



MEDICAL  
MONITORING  
PROJECT

# Virginia Department of Health Medical Monitoring Project Stakeholder Meeting

Monday, April 20, 2015  
10-11:30am



# Introduction

- Presenters
  - Anne Rhodes, PhD; Director of HIV Surveillance
  - Lauren Yerkes, MPH; HIV Epidemiologist
  - Kristen Kreisel, PhD; MMP Project Coordinator
  - Jennifer Kienzle, PhD; MMP Data Manager
  - Celestine Buyu, MPH, MHSA; MMP Principal Investigator
  - Mark Freedman, DVM, MPH; CDC MMP Project Officer for Virginia
- Hold questions for discussion sections
- Chat feature for questions

# Webinar Agenda

- Introduction
- Overview of the HIV Surveillance Program at VDH
- HIV Epidemiology in Virginia
- What is MMP?
- MMP data overview
- **DISCUSSION**
- New Case Surveillance Based Sampling (CSBS) Methodology for MMP 2015
- Reasons for Change to New Design
- **DISCUSSION**
- CSBS Pilot Study
- Change in Facility Involvement with CSBS
- CSBS Challenges and Benefits
- **DISCUSSION**

# HIV Surveillance at VDH

Collect data on  
Persons Living with  
HIV

Work with  
providers and  
other stakeholders  
to improve data  
quality and  
understand needs

Disseminate  
information on HIV  
data, trends, rates  
to monitor the  
epidemic

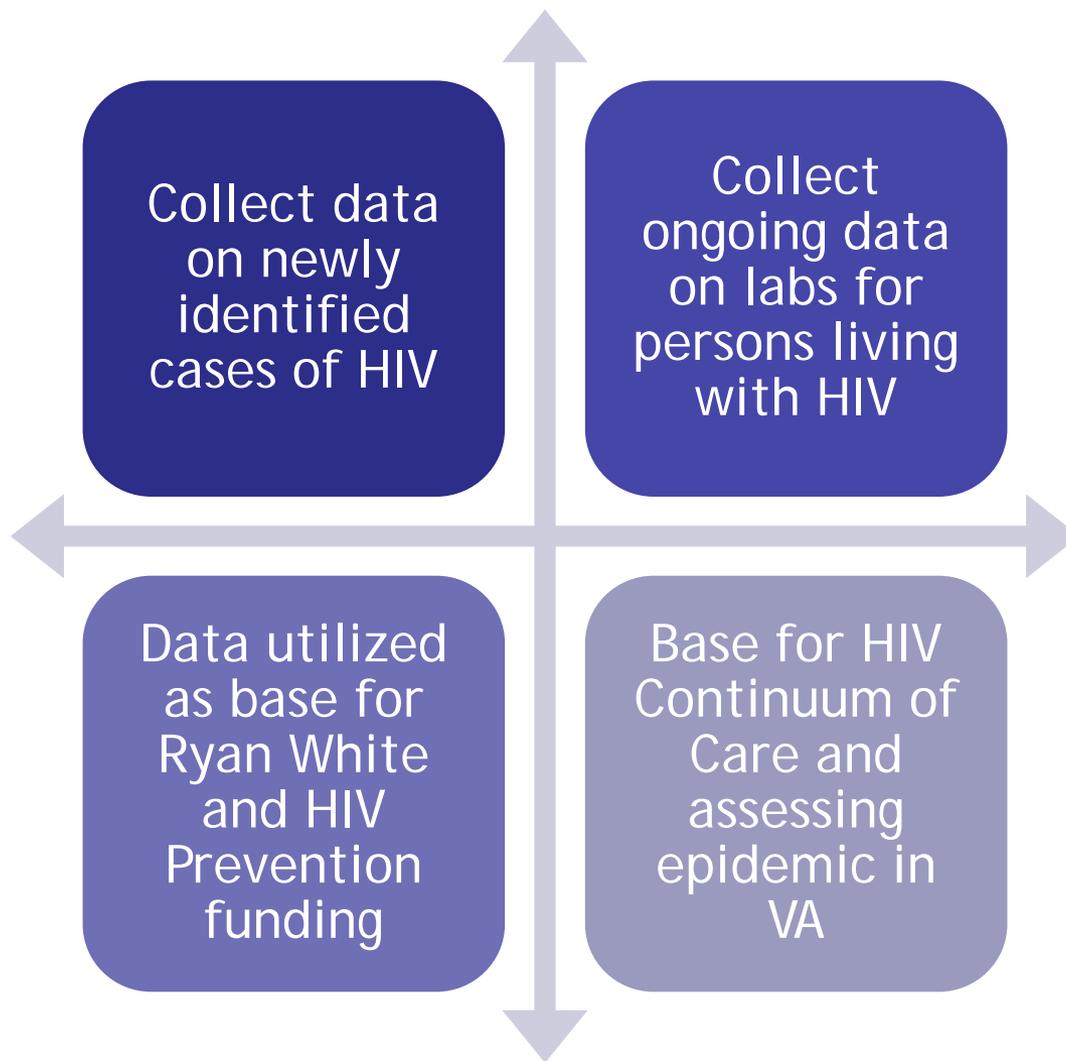
# Division of Disease Prevention

- Includes HIV Prevention, HIV Care (Ryan White grant), TB Control and Newcomer Health, and STD Surveillance and Field Operations
- Part of the Office of Epidemiology
- Webpage:  
<http://www.vdh.virginia.gov/epidemiology/DiseasePrevention/>

Facebook Page:

<https://www.facebook.com/DiseasePreventionHotline>

# HIV Case Surveillance



# HIV Incidence Surveillance

## Purpose

- Provides estimates of the number of new HIV infections over a certain period of time.

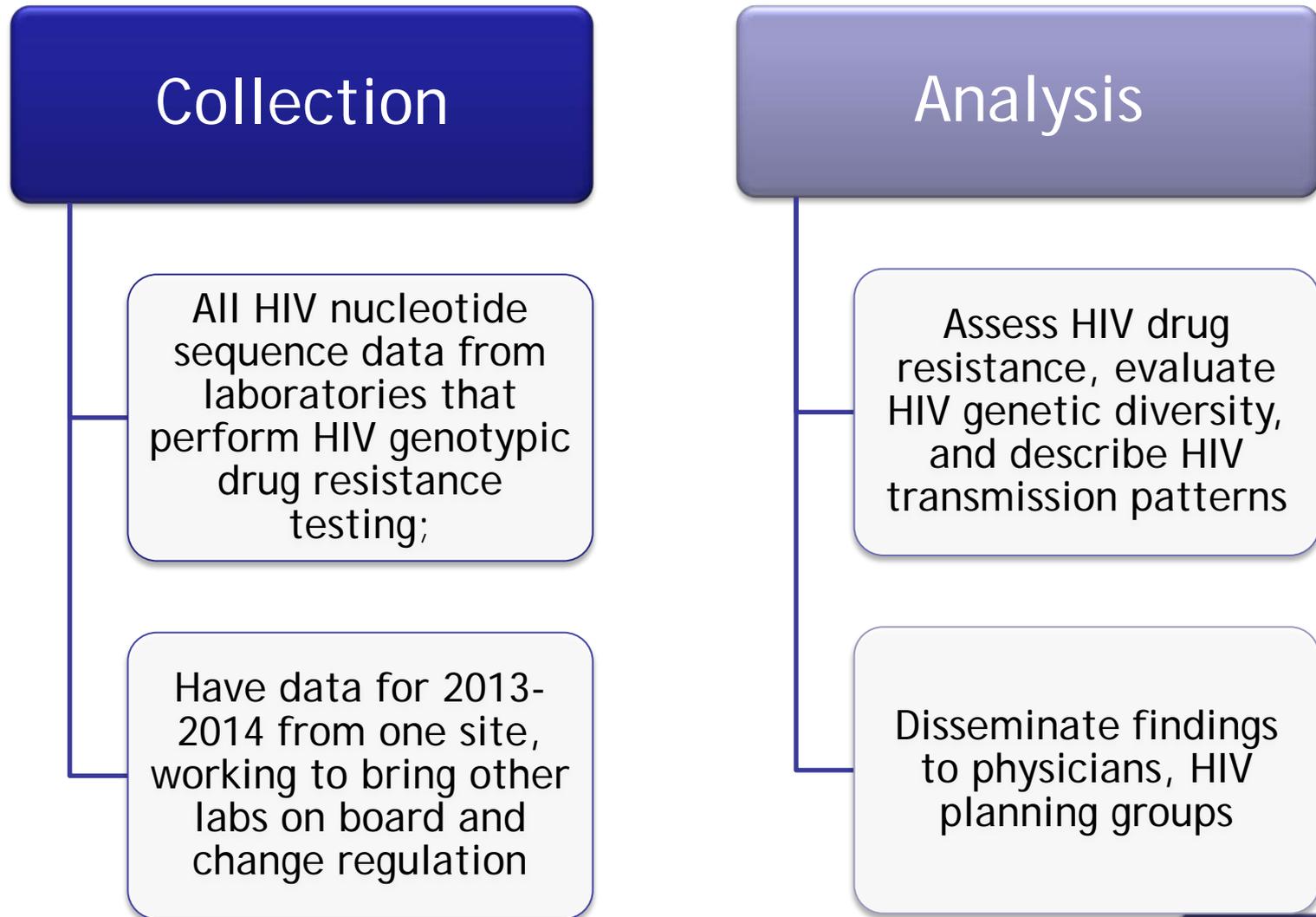
## Definition

- Incidence refers to persons newly infected with HIV in a specified time period, whereas a person newly diagnosed with HIV may have been infected for years before being diagnosed.

