HIV Data in Action:
Using HIV data to prevent new HIV infections
and improve health

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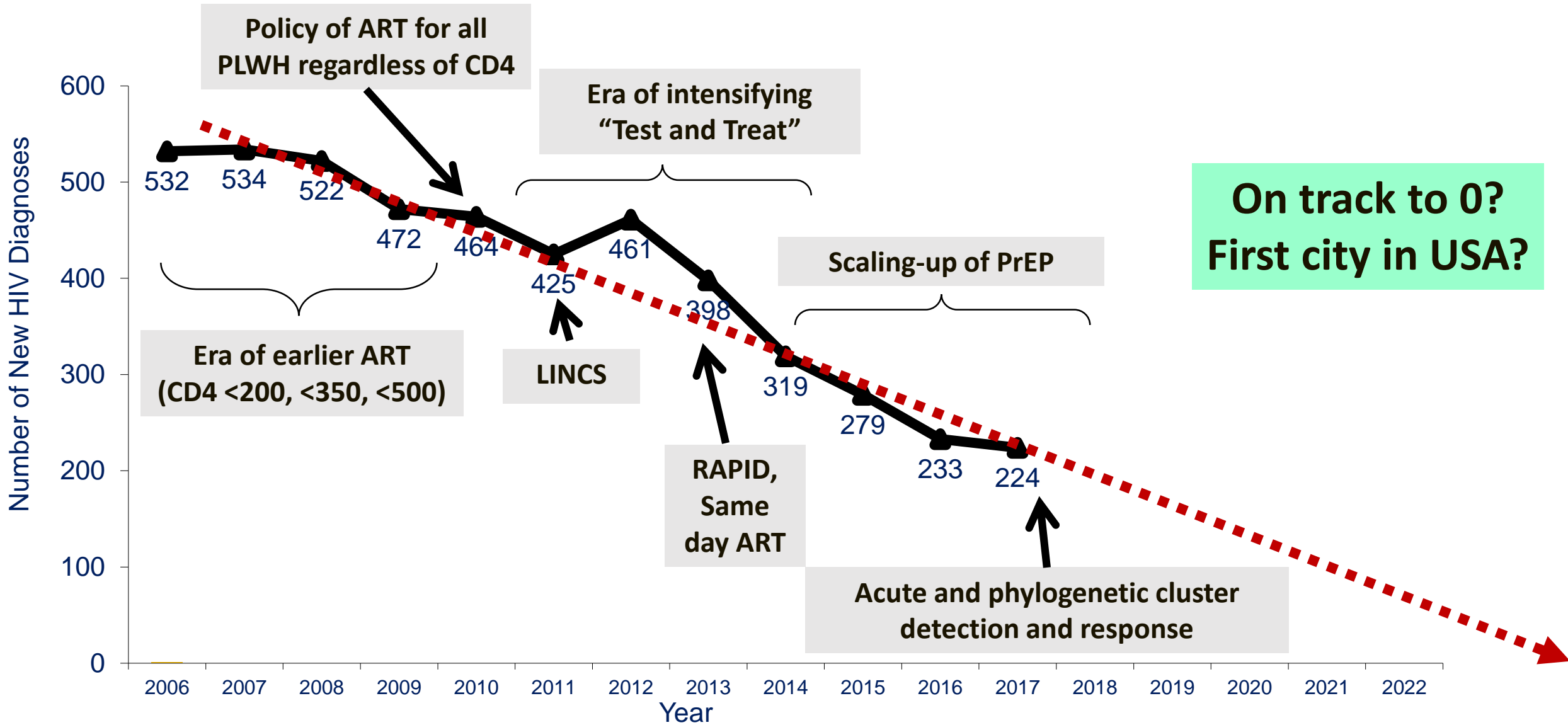HCPC meeting

We Can End HIV

- Exciting time in HIV prevention and treatment:

  - U=U   halt transmission and may reduce stigma
  - PrEP   significantly reducing population-level HIV
  - And, we can detect infection and networks of infection, earlier than ever – saving lives and preventing transmission

- SFDPH is committed to:

  - Using traditional public health tools and new tools in our toolbox to end HIV
  - Listening to ideas, approaches and concerns and working with community to address them
  - Communicating quickly about new data
  - Using available data to effectively reach and serve more people living with or at risk for HIV

How We Use Public Health Data

- Traditionally surveillance data was used to tracks trends

- But currently working to use data for public health action

- Examples:
  - Evaluation of prevention activities
  - Identify disparities in health outcomes and populations needing more resources and attention
  - Working with LINCS to confirm whether persons testing positive for HIV have a new diagnosis or are previously diagnosed and not in care
  - Identify if named partners are HIV-positive and engaged in care
  - Data-to-Care

Trends in San Francisco

Policy of ART for all PLWH regardless of CD4

Era of intensifying "Test and Treat"

Scaling-up of PrEP

On track to 0? First city in USA?

