



Collaboration between Howard Brown Health and Walgreens pharmacies for HIV pre-exposure prophylaxis: ***Identifying usage patterns, patient characteristics, and geographic distribution in Chicago***

Ron Hazen, MPH; Heather Kirkham, PhD, MPH;
Drew Halbur, BSPHarm, AAHIVP, BCACP; Thomas (TK) Peacock, BA;
Glen Pietrandoni, R.Ph., AAHIVP; Ambrose Delpino, PharmD

Midwest LGBTQ Health Symposium

Sept 14 15, 2018.

Presented by Ron Hazen and Drew Halbur.

Disclosures

Drew Halbur and Ron Hazen are employees of Walgreen Co. for whom this research was conducted.

This research was funded internally by Walgreen Co.

All disclosures have been resolved by the symposium planning committee.

Presentation overview

- Background
- Study purpose
- Methods
- Results
- Discussion/Conclusion
- Questions

Howard Brown and Walgreens

- Howard Brown Health (HBH) is one of the nation's largest lesbian, gay, bisexual, transgender, and queer (LGBTQ) organizations with multiple locations throughout the city of Chicago.¹
- HBH serves a population of 27,000 adults and youth in a diverse health and social service delivery system focused around seven major programmatic divisions:
 - primary medical care, behavioral health, research, HIV/STI prevention, youth services, elder services, and community initiatives.¹
- Howard Brown Health (HBH) and Walgreens HIV specialized pharmacies play a significant role in initiating and maintaining PrEP therapy by providing personalized support and adherence counseling.

1. Howard Brown Health. Mission and Overview – About Howard Brown.
<https://howardbrown.org/mission-and-overview/>. Accessed August 2, 2018.

PrEP is pre-exposure prophylaxis for HIV prevention

- Truvada®, once daily fixed-dose emtricitabine (FTC) 200 mg and tenofovir disoproxil fumarate 300 mg (TDF)
- FTC/TDF is the only FDA approved drug combination to prevent HIV¹
- PrEP treatment guidelines include initial and regular (3 months) screenings for HIV/STI, and ≤ 90 day supply¹
- Recommended for certain at-risk groups ~ 1.2 million at risk²:
 - 600K heterosexual, 500K MSM, and 100K IDU

1. Centers for Disease Control. Pre-Exposure Prophylaxis for the Prevention of HIV Infection in the US – 2014 Clinical Providers' Supplement. <https://www.cdc.gov/hiv/pdf/guidelines/PrEPProviderSupplement2014.pdf>. Accessed August 2, 2018.

2. Smith DK, Van Handel M, Wolitski RJ, et al. Vital signs: estimated percentages and numbers of adults with indications for preexposure prophylaxis to prevent HIV acquisition—United States, 2015. MMWR Morb Mortal Wkly Rep. 2015;64(46):1291-1295.

PrEP has been shown to reduce HIV infection risk by up to 100%^{1,2,3}

Study	Participants	N	Study Type	Drug	Adherence adjusted Efficacy
iPrEx ¹	MSM	2,499	Clinical trial	FTC/TDF	92%
TDF2 ¹	Heterosexual men/women	1,200	Clinical trial	FTC/TDF	85%
Partners PrEP ¹	Heterosexual +/- couples	4,747	Clinical trial	TDF; FTC/TDF	86% / 90%
Bangkok IDE ¹	IDU	2,400	Clinical trial	TDF	74%
Kaiser ²	99% MSM	388 PY	Real-world observational	FTC/TDF	100%
SF Strut Clinic ³	99% MEN	1,252	Real-world observational	FTC/TDF	100%

