



July 2011

# Hospitalized Injuries Due to Motor Vehicle Crashes Miami-Dade Co. Children Aged 0-17 Years, 2000-2010

## Miami-Dade County Injury Facts

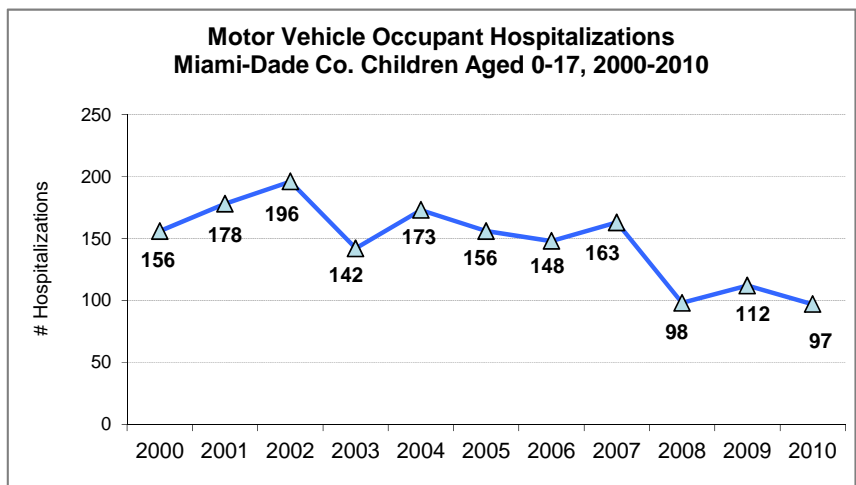


Being an occupant in a motor vehicle crash is the 3<sup>rd</sup> leading cause of hospitalized injury among children aged 0-17 years in Miami-Dade County since 2000.

This fact sheet reviews trends in motor vehicle crash (MVC) injuries that resulted in hospitalization to Miami-Dade County children age 0-17 over the 11-year period 2000-2010.

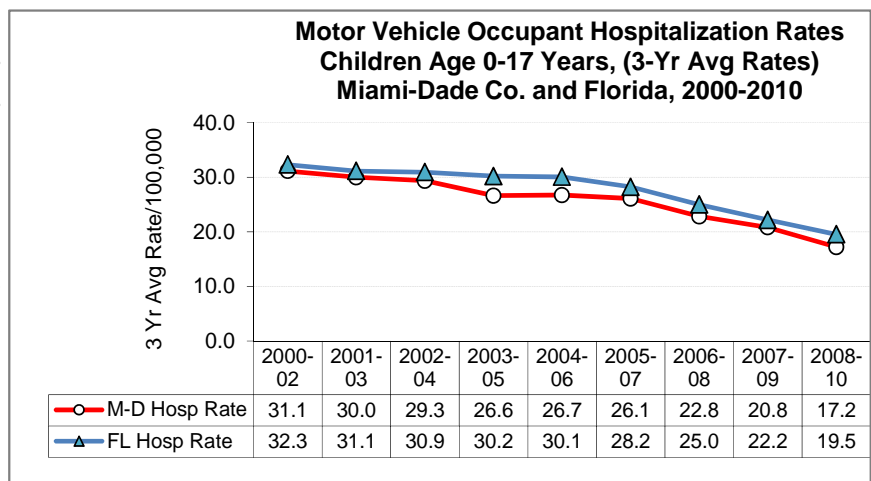
### Trends for Hospitalizations Child MVC Deaths

- Between 2000-2010, 1,619 MVC injuries occurred to children that required hospitalization. Like MVC deaths, they have declined since 2004.
- Among hospitalized cases, 18% were drivers, 75% passengers and 6% unknown. Information on child restraint use is not available from hospital data.



The trends for hospitalized MVC injury rates were examined using rolling 3-year average rates. Three year average rates are used because they are more stable compared to annual rates.

