The BESURE study

2019 Update

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MARYLAND
Department of Health

BE SURE

Overview

- National HIV Behavioral Surveillance and BESURE
- Baltimore Data Overview
- HIV “Cascade” Indicators, All Waves
- IDU5 Data Update
- Upcoming HET5 Cycle

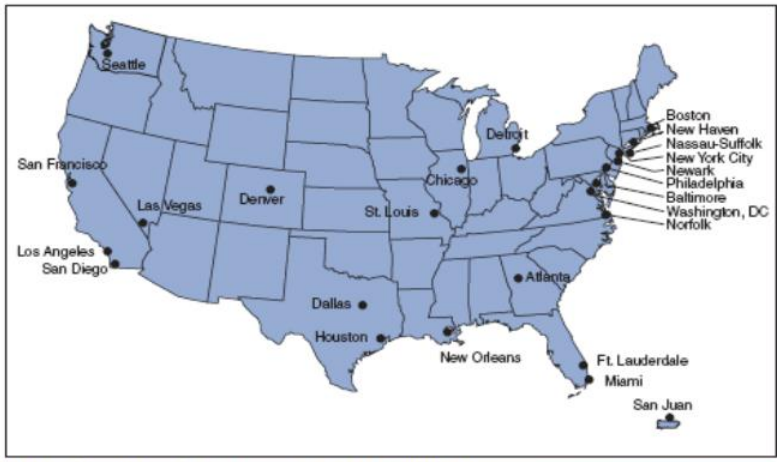
NHBS & BESURE

National HIV Behavioral Surveillance (NHBS)

- Implemented in up to 25 metropolitan areas (varied over time)

- Major divisions of metropolitan areas with greatest numbers of AIDS cases in the U.S.

FIGURE 1. Participating metropolitan statistical areas in the National Human Immunodeficiency Virus Behavioral Surveillance System — United States



MMWR – Surveillance Summaries - July 7, 2006 / 55(SS06);1-16

Baltimore HIV Behavioral Surveillance

The

BEhavioral

SURveillance

REsearch

Study

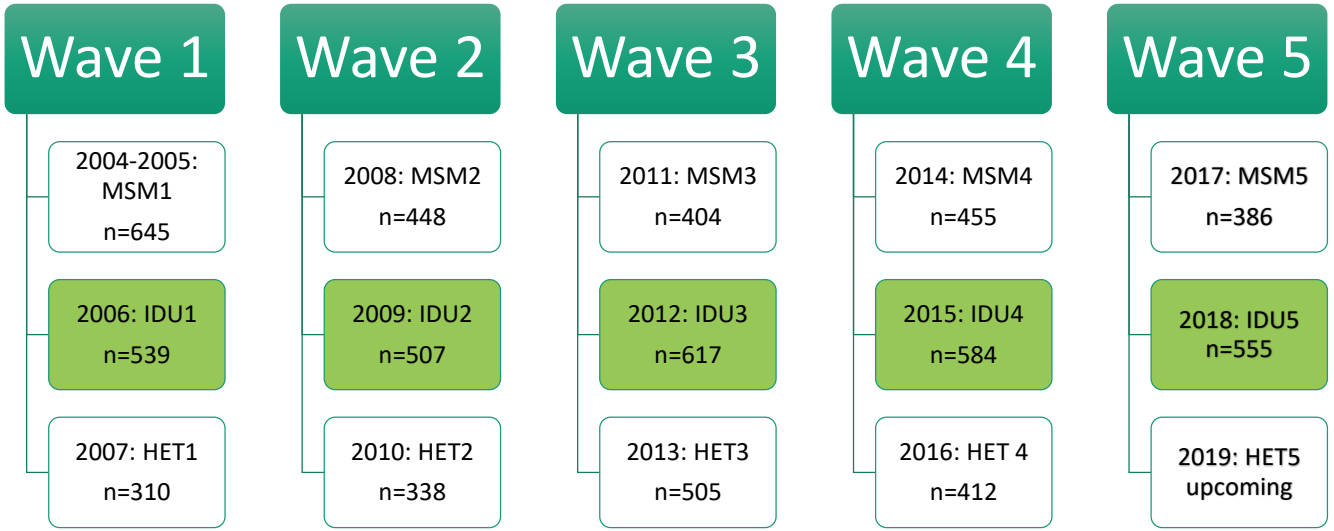
Collaborative project of CDC, MDH, and JHSPH

Objectives

- To assess prevalence of and trends in:
  - HIV risk behaviors
  - HIV testing behaviors
  - Exposure to and use of prevention and care services among persons at high risk for infection or transmission
  - HIV prevalence

  - … and annual survey on social issues, health, and well-being in Baltimore

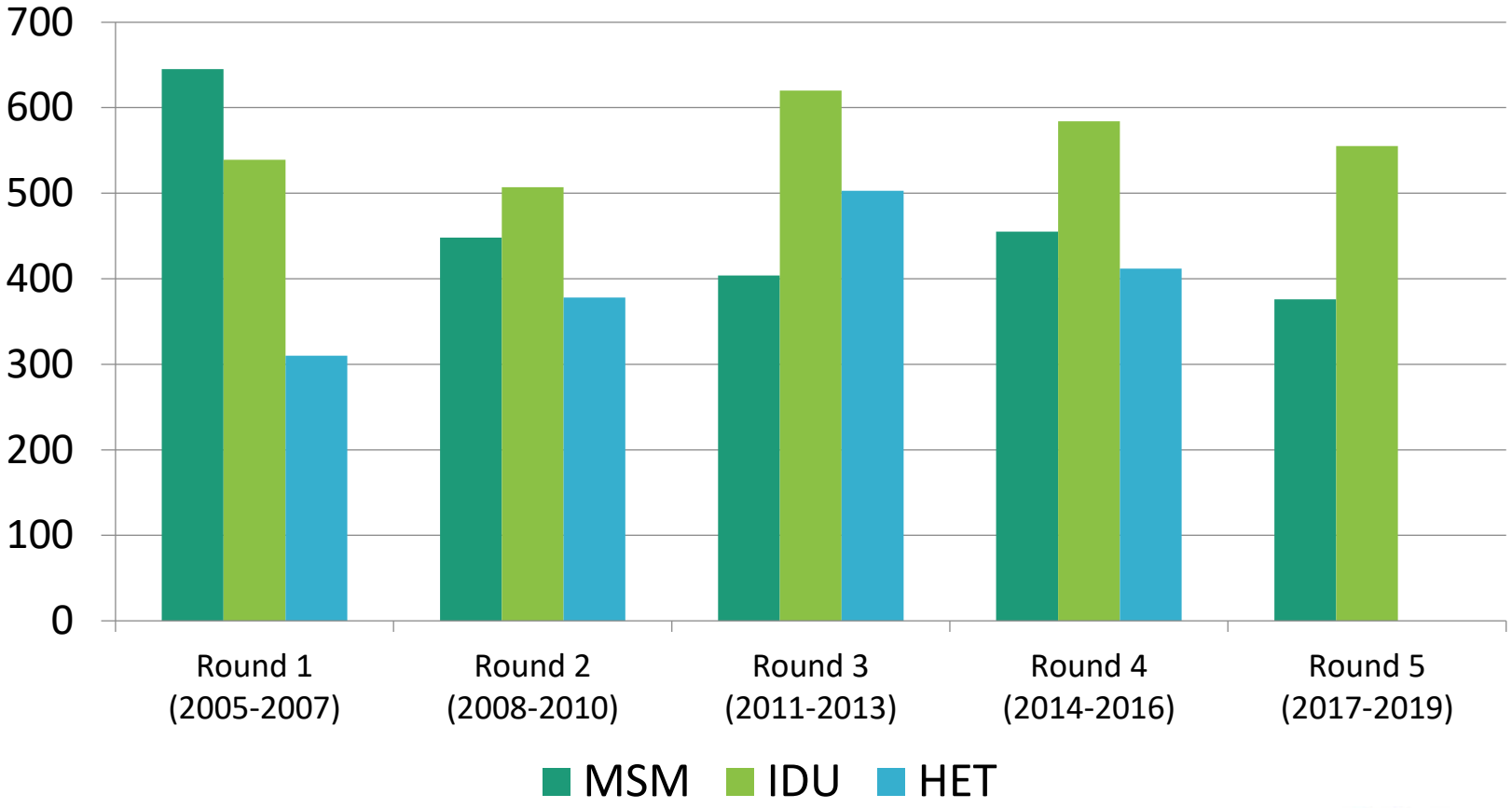
BESURE to date



Recruitment methods

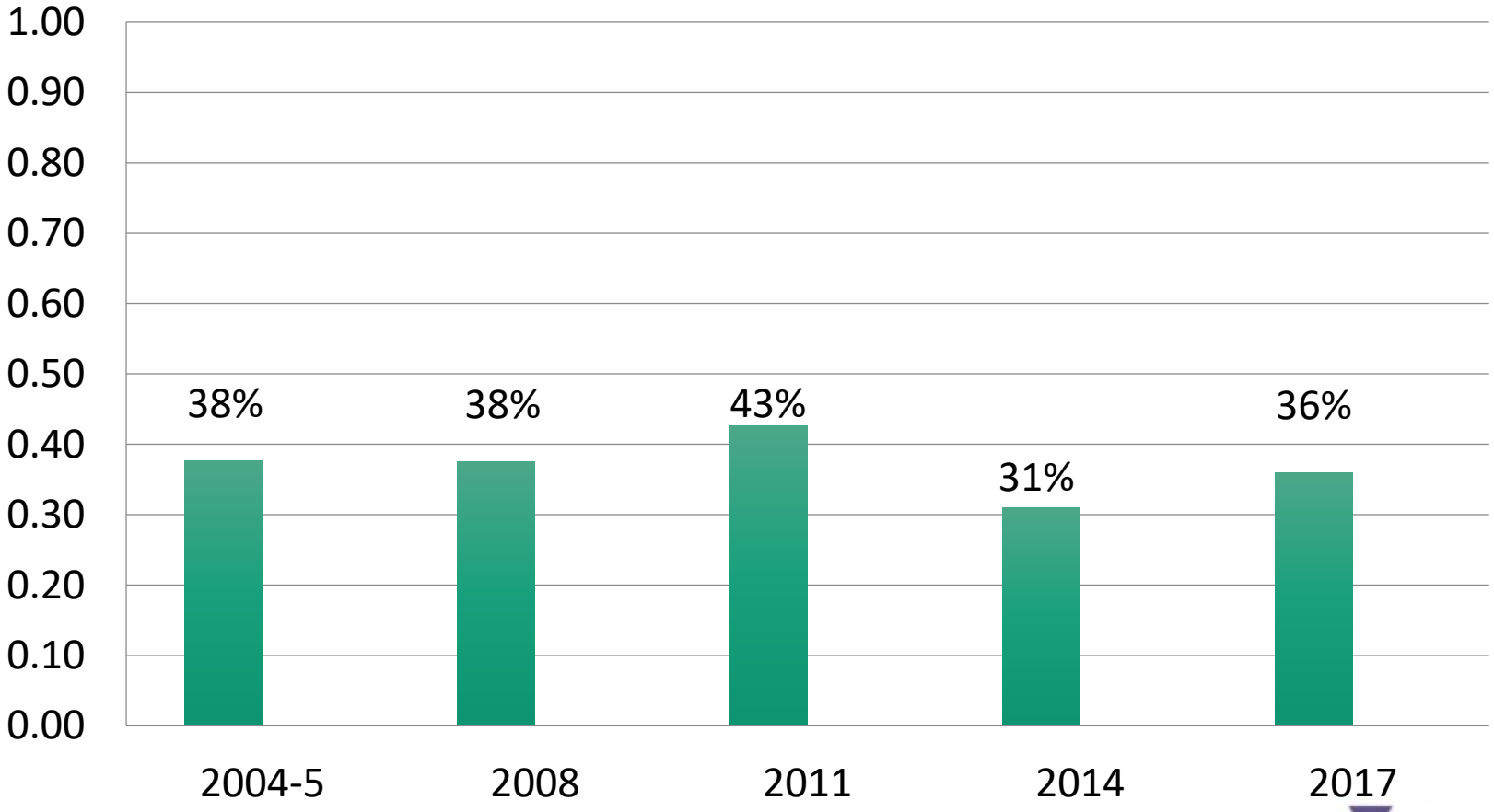
Survey wave	Population	Recruitment
2004-2005 2008 2011 2014 2017	MSM	Venue-based time location sampling
2006 2009 2012 2015 2018	IDU/PWID	Respondent driven sampling
2007	HET	Venue based time location sampling
2010 2013 2016 *2019*	HET	Respondent driven sampling

Sample size

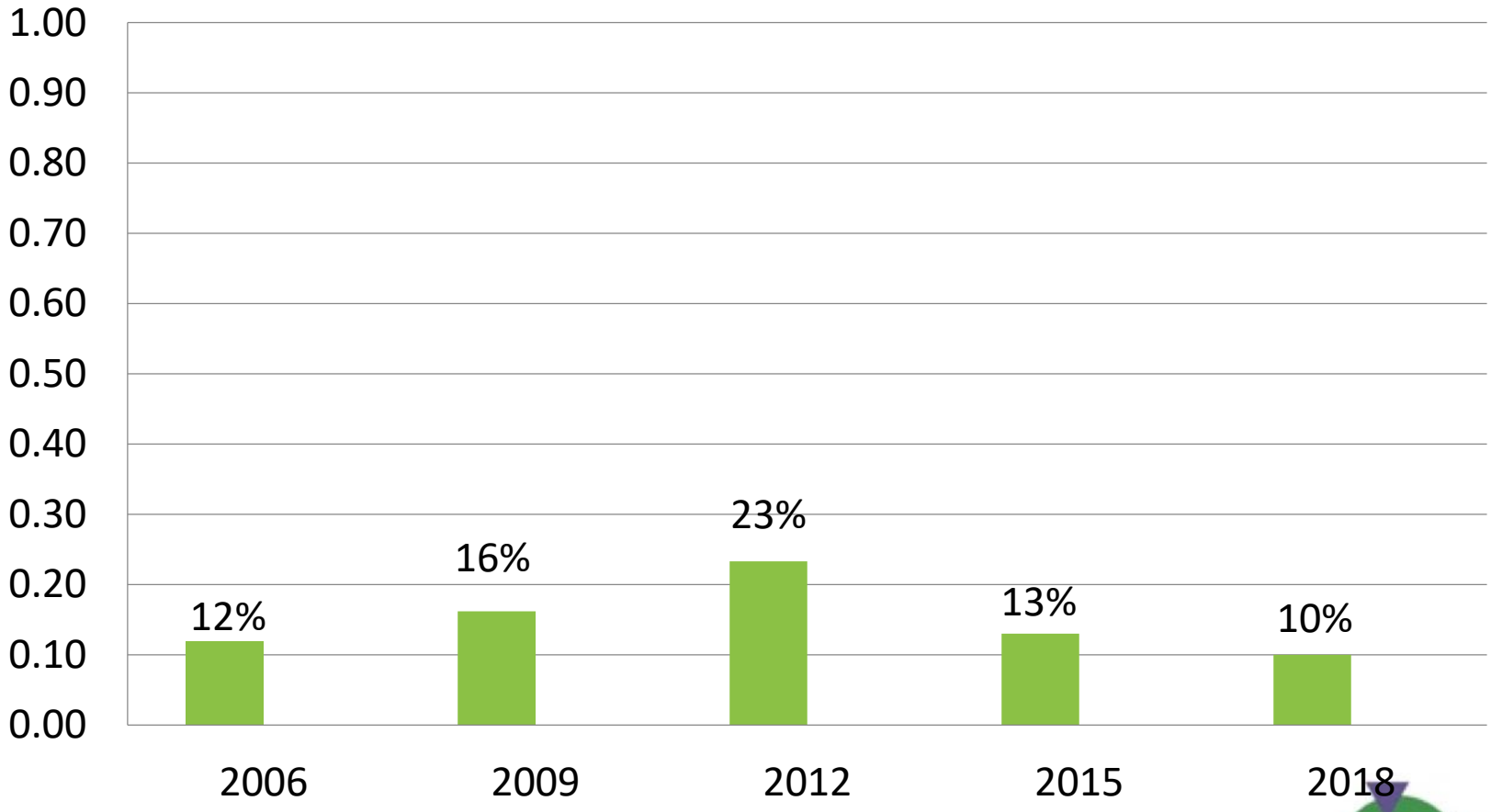

700
600
500
400
300
200
100
0
Round 1 (2005-2007)
Round 2 (2008-2010)
Round 3 (2011-2013)
Round 4 (2014-2016)
Round 5 (2017-2019)
MSM
IDU
HET