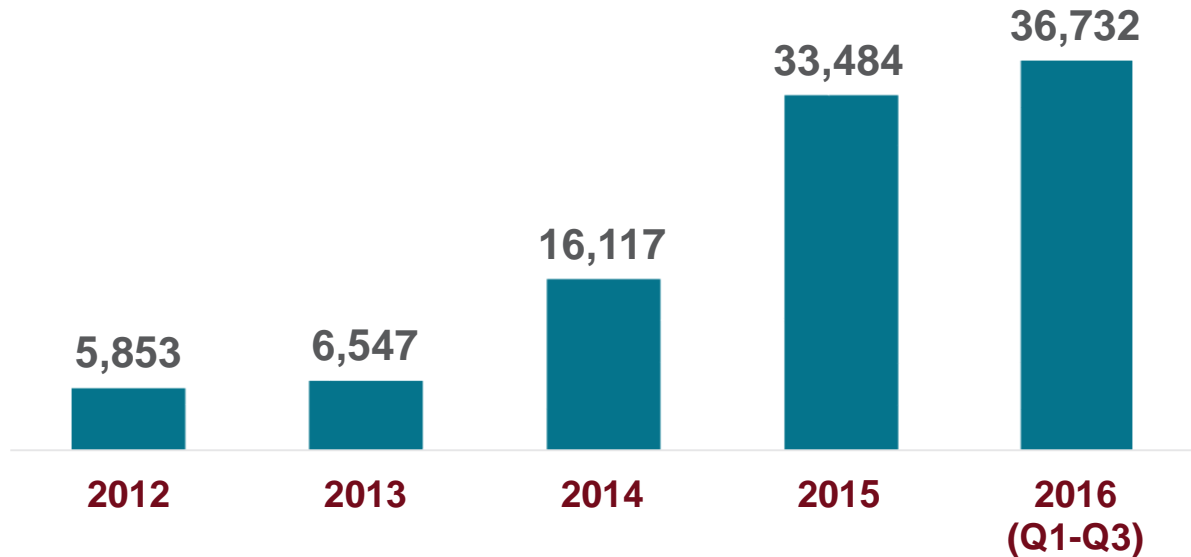
1. PreExposure Prophylaxis for the Prevention of HIV Infection in the United States, 2014 Clinical Practice Guidelines. Adapted from <http://www.cdc.gov/hiv/pdf/guidelines/PrEPguidelines2014.pdf>. Accessed July 13, 2018. Volk JE, Marcus JL, Phengrasamy T, et al.

2. No New HIV Infections With Increasing Use of HIV Preexposure Prophylaxis in a Clinical Practice Setting. Clinical Infectious Diseases: An Official Publication of the Infectious Diseases Society of America. 2015;61(10):1601-1603. doi:10.1093/cid/civ778.

3. Gibson S et al. (Crouch P-C presenting) Eliminating barriers to increase uptake of PrEP in a community-based clinic in San Francisco. 21st International AIDS Conference, Durban, abstract FRAE0104, 2016.

PrEP users in US increased 6.9 times from 2012 to 2016¹

- 98,732 Unique Individuals Starting PrEP from 2012-2016
- 1,715 in Q3 2012 to 11,827 in Q3 2016



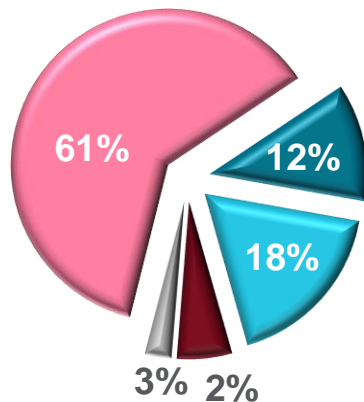
1. Mera R, et al. Changes in Truvada (TVD) for HIV pre-exposure prophylaxis (PrEP) utilization in the United States: (2012-2016). Poster presented at: 9th International AIDS Society Conference on HIV Science 2017; July 23-26, 2017; Paris, France. Poster #WEPEC0919. Accessed August 2nd, 2018.

©2018 Walgreen Co. All rights reserved.

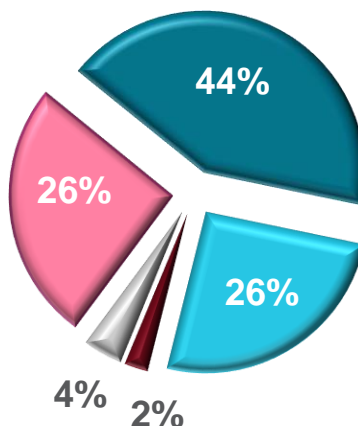
Walgreens Trusted since 1901™

FTC/TDF for PrEP use among African Americans and Hispanics is low relative to the rate of new HIV infections

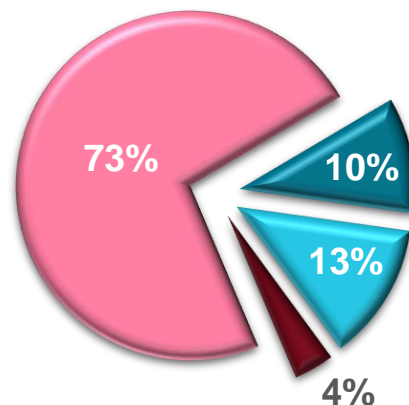
Estimated Population Distribution by Race/Ethnicity, 2016¹



