

Homicide and Assault Injuries As a Public Health Problem in New York State (NYS) 2008-2010

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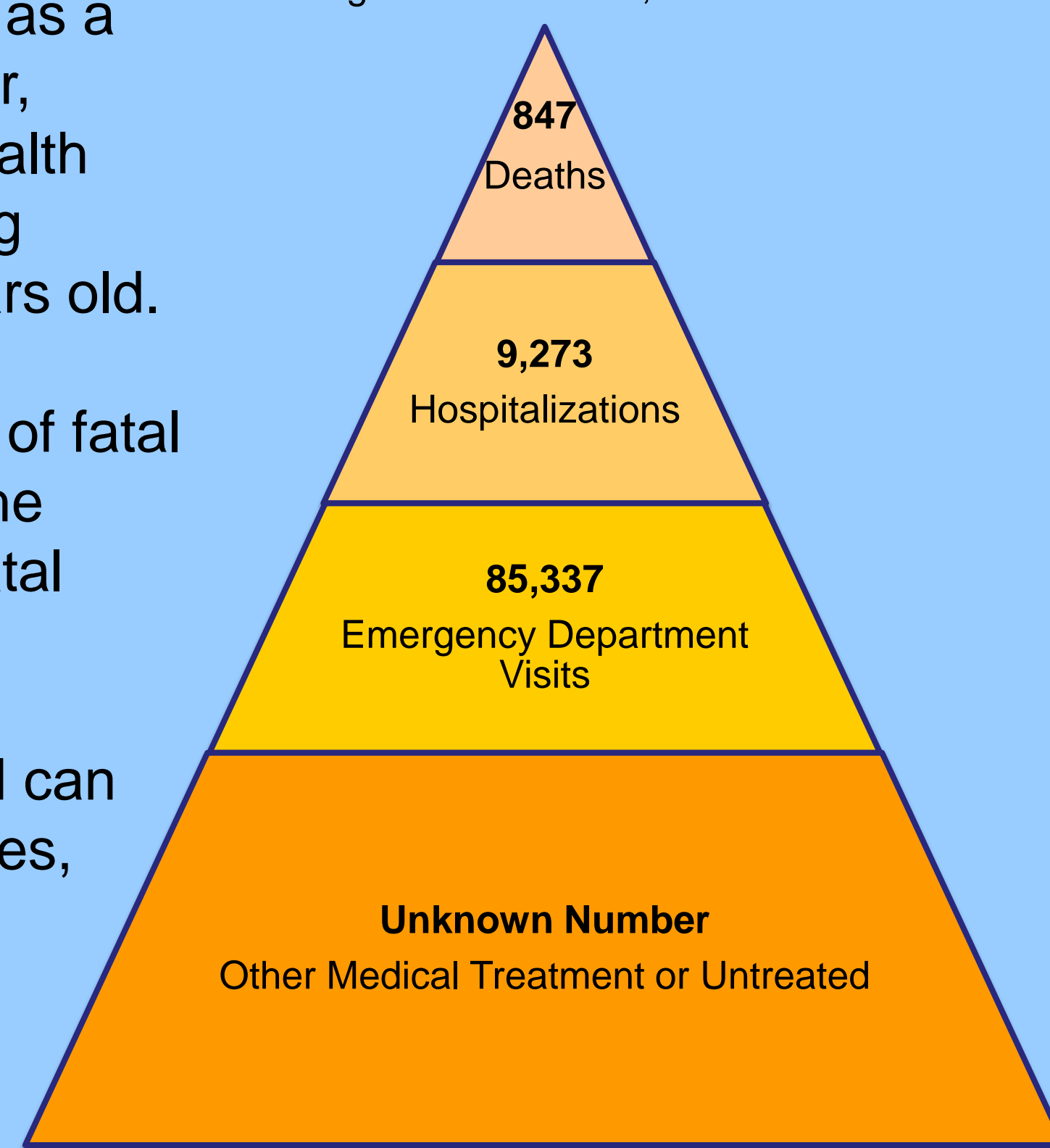
1 Background

Homicide and assault are commonly thought of as a problem for the criminal justice system; however, homicide and assault are a significant public health problem. In fact, homicide is the second leading cause of death for New Yorkers ages 15-34 years old.

Nationally, homicide is the fourth-leading cause of fatal occupational injuries, and nonfatal violence in the workplace accounted for about 15% of all nonfatal violent crime against persons age 16 or older.