HIV Prevalence 2004-2018: MSM, IDU(PWID), HET

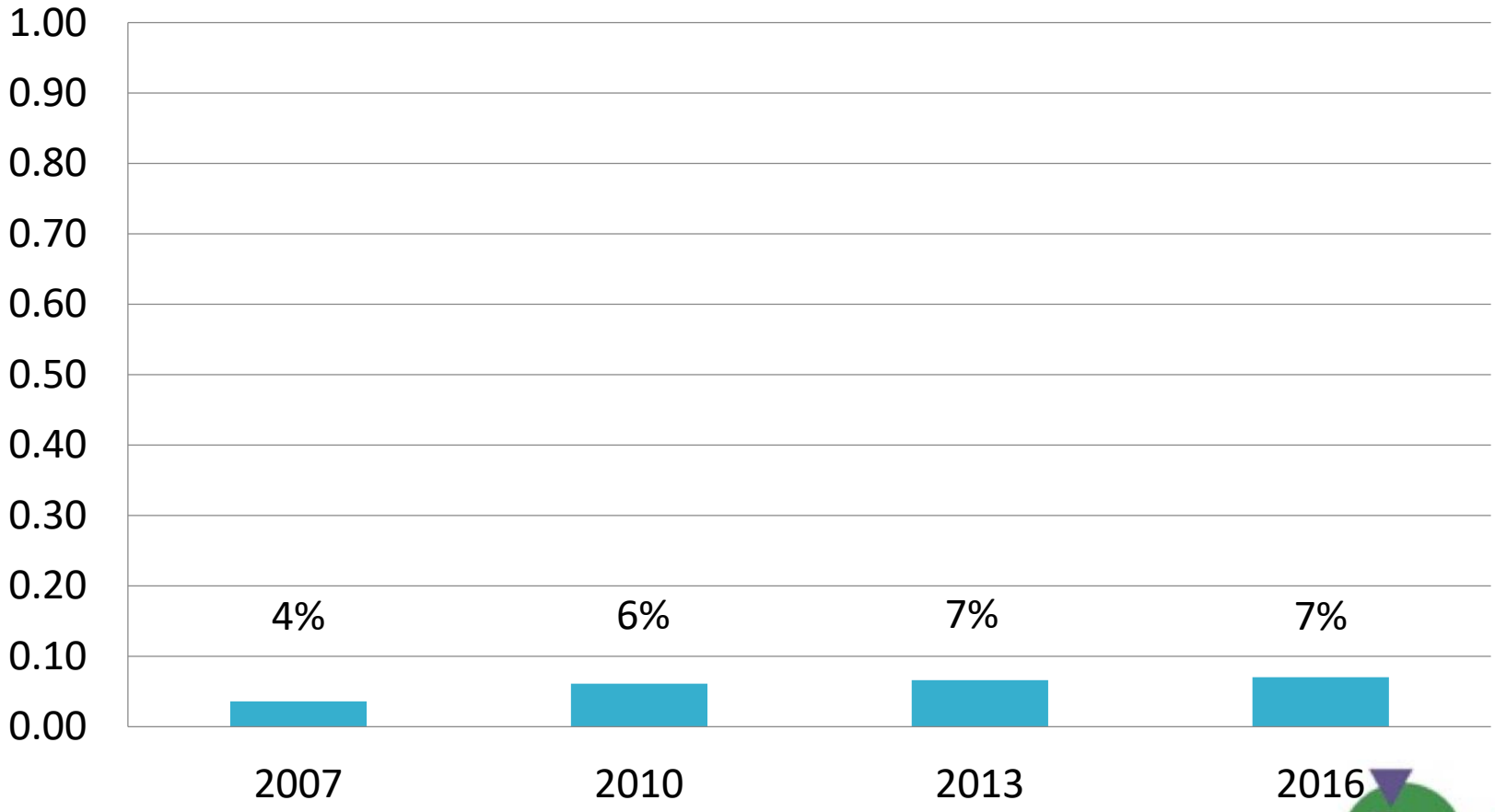
HIV prevalence:
BESURE MSM waves 2004-2017



HIV prevalence:
BESURE IDU/PWID waves 2006-2018



HIV prevalence:
BESURE HET waves 2004-2016



HIV ‘Cascade’ Indicators

HIV ‘cascade’ indicators

HIV testing behavior

- Ever tested for HIV
- Tested in the past 2 years
- Tested in the past year

HIV diagnosis

- Positive test result
- Previously aware
- Newly diagnosed

HIV care (among self-report)

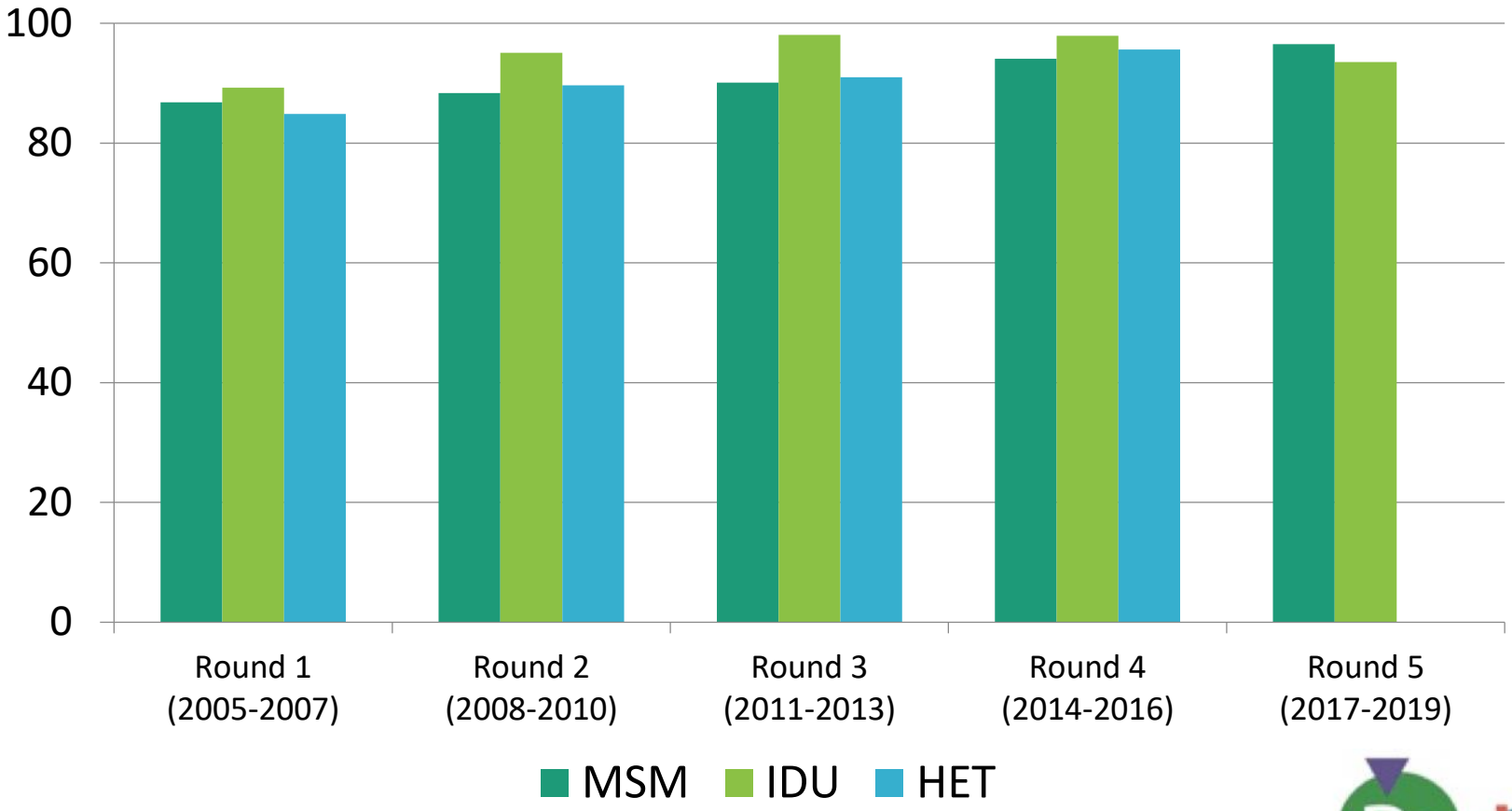
- Ever provider
- Past year
- Taking ARV

Virally suppressed (self-report)

