

# High prevalence and late diagnosis of HIV among black men aged 40-54 in New York City



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# Background: Epidemiology of HIV/AIDS in New York City

- NYC has reported one-sixth of all US AIDS cases, and at the end of 2001 had one-sixth of US persons living with HIV/AIDS
- As of December 31, 2002, 82,810 persons in NYC were living with HIV/AIDS; approximately 1 in 100 New Yorkers were infected
- ~3,600 new diagnoses of HIV (without AIDS) and ~4,200 new diagnoses of AIDS were made in 2002
- ~2,500 deaths were reported among persons with HIV or AIDS in 2002
- In 2002, Blacks comprised over 50% of HIV diagnoses, AIDS diagnoses, and deaths, and over 40% of persons living with HIV/AIDS, but only 25% of NYC population

## HIV/AIDS diagnoses and deaths, and persons living with HIV/AIDS (PLWHA) as of December 31, 2002, NYC

	HIV diagnoses in 2002 <sup>1</sup>				AIDS diagnoses in 2002 <sup>3</sup>		PLWHA as of December 31, 2002		Deaths in 2002	
	Without AIDS		Concurrent with AIDS <sup>2</sup>							
	N	%	N	%	N	%	N	%	N	%
<b>Total</b>	<b>3,561</b>	<b>100.0</b>	<b>1,030</b>	<b>100.0</b>	<b>4,167</b>	<b>100.0</b>	<b>82,810</b>	<b>100.0</b>	<b>2,456</b>	<b>100.0</b>
<b>Race/Ethnicity</b>										
<b>Black</b>	<b>1,911</b>	<b>53.7</b>	<b>605</b>	<b>58.7</b>	<b>2,234</b>	<b>53.6</b>	<b>36,512</b>	<b>44.1</b>	<b>1,320</b>	<b>53.7</b>
Hispanic	992	27.9	280	27.2	1,222	29.3	26,405	31.9	758	30.9
White	572	16.1	125	12.1	625	15.0	17,854	21.6	355	14.5
Asian/Pacific Islander	60	1.7	18	1.7	54	1.3	803	1.0	15	0.6
Native American	6	0.2	*	*	*	*	55	0.1	*	*
Other/unknown	20	0.6	*	*	27	0.6	1,181	1.4	6	0.2