Era of earlier ART (CD4 <200, <350, <500)

LINCS

RAPID, Same day ART

Acute and phylogenetic cluster detection and response

532 534 522 472 464 425 461 398 319 279 233 224

Number of New HIV Diagnoses

Year

2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

San Francisco is aggressively working on the 4 pillars

Diagnose all individuals with HIV as early as possible after infection
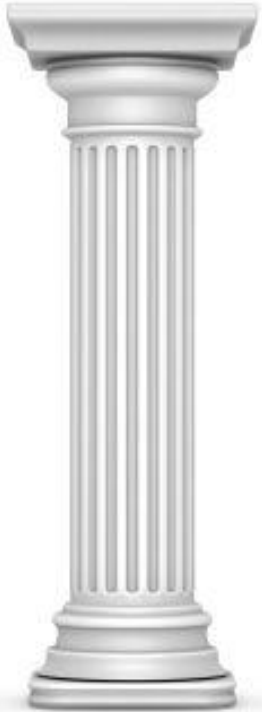
Treat HIV infection rapidly and effectively to achieve sustained viral suppression

Protect individuals from acquiring HIV, including the use of PrEP

Respond to new clusters of HIV infection to reduce transmission

Diagnose - San Francisco

MSM: 96.1% living with HIV are diagnosed in 2017

PWID: 86.8% living with HIV are diagnosed in 2018

Acute Infection Detection: 29% of new diagnoses were diagnosed in the acute stage from 2014-2016
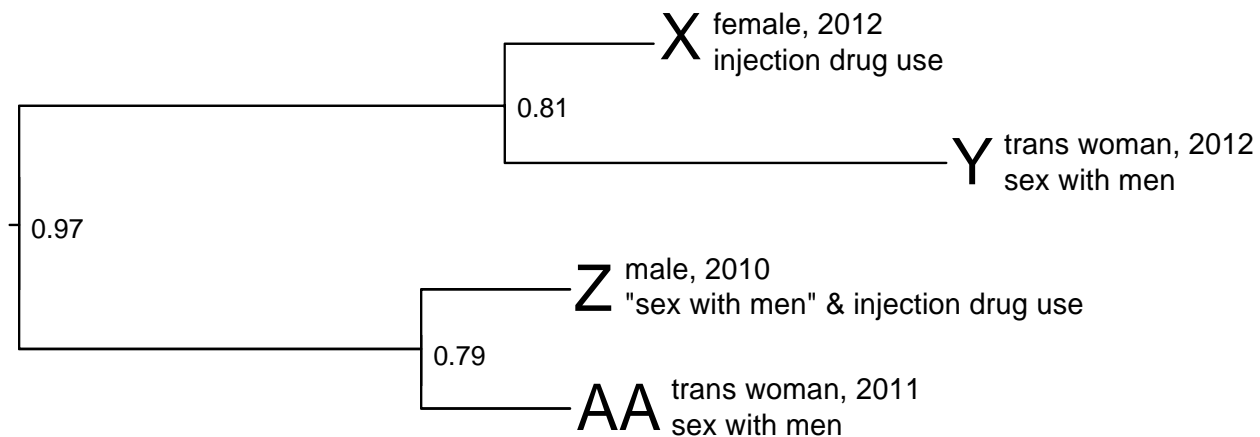
Treat - San Francisco

	Year			
	2013	2014	2015	2016
New HIV diagnoses	N=399	N=330	N=296	N=265
Median days from HIV diagnosis to first care	8	7	7	5
Median days from first care to ART initiation	27	17	6	0
Median days from ART to viral suppression	71	53	50	39

Respond – San Francisco

- **Data to Care**

- **Partner services**

- **RAPID linkage**

- **Cluster investigation**

Respond to new clusters of HIV infection to reduce transmission

X female, 2012
injection drug use

0.81

Y trans woman, 2012
sex with men

0.97

Z male, 2010
"sex with men" & injection drug use

0.79

AA trans woman, 2011
sex with men

What is the LINCS team?

