

# HEALTH DISPARITIES AND PLANNING IN VIRGINIA: Poverty, HIV/AIDS, and Sexually Transmitted Diseases (STDs)



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# Background- Healthy People 2010

- Increase the proportion of all major national, State, and local health data systems that use geocoding to promote nationwide use of geographic information systems (GIS) at all levels.
- A major goal of Healthy People 2010 is to eliminate health disparities. These disparities exist at all State and local levels but are not well delineated because of differences in public health systems. A better trained public health workforce, improved data and information systems, and more effective public health organizations will strengthen the public health infrastructure at all levels and help identify where disparities exist. Then targeted interventions and programs to eliminate the disparities can be developed.

# OVERVIEW

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Lack of consistent socioeconomic data collected through routine HIV/AIDS and STD surveillance



Most states only provide a description of poverty when analyzing surveillance data for HIV prevention planning

# Terminology

Geocoding

Geocoding is the process of assigning latitude and longitude to a point, based on street addresses, city, state and zip code.

Stratify

To separate a sample into smaller subsamples such as age groups or race

Age standardize

A set of techniques used to remove as much as possible the differences in age when comparing two or more populations

Incidence Rate Ratio

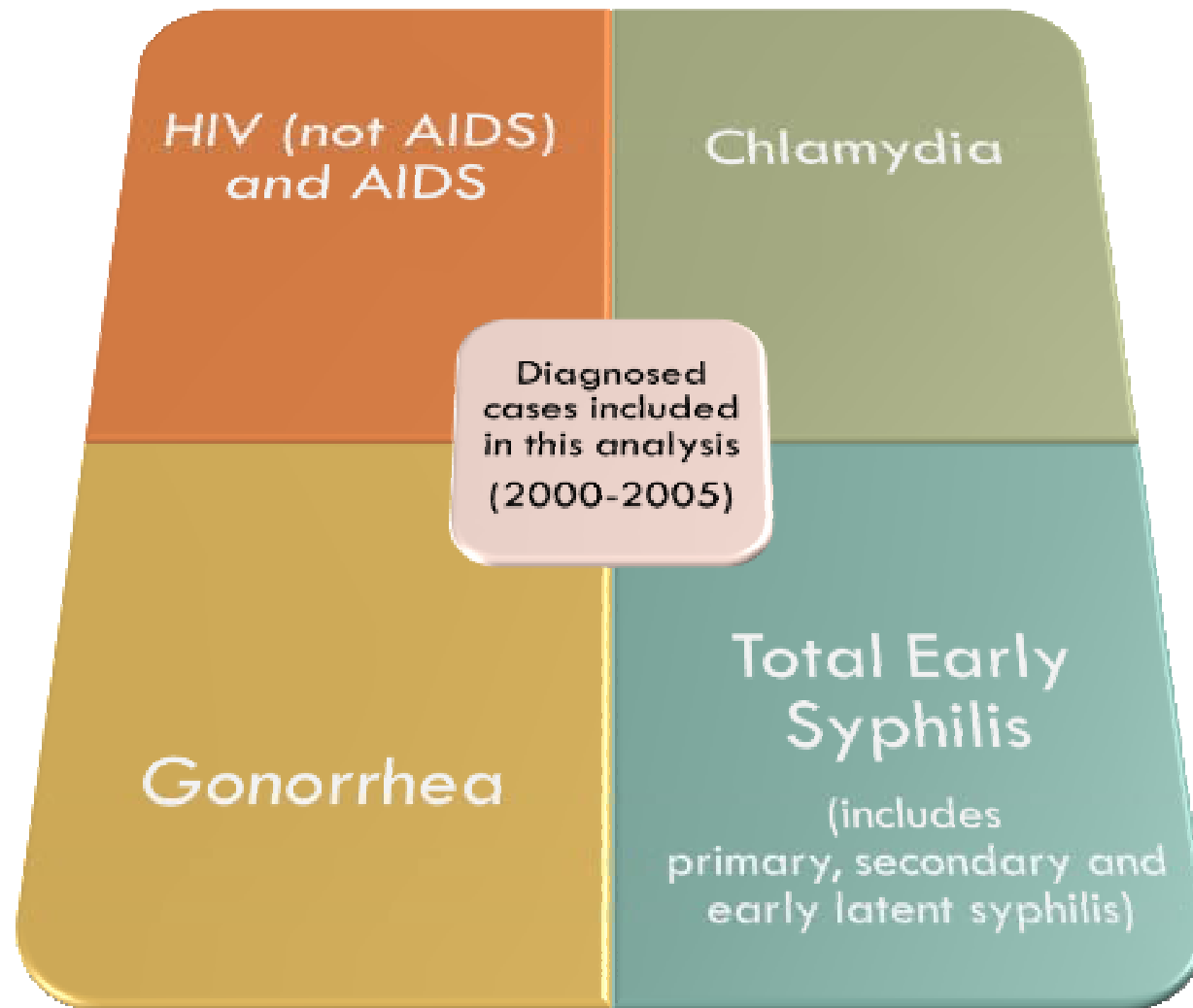
Gives a relative measure of effect comparing each level of poverty to the reference group. This term is sometimes referred to as a relative risk