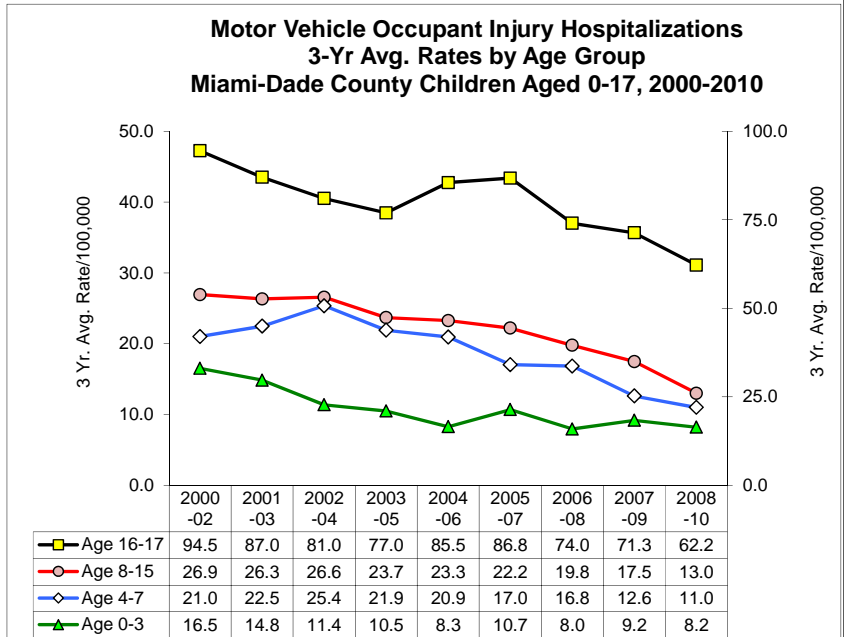
- There has been a linear decline in the 3-year avg. county hospitalization rate, dropping 45% since 2000-02.
- The county's child MVC hospitalization rate has been virtually identical to the state injury rate over this 10-year period.



### Trends in Hospitalized MVC Injury Rates by Age Group

The trends for hospitalized MVC injury rates were examined for four child age groups.

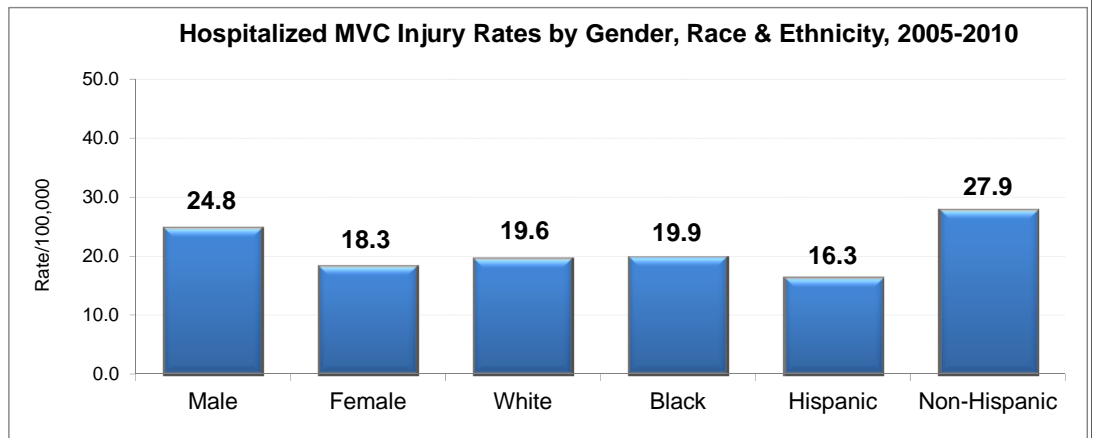
- The hospitalized MVC injury rate for ages 16-17 (black line) has declined 34% since 2000-02. More than 3/4 of that decline has occurred since 2005-07.
- The hospitalized MVC rate for ages 8-15 (red line) decreased 52% since 2000-02 and decreased every 3-year period since 2002-04.
- Ages 4-7 (blue line) corresponds to the ages when most children should be using booster seats or car seats with harnesses. After reaching its highest rate in 2002-04, the MVC injury rate has dropped 57%.
- Ages 0-3 (green line) corresponds to the age children must be properly restrained in car seats with harnesses. Since 2000-02, the injury rate for this age group has declined 50%. However, the MVC injury rate for this age group has been relatively unchanged since 2004-06.



