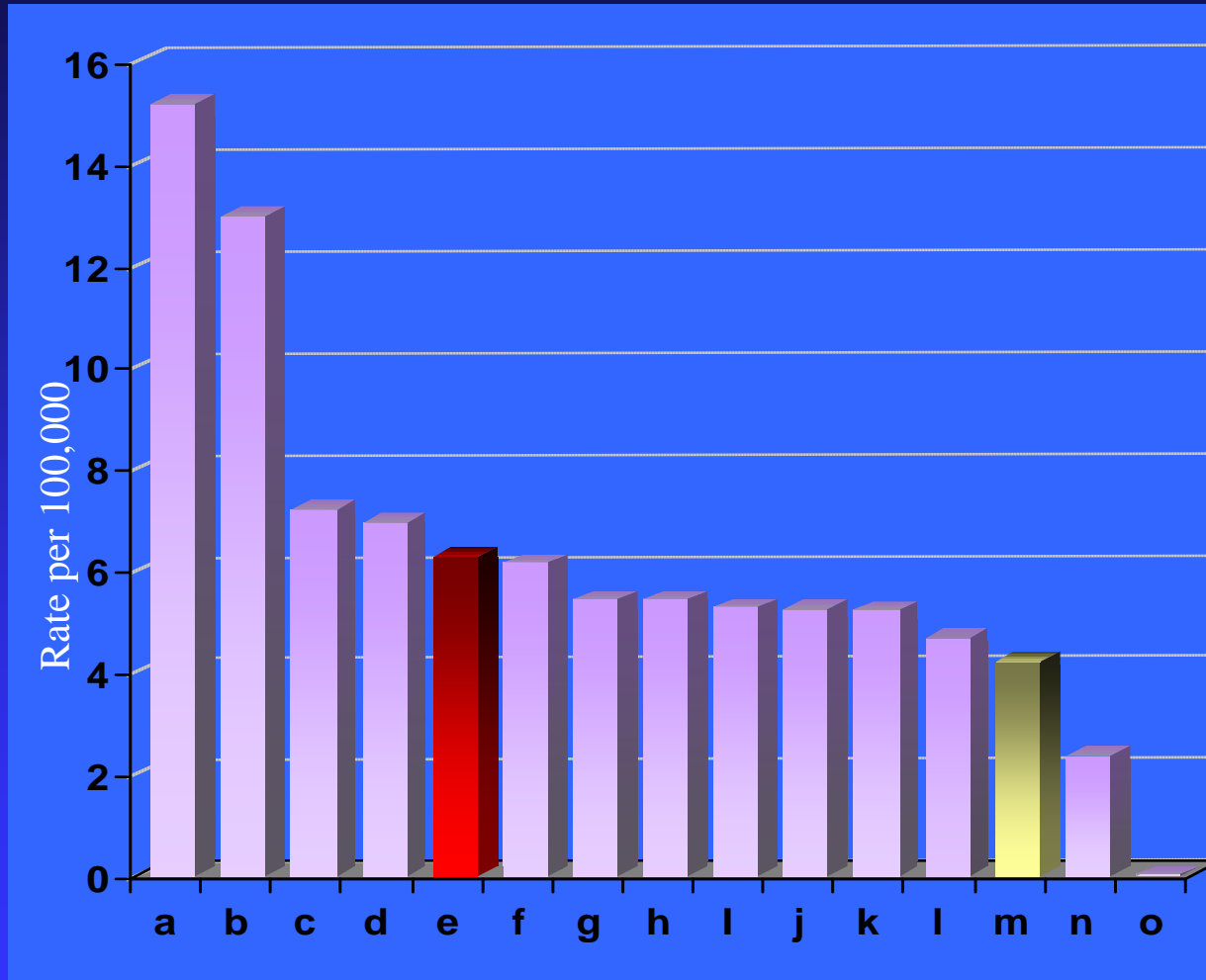


**WHAT IS THE RELATIONSHIP BETWEEN  
PRISONS AND RATES OF HIV/AIDS?**

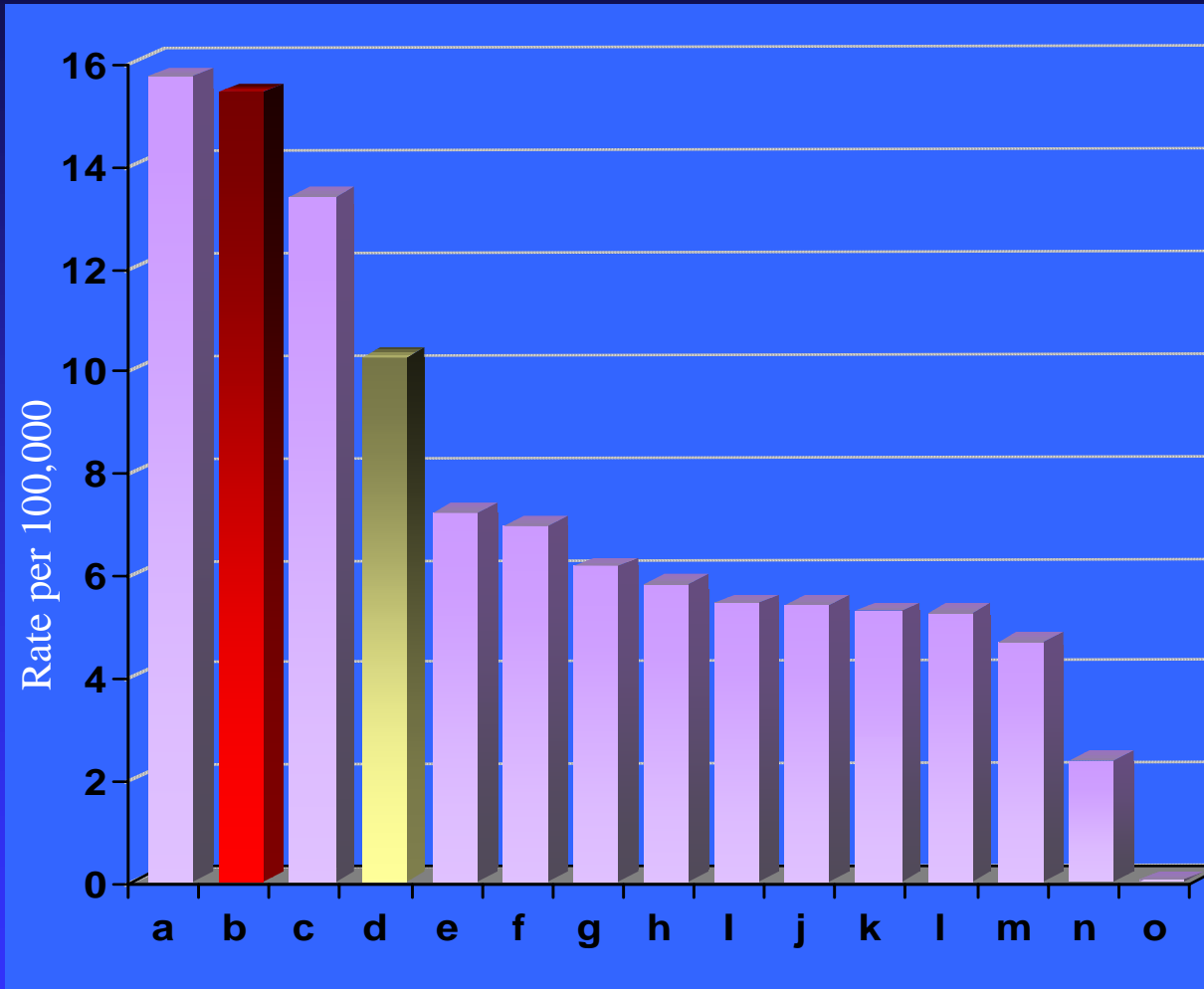
# ARIZONA 1999-2003 HIV EMERGENCE RATE BY COUNTY EXCLUDING PRISONERS



- a- Maricopa
- b- Pima
- c- La Paz
- d- Coconino
- e- Pinal\*
- f- Santa Cruz
- g- Yavapai
- h- Navajo
- i- Apache
- j- Mohave
- k- Cochise
- l- Yuma
- m- Graham\*
- n- Gila
- o- Greenlee

\*60% of emergent cases (1999-2003) in Pinal and Graham counties are among incarcerated persons and are removed in this display.