Census Tract

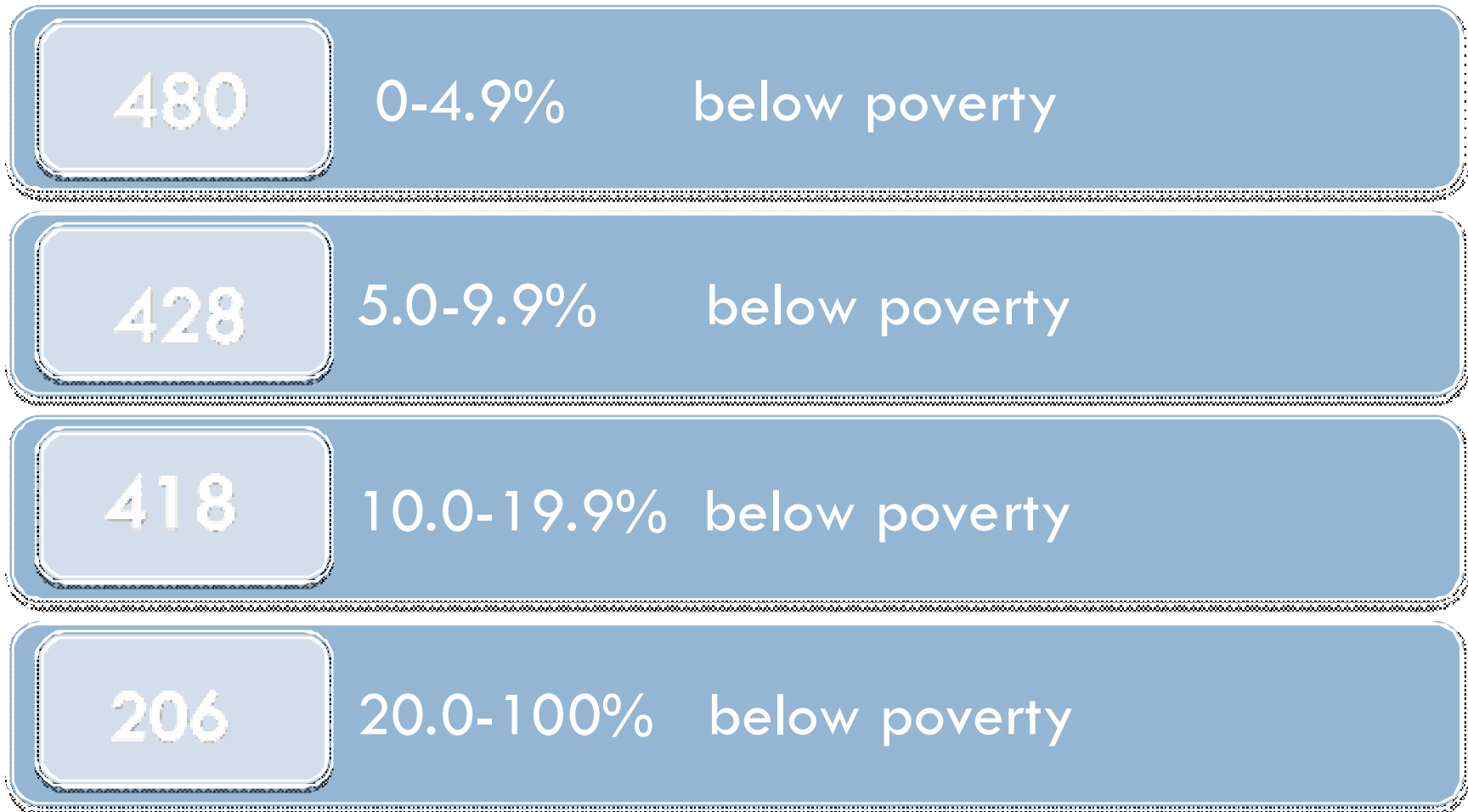
a standard area used by the U.S. Bureau of the Census for purposes of counting the population (each contains about 4,000 people)

Incidence Rate

The rate at which new event occur in a population.

