Traffic-Related Pedestrian Injuries to Children Aged 0 – 17 Years, Miami-Dade County: 2009-2013


Although pedestrian injuries among children have declined in recent years, it remains as one of the leading causes of injury among this age group. Children are at an increased risk for pedestrian injury and death because of their limited understanding of traffic laws and little sense of danger. In addition, parents & caregivers may overestimate their child's traffic skills. This fact sheet summarizes traffic crashes which occurred between 2009 & 2013 involving a pedestrian aged 17 years and younger and identifies areas of the county most at-risk for experiencing child pedestrian incidents.

Traffic-Related Pedestrian Injury Trends

From 2009 - 2013, there were 1,456 crashes involving 1,664 Miami-Dade pedestrians aged 0 – 17 years. At least one injury occurred for 84% of crash incidents and approximately 11% of crashes resulted in multiple pedestrians being injured. A total 37 children were killed between 2009 & 2013 as a result of pedestrian crashes. Despite the large number of crashes during this time period, nearly three-fourths of drivers were not cited for child pedestrian incidents.
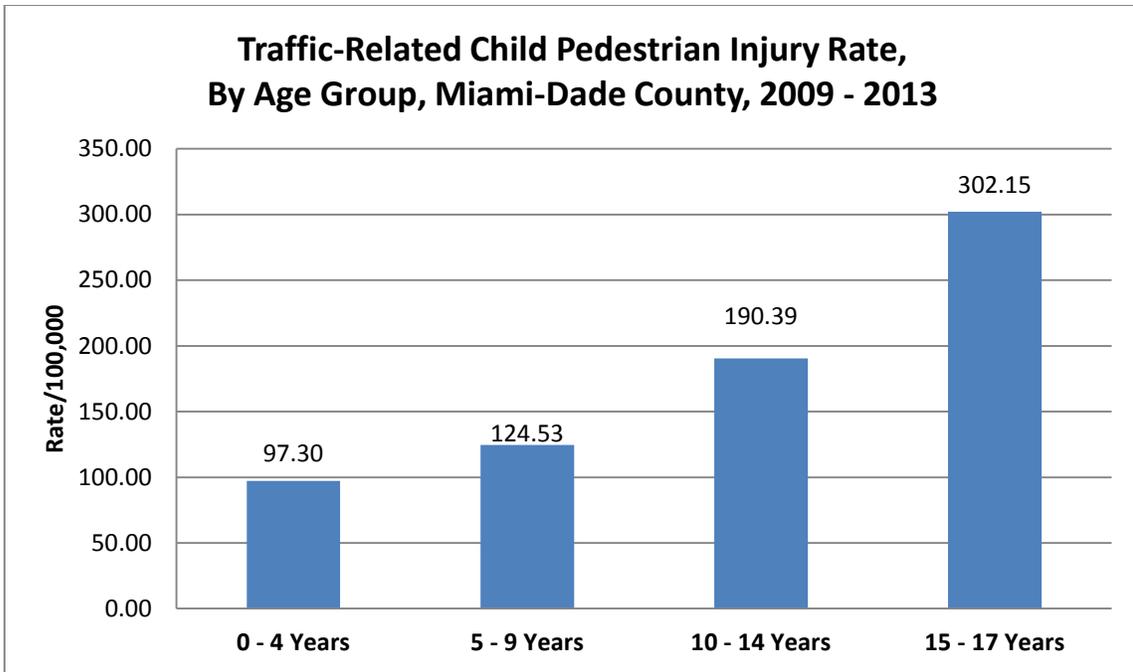
Pedestrian Injuries/Fatalities by Year of Incident, Miami-Dade County 2009 - 2013

Number of Injuries by year:
- 2009: 311
- 2010: 297
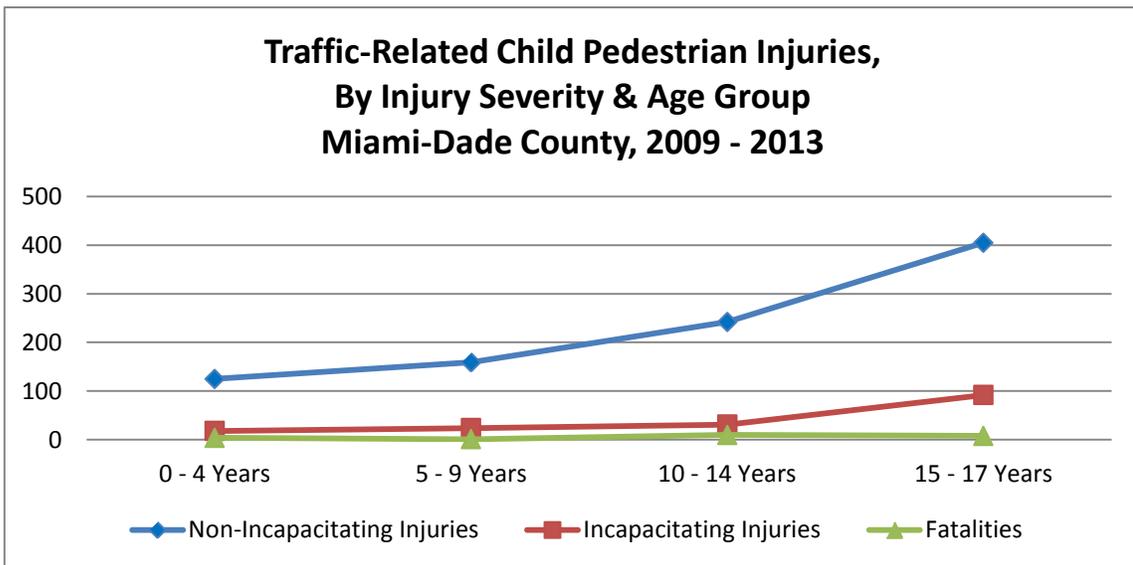- 2011: 279
- 2012: 302
- 2013: 276
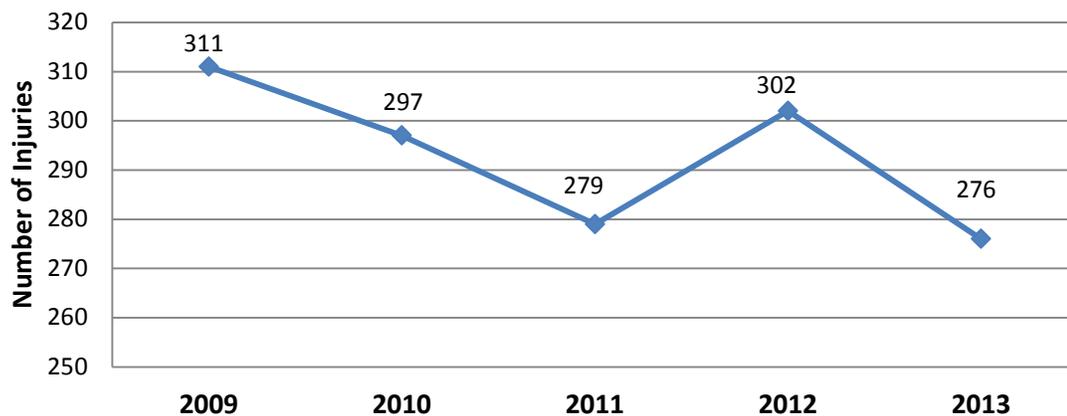
Pedestrian Injury Rate Trends by Age Group