### Trends in Hospitalized MVC Injury Rates by Gender, Race and Ethnicity

Over the 10 years 2000-2009:

- The hospitalized MVC injury rate for males was 36% higher than females.
- The risk for hospitalized MVC injury was similar for white and black children.
- Non-Hispanic children had a 71% higher rate for hospitalized MVC injuries than Hispanic children.



## Primary Injury Diagnosis for Hospitalized Child MVC Victims

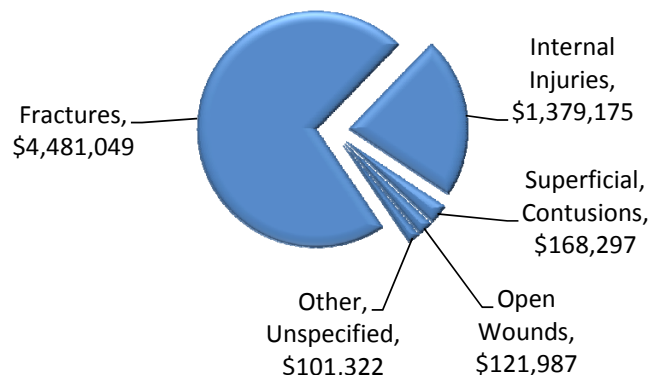
- Overall, there was little difference across the 4 age groups in the types of injury that were listed as the primary diagnosis among hospitalized cases.
- Traumatic brain injuries were the most common injury diagnosis for every age group but the incidence of both MVC-related total TBI and skull fracture decreased as the children aged.
- Lower extremity fractures were the second most common diagnosis for every age group, accounting for one in six hospitalizations.
- Internal injuries to the torso region, a common seatbelt-related injury to children, were either the 3rd or 4th leading type of injury for all four age groups.

Leading Primary Diagnoses for Hospitalized Patients by Age Group, 2000-2010			
Age 0-3	Age 4-7	Age 8-15	Age 16-17
TBI, 39%	TBI, 27%	TBI, 26%	TBI, 24%
TBI Fracture, 21%	TBI Fracture, 10%	TBI Fracture, 10%	TBI Fracture, 5%
TBI Internal, 18%	TBI Internal, 17%	TBI Internal, 16%	TBI Internal, 19%
Lower Ext. Fracture, 13%	Lower Ext. Fracture, 12%	Lower Ext. Fracture, 14%	Lower Ext. Fracture, 15%
Head/Neck: Open Wound, 10%	Torso Internal Injury, 12%	Torso Internal Injury, 13%	Torso Internal Injury, 15%
Torso Internal Injury, 8%	Head/Neck: Open Wound, 11%	Head/Neck: Open Wound, 7%	Upper Ext. Fracture, 8%
Upper Ext. Fracture, 3%	Upper Ext. Fracture, 6%	Upper Ext. Fracture, 6%	Vertebral Col. Fract./Disloc. 7%

