

COUNTERMEASURES FOR **Pedestrian and Bicycle** HIGH CRASH LOCATIONS



WORK ORDER
#GPC V-27



MIAMI-DADE
METROPOLITAN
PLANNING
ORGANIZATION

Kimley»»Horn

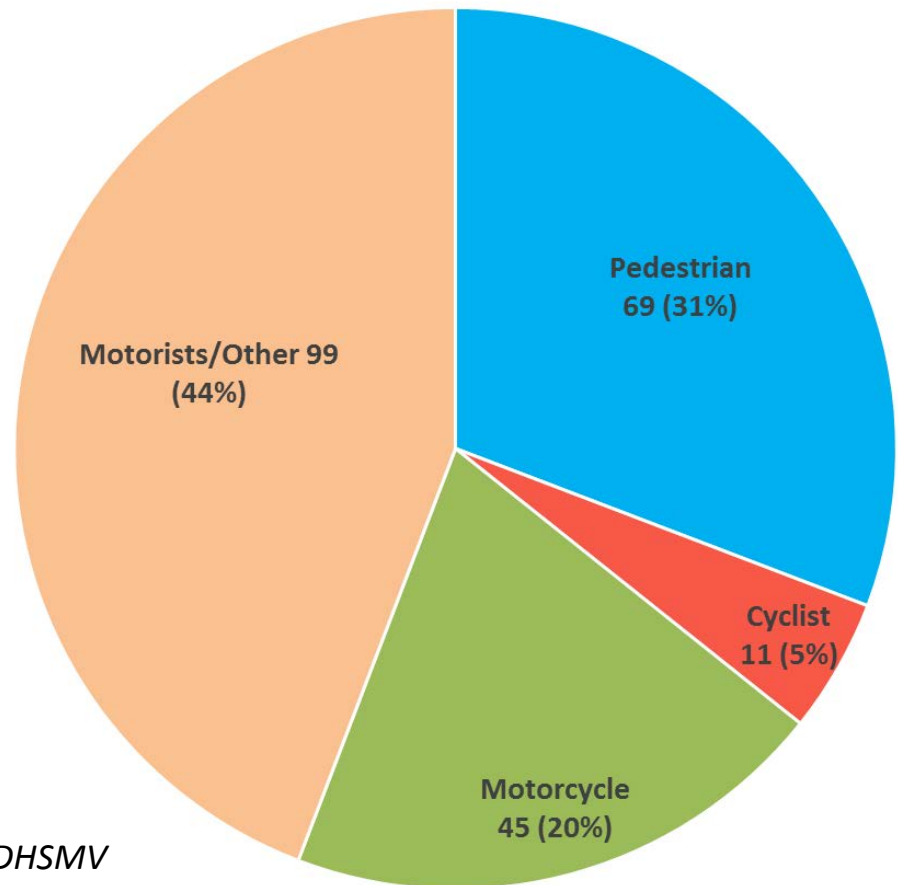
Study Goals

- Develop multi-disciplinary strategies to reduce traffic crashes involving pedestrians and bicyclists.
- Develop an on-going process for continuing safety monitoring, analysis and improvement.

Miami-Dade's Traffic Safety Problem

- Florida's pedestrian and bicycle fatality rates are among the highest in the US.
- Miami-Dade County has the highest number of pedestrian and bicycle crashes in Florida.

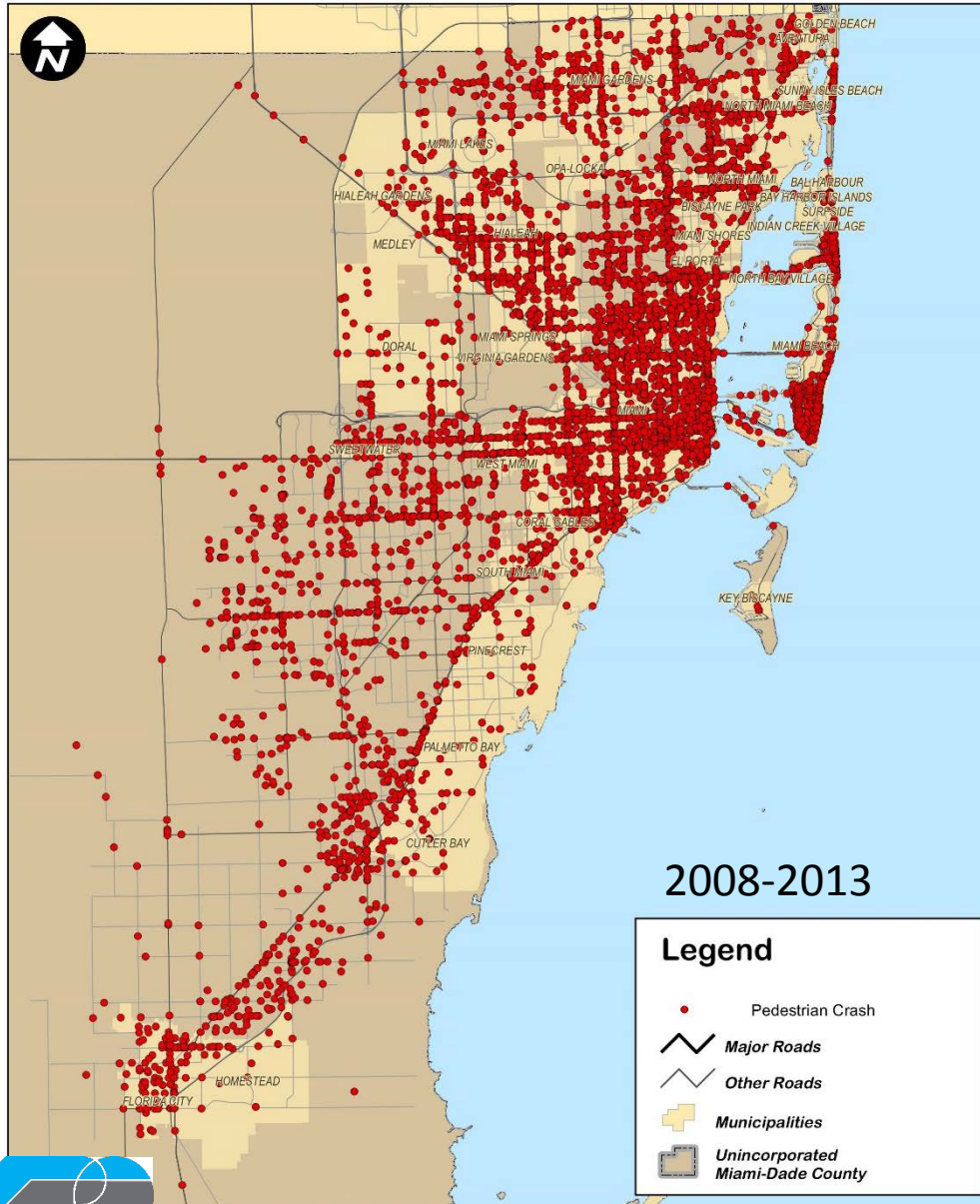
Fatal Traffic Crashes in Miami-Dade County (2013)