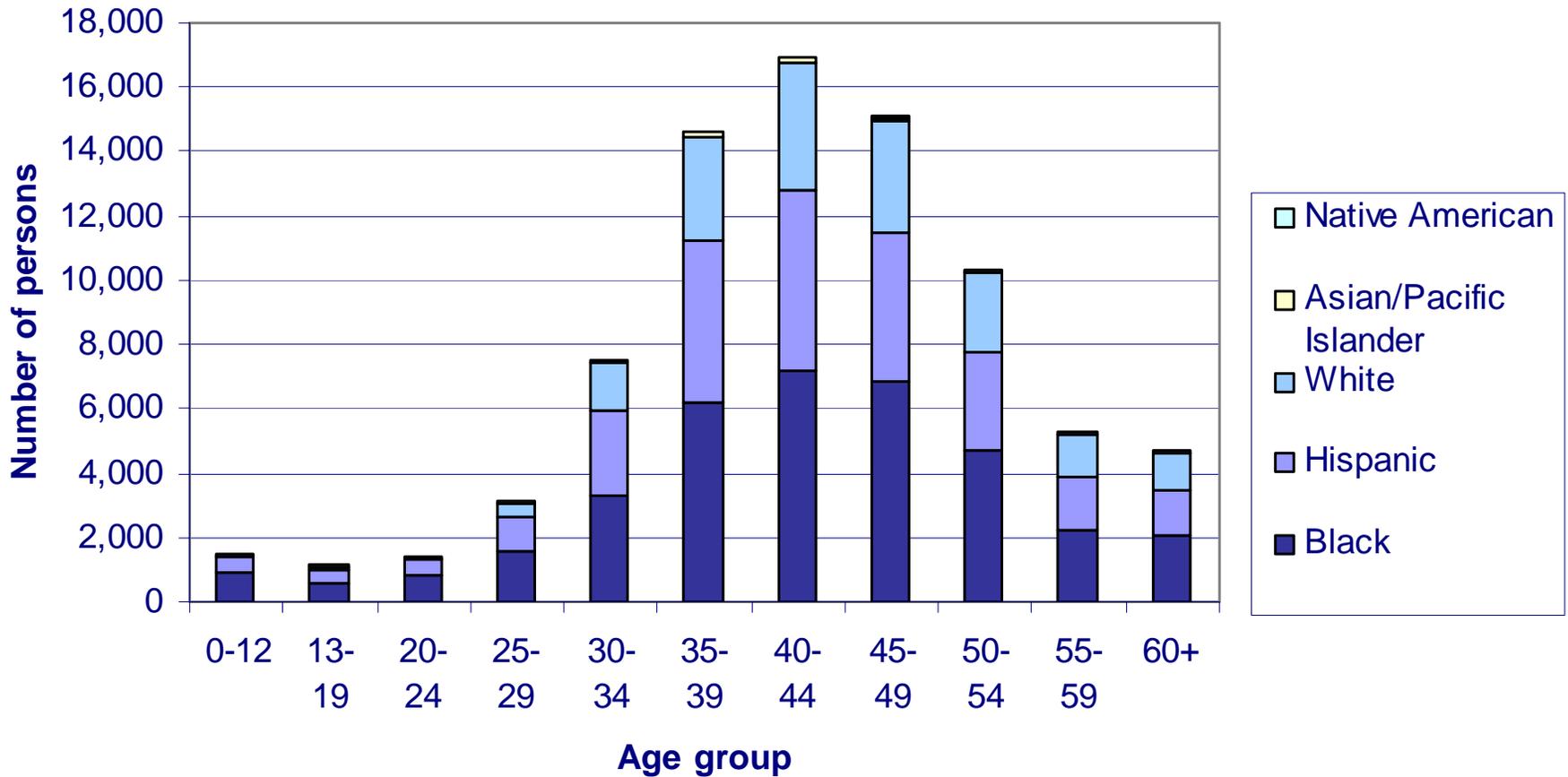
<sup>1</sup> For events occurring January through December 2002 and reported by March 31, 2004.

<sup>2</sup> HIV diagnosed concurrently with AIDS (within 31 days of HIV diagnosis).

<sup>3</sup> Includes concurrent HIV/AIDS diagnoses.

\* Fewer than six people.

## Race/ethnicity of persons living with HIV/AIDS as of December 31, 2002, NYC



What's the problem?

# Public Health Problem

- Non-Hispanic Blacks now comprise the largest group of persons living with HIV or AIDS (PLWHA), new HIV and AIDS diagnoses, and deaths in New York City (NYC), but only 25% of the NYC population
- There has been a shift in the NYC HIV/AIDS epidemic from White men who have sex with men (MSM) (36% of AIDS cases through 1985) to primarily Blacks and Hispanics (81% of 2002 HIV diagnoses) with a mix of transmission risks
- HIV prevention and testing do not reach all that need it
  - An estimated one-quarter of New Yorkers infected with HIV do not know it
  - Nearly one-fifth of New Yorkers diagnosed with HIV since June 2000 were diagnosed with AIDS concurrently (within 31 days), indicating delayed testing and barriers to care

How can we further investigate  
the problem?

# Methods

- Determine the number of persons living with HIV/AIDS as of December 31, 2002, by demographic group (race/ethnicity, sex, and age), using routine NYC HIV/AIDS surveillance data reported through March 31, 2004
- Calculate the prevalence of HIV/AIDS for each demographic group using US Census 2000 data for NYC

# Methods (continued)

- Identify the highest-prevalence demographic group by comparing prevalence rates
- Describe borough of residence, country of birth, transmission risk, and concurrent HIV/AIDS (HIV diagnoses since June 1, 2000, followed within 31 days by an AIDS diagnosis) of the highest-prevalence group using surveillance data

What is the prevalence of  
HIV/AIDS in NYC and by  
race/ethnicity and sex?