Assaults affect the quality of the victim's life and can result in long-term diminished health, job changes, loss of income and depression.

Mean Annual Frequency of Homicide and Assault Injury Among NYS Residents, 2008-2010



2 Data Sources

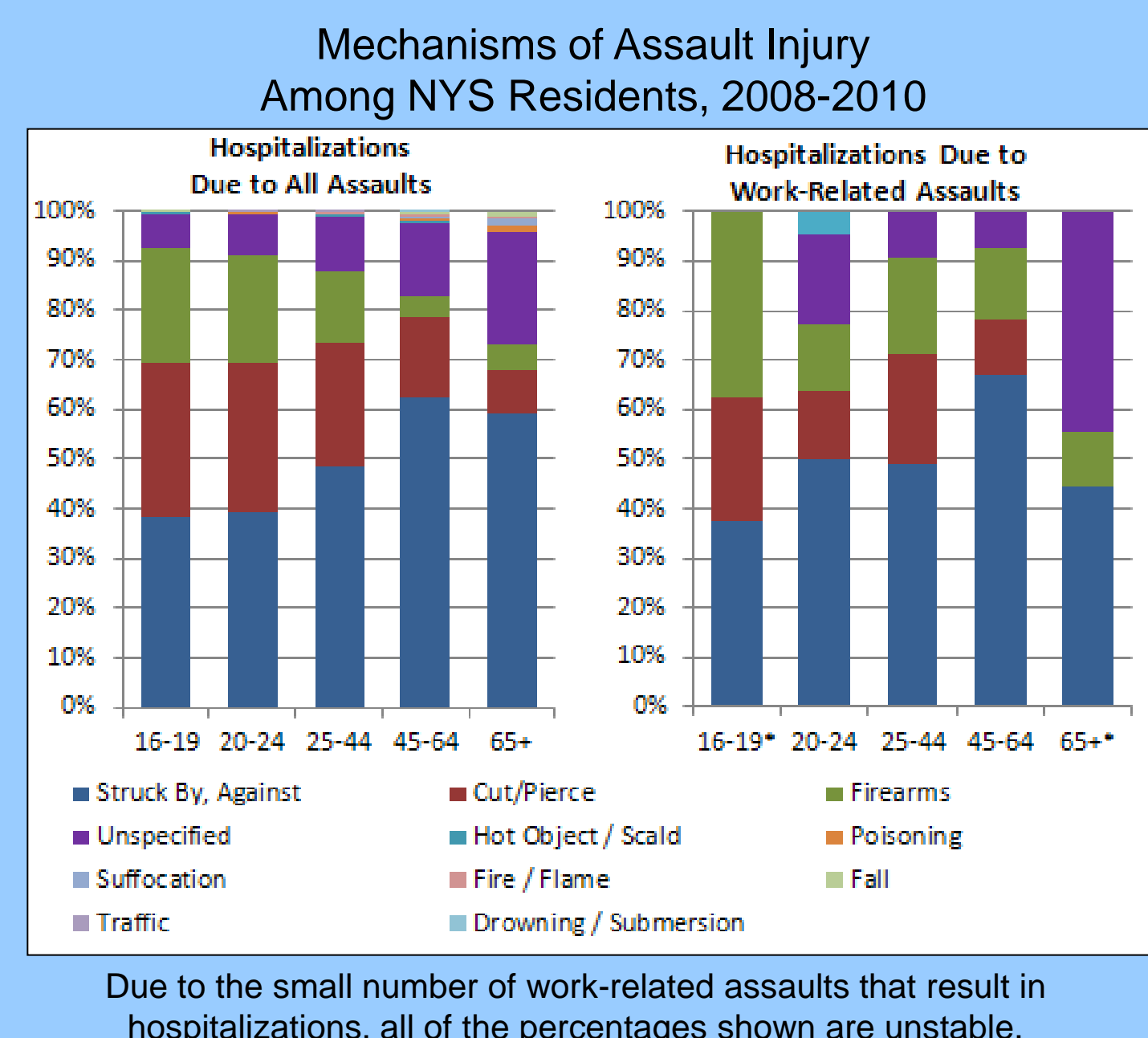
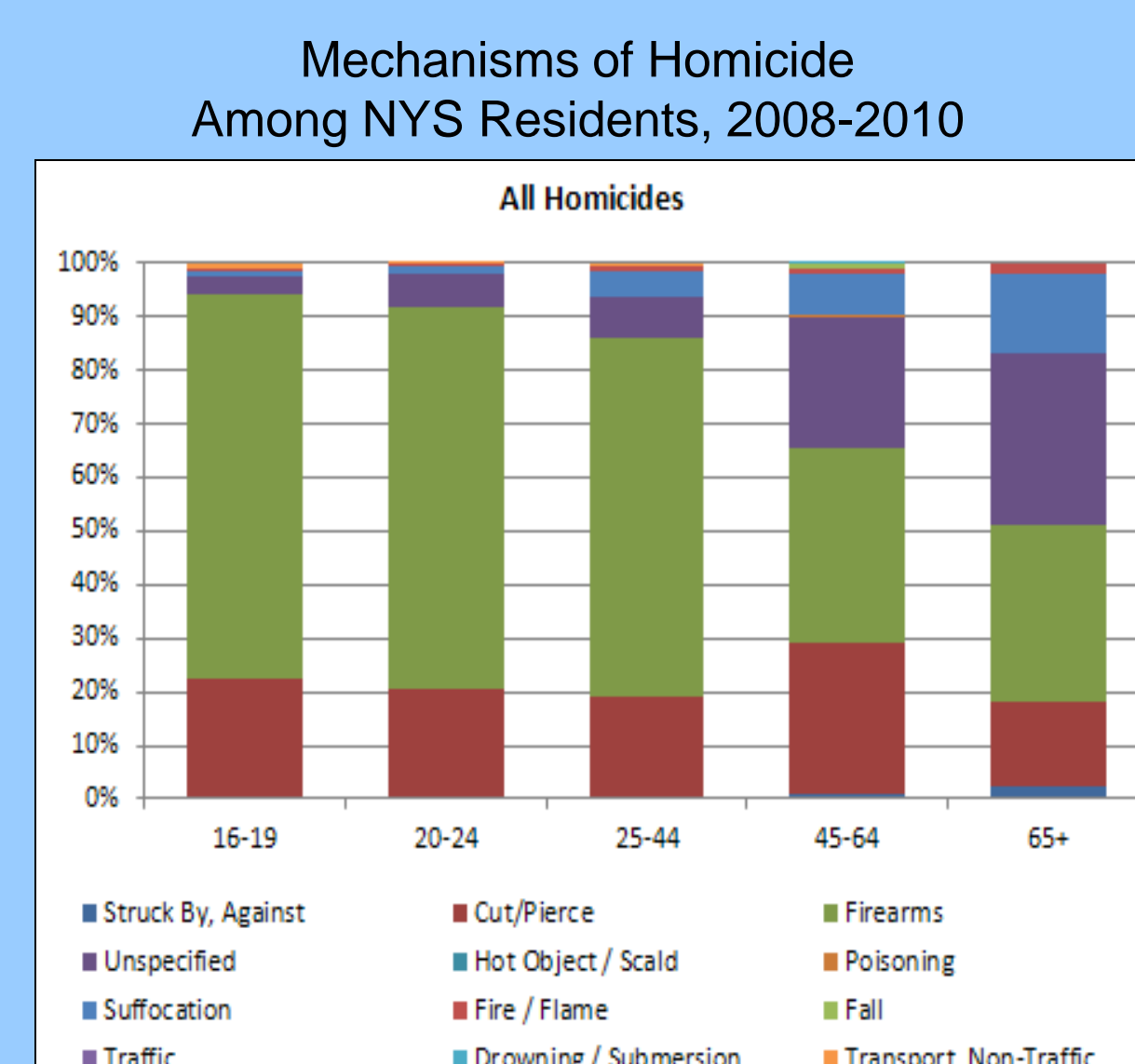
Injury surveillance data included the NYS Vital Statistics and Multiple Causes of Death data, and the NYS inpatient and outpatient discharge data. The death data includes ICD-10 external cause of mortality codes X85-Y09, Y87.1, and U01-U02. The hospital and ED data includes E-codes E960-E969.