Source: DHSMV

Pedestrian Crashes

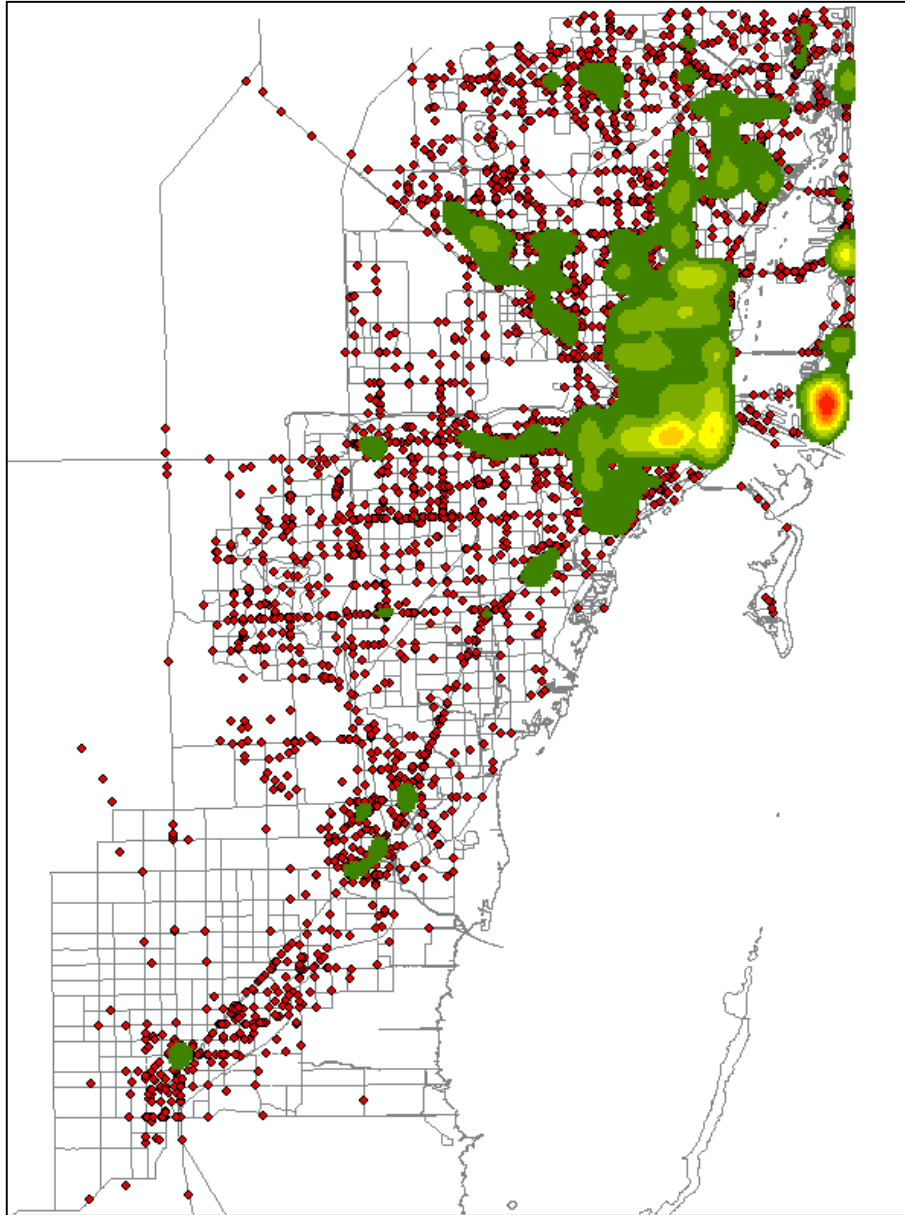
COUNTERMEASURES FOR Pedestrian and Bicycle HIGH CRASH LOCATIONS



Pedestrian Crashes (2008-2013)

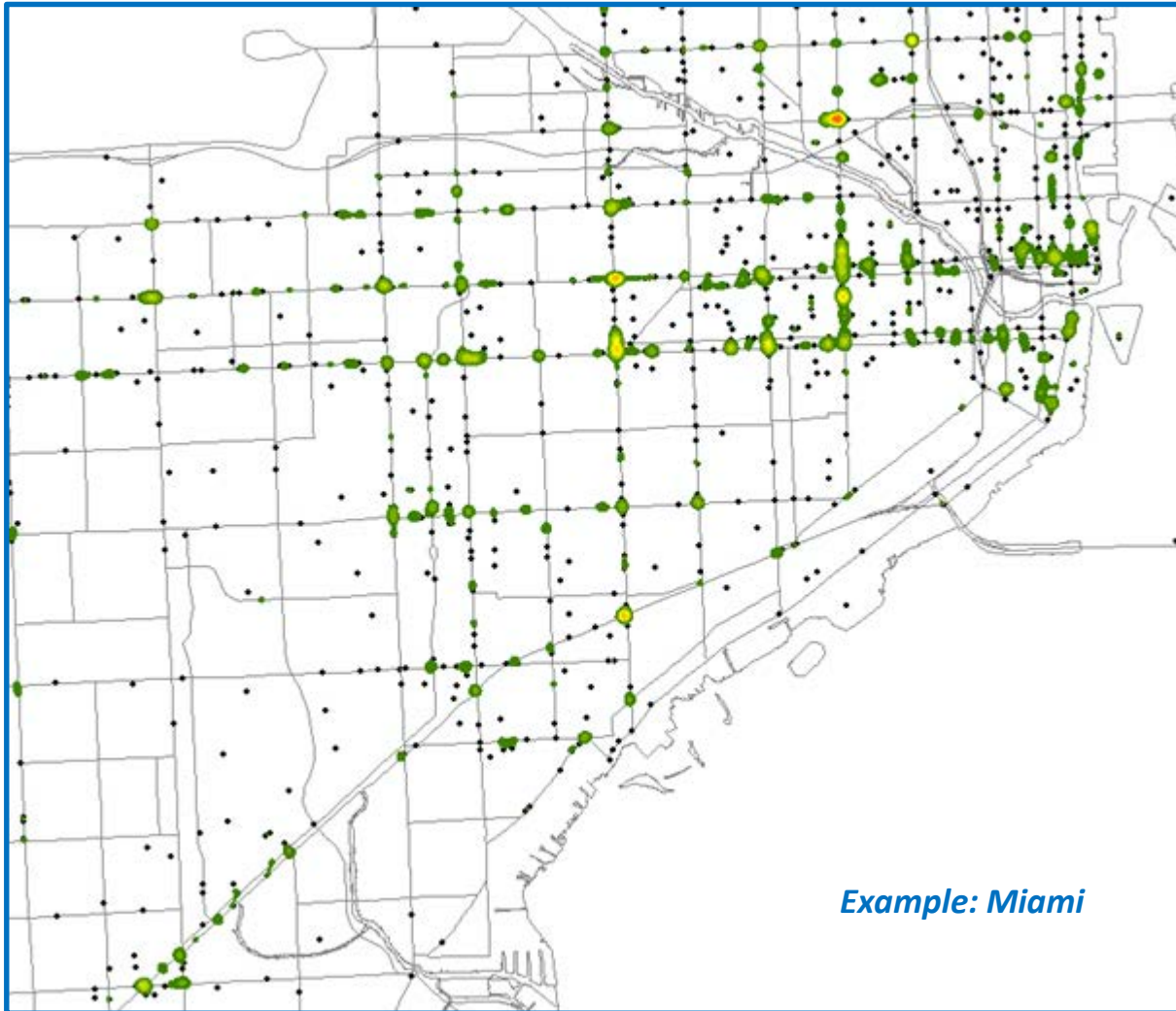
Year	Crashes
2008	1,307
2009	1,301
2010	1,207
2011	962
2012	1,089
2013	1,162
Total	7,028

- Pedestrian crashes declined each year between 2008 and 2011 but have increased in 2012 and 2013.