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\*60% of emergent cases (1999-2003) in Pinal and Graham counties are among incarcerated persons.

# HIV/AIDS in Prison

- Reports of HIV infection among current inmates
  - ◆ 223 known total cases in AZ
  - ◆ 0.7% of the prison population are reported with HIV/AIDS
  - ◆ Approximately 2.1% of statewide prevalence among 0.6% of the state population
  - ◆ Rural counties with large prisons experience higher proportions

CONCLUSION: HIV/AIDS  
RATES IN PRISONS ARE  
HIGHER THAN IN THE  
GENERAL POPULATION .

ARE THERE ANY STUDIES  
TO CORROBORATE THIS  
CONCLUSION?

# NIJ REPORT TO CONGRESS ON HEALTH CARE FOR SOON-TO-BE-RELEASED INMATES: 2002

- National data from state prisons: 1996-1997
- Largest and most comprehensive study ever done on prison health in the U.S.
- At the time of the study only 16% of state prison systems had mandatory HIV testing
- No major jail systems had mandatory HIV testing
- Resulting reported HIV data “almost certainly” underestimate actual HIV prevalence in prisons and jails.
- More than 7,700,000 releases from prison or jail nationally in 1996 (500,000 from state or federal prison, more than 7,250,000 from city or county jail systems)

# STUDY HIV/AIDS RELATED FINDINGS:

- An estimated 13-19% of all U.S. HIV/AIDS prevalence was discharged from prisons and jails in 1996.
- National prevalence estimates of HIV/AIDS in prisons and jails range from 1.2 – 3.0%
- HIV/AIDS Prevalence rate in prisons is 4 – 7 times national prevalence rate
- 88-90% of those estimated HIV infected releases occur from the city/county jail system, and 10-12% occur from the state/federal prison system.
- Proportion of these that are previously reported cases is unknown.

