

HIV Epidemiology Annual Report: What HIV surveillance data can tell us about progress along the HIV care continuum and Getting to Zero

January 14, 2016

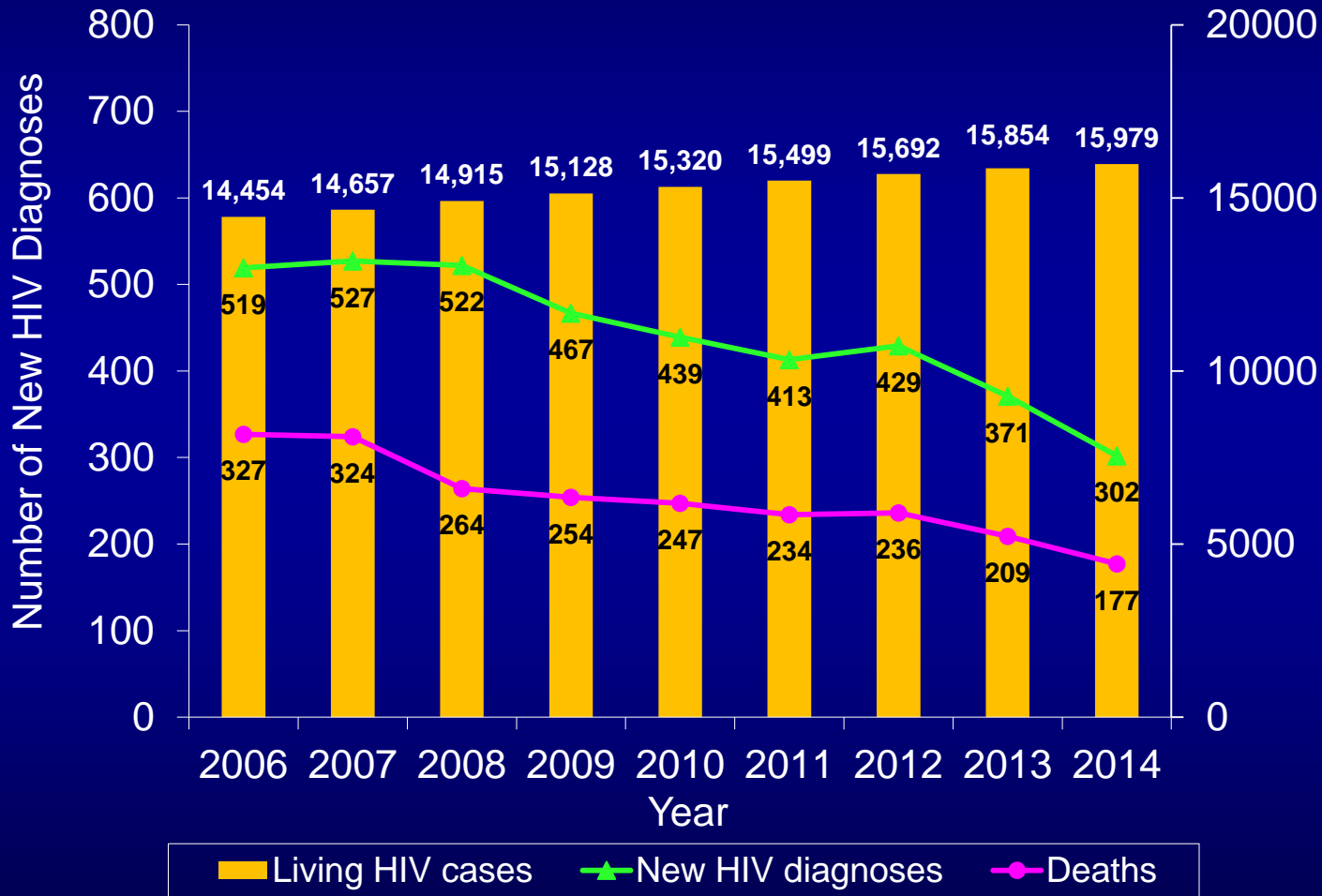
Susan Scheer, PhD, MPH

Applied Research, Community Health
Epidemiology and Surveillance Branch



POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH

New HIV diagnoses, deaths, and prevalence, 2006-2014, San Francisco



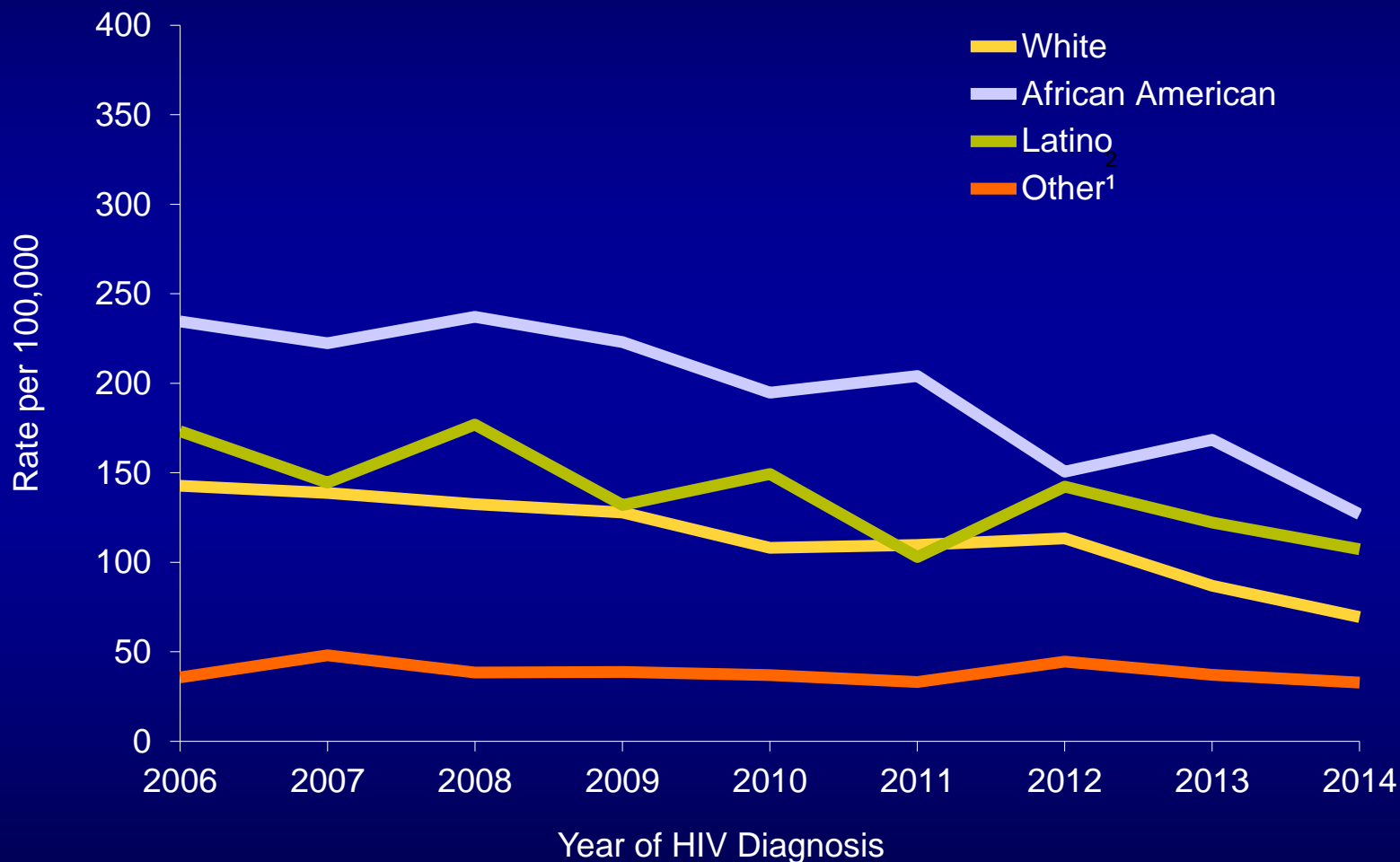
Trends in persons diagnosed with HIV infection by demographic and risk characteristics, 2006-2014, San Francisco

	Year of Initial HIV Diagnosis ¹									
	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Total Number	519	527	522	467	439	413	429	371	302	
Gender										
Male	90%	87%	89%	91%	89%	88%	94%	91%	93%	93% male
Female	7%	8%	8%	5%	8%	10%	5%	6%	5%	
Transfemale ²	3%	4%	3%	4%	3%	2%	1%	3%	2%	
Race/Ethnicity										
White	54%	51%	49%	52%	48%	52%	49%	46%	45%	55% people of color