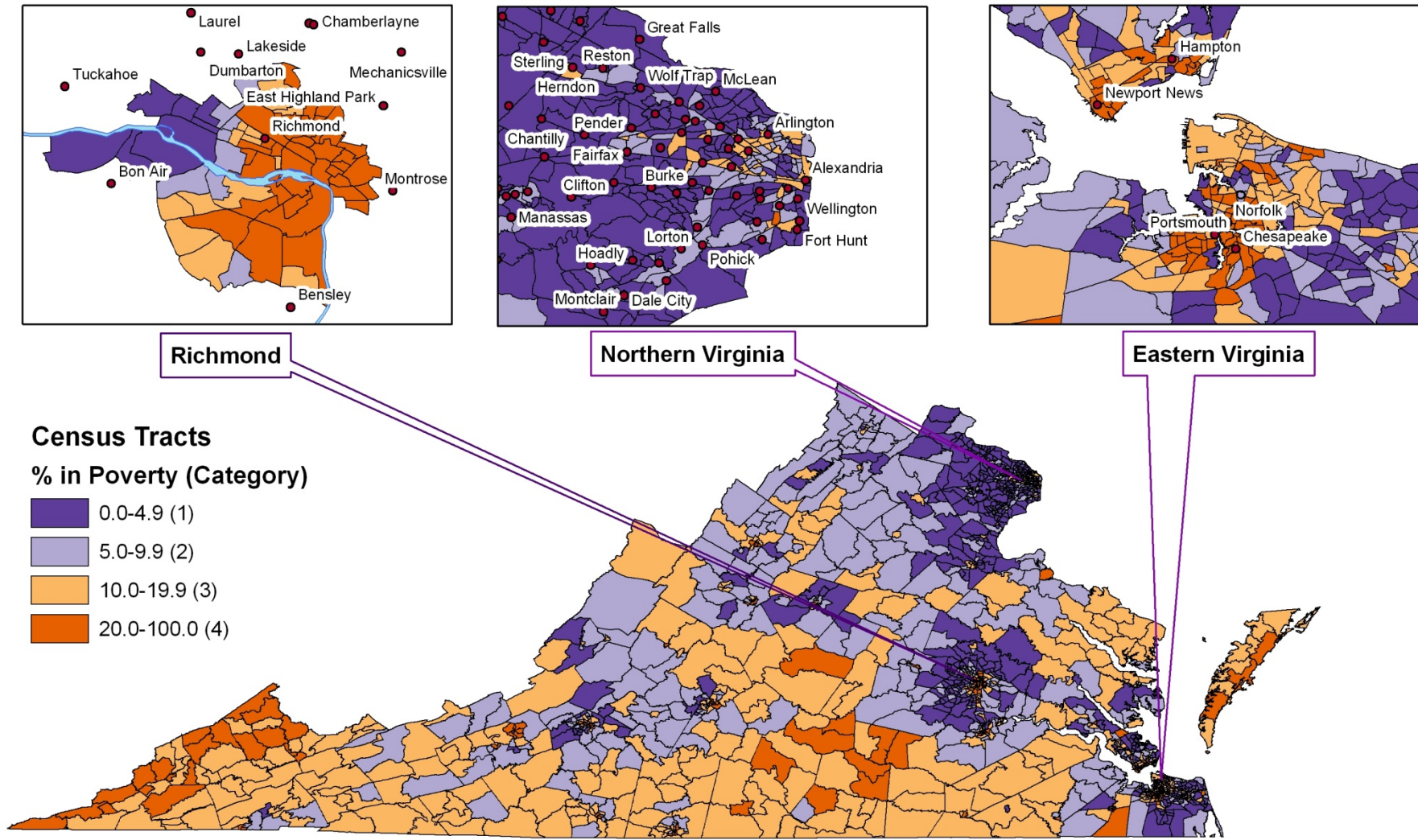


# NUMBER OF CENSUS TRACTS BY POVERTY LEVEL\*



\* Percent below poverty based on US Census and conforms to federal definitions for poverty

