

# Unintentional Fall Injuries to Children Aged 0-17 Miami-Dade County, 2005-2009

## Miami-Dade County Injury Facts

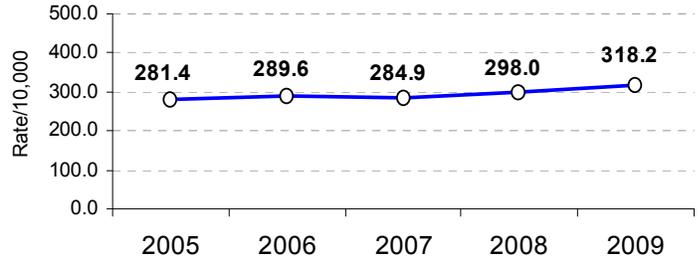


Falls are far and away the leading cause of nonfatal injury to children aged 0-17 years, accounting for 35% of all nonfatal medically-treated injuries.

Between 2005-2009, there were 5 deaths, 2,026 hospitalizations and 85,850 emergency department (ED) visits and due to unintentional falls to Miami-Dade County children aged 0-17 years. Therefore, for every fall death there were another 405 hospitalizations and 17,170 ED visits for falls.

- The injury rate for unintentional falls to children has increased slightly since 2007, up 5% in 2008 and another 7% in 2009.
- Unintentional falls occurred most frequently during the afternoon and evening hours of 6pm-9pm (25% of cases).
- There was no difference regarding the day when falls occurred.

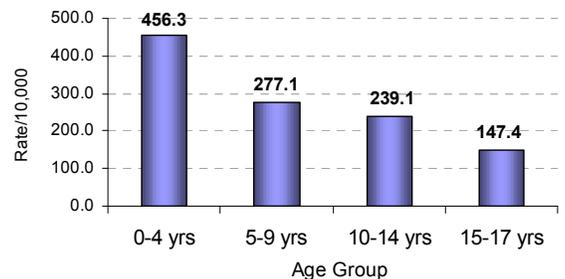
**Unint Fall Injury Rate, Residents Aged 0-17  
Miami-Dade Co., 2005-09**



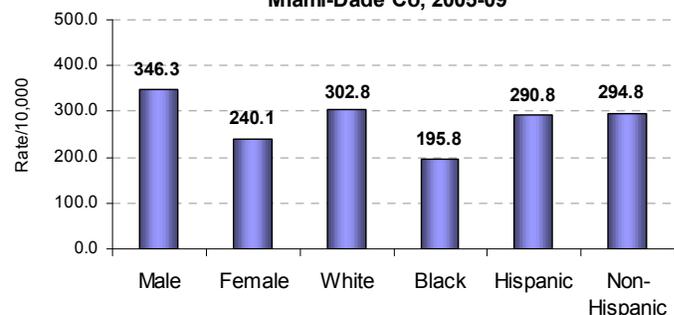
### Who is At Risk?

- Unintentional falls occurred most often to children under 5 years of age (44% of fall injuries). The age 0-4 fall injury rate was 65% higher than children aged 5-9 and decreased as children aged.
- Male children suffered 60% of unintentional falls and had a rate 44% higher than female children.
- White children suffered 73% of unintentional falls and had a rate 55% higher than black children.
- There were no ethnic differences for unintentional fall rates among county children.

**Unintentional Fall Injury Rate by Age Group  
Deaths, Hospitalizations and ED Visits  
Miami-Dade Co, 2005-09**

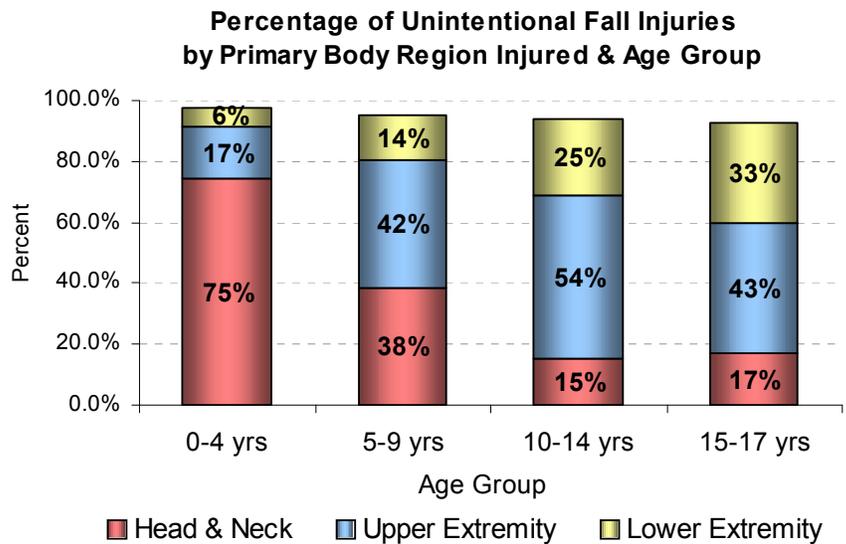


**Unintentional Fall Injury Rate by Gender, Race, Ethnicity  
Deaths, Hospitalizations and ED Visits  
Miami-Dade Co, 2005-09**