## Hospital Charges for Child MVC Victims

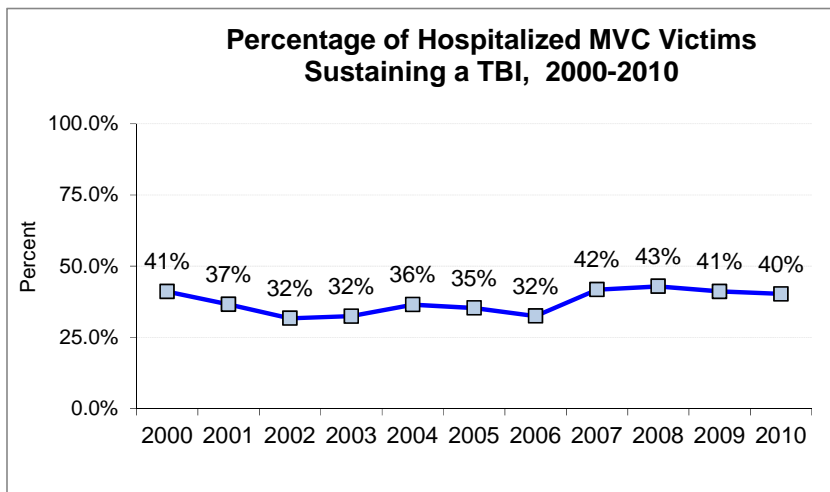
- Hospitalized MVC injuries to children age 0-17 resulted in more than 6 million dollars in hospital charges during 2010.
- Fractures accounted for nearly 4.5 million dollars (72%) of the total charges followed by 1.3 million dollars (22%) for internal injuries.
- The median charge for a hospitalized child MVC patient in 2010 was \$18,889.

**Hospital Charges by Primary Injury Diagnosis  
Hospitalized MCV Injuries, Age 0-17 Years, 2010**

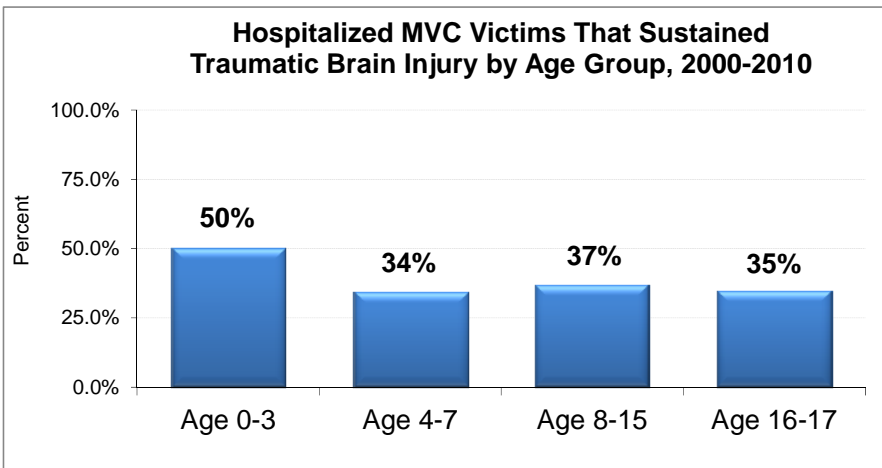


### Traumatic Brain Injury Incidence for Hospitalized Child MVC Victims

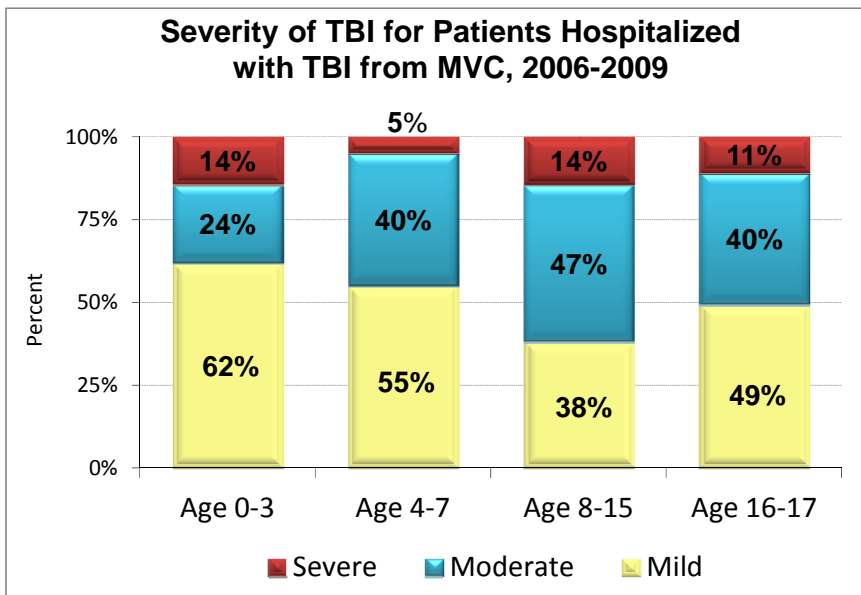
- Overall, 37% of child hospitalized cases were diagnosed with a TBI.
- There was little change in hospitalized TBI incidence over the decade.