# Results 1. Prevalence by race/ethnicity and sex

- Citywide, 1 in 97 people were living with HIV/AIDS as of December 31, 2002
- Blacks have the highest HIV prevalence of all racial/ethnic groups: 1.9%, or 1 in 54<sup>1</sup>
- Prevalence among Hispanics is also high (1 in 82)<sup>1</sup>
- In each racial/ethnic group, prevalence among men is at least twice that of women

<sup>1</sup> $p < 0.0001$  for difference between Blacks or Hispanics and Whites

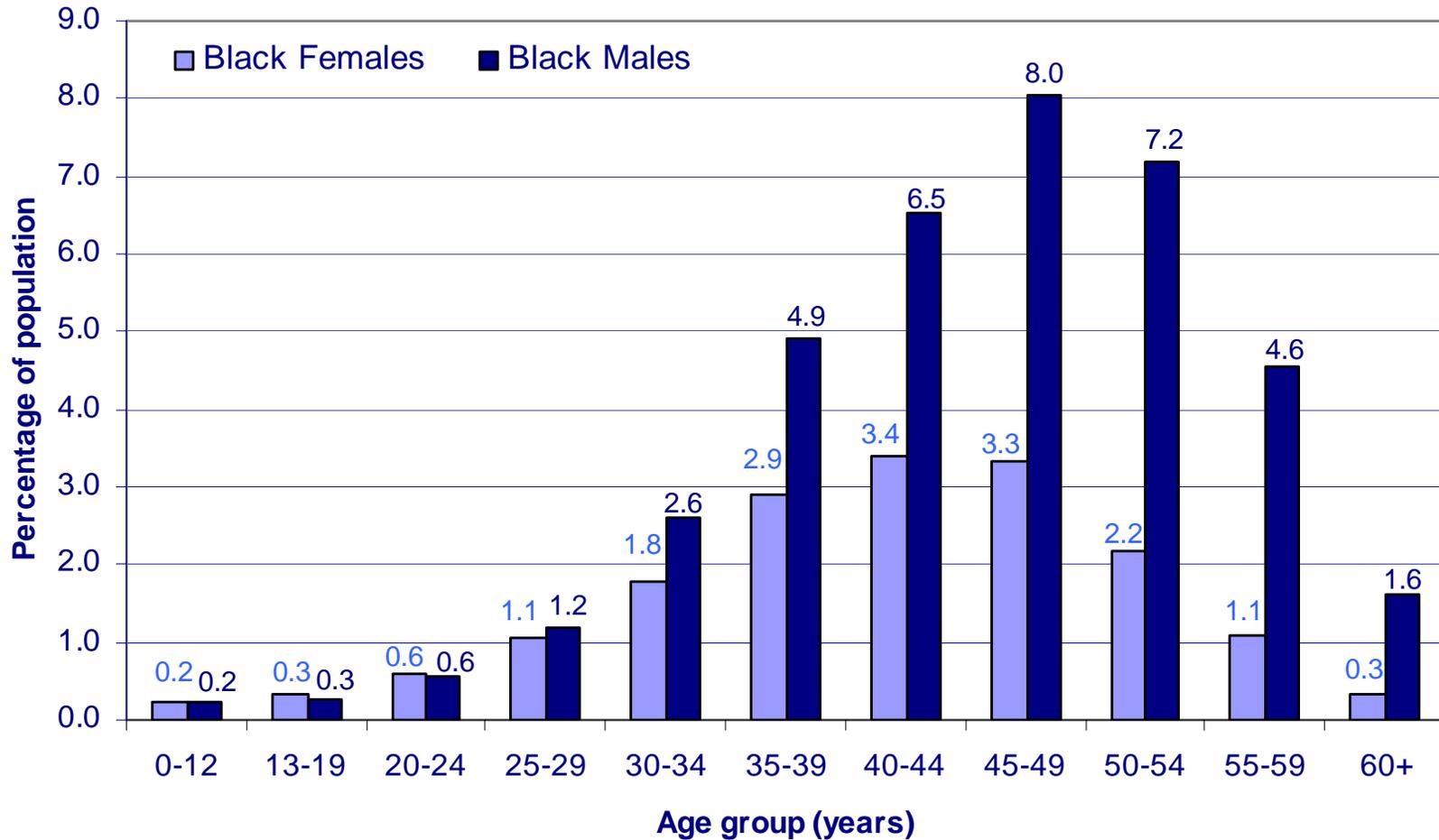
# Prevalence of HIV/AIDS by race/ethnicity and sex as of December 31, 2002, New York City