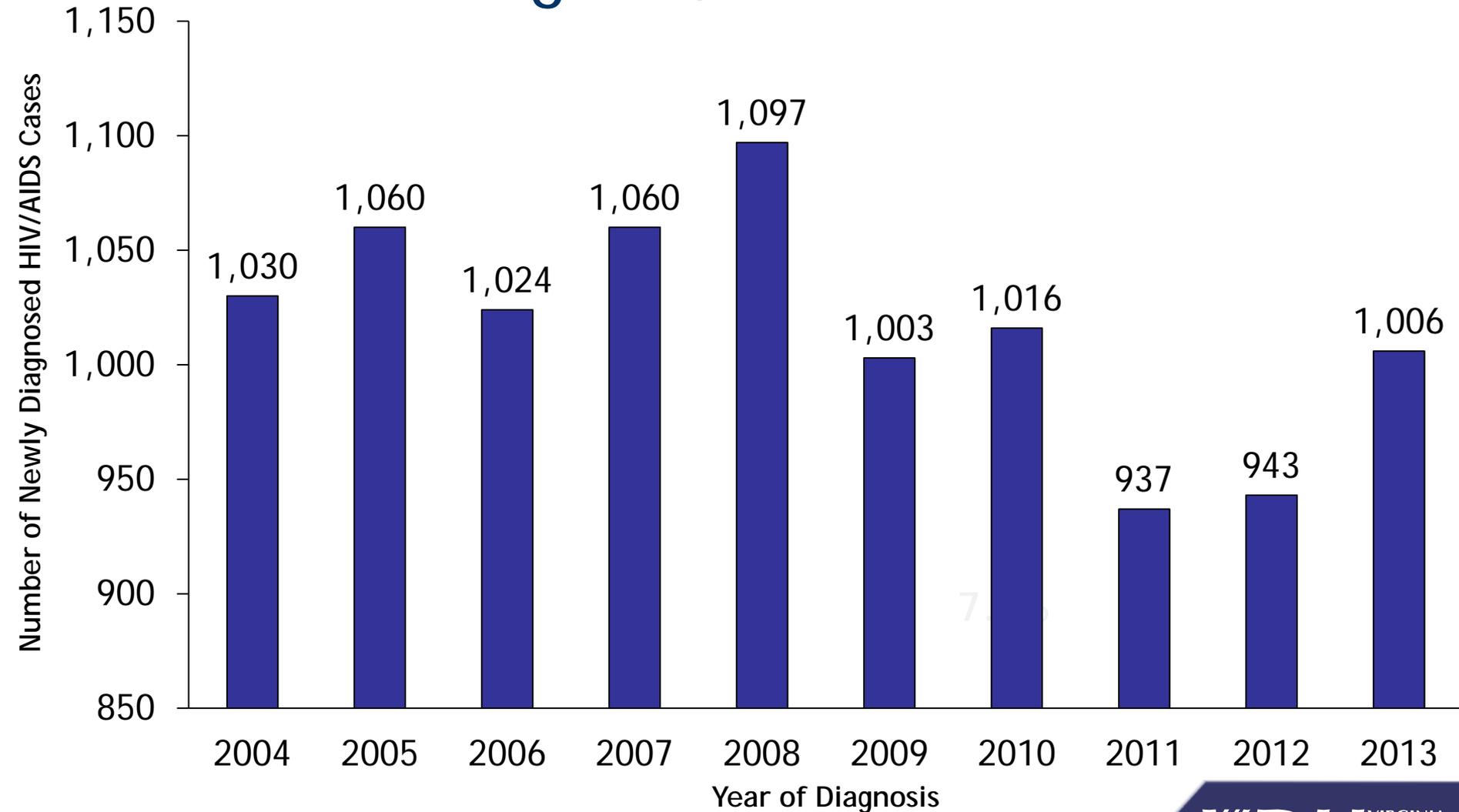
## Usages

- Important for prevention evaluation and planning, public health policy development, resource allocation and to identify disease trends.

# Molecular HIV Surveillance



# Newly Diagnosed HIV Disease Cases in Virginia, 2004-2013



Data as of December 2014; Accessed March 2015, HIV Surveillance, Virginia Department of Health

# New HIV Diagnoses by Region, 2013

|           | Central<br>(N= 207)   | Eastern<br>(N= 343)  | Northern<br>(N= 279)   | Northwest<br>(N= 87)  | Southwest<br>(N = 90)   |
|-----------|---|--|--|---|---|
| Sex       | 79.2% male<br>20.8% female  | 81.6% male<br>18.4% female   | 81.0% male<br>19.0% female   | 82.8% male<br>17.2% female  | 77.8% male<br>22.2% female  |
| Race      | 75.9% Black, NH<br>20.8% White, NH<br>2.4% Hispanic                   | 72.0% Black, NH<br>21.9% White, NH<br>4.4% Hispanic                  | 44.4% Black, NH<br>42.5% White, NH<br>18.6% Hispanic                 | 44.8% Black, NH<br>42.5% White, NH<br>11.5% Hispanic                  | 44.4% Black, NH<br>51.1% White, NH<br>3.3% Hispanic                   |
| Age at Dx | 34.8% 15-24<br>28.0% 25-34<br>13.5% 35-44<br>13.0% 45-54<br>10.6% 55+ | 30.0% 15-24<br>31.5% 25-34<br>15.7% 35-44<br>12.0% 45-54<br>9.6% 55+ | 13.6% 15-24<br>29.4% 25-34<br>25.5% 35-44<br>21.9% 45-54<br>9.0% 55+ | 24.1% 15-24<br>20.7% 25-34<br>14.9% 35-44<br>24.1% 45-54<br>16.1% 55+ | 23.3% 15-24<br>23.3% 25-34<br>20.0% 35-44<br>18.9% 45-54<br>11.1% 55+ |
| Risk      |   |  |  |   |   |

Data as of December 2014; Accessed March 2015, HIV Surveillance, Virginia Department of Health

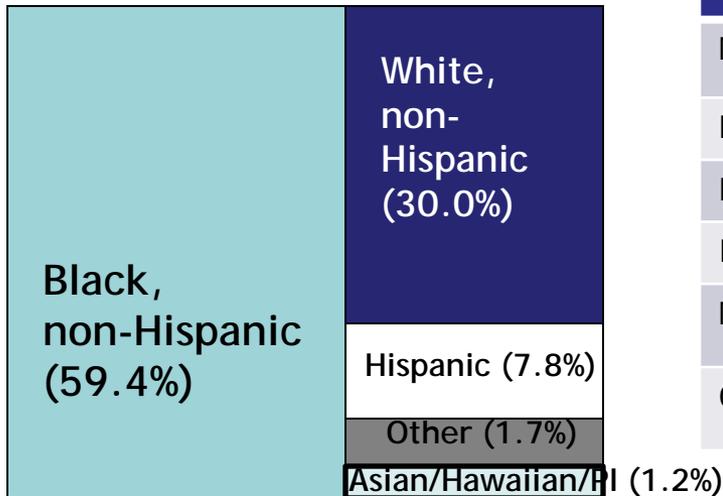
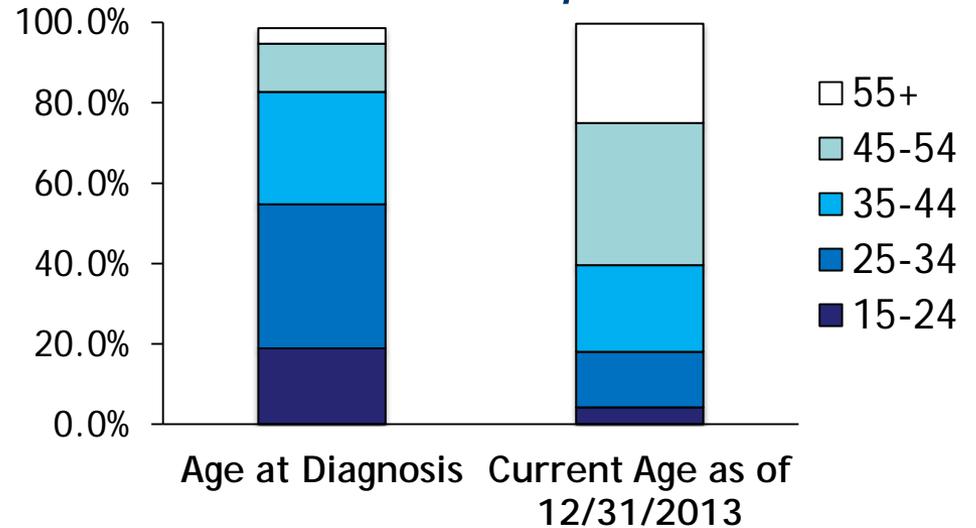
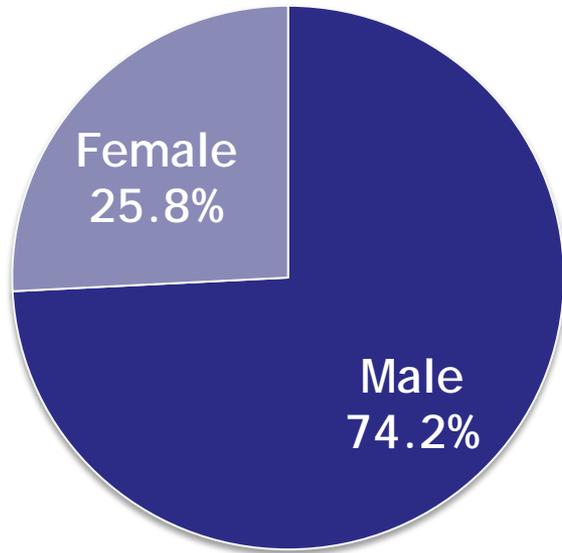
MSM- Men who have sex with men/ male-to-male sexual contact

IDU- Injection drug use

NRR/NIR- No reported or identified risk

HC- Heterosexual contact

# Summary of Persons Living with HIV Disease in Virginia as of December 31, 2013

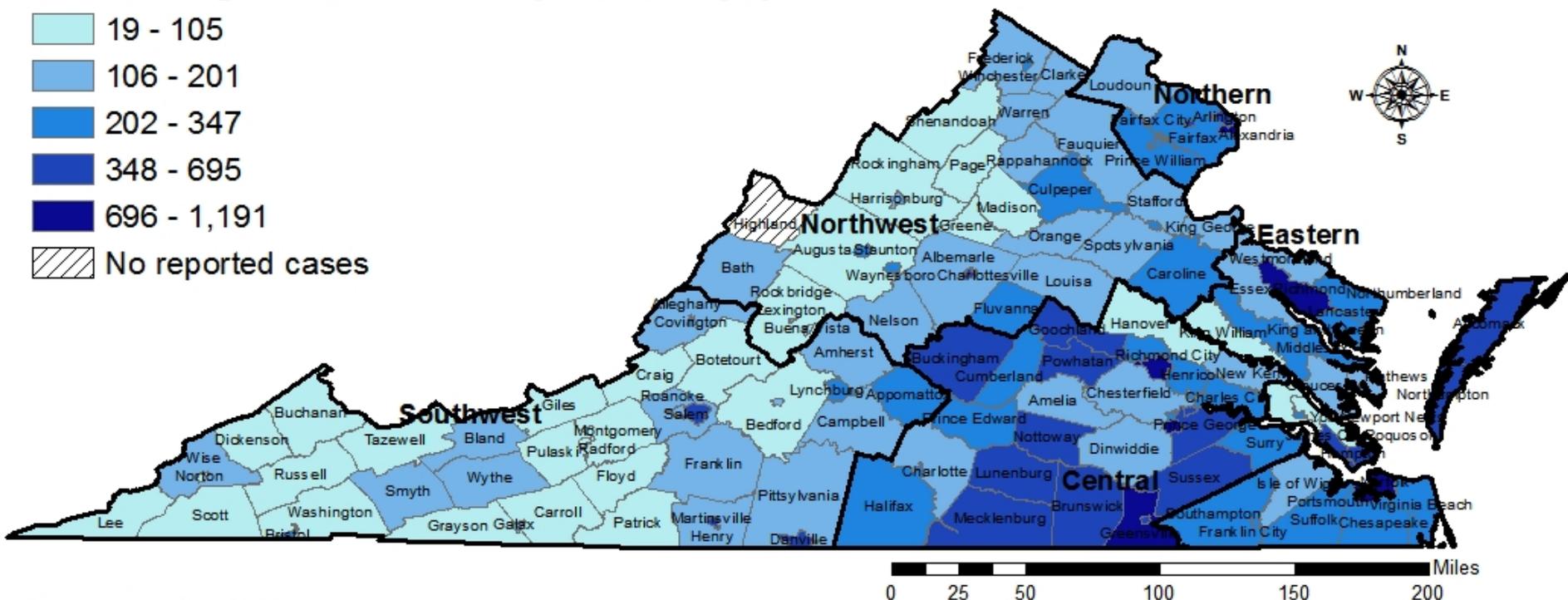
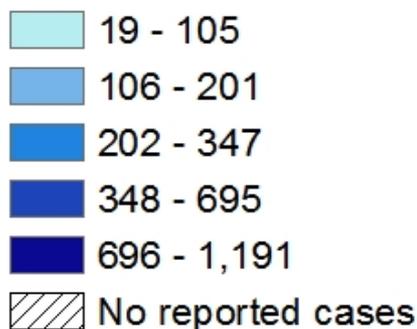


| Transmission Risk                               | Percent of PLWHA |
|---|------------------|
| Men who have sex with men (MSM)                 | 46.4%            |
| No reported or identified risk                  | 19.2%            |
| Heterosexual contact                            | 19.1%            |
| Injection drug use                              | 9.7%             |
| MSM-IDU   | 4.0%             |
| Other (pediatric and receipt of blood products) | 1.7%             |