## Body Region Injured by Unintentional Fall Injuries

- 47% of all medically-treated fall injuries occurred to the head or neck, of which 16% resulted in a diagnosis of traumatic brain injury (TBI).
- Upper (34%) and lower (15%) extremities were the next most common site of fall injuries.
- 3 of every 4 nonfatal fall injuries to children aged 0-4 years were to the child's face or head.
- As children aged, the percentage of fall injuries to the face or head decreased and injuries to the upper and lower extremities increased.



## Primary Injury Diagnosis

### Nature of Injury:

- Fractures (27%), open wounds (25%) and superficial injuries such as contusions (20%) accounted for nearly 3/4 of medically-treated unintentional fall injuries.

### Primary Diagnosis:

- Upper extremity fractures were the most common primary diagnosis, accounting for 39% of hospitalized falls and 21% of falls treated in the ED.
- Open wounds to the head or neck (22%) were the most common injury treated in the ED.
- One-third of hospitalized patients and 15% of ED patients were diagnosed with a traumatic brain injury.

5 Leading Injury Diagnoses	Hospital	ED Visit	All Falls
Upper Extremity Fracture	39%	21%	22%
Open Wound: Heck or Neck	1%	22%	22%
Traumatic Brain Injury	31%	15%	16%
Superficial Wound: Heck or Neck	5%	11%	11%
Lower Extremity: Sprain/Strain	< 1%	5%	5%

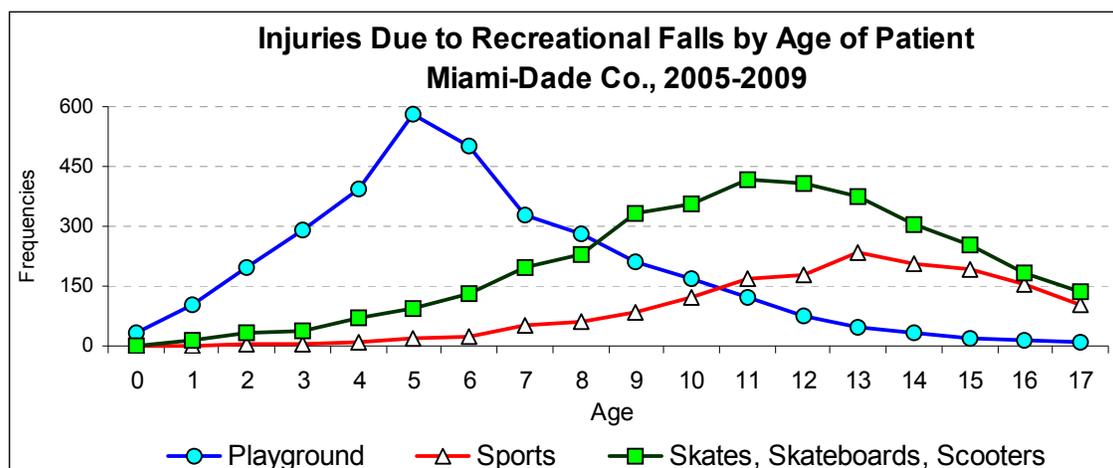
## Activities Causing Injuries Due to Falls

Identifying the causes for any injury is essential for injury prevention because modifying or eliminating the external causes are among the most effective ways to prevent injury. Unfortunately, the data sources we use to monitor injury often don't provide enough information to identify the specific cause of an injury. As seen in the table below, 39% of the fall injuries were coded in the medical record as an unspecified fall. Among fall-related injuries that contained a cause-of-injury, the leading causes of child fall injuries included:

- Slipping or tripping on the same level was the most common cause of a medically-treated fall injury for every age group. Records don't specify on what or where the children tripped or slipped.
- Falls from bed caused nearly 1/2 of fall injuries to infants < 1 year old and was the 2nd leading cause of fall injury to children 1-4 years old.