Population	Prevalence		
	Overall	Men	Women
<b>Citywide</b>	<b>1 in 97</b>	<b>1 in 66</b>	<b>1 in 167</b>
<b>Blacks</b>	<b>1 in 54</b>	<b>1 in 39</b>	<b>1 in 76</b>
Hispanics	1 in 82	1 in 57	1 in 139
Whites	1 in 157	1 in 87	1 in 588
Native Americans	1 in 315	1 in 205	1 in 608
Asian / Pacific Islanders	1 in 972	1 in 594	1 in 2,615

# Results 2. Prevalence among Blacks by sex and age

- Black men
  - Overall prevalence: 1 in 39
  - Prevalence peaks in men aged 40-54 years
  - Black men 45-49 years old have highest HIV prevalence of all demographic groups (by race/ethnicity, sex, and age), 1 in 12 (8.0%)
- Black women
  - Overall prevalence: 1 in 76
  - Prevalence peaks in women aged 35-49 years

## Black persons living with HIV/AIDS as of December 31, 2002, by age group, as percent of Black population, New York City



Black men 45-49 years old have the highest prevalence of all demographic groups: 1 in 12, or 8.0%.

Among Black women, 40-44-year-olds have the highest prevalence: 1 in 29, or 3.4%.

## Results 3. Black men 40-54 years old

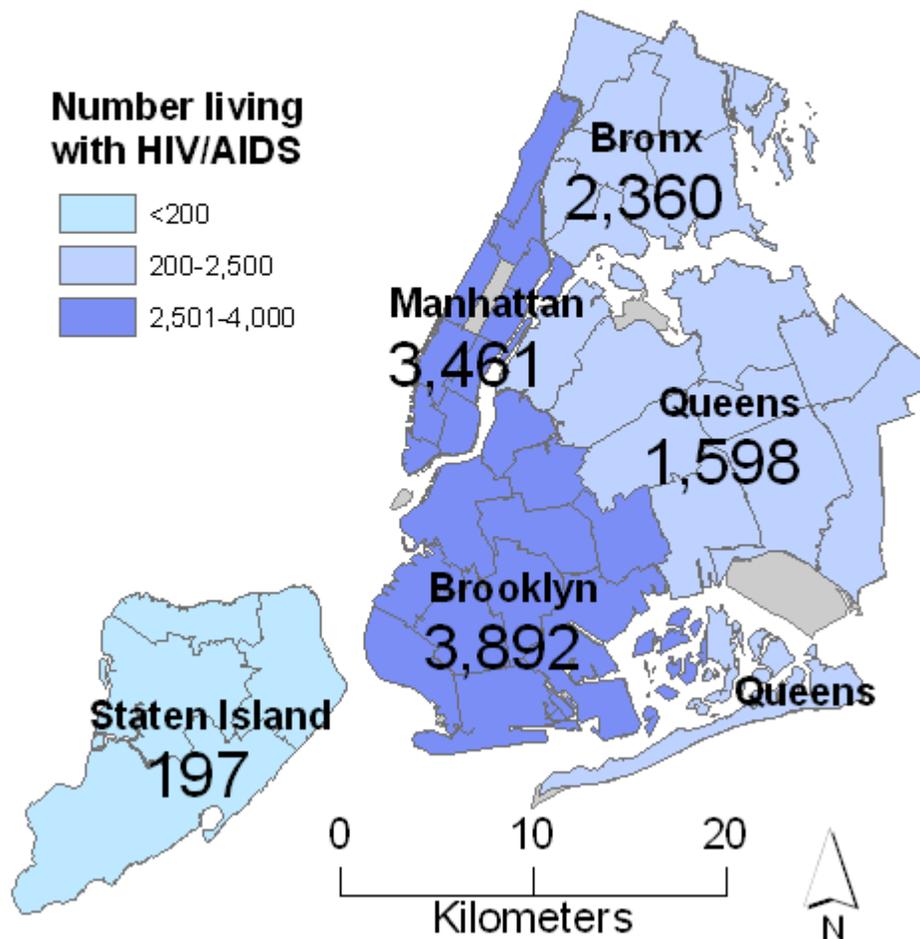
- 12,020 Black men 40-54 years old were living with HIV/AIDS in NYC as of December 31, 2002
- They represent 7.2% of all Black men 40-54 years old in NYC, or 1 in 14

What are characteristics of the epidemic among Black men 40-54 years old?

