



2017 EPIDEMIOLOGY REPORT

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A report on sexually transmitted infection and human immunodeficiency virus testing, positivity, and behavioral trends from 2012–2016

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EXECUTIVE SUMMARY

Howard Brown Health's fourth Epidemiology Report highlights the significant public health role that Howard Brown plays in Chicago and the greater Midwest, as the region's largest LGBTQ health center. The report details sexually transmitted infection (STI) and human immunodeficiency virus (HIV) screening, positivity rates, and behavioral trends among clients accessing care at Howard Brown's clinical and outreach locations from 2012–2016.

This report stratifies STI and HIV screening and positivity by year, the type of service accessed, and client demographics such as age, race/ethnicity, gender identity, and sexual orientation. Over the past five years, Howard Brown provided 63,889 tests for HIV, 74,018 tests for syphilis, 70,430 tests for gonorrhea, and 70,290 tests for chlamydia. The absolute number of cases of primary and secondary syphilis, gonorrhea, chlamydia, and HIV diagnosed at Howard Brown have increased each year. Syphilis positivity has fluctuated year to year, but is trending up, from 1.26% in 2012 to 1.46% in 2016. Gonorrhea and chlamydia screening volume have increased on average 29% over the reporting period, while positivity for the infections have increased <1% each year on average. New HIV positivity dropped from 0.91% to 0.68% from 2015 to 2016.

Howard Brown observed that HIV and STIs continue to disproportionately impact men who have sex with men (MSM), transgender women, youth, and persons of color. Several of Howard Brown's trends mirror data reported in Chicago, including the increase in syphilis, small increases in gonorrhea and chlamydia positivity, a decline or plateau in HIV infections, and demographic groups that experience disproportionate disease prevalence and incidence.

Two particularly important successes over this five-year reporting period are:

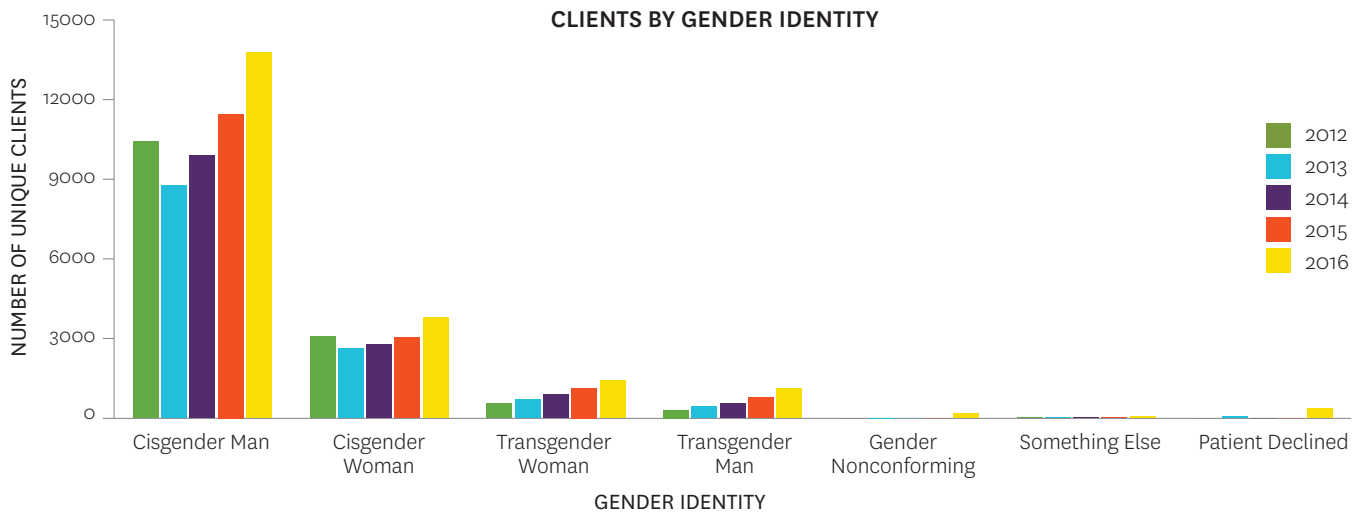
- The proportion of STI screening events that included extragenital tests (pharyngeal and/or rectal) in addition to traditional urogenital tests.
 - > STI screening events that included extragenital tests increased from 20% in 2012 to 69% in 2016.
- The success in providing pre-exposure prophylaxis (PrEP) care to prevent HIV acquisition.
 - > From 2012 to 2016, 3,384 clients initiated PrEP at Howard Brown.
 - > In 2015 and 2016, an estimated 44 new HIV infections among MSM and transgender women were averted through the use of PrEP, providing an estimated savings of \$10 million in lifetime medical costs.