- One-half of the children aged 0-3 were hospitalized with a MVC-related TBI compared to 1/3 of MVC hospitalizations for the other three age groups.



- An estimate of TBI severity was obtained for hospitalizations that occurred during the years 2006-2009.
- Children 8-15 had the worst TBI severity profile: 61% of their TBI injuries were classified as moderate or severe, a substantially greater percentage than the other three age groups (age 0-3: 38%, age 4-7: 45%, age 16-17: 51%).

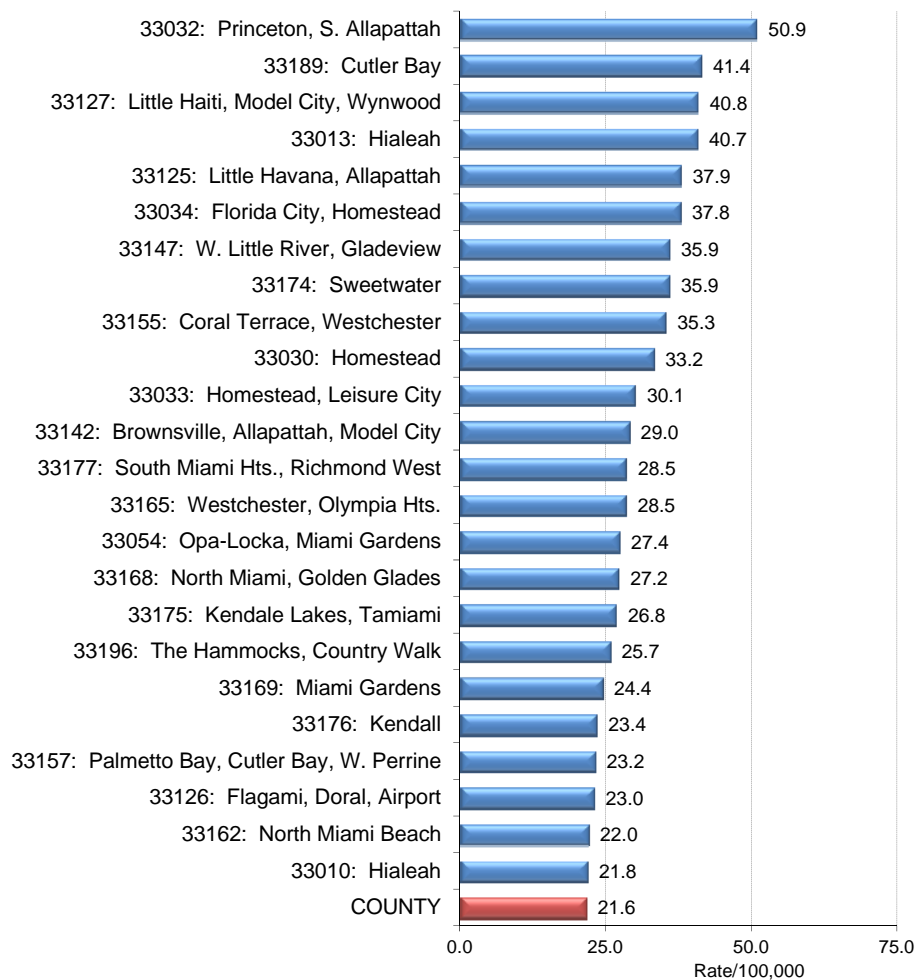


## Zip Code of Residence for Hospitalized Child MVC Injury, 2005-2010

Rates for child MVC injuries that resulted in hospitalization for the 6-year period 2005-2010 were calculated for the victim's zip code of residence. The graph below shows those zip codes that experienced at least 12 MVC hospitalizations since 2005 and had a hospitalized MVC injury rate greater than the county rate.

- Two zip codes in south Miami-Dade had the two highest child MVC rates in the county: 33032 in the Princeton/S. Allapattah communities (31 hospitalized) and 33189 in Cutler Bay (19 hospitalized).
- Two adjacent zip codes, 33127 in the Little Haiti, Model City areas (21 hospitalizations) and 33147, which includes W. Little River (31 hospitalizations), had the 3rd and 7th highest hospitalized rates.
- The zip code 33013 in Hialeah (16 hospitalized) had the 4th highest MVC hospitalization rate.
- Three zip codes in the Homestead/Florida City area were among the 11 highest MVC hospitalization rates: 33034 (13 hospitalized), 33030 (20 hospitalized) and 33033 (27 hospitalized).

**MVC-Occupant Hospitalized Injury Rate by Zip Code of Residence  
Residents Aged 0-17 Years  
6-Year Avg. Rate/100,000, Miami-Dade Co., 2005-2010**



## Prevention Points

- Everybody needs a child safety seat, booster seat, or safety belt - on every ride.
- Not properly restraining a child is against the law and punishable by a fine.
- Never hold a child on your lap in a car! You could crush him/her in a crash, or the child may be torn from your arms. You are not as strong as the force of the vehicle and its speed.