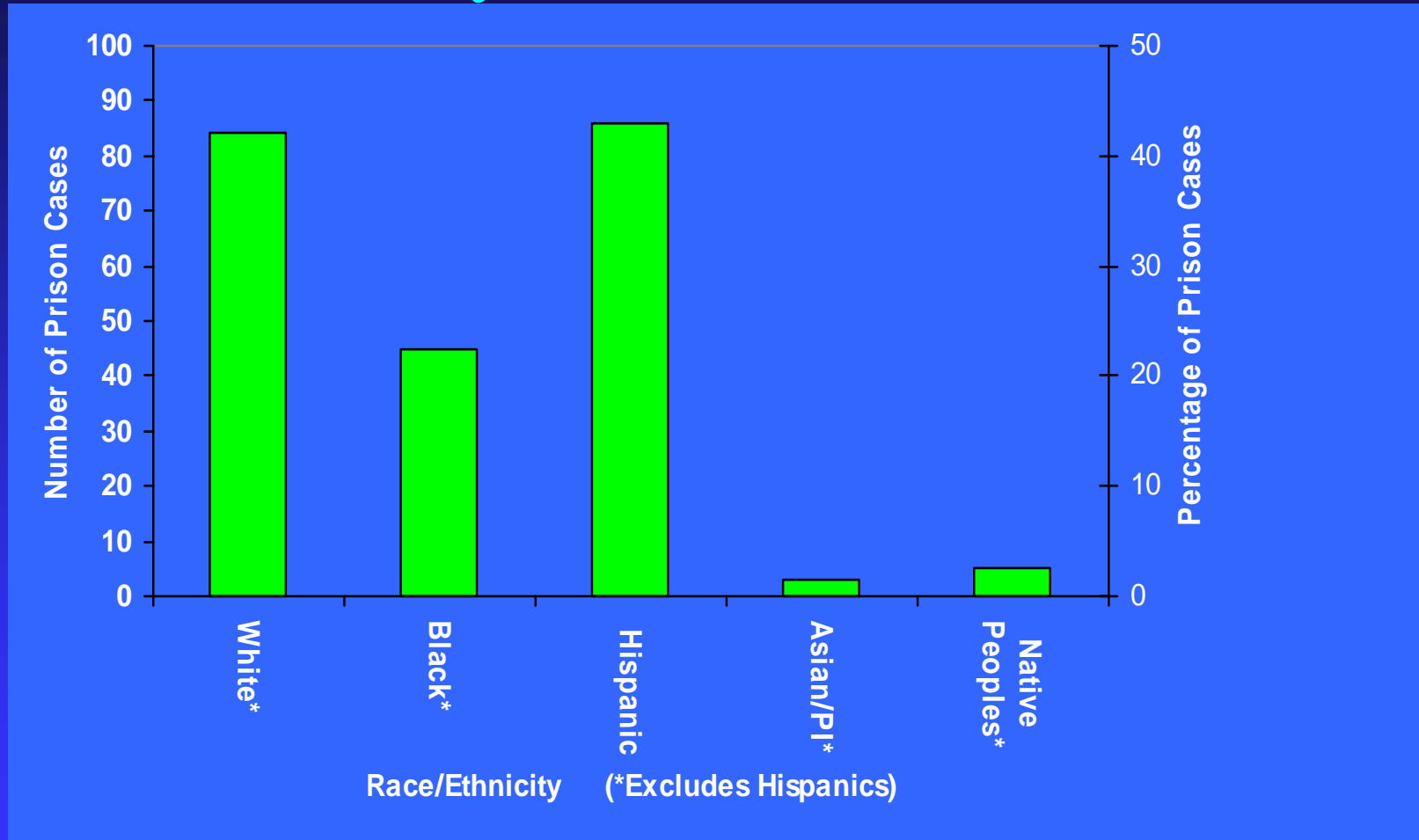
WHAT ARE THE ARIZONA  
HIV/AIDS DATA FROM  
PRISONS?