We believe this report illustrates both the healthcare successes and challenges faced by our community. This report is designed to educate our community about the impact of our work in public health. We thank our patients and everyone who relies on Howard Brown for their sexual health and STI screening needs.

BACKGROUND & DATA SOURCES

Howard Brown Health is the largest LGBTQ health center in the Midwest, providing comprehensive medical, social, and behavioral health services to more than 26,170 adults and youth each year. Howard Brown has several clinical locations throughout the city, in Edgewater, Englewood, Hyde Park, Lakeview, Rogers Park, and Uptown.

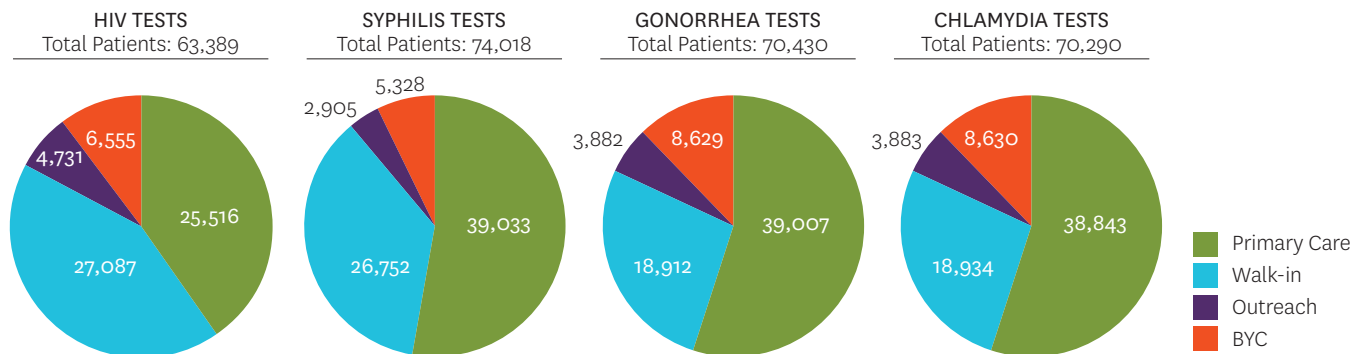
Howard Brown serves patients across the gender spectrum.



This report highlights trends in HIV and STI incidence over the past five years and also distinguishes rates among screening methods. All surveillance data are collected from clients seeking screening through outreach venues and Howard Brown’s primary care and Sexual Health Walk-in Clinic, and are entered into Howard Brown’s electronic medical record system.

DATA HIGHLIGHTS

Howard Brown continues to see an increase in its patient population due to added locations and increased accessibility to the Sexual Health Walk-in Clinic, achieved by adopting a sliding scale fee. Over the past five years, the number of visits for primary care have more than doubled (104%), and walk-in visits have increased by 15%. Over this five-year period, 45,839 unique patients have accessed screening services across Howard Brown sites and outreach venues. During this period, 63,889 tests for HIV, 74,018 tests for syphilis, 70,430 tests for gonorrhea, and 70,290 tests for chlamydia were conducted. The bulk of HIV/STI screening occurs in the primary care setting, followed by the Sexual Health Walk-in Clinic, Broadway Youth Center (BYC), and outreach, respectively.



Absolute numbers of primary and secondary (P&S) syphilis continue to increase each year, showing an average of 23% increase each year over the five-year period across all sites. Reported cases for gonorrhea and chlamydia have also increased from year to year.