LINCS is your link to sexual health

Have you been tested for syphilis?
- If you have syphilis, getting treated today will help keep you healthy, and will prevent the spread to your partners
- We recommend testing for STDs every 3 months

Are you or your partners interested in PrEP?
- PrEP is a daily pill that prevents HIV by more than 90%
- We have a team who can help you get PrEP regardless of insurance status

Living with HIV and haven't seen a doctor in 6 months?
Our team can help you:
- Get into HIV care
- Stay healthy on medications to keep your viral load low so you don't transmit HIV

WHAT IS PARTNER SERVICES?
It can be difficult to tell your partners you have HIV or an STD. Our specialists can contact partners and get them free testing and treatment, while protecting your privacy.

To get LINCed, call us at 415-487-5536 | www.sfcityclinic.org
LINCS is the city's team ensuring comprehensive sexual health.

LINCS is the city's team ensuring access to free and confidential sexual health services
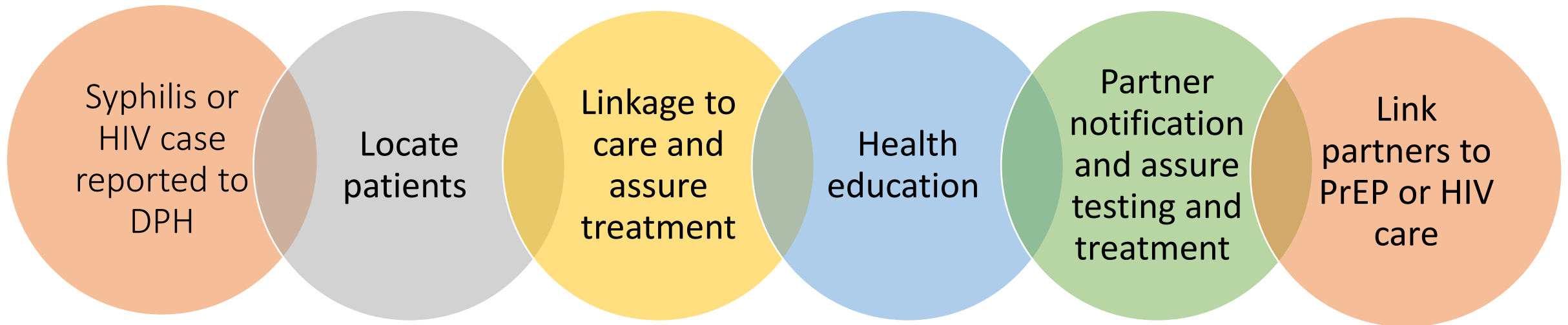
Syphilis and HIV partner services and navigation to care

What does the LINCS team do?

Disease intervention and navigation to health services

We work closely with clinical providers and surveillance data to ensure patients and partners are linked to sexual health services

Syphilis or HIV case reported to DPH

Locate patients

Linkage to care and assure treatment

Health education

Partner notification and assure testing and treatment
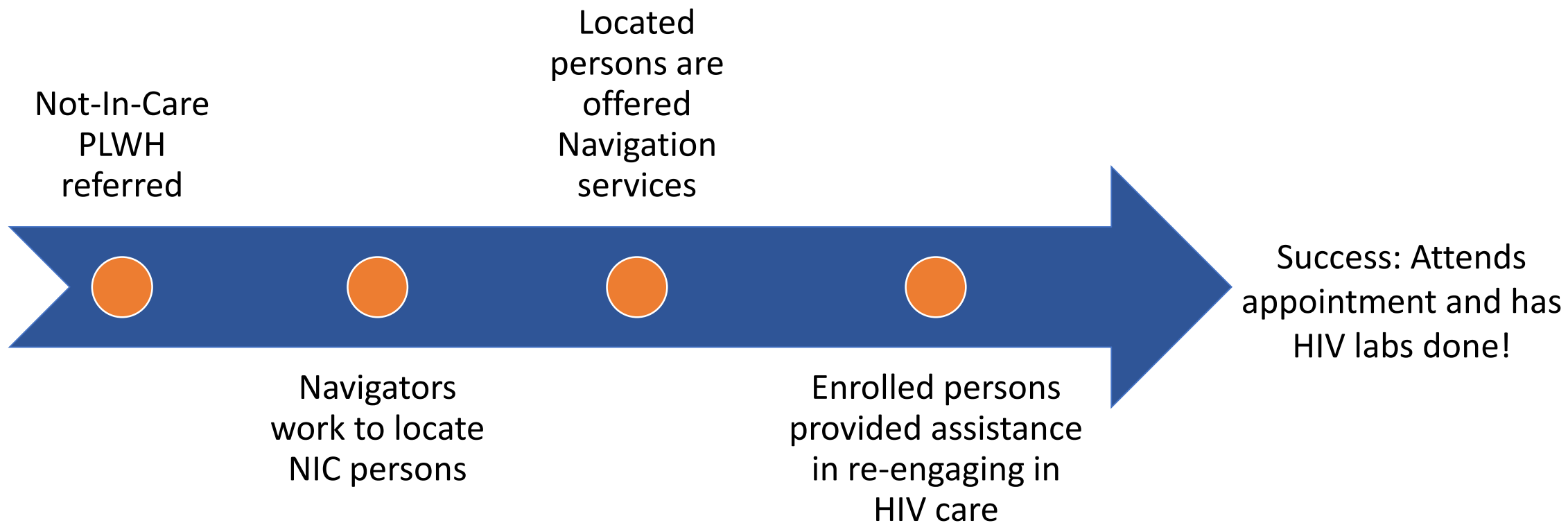
Link partners to PrEP or HIV care