Pedestrian Crash Density

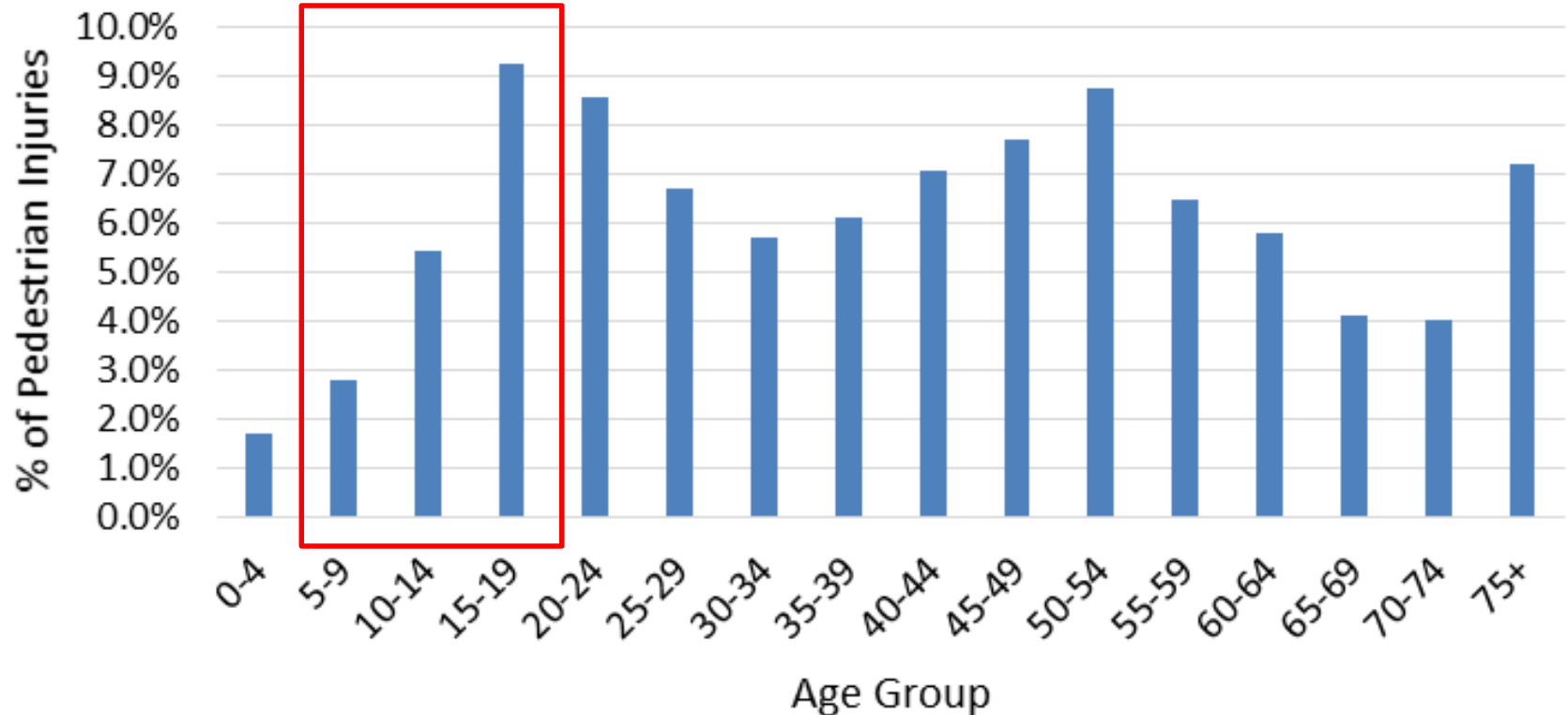
High Pedestrian Crash Locations



Example: Miami

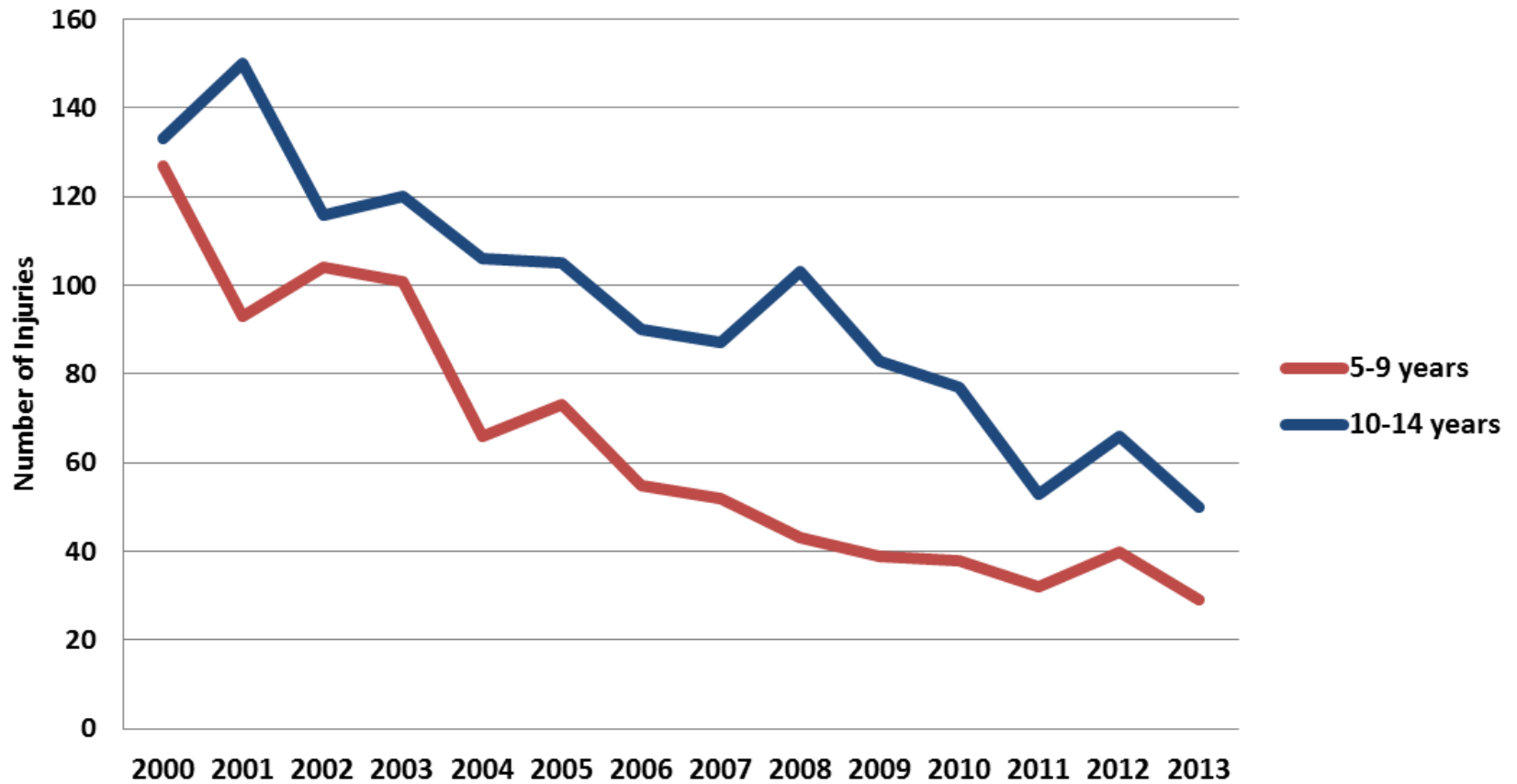
Pedestrian Injury Age Distribution 2008-2013