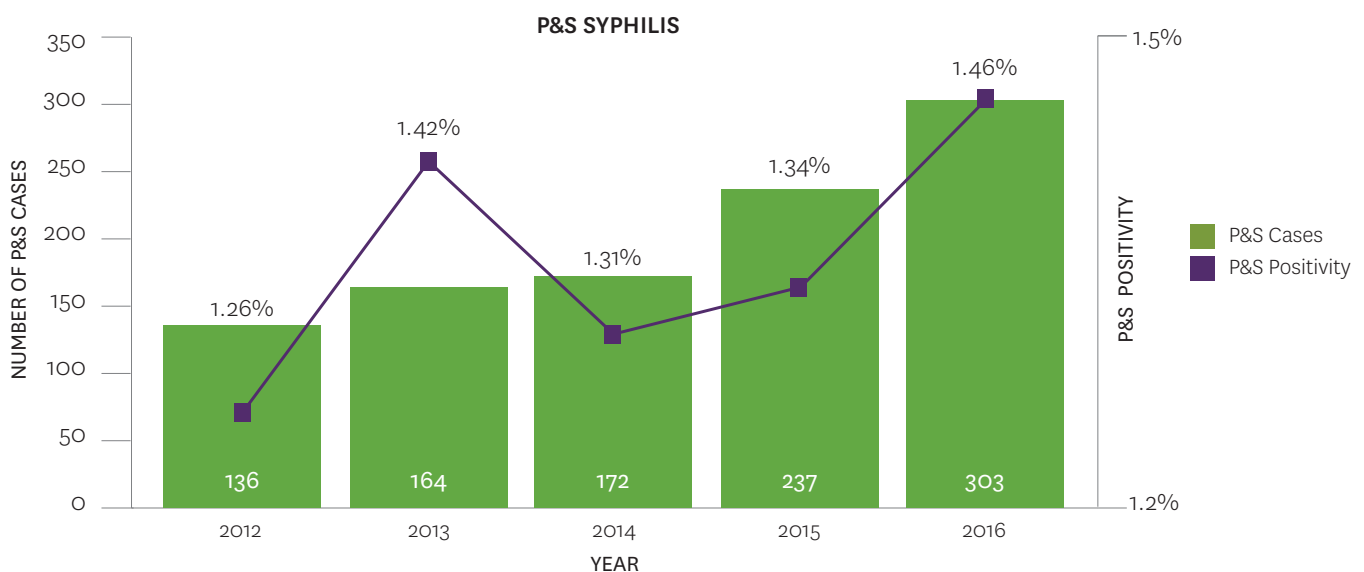
HIV and STIs continue to disproportionately impact men who have sex with men (MSM), transgender women, youth, and persons of color in Chicago. Howard Brown is addressing this need by further increasing access to screening services and prevention.