What is Data to Care?

- Using data sources to find people living with HIV who are out of care and helping them get care

- People may:
  - Have never linked to care after diagnosis
  - Have not had a care visit in a long time
  - Have had a visit but need help staying virally suppressed

Our Model

Not-In-Care
PLWH
referred

Located
persons are
offered
Navigation
services

Navigators
work to locate
NIC persons

Enrolled persons
provided assistance
in re-engaging in
HIV care

Success: Attends
appointment and has
HIV labs done!

Data sources for lists

eClinicalWorks
- Medical record system used by DPH clinics
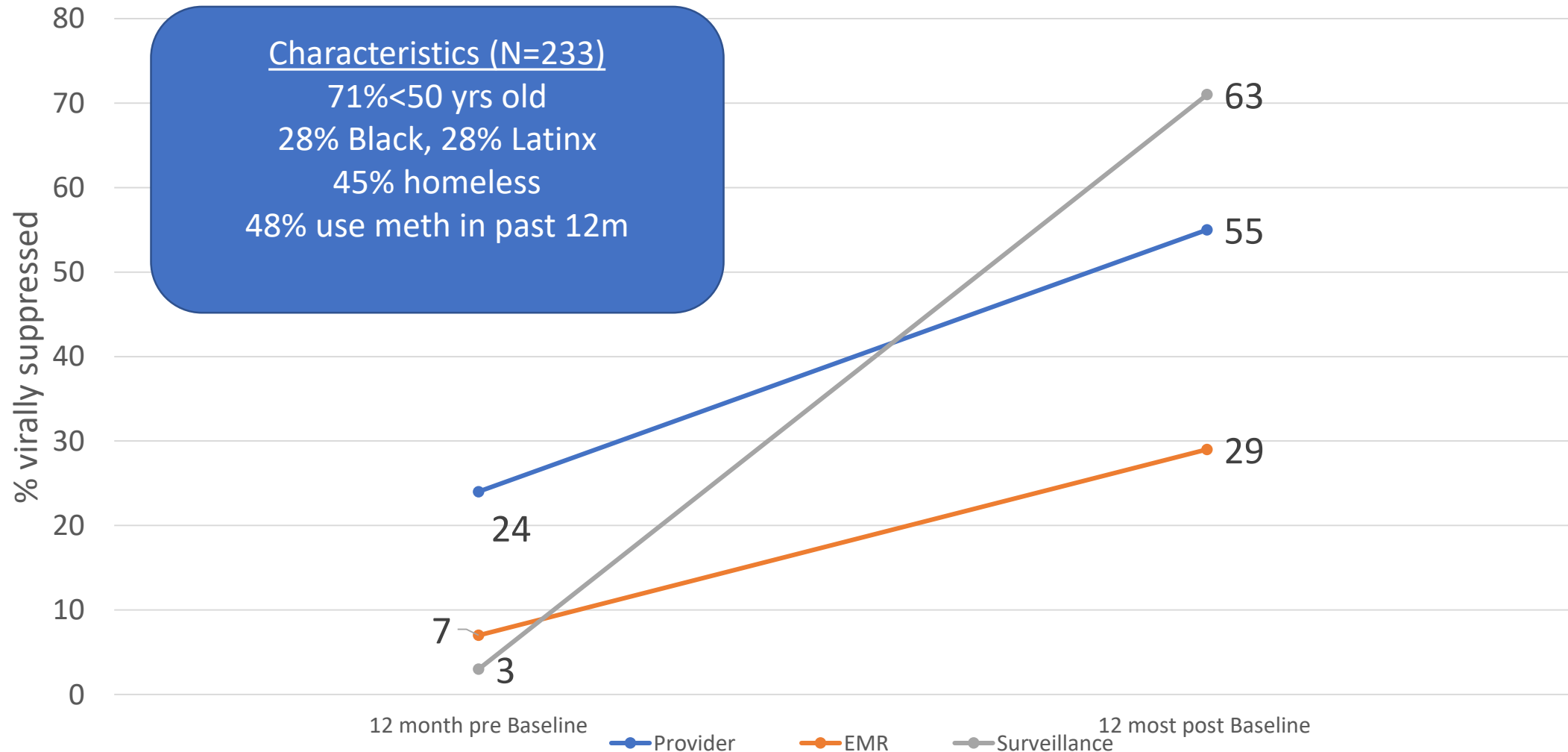- Active panel list used as a basis for provider lists

eHARS
- HIV surveillance database—all diagnosed and tested in SF
- Most complete source of HIV testing records
- Source of surveillance-generated DTC lists