*Juvenile
pedestrians (18%)*

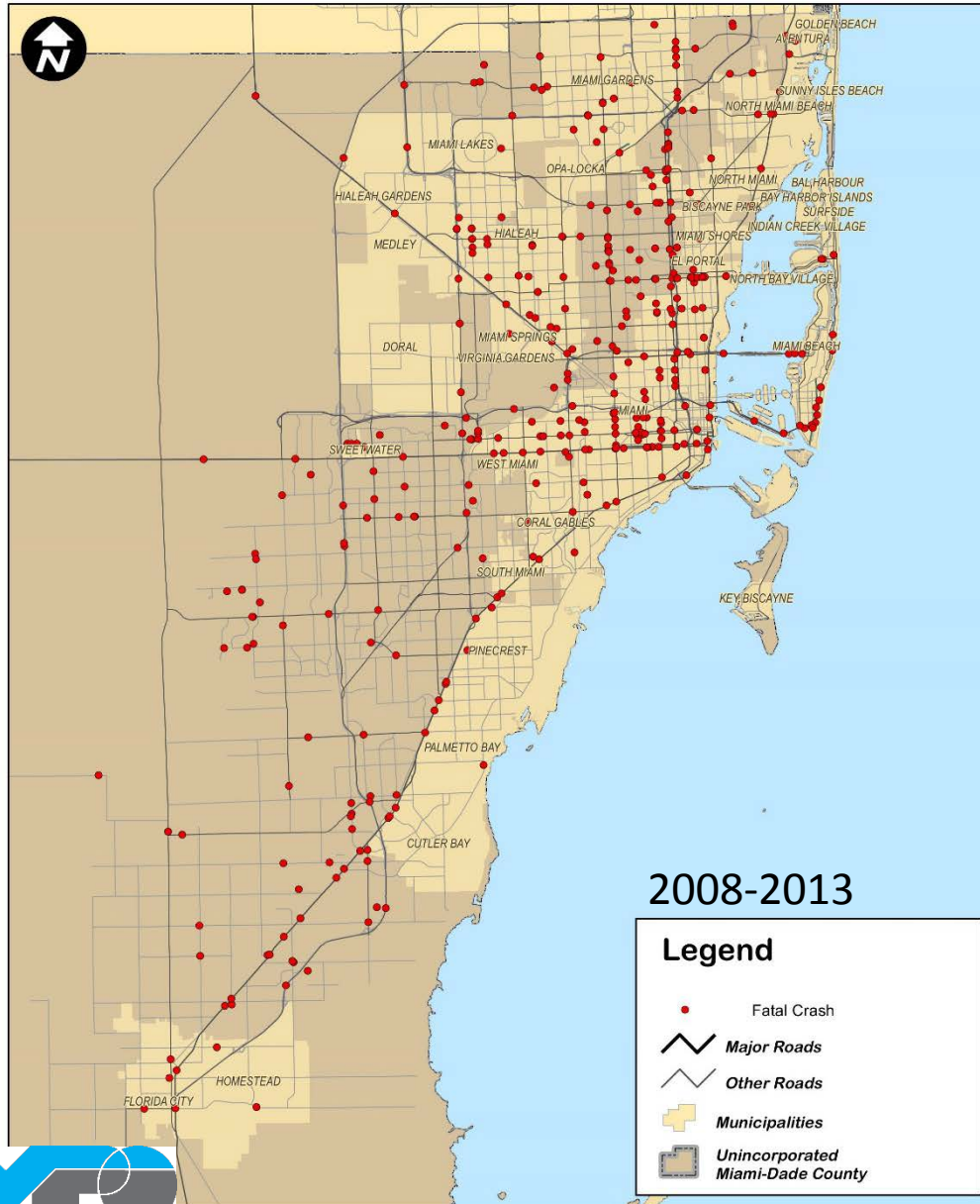


Source: DHSMV

Miami-Dade County Juvenile Pedestrians Injuries 2000-2013



COUNTERMEASURES FOR Pedestrian and Bicycle HIGH CRASH LOCATIONS



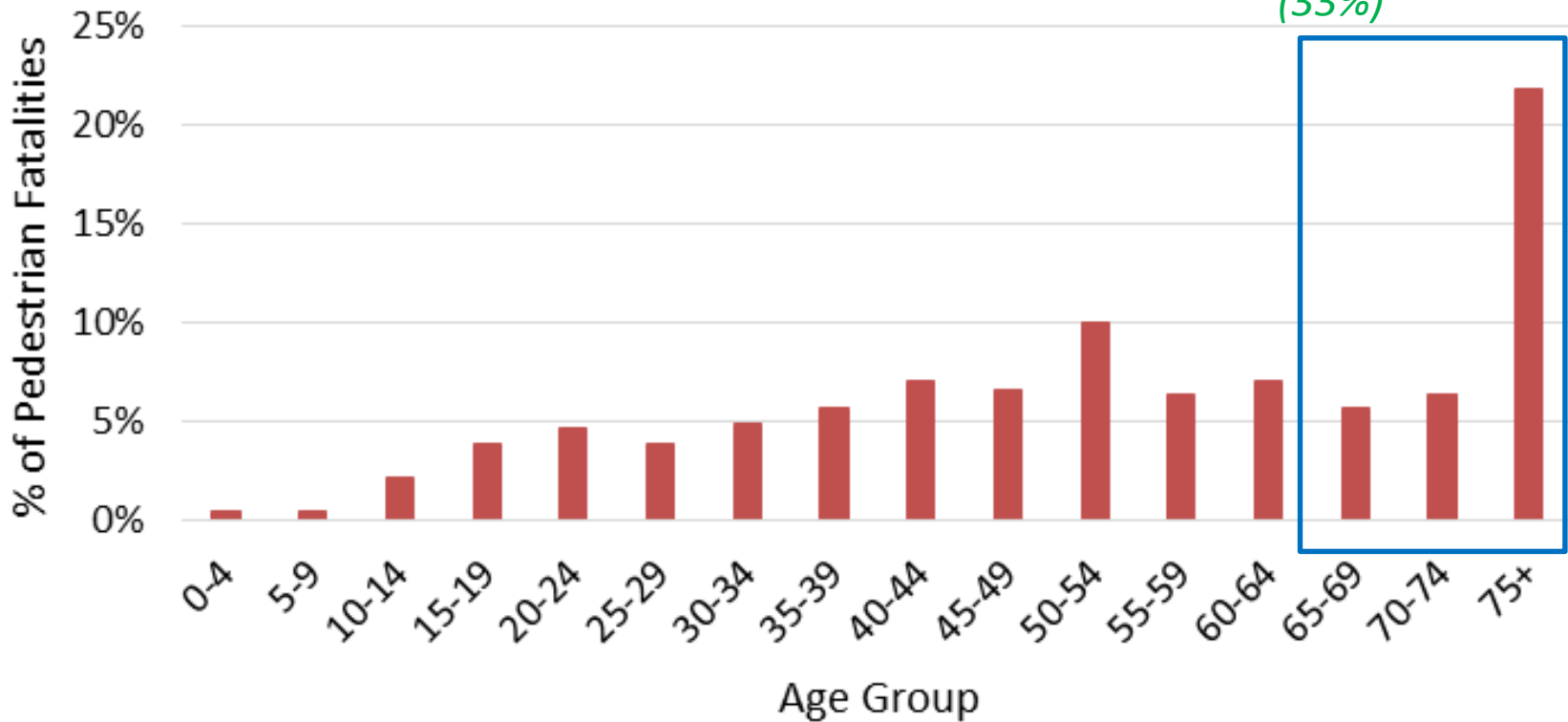
Fatal Pedestrian Crashes (2008-2013)

Year	Fatal Crashes
2008	64
2009	65
2010	75
2011	68
2012	47
2013	68
Total	388

On average, 1 in 18 crashes involving a pedestrian resulted in a fatality.