# Percent of the Population Living below the Poverty Line by Census Tract\*, Virginia 2000

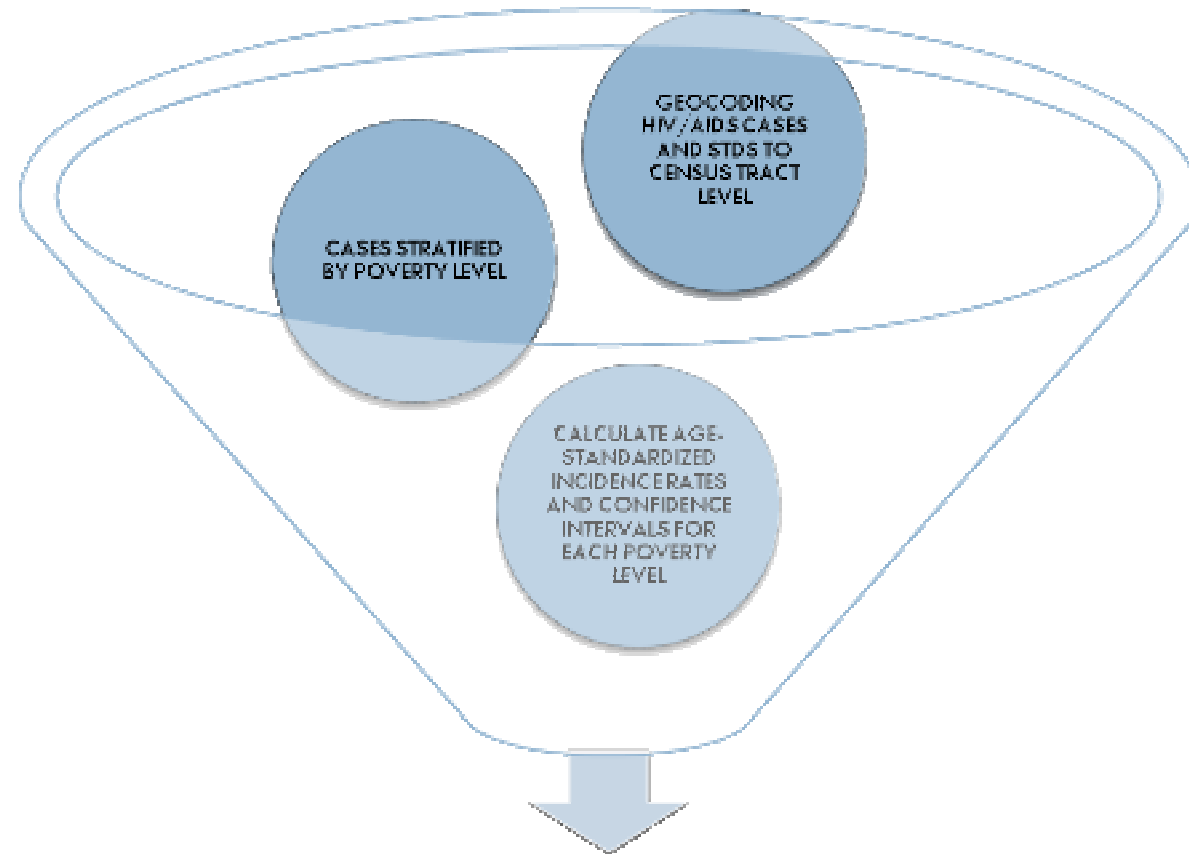


Prepared by Chris Delcher, Division of Disease Prevention, Virginia Department of Health  
 Poverty data obtained from the Public Health Disparities Geocoding Project  
 (<http://www.hsph.harvard.edu/thegeocodingproject/index.htm>)  
 Color scheme by ColorBrewer  
 ([http://www.personal.psu.edu/cab38/ColorBrewer/ColorBrewer\\_intro.html](http://www.personal.psu.edu/cab38/ColorBrewer/ColorBrewer_intro.html))