The trends for pedestrian injury rates were examined for four age groups. As children aged, their risk to be injured in a pedestrian incident increased. Injury rates were highest among teenagers aged 15 – 17 years, which was more than 1.5 times higher than 10 – 14 year olds. This may be due to more risk taking among adolescents when crossing streets as compared to younger children.

Traffic-Related Child Pedestrian Injury Rate,
By Age Group, Miami-Dade County, 2009 - 2013

Rate/100,000

- 0 - 4 Years: 97.30
- 5 - 9 Years: 124.53
- 10 - 14 Years: 190.39
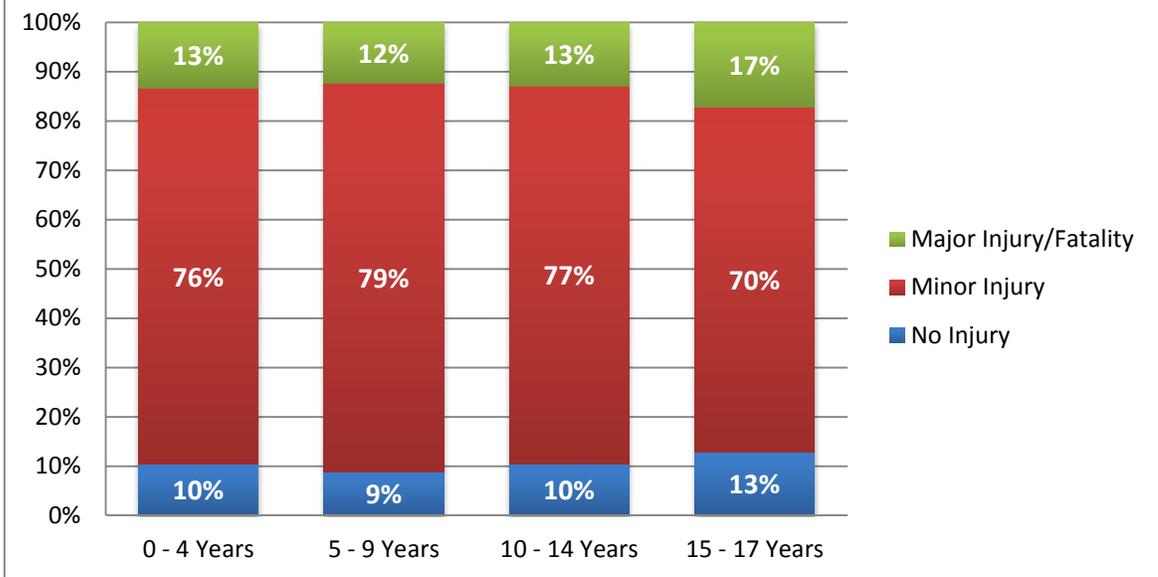- 15 - 17 Years: 302.15

Severity by Age Group: The majority of incidents among child pedestrians across all age groups resulted in minor (non-incapacitating) injuries. The majority of major (incapacitating) injuries occurred among high school aged children. In addition, this age group also was involved in the most pedestrian incidents resulting in minor injuries.

Traffic-Related Child Pedestrian Injuries,
By Injury Severity & Age Group
Miami-Dade County, 2009 - 2013

— Non-Incapacitating Injuries — Incapacitating Injuries — Fatalities

The distribution of injury severity was similar across the four different age groups, with the percent injured/killed ranging from 87% for teenagers aged 15 – 17 years to 91% for 5-9 year old children.

Severity of Child Pedestrian Incidents by Age Group, Miami-Dade County, 2009 - 2013

| Age Group	Major Injury/Fatality	Minor Injury	No Injury
0 - 4 Years	13%	76%	10%
5 - 9 Years	12%	79%	9%
10 - 14 Years	13%	77%	10%
15 - 17 Years	17%	70%	13%

Fatal MVC occupant rates among adults aged 18 – 44 & 45 – 64 years have declined 21% and 24%, respectively between 2008 and 2012. In contrast, fatality rates have increased 11% among adults aged 65+ years during the same time period.