Pedestrian Fatality Age Distribution 2008-2013

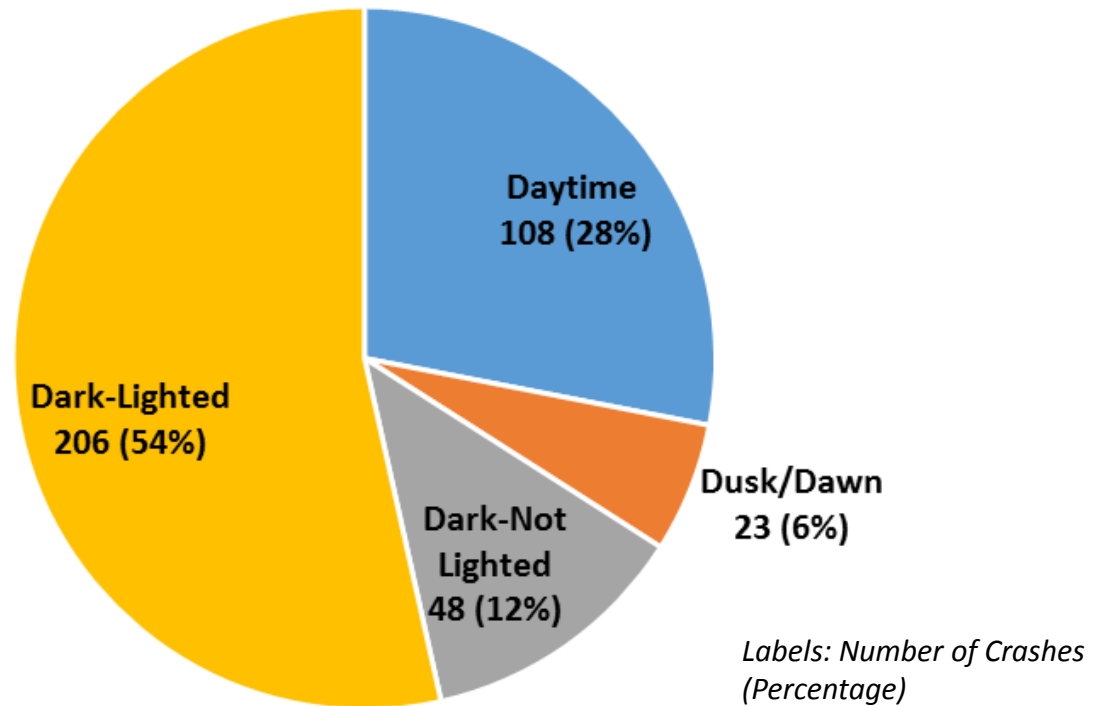
*Elderly pedestrians
(33%)*



Source: DHSMV

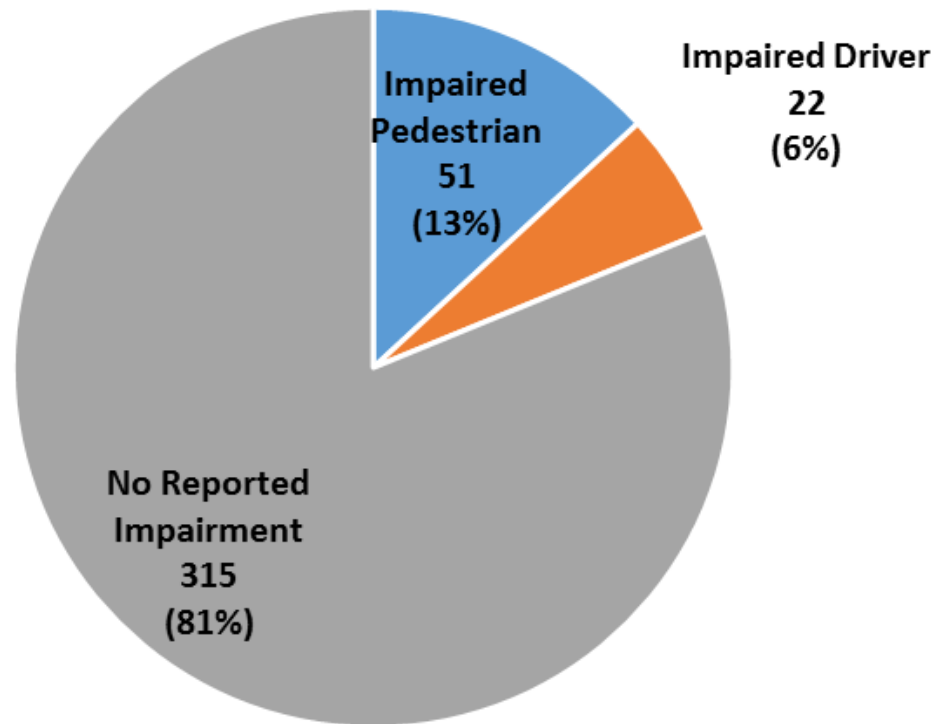
Lighting Condition

Pedestrian Fatalities 2008-2013

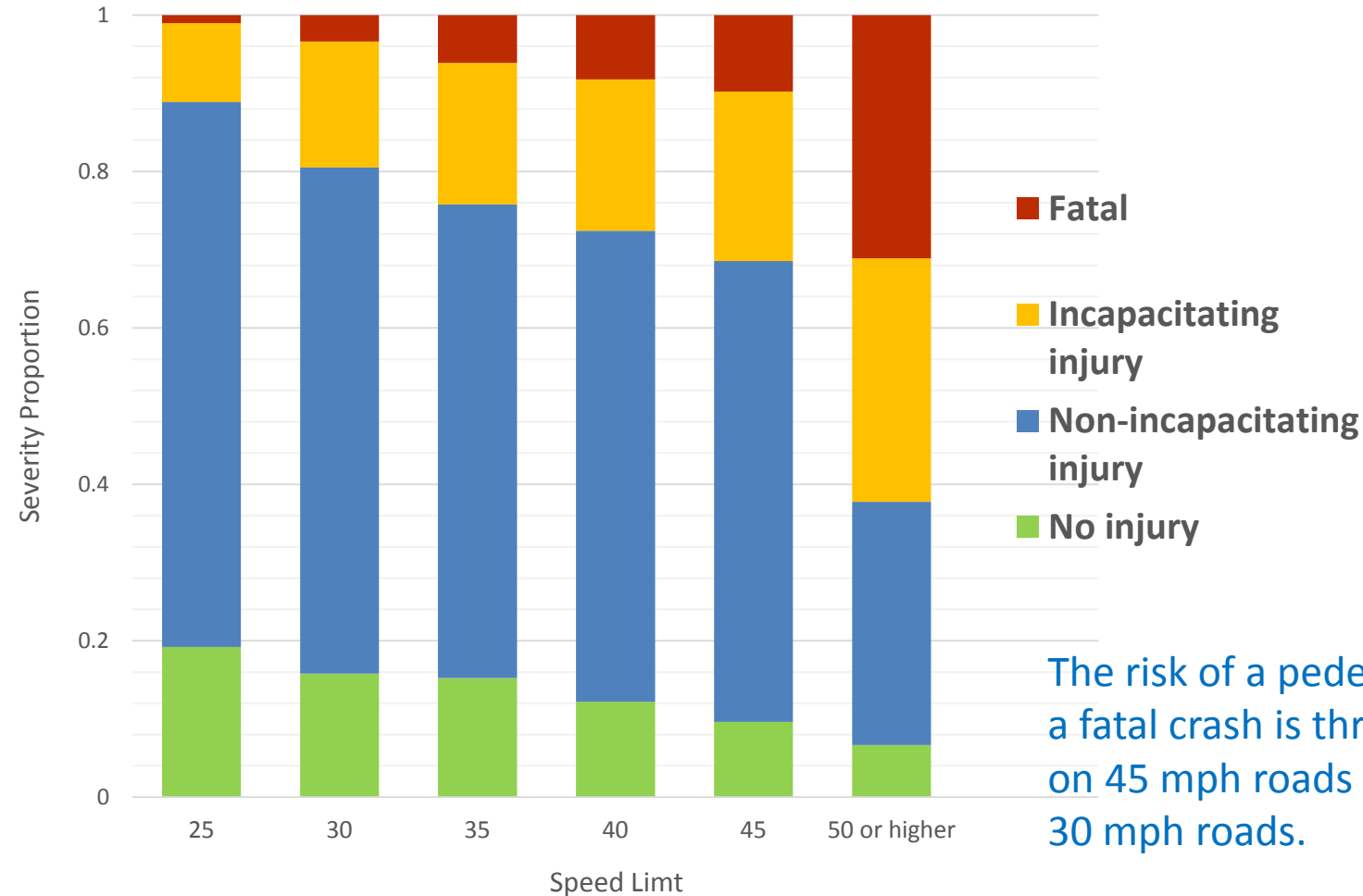


Impairment

Pedestrian Fatalities 2008-2013



Speed Limit vs. Pedestrian Injury Severity



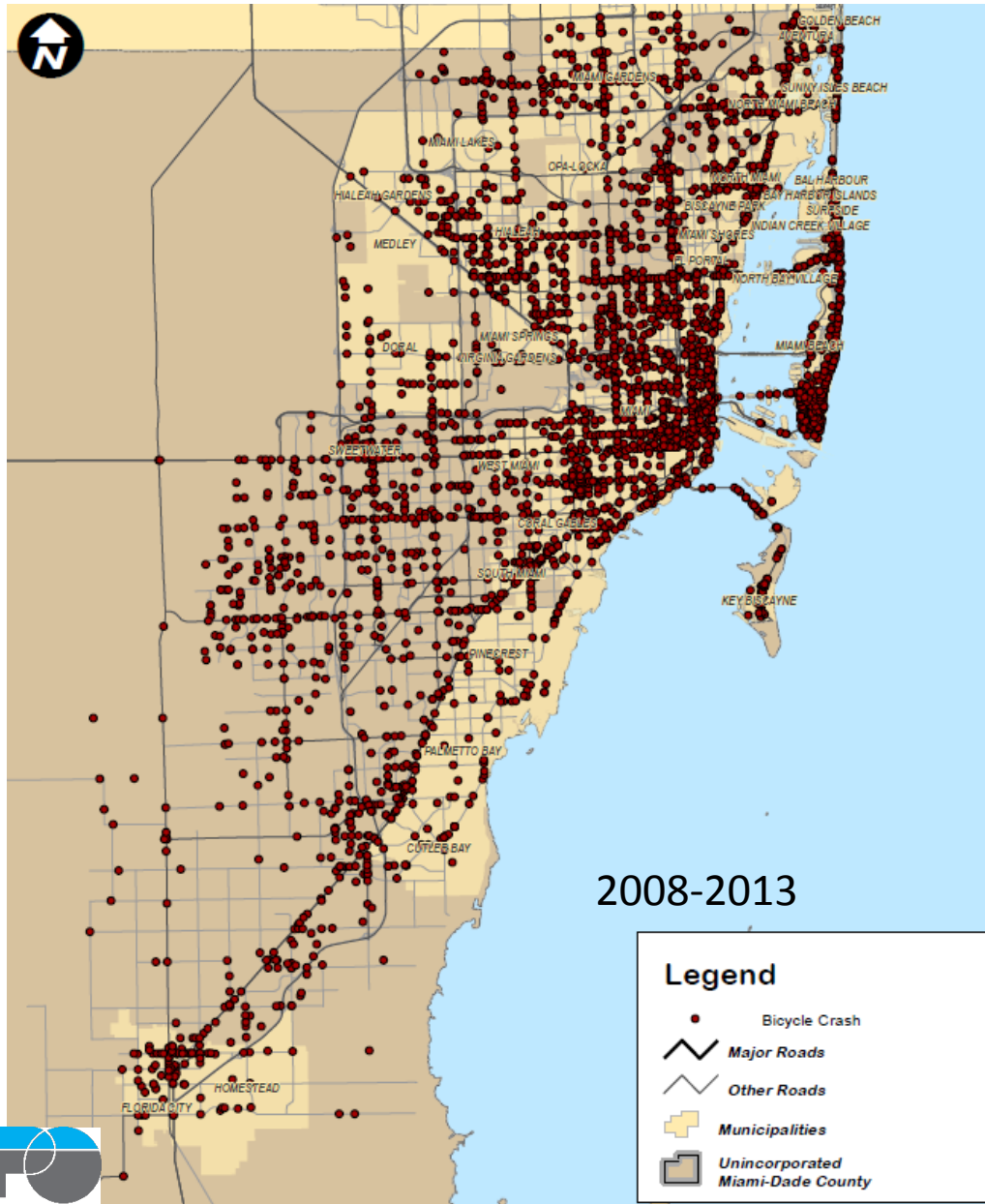
The risk of a pedestrian crash being a fatal crash is three times greater on 45 mph roads in comparison to 30 mph roads.