African American	14%	15%	16%	15%	14%	16%	10%	13%	11%	
Latino	22%	20%	23%	21%	25%	20%	25%	25%	27%	
Asian/Pacific Islander	6%	9%	8%	8%	8%	8%	11%	13%	13%	
Native American	1%	0%	1%	0%	0%	0%	1%	1%	0%	
Multi-race	3%	4%	3%	4%	5%	3%	2%	2%	4%	
Unknown	0%	0%	0%	0%	0%	1%	1%	1%	0%	
Age at HIV Diagnosis (years)										
13 - 17	<1%	<1%	1%	<1%	<1%	<1%	0%	0%	<1%	17% Over age 50
18 - 24	12%	10%	10%	12%	13%	11%	12%	13%	12%	
25 - 29	13%	19%	16%	12%	13%	15%	17%	21%	17%	
30 - 39	34%	36%	35%	31%	31%	26%	31%	29%	30%	
40 - 49	28%	24%	29%	27%	28%	31%	29%	25%	24%	
50+	14%	10%	9%	17%	15%	17%	11%	12%	17%	
Transmission Category										
MSM	70%	66%	72%	71%	64%	72%	78%	77%	75%	75% MSM
PWID	8%	6%	6%	5%	8%	7%	3%	6%	6%	
MSM-PWID	16%	17%	12%	16%	15%	11%	10%	10%	11%	
Heterosexual	5%	8%	7%	5%	8%	6%	6%	5%	3%	
Other/Unidentified	2%	3%	3%	3%	5%	3%	3%	2%	5%	

¹ Data include persons diagnosed with HIV infection in any stage and reported as of April 10, 2015. Percentages may not add to 100% due to rounding.