Surveillance of occupational assaults and homicides was conducted with Survey of Occupational Injuries and Illnesses (SOII) and Census of Fatal Occupational Injuries (CFOI) data from the Bureau of Labor Statistics.

3 Results

Mechanism of Injury

The leading mechanisms for assault vary by the victim's age group and by the severity of injury sustained.



Disparities

Not all New Yorkers are at equal risk to be victims of homicide or assault. Disparities exist among different age groups, genders, races, occupations, and socioeconomic and employment statuses.

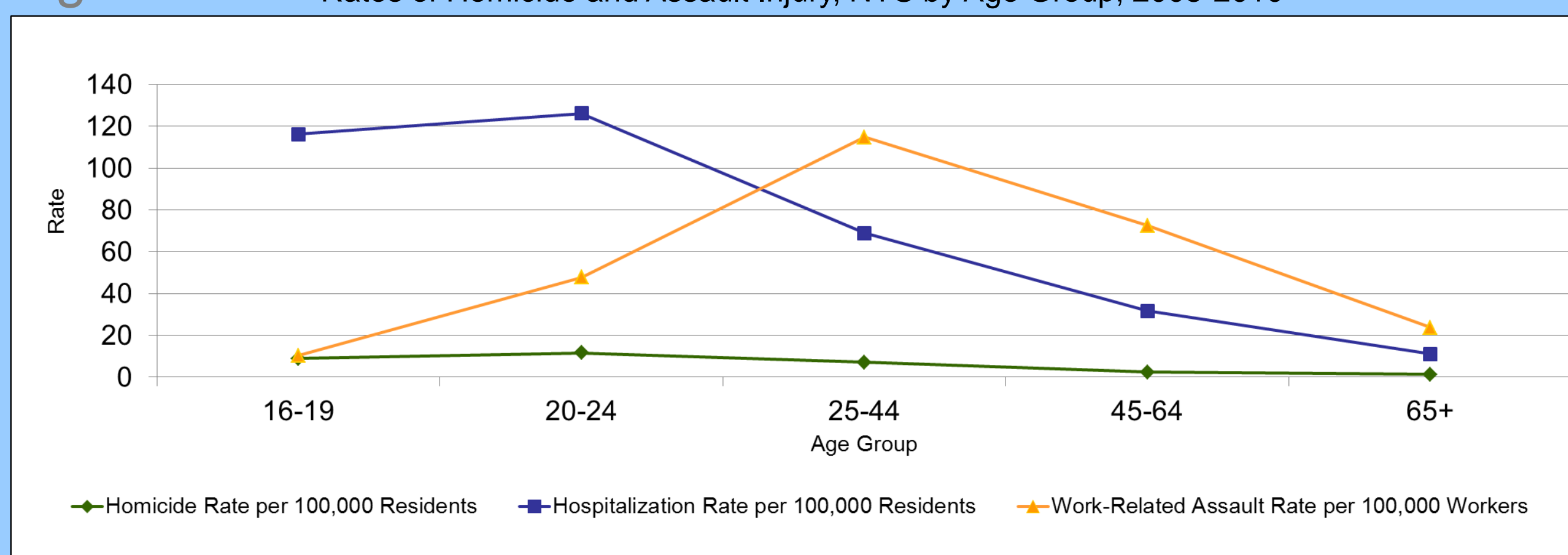
Gender

Percent of Homicide and Assault Victims that are Male, NYS, 2008-2010

	Males	
	All Assault	Work-Related Assault
Homicide	82%	85%
Assault-Related Injuries	84% (Hospitalizations) 63% (ED Visits)	49%