Estimated New HIV Infections, 2016¹



Total FTC/TDF for PrEP Utilization by Race/Ethnicity, Sept 2016²

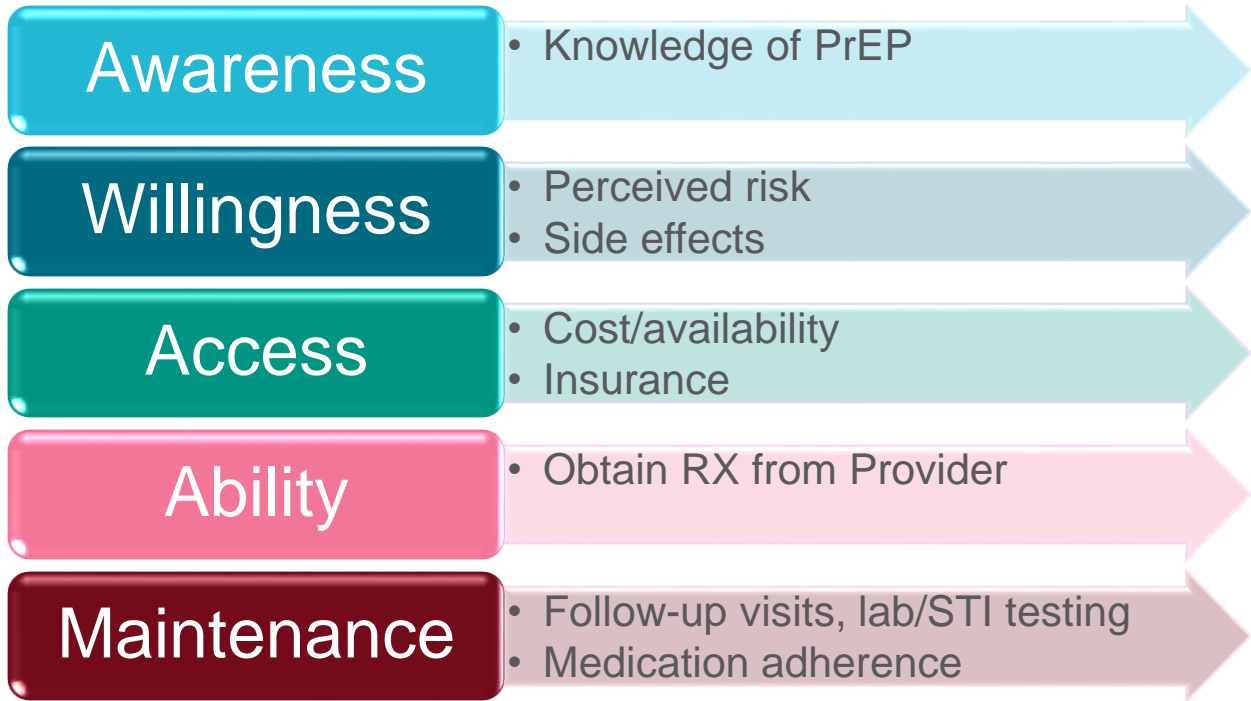


White
 African American
 Hispanic
 Asian
 Multiracial/Other

1. CDC. HIV Surveillance Report, *Diagnoses of HIV Infection in the United States and Dependent Areas*, 2016, Vol. 28; November 2017. KFF. State Health Facts; Accessed November 2017.

2. These data represent 41% of unique individuals who have started TVD for PrEP from 2012-3Q2016.

HIV PrEP motivations and barriers¹



1. Parsons JT, Rendina HJ, Lassiter JM, Whitfield TH, Starks TJ, Grov C. Uptake of HIV pre-exposure prophylaxis (PrEP) in a national cohort of gay and bisexual men in the United States. *J Acquir Immune Defic Syndr*. 2017;74(3):285-292.

PrEP adherence differs from HIV treatment adherence¹

- May be used for high-risk periods (on demand)
- May provide protection if taken less than daily (i.e. ≥ 4 pills/week²)
- Users have other means (e.g. condoms) to prevent HIV
- PrEP reaches peak concentration in 9 days for rectal tissue in and 20 days for blood and vaginal tissue

¹ World Health Organization. WHO consultation on PrEP adherence – June 8, 2014; <http://www.who.int/hiv/pub/prep/Prep-June2014.pdf>. Accessed July 16, 2018.