| | HIV (2015–2016) | | GONORRHEA (2012–2016) | | CHLAMYDIA (2012–2016) | | P&S SYPHILIS (2012–2016) | |
|---|--------------------|--------------|--------------------------|--------------|--------------------------|--------------|-----------------------------|--------------|
| | # New Positive | % Positivity | # Positive | % Positivity | # Positive | % Positivity | # Positive | % Positivity |
| GENDER IDENTITY | | | | | | | | |
| Cisgender men | 243 | 1.02% | 5,992 | 10.74% | 5,568 | 10.00% | 969 | 1.58% |
| Cisgender women | 2 | 0.03% | 144 | 1.55% | 731 | 7.89% | 9 | 0.12% |
| Transgender women | 18 | 1.61% | 141 | 4.11% | 204 | 5.95% | 29 | 0.82% |
| Transgender men | 4 | 0.60% | 40 | 3.00% | 41 | 3.09% | 2 | 0.17% |
| Genderqueer/Gender Nonconforming | 0 | 0.00% | 14 | 7.78% | 13 | 7.22% | 1 | 0.85% |
| Something Else | 0 | 0.00% | 0 | 0.00% | 10 | 10.75% | 1 | 1.37% |
| Patient Declined | 4 | 2.34% | 26 | 7.93% | 16 | 4.88% | 2 | 0.73% |
| RACE/ETHNICITY | | | | | | | | |
| Non-Hispanic White | 100 | 0.57% | 3,637 | 9.47% | 3,403 | 8.88% | 508 | 1.26% |
| Non-Hispanic Black or African American | 89 | 1.42% | 1,393 | 9.40% | 1,483 | 10.02% | 213 | 1.38% |
| Hispanic or Latino | 57 | 1.25% | 778 | 7.92% | 970 | 9.90% | 206 | 1.88% |
| Non-Hispanic Asian | 11 | 0.59% | 212 | 6.36% | 324 | 9.73% | 44 | 1.25% |
| Non-Hispanic American Indian/ Alaska Native | 1 | 0.53% | 47 | 9.48% | 50 | 10.08% | 15 | 2.83% |
| Non-Hispanic Native Hawaiian or Other Pacific Islander | 0 | 0.00% | 15 | 7.89% | 19 | 10.00% | 3 | 1.68% |
| Unspecified | 4 | 0.41% | 73 | 5.60% | 122 | 9.36% | 7 | 0.54% |
| Patient Declined | 9 | 0.87% | 202 | 9.73% | 212 | 10.22% | 17 | 0.91% |
| AGE CATEGORIES | | | | | | | | |
| ≤18 | 8 | 1.02% | 109 | 8.04% | 198 | 14.59% | 15 | 1.60% |
| 19–25 | 87 | 0.80% | 1,990 | 9.73% | 2,408 | 11.77% | 271 | 1.48% |
| 26–30 | 70 | 0.97% | 1,684 | 11.12% | 1,529 | 10.11% | 204 | 1.29% |
| 31–40 | 67 | 0.94% | 1,614 | 9.50% | 1,526 | 8.99% | 270 | 1.47% |
| 41–50 | 25 | 0.70% | 618 | 6.70% | 615 | 6.70% | 168 | 1.51% |
| ≥50 | 14 | 0.45% | 342 | 4.71% | 307 | 4.25% | 85 | 0.90% |
| AREA OF RESIDENCE IN CHICAGO | | | | | | | | |
| North | 130 | 0.70% | 4,064 | 9.64% | 3,952 | 9.40% | 624 | 1.40% |
| South | 57 | 1.25% | 887 | 8.54% | 1,067 | 10.29% | 146 | 1.38% |
| West | 20 | 0.87% | 469 | 9.11% | 499 | 9.70% | 85 | 1.61% |
| Unknown | 4 | 0.50% | 125 | 7.67% | 148 | 9.09% | 12 | 0.78% |
| Suburb | 47 | 1.01% | 633 | 7.22% | 736 | 8.40% | 121 | 1.26% |
| Out of state | 13 | 0.80% | 179 | 7.61% | 181 | 7.71% | 25 | 1.04% |

SYPHILIS

In the Chicago metropolitan area, syphilis rates continue to rise, increasing by nearly 30% between 2014 and 2015.¹ Men who have sex with men also continue to be disproportionately impacted by syphilis, as rates among MSM in Chicago have risen 3.1% on average since 2010. Primary and secondary syphilis rates are also highest among non-Hispanic Whites, Hispanics, and Asian/Pacific Islanders. Syphilis rates have decreased for non-Hispanic Blacks.²

Howard Brown diagnoses a large portion of the reported syphilis cases in Chicago. Between 2012–2016, the number of reactive P&S syphilis cases has more than doubled. In 2016, 303 new P&S syphilis cases were detected; a 28% increase from the previous year. P&S syphilis positivity has fluctuated between 1.26% in 2012 to 1.46% in 2016.