Age

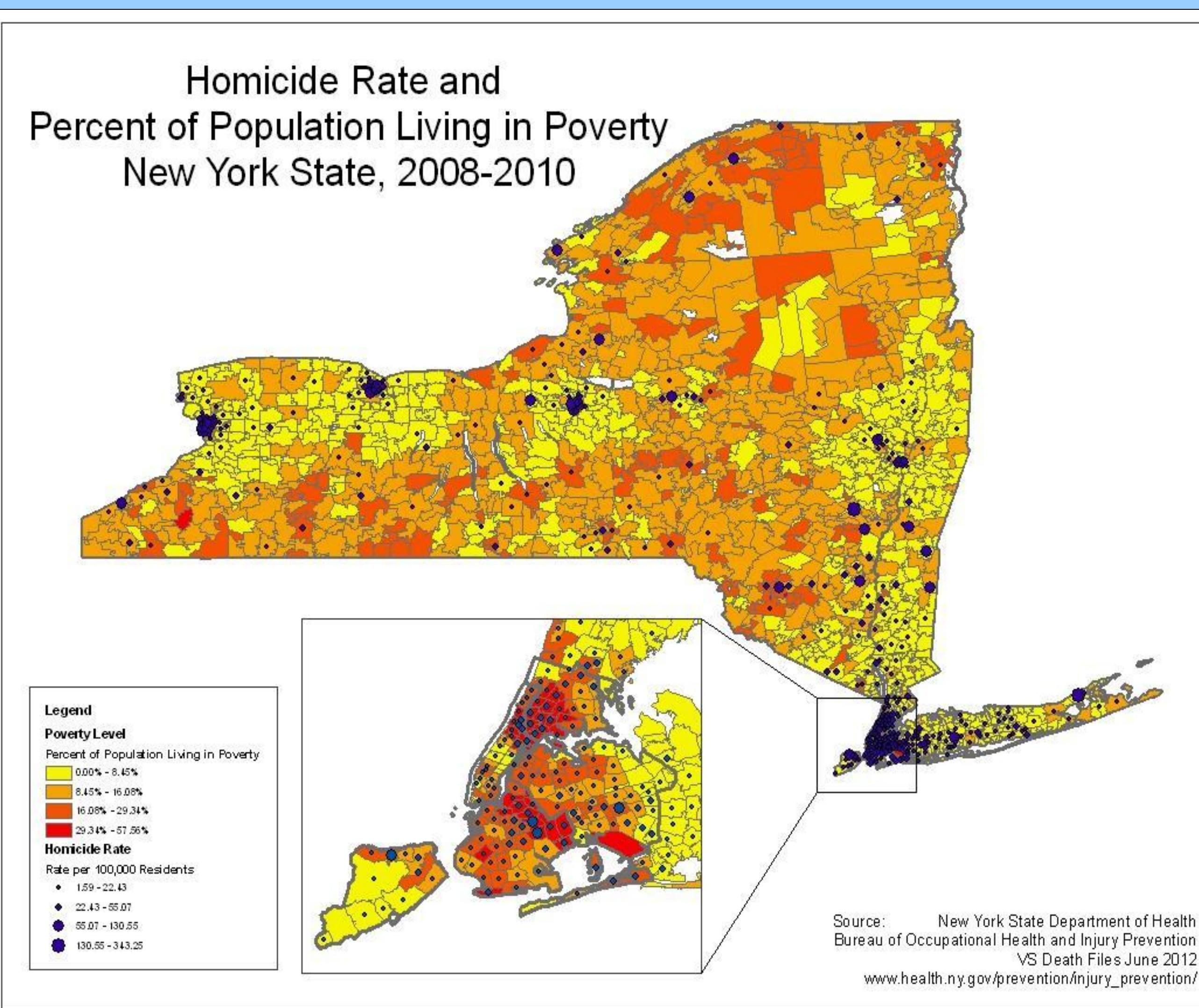
Rates of Homicide and Assault Injury, NYS by Age Group, 2008-2010