ISCHTR
- STD surveillance database, some HIV data (in-network)
- Also contains City Clinic medical records and records of linkage/navigation work performed by LINCS
- All lists matched/uploaded into ISCHTR to filter and make available to navigators

Viral suppression 12 months Pre and Post LINCS navigation by referral source (2015-2017)

Characteristics (N=233)
71%<50 yrs old
28% Black, 28% Latinx
45% homeless
48% use meth in past 12m

% virally suppressed

80
70
60
50
40
30
20
10
0

63
55
29
24
7
3

12 month pre Baseline   12 most post Baseline

Provider   EMR   Surveillance

Partner Services

- What is Partner Services?
  - RAPID linkage to Care
  - Outreach to partners for confidential and free testing and referrals to PrEP
  - Re-linkage services for partners who are not-in-care
- Surveillance informs partner services
  - New HIV diagnoses are forwarded to LINCS
  - Private providers, Kaiser, federal provider (SF VA)
  - Able to check if the HIV morbidity ever reported in California or nationally
- Identify if partners and HIV+ and in care
  - Check if reported case in SF, California registries, and national database (SF or Out of jurisdiction)
  - Prioritize partner notification and re-linkage services

Index Case Continuum (%): Identifying New HIV+ Infections
HIV Cases, San Francisco 2018

VERSION 6b. 2019-04-16
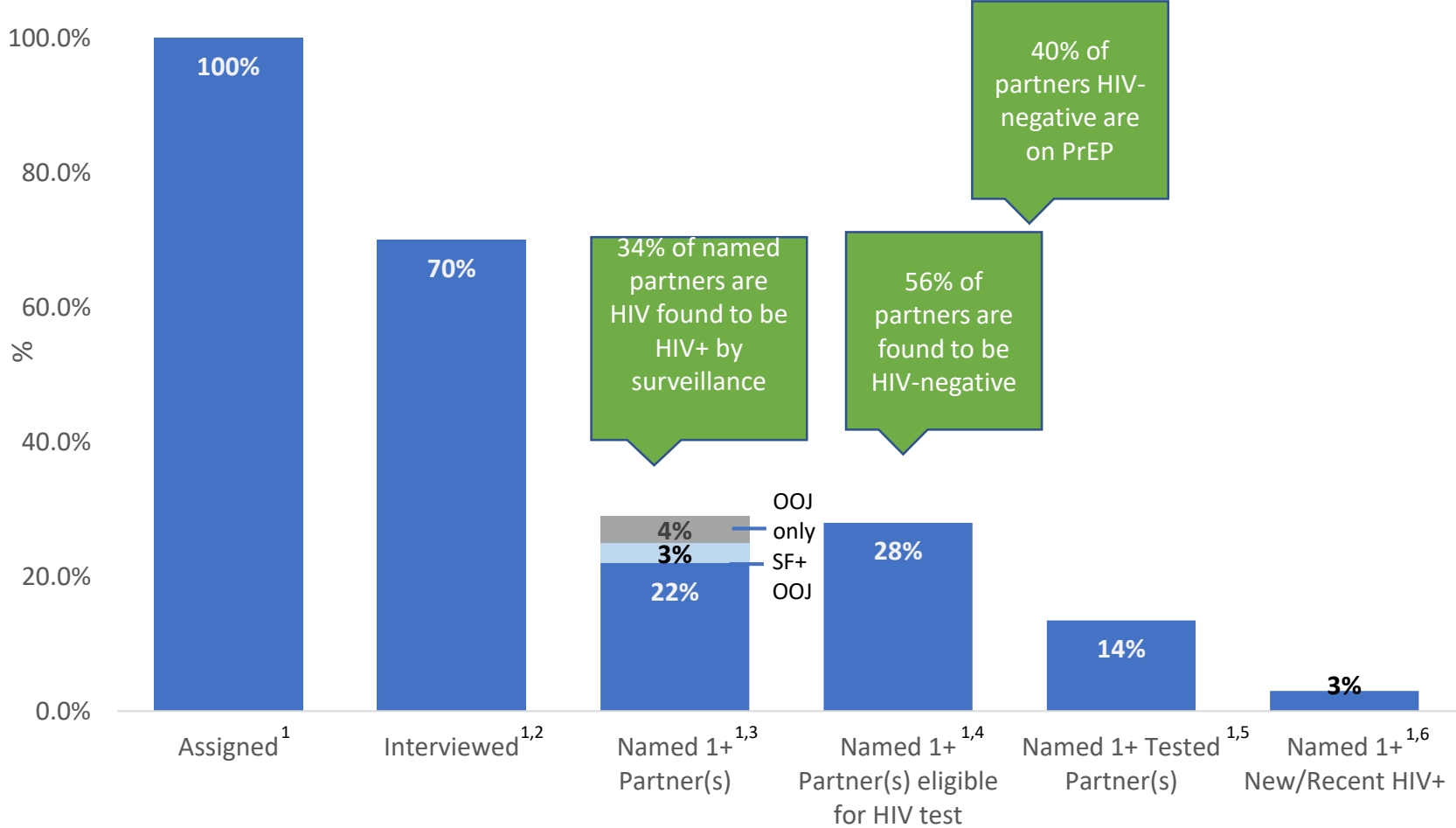
[1]Denominator: 188 HIV+ cases assigned for Partner Services in 2018. All new HIV+ cases was assigned.
[2]Numerator: # HIV+ cases with a complete or partial interview assignment.
[3]Numerator: # HIV+ cases who named 1+ locatable partner: 22% named only SF partners; 3% named SF and OOJ partners; 4% named only OOJ partners.
[4]Numerator: # HIV+ cases who named 1+ partner who was eligible for an HIV test.
[5]Numerator: # HIV+ cases who named 1+ partner tested for HIV.
[6]Numerator: # HIV+ cases who named 1+ partner newly or recently diagnosed HIV+.