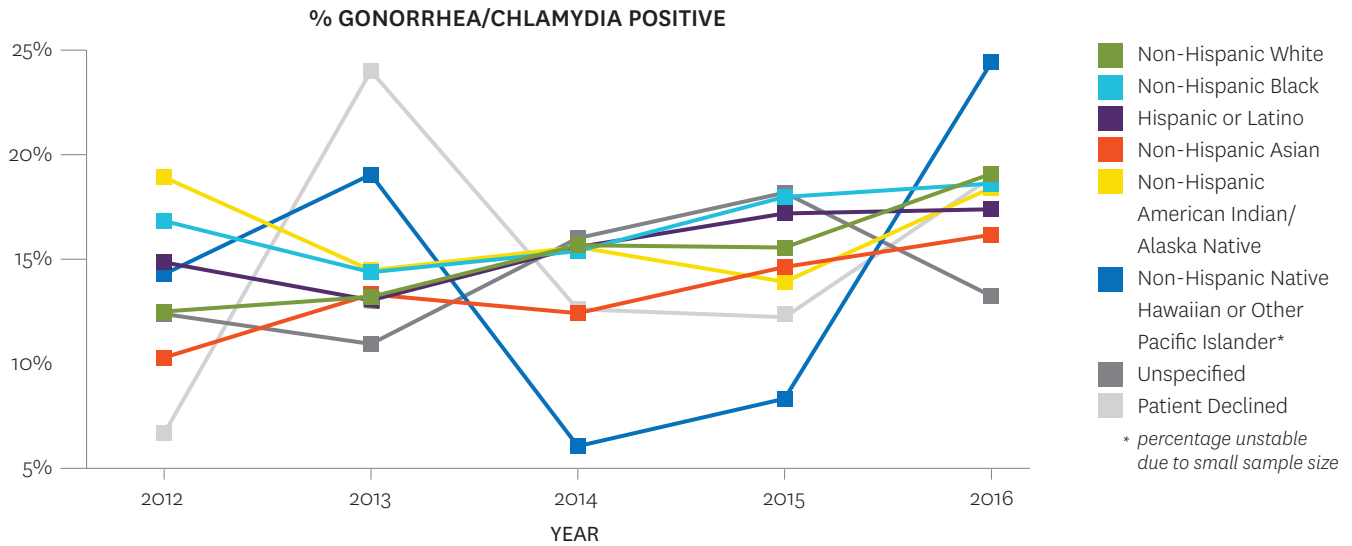
The majority of new syphilis infections at Howard Brown are found in non-Hispanic Whites; however, non-Hispanic Blacks and Hispanics are still disproportionately impacted, experiencing slightly higher positivity rates (1.47% and 1.51% respectively, versus 1.35% in non-Hispanic Whites). Howard Brown remains committed to addressing racial disparities in HIV/STI rates by expanding clinical sites to Rogers Park and Englewood in 2016, and in 2017 expanding to Hyde Park and opening an additional Sexual Health Walk-in Clinic.

The most common reported risk factors among patients testing positive for P&S syphilis are condomless sex and anonymous partners.

