM, that when clicked redirected participants to  Recruitment April – August 2007 | Born male  At least 18 years old  New York City resident  Reported sex with a man last 12 months  HIV Factor Analysis[54]  Same as online sample criteria above, with additional criteria of reporting meeting at least one sex partner online in the last 12 months and reporting sex with a main or casual partner in the past 12 months. | 62% (n=1053) 18-29  23% (n=394) 30-39  12% (n=195) 40-49  3% (n=58) >50  Mean 29 (SD 9) years  Subgroup who reported sex with a main or casual partner in the past 12 months:  11% (n=125) 18-19  48% (n=534) 20-29  24% (n=275) 30-39  14% (n=152) 40-49  3% (n=38) >50 | 63% (n=1067) White  13% (n=215) Black  29% (n=315) Hispanic  6% (n=93) Other  Subgroup who reported sex with a main or casual partner in the past 12 months:  63% (n=711) White  13% (n=142) Black  18% (n=203) Hispanic  6% (n=62) Other | Subgroup who reported sex with a main or casual partner in the past 12 months:  14% (n=156) ≤High school graduate  86% (n=962) >High school | Not reported |
| WHBS San Francisco  Raymond et al. 2010[55] | MSM  (n=723) | Banner advertisements on Gay.com, Manhunt, Friendster, MySpace, Facebook, and 19 others  Geographically targeted to San Francisco area  Internet venue-based sampling, in which study staff entered online venues frequented by MSM to invite men by online message or email to participate in the survey.  Recruitment November 2003 to December 2004 | Men  At least 18 years old  San Francisco Bay Area counties resident  Gay or bisexual,  Had sex with a man during the past 12 months. | 9% (n=62) 18-20  18% (n=132) 21-25  18% (n=129) 26-30  14% (n=98) 30-35  13% (n=93) 36-40  14% (n=101) 41-45  8% (n=55) 46-50  7% (n=53) >50 | n=716 reported  72% (n=512) Caucasian  2% (n=16) African American  13% (n=94) Latino  8% (n=56) Asian  0.4% (n=3) American Indian  1% (n=7) Native Hawaiian/Pacific Islander  2% (n=11) Other  2% (n=17) Mixed Race | 27% (n=64) High school or less  26% (n=191) Some college  37% (n=271) College  27% (n=192) Post-graduate | 7% (n=52) ≤$9,999  15% (n=107) $10,000-$29,000  15% (n=112) $30,000-$49,000  15% (n=105) $50,000-$69,000  12% (n=86) $70,000-$89,000  22% (n=158) ≥$90,000 |

1Numbers might not add to total in the ‘Target Population’ column because of missing or unknown data.