Data as of December 2014; Accessed March 2015, HIV Surveillance, Virginia Department of Health

# Persons Living with HIV Disease as of December 31, 2013 by Locality in Virginia

Rate of living HIV disease cases per 100,000 population



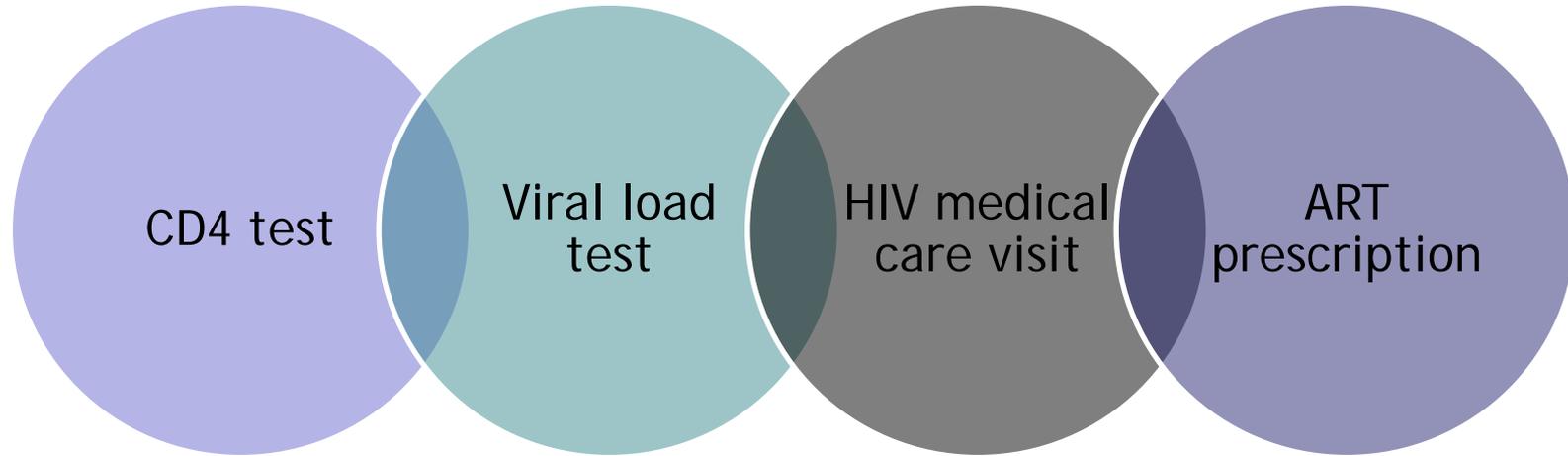
Data as of October 2014

# What is the HIV Continuum of Care?

- A model used to assess health outcomes of persons living with HIV/AIDS (PLWHA)
- A surveillance tool used to:
  - Evaluate program effectiveness
  - Identify potential gaps in services to facilitate better outcomes among subpopulations most in need
  - Assist PLWHA to engage in and receive continuous care
  - Aid PLWHA in achieving progress through the stages of engagement with the goal of viral suppression

# Defining the HIV Continuum of Care

*What's considered a care marker?*



Linkage



Evidence of a care marker within 90 days of initial HIV diagnosis

Retention



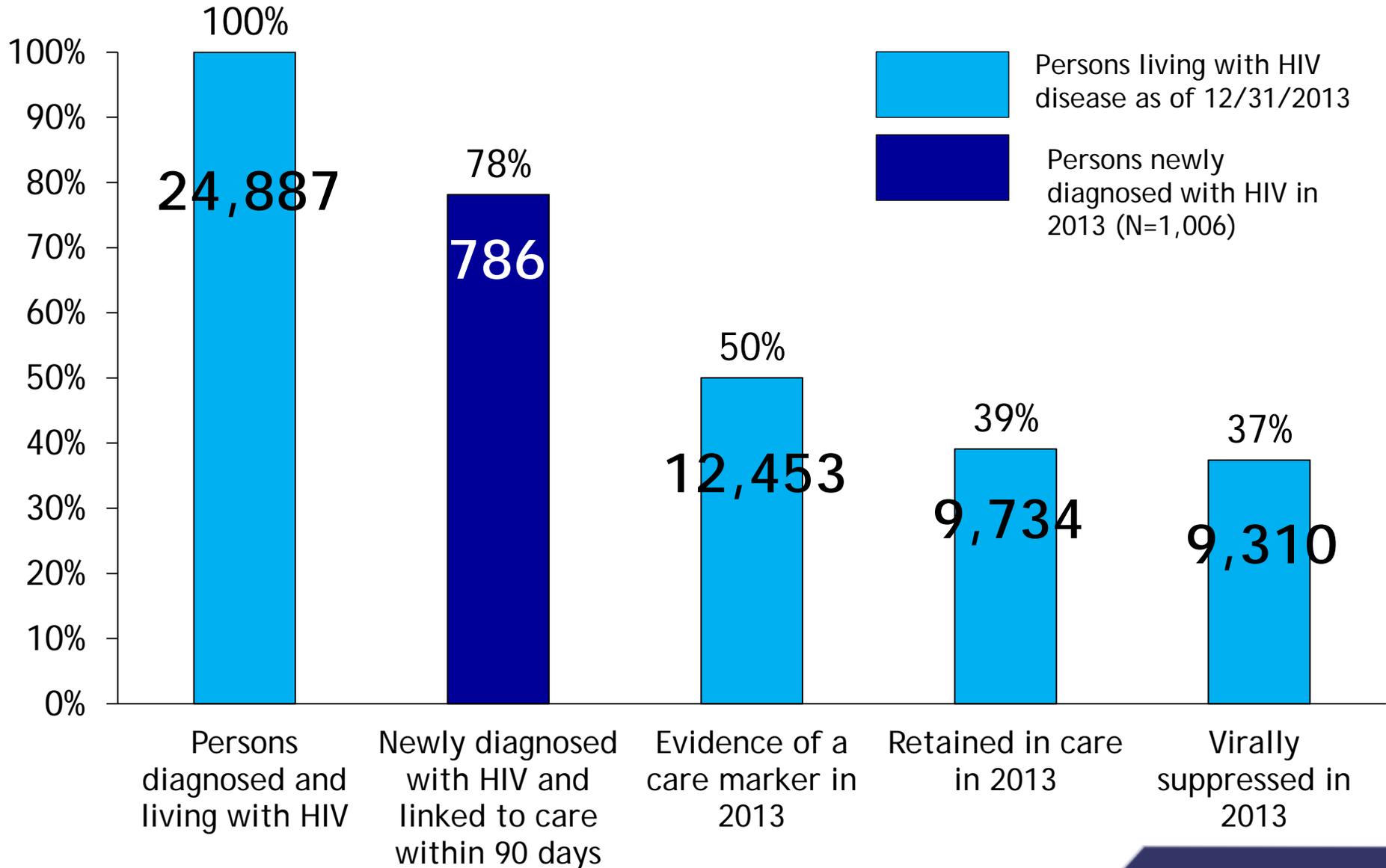
2 or more care markers in 12 months at least 3 months apart

Viral Suppression



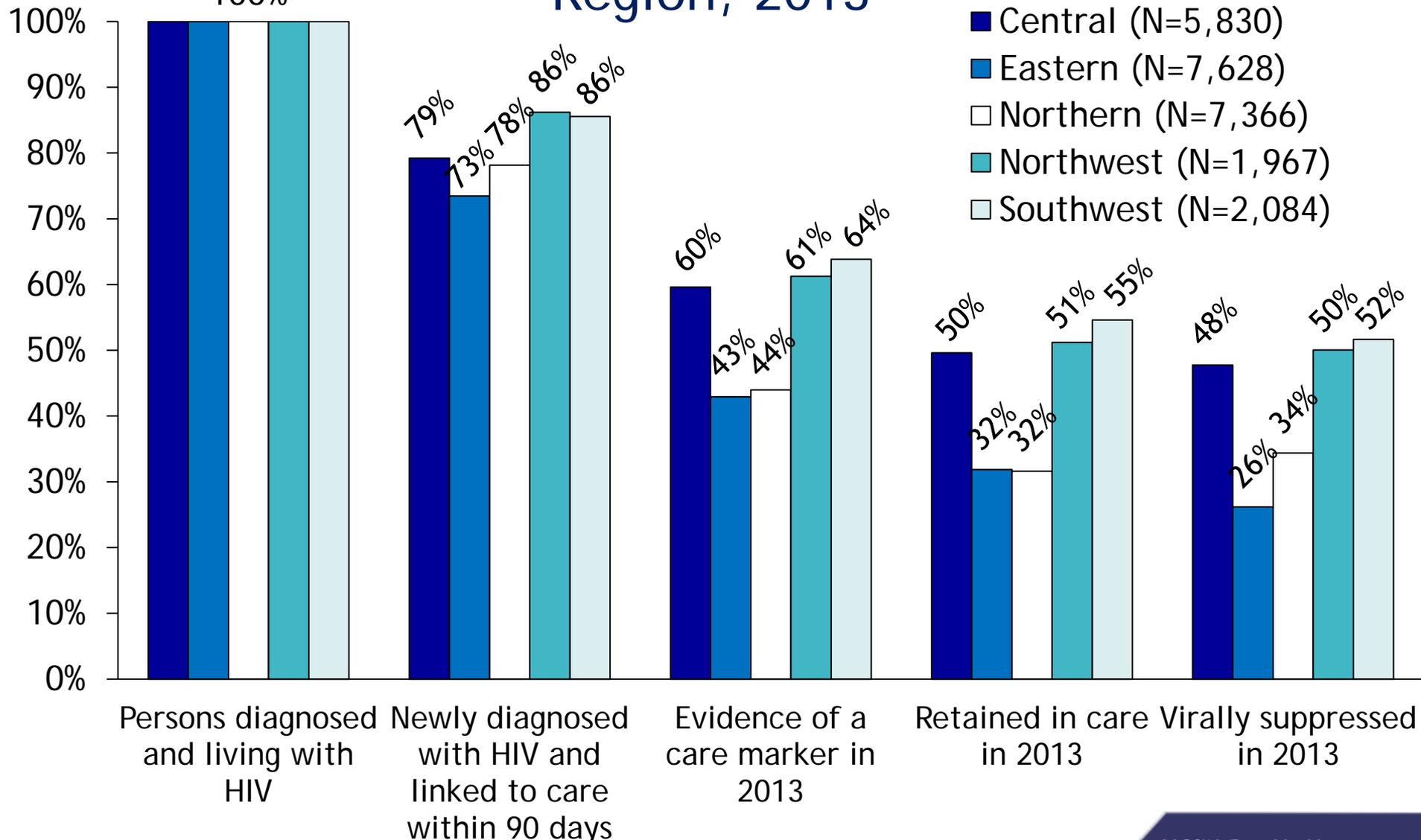
Last viral load <200 copies/mL in the time period being measured