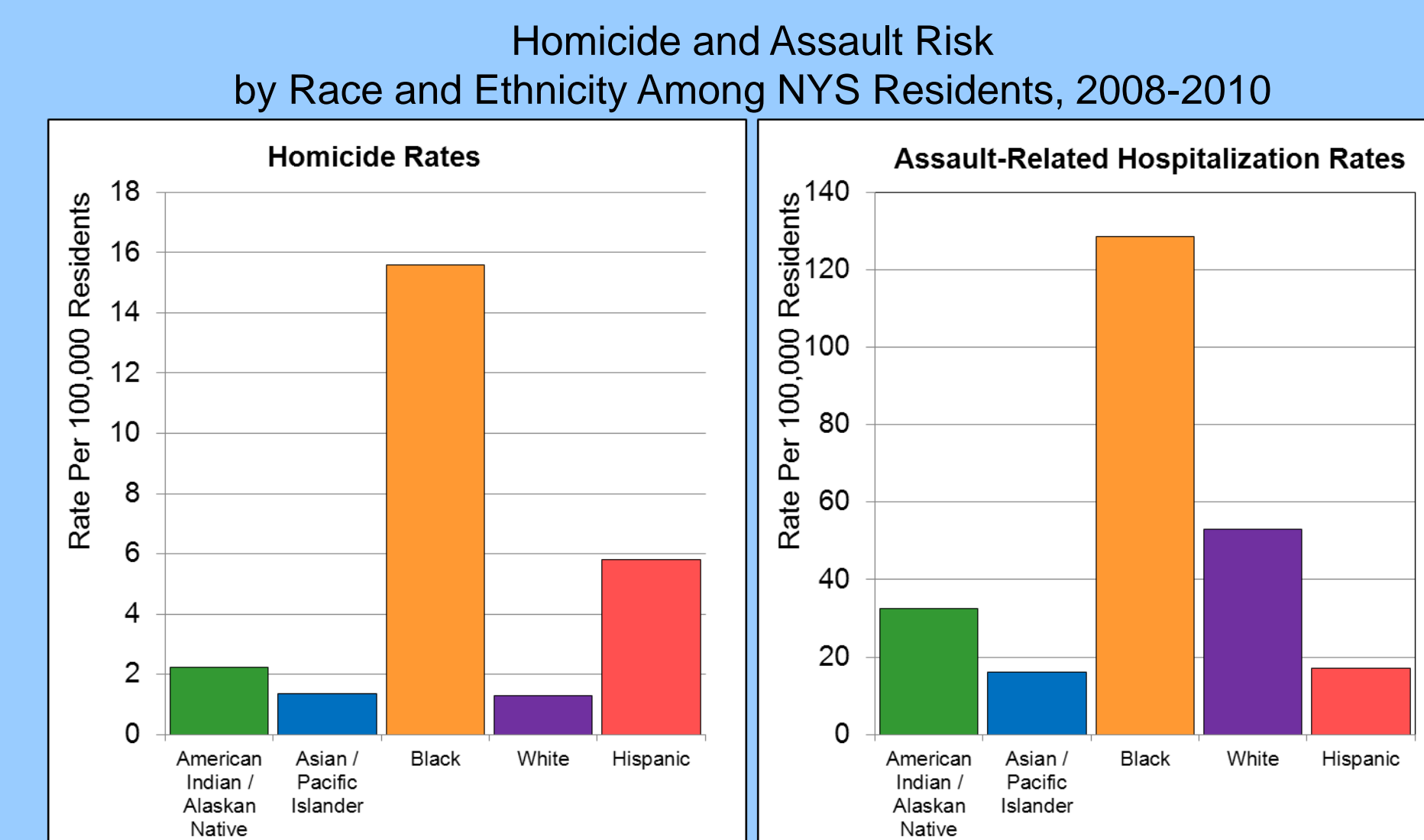
Poverty

Poverty, defined as 20% or more of the population living at or below the federal poverty level, is associated with higher rates of homicide and assault.

Poverty Indicator	Homicides		Assault-Related Hospital Treatment			
	Homicides (μ)	Homicide Rate Per 100,000	Hospitalization (μ)	Rate of Hospitalization	ED Visits (μ)	Rate of ED Visits Per 100,000
No	404	7.5	4,227	29.6	40,401	337.2
Yes	359	25.8	4,787	102.1	48,174	861.6
Unknown	85	n/a	212	n/a	1,023	n/a



Race and Ethnicity While poverty is a risk factor, its impact varies among races and ethnicities.



