

Achieving the Goals of the U.S. National HIV/AIDS Strategy: Declining HIV diagnoses, improving clinical outcomes, and diminishing racial/ethnic disparities in King County, WA., USA.

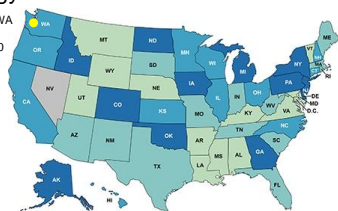
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Goal

- Evaluate King County, Washington's progress in meeting the goals of the national HIV/AIDS Strategy 2003-2013

King County, WA (Seattle)
Pop=2,080,000



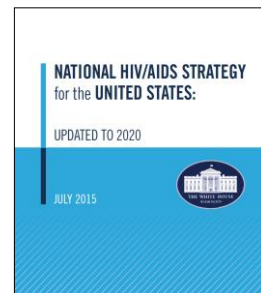
Background

4 GOALS:

- Reduce new infections
- Increase access to care and improve health outcomes
- Reduce disparities
- Coordinated response

New infections now declining in the U.S.

- Not clearly affecting MSM
- Increase proportion of cases in Black MSM
- Low levels viral suppression – 35% diagnosed persons



Methods: Outcomes

- New HIV diagnoses
 - Surrogate for new infections
 - HIV test positivity among MSM tested through Public Health
- Clinical outcomes
 - Rate of AIDS
 - HIV viral suppression (HIV RNA <200 copies/ml)
 - Age adjusted mortality rate in persons with HIV
- Disparities
 - New diagnoses and measures of morbidity and mortality by race/ethnicity

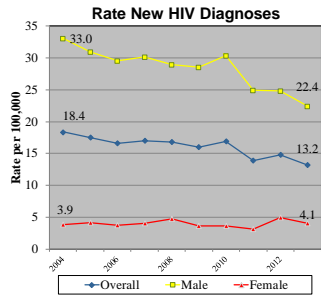
Methods: Data Sources & Population Size

- HIV surveillance data
 - Medical providers report HIV and AIDS diagnoses
 - Laboratories report HIV positive tests (since 1985), and all CD4 lymphocyte and HIV RNA levels reportable (since 2006)
- Population size
 - U.S. Census – number King County residents – age, race/ethnicity
 - MSM population size – 5.4% of men
 - Midpoint between ever sex with a man (6.9%) and sex with a man in last 5 years (3.9%) (Purcell D. Open AIDS J 2012)
 - Number of persons living with HIV/AIDS includes in-migrants and excludes out-migrants and deaths
 - In-migration ascertained through lab reporting
 - Out-migration ascertained via case investigation of persons with no labs

Results: Prevalent and New HIV Diagnoses

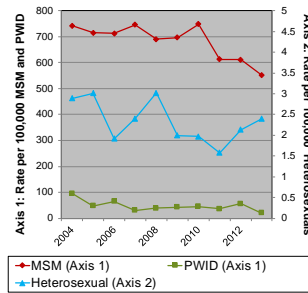
		Prevalent Cases N=9539	New Diagnoses N=3779
Gender	Male	89%	88%
Birthplace	U.S.	79%	71%
	Foreign	18%	27%
HIV Risk	MSM (including MSM/PWID)	77%	73%
	PWID	6%	4%
	Heterosexual	9%	10%
Race/Ethnicity	White	64%	56%
	Hispanic	11%	14%
	US-Born	44%	41%
	Foreign-born	56%	59%
	Black	18%	20%
	US-Born	64%	52%
Foreign-born	36%	48%	
Other	7%	10%	
Age at Diagnosis	<20 years	3%	3%
	20-29	29%	28%
	30-39	40%	33%
	40-49	21%	24%
	≥50	7%	12%

Trends in HIV Diagnoses, King County, WA 2003-2013



- 28% decline in rate new diagnoses ($p < .0001$)
- 32% decline in men ($p < .0001$) with no decline in women

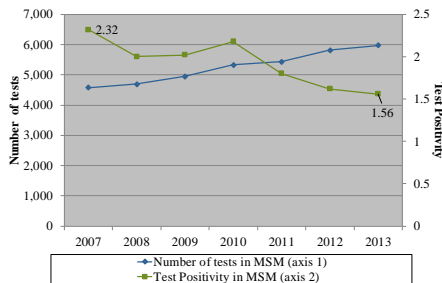
Trends in HIV Diagnoses by HIV Risk Factor, King County, WA 2003-2013



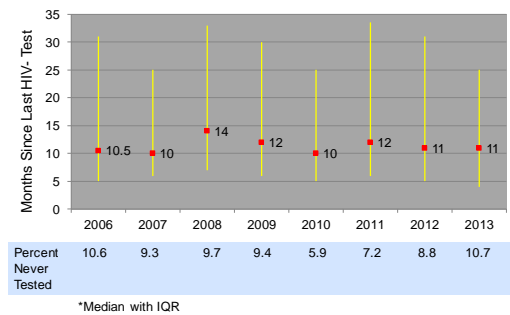
- 26% decline in MSM
- 79% decline PWID
- 17% decline in heterosexuals