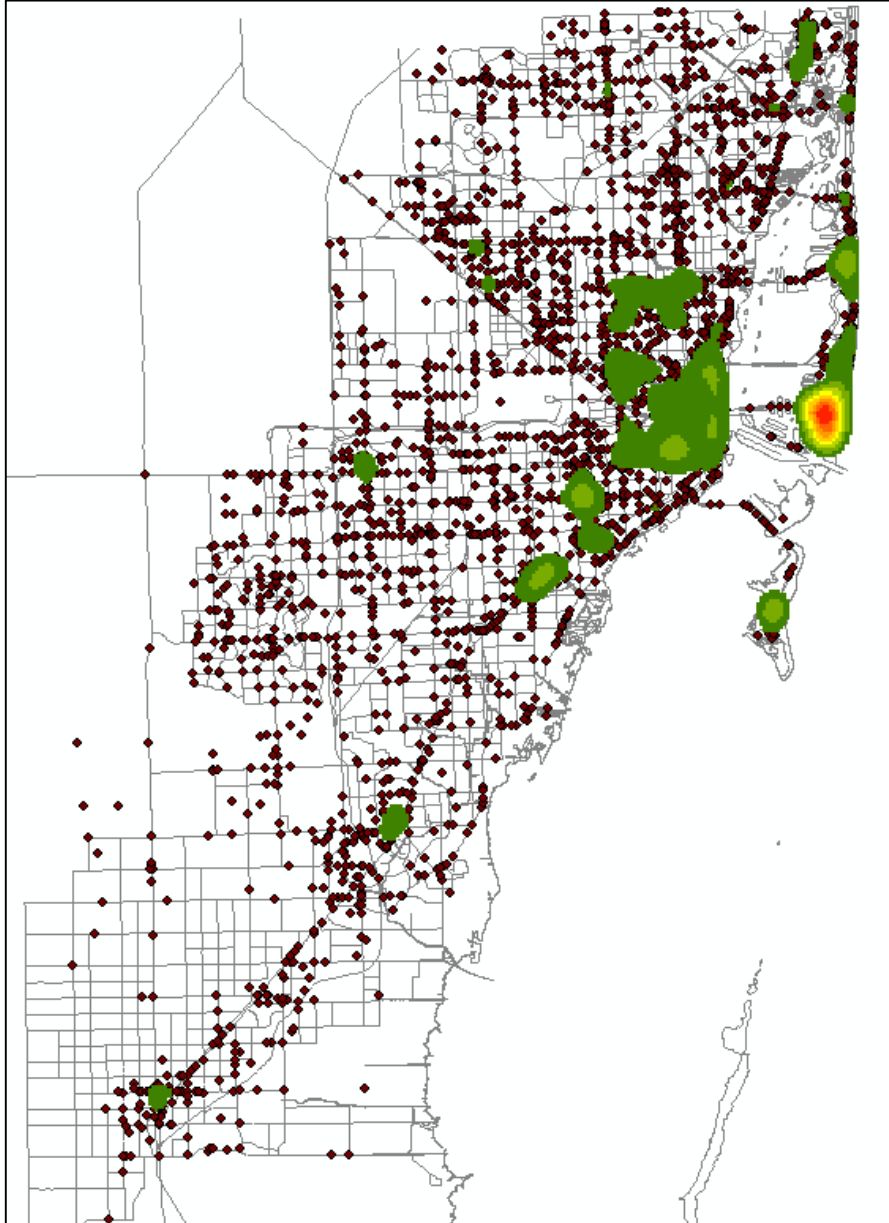
Bicycle Crashes

Bicycle Crashes (2008-2013)

Year	Crashes
2008	492
2009	528
2010	583
2011	667
2012	727
2013	857
Total	3,854

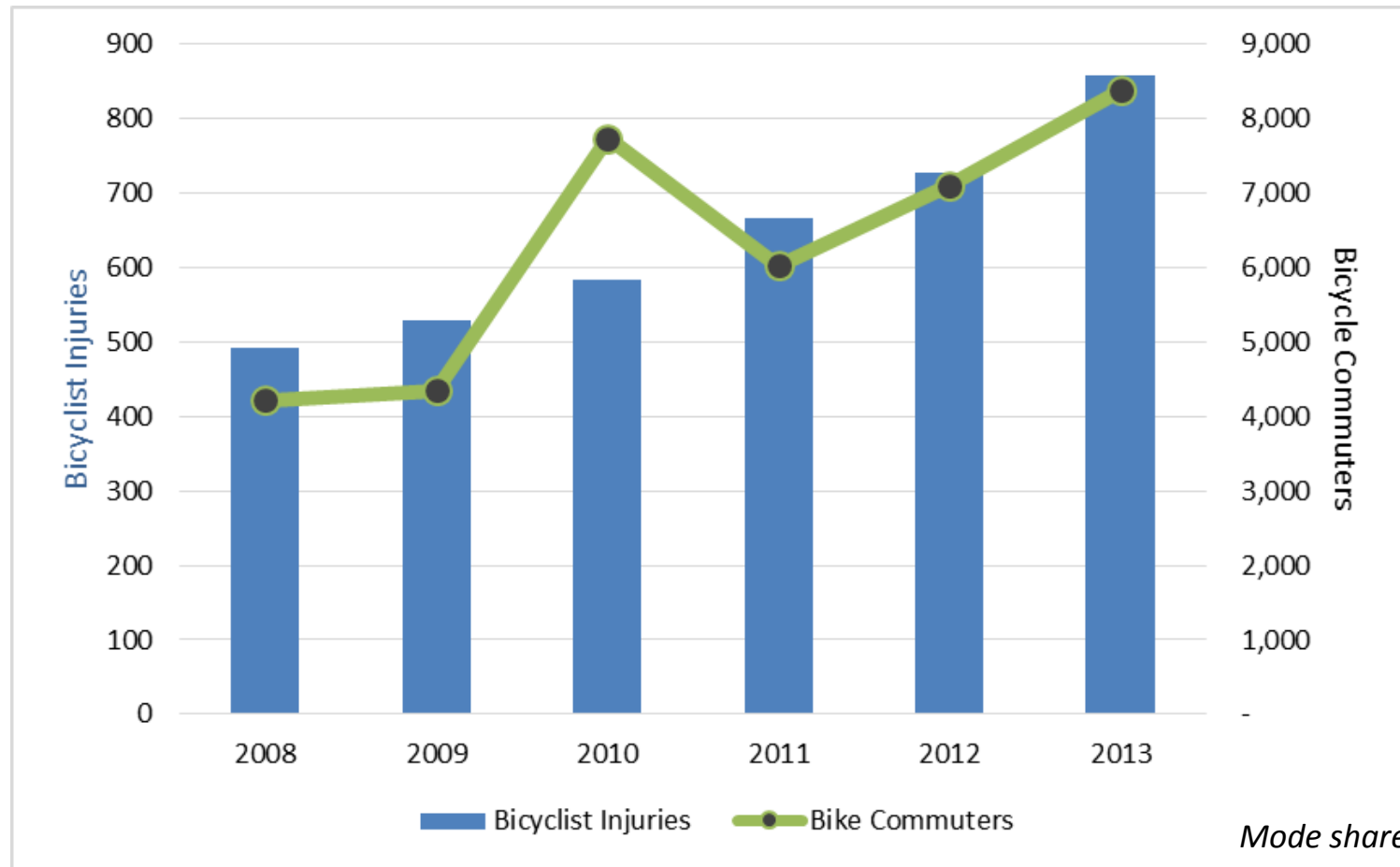
- 74% increase in bicycle crashes between 2008 and 2013.