# HIV/AIDS Among Prisoners in Arizona

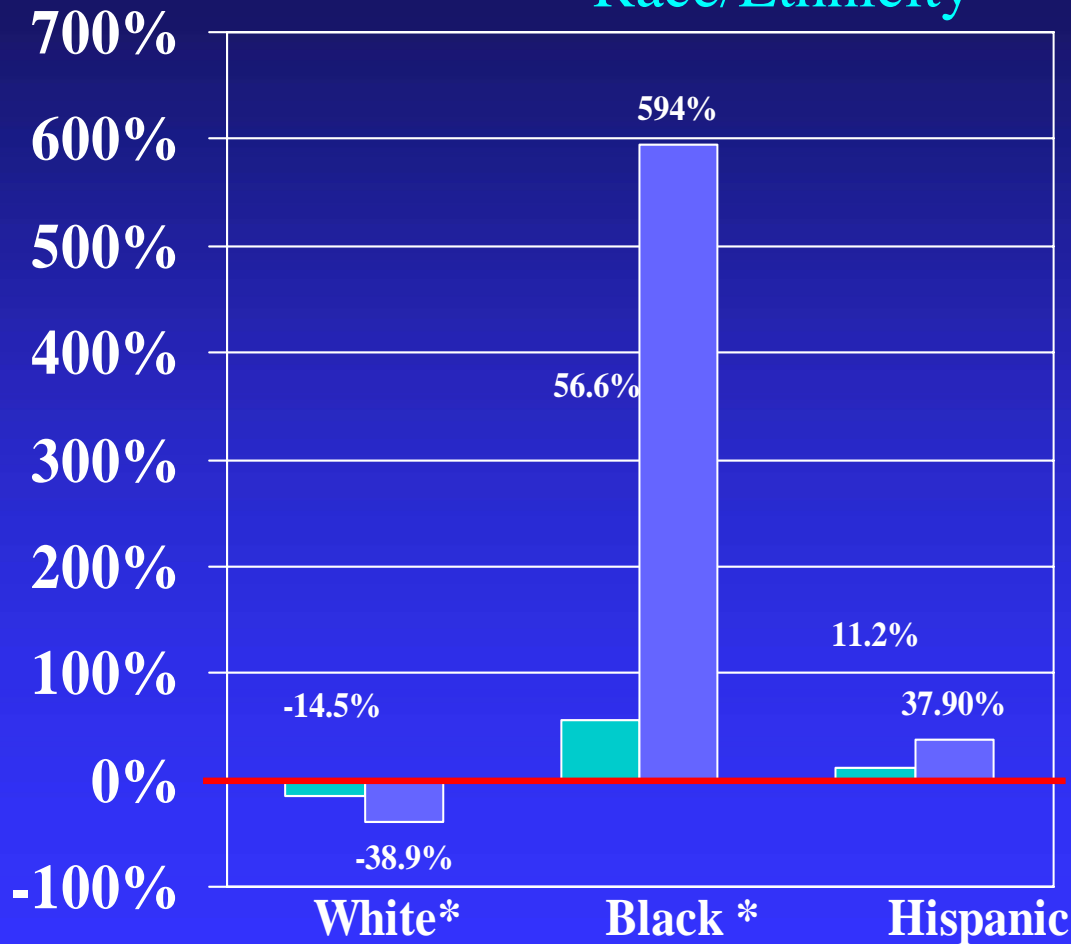
	<b>Reported HIV Prevalence Reported from Prisons (% of Total County Prevalence)</b>	<b>Current Estimated State/Federal Prison Population</b>	<b>Reported Prison HIV/AIDS Prevalence Rate per 100,000</b>	<b>Reported 1999-2003 Prison HIV/AIDS Emergence (% of Total)</b>
<b>Cochise Co.</b>	5/117 (4.3%)	2,178	230	1/32 (3.1%)
<b>Graham Co</b>	13/29 (44.8%)	2,596	501	10/17 (58.8%)
<b>Maricopa Co.</b>	83/7010 (1.2%)	9,824	845	84/2509 (3.3%)
<b>Navajo Co.</b>	3/45 (6.7%)	1,865	161	2/29 (6.9%)
<b>Pima Co.</b>	18/1903 (0.9%)	5,502	327	18/576 (3.1%)
<b>Pinal Co.</b>	99/331 (29.9%)	10,613	933	86/145 (59.3%)
<b>Total</b>	<b>223/9435 (2.4%)<sup>1</sup></b>	<b>32,578</b>	<b>678</b>	<b>201/3308 (6.1%)</b>

<sup>1</sup> Includes 2 cases from other counties. Source: Arizona HARS 5/1/05; ADOC

