Pedestrian Fatalities in New York City 2009 – 2011: Preliminary Findings

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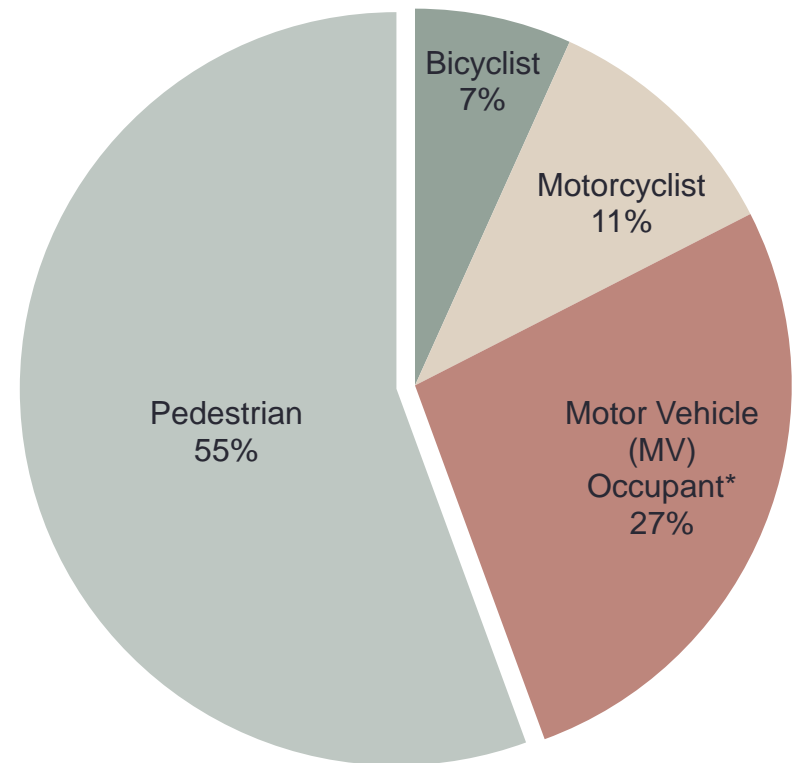
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NYC
Health

NYC Traffic Safety Overview

- Approximately 250-275 traffic fatalities per year

- More than half are pedestrians (55%), ~150 per year.

NYC Traffic Fatalities, 2009-2011 (n=830)

Bicyclist 7%

Motorcyclist 11%

Motor Vehicle (MV) Occupant* 27%

Pedestrian 55%

*Includes MV Drivers & Occupants
Source: NYCDOHMH, Office of Vital Statistics

Methods

- Used ICD-10 external cause of injury coding system
- Reviewed all traffic deaths between 2009-2011 (n=830)
- Data sources:
  - NYCDOHMH Office of Vital Statistics death certificate data
  - Office of Chief Medical Examiner
    - File review of autopsy reports with detailed abstraction form, which include toxicology and some crash information
  - NYCDOT Traffic Fatality Database
  - NYSDOT/DMV Police Accident Report/MV-104

Pedestrian Information

Total Fatal Pedestrians, n = 457	% in Study	% of NYC Population*
Sex		
Male	62%	48%
Female	38%	52%
Borough of Incident		
Bronx	16%	17%
Brooklyn	30%	31%
Manhattan	23%	19%
Queens	26%	27%
Staten Island	5%	6%

NYC Health

Pedestrian Information, cont.

Age	% in Study	% of NYC Population*
0-14	5%	18%
15-24	8%	14%
25-34	12%	17%
35-44	11%	14%
45-54	13%	14%
55-64	18%	11%
65-74	14%	7%
75+	21%	6%

Race/ethnicity	% in Study	% of NYC Population*
Non-Hispanic White	20%	33%
Non-Hispanic Black	38%	23%
Hispanic	27%	29%
Asian	12%	13%
Other	3%	2%