- Self-reported viral suppression

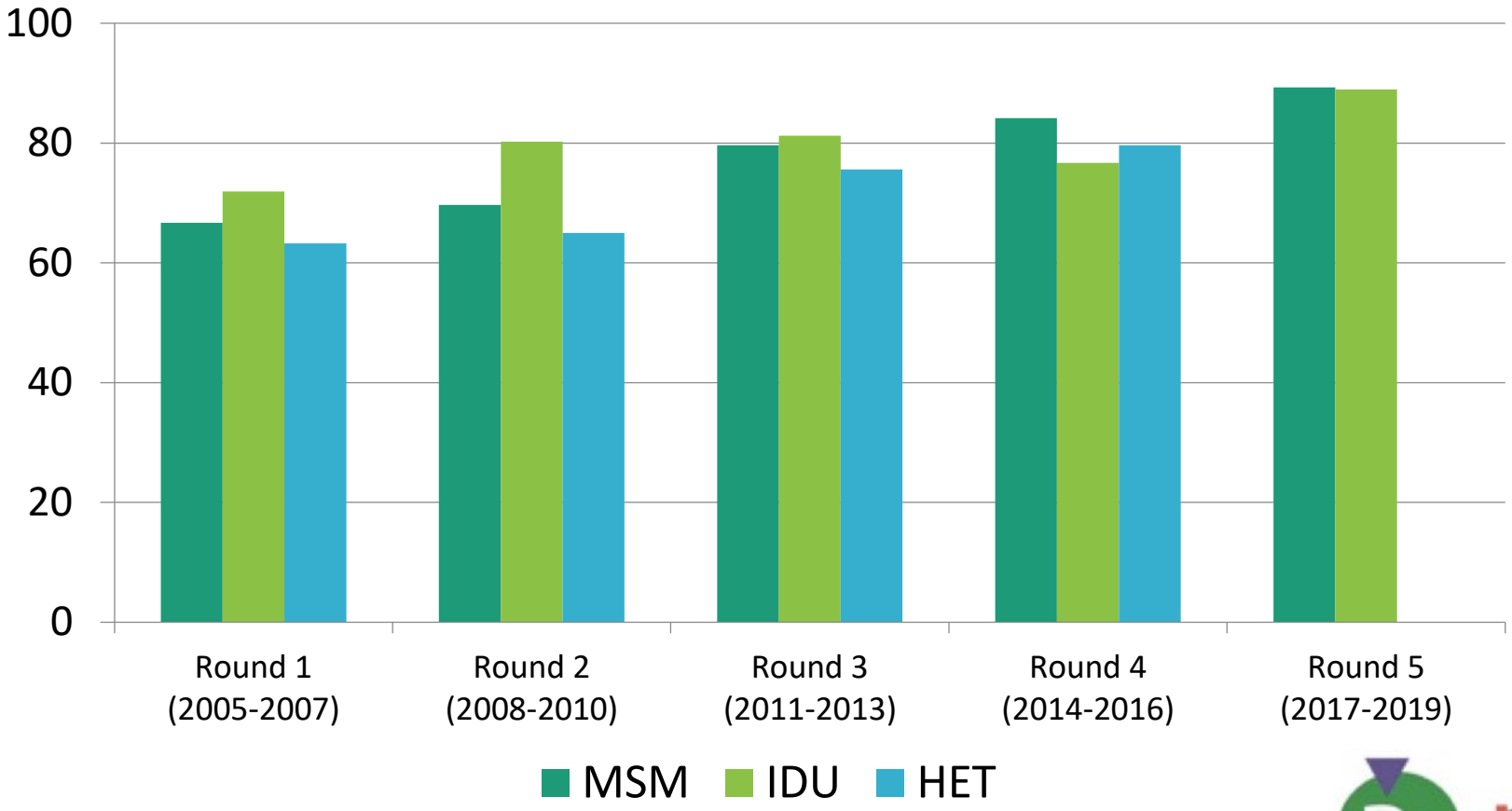
Ever tested for HIV

among all study participants



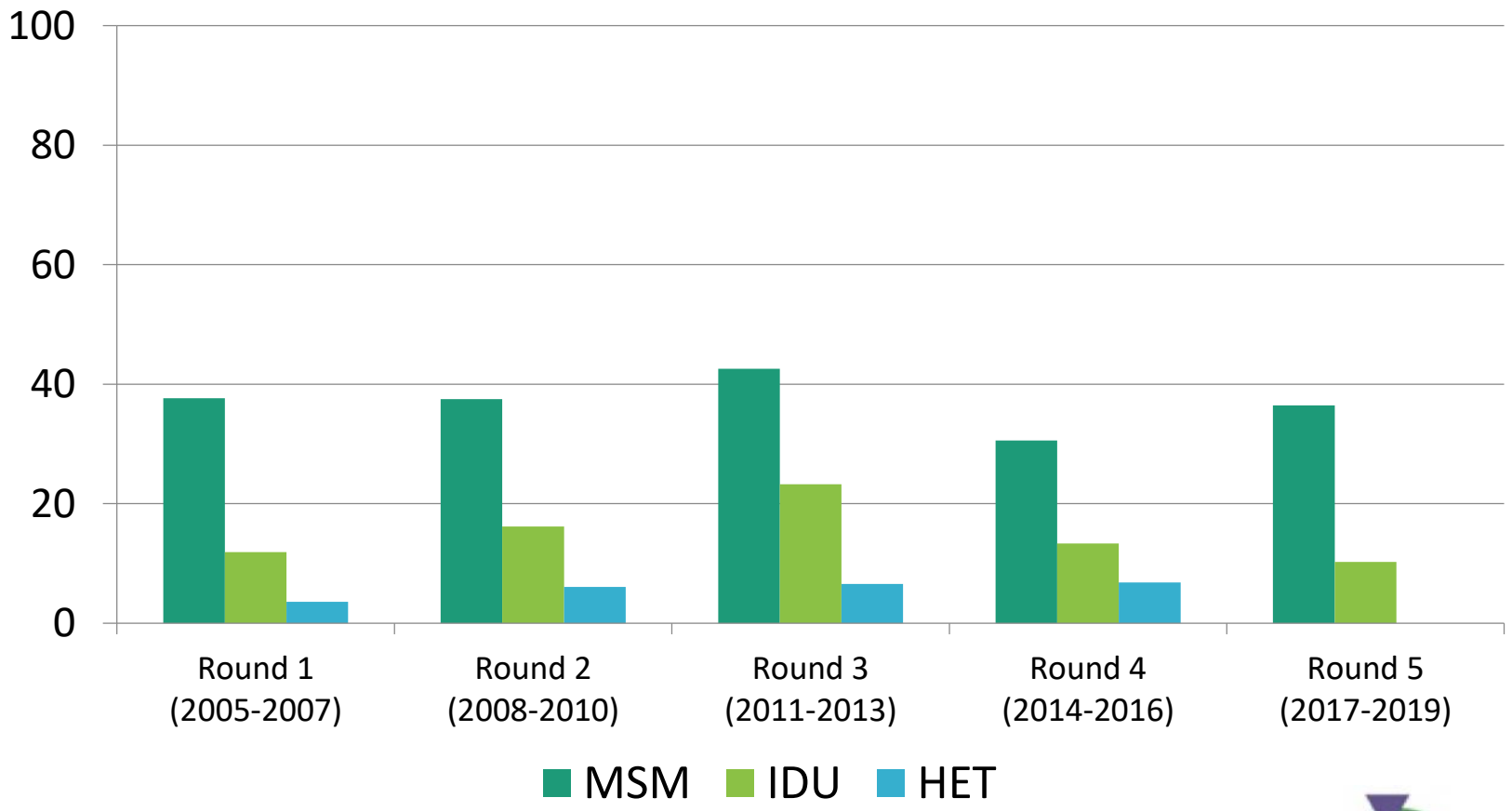
Tested in the past two years

among self-reported HIV-negative participants



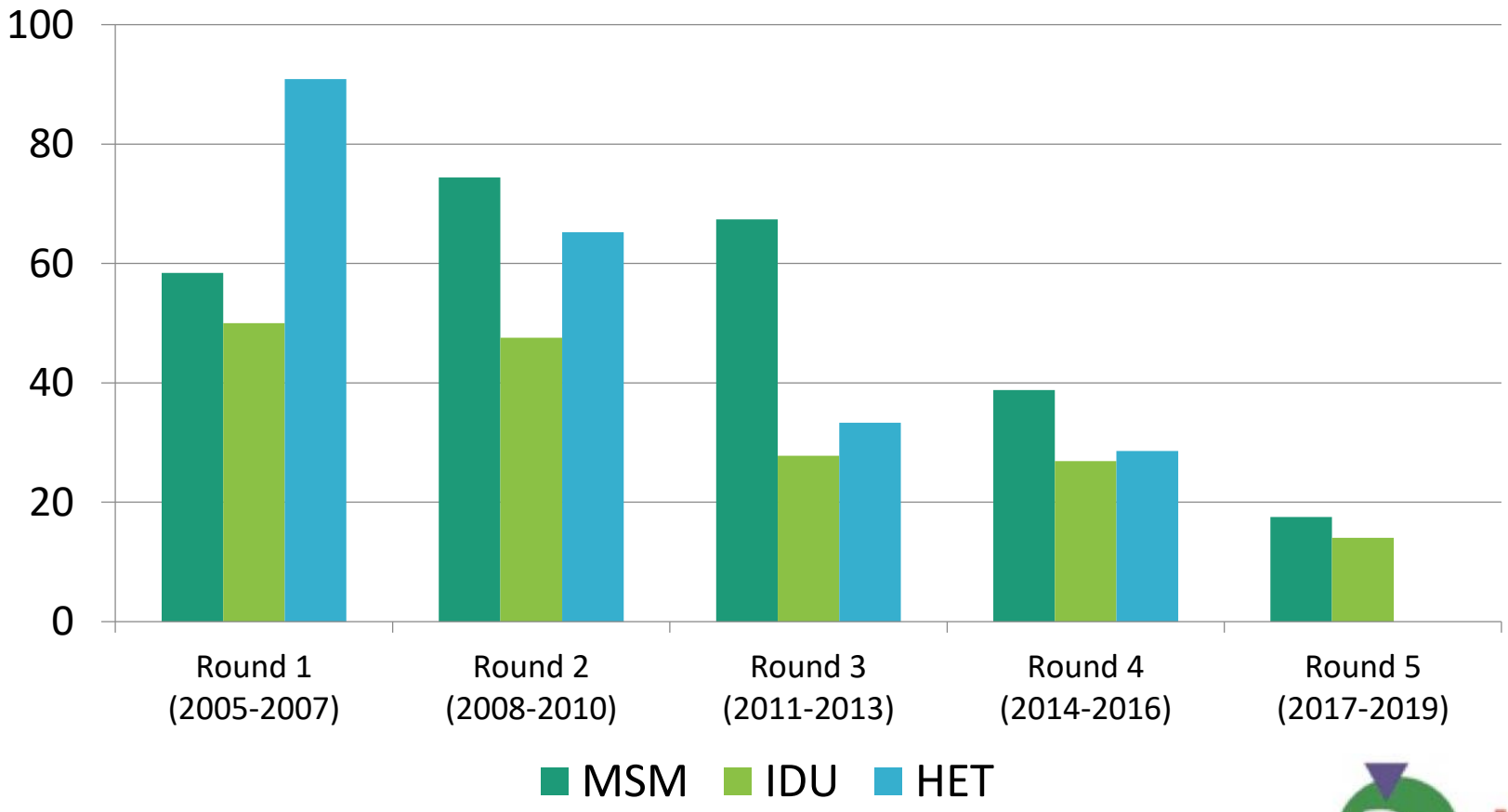
HIV positive test result

among all participants



Newly diagnosed

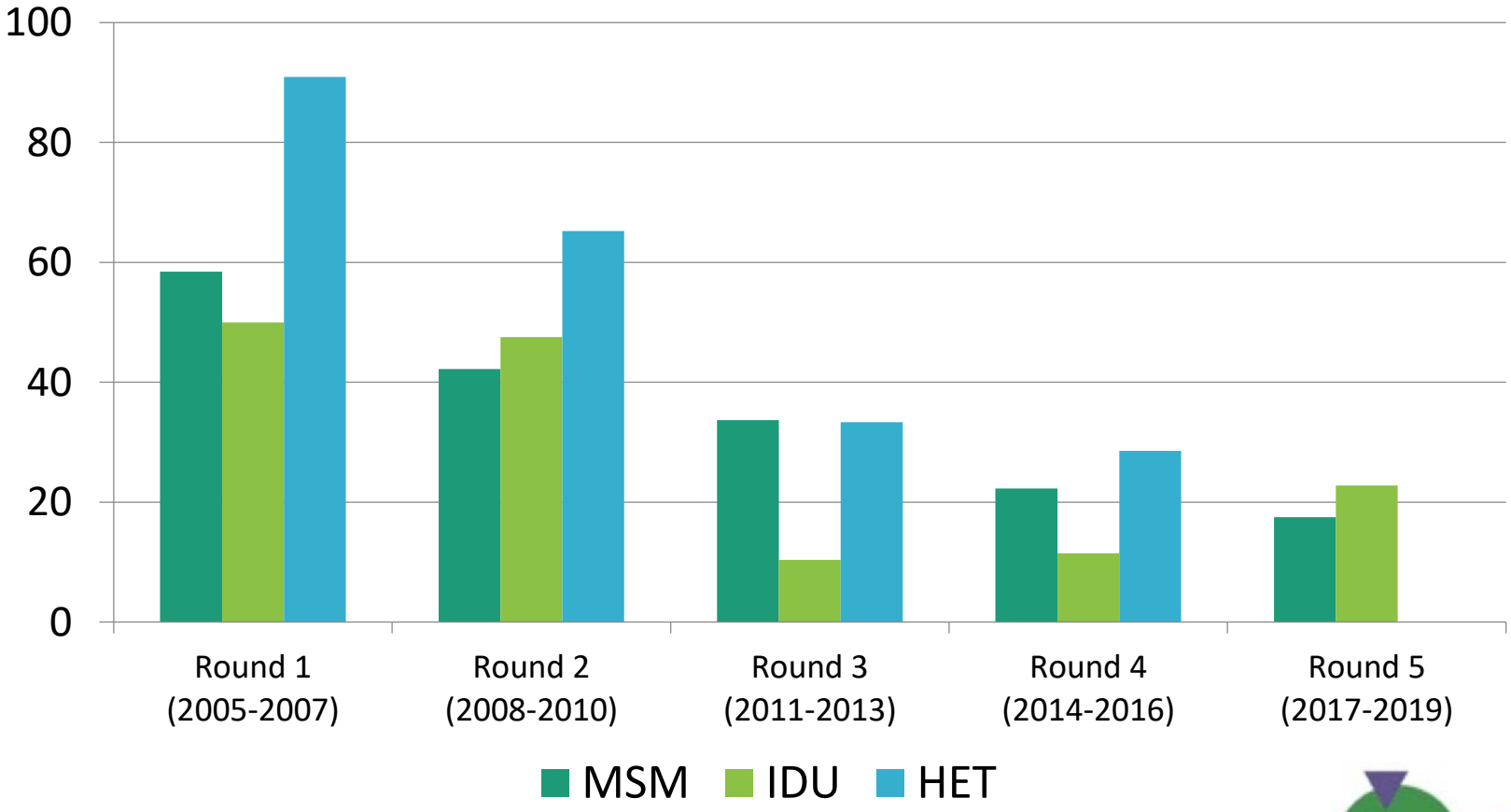
among participants who tested positive



Newly diagnosed

among participants who tested positive

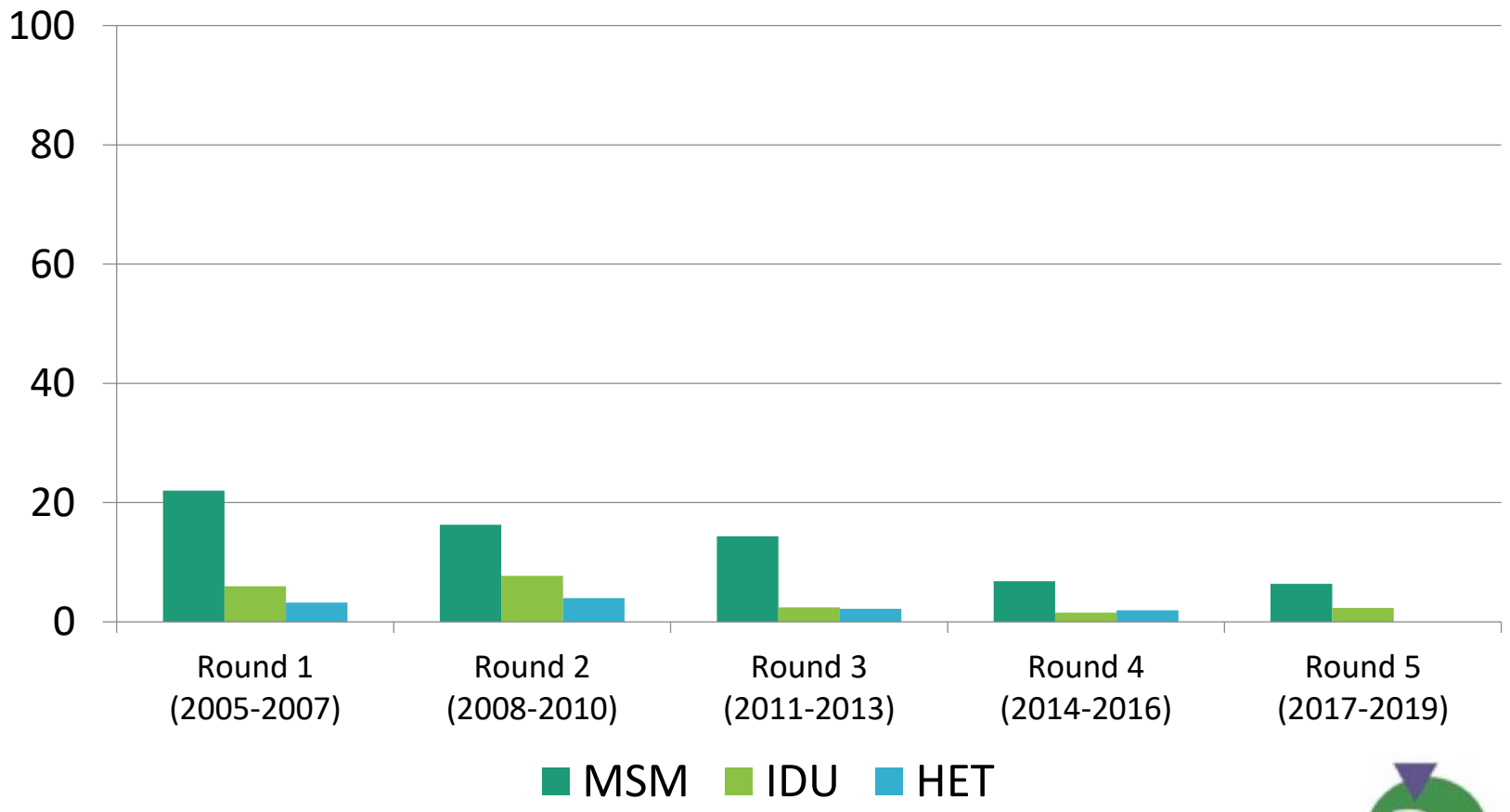
MSM2-4, IDU3-4 are ART-adjusted



Newly diagnosed

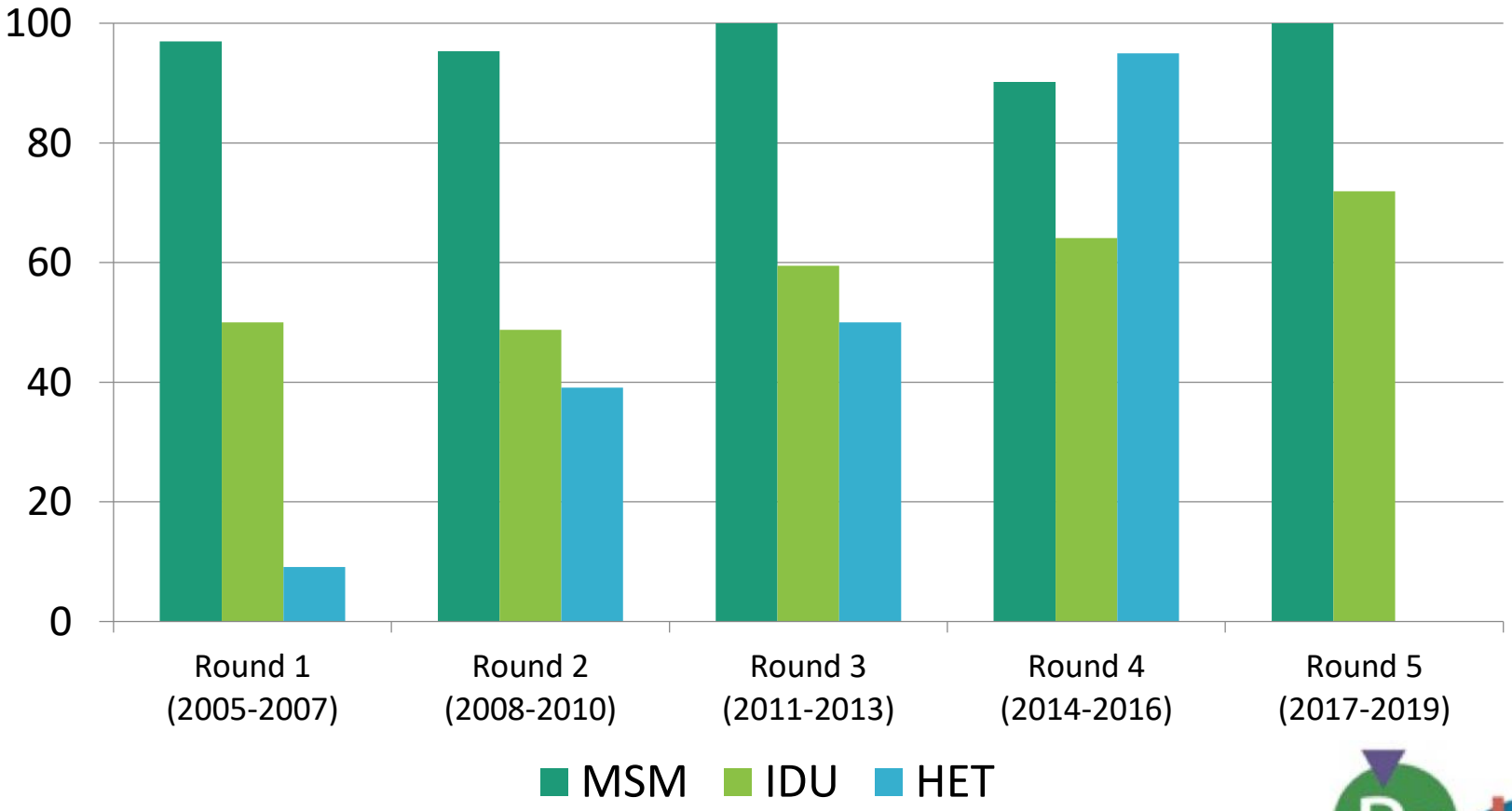
among all participants

MSM2-4, IDU3-4 are ART-adjusted



Ever seen an HIV care provider

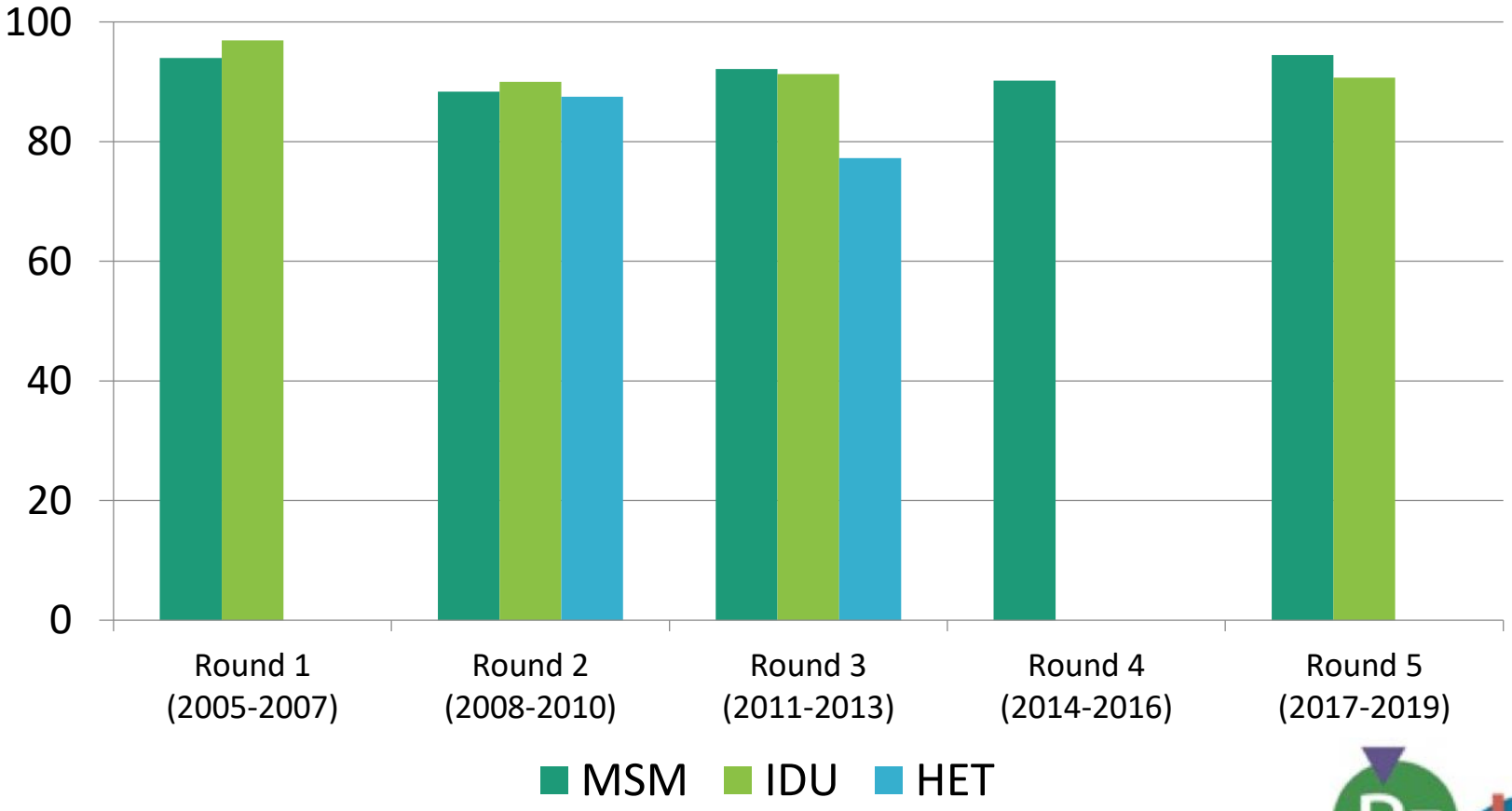
among participants who reported an HIV diagnosis