# HIV Continuum of Care in Virginia, 2013



Data derived from eHARS, ADAP, VACRS, Medicaid as of December 2014; Accessed March 2015, HIV Surveillance, Virginia Department of Health

# HIV Continuum of Care in Virginia by Health Region, 2013



Data derived from eHARS, ADAP, VACRS, Medicaid as of December 2014; Accessed March 2015, HIV Surveillance, Virginia Department of Health



# What is the Medical Monitoring Project (MMP)?

- Ongoing supplemental surveillance system assessing behaviors and clinical characteristics of persons living with HIV/AIDS (PLWHA) who have received outpatient HIV medical care
- To learn more about the experiences and needs of people who are receiving care for HIV
- Funded by Centers for Disease Control and Prevention (CDC)
- Conducted by state and local health departments





# Goals of MMP

Behaviors and  
clinical  
outcomes

HIV-related  
Co-morbidities

Access to/  
Use of Prevention  
Services

HIV Care

Support  
Services

Met/Unmet  
Needs



# Significance of MMP

- MMP is the most comprehensive project of its kind.
- MMP can provide valuable local and national estimates regarding health care utilization, quality of care, and met and unmet needs of PLWHA.
- Because of a nationally representative sample, information gathered from MMP can be used for care, prevention, and funding planning purposes groups by a wide variety of groups with different initiatives.



# Current MMP Sampling Methods: 3-Stage Sampling Design

## State Level

- 23 Project Areas
  - 16 states, 1 U.S. territory, 6 separately funded cities
- 

## Health Care Facility Level

- Sample of HIV medical care facilities from each state (small, medium, and large)
  - Sampling frame reconstructed every 2 years
  - 25-50 facilities from each project area
- 

## Patient Level

- Sample of patients from each facility selected to participate
- Behavioral and clinical information to represent HIV+ patients in HIV medical care
- 400 sampled for Virginia; 100-800 for other project areas

# MMP Data Collection - Interviews

Telephone Interviews



OR

In-person Interviews







# Uses of MMP Data for Current Issues

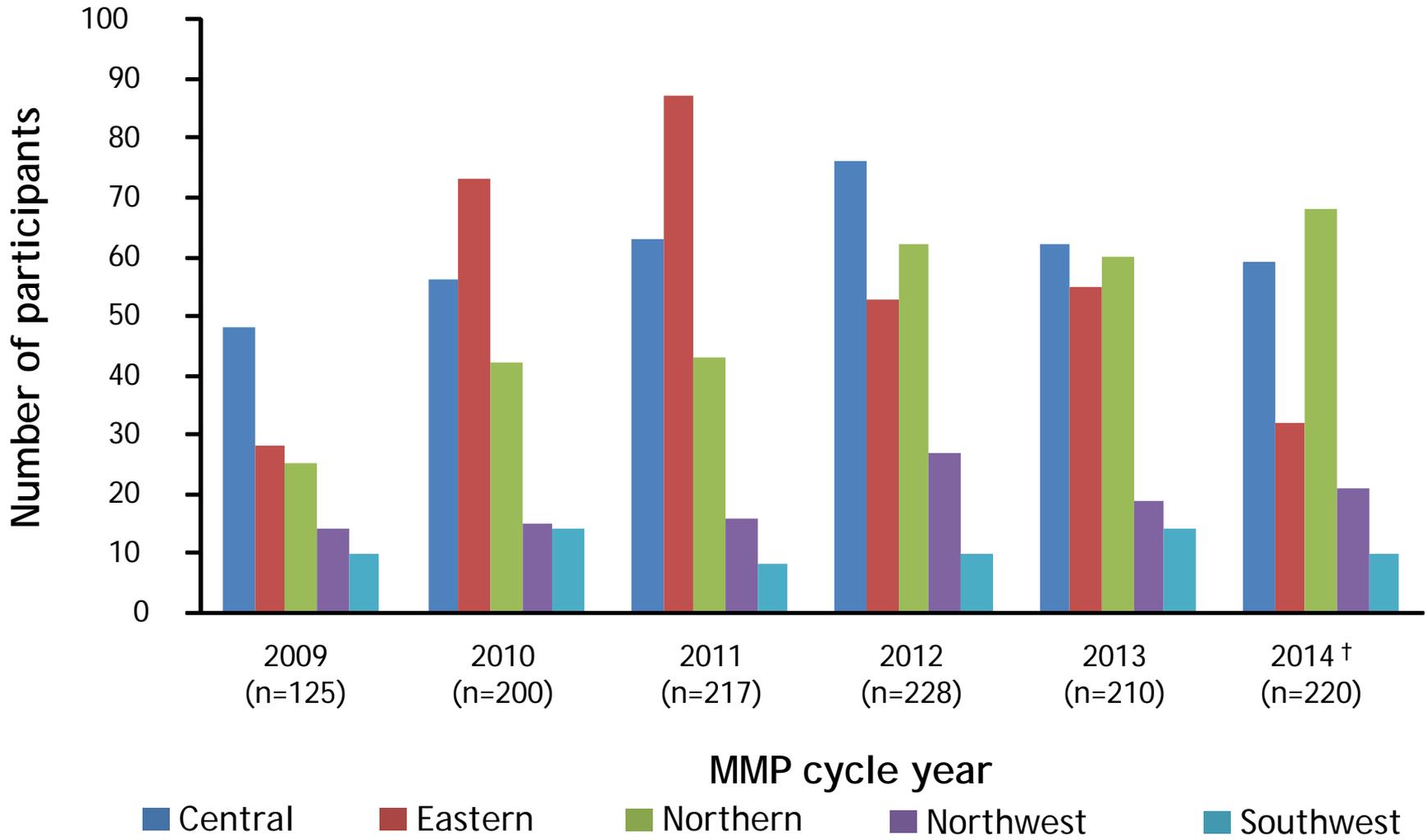
- Contribution of MMP data to the HIV continuum of care
  - Can provide nationally and locally representative data to evaluate each stage of the HIV continuum of care, especially the “Prescribed ART”
    - Diagnosis, linked to care, retained in care, **prescribed ART**, virally suppressed
- MMP data can provide information on how the Affordable Care Act (ACA) is affecting the National HIV/AIDS Strategy (NHAS)
  - Insurance status, met/unmet needs



# Enhancing HIV Surveillance

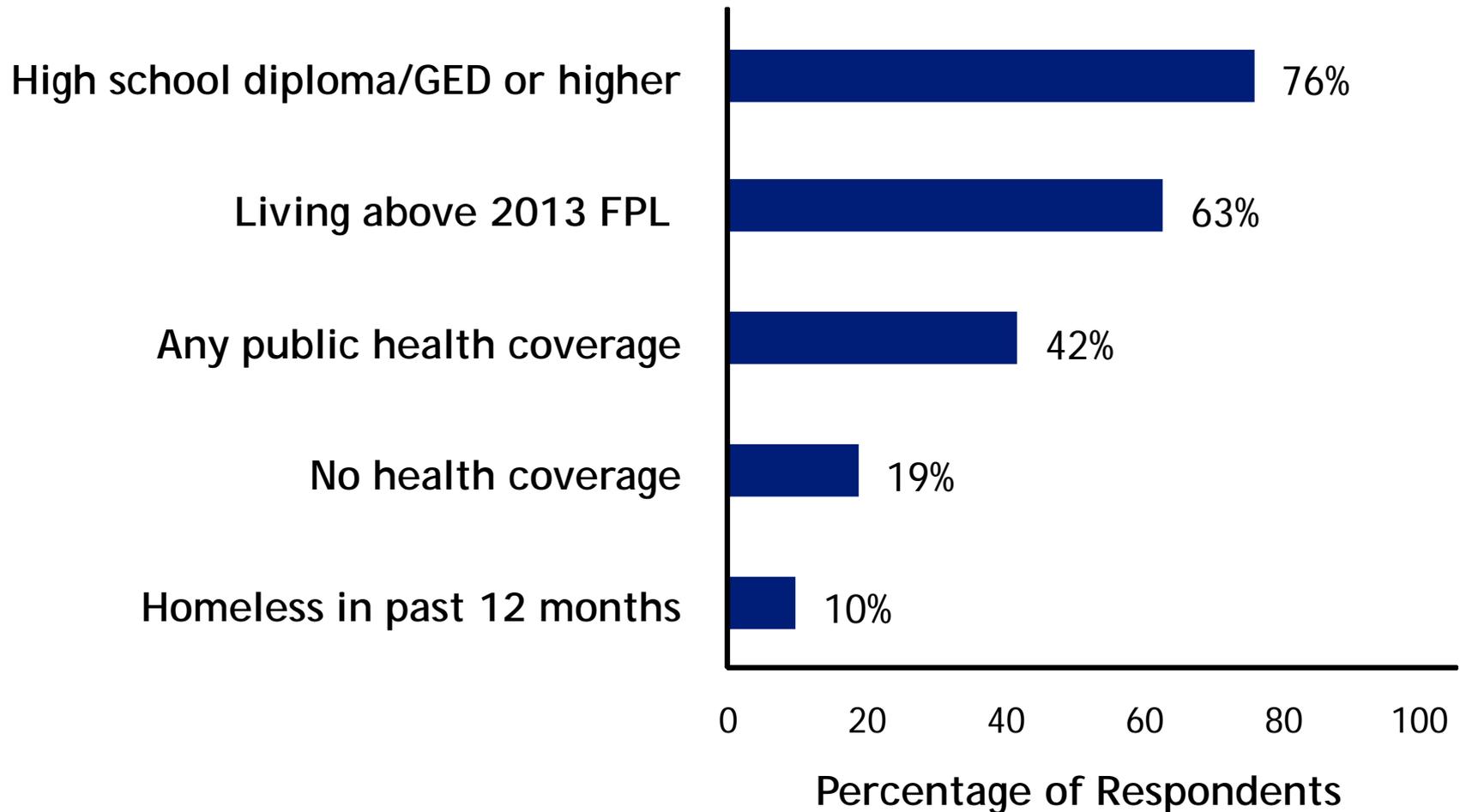
- Sociodemographics
- Access to and utilization of care
- HIV treatment and adherence
- Insurance/ health coverage
- Substance use
- Mental health
- Met/unmet need for ancillary services
- Prevention activities
- Health Conditions and preventive therapy
- Sex behaviors
- Women's health

# Participation by Year and Region



† Participant count, to-date.