Trends in Fatal MVC Injury Rates by Gender & Race

• **Gender:** Nearly sixty percent of child pedestrians injured in a crash were males. Between 2009 & 2012, the male pedestrian injury rate was 48/100,000, which was approximately 1.25 times higher than the female rate (38/100,000).
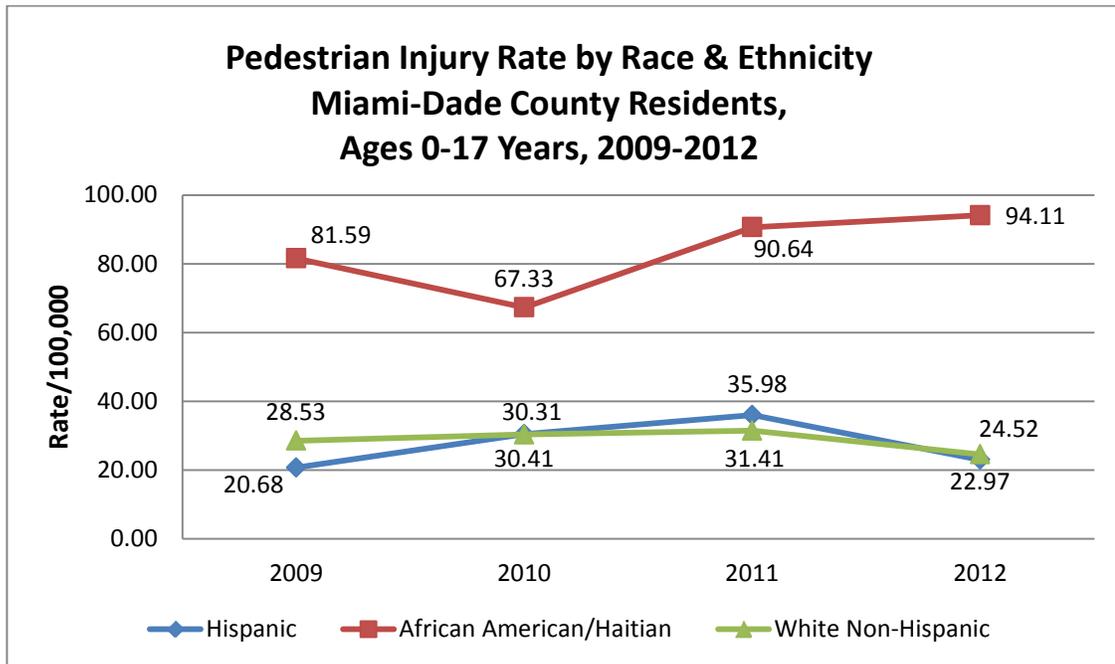
Pedestrian Injury Rate by Gender Residents Aged 0-17 Years, Miami-Dade County, 2009-2012