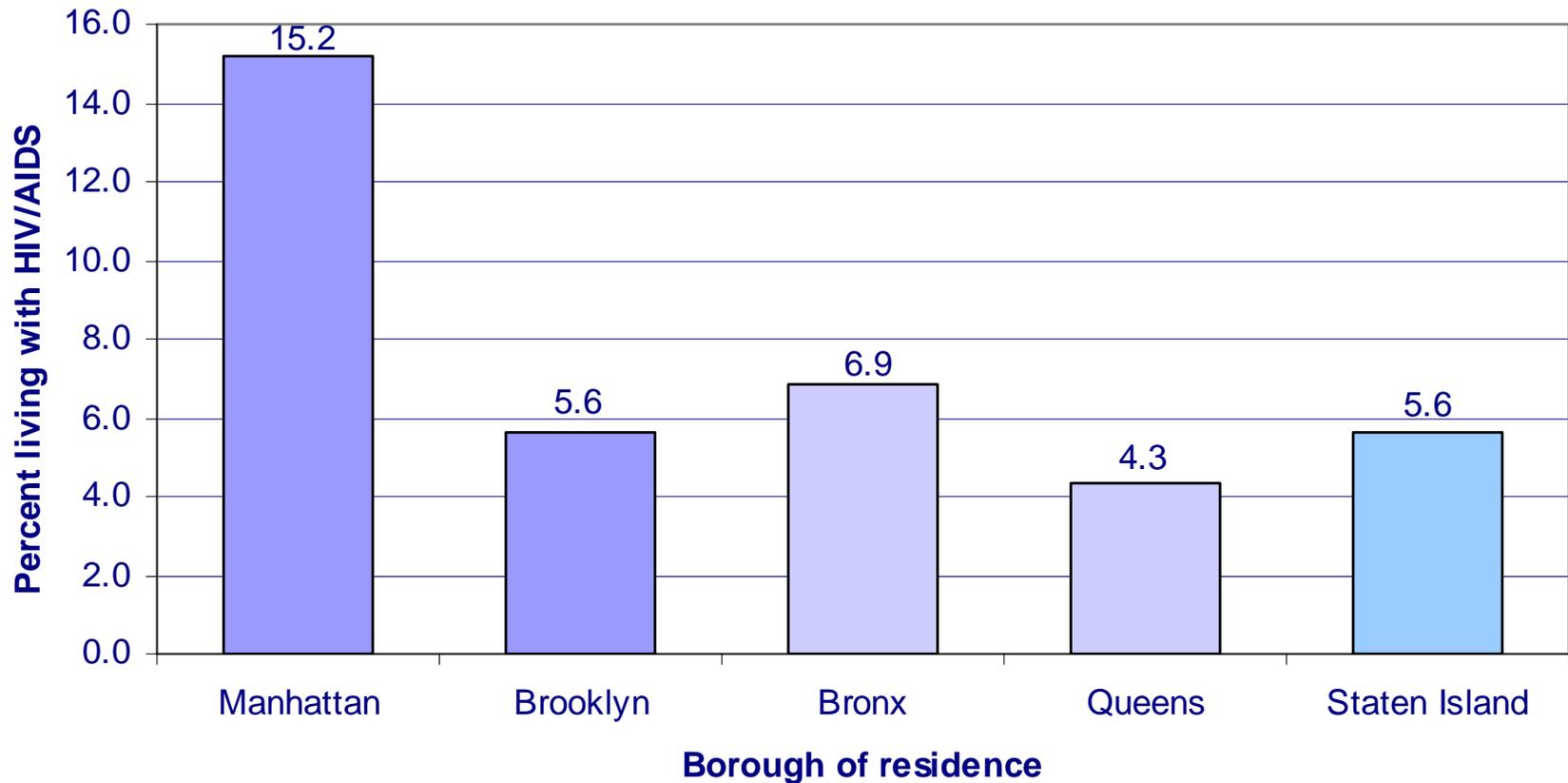
## Results 3a. Borough of residence among Black men 40-54 years old