\* The average census tract contains approximately 4,000 individuals

March 2007

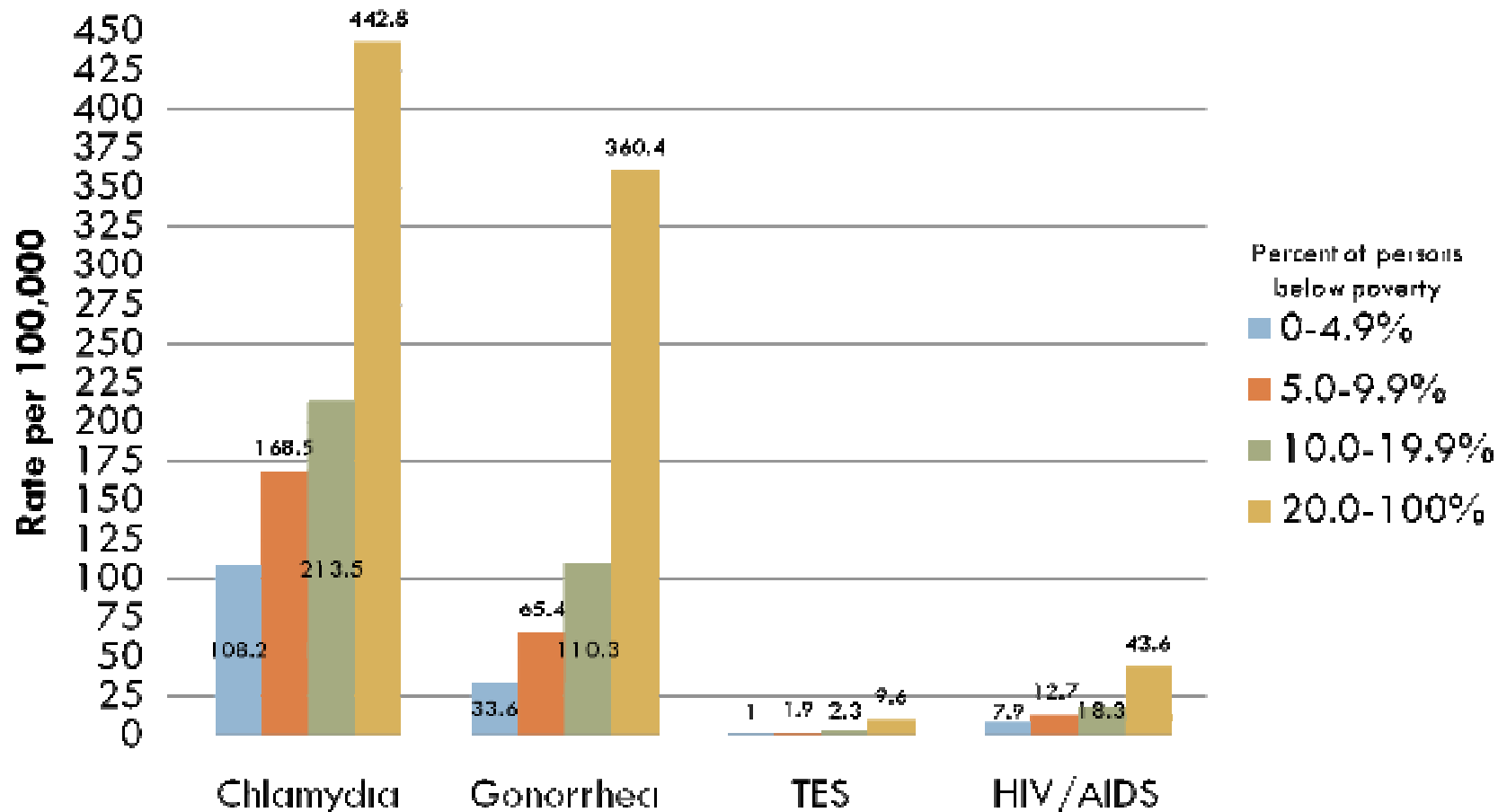
# METHODS *developed by Harvard Geocoding Project*



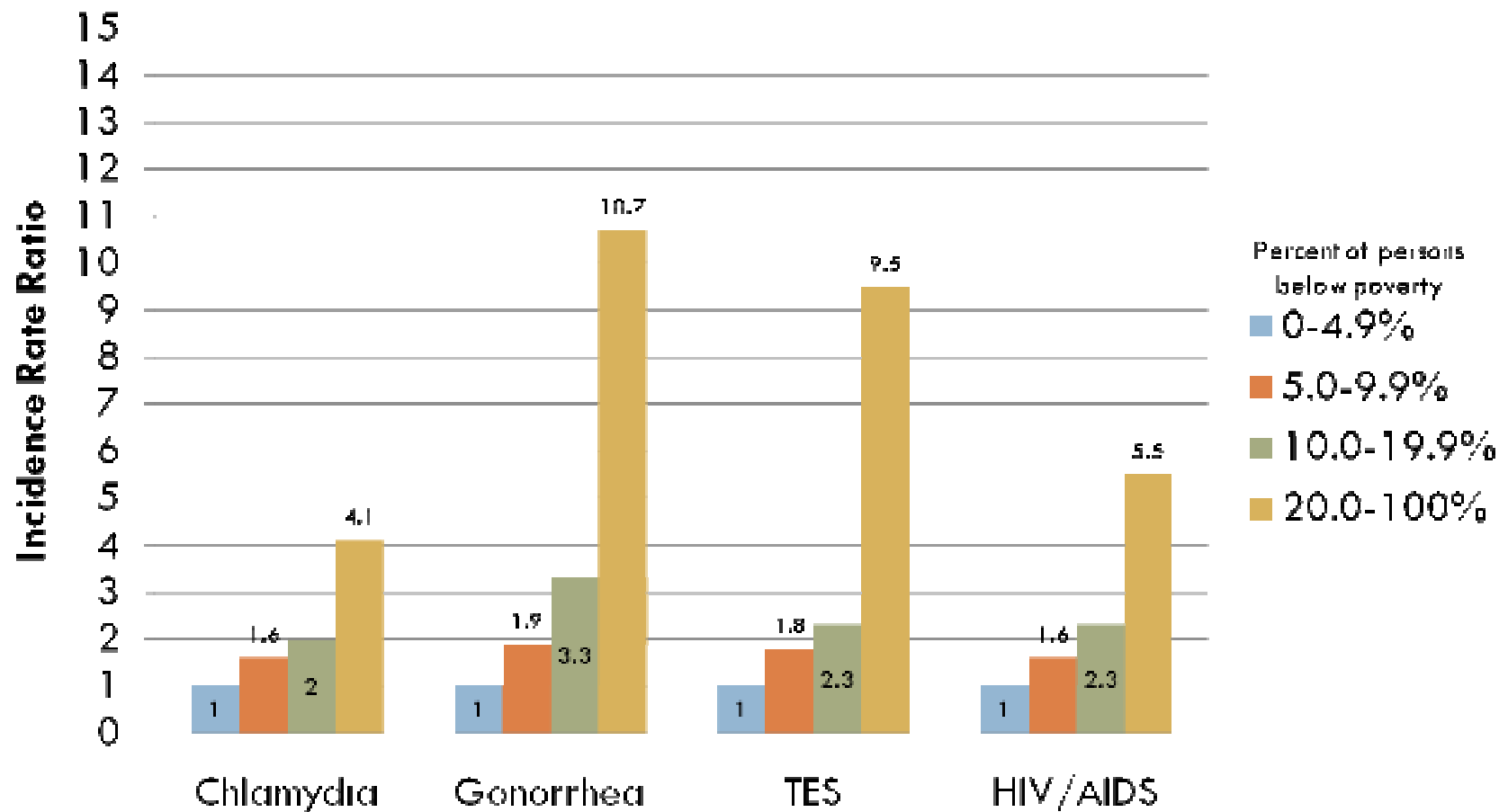
Association between poverty and reported HIV/AIDS, Chlamydia, Gonorrhea and Total Early Syphilis Cases are quantified