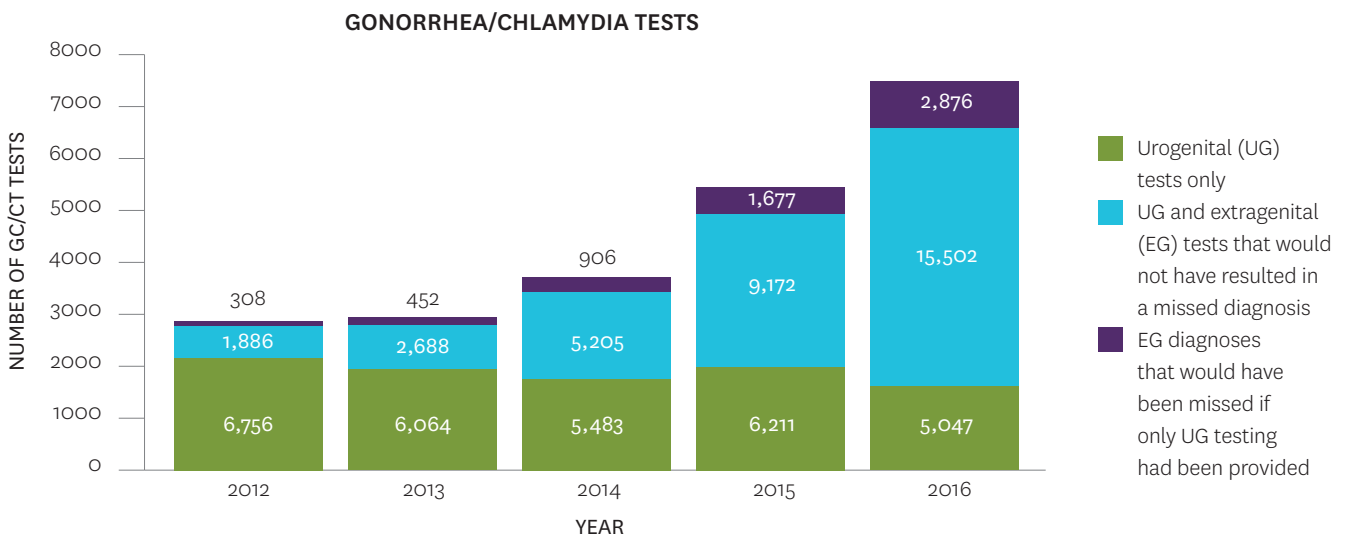
GONORRHEA AND CHLAMYDIA

In Chicago, chlamydia (CT) rates have remained relatively stable, increasing, on average, by 0.5% per year between 2010 and 2014. Gonorrhea (GC) rates have increased slightly more during this time, <1.0% per year. Non-Hispanic Whites, Asian/Pacific Islanders, Hispanics, and individuals ages 25–39 have experienced the largest increases in chlamydia and gonorrhea. Non-Hispanic Blacks have experienced a decline in infection rates.³

While CT and GC infection rates have increased minimally in Chicago, between 2012 and 2016, the number of reactive GC and CT screenings at Howard Brown has nearly quadrupled. In 2016, 2,514 gonorrhea infections and 2,488 chlamydia infections were detected across all sites, showing a 68% and 51% increase in morbidity from 2015. The population that has experienced the highest rates of GC/CT of those screened at Howard Brown are MSM. Contrary to Chicago trends, rates among non-Hispanic Blacks have increased each year since 2013.



Because a large number of extragenital gonorrhea and chlamydia infections may be asymptomatic, urogenital screening alone is not sufficient for detection of GC/CT. Combined urogenital and extragenital screening is necessary, and Howard Brown has significantly increased combined screening from 20% in 2012 to 69% in 2016, out of all GC/CT screenings conducted. In 2016, 2,876 extragenital GC/CT infections would have been missed if only urogenital screening was conducted.



Patients testing positive for GC/CT most commonly report condomless sex, anonymous sex partners, and marijuana use.

HIV

The HIV infection rates in the Chicago metropolitan area have plateaued between 2010 and 2014, showing decreasing rates among each demographic and transmission group, with the exception of MSM. MSM experience an average increase in HIV infections of 3.1% from year to year.²

Howard Brown's screening for HIV increased by 41% between 2015 and 2016 alone, from 14,538 tests to 20,492 tests. The absolute number of HIV infections newly identified by Howard Brown also increased, from 132 to 139. Importantly, though, the rate of newly identified HIV dropped from 0.91% (132 positives/14,538 tests) to 0.68% (139 positives/20,492 tests) between 2015–2016. MSM and transgender women continue to experience the highest rates of infection. Non-Hispanic Blacks also remain disproportionately impacted by HIV. Considering all newly diagnosed HIV infections at Howard Brown, the percentage among Non-Hispanic Blacks increased from 29% to 38% between 2015 to 2016, while accounting for only 19% of the HIV tests during the same time period.

| Year | # HIV Screening Events | # Newly Identified HIV Infections | New HIV positivity |
|----------|------------------------|-----------------------------------|--------------------|
| 2015 | 14,538 | 132 | 0.91% |
| 2016 | 20,492 | 139 | 0.68% |
| % change | 40.95% | 5.30% | -25.29% |