- Brooklyn accounted for the greatest number (3,892)
- Prevalence highest in Manhattan (1 in 7, N=3,461, versus 1 in 18 in Brooklyn)

# Borough of residence of Black men 40-54 years old living with HIV/AIDS as of December 31, 2002, New York City



### Prevalence of HIV/AIDS by borough of residence among Black men 40-54 years old, as of December 31, 2002, NYC



# Results 3b. Country of birth among Black men 40-54 years old

- Country of birth reported for 75%<sup>1</sup>
  - 14% born outside United States
  - 85% born in United States (not including US dependencies like Puerto Rico)
- Non-US-born mainly from two regions
  - 72% from Caribbean (n=811)
    - 507 (63%) from Haiti
    - 141 (17%) from Jamaica
    - 94 (12%) from Trinidad & Tobago
  - 16% from Africa
- 52% of the non-US-born live in Brooklyn

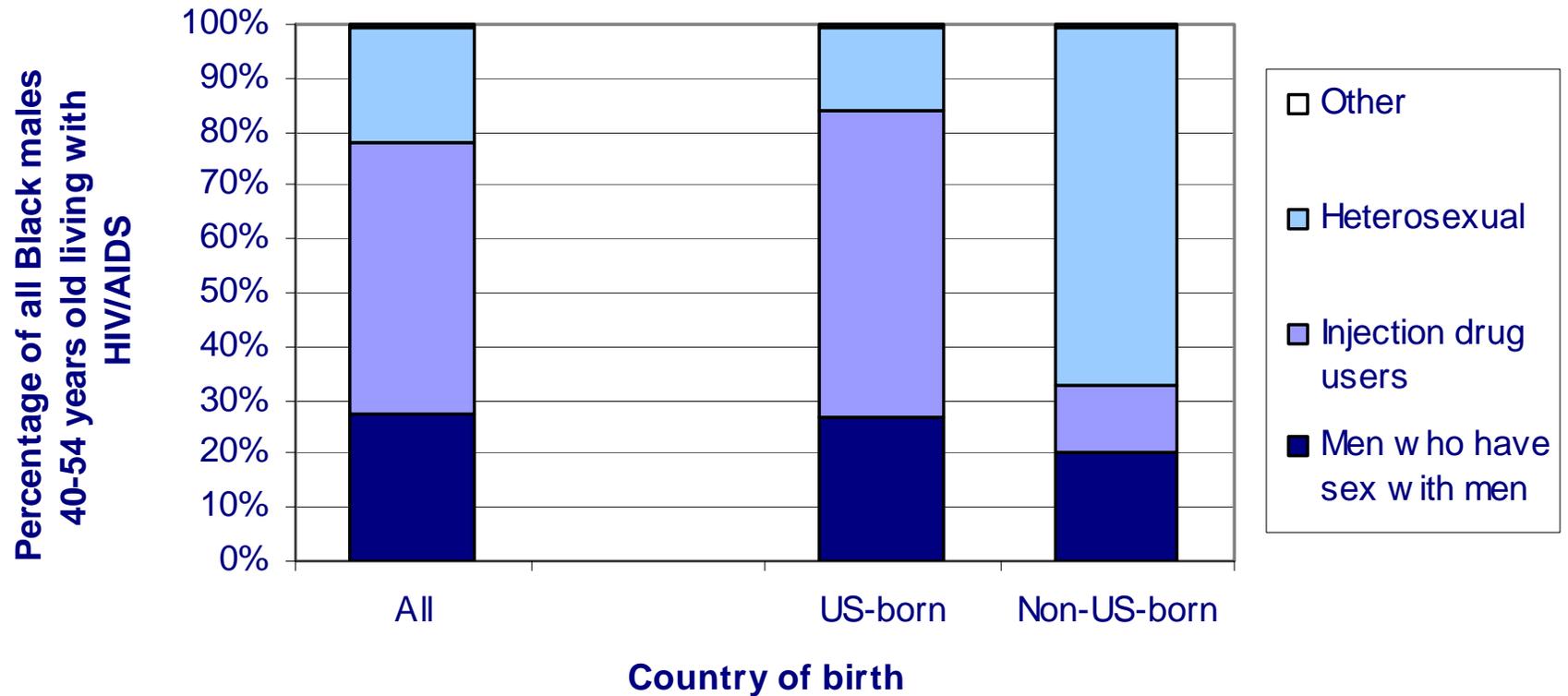
<sup>1</sup> Subsequent country and region data on this slide are presented as a percentage of those whose country of birth was reported.