Rate/100,000

Year	Males	Females
2009	~50	~32
2010	~47	~34
2011	~51	~49
2012	~43	~37
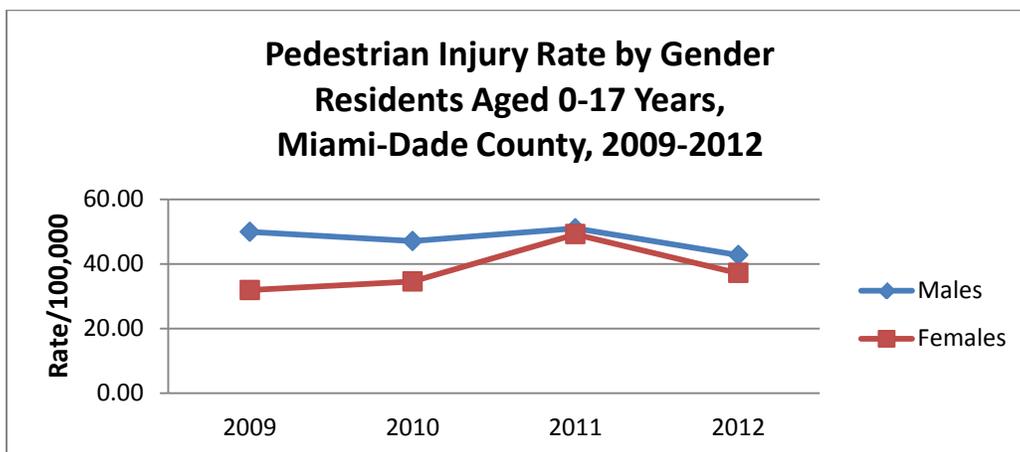
 • **Race/Ethnicity:** African-American children were disproportionately affected by pedestrian injuries, representing 43% of all child victims between 2009 & 2012. Furthermore, half of the pedestrian fatalities occurred among African-American children.
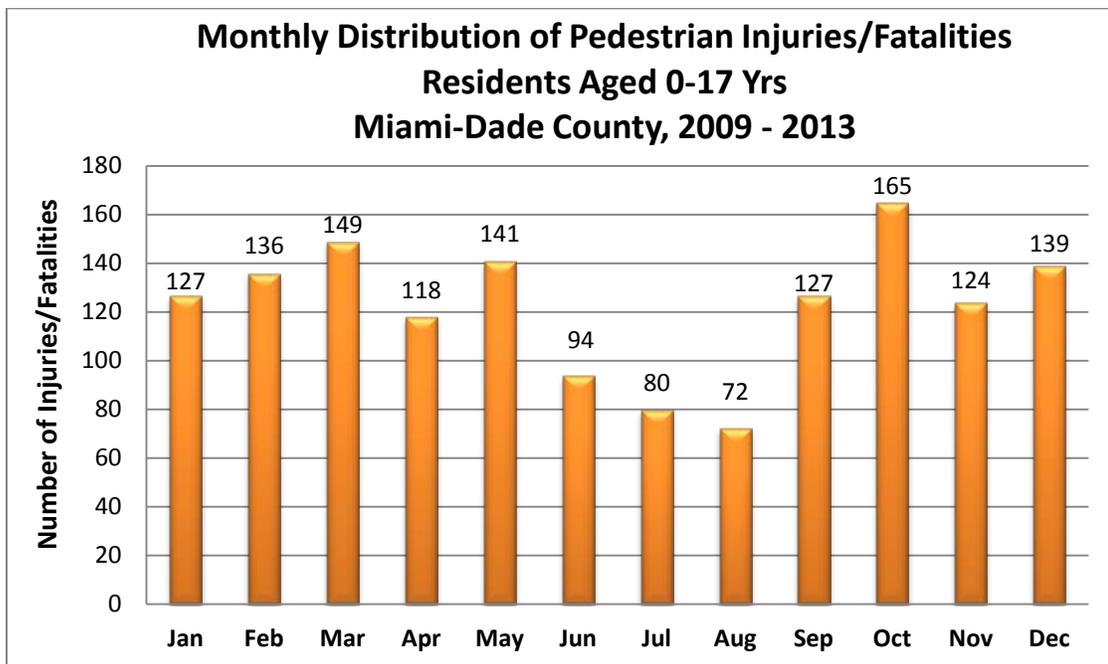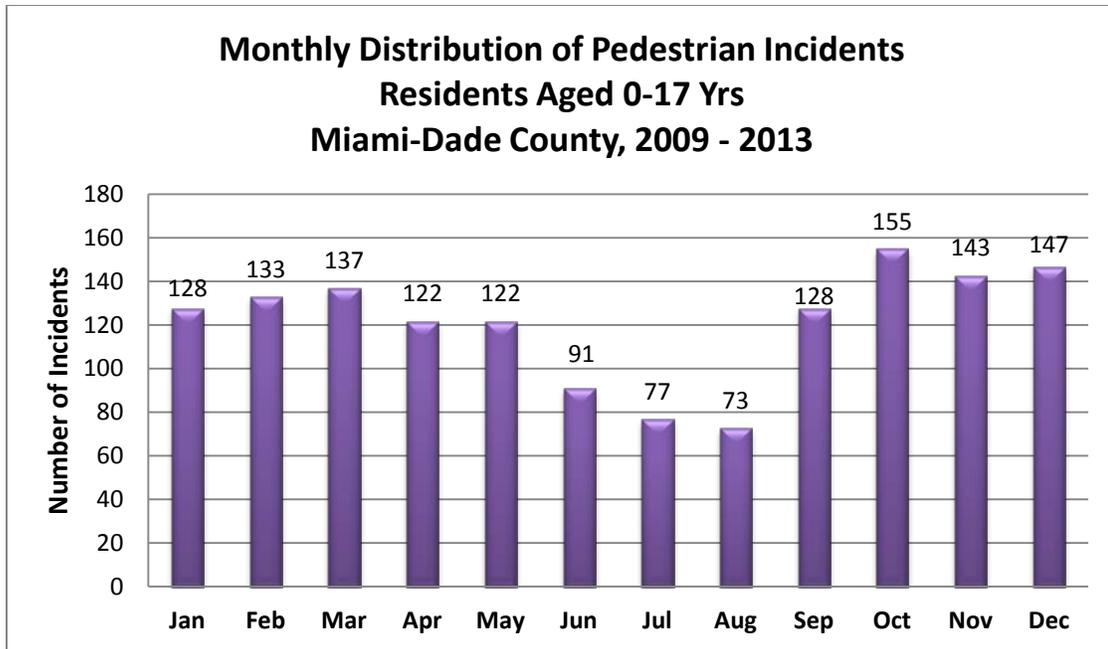
The 2012 injury rate for African-American children was approximately 4 times higher than Hispanic children and White-Non Hispanic children. The child pedestrian injury rate declined 14% for White Non-Hispanic children. In contrast, pedestrian injury rates increased 11 & 15% for Hispanic and African American children, respectively between 2009 & 2012.

Pedestrian Injury Rate by Race & Ethnicity
Miami-Dade County Residents,
Ages 0-17 Years, 2009-2012

	2009	2010	2011	2012
Hispanic	20.68	30.41	35.98	22.97
African American/Haitian	81.59	67.33	90.64	94.11
White Non-Hispanic	28.53	30.31	31.41	24.52

Rate/100,000

— Hispanic   — African American/Haitian   — White Non-Hispanic
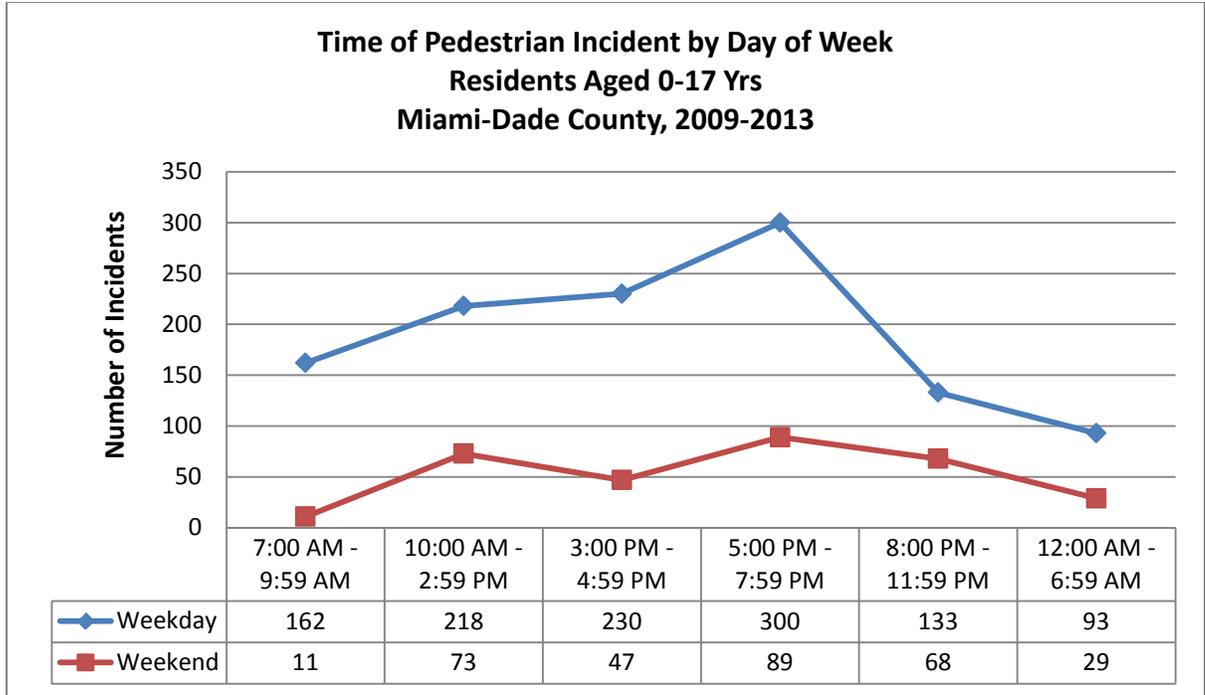
Factors Involved in Child Pedestrian Incidents