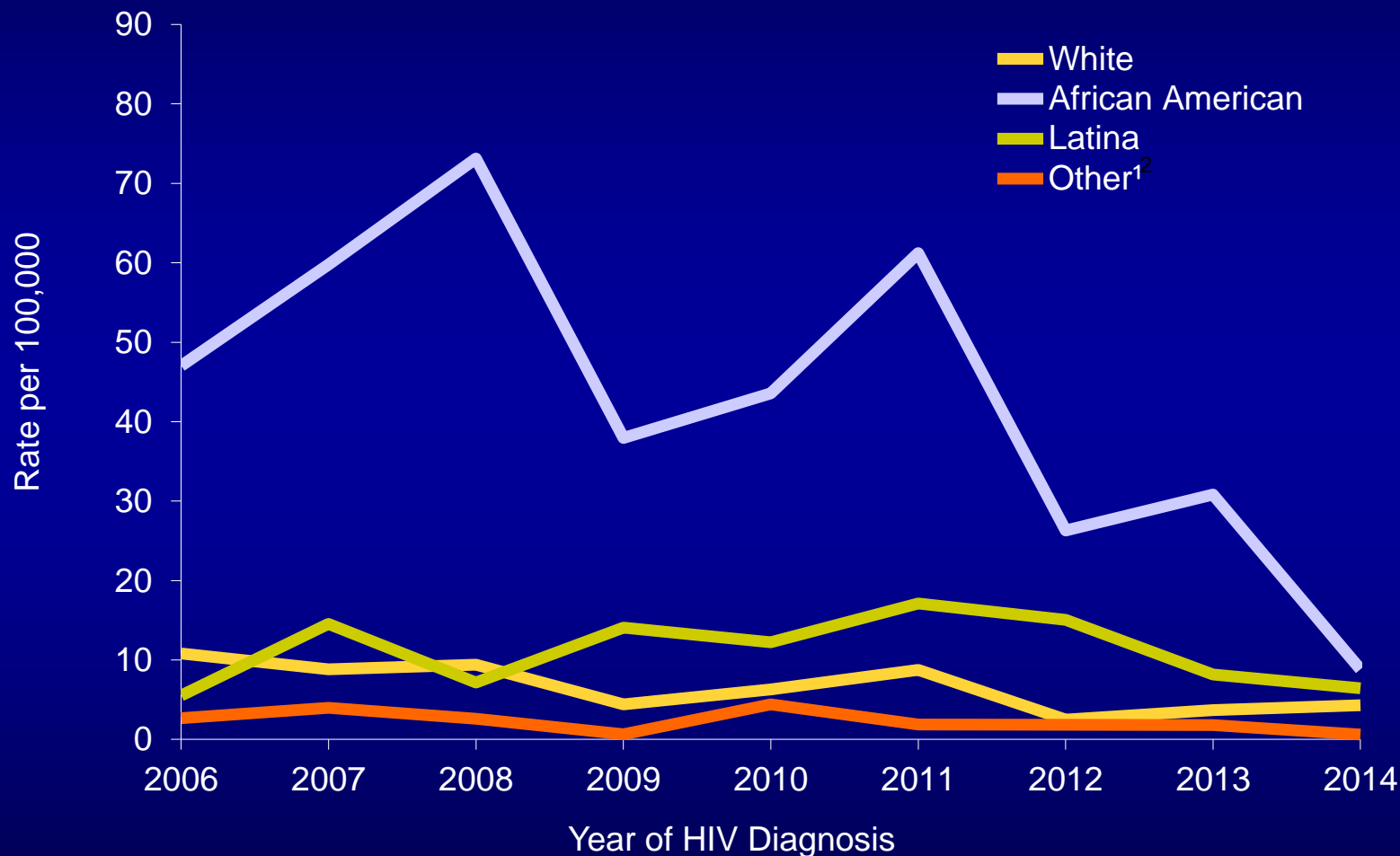
² Transfemale data include all transgender cases. Transmale data are not released separately due to potential small population size. See Technical Notes "Transgender Status".

Figure 2.2 Annual rates of men diagnosed with HIV infection per 100,000 population by race/ethnicity, 2006-2014, San Francisco



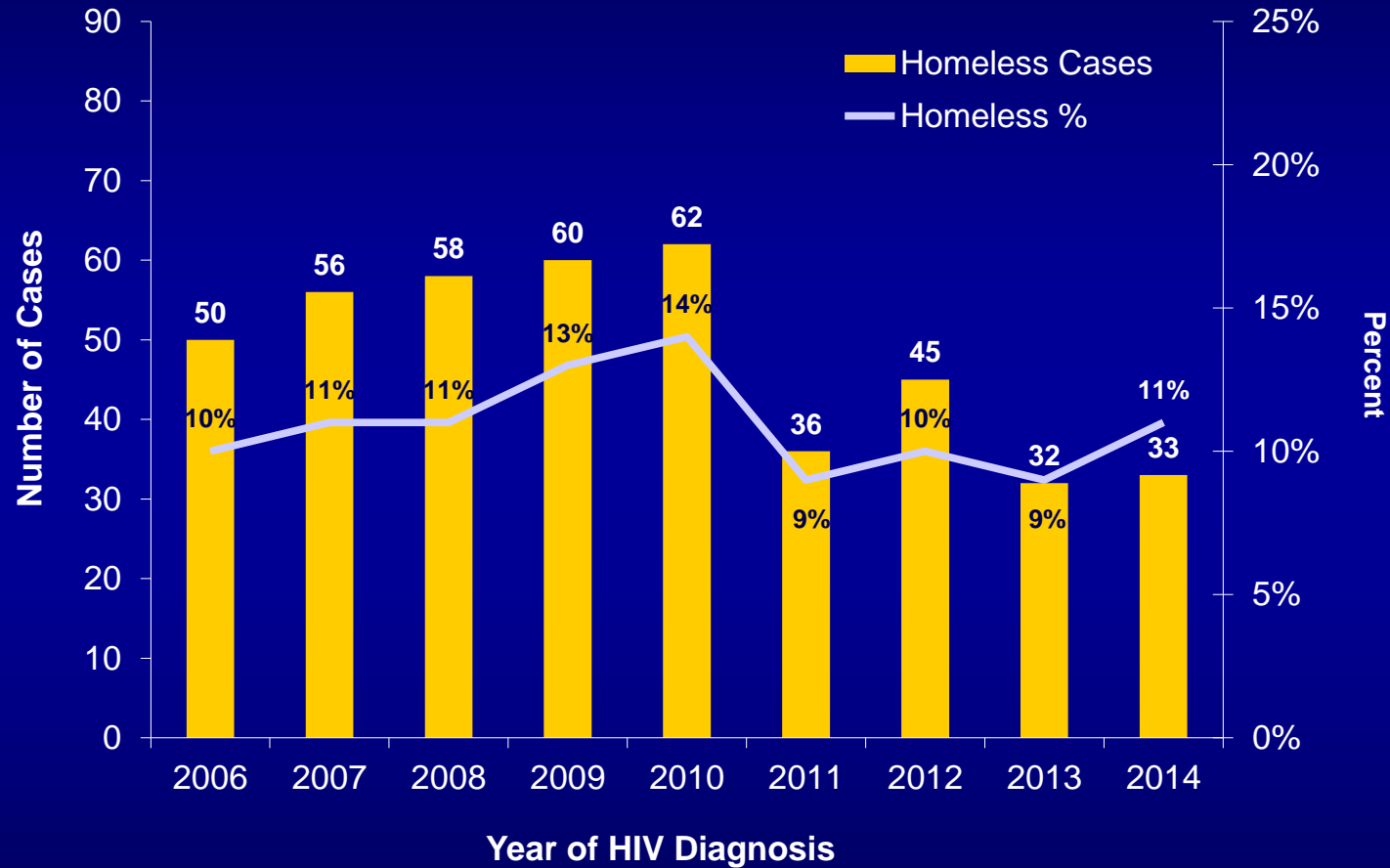
¹ Cases in the "Other" race/ethnicity category include 68% Asian/Pacific Islanders, 4% Native Americans, 22% multiple races, and 3% unknown.