*These estimates were produced by DOHMH, based on the US Census Bureau Population Estimate Program, 2010.
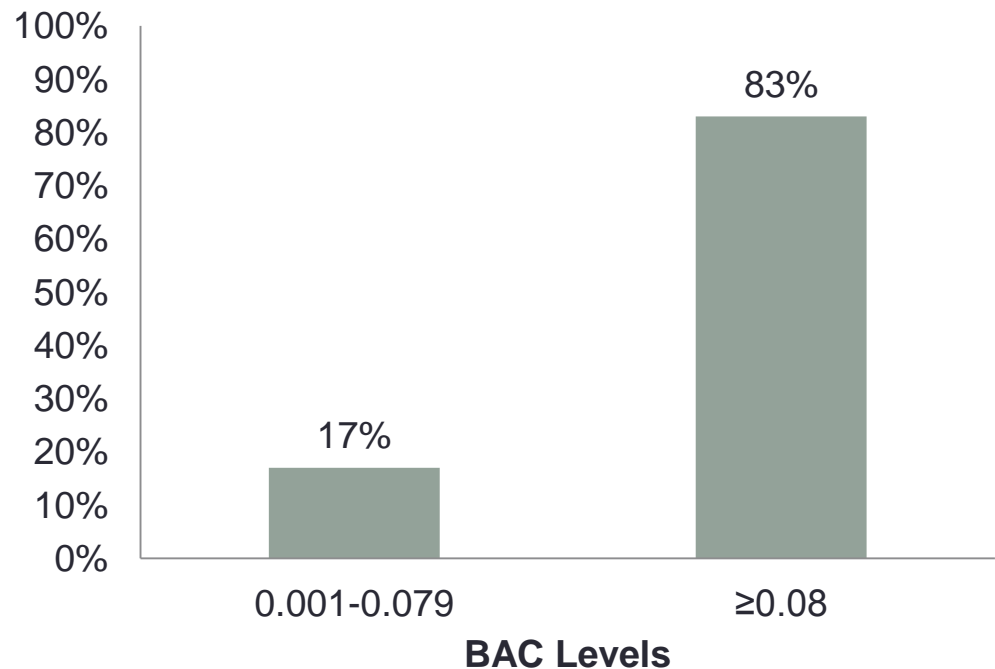
ALCOHOL INVOLVEMENT: PRELIMINARY FINDINGS

# Pedestrian Testing for Alcohol Preliminary Findings

- 81% of pedestrians tested for alcohol (n=371)