# Selected Sociodemographic Characteristics, 2013<sup>†</sup>

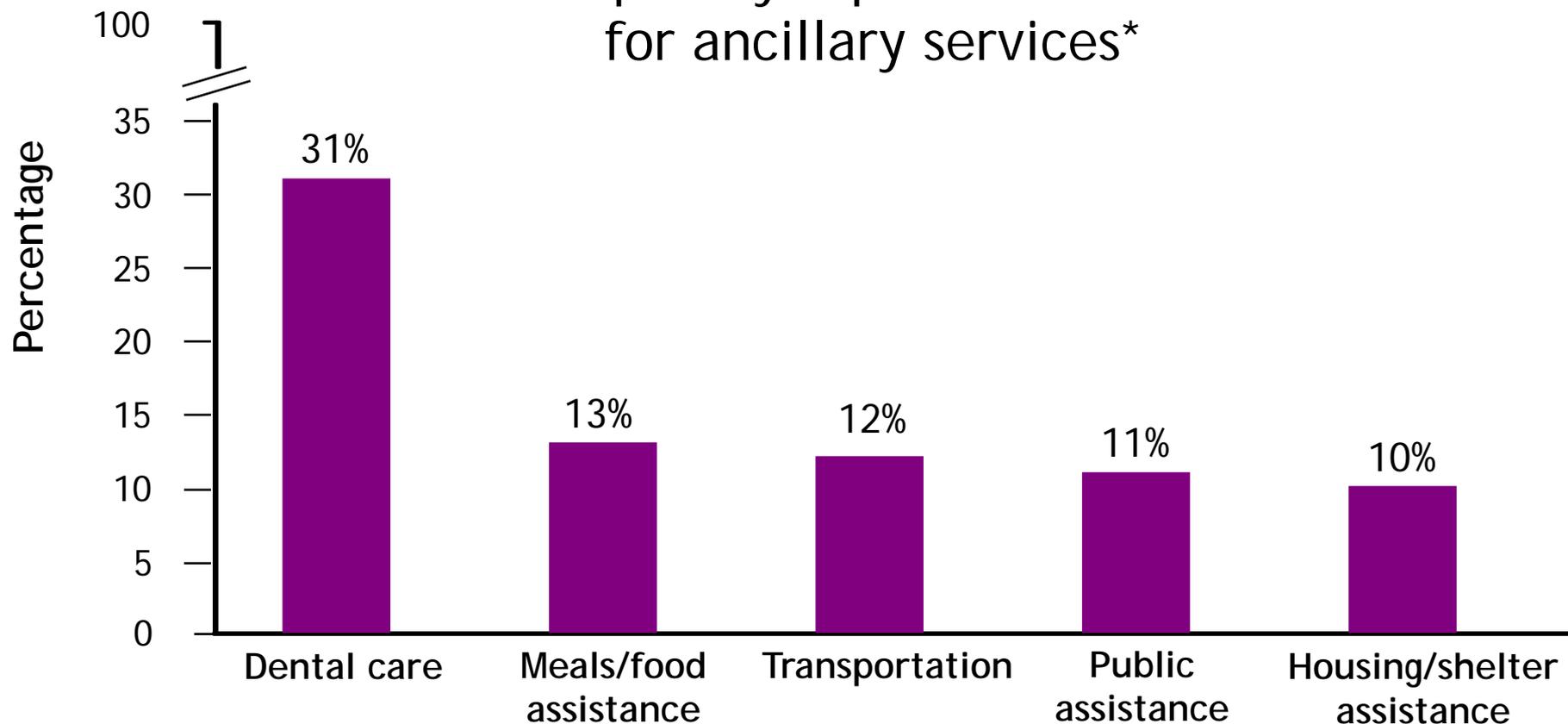


<sup>†</sup> Preliminary data.



# Unmet Need for Ancillary Services, 2013<sup>†</sup>

Most frequently reported unmet needs for ancillary services\*

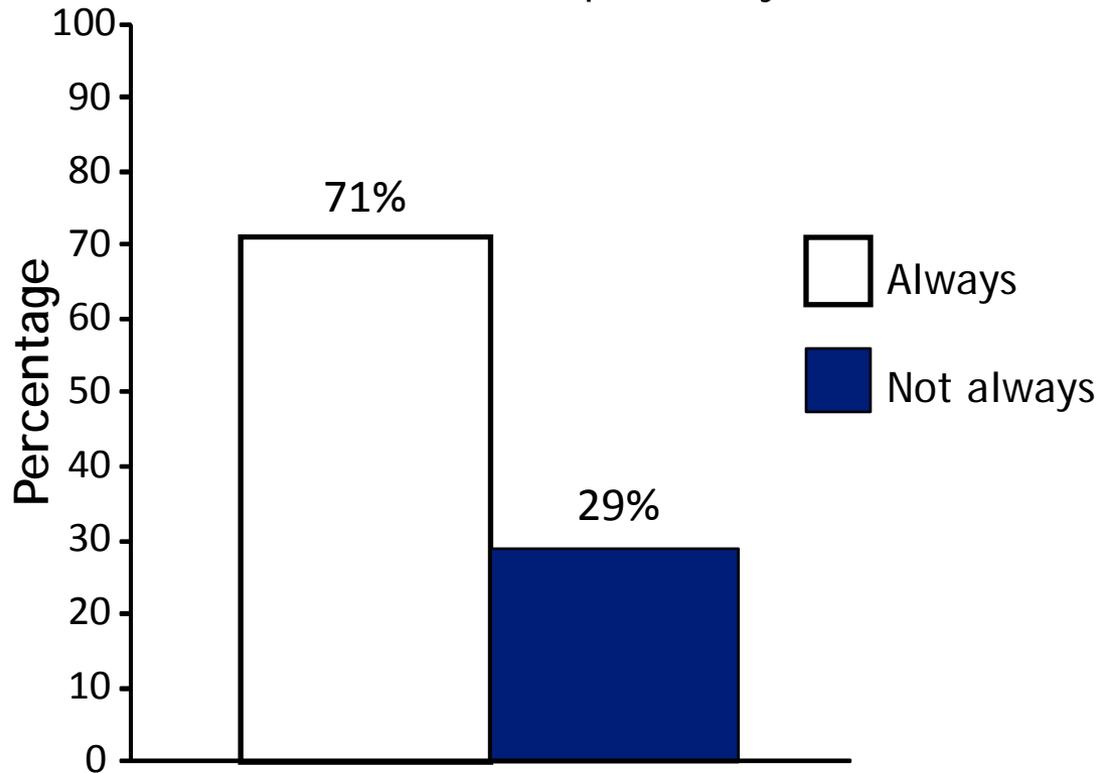


\*Percentages calculated from entire 2013 study population (n=210); categories are not mutually exclusive.

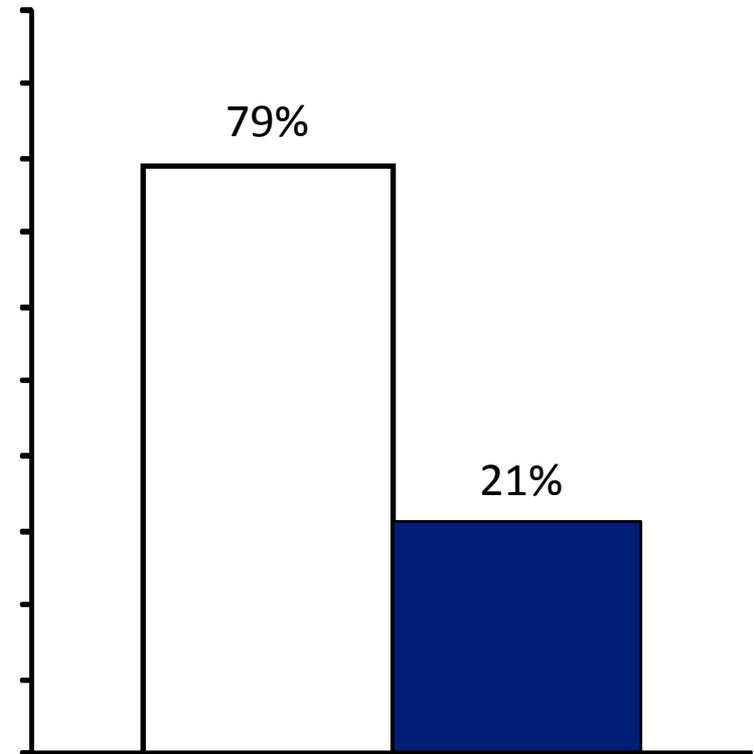
<sup>†</sup> Preliminary data.

# Treatment Adherence, 2013 †

If medication has special instructions, how often did you follow all special instructions in the past 3 days?



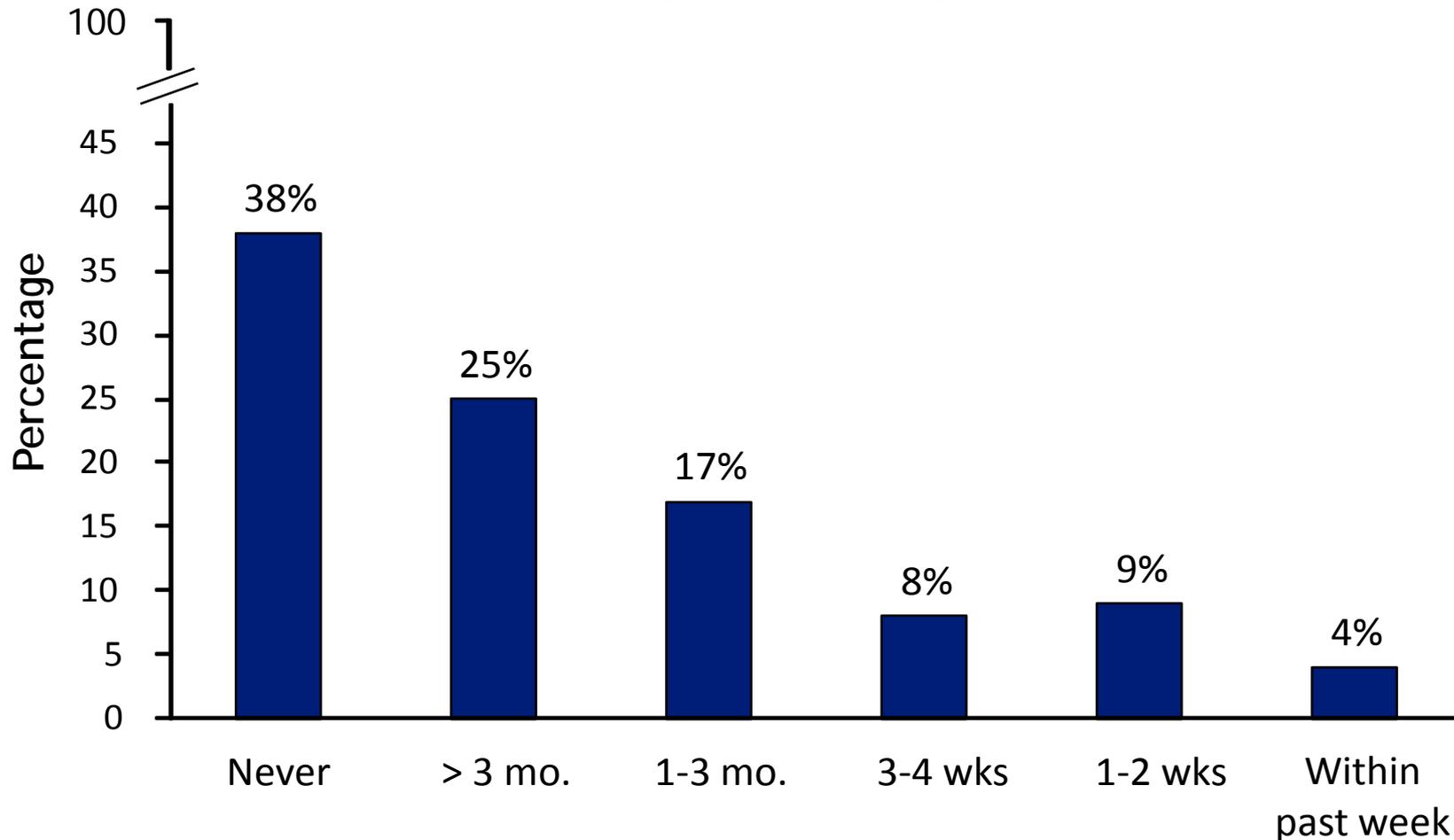
How closely did you follow your specific medication schedule during the past 3 days?