# Average annual age-standardized incidence rates for HIV/AIDS and STDs in Virginia (2000-2005), by poverty level



# Age Standardized Incidence Rate Ratio for HIV/AIDS and STDs in Virginia (2000-2005), by poverty level



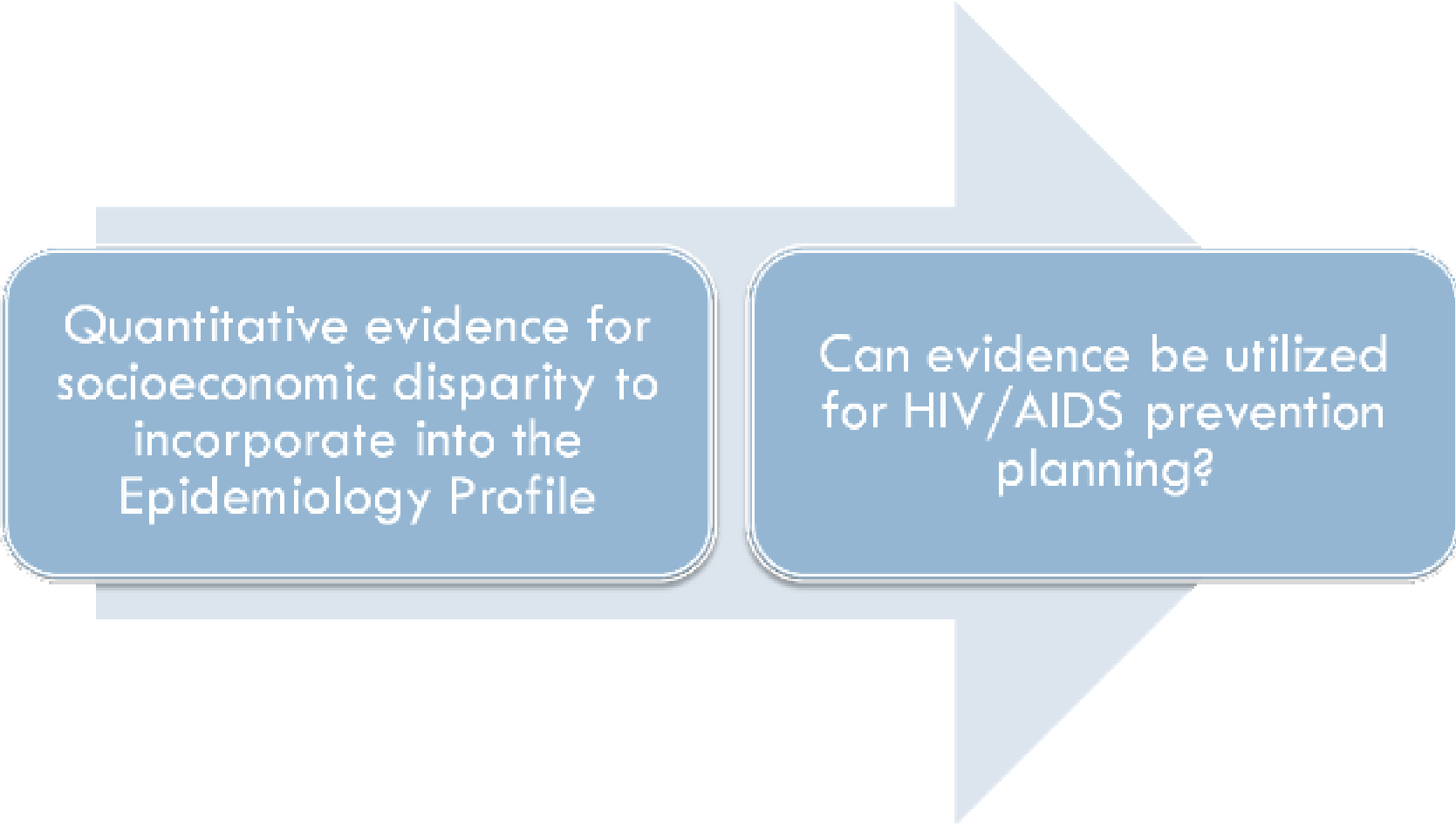
Target characteristics (based on priority populations) extracted from surveillance reports of diagnosed cases of HIV (not AIDS) and AIDS by poverty levels, 2000-2005.