All Trends $p < .01$

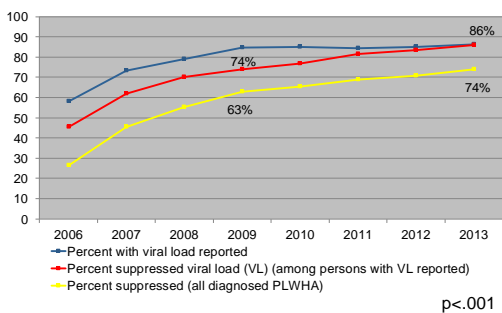
Trends in Number of Public Health Funded HIV Tests Performed in MSM and Test Positivity, 2007-13



HIV Inter-test Interval* and Percent Never HIV Tested Among MSM with Newly Diagnosed HIV Infection, King County, WA 2006-13

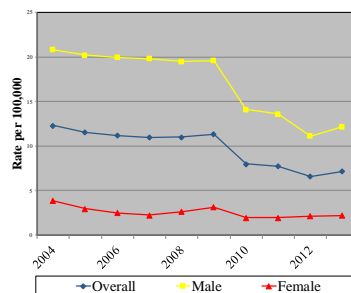


Trends in Viral Suppression (<200 copies/ml) Among Persons with HIV Infection, King County, WA 2003-2013



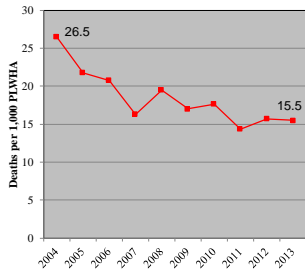
$p < .001$

Trends in AIDS Diagnoses, King County, WA 2003-2013



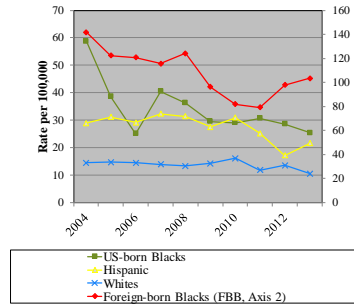
- 42% decline. $P < .001$

Trends in Age-Adjusted Mortality Among Persons with HIV Infection, King County, WA 2003-2013



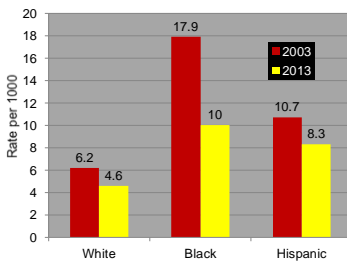
- 28% decline in crude mortality (p=.0004)
- 42% decline in adjusted mortality (p<.0001)

Trends in the Rate of HIV Diagnosis by Race/Ethnicity, King County, WA 2003-2013



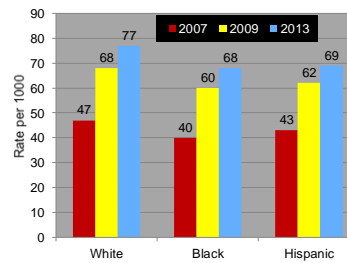
- Declines in new diagnoses affected all groups defined by race/ethnicity
- Greatest decline was in U.S.-born Blacks (57%)
- Racial disparities persist
 - 2013 Rates new diagnosis is 2.4X higher US born blacks than in whites
 - Down from 4.1x higher in 2003

Trends in the Rate of HIV Diagnosis by Race/Ethnicity Among MSM in King County, WA 2003-2013



- Declines in new diagnoses among MSM affected all groups defined by race/ethnicity
- Greatest absolute and relative decline was in U.S.-born Blacks (44%)
- Racial disparities persist

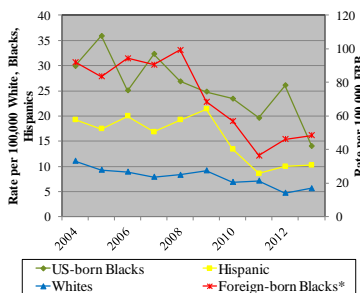
Trends in Viral Suppression* by Race/Ethnicity Among in King County, WA 2007-2013



- Increases in viral suppression occurred in all groups defined by race/ethnicity
- Largest increase occurred 2007-2009 period during which surveillance system was improving
- Racial disparities persist

* Assumes persons without reported viral loads are not suppressed

Trends in the Rate of AIDS Diagnosis by Race/Ethnicity in King County, WA 2003-2013



- Declines in all groups defined by race/ethnicity
- Greatest absolute and relative decline was in Blacks
- Racial disparities persist

* 3 year rolling averages

Summary

- Significant declines in new HIV diagnoses, AIDS diagnoses, mortality & increases in viral suppression

New diagnoses	↓28%
Viral suppression (2009-13)	↑17% (74% Diagnosed Persons Suppressed)
AIDS diagnoses	↓42%
Age-adjusted mortality	↓42%

- Improvements affected all racial/ethnic subgroups, though disparities persist

Limitations

- New HIV diagnoses surrogate for incidence
- True size of populations uncertain
 - Percent men who are MSM uncertain – would not affect trends if there is no change in percent of men who are MSM
 - In- and out-migration imperfectly ascertained
- Lab surveillance data incomplete
 - Underestimates viral suppression
- Generalizability uncertain

Conclusion

- King County is making significant progress toward achieving the goals of the U.S. National HIV/AIDS Strategy
- Many areas of the U.S. face challenges that are significantly greater than those we face in King County.
- Despite this, we believe that our experience should be a source of optimism