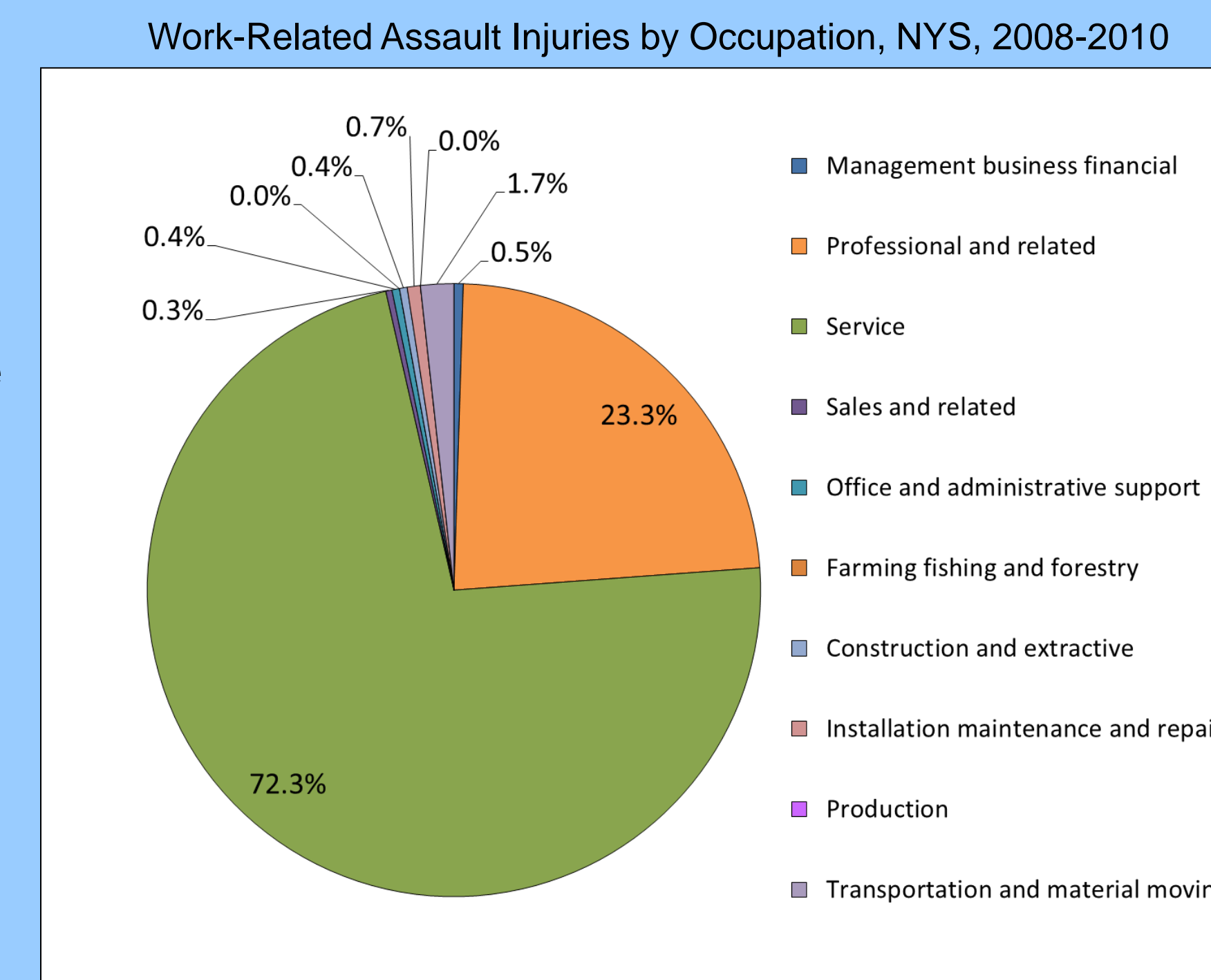
Impact of Poverty on Homicide and Assault Risk by Race and Ethnicity Among NYS Residents, 2008-2010

Race / Ethnicity	Homicide Risk			Assault-Related Hospitalization Risk		
	Odds Ratio	Confidence Interval		Odds Ratio	Confidence Interval	
		Lower Limit	Upper Limit		Lower Limit	Upper Limit
American Indian / Alaskan Native	1.0555	0.1487	7.4935	0.7273	0.4531	1.1674
Asian / Pacific Islander	0.7451	0.4389	1.2649	0.6969	0.5931	0.8190
Black	2.1146	1.8925	2.3629	3.6965	3.5559	3.8427
White	0.9569	0.8255	1.1093	0.8357	0.7865	0.8880
Hispanic	1.3426	1.1120	1.6209	3.3974	3.2098	3.5960

The individual races are exclusive of the Hispanic ethnicity.

Disparities among workers in NYS

The mean salary of all occupations in NYS is \$53,510; however, the mean salary for service workers is \$32,250. These lower paid workers are at higher risk for work-related assault. While they represent only 20% of the NYS working population, they account for 72% of all work-related assault injuries and 30% of work-related homicides.



The rate of work-related assault injuries among all workers is 132.0 per 100,000 workers, but 473.0 per 100,000 service workers. There are a higher percentage of Black and Hispanic workers that are employed in service occupations, when compared with other occupations and with the NYS workforce as a whole.

Service occupations include: protective services, food and beverage services, health services, cleaning and building services, and personal services.

4 Conclusion

Homicide and assault continues to be a significant public health problem in NYS. The surveillance of assault-related injuries in NYS is part of a public health approach that will allow for targeted implementation of programs and interventions to prevent assault-related morbidity and mortality. The disparities in incidence emphasize the continued need to make NYS safer for all its residents and workers.

This exploratory data analysis will help guide future analyses and prevention activities.

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