Figure 2.3 Annual rates of women diagnosed with HIV infection per 100,000 population by race/ethnicity, 2006-2014, San Francisco



1 Cases in the “Other” race/ethnicity category include 56% Asian/Pacific Islanders, 3% Native Americans, 34% multiple races, and 6% unknown.

Number and percent of homeless persons diagnosed with HIV infection by year of diagnosis, 2006-2014, San Francisco



Underlying causes of death among persons with HIV infection¹, 2001-2012, San Francisco

Underlying Cause of Death ²	Year of Death					
	2001-2004		2005-2008		2009-2012	
	Number	(%)	Number	(%)	Number	(%)
HIV	900	(67.9)	676	(54.4)	413	(43.8)
Non-AIDS cancer	96	(7.2)	132	(10.6)	128	(13.6)
Lung cancer	28	(2.1)	50	(4.0)	32	(3.4)
Liver cancer	14	(1.1)	24	(1.9)	19	(2.0)
Colon cancer	3	(0.2)	8	(0.6)	7	(0.7)
Anal cancer	5	(0.4)	6	(0.5)	6	(0.6)
Hodgkins lymphoma	1	(0.1)	2	(0.2)	1	(0.1)
Drug overdose	37	(2.8)	77	(6.2)	104	(11.0)
Heart disease	74	(5.6)	95	(7.6)	82	(8.7)
Coronary heart disease	52	(3.9)	51	(4.1)	40	(4.2)
Cardiomyopathy	5	(0.4)	7	(0.6)	4	(0.4)
Suicide	24	(1.8)	48	(3.9)	38	(4.0)
Liver disease	34	(2.6)	27	(2.2)	22	(2.3)
Liver cirrhosis	16	(1.2)	14	(1.1)	12	(1.3)
Alcoholic liver disease	14	(1.1)	11	(0.9)	9	(1.0)
Chronic obstructive lung disease	20	(1.5)	24	(1.9)	18	(1.9)
Mental disorders due to substance use	32	(2.4)	33	(2.7)	12	(1.3)
Cerebrovascular disease	14	(1.1)	6	(0.5)	11	(1.2)
Diabetes	3	(0.2)	7	(0.6)	7	(0.7)
Viral hepatitis	11	(0.8)	11	(0.9)	6	(0.6)
Diseases of arteries	4	(0.3)	1	(0.1)	4	(0.4)
Renal disease	3	(0.2)	7	(0.6)	4	(0.4)
Septicemia	3	(0.2)	3	(0.2)	3	(0.3)
Pancreatitis	3	(0.2)	1	(0.1)	1	(0.1)

and % of drug overdoses has increased

¹ Deceased cases diagnosed with HIV infection that lack cause of death information are not represented in this table.

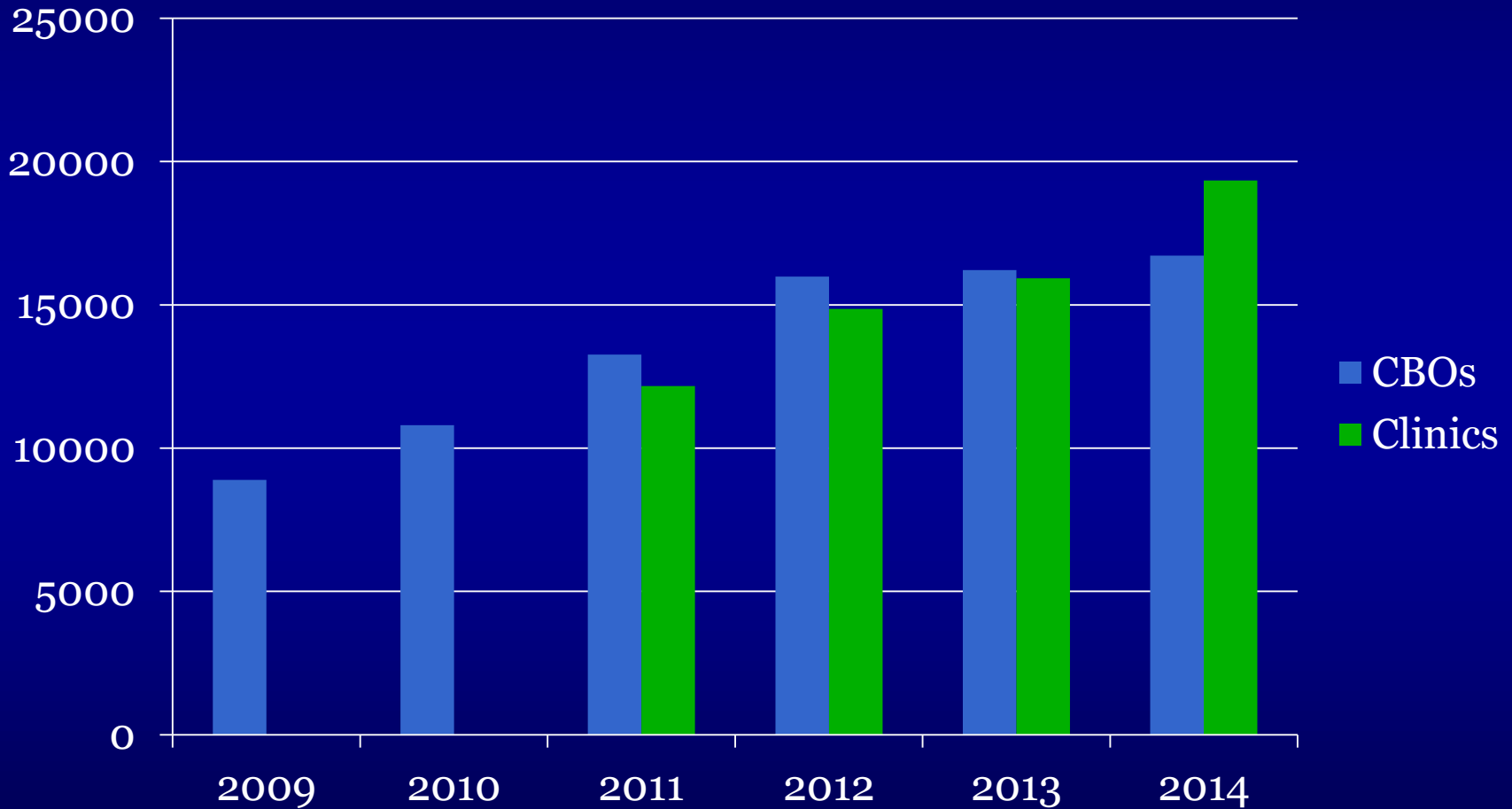
Using Surveillance Data to measure progress along the HIV Care Continuum