Note: small overall n, especially in HET cycles

Seen an HIV care provider in the past year

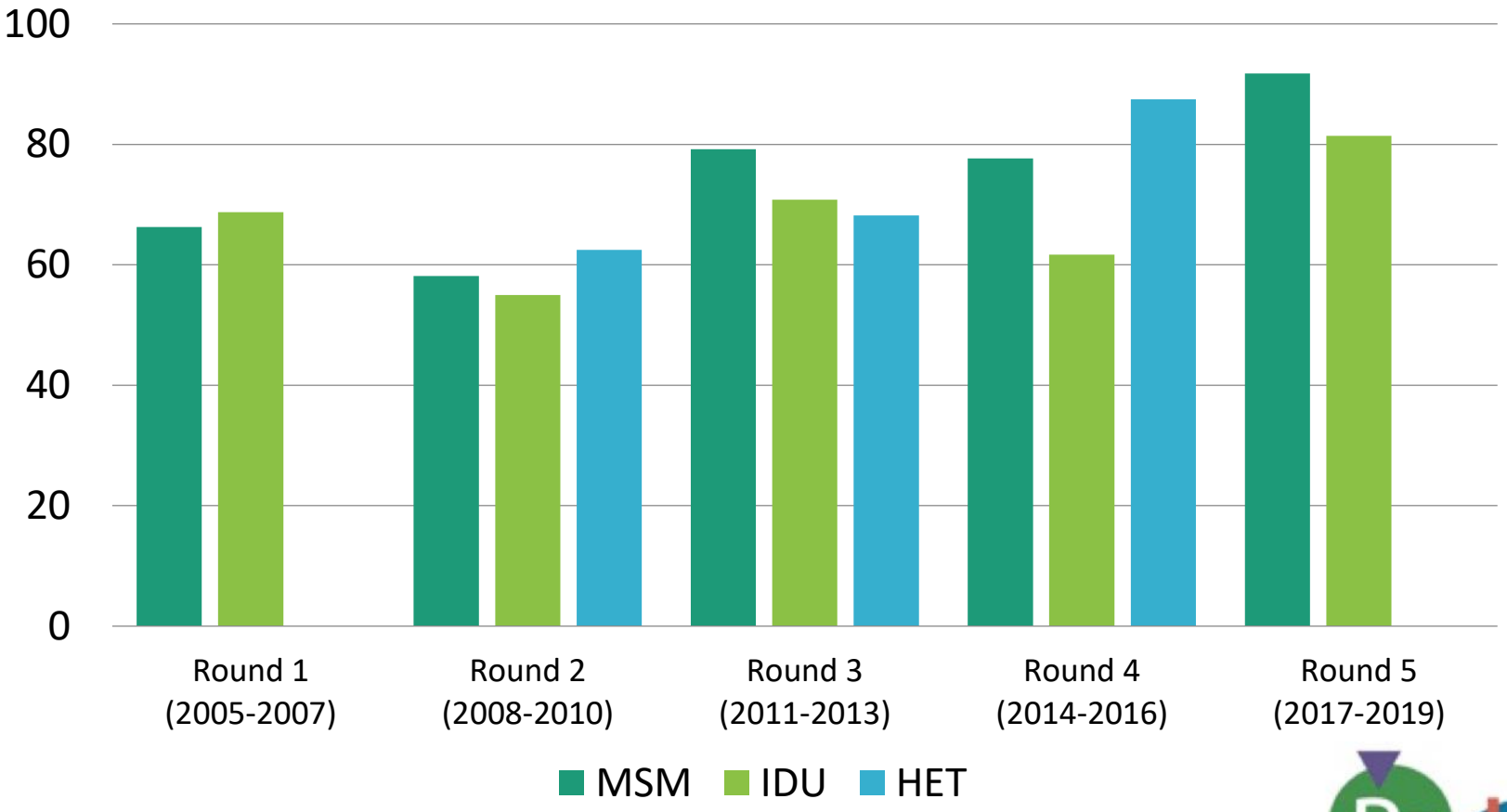
among participants who have seen provider



Dates are missing for IDU4 & HET4.

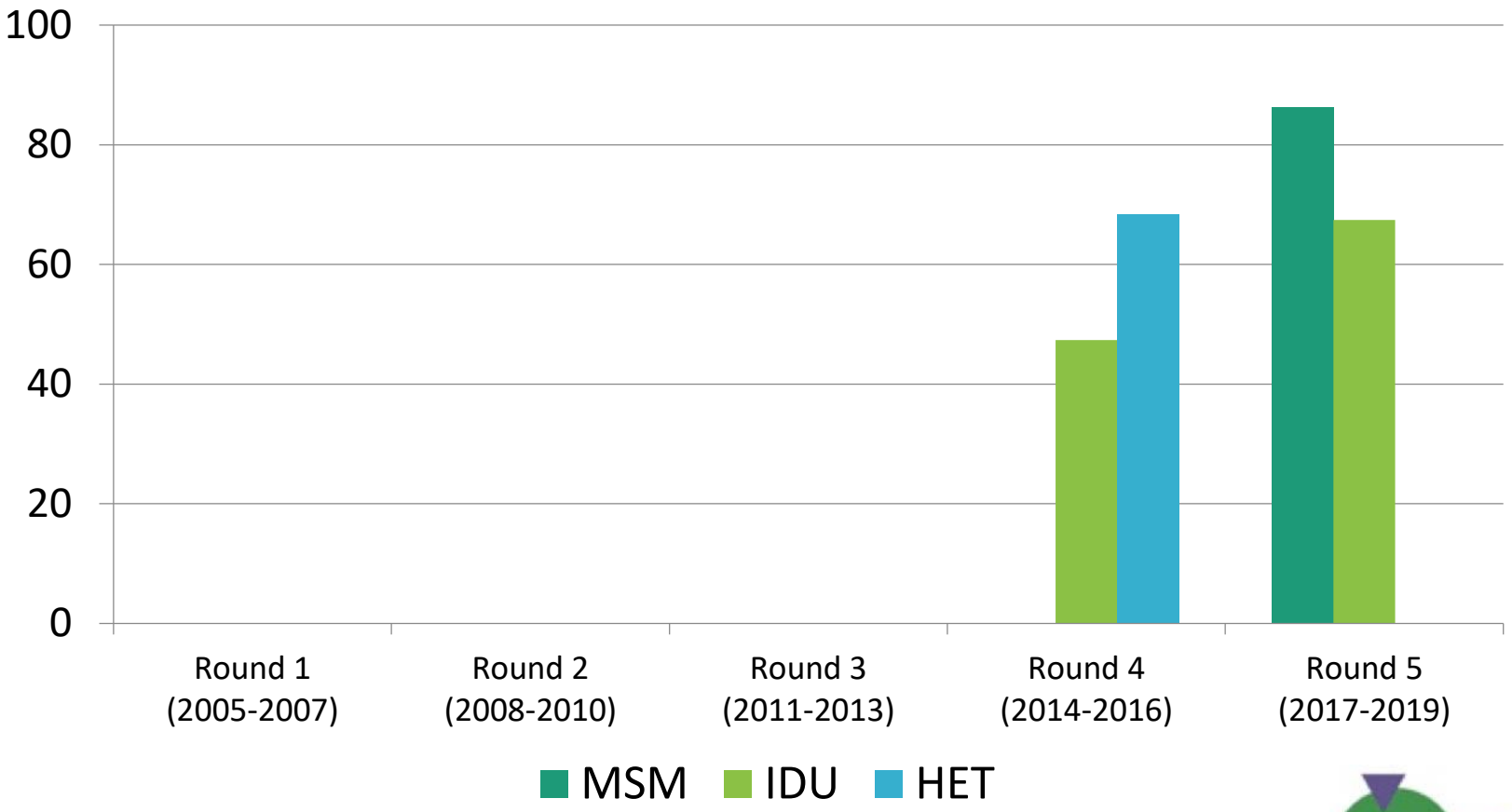
Taking antiretroviral medications

among participants who reported an HIV diagnosis



Viral suppression (undetectable*)

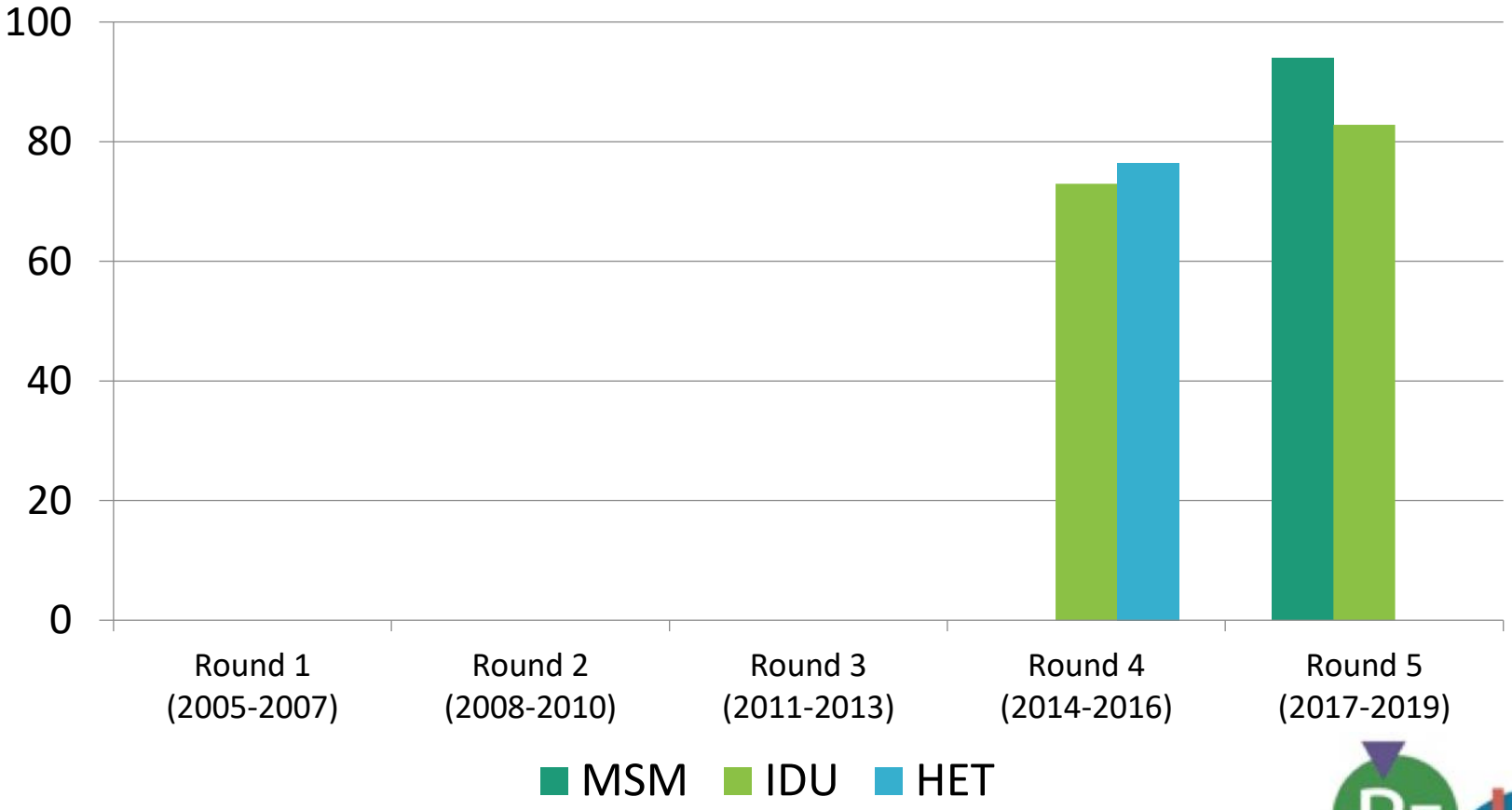
among participants who reported an HIV diagnosis



* self-reported

Viral suppression (undetectable*)

among participants who reported taking antiretroviral medications



* self-reported

BESURE IDU5 Data Update

Socio-demographics and socio-behavioral indicators
HIV prevalence by race/ethnicity, age, geography
HIV drug-related risk behaviors
STI & HCV testing and prevalence
Selected local data

Socio-demographics and key indicators, BESURE PWID 2009-2018

Characteristic		IDU2 (n=507)	IDU3 (n=620)	IDU4 (n=576)	IDU5 (n=555)
Race/ Ethnicity	White, not Hispanic	16%	7%	19%	40%
	Black, not Hispanic	80%	89%	77%	54%
	Hispanic	1%	1%	1%	1%
	Other	4%	4%	3%	4%
Age	18-24	1%	1%	1%	2%
	25-34	12%	3%	8%	21%
	35-44	23%	82%	18%	16%
	45+	64%	67%	73%	61%
Sex	Male	72%	67%	72%	70%
	Female	27%	33%	28%	29%
	Transgender	1%	1%	1%	1%
Sexual identity	Other	8%	13%	14%	11%
	Heterosexual or Straight	92%	87%	86%	89%

Socio-demographics and key indicators, BESURE IDU 2009-2018

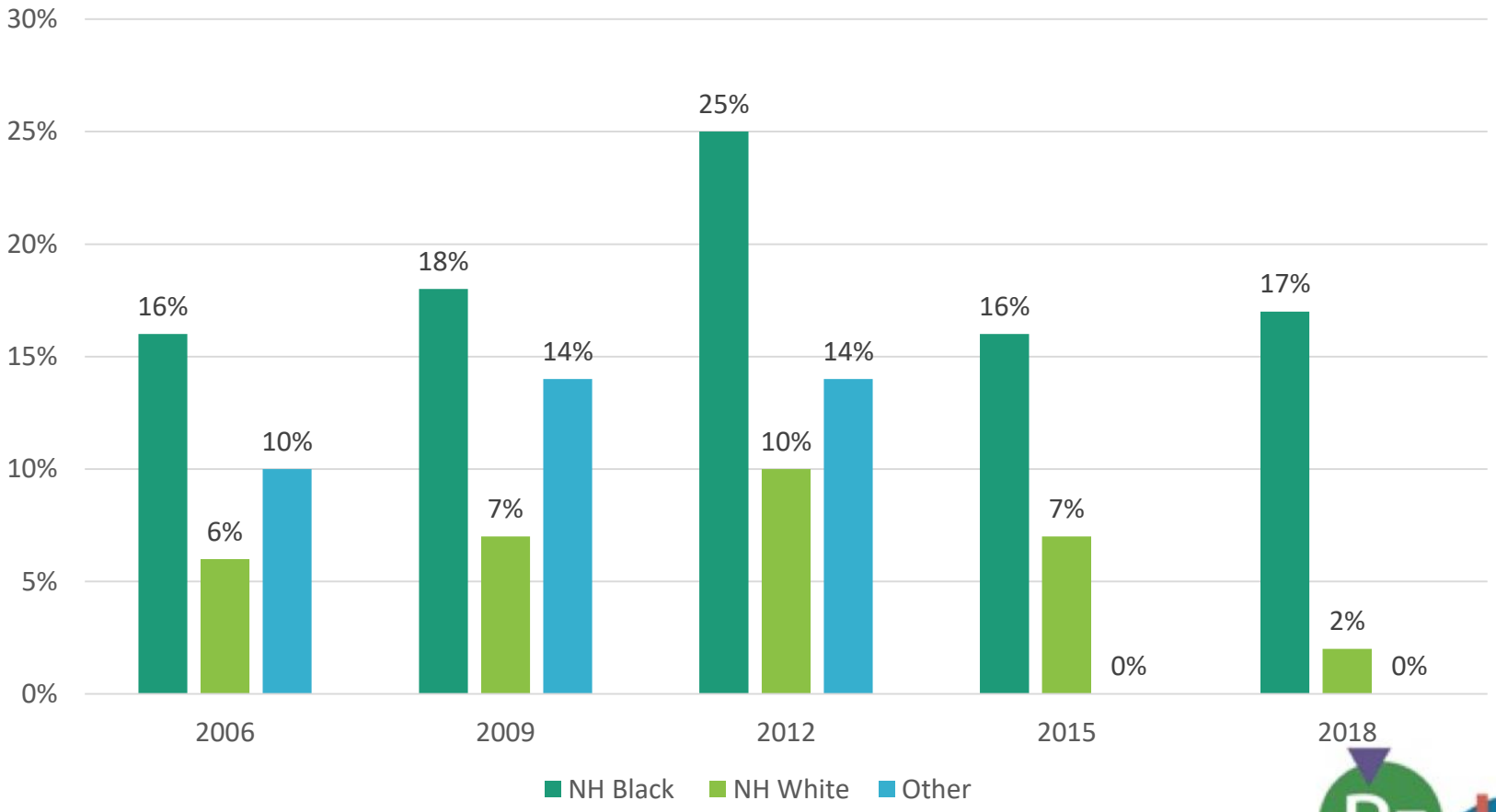
Characteristic		IDU2 (n=507)	IDU3 (n=620)	IDU4 (n=576)	IDU5 (n=555)
County of Residence	Baltimore City Baltimore County Other County in MSA	96% 3% 1%	97% 2% 1%	94% 5% 1%	86% 13% 1%
Education	High school/GED or less College or some college	83% 17%	84% 16%	81% 19%	76% 24%
Employment	Unemployed Full or Part-time	46% 12%	41% 7%	53% 8%	61% 12%
Median annual household income	(mid-point)	$5,000-$9,999	$5,000-$9,999	$5,000-$9,999	$5,000-$9,999