† Preliminary data.

# Treatment Adherence, 2013 †

When was the last time you missed any of your antiretroviral medicines?

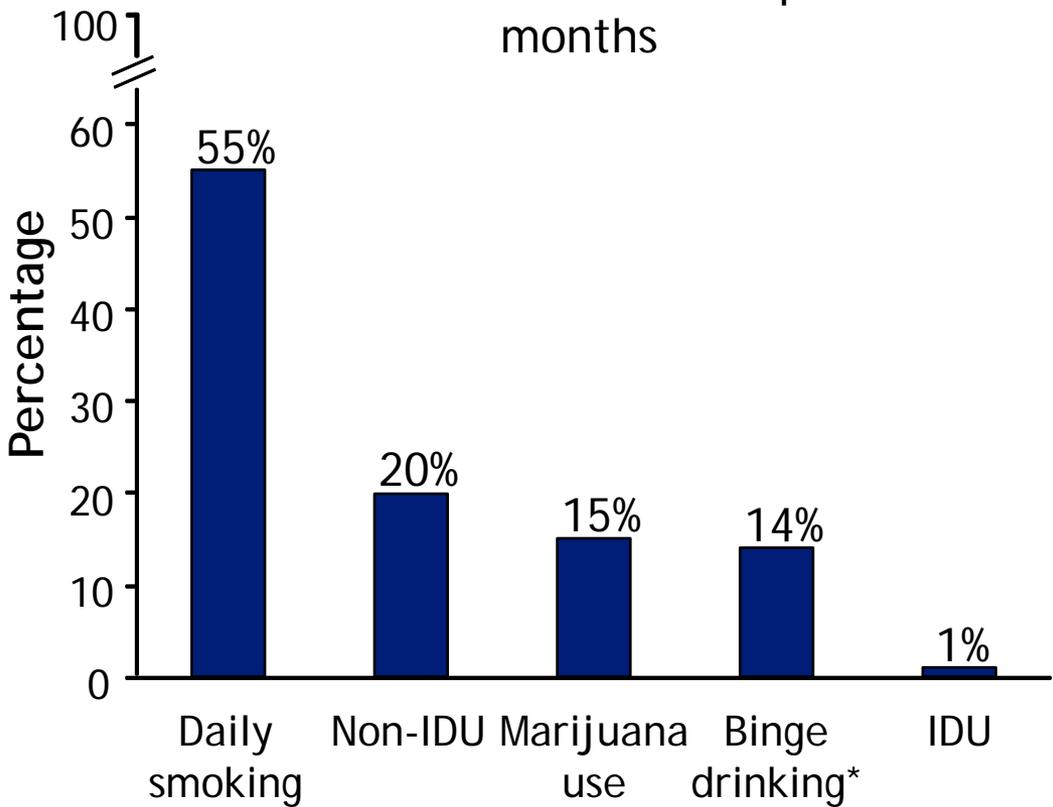


† Preliminary data; Numbers do not add up to 100%, as 9% of respondents skipped this item.

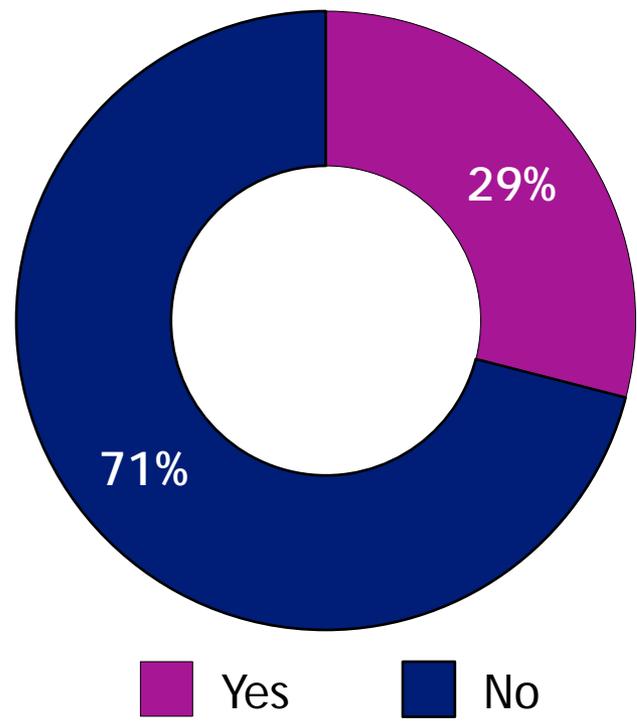


# Substance Use and Mental Health, 2013 †

Substance use within the past 12 months



Depression symptoms present (PHQ-8 score  $\geq 10$ )?



† Preliminary data.

\* Binge drinking refers to alcohol use in the past 30 days.



# Discussion/Questions



# New Sampling Methodology for MMP 2015

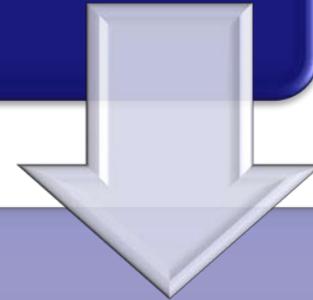
- New methods will transition to a Case Surveillance Based Sampling (CSBS) method
- MMP population of inference will now include all HIV-diagnosed persons (in and out of care)
- Data will be representative of full HIV population
- Will assist in addressing issues related to linkage and retention in care, as well as early initiation of antiretroviral therapy (ART)



# MMP 2015 Sampling Method: 2-Stage Sampling Design

## State Level

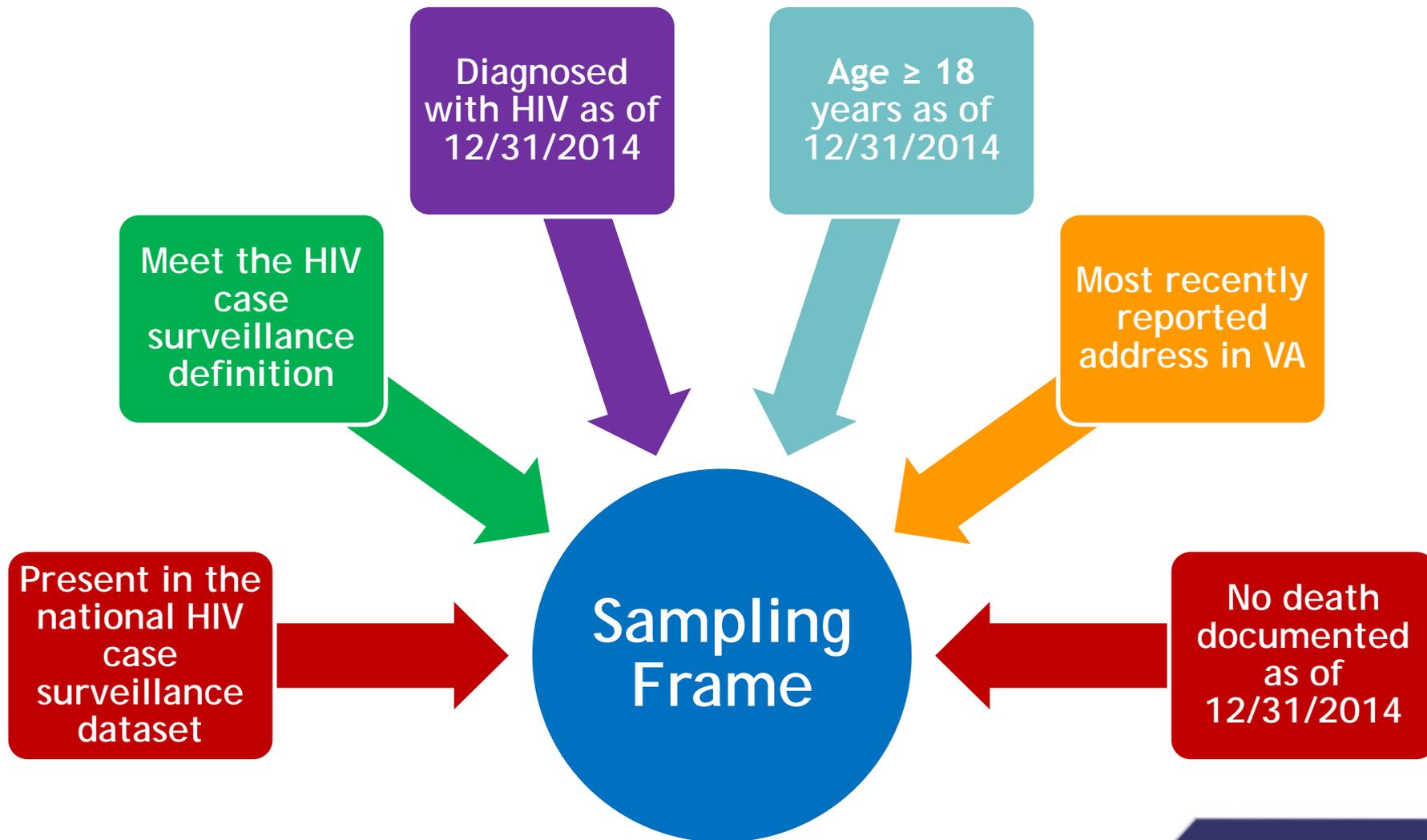
- Up to 26 Project Areas possible, contingent on resource availability
- Same 16 states, 1 U.S. territory, 6 separately funded cities as 2014
- Potential for 3 additional states



## Patient Level

- Sample of patients selected to participate from HIV Surveillance database for Virginia (eHARS)
- 400 sampled for Virginia; 100-800 for other project areas