**Step 1
Getting from infection to diagnosis**



Testing Trends among Men in SF

2010 Goal: 30,000 tests by 2014



National HIV Behavioral Surveillance MSM in San Francisco 2004-2014

Variable	HIV- and Risk-Related Variables in 4 Waves Among MSM			
	MSM 2004	MSM 2008	MSM 2011	MSM 2014
HIV test in last 6 months	44%	55%	58%	64%
Unrecognized HIV	22%	18%	7.5%	3%

Total Unrecognized HIV infection in San Francisco ~ **7%**

Step 2

Getting from diagnosis to care



Care and prevention indicators among new HIV diagnoses, 2010-2013, San Francisco (Linkage to Care)

Indicators	Year				
	2010	2011	2012	2013	2014
Proportion linked to care w/in 3 months of diagnosis	84%	86%	88%	83%	91%
Proportion virally suppressed w/in 12 months of diagnosis	56%	59%	67%	68%	
Proportion developed AIDS w/in 3 months of diagnosis	26%	24%	21%	18%	
Proportion of homeless at diagnosis	14%	9%	10%	9%	

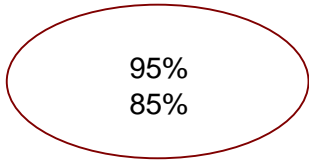
Step 3

Getting from care to treatment



Table 3.6 Estimate of ART use among persons living with HIV by demographic, risk, and socioeconomic characteristics, December 2014, San Francisco

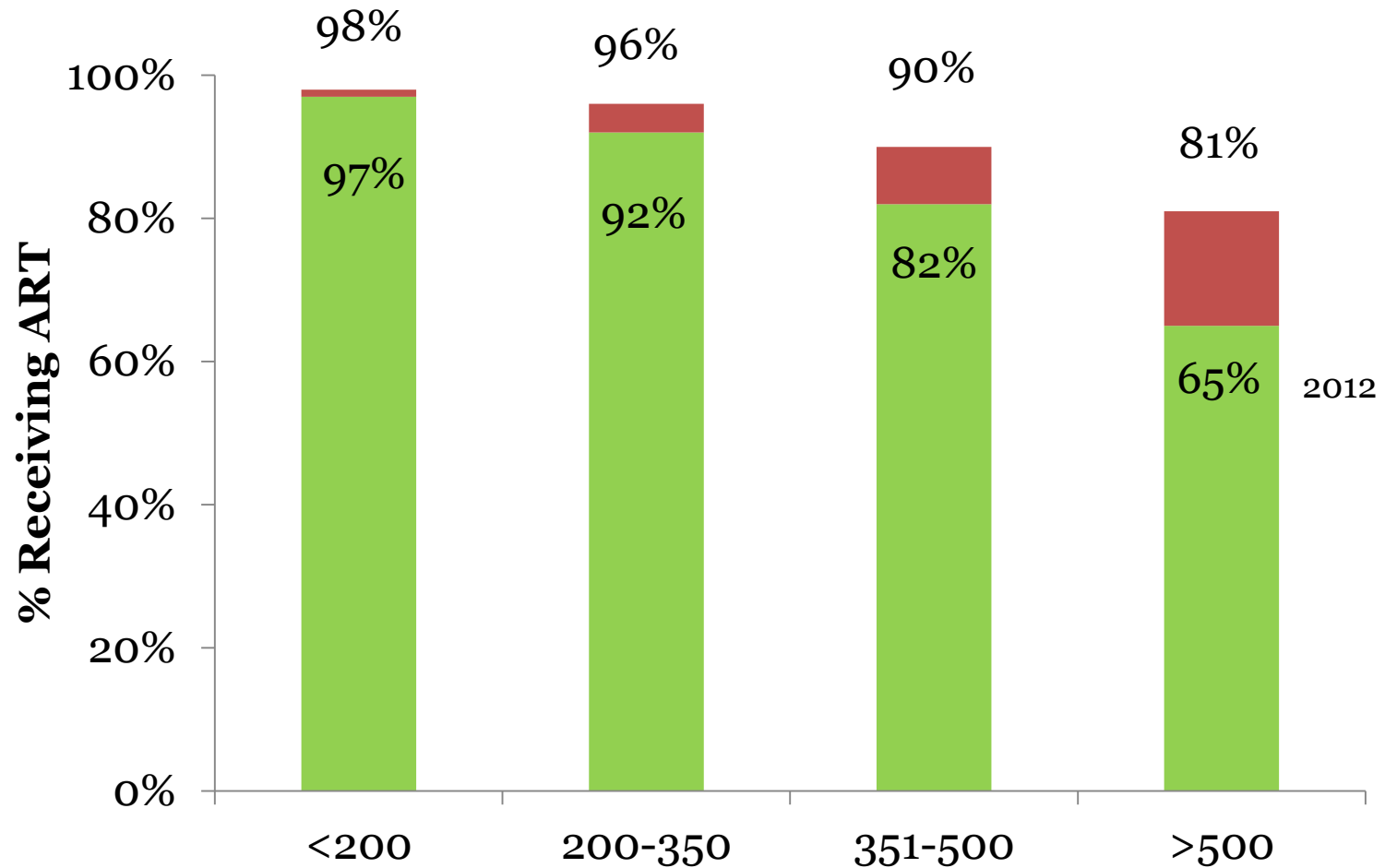
	Percent Receiving ART	
	Lower Level Estimate	Upper Level Estimate
Overall	87%	94%
Gender		
Male	87%	95%
Female	85%	92%
Transfemale ¹	85%	92%
Race/Ethnicity		
White	89%	95%
African American	83%	93%
Latino	85%	94%
Asian/Pacific Islander	83%	92%
Native American	77%	92%
Multiple race	85%	90%
Transmission Category		
MSM	87%	95%
PWID	83%	93%
MSM-PWID	87%	94%
Heterosexual	87%	92%
Housing Status, Most Recent		
Housed	88%	95%
Homeless	69%	85%
Insurance at HIV/AIDS Diagnosis		
Private	92%	96%
Public	87%	93%
None	83%	93%