• **Seasonality of Incidents**: During the 5-year period, child pedestrian incidents and injuries demonstrated two variations throughout the year: a decline between May and August and a doubling of incidents and injuries between August and October. These two fluctuations correspond to the months children end and return to school and emphasize the importance of conducting programs pertaining to prevention of pedestrian injuries prior to the start of the school year.

Monthly Distribution of Pedestrian Incidents
Residents Aged 0-17 Yrs
Miami-Dade County, 2009 - 2013

Number of Incidents

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
128	133	137	122	122	91	77	73	128	155	143	147

Monthly Distribution of Pedestrian Injuries/Fatalities
Residents Aged 0-17 Yrs
Miami-Dade County, 2009 - 2013

Number of Injuries/Fatalities

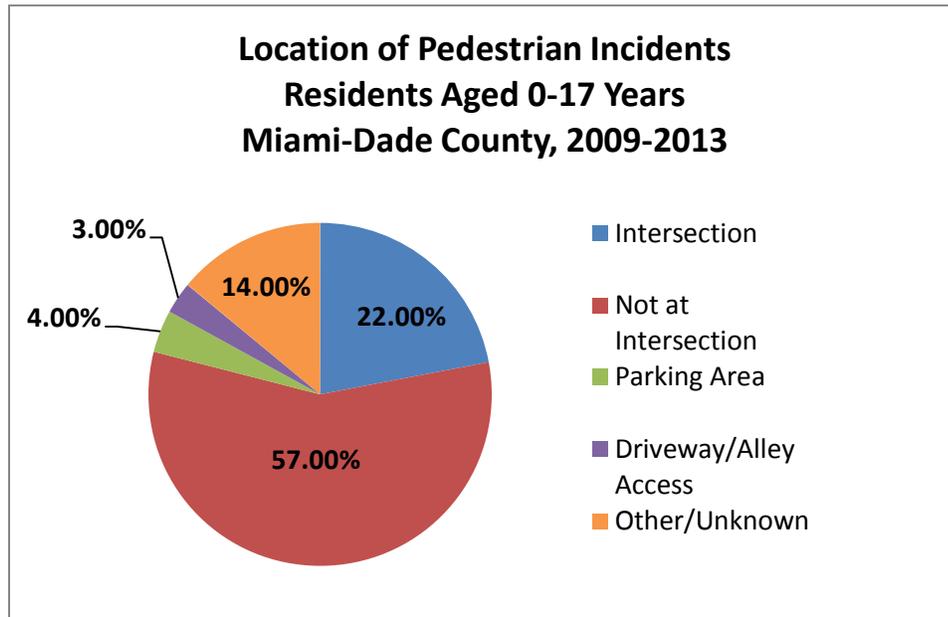| Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
127	136	149	118	141	94	80	72	127	165	124	139

Time of Incident: Overall, incidents steadily increased after 9am, reaching their peak in the hours between 5:00pm – 7:59pm (27% of all incidents). Moreover, both weekday and weekend incidents peaked during the same time period. Overall, approximately 42% of incidents occurred on a weekday between the hours of 7:00 am-4:59 pm, which would correspond to the times when children would be either walking to, from or attending school.

Time of Pedestrian Incident by Day of Week
Residents Aged 0-17 Yrs
Miami-Dade County, 2009-2013

	7:00 AM - 9:59 AM	10:00 AM - 2:59 PM	3:00 PM - 4:59 PM	5:00 PM - 7:59 PM	8:00 PM - 11:59 PM	12:00 AM - 6:59 AM
Weekday	162	218	230	300	133	93
Weekend	11	73	47	89	68	29

Location of Incidents: The majority of child pedestrian incidents occurred at non-intersection locations (57%). Incidents that occurred at intersections or at locations influenced by an intersection accounted for another 22% of cases. Parking lots were the 3rd most frequent location with 4% of incidents.

Location of Pedestrian Incidents
Residents Aged 0-17 Years
Miami-Dade County, 2009-2013

- 3.00%
- 14.00%
- 4.00%
- 22.00%
- 57.00%

- Intersection
- Not at Intersection
- Parking Area
- Driveway/Alley Access
- Other/Unknown

Where Pedestrian Incidents Occurred

The following maps present data on child pedestrian incidents that occurred between the years 2009 & 2013.