- 20% of those tested were positive for alcohol (n=75)
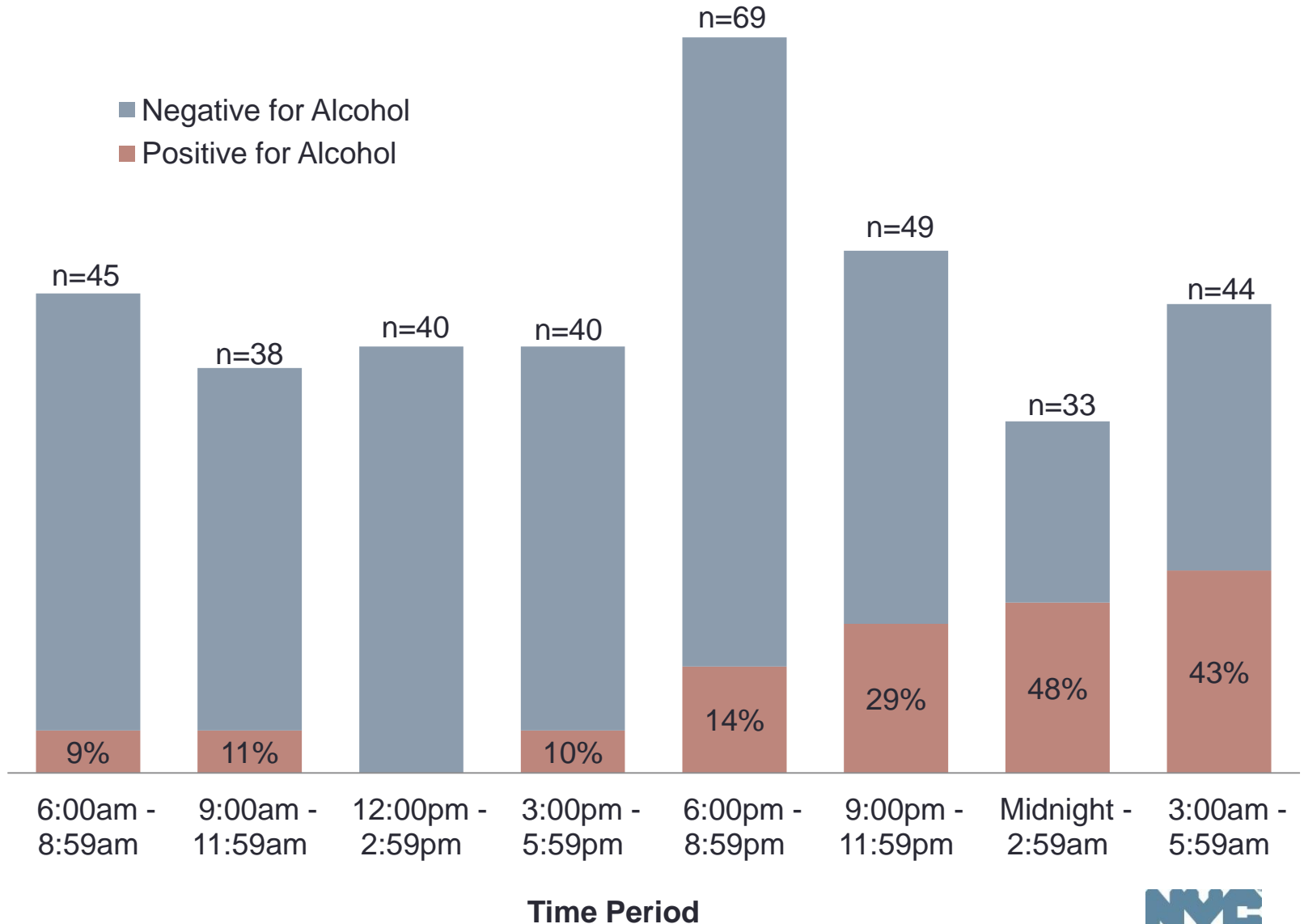
- Positive defined as BAC >0

BAC Levels for Pedestrian Fatalities Who Tested Positive for Alcohol in NYC, 2009-2011 (n=75)