- All children under 13 years old should ride properly restrained in the back seat:
  - Children 0-24 months should be in rear facing car seats.
  - Children older than 24 months and less than 40 pounds in weight should travel in a forward facing car seat with a harness.
  - Children more than 40 pounds should use a booster seat with the car's lap/shoulder belt or a car seat with a five point harness that accommodates children over 40 pounds.
  - Children between 8-11 years old or at least 4'9" tall are ready to use the adult lap/shoulder belt if:
    1. The shoulder belt lies across the middle shoulder and chest (not against the neck).
    2. The lap belt lies low across the upper thighs (not across the stomach).
    3. The child is tall enough to sit against the vehicle seat back with knees bent naturally over the edge of the seat without slouching and can stay in that position throughout the trip.
- Each child must be in a car seat sized according to the child's age, height and weight. Check with a Certified Passenger Safety Technician to help you choose the correct car seat and make sure you are using it properly. Child Passenger Safety Programs and Technicians are available in Miami-Dade County at:
  1. Injury Free Coalition for Kids of Miami 305-243-3928
  2. City of Miami Beach Fire Rescue Child Passenger Safety Program 305-673-4935
  3. Florida Highway Patrol Child Car Seat Program 305-470-2260
  4. Miami Dade Fire Rescue Child Car Seat Program 786-331-4927
  5. Miami Dade Police Department Child Car Seat Program 305-471-3055
  6. To locate a child safety seat inspection station outside the Miami area call 866-SEAT-CHECK

### Produced by the Miami-Dade County Injury Surveillance System

Data Sources: Death Certificates, Office of Vital Statistics, FL Dept. of Health  
 Medical Examiner Records, Miami County Medical Examiner Dept.  
 Hospital Discharge Data, Agency for Health Care Administration  
 PHONE (IFCK): 305-804-7212 (MDCHD): 305-470-5649  
 E-MAIL: [stephen.dearwater@jhsmiami.org](mailto:stephen.dearwater@jhsmiami.org)  
 WEBSITE: <http://dadehealth.org/injury/INJURYintro.asp>