|               | RISK            |              |                            |            |                       |              | DEMOGRAPHICS      |              |             |            |            |           |                         |
|---------------|-----------------|--------------|----------------------------|------------|-----------------------|--------------|-------------------|--------------|-------------|------------|------------|-----------|-------------------------|
|               | Diagnosed Cases |              | Men who have sex with men* |            | Injection Drug Users* |              | Heterosexual Risk |              | Black       |            | Hispanic   |           | Asian/Pacific Islanders |
| Poverty Level | N               | n            | %                          | n          | %                     | n            | %                 | n            | %           | n          | %          | n         | %                       |
| 0-4.9%        | 1,235           | 516          | 41.8                       | 91         | 7.4                   | 294          | 23.8              | 583          | 47.2        | 107        | 8.7        | 30        | 2.4                     |
| 5-9.9%        | 1,673           | 634          | 37.9                       | 132        | 7.9                   | 396          | 23.7              | 910          | 54.4        | 173        | 10.3       | 24        | 1.4                     |
| 10-19.9%      | 2,158           | 722          | 33.5                       | 210        | 9.7                   | 538          | 24.9              | 1,432        | 66.4        | 171        | 7.9        | 19        | 0.9                     |
| 20-100%       | 1,765           | 475          | 26.9                       | 206        | 11.7                  | 446          | 25.3              | 1,521        | 86.2        | 42         | 2.4        | 2         | 0.1                     |
| <b>Total</b>  | <b>6,831</b>    | <b>2,347</b> | <b>34.4</b>                | <b>639</b> | <b>9.4</b>            | <b>1,674</b> | <b>24.5</b>       | <b>4,446</b> | <b>65.1</b> | <b>493</b> | <b>7.2</b> | <b>75</b> | <b>1.1</b>              |