# Arizona HIV/AIDS in Prison by Race/Ethnicity



# Expected Value Divergence: Difference Between Prison Population and Prison HIV/AIDS Prevalence by Race/Ethnicity

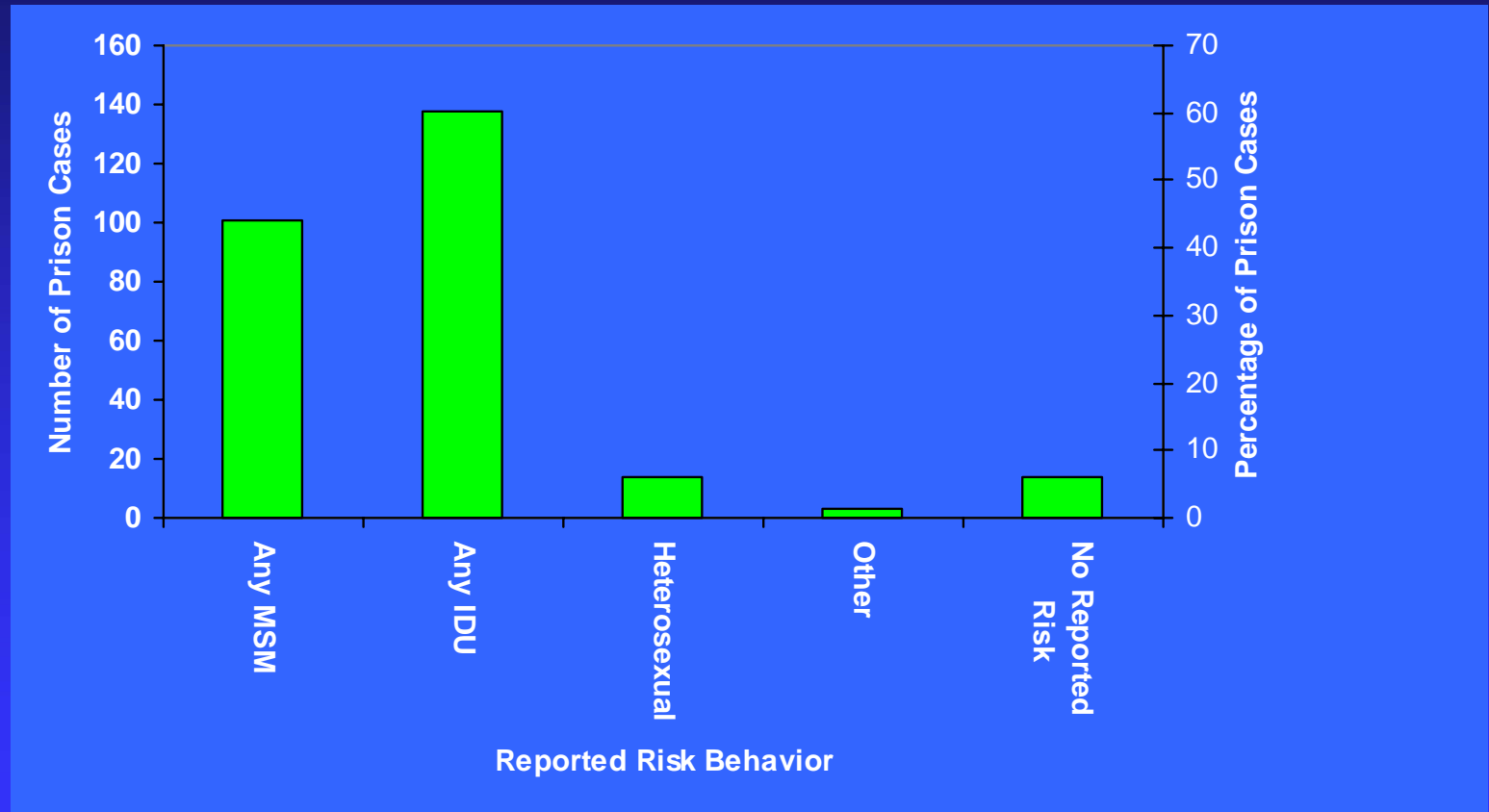


■ Disproportion with Prison Population  
 ■ Disproportion with State Population

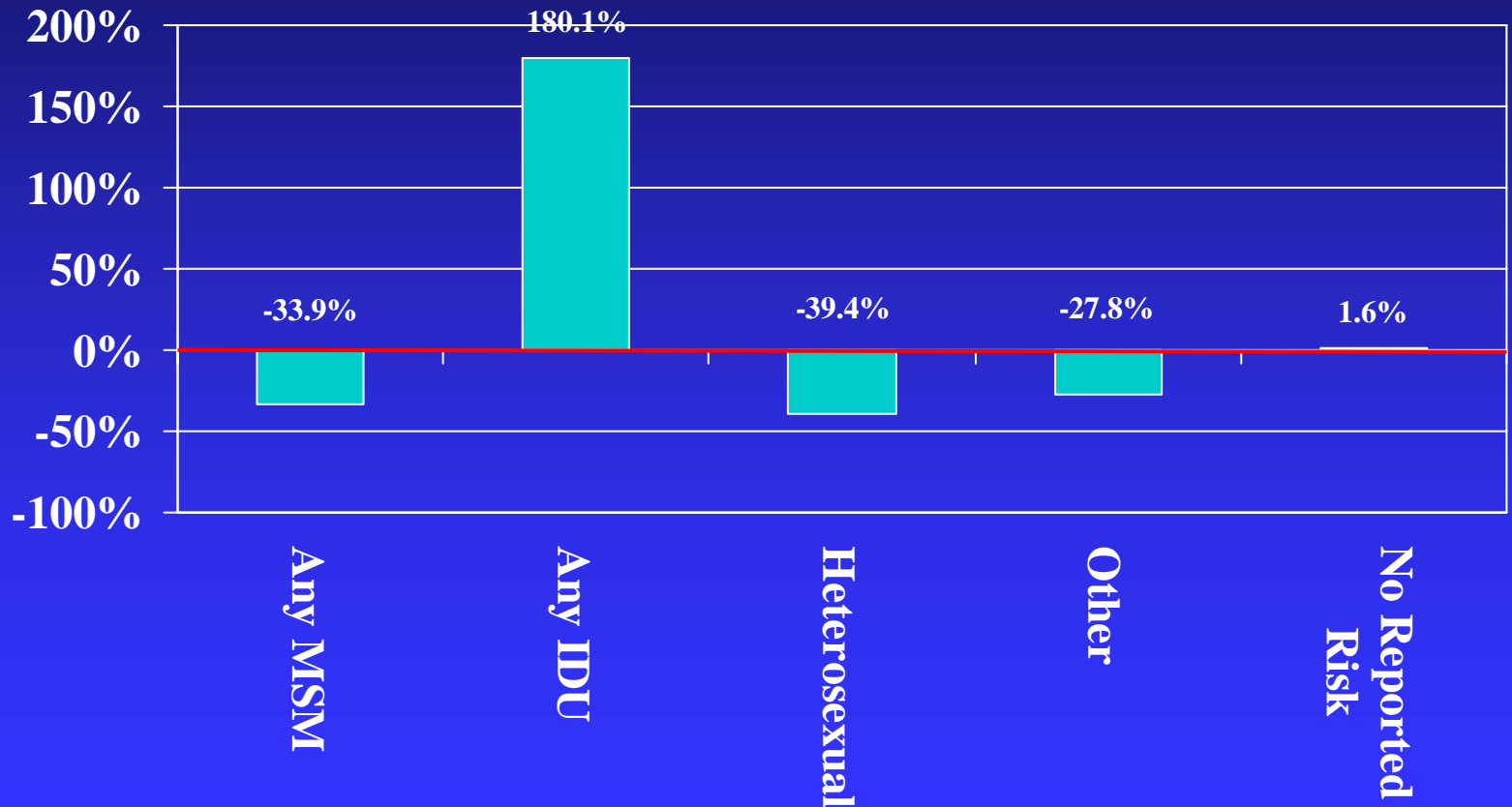
\*Excludes Hispanics

8 cases among Asians or Native Peoples are not presented here

# Reported Risk Behaviors Among Prisoners Reported with HIV/AIDS



# Expected Value Divergence: Difference Between Prison Population and Prison HIV/AIDS Prevalence by Reported Risk



# ARE THERE ANY DATA THAT CORROBORATE THE ARIZONA PRISON DATA?

- Arizona surveillance data mirror these patterns
- Arizona prison hepatitis C surveillance data
  - All incoming prisoners tested for hepatitis C for 8 consecutive quarters in 2003-2005
  - 2,546 cases of hepatitis C infection found per year

- (2,546 Arizona prison hepatitis C admissions per year) X
- (3.1% Arizona HIV prevalence among hepatitis C cases) =
- 78.9 (Expected number of reported prevalent HIV cases per year in Arizona prisons among hepC prisoners) X
- 2.75 years (average term of service in Arizona prisons) =
- 217 (expected current reported HIV prevalence among hepC infected prisoners in Arizona)
  