The vast majority of child pedestrian incidents were clustered in the northern-central and northeast sections of the county, in particular the following zip codes: 33142 (Brownsville), 33147 (West Little River), 33150 (Little Haiti), 33127 (Wynwood), 33161 (North Miami), and 33056 (Carol City, Miami Gardens).

Other areas that demonstrated some clustering of pedestrian injury included:
• 33139 zip code which corresponds to the Miami Beach area.
• 33176 and 33157 zip codes which correspond to Kendall, Palmetto Bay, and Cutler Bay areas

Traffic Crashes Involving Pedestrians Aged 0 - 17 Years
Miami-Dade County, 2009 - 2013
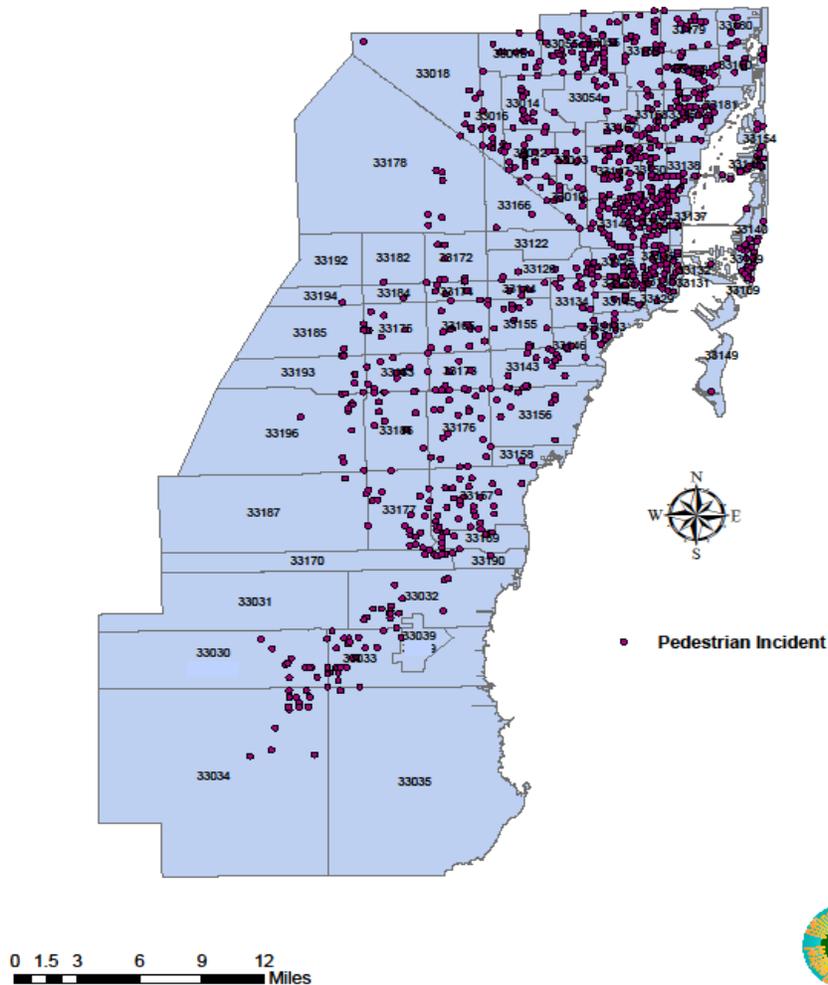
Leading Zip Codes for Child Pedestrian Incidents

The six zip codes that experienced the most child pedestrian incidents between 2009 & 2013 were all located in the northern-central & northeast sections of the county:

- 33147 (W. Little River, Brownsville areas: 51 incidents)
- 33142 (Allapattah, Brownsville area: 46 incidents)
- 33056 (Miami Gardens area: 45 incidents)
- 33161 (North Miami area; 45 incidents)
- 33150 (Pinewood, Model City, Little Haiti areas: 44 incidents)
- 33127 (Little Haiti, Model City areas: 40 incidents)

Four of these zip codes (33147, 33142, 33150, & 33127) are adjacent to each other.

Zip Codes 33147, 33142, 33150, & 33127
(West Little River, Brownsville, Pinewood, Model City, & Little Haiti)

The map below shows the locations of 181 child pedestrian incidents that occurred in the zip codes 33147, 33142, 33150, & 33127.

Within these zip codes, several areas with high numbers of pedestrian incidents are highlighted:

- Along NW 7 Avenue between NW 62 Street & NW 95 Street
- The area between NW 22 Ave & NW 12 Ave and NW 54 Street & NW 62 Street
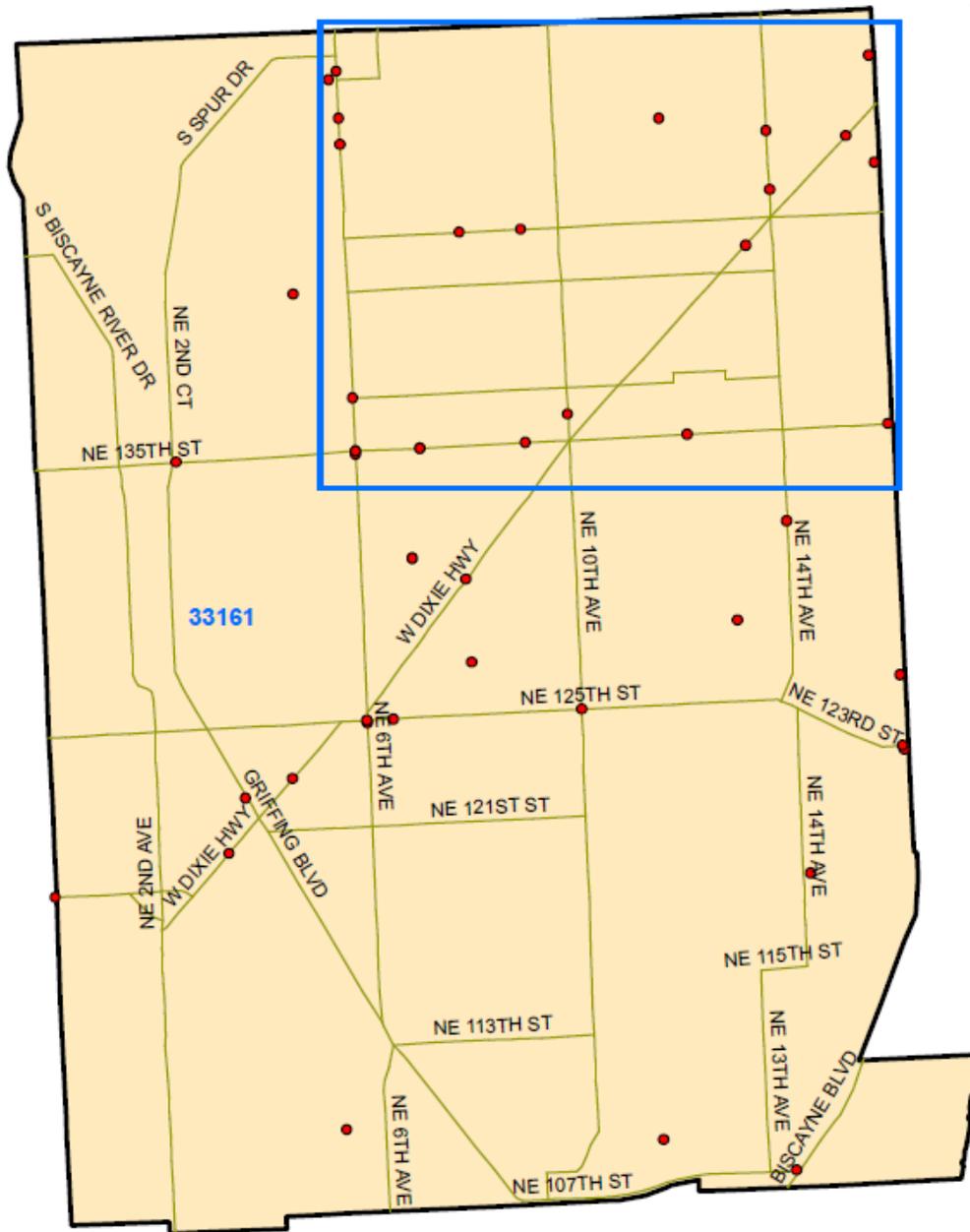- Along NW 79 Street between NW 32 Ave & NW 2 Ave
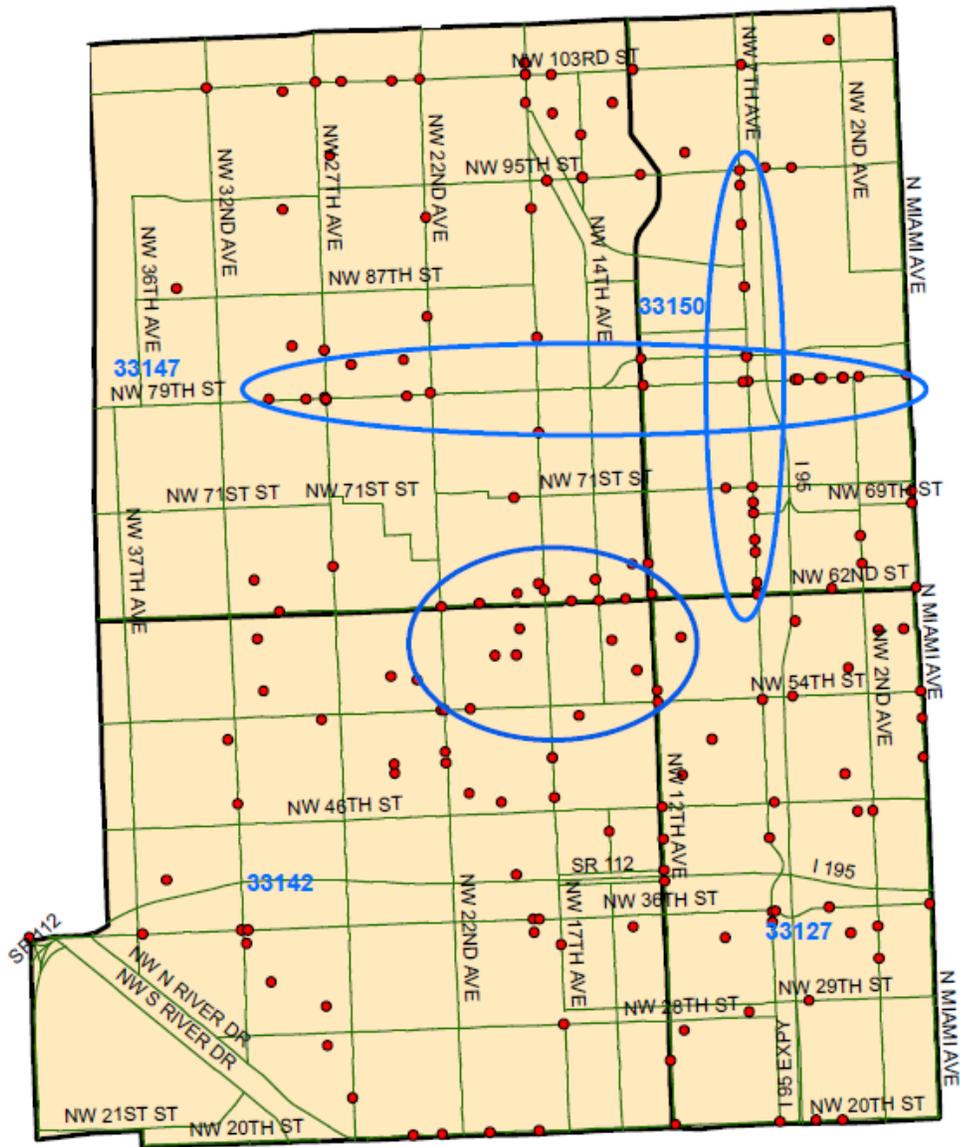
Zip Code 33161 (North Miami)

The map below shows the locations of 45 child pedestrian incidents that occurred in the zip code 33161.