17% — 0.001-0.079

83% — ≥0.08

BAC Levels

Distribution of Pedestrian Fatalities by Time of Incident, in NYC, 2009 - 2011
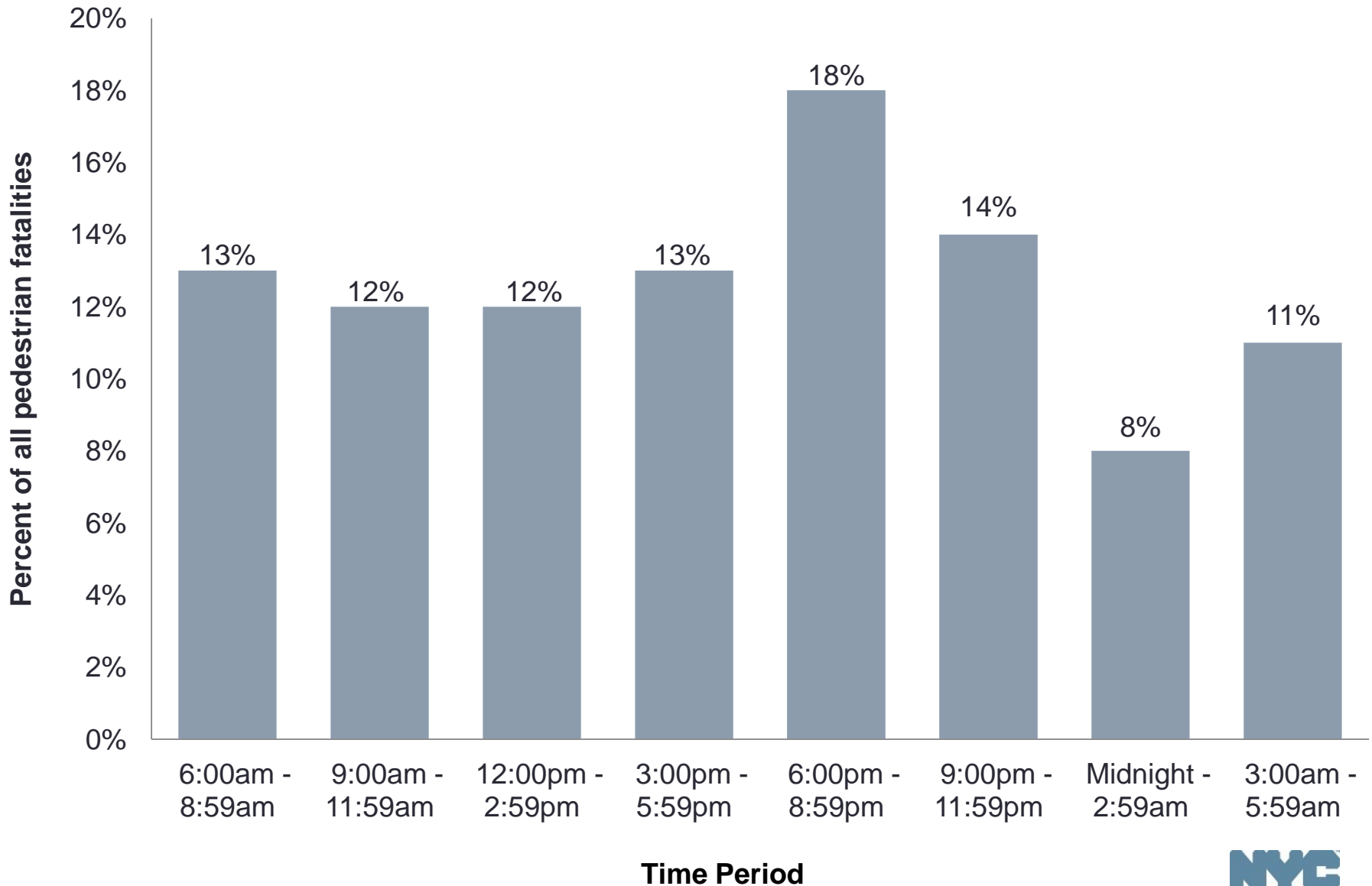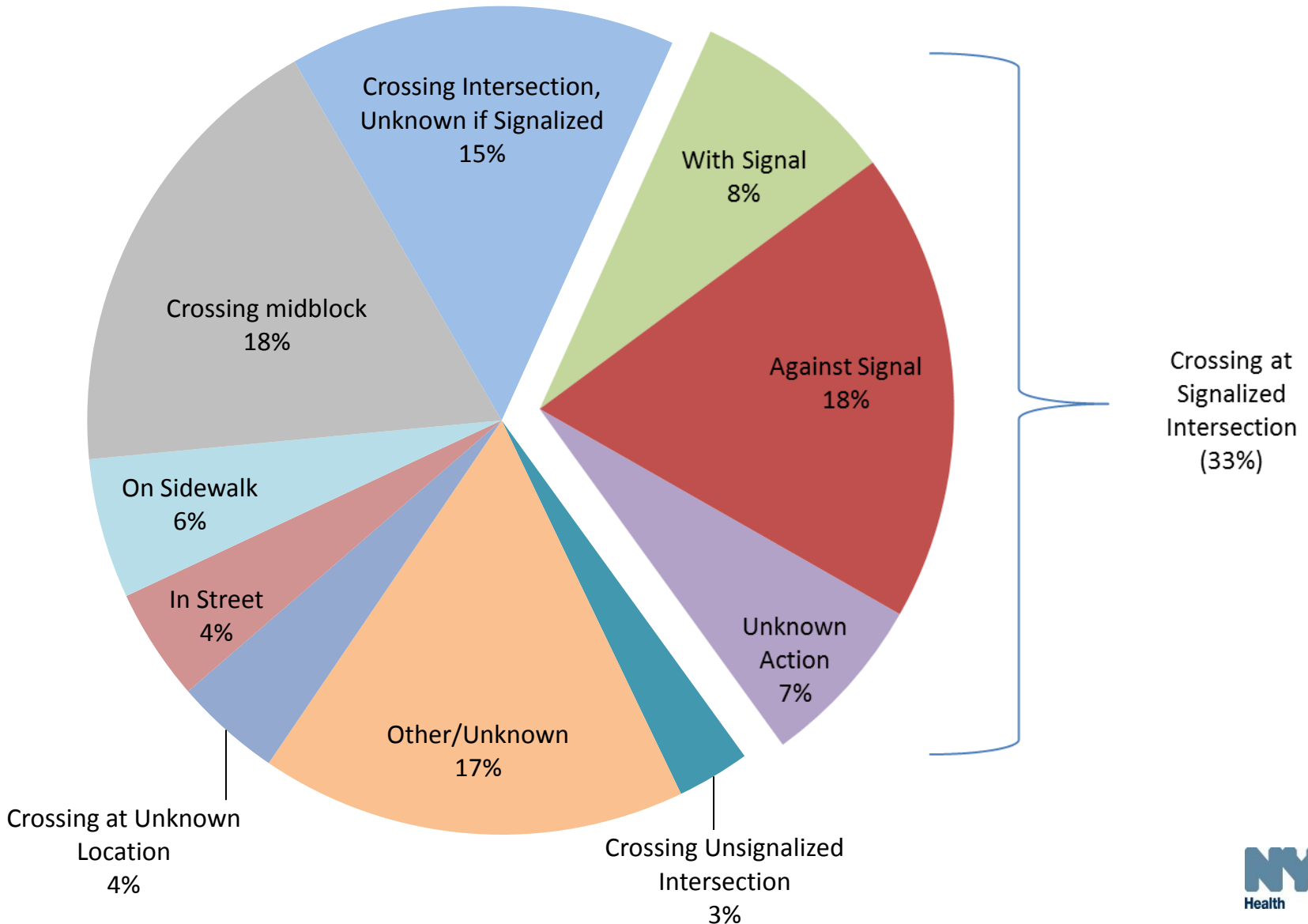
Distribution of Pedestrian Fatalities and Alcohol Involvement, Among Tested, by Time of Incident in NYC, 2009-2011