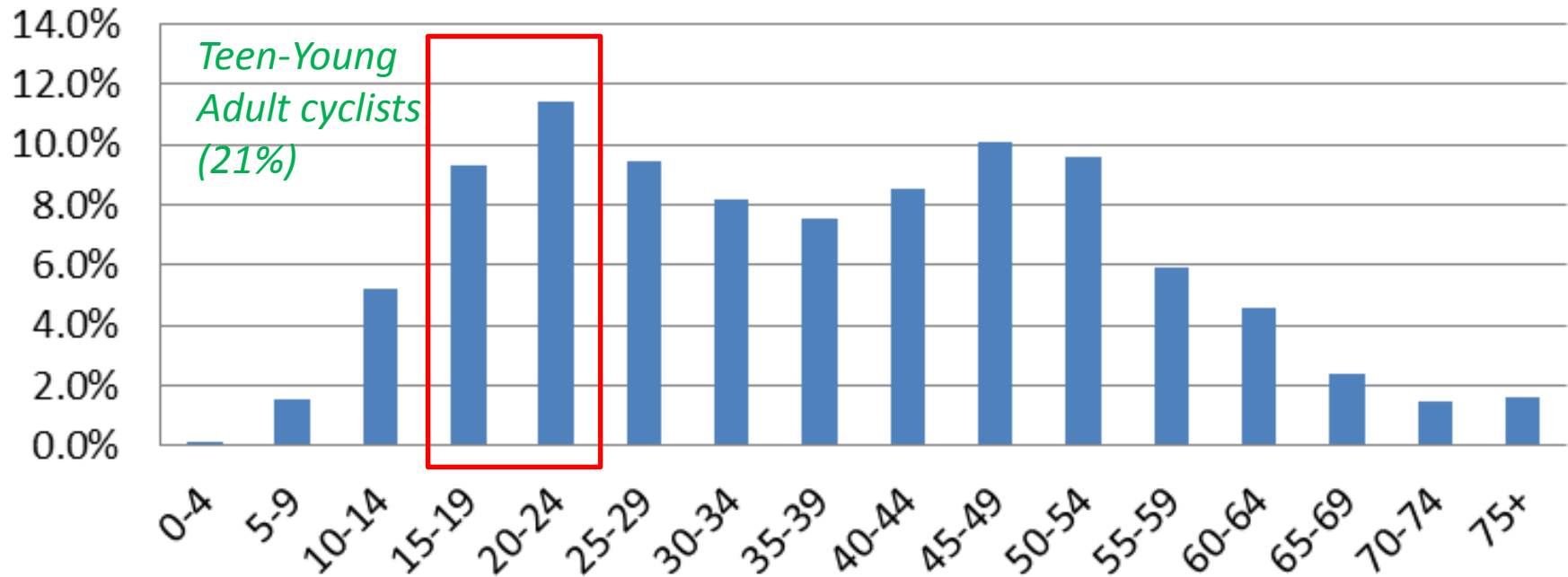
Bicyclist Crash Density

Bicycle Crashes and Commuting



*Mode share: American
Community Survey*

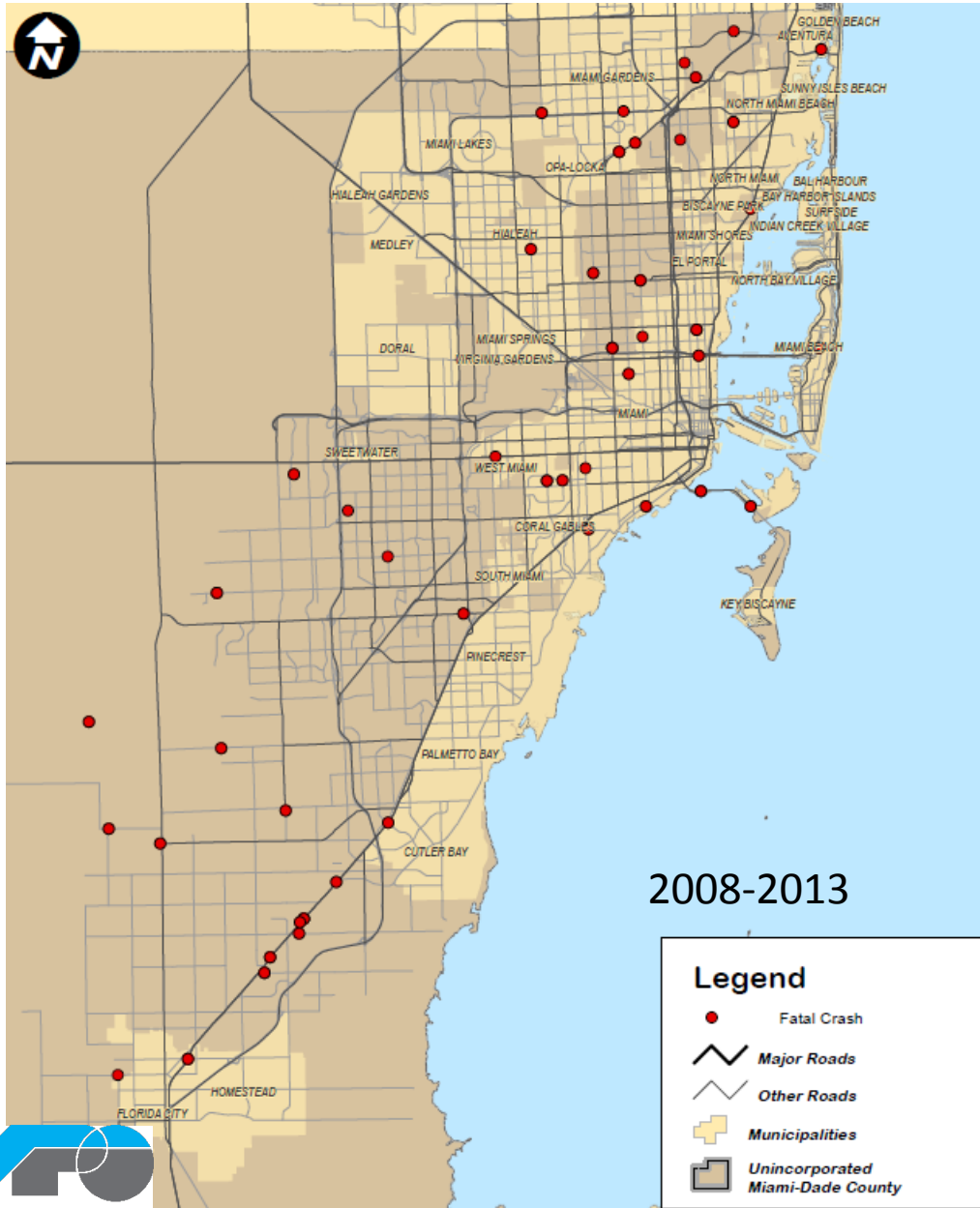
Bicyclist Injury Age Distribution 2008-2013



Source: DHSMV

n=3492

COUNTERMEASURES FOR Pedestrian and Bicycle HIGH CRASH LOCATIONS

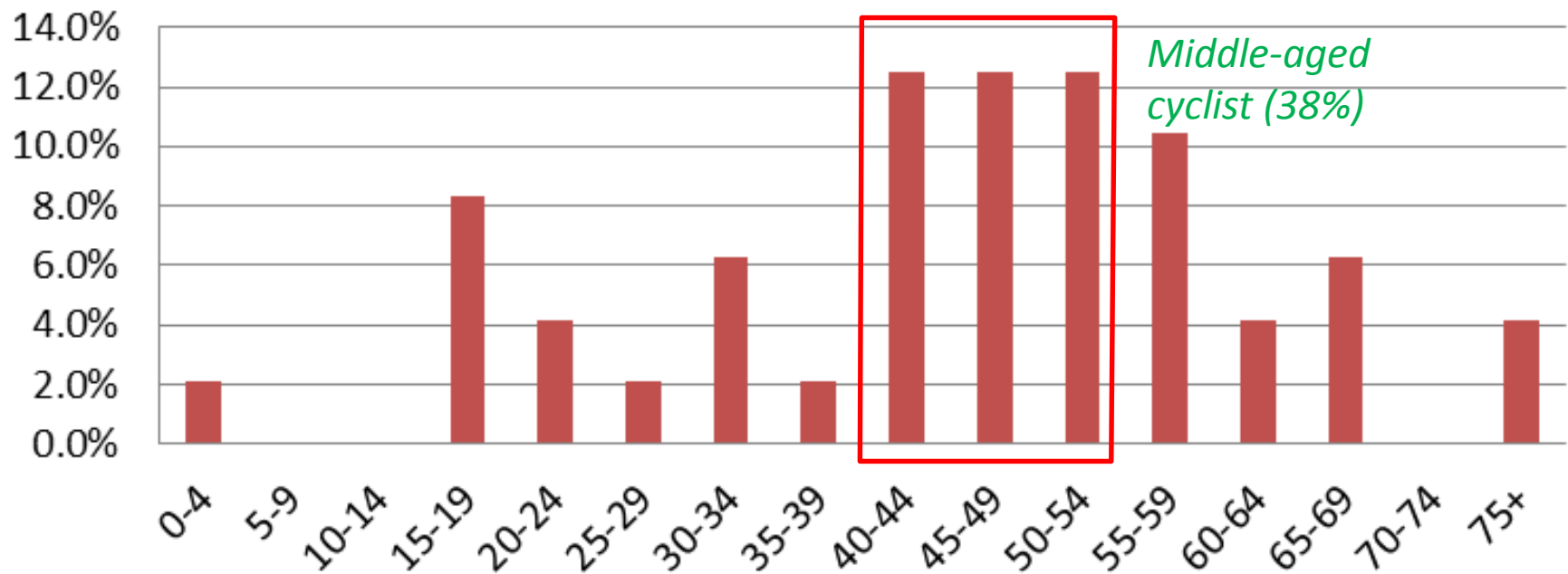


Fatal Bicycle Crashes (2008-2013)

Year	Fatal Crashes
2008	6
2009	12
2010	7
2011	6
2012	6
2013	10
Total	47

- In general, fatal bicycle crashes are scattered.
- On average, 1 in 82 crashes involving a bicyclist resulted in a fatality.