Homeless less likely to be prescribed ART

¹ Transfemale data include all transgender cases. Transmale data are not released separately due to the potential small population size. See Technical Notes “Transgender Status.”

Estimate of ART use among living HIV cases with chart review¹
by nadir CD4 level, **December 2014**, San Francisco



Step 4

Getting from treatment to viral suppression



Care and prevention indicators among new HIV diagnoses, 2010-2013, San Francisco (Viral Suppression)

Indicators	Year			
	2010	2011	2012	2013
Proportion linked to care w/in 3 months of diagnosis	84%	86%	88%	83%
Proportion virally suppressed w/in 12 months of diagnosis	56%	59%	67%	67%
Proportion developed AIDS w/in 12 months of diagnosis	32%	27%	22%	18%
Proportion of homeless at diagnosis	14%	9%	10%	9%

Kaplan-Meier estimates of time from HIV diagnosis to viral suppression among persons diagnosed with HIV by year of diagnosis, 2009-2013, San Francisco

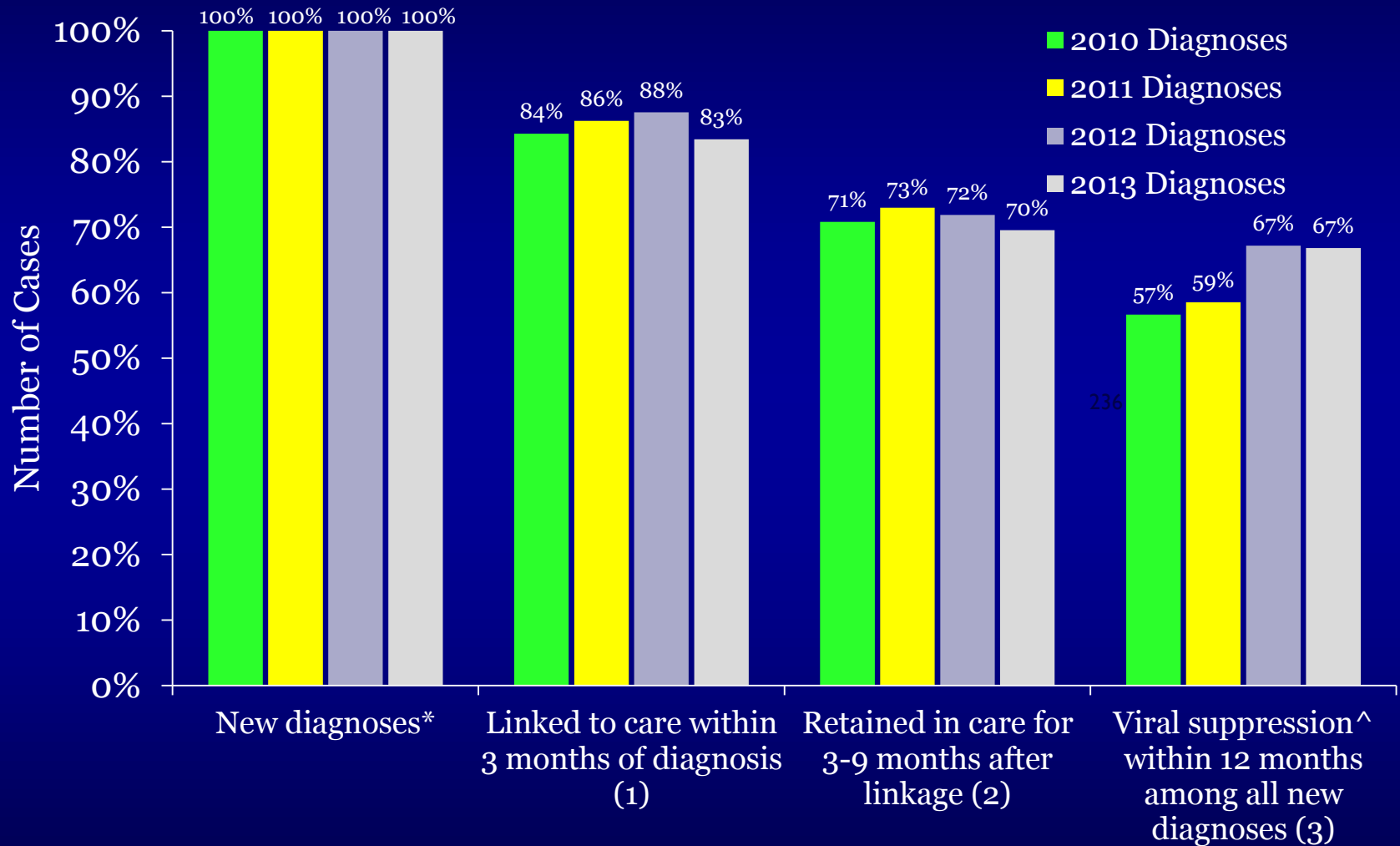
	Median time between diagnosis and viral suppression (months)	Total cases included	No. virally suppressed as of 4/10/2015	No. (%) censored at the last lab test date
2009	11	455	380	75 (16%)
2010	8	431	373	58 (13%)
2011	6	400	351	49 (12%)
2012	5	433	369	64 (15%)
2013	4	367	302	65 (18%)