² Buchbinder SP, Glidden DV, Liu AY, et al. HIV pre-exposure prophylaxis in men who have sex with men and transgender women: a secondary analysis of a phase 3 randomised controlled efficacy trial. *The Lancet infectious diseases*. 2014;14(6):468-475.

Study purpose

To characterize:

- (1) medication usage patterns,
- (2) demographic characteristics, and
- (3) the geographic distribution

among Walgreens' PrEP users in Chicago with HBH providers.

Study design and outcomes

Study design

Retrospective cohort study using 2016 pharmacy claims data from Walgreens.

Study population

N=1,105 PrEP patients in calendar year 2016 were included if they were prescribed PrEP by a HBH provider and were on PrEP therapy for ≥ 90 days, excluding those on combined ARV therapy, and were followed for 365 days.

Primary outcome

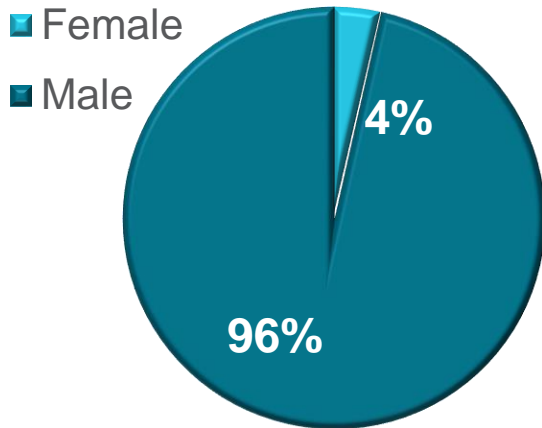
Medication adherence (PDC), length of use and geographic distribution.

Analysis software

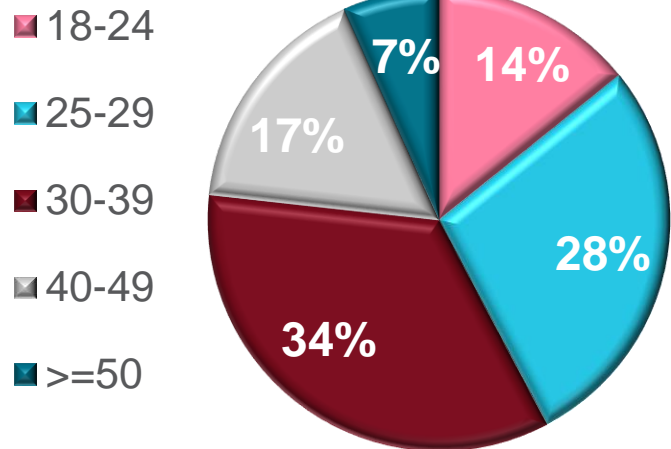
Statistics in SAS 9.3. Maps in ArcGIS.

HBH PrEP users (N=1,105) were mostly male (96%) and ages 25-39 (62%)

Gender*



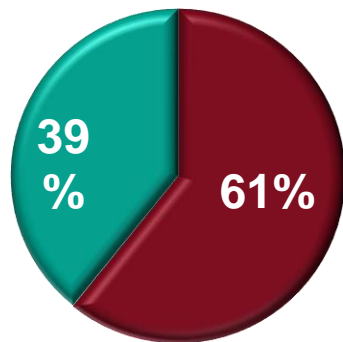
Age groups



**unable to identify transgender users*

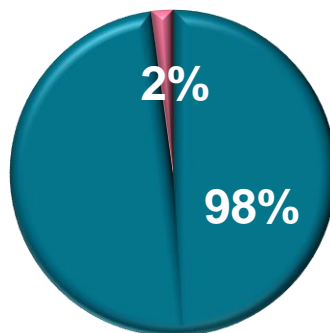
HBH PrEP users (N=1,105) were more likely to be commercially insured (61%), have ≤\$20 copay (98%) and be new to therapy (56%)