What's next: Cluster data to identify hotspots of new infections

- HIV mutates over time
  - Leads to changes in the genetic sequence of the virus
- Routine resistance testing generates sequences which help guide HIV treatment decisions
- Public health agencies can analyze the sequences, or molecular data, to find large groups of infections that are very similar
  - Indicates that HIV is spreading quickly
- In 2018, CDC required all jurisdictions to utilize molecular surveillance data
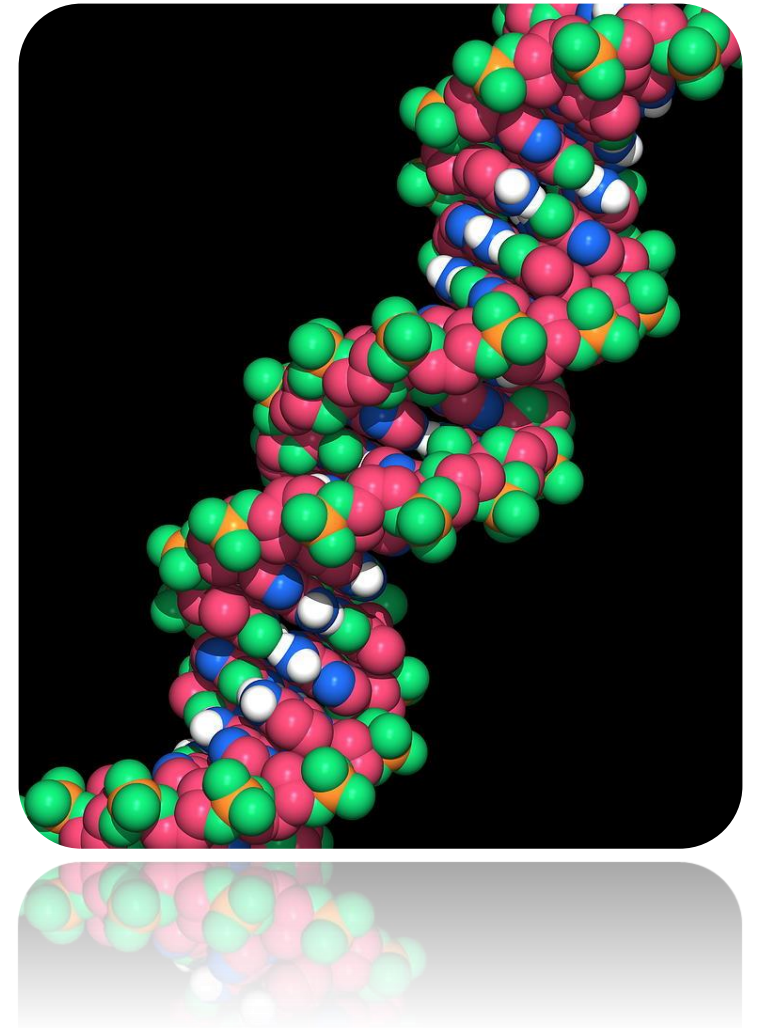
We plan to use HIV sequence data to:

- Monitor where HIV infections are increasing
- Identify if there are pockets of increasing drug resistance among newly diagnosed individuals
- Prioritize Data to Care and partner services efforts
  - Identify individuals who are not-in-care and help them re-link to care
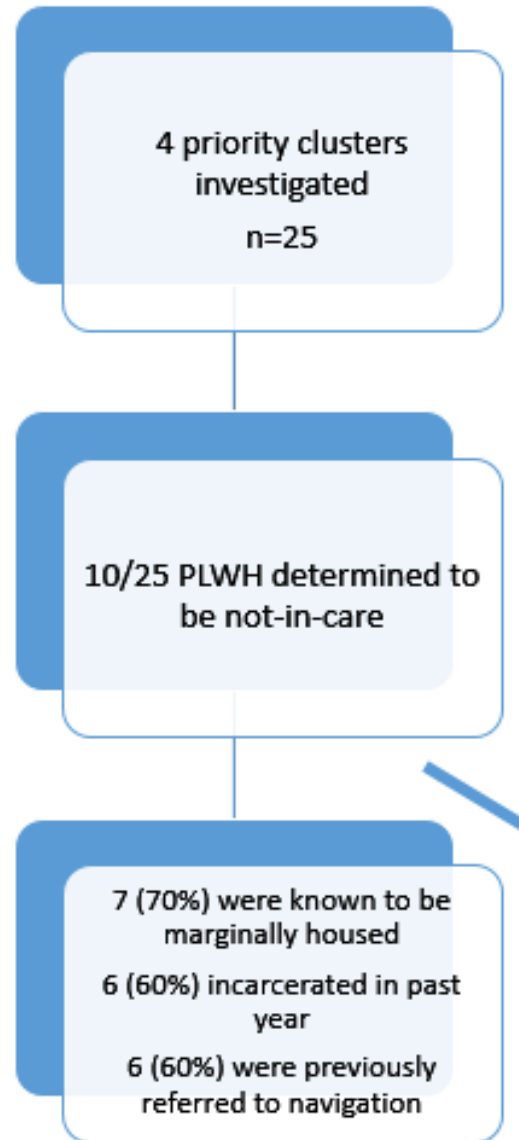 - Help identify and re-link sexual partners to care

Using sequence and partner services data to identify PLWH who are not-in care: A pilot

- Clusters were identified using HIV-TRACE with the following criteria:
  - > 5 people in each cluster
  - >50% diagnosed in last 3 years
  - At least 1 person not virally suppressed

- We prioritized four clusters in which half of the cases were from the following <u>priority populations</u>:
  - Transwomen
  - Age 20-29
 - People who inject drugs (PWID)
  - African American

Pilot Methods (cont.)

- LINCS staff member investigated each patient linked to a cluster to establish further actions needed
  - Extensive medical chart review
  - Review of Partner Services (PS) data
  - Contacting last known (VL ordering) providers

Figure 1. Outcomes from initial investigation of NIC PLWH identified through HIV-TRACE and partner services