Patients testing positive for HIV most commonly report condomless sex, having had anonymous partners, marijuana use, and/or use of inhalants.

| Risk factor | % of P&S cases reporting risk | % of GC/CT cases reporting risk | % of HIV cases reporting risk |
|--------------------|-------------------------------|---------------------------------|-------------------------------|
| Condomless Sex | 51.64% | 64.76% | 87.57% |
| Anonymous Partners | 29.21% | 37.25% | 57.84% |
| Meth | 2.51% | 1.22% | 4.86% |
| Marijuana | 10.25% | 17.40% | 27.57% |
| Club Drugs | 1.16% | 1.52% | 4.32% |
| Cocaine | 2.71% | 3.33% | 3.78% |
| Ecstasy | 0.97% | 3.15% | 4.86% |
| Injection Drugs | 0.39% | 0.53% | 2.16% |
| Inhalants | 7.93% | 10.62% | 20.00% |

When an individual is diagnosed with HIV, co-infections may also be present at the time of diagnosis. In 2015 and 2016, nearly 30% of individuals diagnosed with HIV were also diagnosed with GC/CT infections on the same day. This frequency of same-day STI co-infections emphasizes the importance of full STI screening panels. Also of note is that among individuals diagnosed with HIV in 2015, 28% were infected with gonorrhea and/or chlamydia in the year following their diagnosis. This statistic indicates that it is important to quickly link patients to HIV care in order to lower their viral loads, which may lower or eliminate their ability to transmit HIV, should they engage in condomless sex after initial diagnosis.

SPECIAL CONSIDERATIONS

Howard Brown promotes access to HIV/STI screening by providing a variety of opportunities to get screened. At the clinic, patients may access screening and treatment in their primary care appointments with providers or through the Sexual Health Walk-in Clinic. Howard Brown conducts HIV and STI screening outside of its facilities through outreach, conducting rapid HIV tests, phlebotomy, and collecting urine and swabs at locations in the city and suburban areas. BYC also provides HIV/STI screening through primary care and drop-in services.

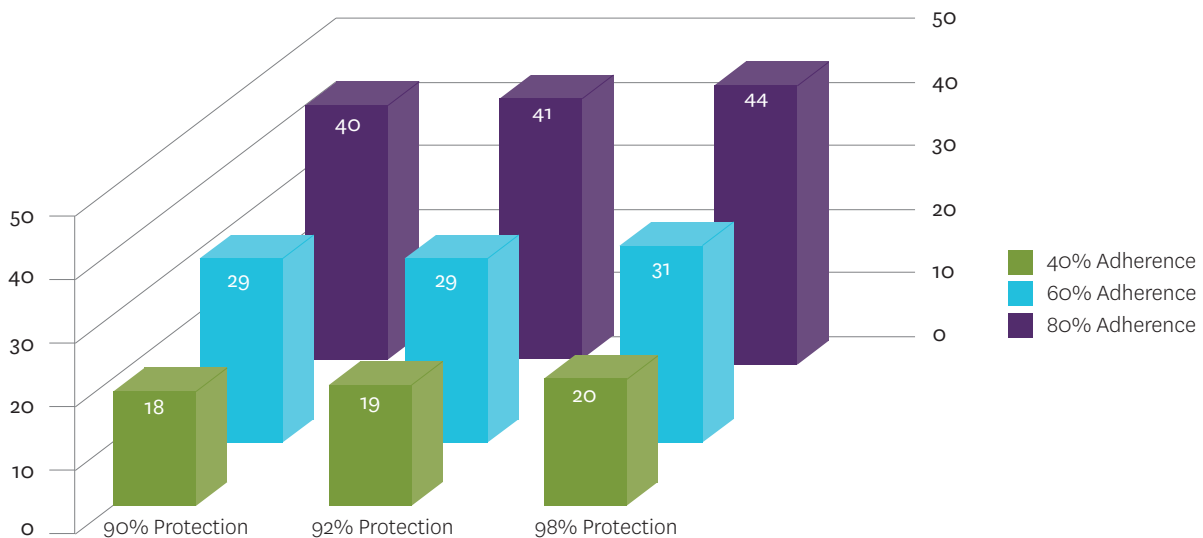
The Sexual Health Walk-in Clinic and BYC experience higher rates of gonorrhea and chlamydia infections compared to primary care and outreach. This may be due to the higher likelihood of patients accessing these services because they are experiencing symptoms.³ The Sexual Health Walk-in Clinic also shows the highest rates of new HIV infections.