Payer Type*



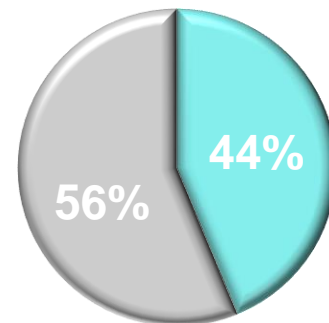
■ Commercial
■ Non-Commercial

Copay Category



■ 20 or less
■ More than 20

New-to-therapy

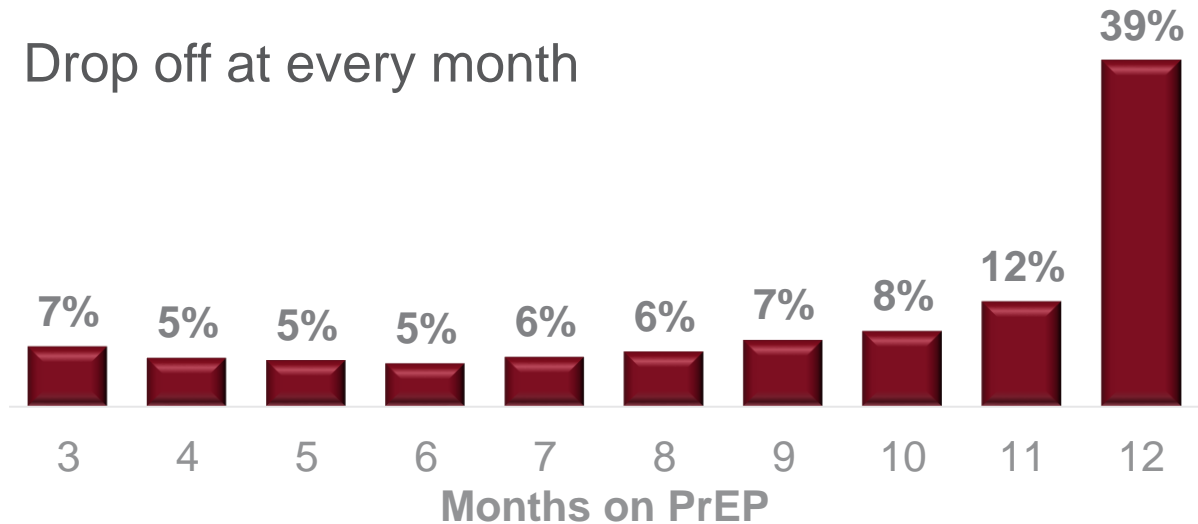


■ No ■ Yes

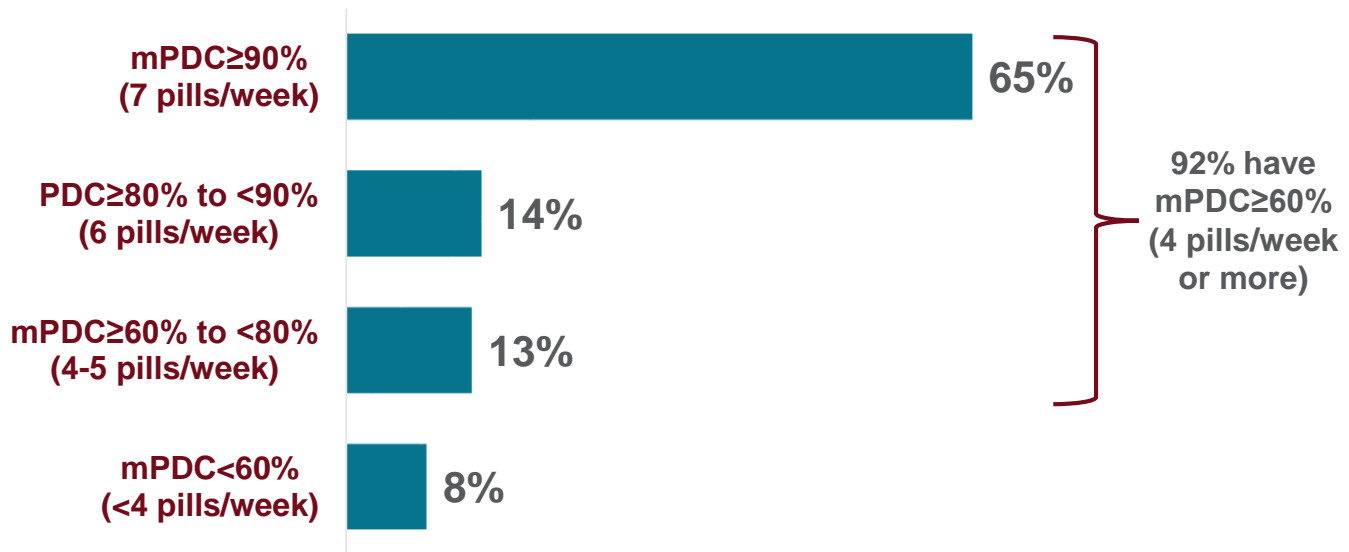
* Commercial insurance = commercial prescription insurance