PEDESTRIAN BEHAVIOR

Pedestrian Behavior at Time of Fatal Crash in NYC, 2009-2011

Pedestrian Behavior & Alcohol Involvement

	% Positive	% Negative
Crossing at Signalized Intersection <u>With Signal</u> (n=28)	10%	90%
Crossing at Signalized Intersection <u>Against Signal</u> (n=67)	25%	75%
Crossing Midblock (n=64)	25%	75%

Summary

- Most pedestrian fatalities did not involve pedestrian alcohol use
- Findings suggest increased prevalence of risky pedestrian behavior for intoxicated pedestrians

- Pedestrian Behavior
  - More pedestrians were killed while crossing midblock or crossing against the signal
  - Those crossing midblock or against the signal were more likely to have alcohol in their systems compared to crossing with the signal.
  - Almost no pedestrians with alcohol had been crossing with the signal
- Time of Day
  - PM rush hour/dinner (6:00pm – 8:59pm) peak time for total pedestrian fatalities
  - Much greater proportion of pedestrian fatalities involving alcohol occurred between 6:00pm and 6:00am
  - Late night (midnight - 6am), two in five pedestrian fatalities involved pedestrian alcohol use

- Other findings:
  - Pedestrians remain an important focus area – 55% of NYC traffic deaths
  - Fatal pedestrian injury most common among: males, adults 65+, and non-Hispanic Blacks

Discussion

- Other crash roles - Alcohol involvement and BAC levels
  - Motor vehicle drivers, passengers, motorcyclists, bicyclists

- Pedestrians
  - NYCDOT database matching
  - Need for comparison of risk
    - Pedestrian alcohol use & behavior - field study?
  - Need to expand dataset – low #s in some fields
    - Longer time period
    - Do other cities have similar data available?

- Older adults (65+) are particularly vulnerable
  - Typically, these fatalities do not involve alcohol

- Suggestions for analysis/other questions?

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