Putting it all together: Cascades



HIV Care Continuum

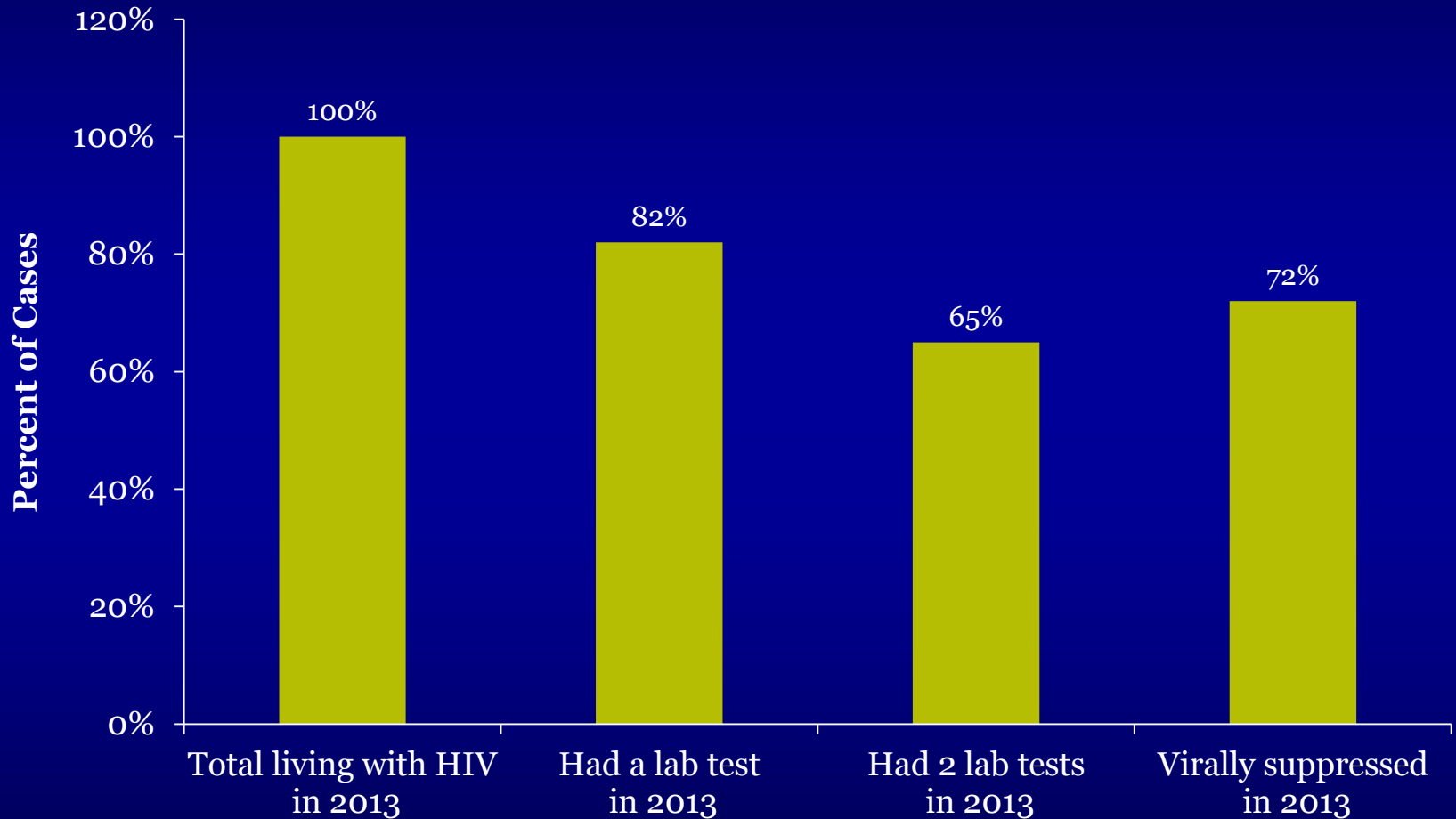
Continuum of HIV care among persons diagnosed with HIV, 2010-2013, San Francisco



* Number of new diagnoses shown each year is based in the evidence of a confirmed HIV test and does not take into account patient self-report of HIV positive.