HBH PrEP users averaged 9 months of therapy and 39% had 1 year of coverage

- Average of 9 months
- 39% had PrEP coverage for the entire year
- Drop off at every month



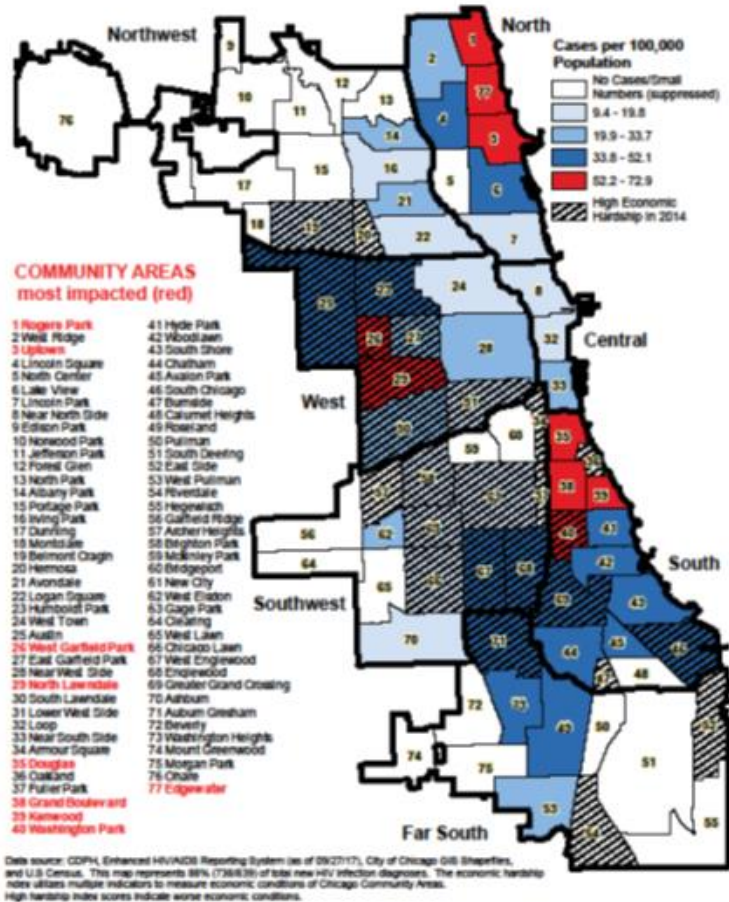
PrEP adherence, or modified proportion of days covered (mPDC), was 88%; most had mPDC≥90% (65%)



$$mPDC = \frac{\text{Days with medication in period}}{(\text{Last fill date} + \text{days supply}) - \text{first fill date}}$$