Bicyclist Fatality Age Distribution 2008-2013

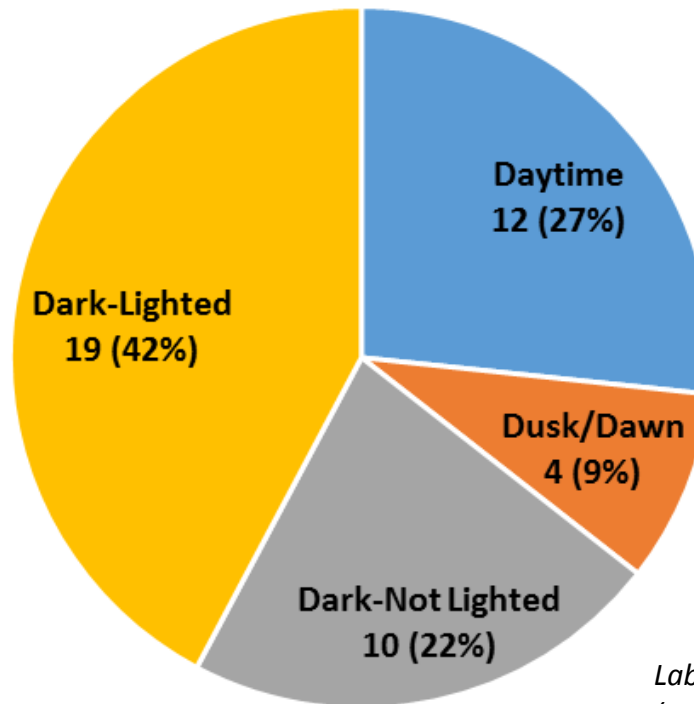


Source: DHSMV

n=48

Lighting Condition

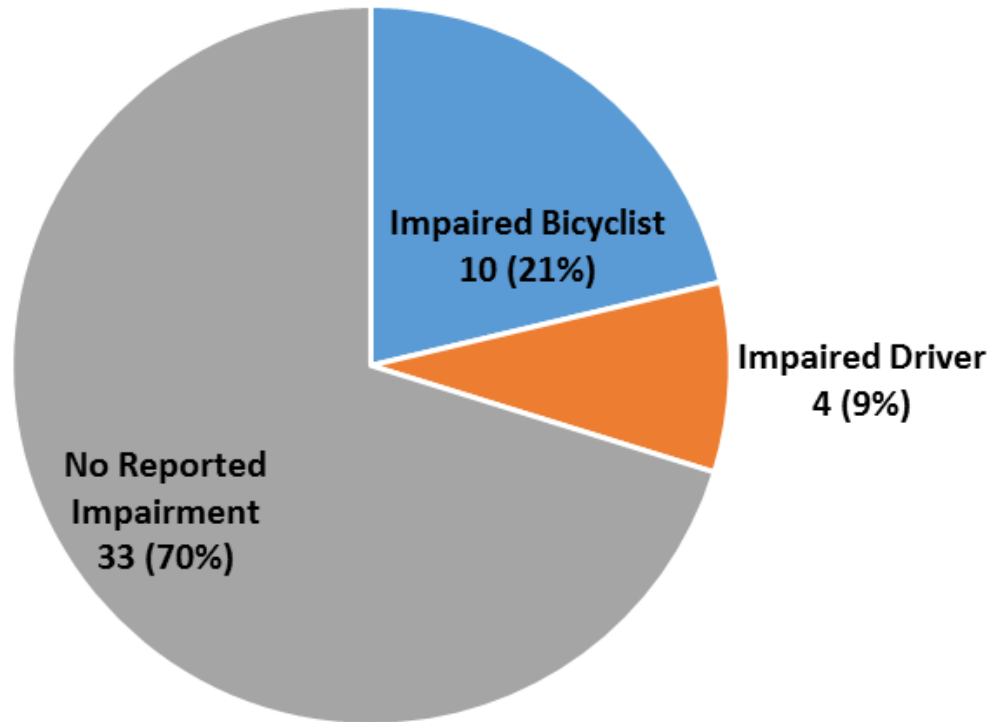
Bicyclist Fatalities 2008-2013



*Labels: Number of Crashes
(Percentage)*

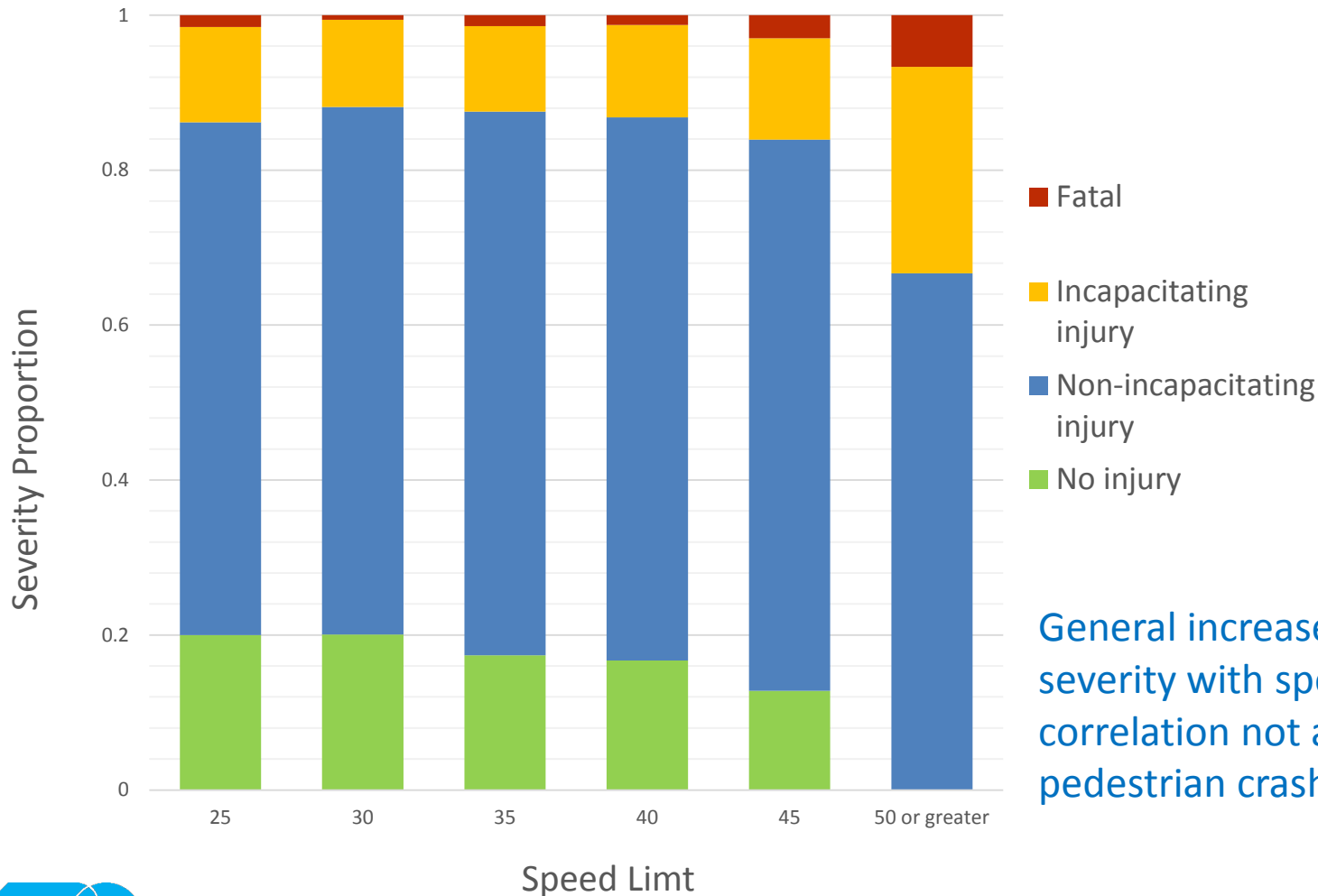
Impairment

Bicyclist Fatalities 2008-2013



*Labels: Number of Crashes
(Percentage)*

Speed Limit vs. Bicycle Injury Severity



General increase of injury severity with speed limit; correlation not as discernable as pedestrian crashes.

Next Steps

- Coordinate with stakeholder agencies.
 - FDOT
 - Miami-Dade County
 - Municipalities
 - WalkSafe, Alliance on Aging, Miami-Dade Public Schools, and outreach groups
 - Enforcement agencies
 - Miami-Dade Transit
- Conduct field reviews and develop countermeasures
 - Engineering
 - Education, and
 - Enforcement strategies.