| Line of Service | GC Positivity | CT Positivity | New HIV Positivity |
|-----------------|---------------|---------------|--------------------|
| Primary Care | 7.80% | 8.15% | 0.34% |
| Walk-In | 12.30% | 10.66% | 0.52% |
| Outreach | 4.95% | 6.05% | 0.42% |
| BYC | 9.18% | 13.51% | 0.35% |

Howard Brown is a national leader in biomedical HIV prevention interventions, providing same day nPEP (non-occupational post-exposure prophylaxis), PrEP medical care, navigation, and case management. Because MSM and transgender women are disproportionately impacted by HIV, it is crucial that PrEP (pre-exposure prophylaxis) is affordable and accessible for these communities. In 2015 and 2016, 2,544 MSM and transgender women (1,058 and 1,486 each year, respectively) initiated PrEP at Howard Brown regardless of ability to pay.

Given the proportion of MSM and transgender women receiving HIV-negative and HIV-positive results at Howard Brown in 2015 and 2016, and the percentage of HIV-negative MSM and transgender women on PrEP, it is estimated that up to 44 new HIV infections were averted between 2015 and 2016 as a result of this public health intervention.*

ESTIMATED HIV INFECTIONS AVERTED AMONG MSM AND TRANSGENDER WOMEN



The estimated average lifetime medical cost saved by avoiding one HIV infection is \$229,800.⁴ Given this model, an estimated \$10,111,200 is saved by preventing 44 new HIV infections.

*Assuming 80% adherence and 98% protection

REFERENCES

1. Table 25. All Stages of Syphilis* – Reported Cases and Rates of Reported Cases in Selected Metropolitan Statistical Areas (MSAs)† in Alphabetical Order, United States 2011–2015. Centers for Disease Control and Prevention. <https://www.cdc.gov/std/stats15/tables/25.htm>. Published October 24, 2016. Accessed March 3, 2017.
2. HIV/STI Surveillance Report, Chicago. https://www.cityofchicago.org/content/dam/city/depts/cdph/HIV_STI/HIV_STISurveillanceReport2015_revised.pdf. Published December 2015. Accessed February 24, 2017.
3. Celum, C. L., Bolan, G., Krone, M., Code, K., Leone, P., Spaulding, C., Hook, E. W. (1997). Patients Attending STD Clinics in an Evolving Health Care Environment. *Sexually Transmitted Diseases*, 24(10), 599–605. doi:10.1097/00007435-199711000-00009
4. Schackman BR, Fleishman JA, Su AE, et al. The Lifetime Medical Cost Savings From Preventing HIV in the United States. *Medical Care*. 2015;1. doi:10.1097/mlr.000000000000308.

For more information and hours for our Sexual Health Walk-in Clinics, Broadway Youth Center, and primary care, please visit howardbrown.org or call 773.388.1600.

Howard Brown serves all people, regardless of ability to pay. Patients may qualify for our sliding scale fee.

OUR LOCATIONS:

Howard Brown Health Clark | 6500 N. Clark Street, Chicago IL 60626

Howard Brown Health Sheridan | 4025 N. Sheridan Road, Chicago, IL 60613

Howard Brown Health 55th St. | 1525 E. 55th Street, Chicago, IL 60637

Howard Brown Health 63rd St. | 641 W. 63rd Street, Chicago, IL 60621

Howard Brown Health Halsted | 3245 N. Halsted Street, Chicago, IL 60657

Howard Brown Health at TPAN | 5537 N. Broadway, Chicago, IL 60640

Broadway Youth Center | 4009 N. Broadway, Chicago, IL 60613



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