Socio-demographics and key indicators, BESURE PWID 2008-2017

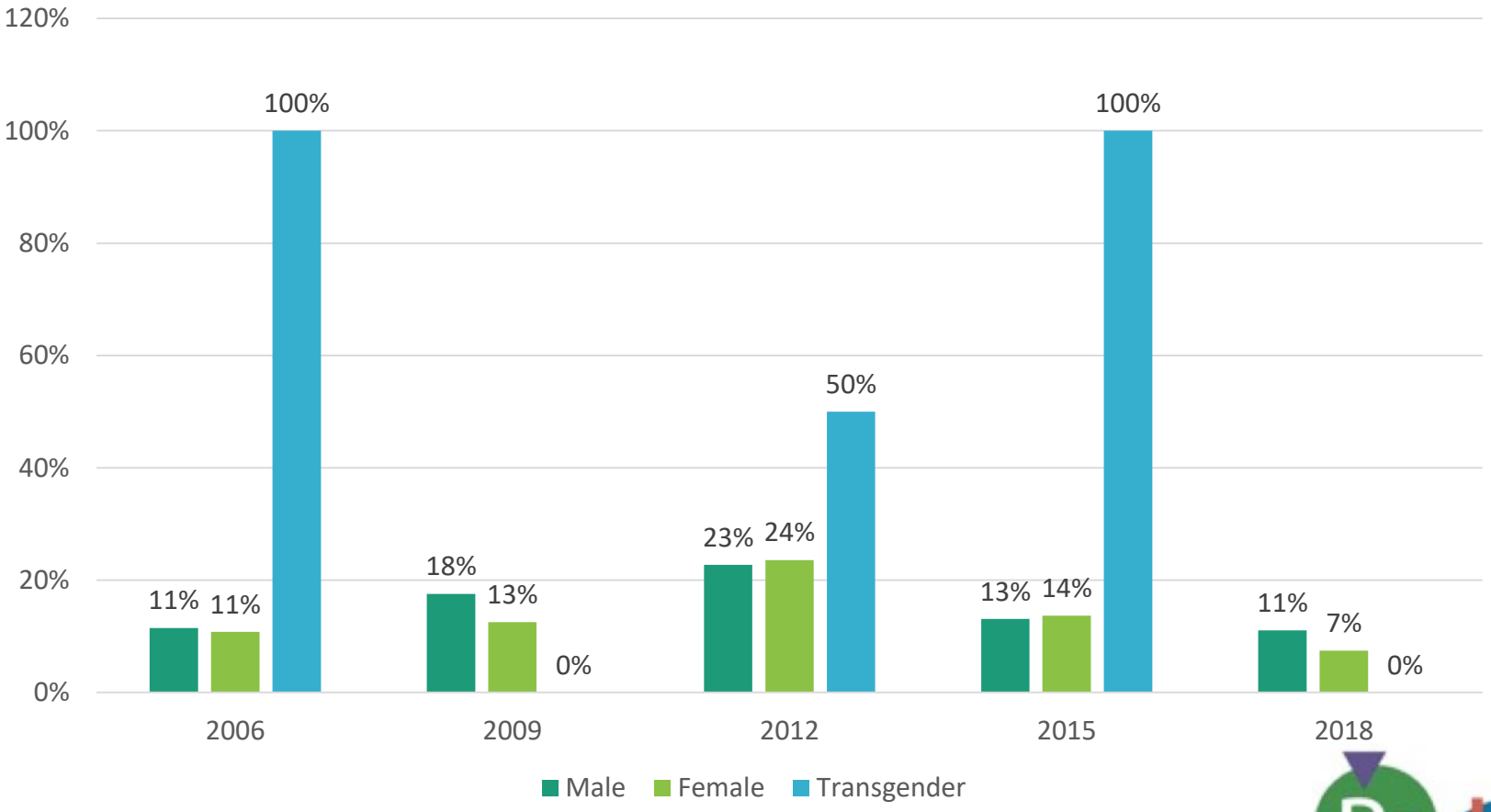
Characteristic		IDU2 (n=507)	IDU3 (n=620)	IDU4 (n=576)	IDU5 (n=555)
Health Insurance	Insured	59%	85%	86%	92%
Homelessness	Past year Current	54% 31%	32% 14%	43% 26%	60% 35%
Incarcerated*	Past year	44%	23%	21%	22%
Received money or goods in exchange for sex**	Past year	NA	NA	28%	19%

* In IDU2, the definition of homelessness included “temporarily staying with friends or relatives.”
** Transactional sex asked differently in different years: In IDU5 direct item in local survey while in IDU4 constructed from NHBS core survey items.

HIV prevalence by race/ethnicity: PWID 2006-2018

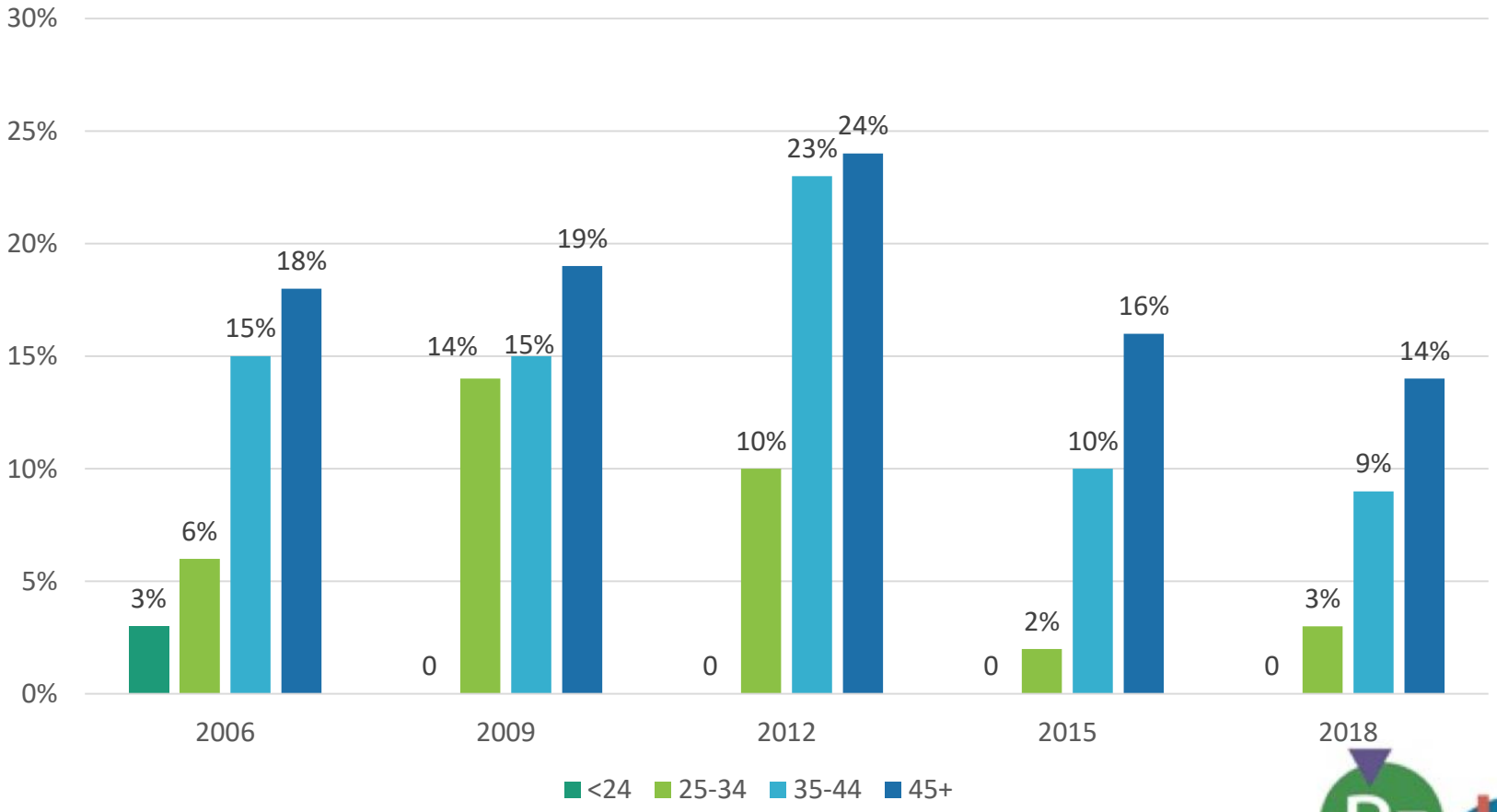


HIV prevalence by gender: PWID 2006-2018

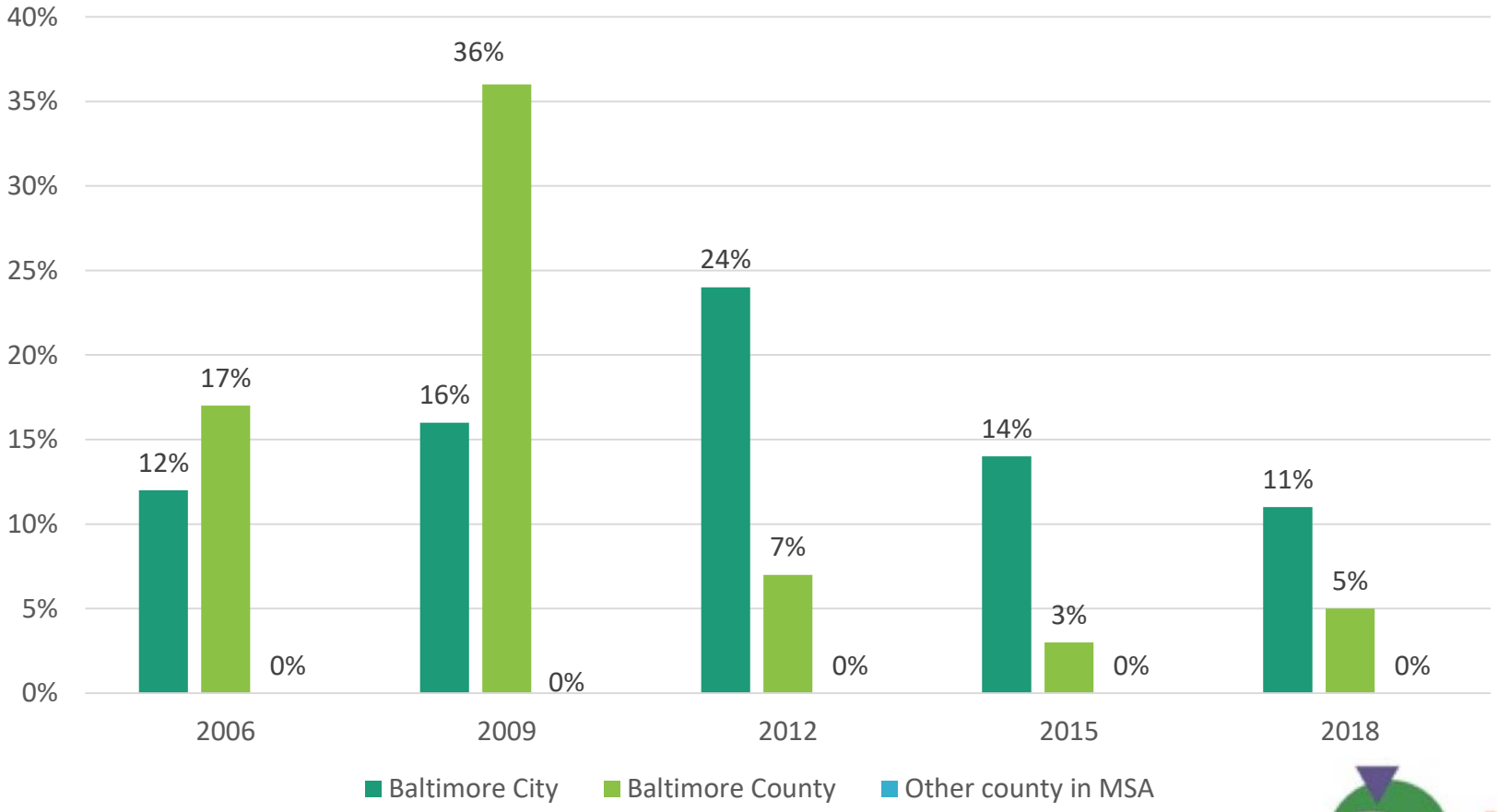


The numbers of transgender participants has been low (n<5).

HIV prevalence by age: PWID 2006-2018



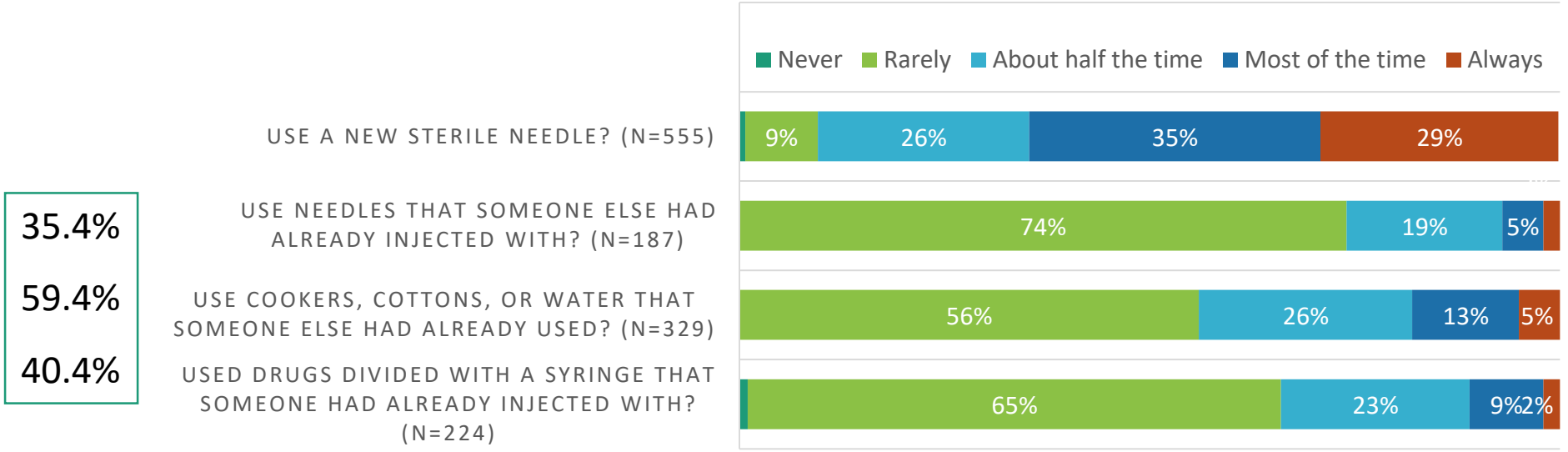
HIV prevalence by county: PWID 2006-2018

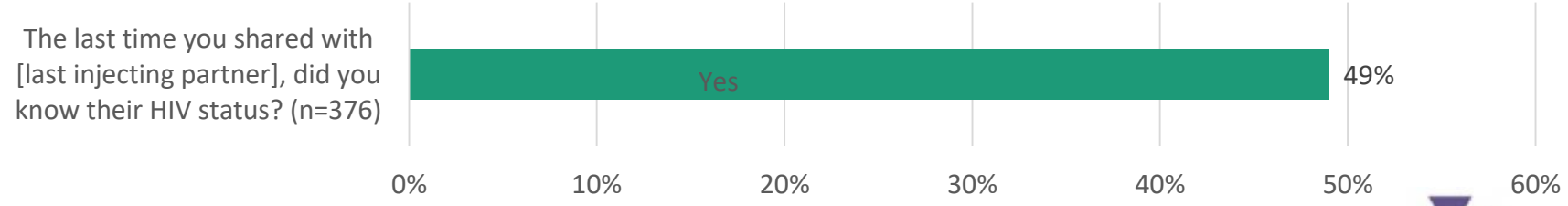


Very small proportion of participants outside of Baltimore City, especially prior to 2018

HIV drug related risk behaviors: PWID 2018

In the past 12 months, how often did you...

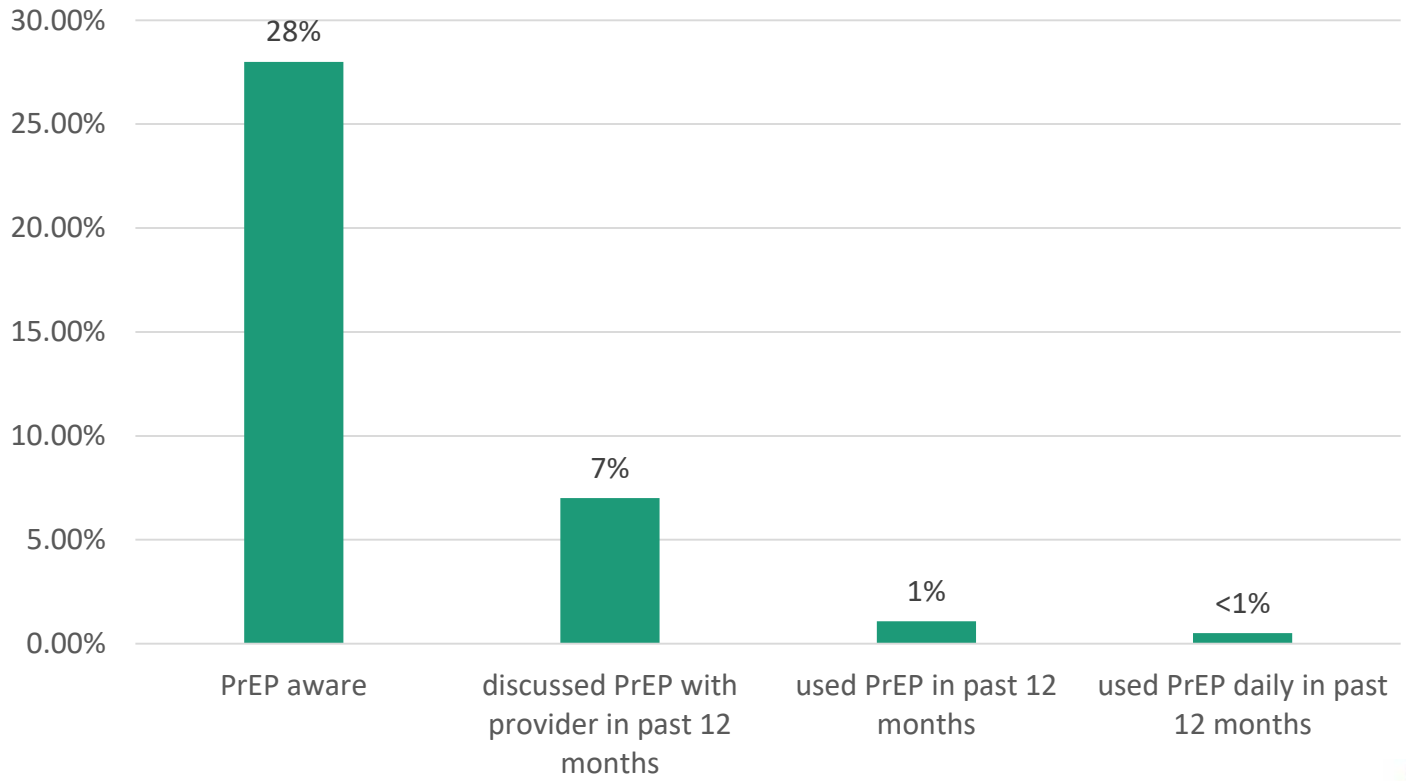




Among 67.7% who reported “sharing” any injection equipment in past year

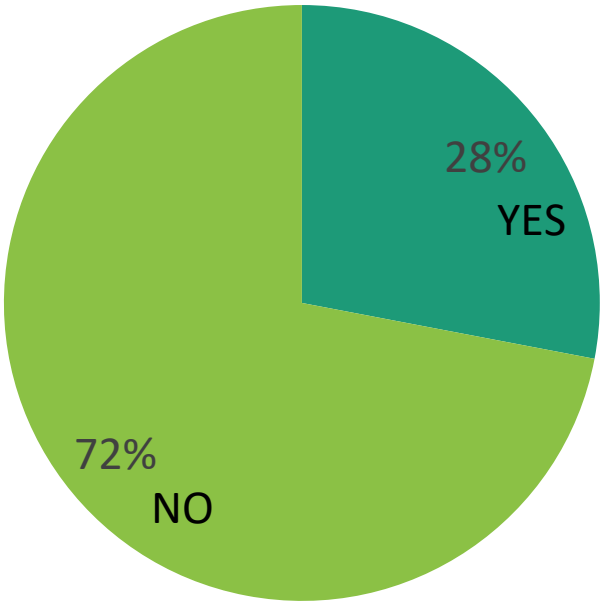
PrEP: PWID 2018

among those who reported being HIV negative (n=512)