2016 Rate of HIV Infection Diagnoses in Chicago by Community Area¹

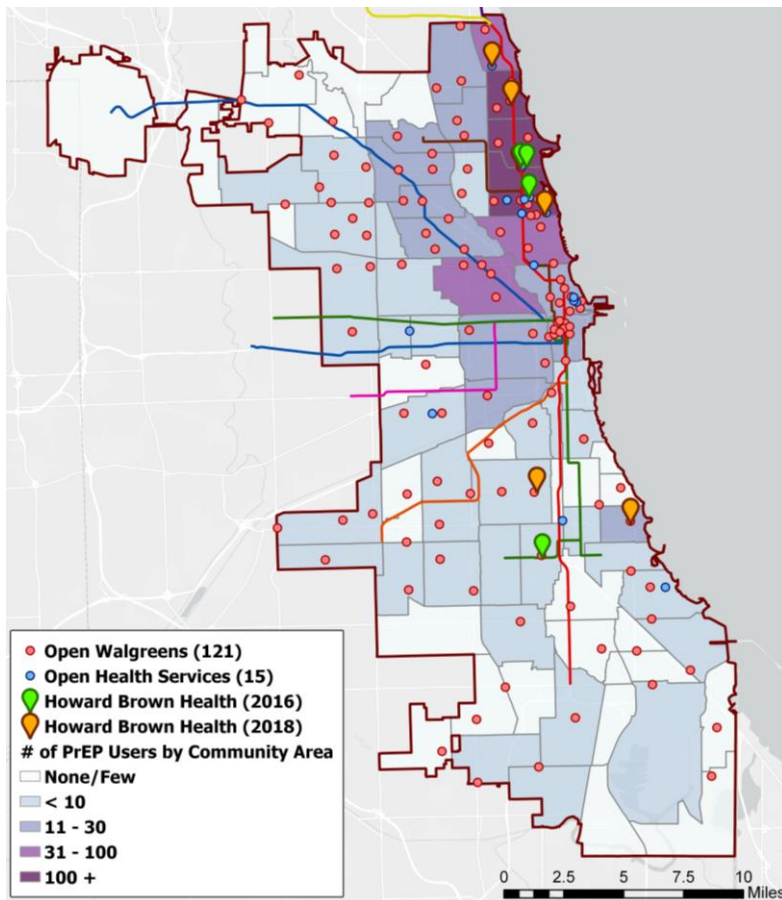
- Community areas with highest the highest rates of HIV infection diagnoses were clustered on the north, west and south sides
- Rogers Park, Uptown, Edgewater
- West Garfield Park, North Lawndale
- Douglass, Grand Boulevard, Kenwood and Washington Park
- There remains a need for greater PrEP uptake in community areas on south and west sides, in Black and Latino communities



1. Chicago Department of Public Health. HIV/STI Surveillance Report 2017. Chicago, IL: City of Chicago, December 2017.

Walgreens PrEP users with HBH Providers in Chicago, 2016

- There are ~136 Walgreens throughout the city of Chicago, ~15 of which are health system/specialty pharmacies.
- In 2016, HBH primarily located on north side; now there are 9 locations located throughout the city.
- By location, PrEP users with HBH providers resided throughout Chicago, but were predominately located on the north side.



Conclusions

- HBH PrEP users:
 - High adherence (65% \geq 90% PDC; 7 pills/week); 92% have mPDC \geq 60% (4 pills/week or more)
 - 39% used for entire year period; average time was 9 months
 - Located throughout Chicago, but many on Northside.
- Although a high proportion of PrEP patients had non-commercial insurance, almost none had pharmacy copays of more than \$20.

Conclusions

- Through close collaboration, community-based pharmacies and community health centers are able to effectively initiate PrEP for patients and eliminate medication-related financial barriers to accessing therapy.
- Future research should investigate improved methods for PrEP adherence, persistence, and access among all communities, including those most impacted by HIV infection.
- There remains a need to address PrEP disparities throughout Chicago.

Limitations

- Observational design; 2016 data only. Additional HBH locations opened after study period.
- PrEP users from Walgreens' pharmacy claims data (no clinical data). Cannot confirm HIV status.
- Limited demographics available.
- Unable to determine if a patient fills scripts at another pharmacy.
- Missing data, etc.

Disclaimer

Presented at the Midwest LGBTQ Health Symposium, September 14-15, Chicago, IL.

For more information on this presentation, please contact:

ronald.hazen@waglgreens.com or drew.halbur@waglgreens.com.

This research was funded internally by Walgreen Co.

The findings and conclusions of this analysis are those of the authors and do not necessarily represent the official position of Walgreens Co.

This publication is for informational purposes only. It is not intended to be a substitute for professional medical advice, diagnosis or treatment. Always seek the advice of your physician or other qualified healthcare provider with any questions you may have regarding a medical condition. Never disregard professional medical advice or delay in seeking it because of something you have read in this publication. If you think you may have a medical emergency, call your physician or 911 immediately. Walgreens does not recommend or endorse any specific tests, physicians, products, procedures, opinions or other information that may be mentioned in this publication. Reliance on any information provided in this publication is solely at your own risk.

©2018 Walgreen Co. All rights reserved.

Thank you
&
Questions?

PrEP resources - patients

Prelocator.org

Greaterthan.org/get-prep

Truvada.com

Gileadadvancingaccess.com

WhatisPrEP.org

Prefacts.org

PrEP resources - providers

Cdc.gov/hiv

Risk reduction tool: cdc.gov/hivrisk

Truvadapreprems.com