4 priority clusters investigated

n=25

10/25 PLWH determined to be not-in-care

7 (70%) were known to be marginally housed

6 (60%) incarcerated in past year

6 (60%) were previously referred to navigation

Figure 2. Characteristics and outcomes from re-linkage efforts among NIC PLWH identified through HIV-TRACE
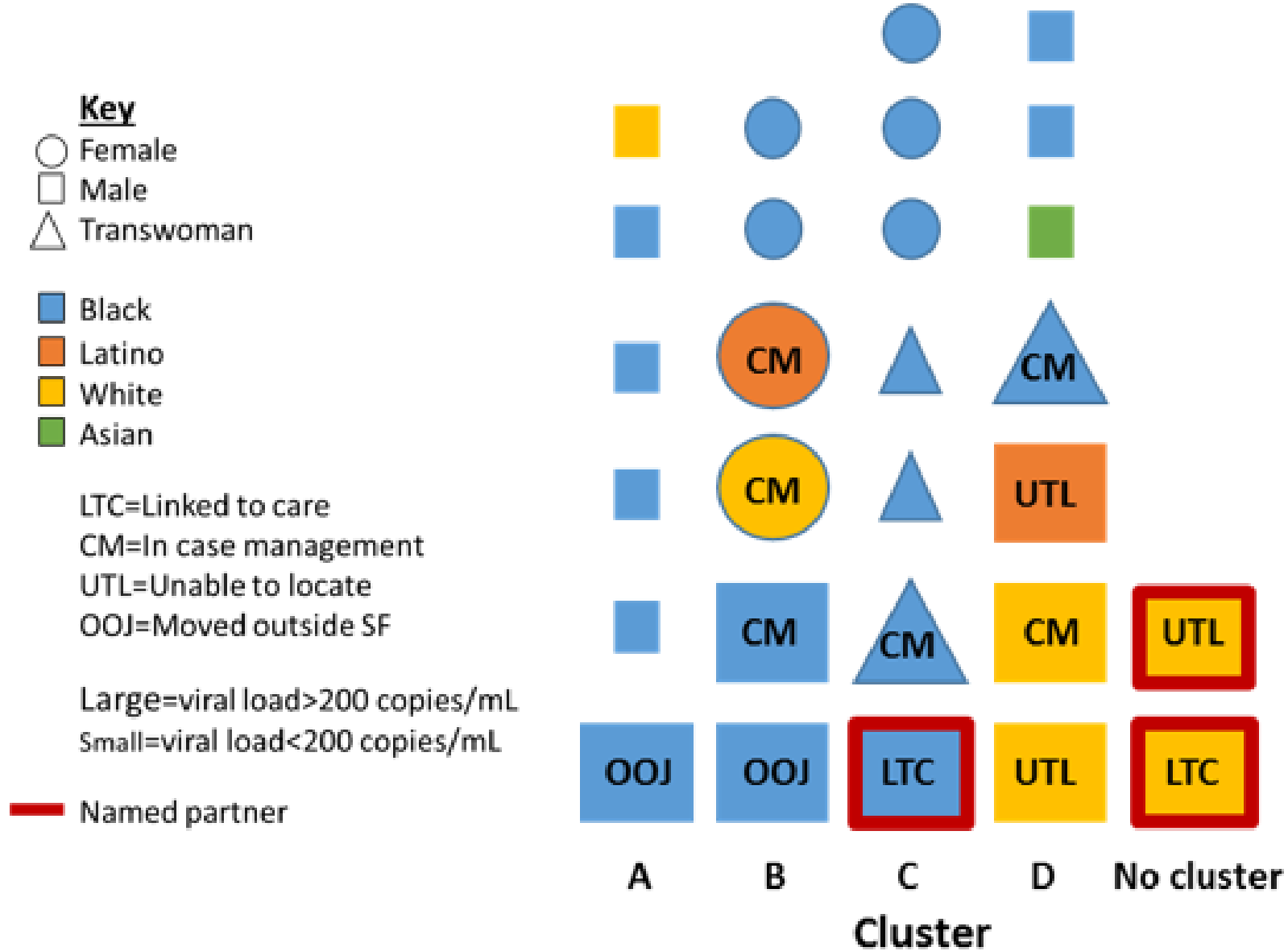
Lessons learned

- We utilized HIV sequences and HIV PS data to identify NIC PLWH for re-linkage.
- We found that over half of the NIC PLWH in prioritized clusters had been previously referred for HIV navigation.
- Two PLWH were re-linked, both of whom were identified as named partners through HIV PS investigations.
- One named partner who was re-linked to care was found to be genetically linked to a cluster.
- What's next
  - Not-in-care patients who are found to be in a cluster have recently been in the care system but failed to engage making
  - We need new interventions or more intensive case management services in order to help these clients stay engaged and adhere to medications

Cluster data has been used to identify outbreaks in other jurisdictions

- In Indiana there was an outbreak of HIV related to injection drug use
  - Health department investigators initially identified the growing number of infections
  - The use of molecular data helped to determine how communities were affected and also the impact of preventive interventions

- In Houston, CDC and the public health department used data to identify rapidly growing transmission among Latino MSM. This led to a multiple community based efforts including
  - Increased community based testing
  - Letter to providers to increase routine HIV testing and offer of PrEP
  - Conducted partner services to ensure HIV-negative partners knew about PrEP

Outbreak preparation: What if we identified a rapidly growing cluster in SF?

- Communication with community
  - Best practices?
  - What if the number of new infections is not high, but we are seeing an uptick in infections in certain communities?
- Consider expanding partner services to ensure all individuals who are eligible receive partner services
  - What could we do differently to "sell" partner services in the setting of a cluster response?
- How to communicate and problem-solve with medical providers and case managers when clients in a cluster are not virally suppressed?

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