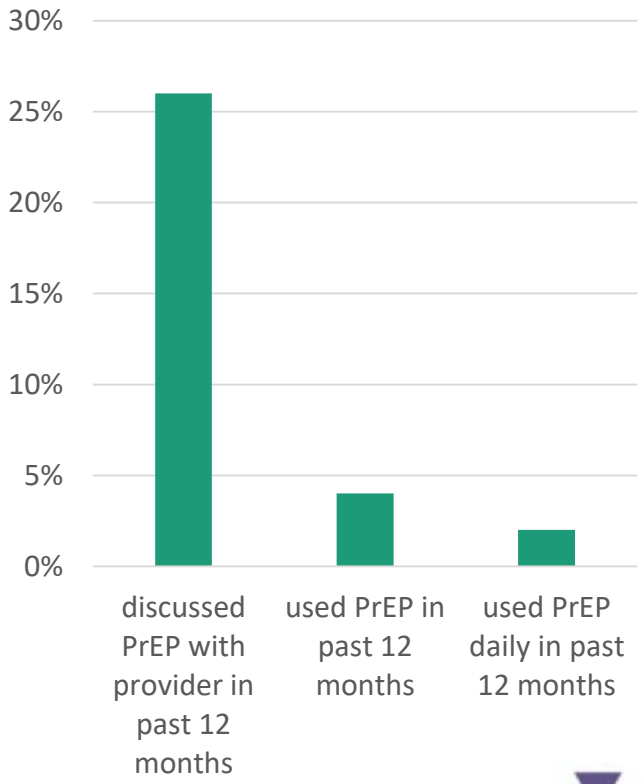
PrEP: PWID 2018

among those who reported being HIV negative (n=512)



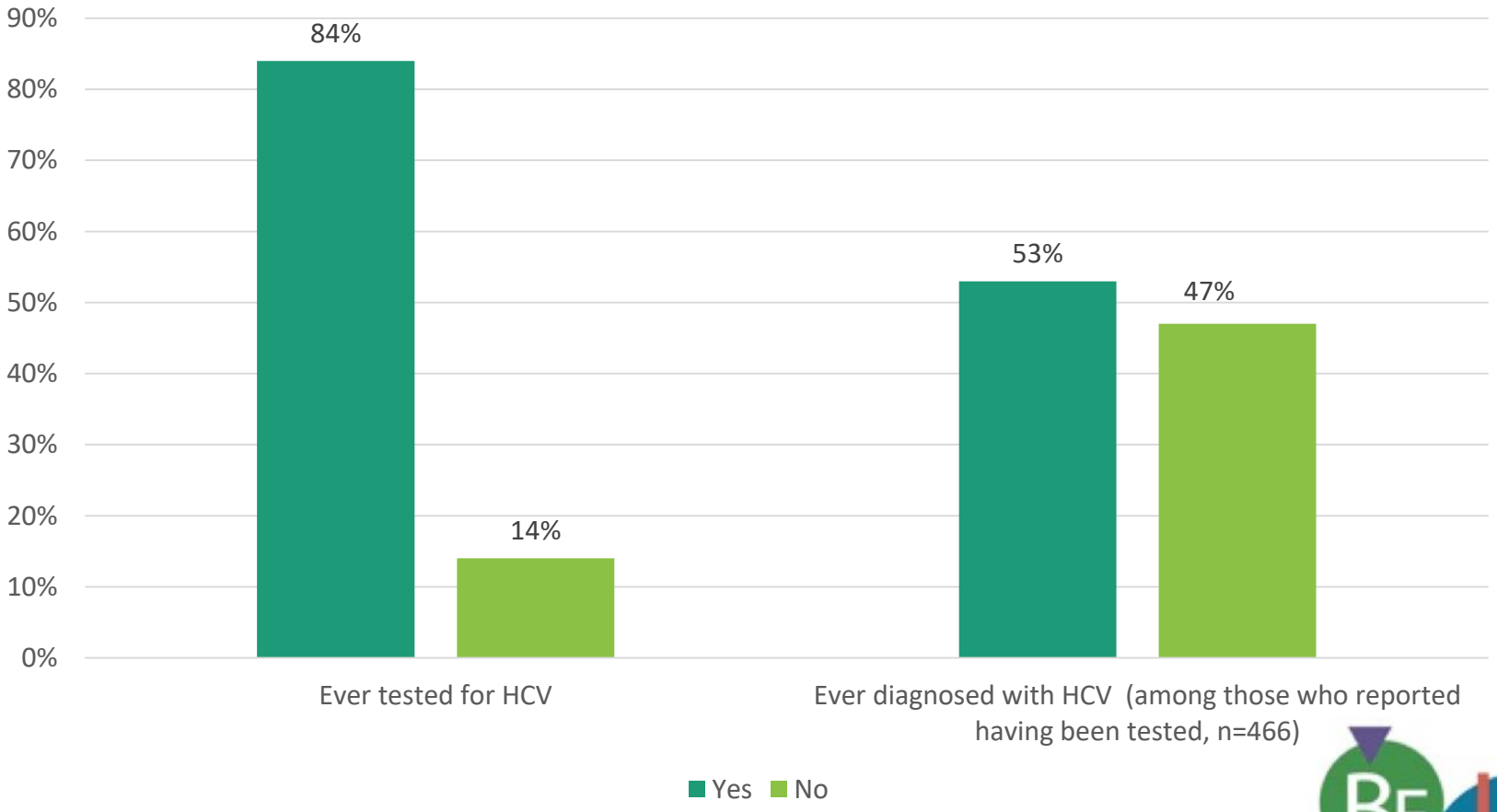
PrEP aware

among those aware of PrEP (n=141)

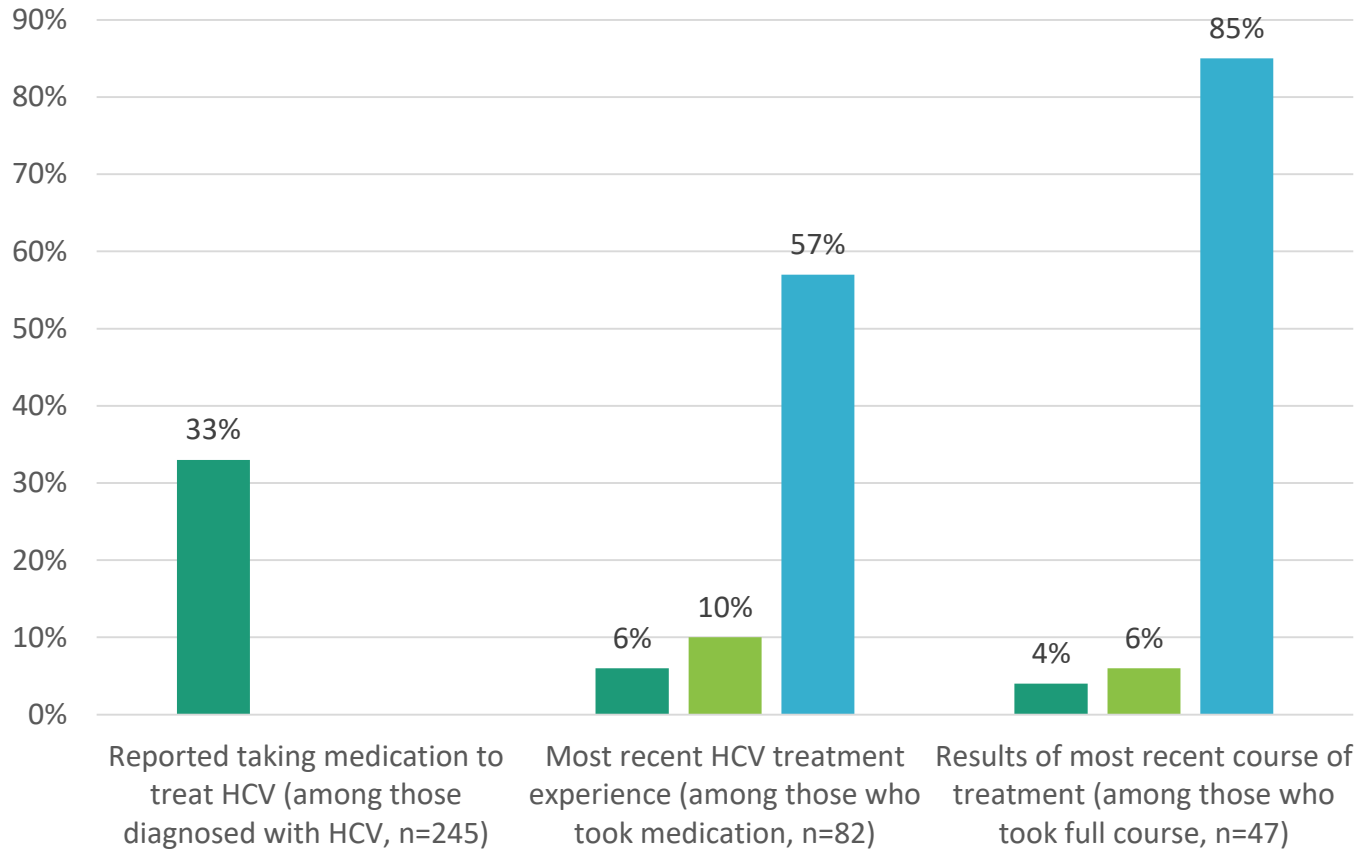


6 participants reported taking PrEP in the past 12 months. 3 of those reported taking PrEP daily.

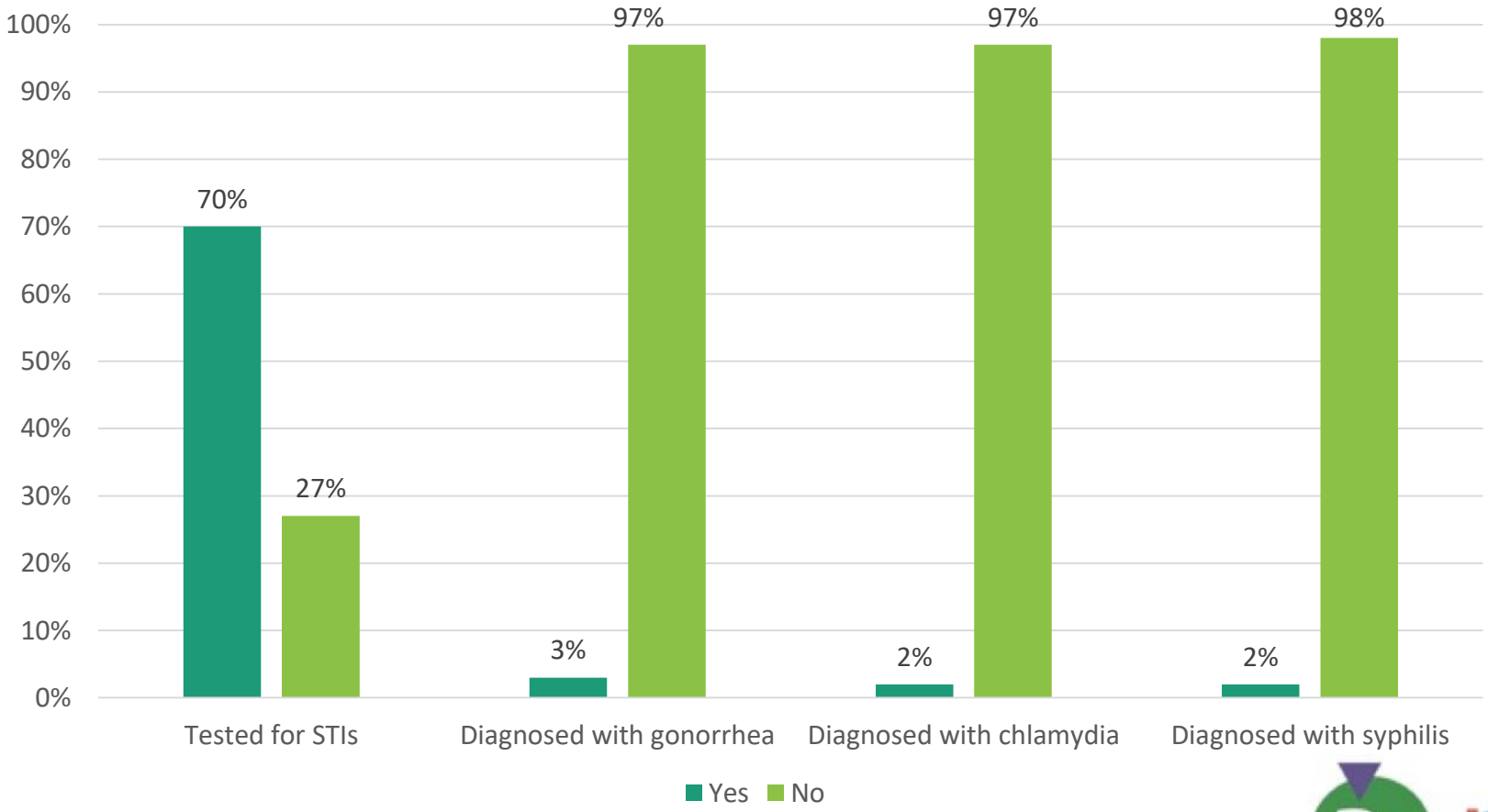
HCV testing (self-report): PWID 2018



HCV treatment: PWID 2018



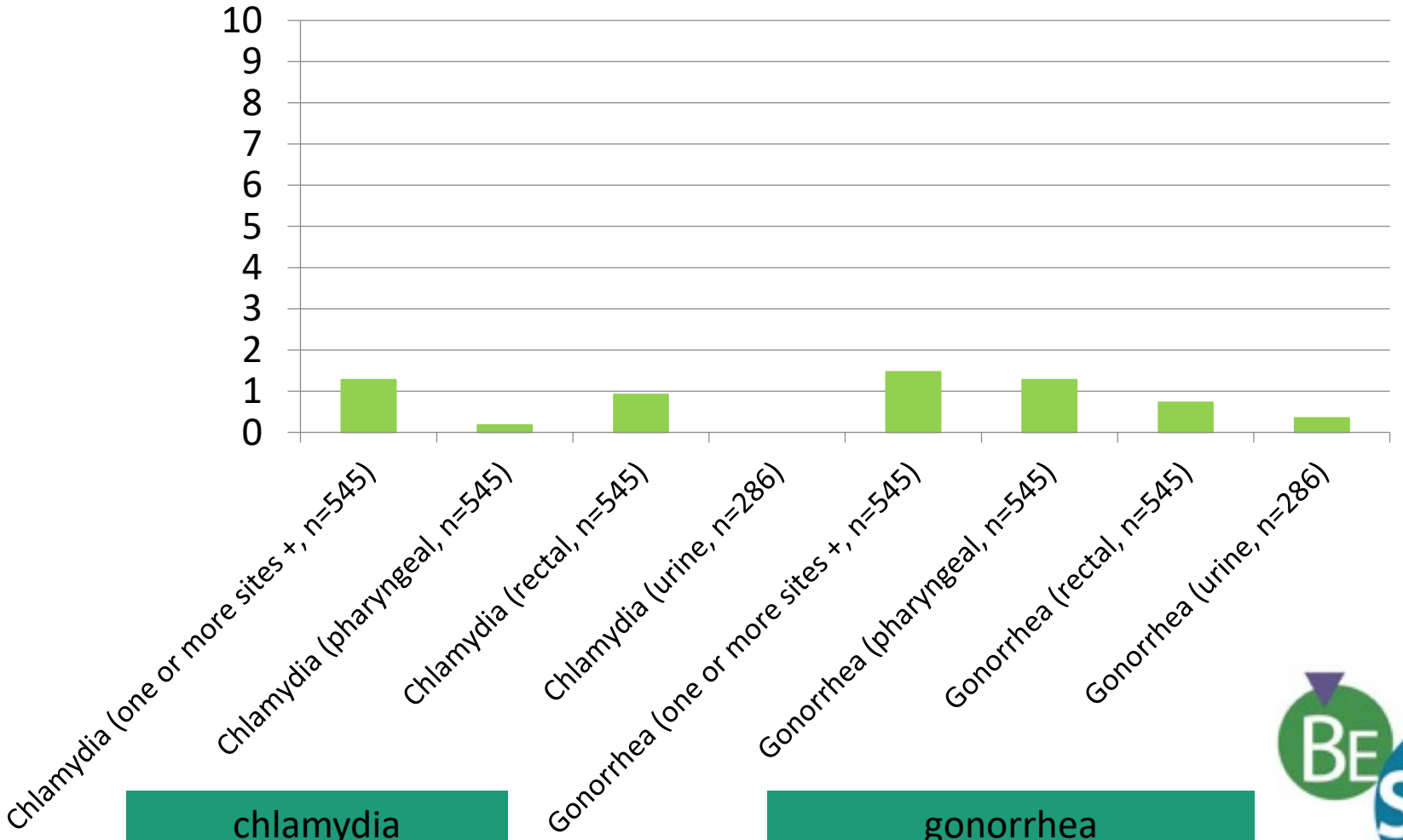
Past year STI testing (self-report): PWID 2018