# Inclusion Criteria for Sampling Frame



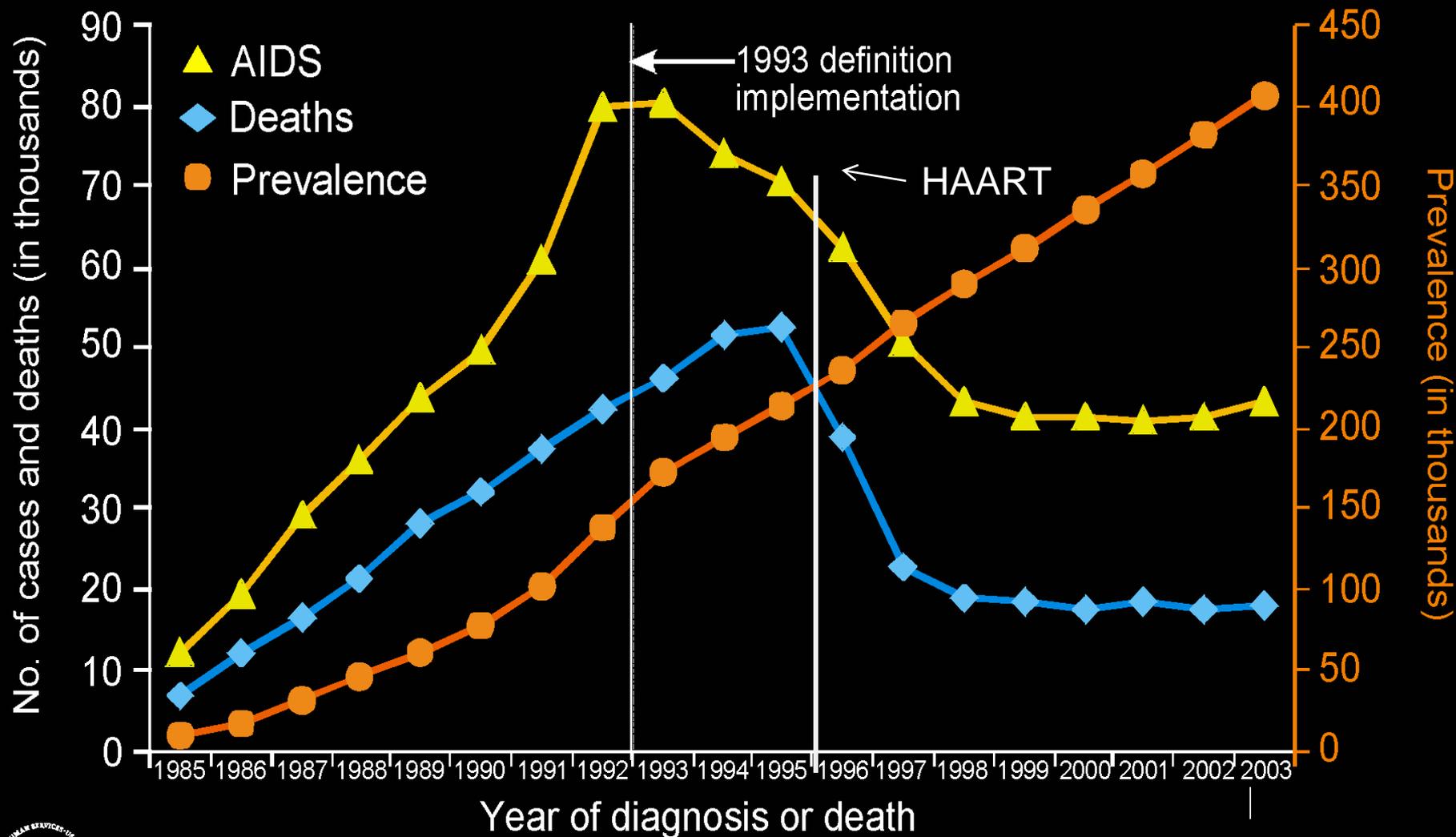


# Why the Change in Methodology??

Supplemental HIV Surveillance:

The Back Story

# Estimated Number of AIDS Cases, Deaths, and Persons Living with AIDS, 1985-2003, United States



Note. Data adjusted for reporting delays.





# Backstory (Continued)

- Comprehensive rosters of HIV-infected persons did not exist in 2004
- Name-based reporting was not legally mandated in all jurisdictions
- Facility-based sampling allowed for the collection of interview and medical record data
- The importance of ART for HIV was very clear but the role of ART in HIV prevention was not yet firmly established



# Why the Change to CSBS?

- Address information gaps regarding progress with linkage and retention in care and enhance the value of the data collected
- Strong evidence has emerged showing that a reduction of HIV to undetectable levels through ART can sharply reduce the transmission of HIV



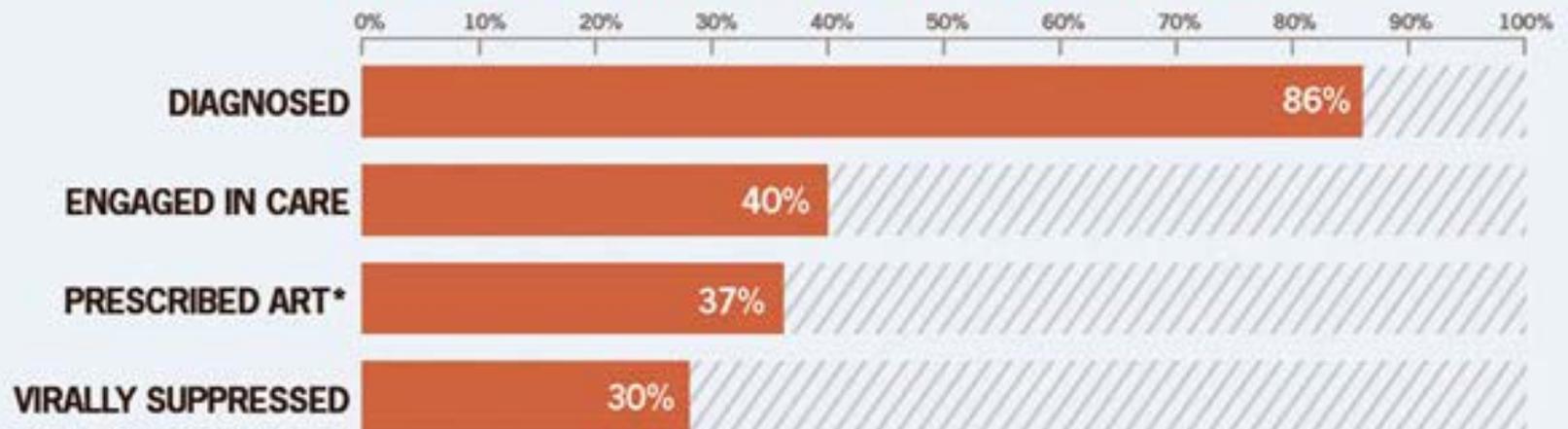
# Why the Change to CSBS? (Continued)

- Expand the target population to all HIV-diagnosed persons regardless of their care status
- IOM recommendation
- NHAS - Increasing access to care
- Increase MMP's capacity to monitor and guide efforts to prevent HIV infection

# National HIV Care Continuum Indicators

## HIV Care Continuum Shows Where Improvements are Needed

In the US, 1.2 million people are living with HIV. Of those:



SOURCES: CDC National HIV Surveillance System and Medical Monitoring Project, 2011.

\*Antiretroviral therapy



# Discussion/Questions

# The Case-Surveillance-Based Sampling Demonstration Project:

Methods to Include those Not Receiving HIV  
Care in the Medical Monitoring Project

Mark Freedman, DVM, MPH  
Virginia MMP Project Officer

Virginia MMP Stakeholder Webinar  
April 20, 2014



# Acknowledgements

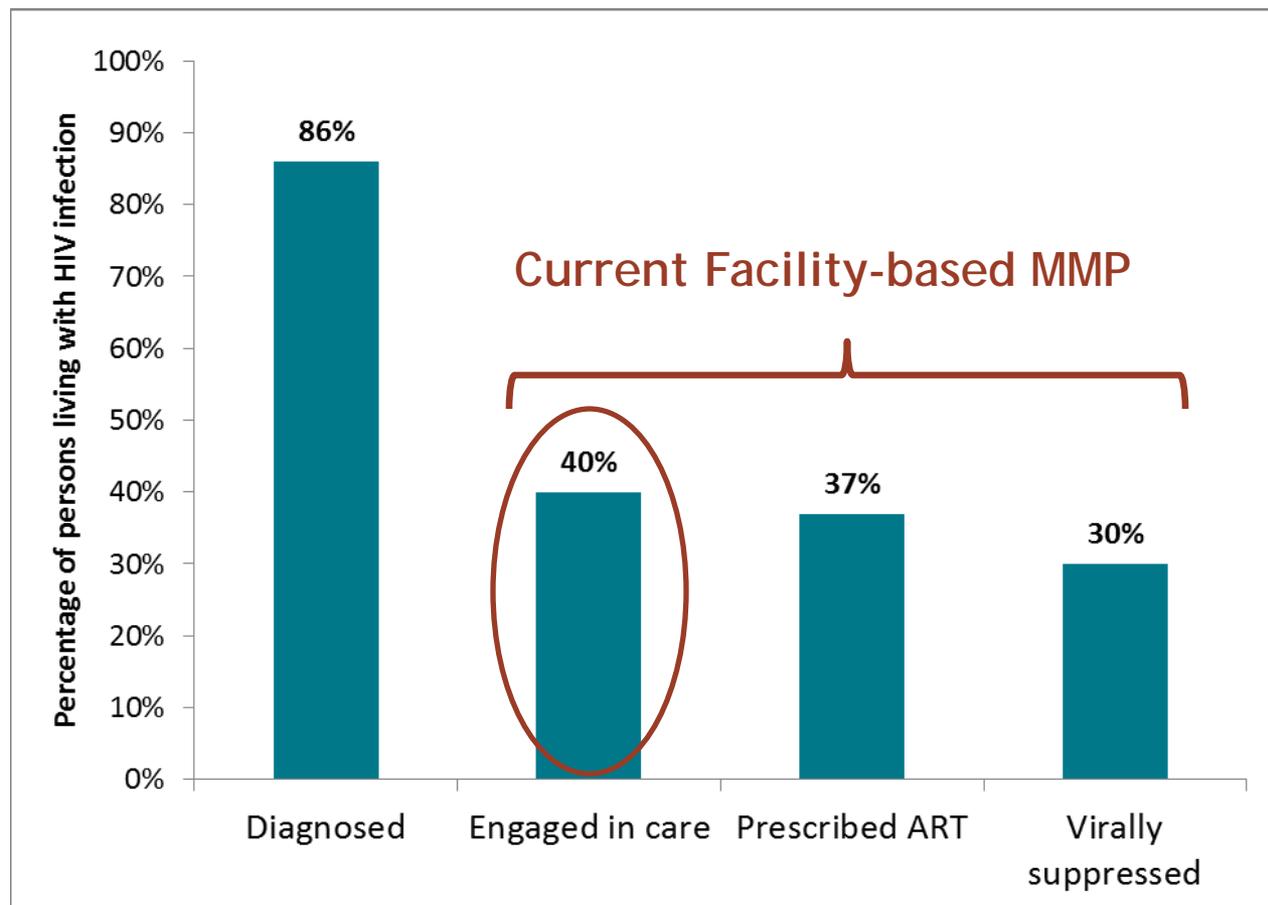
- **HICSB**
  - Mi Chen
  - Irene Hall
  - Alexandra Oster
  - Tian Tang
- **MMP**
  - Demi Adedinsewo
  - Jeanne Bertolli
  - Lauren Messina
  - Margaret Nyaku
  - Mabel Padilla
  - Joseph Prejean
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  - Jane Kelly
  - Eugene Pennisi
  - Pascale Whortley