Within this zip code, one area with high numbers of pedestrian incidents is highlighted:

• The area between NE 6 Ave & NE 16 Ave and NE 135 Street & NE 151 Street

Zip Code 33056 (Miami Gardens)

The map below shows the locations of 45 child pedestrian incidents that occurred in the zip code 33161.

Within this zip code, two areas with high numbers of pedestrian incidents are highlighted:

- Along NW 27 Ave between NW 167 Street & NW 183 Street
- Along NW 37 Ave between NW 175 Street & NW 199 Street
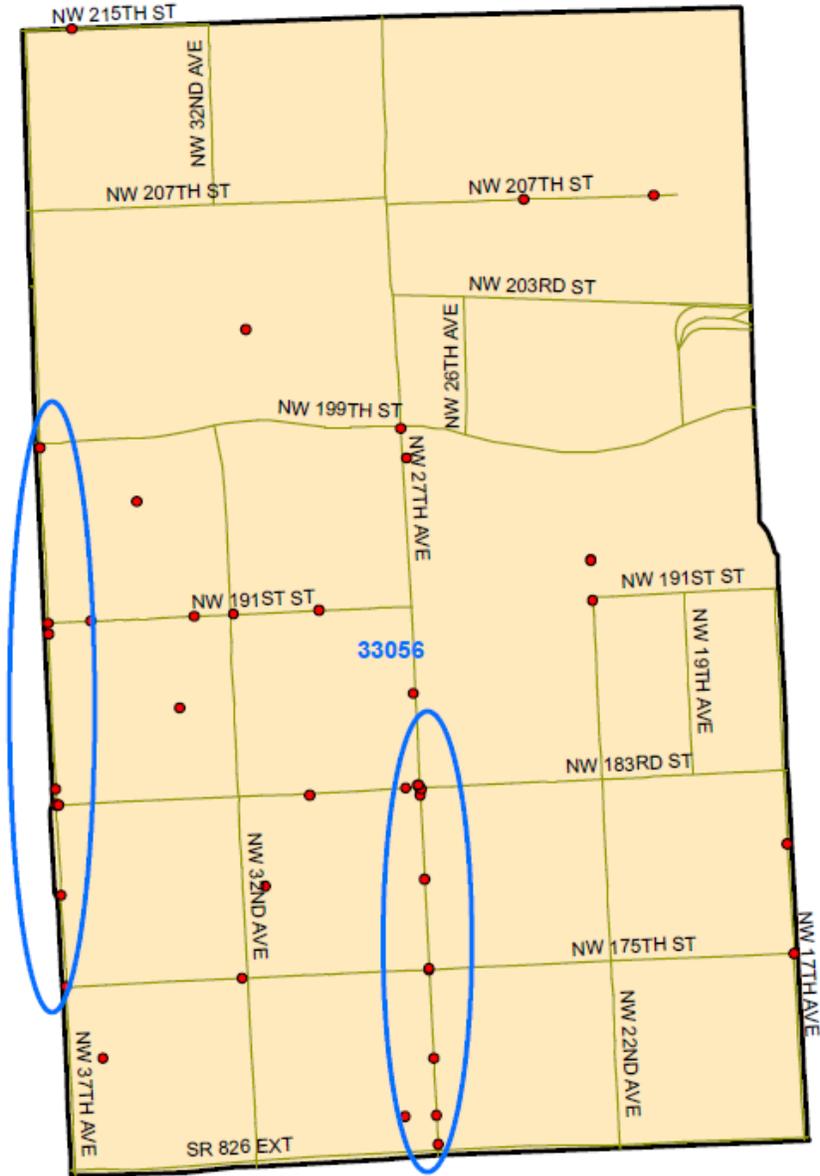
Where Do Most Child Pedestrian Injuries and Deaths Occur?

Many child pedestrian deaths occur in the evenings when visibility may be reduced. Areas that pose an increased risk of injury or death as a child pedestrian, according to the National SAFE KIDS Campaign, include the following:

- High traffic areas
- Areas with a high number of parked vehicles on street
- Areas with higher posted speed limits
- Areas with no divided highways
- Areas with few pedestrian-control devices, such as crosswalk signals
- Areas that lack clear pedestrian pavement markings
- Locations that lack designated play areas
- Residential areas

How to Keep Your Child Safe as a Pedestrian?

To help prevent your child from getting hurt as a pedestrian, the National SAFE KIDS Campaign recommends the following tips:

- Children under age 10 should not be allowed to cross streets by themselves.
- Teach proper pedestrian behavior by modeling pedestrian behavior, such as crossing at street corners, using traffic signals and crosswalks when available, and making eye contact with drivers before crossing.
- Teach children to look LEFT, RIGHT, and then LEFT again when crossing a street, and to continue looking around when crossing.
- Teach children that seeing the driver in a vehicle does not mean that the driver can see them.
- Never allow children to run into the street.
- Do not allow children to play in driveways, unfenced yards, streets, or parking lots.
- When walking along a street with no sidewalks, teach children to walk facing oncoming traffic, as far left as possible.
- Teach children to cross the street at least 10 feet in front of a school bus.
- Children should wait for adults on the same side of the street where the school bus loads and unloads.

Other preventive measures to take may include insisting on safer traffic measures, pedestrian walkways that separate pedestrians from the traffic, and lower speed limits.