STI prevalence

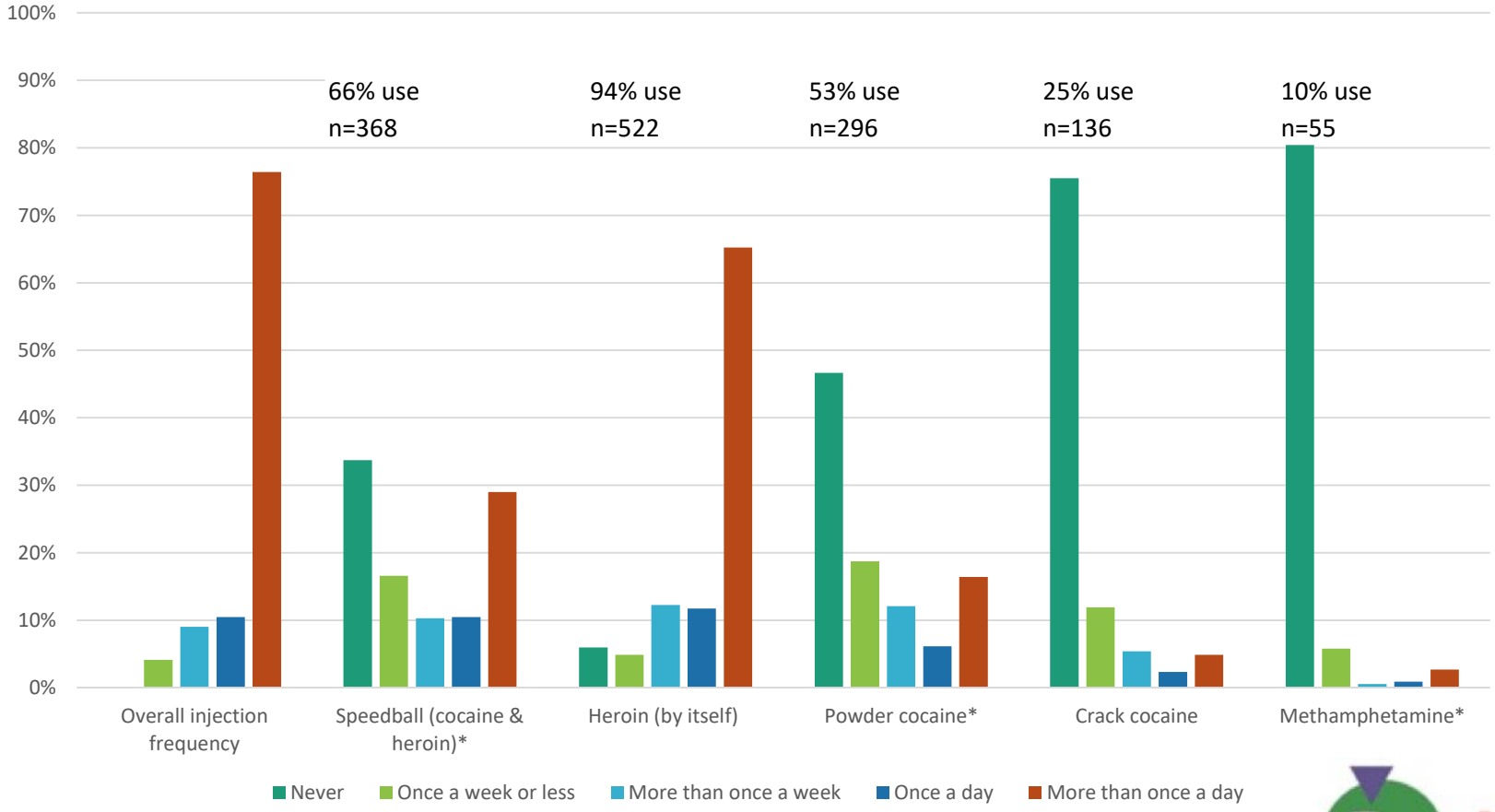
among 545
participants tested

1.3% chlamydia (n=7)
1.5% gonorrhea (n=8)



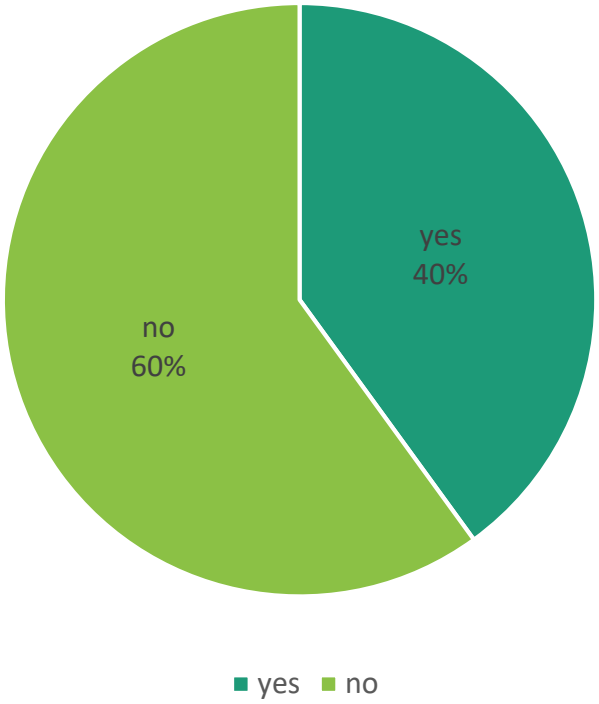
Selected Local Data

Past year injection frequency: PWID 2018

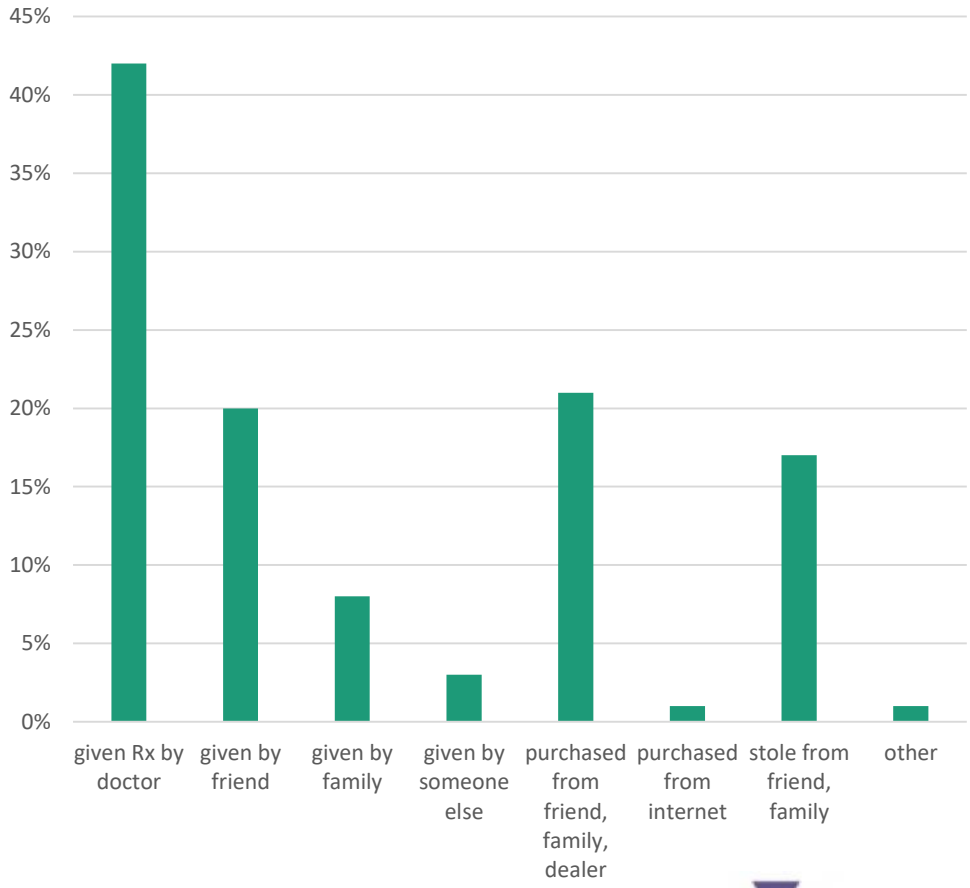


*Differed by county of residence in chi2 test ($p<0.05$)

Were you hooked on painkillers before you injected drugs for the very first time?

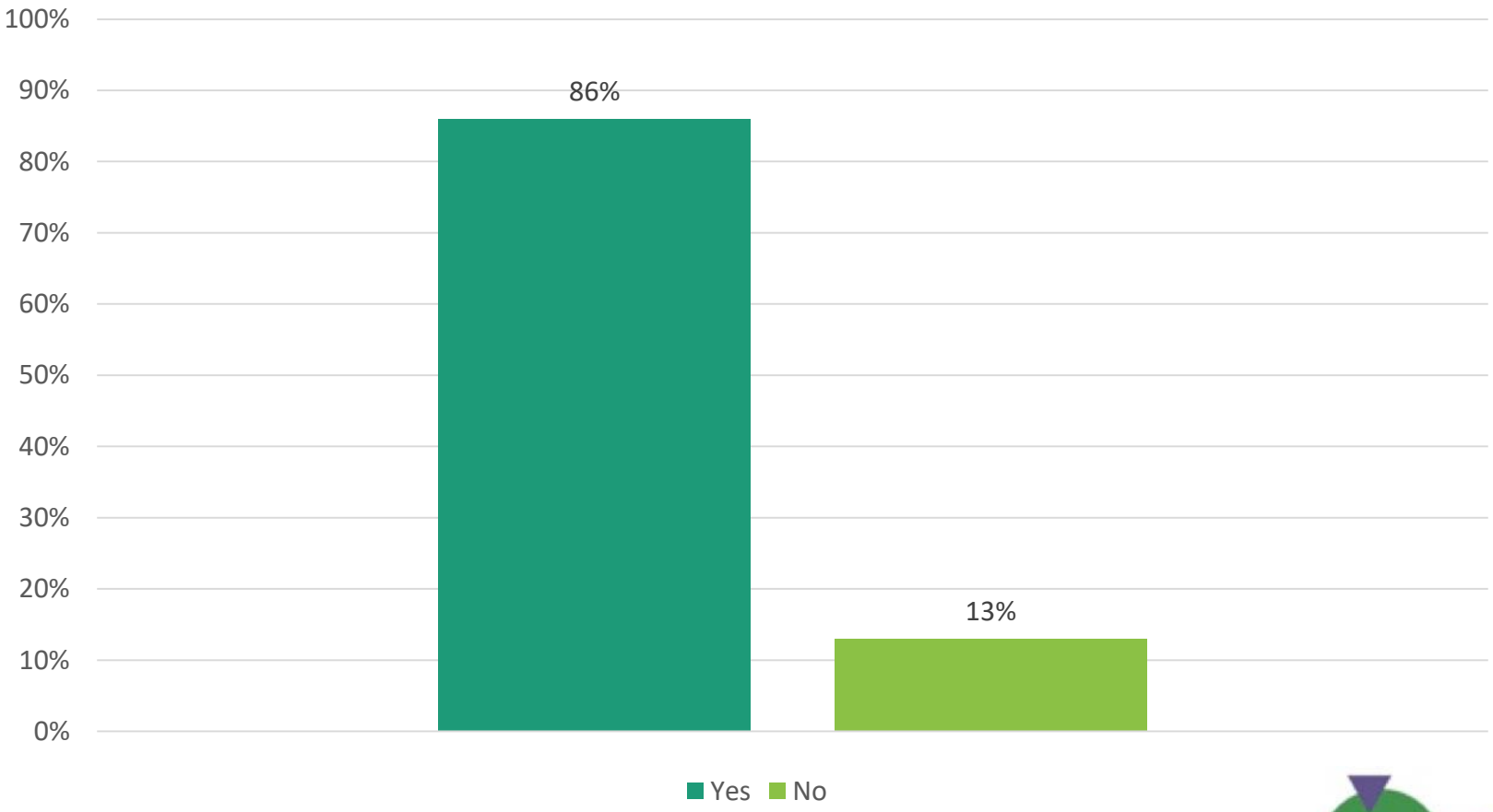


When you first used those painkillers, how did you obtain the drug?



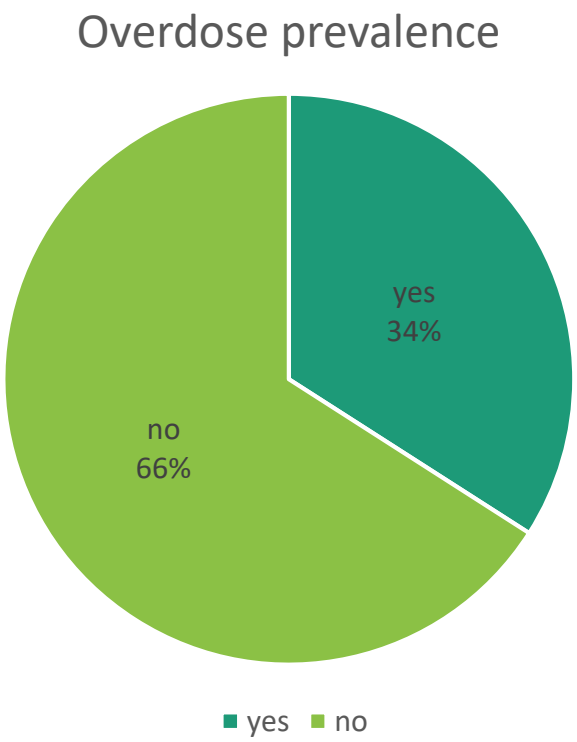
among 233 participants who reported being hooked on painkillers before first injection

In the past 30 days, have you heard or suspected that drugs you were using were cut or laced with Fentanyl?

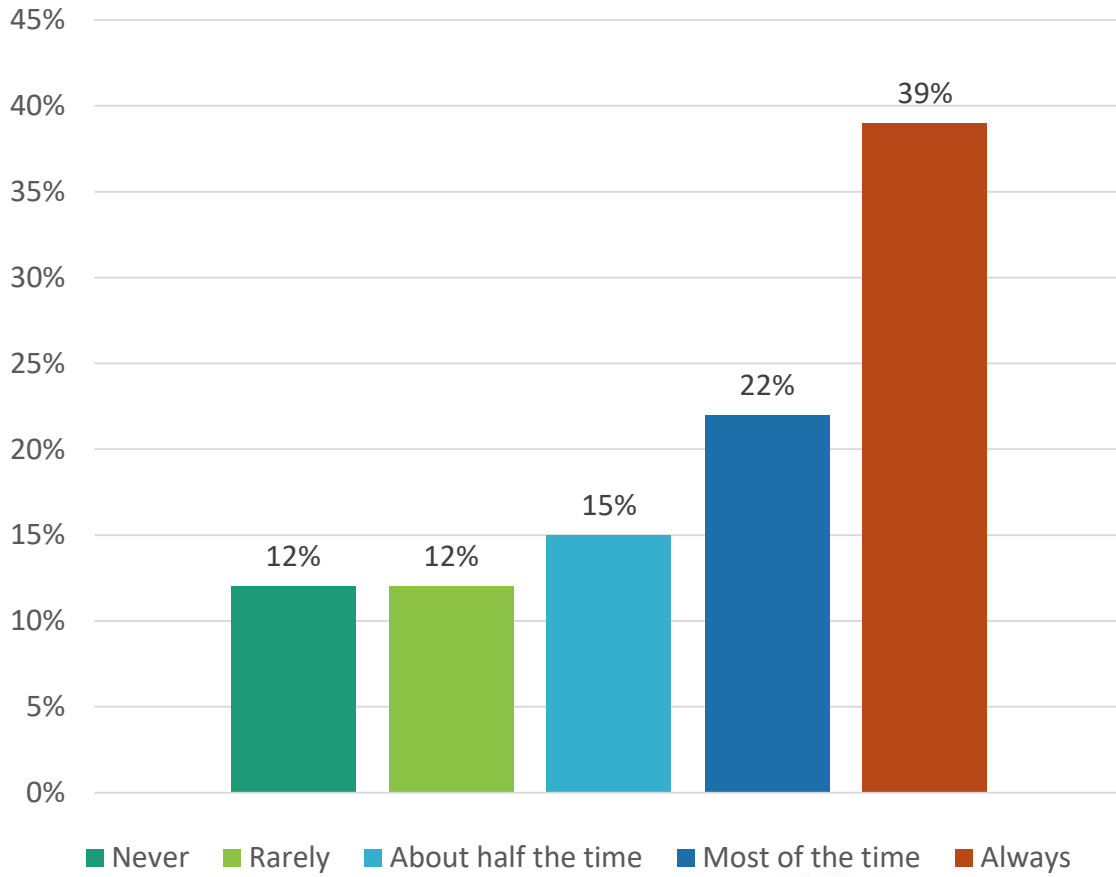


n=527

In the past 12 months, did you overdose on heroin or painkillers? By overdose, I mean if you passed out, turned blue, or stopped breathing from using drugs.