\*p<.05= significantly different between the least/most impoverished tracts

# Next Steps

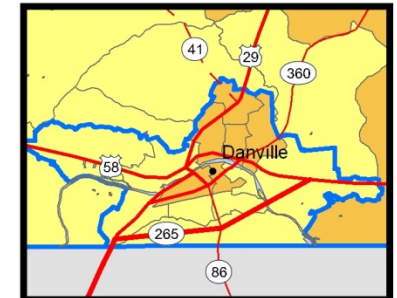
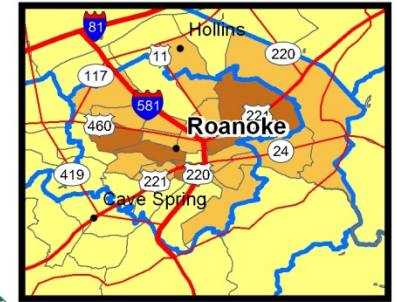
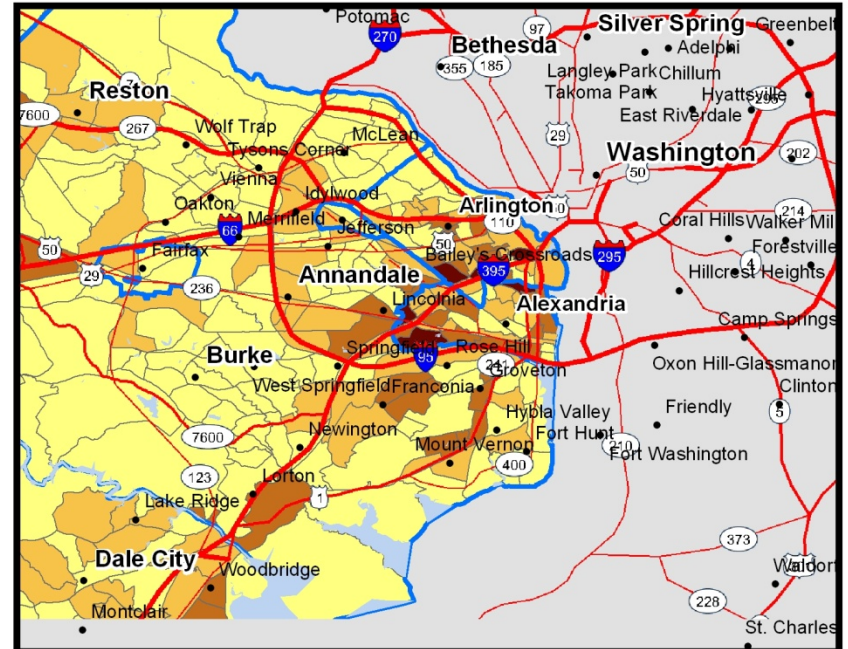
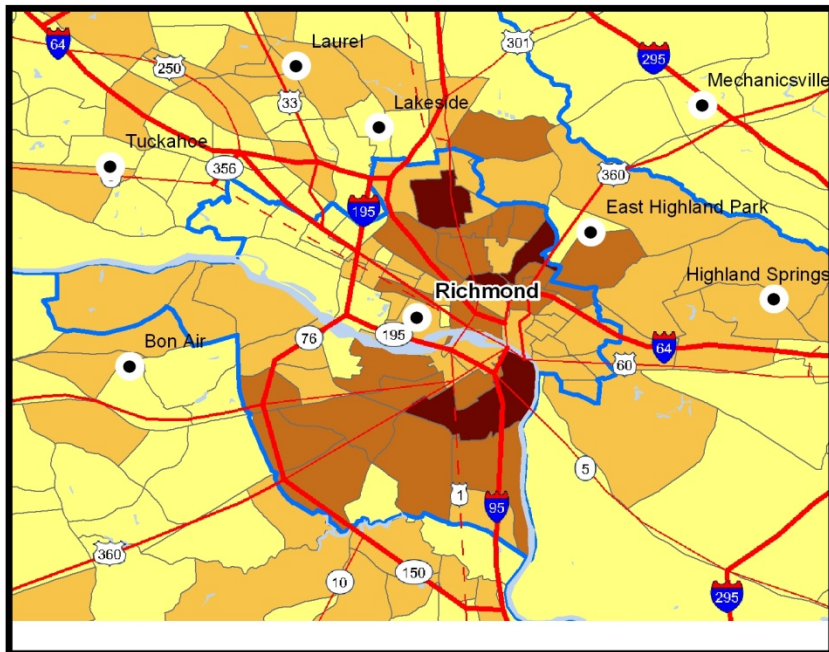
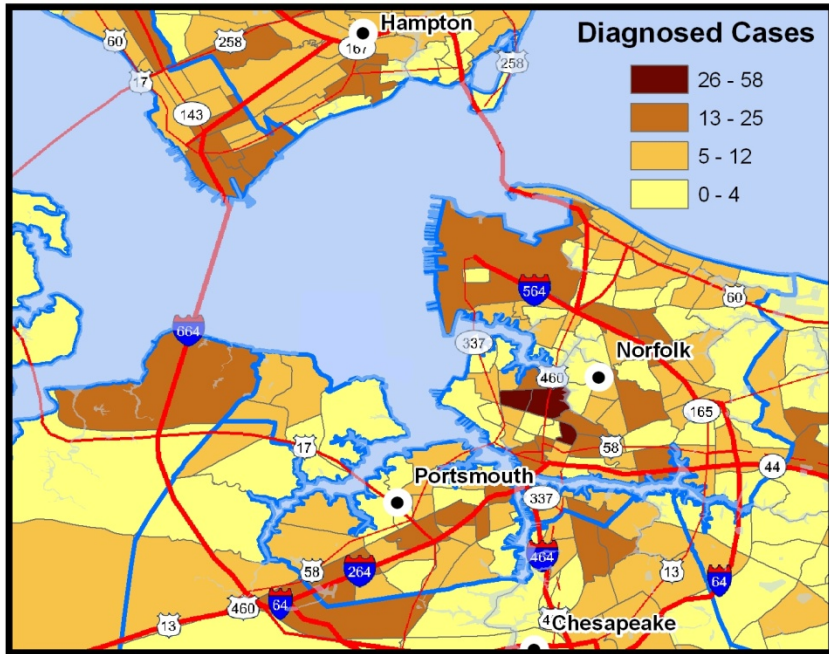
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Quantitative evidence for socioeconomic disparity to incorporate into the Epidemiology Profile

Can evidence be utilized for HIV/AIDS prevention planning?





HIV/AIDS Cases (2000-2005) by CENSUS TRACT



Virginia

# QUESTIONS?

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