# Results 3c. Transmission risk among Black men 40-54 years old

- Overall: 38% injection drug user (IDU), 21% men having sex with men (MSM), 16% heterosexual sex, 25% unknown or under investigation<sup>1</sup>
- Differential risk by borough of residence ( $p < 0.0001$ )
  - Manhattan: 50% IDU, 35% MSM, 16% heterosexual sex
  - Brooklyn: 47% IDU, 24% MSM, 28% heterosexual sex
- Differential risk by country of birth ( $p < 0.0001$ )
  - US-born: 61% IDU, 24% MSM, 15% heterosexual sex
  - Non-US-born: 67% heterosexual sex, 19% MSM, 14% IDU

<sup>1</sup> Subsequent data on this slide are presented as a percentage of those whose transmission risk was known

## Transmission risk<sup>1</sup> by country of birth among Black men 40-54 years old living with HIV/AIDS as of December 31, 2002, NYC



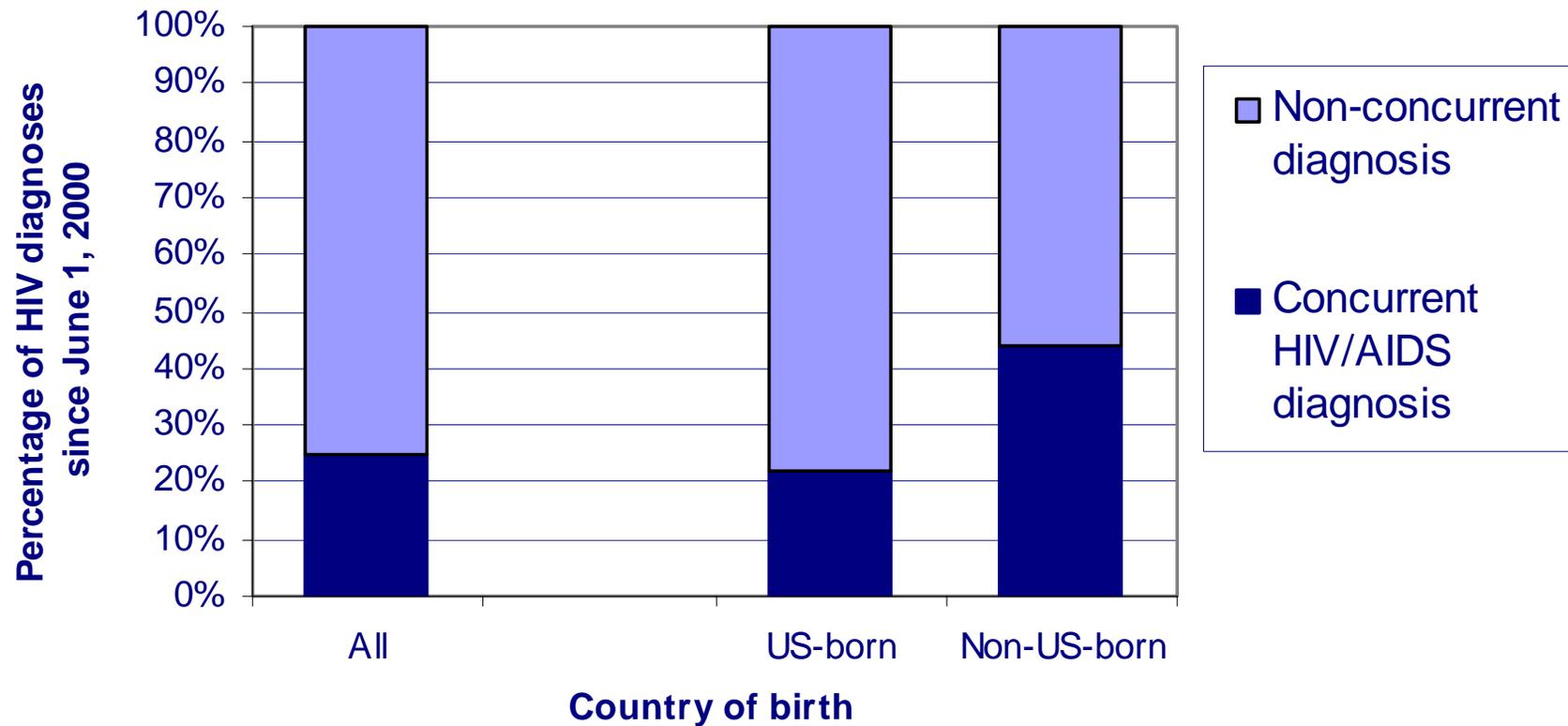
<sup>1</sup> Among persons with known transmission risk