- (14,800 Arizona prison non-hepatitis C admissions per year) X
- (0.33% Arizona race/gender adjusted HIV prevalence among prison population) =
- 48.8 (Expected number of reported prevalent HIV cases per year in Arizona prisons among non-hepC prisoners) X
- 2.75 years (average term of service in Arizona prisons) =
- 134 (expected current reported HIV prevalence among non-hepC prisoners in Arizona)
  
- Total expected Prevalence =  $217+134 = 351$  X
- 1.333 (adjustment for unreported prevalence) = 468
- Actual reported Prevalence = 223

# 2004 Arizona HIV Testing Data:

- 4,230 tests for HIV among incarcerated persons conducted by CTS
- 56 positives found
- Positive proportion = 1.3%
- Potential problems with duplicate testing and selection bias with these data

# CONCLUSION: Arizona HIV/AIDS Reports from Prisons Significantly Underestimate Actual HIV Prevalence

- Reported HIV/AIDS among prisoners is still 4 times the rate in the Arizona general population
- Actual prevalence is probably 8 times the rate in the Arizona general population

**WHY DO PRISONS EXPERIENCE HIGHER  
HIV/AIDS RATES?**

# Population Descriptors

- Many Descriptors for Prison and Risk for HIV/AIDS coincide:
  - ◆ Gender
    - ◆ U.S. Prisons- 91% Male
    - ◆ AZ HIV/AIDS- 85% Male
  - ◆ Drug Use
    - ◆ U.S. Prisons- nearly 25% convicted on drug offenses
    - ◆ Studies estimate 70-80% of U.S. inmates have a drug use history
    - ◆ AZ HIV/AIDS population estimates 69-83% have a history of illicit drug use
    - ◆ AZ HIV/AIDS population estimates more than 38% are current, regular illicit drug users

# Population Descriptors

- Many Descriptors for Prison and HIV/AIDS coincide
  - ◆ Race/Ethnicity
    - ◆ U.S. Prisons- 60% population are minorities
    - ◆ U.S. HIV/AIDS – 61% population are minorities
  - ◆ Black non-Hispanics are 13% of the US population and:
    - ◆ 40% of the U.S. prison population – a 3 fold disparity
    - ◆ 50% of current HIV/AIDS prevalence – a 4 fold disparity

# Environment

- Many Prison Environmental Factors Are Conducive to Communicable Disease Transmission:
  - ◆ Documented History of Communicable Diseases Among Prison Populations
    - ◆ Tuberculosis
    - ◆ Hepatitis C
    - ◆ Sexually Transmitted Diseases
    - ◆ Meningitis

# Environment

- ◆ Overcrowding: 12 of 14 state prisons or state contracted prisons maintained average occupancy at or above 100% in 2003 (9 of 14 were at or above 110%)
- ◆ Overcrowding: Maricopa County Jails in 2004 averaged 176% occupancy

# Environment

- Some Prison Environmental Factors Are Conducive to HIV Transmission:
  - ◆ Illicit activity in prison
    - ◆ 28% injection drug use in prison (one study)
    - ◆ 10-22% of prisoners report being raped or sexually assaulted in prison
  - ◆ Tattooing

# CONCLUSION:

- Prisons experience elevated rates of HIV prevalence because many demographic and behavioral factors coinciding with elevated likelihood of HIV prevail among prison populations

# Important Questions That Need to be Answered:

- What is the real prevalence and incidence of HIV in Arizona prisons and Jails?
  - ◆ How effective is current policy at identifying the appropriate people to test for HIV/AIDS in prisons?
  - ◆ How can we detect and test those with HIV/AIDS whom we are currently missing?
- How can we resolve concerns about expense of treatment, adequate staffing, and liability?

# Important Questions That Need to be Answered:

- How effective are delivery of care, and continuity of care during and after incarceration?
  - ◆ Is current policy, having the effect that prisons act as an incubator for HIV/AIDS, ultimately posing a health threat to the broader community by release of persons with undetected, untreated HIV?
  - ◆ Is the State doing an adequate job at making contact with those released who have HIV/AIDS, facilitating their needed care, providing counseling and prevention education?