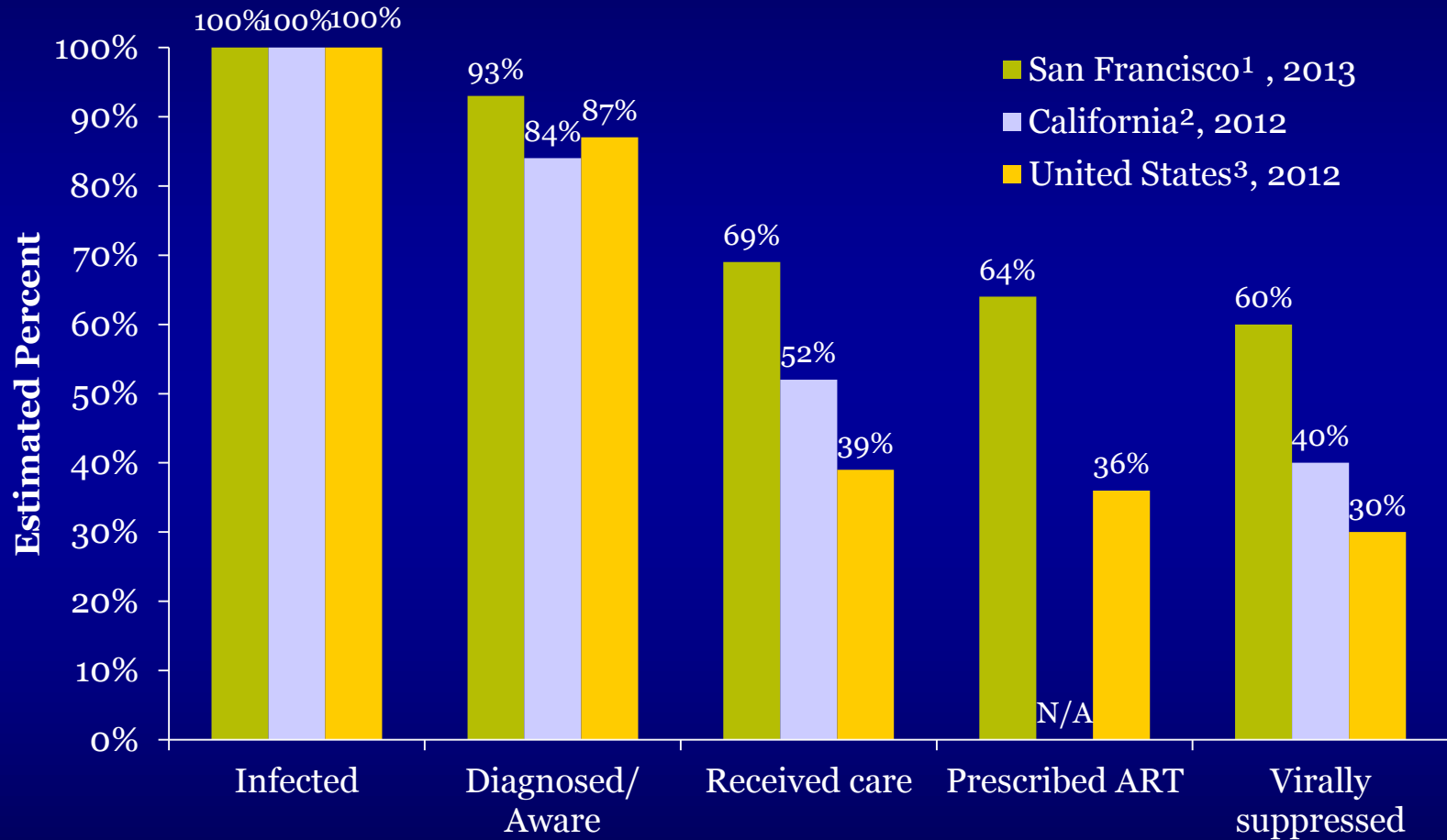
[^] Defined as the latest viral load test during the specified period is ≤ 200 copies/mL.

Continuum of HIV care among persons living with HIV, 2013, San Francisco



1. Includes San Francisco residents at diagnosis living with HIV at the end of 2013 and diagnosed by the end of 2012. Excludes persons who were non-San Francisco residents at time of HIV diagnosis but San Francisco residents at AIDS diagnosis. Excludes persons known to have moved out of SF.

Continuum of HIV care among persons living with diagnosed or undiagnosed HIV infection - San Francisco, California, United States



1 The estimated percent received care and virally suppressed among all infected was derived by applying the 93% diagnosed/aware to the 74% who had ≥ 1 lab test and 64% who were virally suppressed among those living with HIV diagnosis as shown in Table 3.3, respectively. Among those received care in 2013, 93% were known to have received ART. This 93% was then applied to the estimated 69% received care to derive the estimated 64% prescribed ART among all infected.

2 California data source: The Continuum of HIV Care in California - 2012. <http://www.cdph.ca.gov/programs/aids/Documents/HIVCareContinuum-2012.pdf>; posted December 1, 2014.

3 U.S. data source: CDC HIV Surveillance Supplemental Report 2015;20(No.2); published July 2015.

Summary

- **Routinely collected surveillance data provides a population-based data source to measure the success of the HIV prevention and care programs including GTZ RAPID and Retention initiatives.**
- **Significant progress in SF; declining HIV cases and deaths and improvements in HIV care indicators such as HIV status awareness, earlier HIV diagnosis and treatment initiation, linkage and engagement in care and time to viral suppression.**
- **Nevertheless, still have significant disparities.**
- **New diagnoses are disproportionately affecting people of color and MSM.**
- **Timely linkage to care, retention and viral suppression are less likely among women and transwomen, African Americans and Latinos, and PWID. Homeless persons are less likely to be on treatment.**
- **This data is available to you. Please ask if you would like to see something that affects your work or a population of interest.**

A copy of the HIV Epidemiology Report is on the SFDPH website at:
<https://www.sfdph.org/dph/files/reports/RptsHIVAIDS/HIV-EpidemiologyAnnualReport-2014.pdf>

For questions or further information, please contact:
Susan Scheer, PhD, MPH
ARCHES Branch, HIV Epidemiology Section
Population Health Division, SFDPH
susan.scheer@sfdph.org