Among Black men diagnosed with HIV since June 1, 2000, what proportion were diagnosed with AIDS within 31 days?

## Results 3d. Concurrent HIV/AIDS diagnosis among Black men 40-54 years old

- 409 of 1,657 (nearly 1 in 4) diagnosed with HIV since June 1, 2000 and alive at the end of 2002 were diagnosed with AIDS concurrently, versus fewer than 1 in 5 (19%) citywide
- Non-US-born were more likely to be diagnosed concurrently (44.1% versus 21.7%;  $p < 0.0001$ )

## Concurrent HIV/AIDS diagnoses by country of birth among Black men 40-54 years old living with HIV/AIDS as of December 31, 2002, NYC



What does all of this mean?

# Conclusions

- In NYC, Black men 40-54 years old have the highest prevalence of HIV/AIDS of all demographic groups and have elevated rates of concurrent HIV/AIDS diagnosis
  - High prevalence suggests barriers to prevention and care for this population
  - Concurrent diagnoses indicate lost opportunities for prevention of transmission and barriers to access to HIV testing
- Both HIV/AIDS prevention and HIV testing should be made more available
  - Ensure accessibility for Black men
  - Reach out to their sexual and injection partners

# Conclusions (continued)

- Demographic and clinical characteristics of Black men 40-54 years old are heterogeneous, such as:
  - Manhattan has proportionately more men who have sex with men, while Brooklyn has more heterosexuals
  - Non-US-born were almost twice as likely as US-born to be diagnosed concurrently
- Interventions for Black men could be directed at subgroups (which are themselves heterogeneous), such as:
  - Non-US-born men in Brooklyn
  - Men in Manhattan who have sex with men

But...

# Limitations

- Assessment of concurrent HIV/AIDS diagnoses
  - Here it was defined as AIDS diagnosed within 31 days of HIV diagnosis
  - Classifications vary; CDC surveillance reports use a one-year window period
- Reported persons living with HIV/AIDS only
  - Reported prevalence appears lower than actual prevalence in populations that test infrequently, late, or not at all
  - Persons participating in clinical trials and research studies are not reportable
- Estimated 90% of cases as of December 31, 2002, would have been reported by March 31, 2004 (reporting lag)
- Race/ethnicity classification methods differ between US Census and NYC HIV surveillance

What should be done?

# Future directions

- Provide results to Commissioner of Health, HIV Prevention Planning Group of the Department of Health, and the NYC Commission on HIV/AIDS
- Conduct further analyses to describe characteristics of other high-prevalence groups (Black women, Hispanic men and women)
- Use research data to better understand surveillance data, and develop hypotheses for new research studies based on surveillance data

Data presented at the XV International AIDS Conference, Bangkok,  
Thailand, July 11-16, 2004