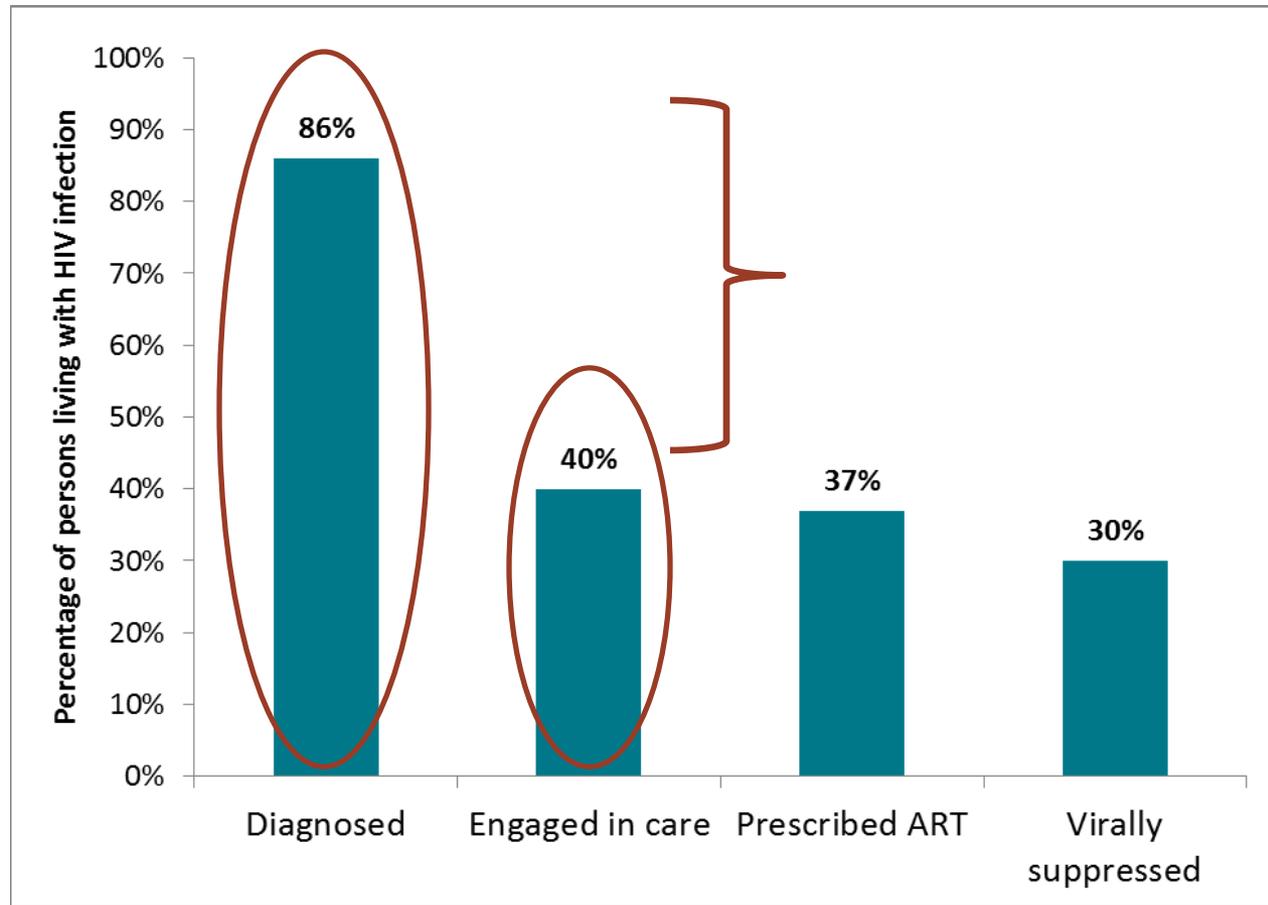
# Caveats

- Unpublished data: please do not distribute
- Findings and conclusions are those of the speaker
  - Not formally cleared

# Continuum of HIV Care: MMP's Current Role



# MMP Misses Persons Not in Care





# Basic CSBS Procedures

- Persons sampled out of national case surveillance data
  - All living HIV-diagnosed adults are eligible
  - Oversampling of recently diagnosed persons
- Persons located through public health and other available data systems
- Like MMP, interview, medical record abstraction, and linked case surveillance data collected and weighted



# Key Outcomes

- Interview response rate
- Inclusion of new population

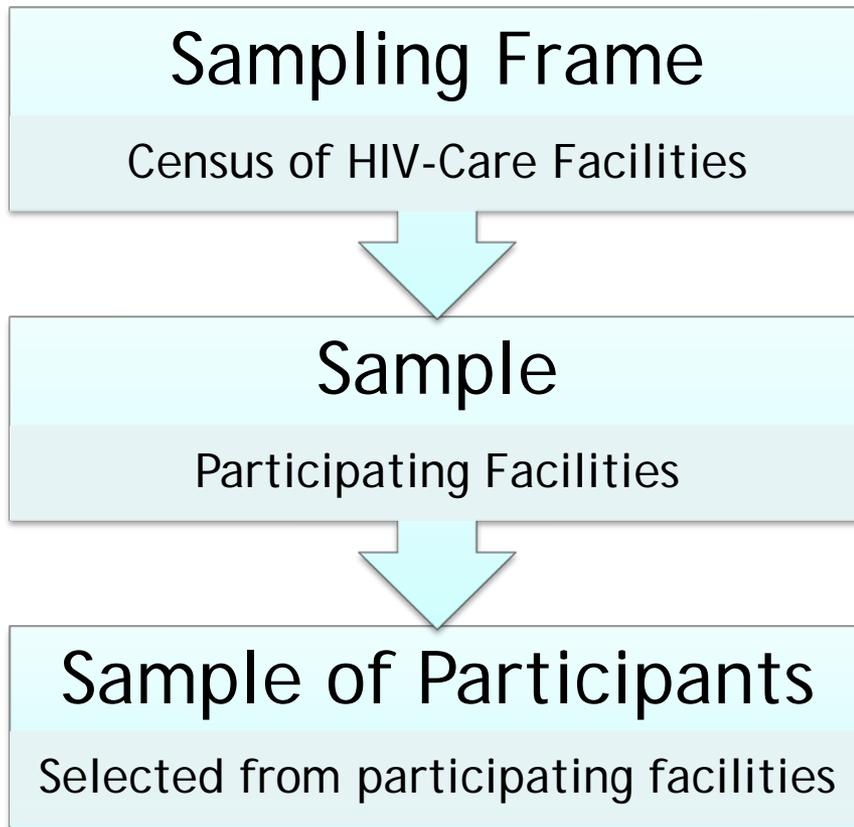


# Decision to Incorporate CSBS Methods into MMP

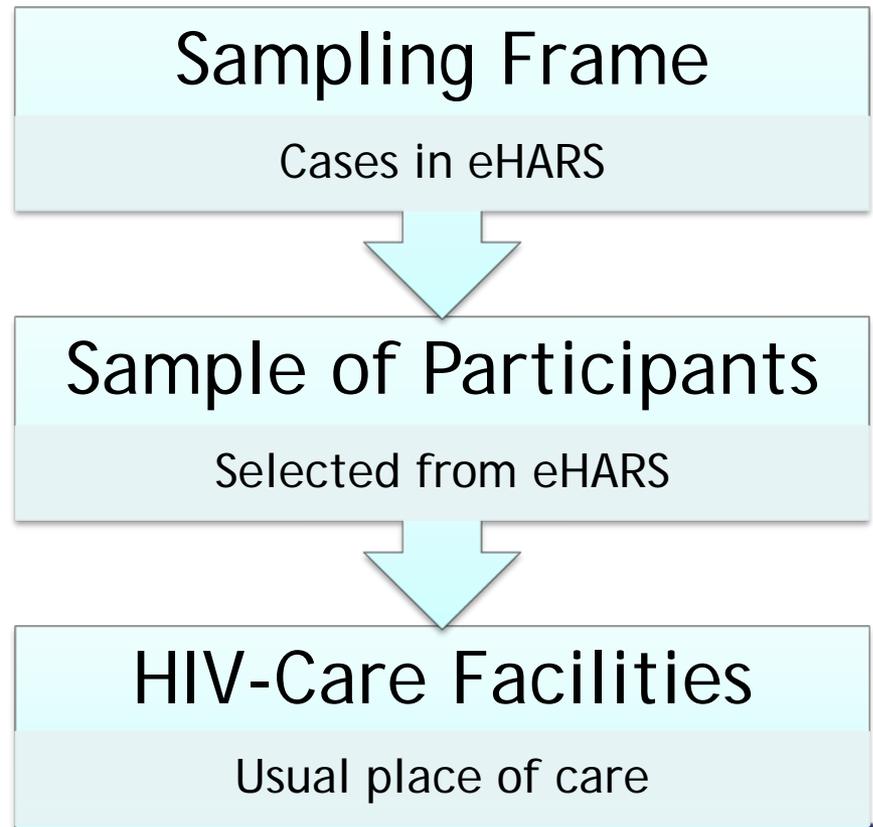
- **Promising pilot experience**
  - Comparable overall response rate
  - About ¼ of CSBS participants less engaged in care than MMP participants
- **Compelling public health data needs**
- **MMP to adopt CSBS methods in 2015**

# Changes in Facility Involvement

## MMP Facility Sampling



## MMP CSBS





# Changes in Provider Relationships

- Census of HIV-care providers in Virginia
- Reaching certain patients may require additional help from HIV-care facilities and foster a closer partnership with VDH
- The patients will be different
- VDH will no longer depend on facilities to get a sample of patients
- Participation is patient driven

# HIV-Care Facility Perspective

- No staff time putting together list of patients seen at care facility
- Large facilities may see a decrease in the number of patients associated with their facility
- Initial contact most likely with patient
- Work closer with VDH to link some patients to care



# VDH Perspective

- More HIV-care facilities involved
- Facility of care information will come from the patient or VDH registry
- Opportunity to assist with re-engagement activities
- MRA?



# Challenges of Transition to CSBS

- Cross-jurisdiction data collection
- More “cold calling”
- Identifying MRA facilities
- Potential for sampled persons to be unaware of their status
- Incarcerated persons more likely to be sampled



# Benefits of Transition to CSBS

- Connect with persons who are at various stages of the HIV care continuum
- Adhere to the NHAS and increase the proportion of persons linked to care
- Develop and build relationships with other care facilities
- Strengthen the partnership between VDH and providers of ancillary services
- Participant recruitment is direct
- No major changes with HIV-care facilities that are always sampled

# Participant Privacy

- Division of Disease Prevention Security and Confidentiality Policies and Procedures
- VDH Confidentiality Policy
- VDH Information Security Policy
- VDH Information Security Standard
- OMB approval
- CDC non-research determination

# MMP Resources

- CDC MMP website:  
<http://www.cdc.gov/hiv/statistics/systems/mmp/>
- VDH MMP website:  
<http://www.vdh.virginia.gov/epidemiology/DiseasePrevention/Programs/HIV-AIDS/SurveillanceProgram/MMP.htm>
- Recent MMWR publication analyzing 2009 national weighted MMP data:  
Behavioral and Clinical Characteristics of Persons Receiving Medical Care for HIV Infection — Medical Monitoring Project, United States, 2009. MMWR Morb Mortal Wkly Rep, June 20, 2014. 63(SS5): p. 1-28.

# Thank you!

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Any  
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# Discussion/Questions