In the past 12 months, when you injected drugs, how often was Narcan or Naloxone available to you in case of an overdose? It could have been yours or someone else's.



among 511 participants who reported having heard of Narcan.

In the past 12 months, how many times have you used Narcan or Naloxone on yourself or someone else?
among 511 participants who reported having heard of Narcan.

45% (n=232) reported 0 times

54% (n=275) reported between 1 and 31 times

mean among those reporting at least 1 use=3.40

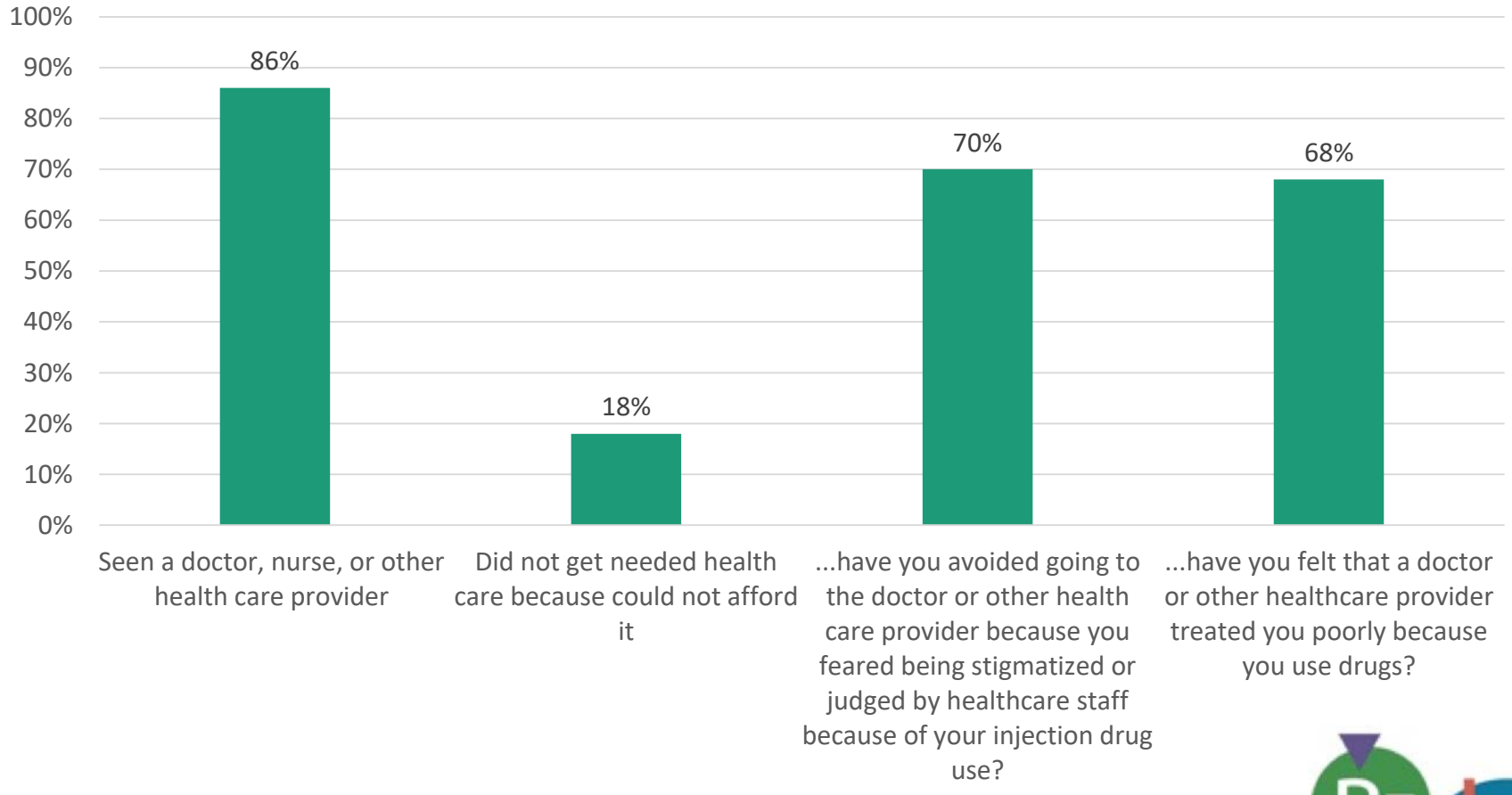
In the past 12 months, that is, since [current month] of last year, how many times have you seen someone overdose from heroin, fentanyl, or opioid painkillers?

17% (n=96) reported 0 times

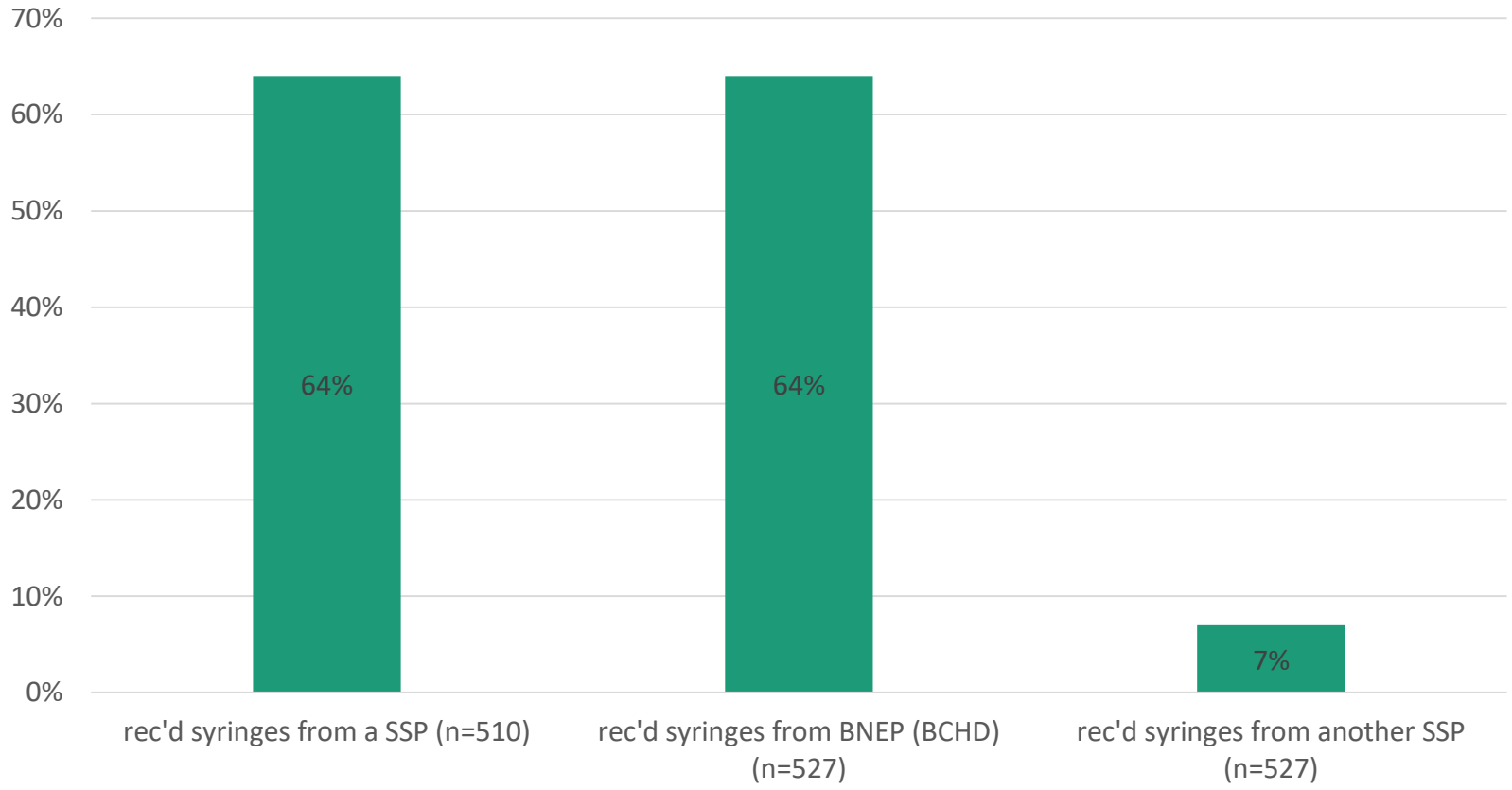
77% (n=453) reported having witnessed between 1 and 300 opioid overdoses

mean among those reporting witnessing at least one opioid overdose=7.08

Past year health care experience among PWID, BESURE 2018



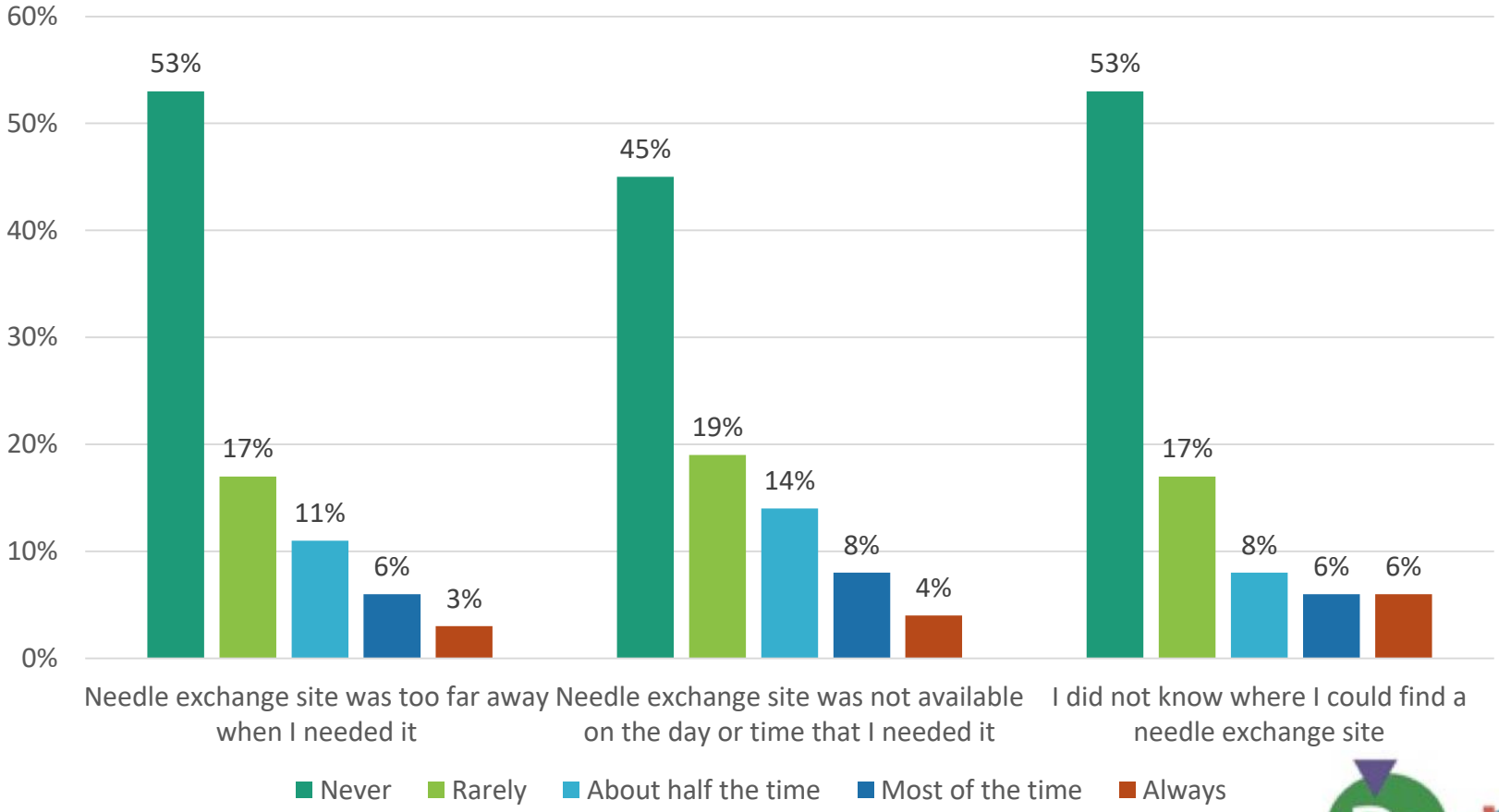
Received syringes from Syringe Service Program among PWID, BESURE 2018



Among 92% who received new sterile syringe in past year

Syringe Exchange Services

In the past year when trying to access needle exchange programs, how often have you faced each of the following?



Looking Ahead to HET5

Next steps

Looking ahead to HET5

- February-May 2019: Formative research
- June/July 2019 : Operational preparations, community awareness, continued community engagement
- July 2019: Begin survey
- December 2019 or hopefully sooner: Conclude

What have we done with our data

- Share with city & state health departments & CDC
- Share with community partners directly, at workgroup meetings, at forums
- Community presentations
- Grant proposals
- Academic publications
- Direct services
- Report of findings

Recent publications

Maulsby C, et al. **HIV and Employment among Black Men who have Sex with Men in Baltimore**. *AIDS Care*, in press.

Mitchell KM, et al. **Improvements in the HIV care cascade needed to meaningfully reduce HIV incidence among men who have sex with men in Baltimore, US: a modeling study**. *Journal of the International AIDS Society (JIAS)*. In press.

Kasaie P, et al. **(2019**). **Gonorrhoea and chlamydia diagnosis as an entry point for HIV pre-exposure prophylaxis: A modeling study.** *BMJ Open.* In press.

Park JN, et al. (2019). **Police violence among people who inject drugs in Baltimore, Maryland. International Journal of Drug Policy**. 64: 54-61. PMID: 30579221.

Kasaie P, et al. (2018). Impact of Providing Preexposure Prophylaxis for Human Immunodeficiency Virus at Clinics for Sexually Transmitted Infections in Baltimore City: An Agent-based Model. Sex Trans Dis. 45(12): 791-797.
Sherman SG, et al. **Correlates of exchange sex among a population-based sample of low-income women who have heterosexual sex in Baltimore.** AIDS Care. 2018 Oct;30(10):1273-1281.

German D, et al. **Characteristics of Black Men Who Have Sex With Men in Baltimore, Philadelphia, and Washington, D.C.: Geographic Diversity in Socio-Demographics and HIV Transmission Risk.** J Acquir Immune Defic Syndr. 2017 Jul 1;75 Suppl 3:S296-S308.

Maragh-Bass AC, et al. **Sociodemographic and access-related correlates of health-care utilization among African American injection drug users: The BESURE study.** J Ethn Subst Abuse. 2017 Jul-Sep;16(3):344-362.

How to find our data

- MDH website http://phpa.dhmh.maryland.gov/OIDEOR/CHSE/SitePages/behavioral-surveillance.aspx
- Facebook! www.facebook.com/besurebaltimore
- BESURE website! www.besurebaltimore.com
- Email BESURE team

The **Be**havioral **Su**rveillance **Re**search (BESURE) Study is a community health project that measures prevalence of HIV, health and social issues, health-related behaviors and access to services among key groups in Baltimore. BESURE is in its 13th year and has become a primary source of information on the health of people in our community. The results of the study directly inform program planning to improve health outcomes and fight the spread of HIV in Baltimore.

The BESURE-Transgender project, *a new endeavor of the BESURE team* and supported by the Maryland Department of Health, is intended to identify the strengths and assets, and understand health, social, and service needs of transgender and gender non-conforming individuals living in and around Baltimore City. The information collected will guide health and wellness services in Maryland.

BeSure Baltimore

Facebook: https://www.facebook.com/besurebaltimore

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Communities **L**everaging **E**vidence for **A**ction and **R**esources (CLEAR), a project of BESURE, seeks to identify the strengths and assets, and understand health, social, and service needs of transgender and non-binary individuals living in and around Baltimore City.

CLEAR's three project components include:

1) **Understanding the local landscape of transgender and non-binary individuals' health and wellness.** We do this through offering opportunities to participate in surveys and interviews. To learn more, please contact Brendon (brendonh@jhu.edu).

2) **Providing referrals to trans-affirming services and resources.** We do this through building relationships with organizations across the city that offer services related to housing, employment, health, and more. To learn more, please contact August (august.cason@jhu.edu).

3) **Building individual and community capacity through programming.** We do this through offering in-person and online workshops on topics of money management, preparing for an interview, navigating health insurance, writing a grant, and more. To learn more, please contact Londyn (londyn@jhu.edu).

In addition to full-time staff, CLEAR also has Community Advisory Board and Co-Investigator team and is supported by the Maryland Department of Health.

With sincerest thanks to:

- Study participants
- Community partners
- MDH state lab staff

- Data collection, field operations, data management, project administration, and investigator teams over time
- Sarah Linden, Lou Spencer, Antione Tomlin
- *Anne Sawyer

- Colin Flynn, Molly Gribbin
- MDH, CDC