Mechanism of Fall	Number	Percent
Fall: slip, trip (on same level)	16,646	19%
Fall from bed	8,542	10%
Fall striking object	8,044	9%
Fall at playground	3,411	4%
Fall from chair	2,605	3%
Fall on stairs, steps	2,062	2%
Fall in sports, recreation	1,622	2%
Fall from skateboard	1,614	2%
Fall from furniture	1,510	2%
Fall: roller/inline skates	1,193	1%
Fall: unspecified	34,093	39%

- Injuries that occurred at playgrounds (blue line on graph) were the 4th leading cause of medically-treated falls (n=3,411). A total of 222 children were hospitalized due to playground falls and 3,189 were treated in the emergency dept. Playground injuries accelerated at age 2 and peaked at 5 years of age. More than one-half of the playground injuries were upper extremity fractures and 22% were injuries to the head or neck.
- Fall injuries that occurred during sports (red line) began increasing after age 6 and peaked at age 13. 45% of the injuries were upper extremity fractures and 16% sprains/strains to the lower extremities.
- Fall injuries that occurred while using skateboards, inline skates or non-motorized scooters (green line) accounted for 3,501 injuries and peaked between the ages 9-14 years. Upper extremity fractures (39%) were the most common injury. Another 18% suffered injuries to the head or neck (5% involved a TBI) and 9% suffered lower extremity fractures.

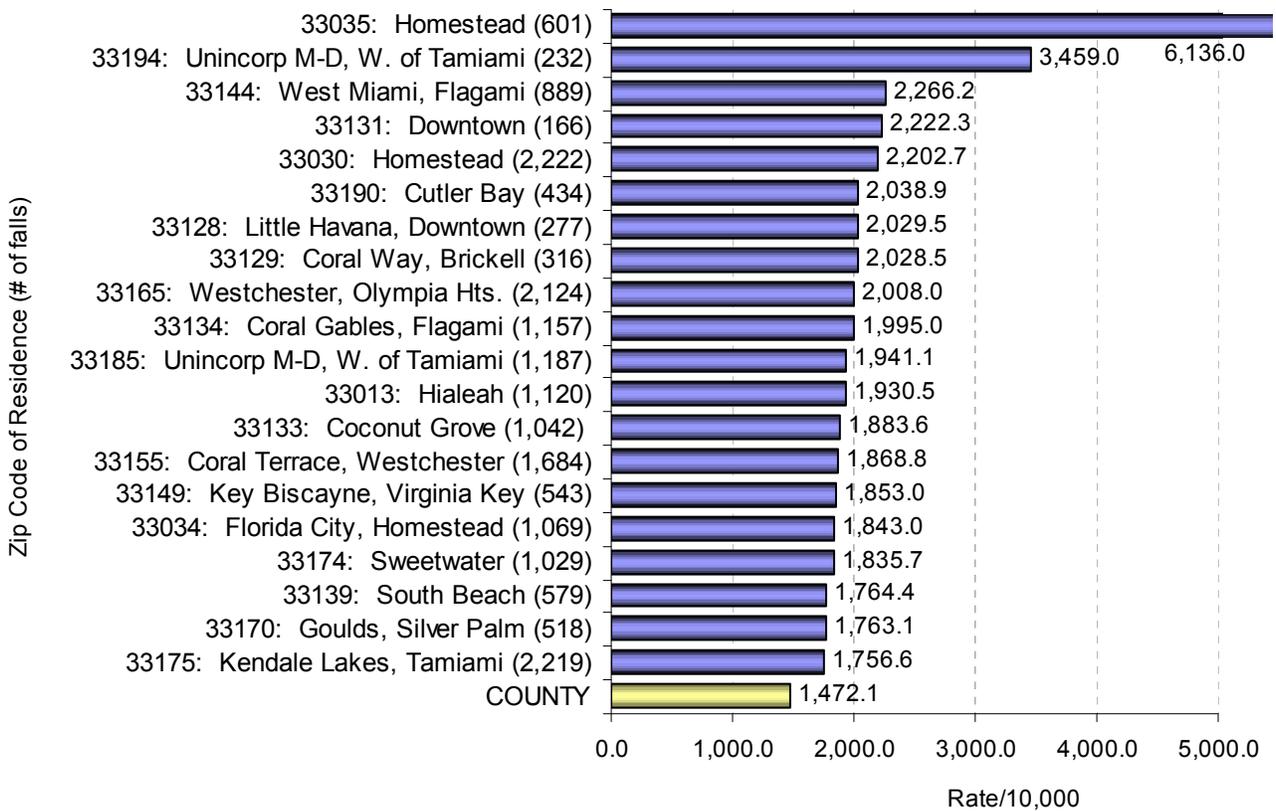


### Residence of Children Injured by Unintentional Falls

The graph below shows the 20 zip codes of residence in the county that experienced the highest injury rates due to unintentional falls to children aged 0-17 years between the years 2005-2009.

- Two zip codes in the Homestead area (33035, 33030) were among the 5 highest fall injury rates. The Homestead zip code 33035 had a fall-related injury rate that was more than 4 times greater than the rate for the entire county.
- The 33194 zip code (Unincorporated Miami-Dade) had the second highest rate of medically-treated falls to children and was more than twice the rate for the entire county.
- Four adjacent zip codes of 33144 (West Miami), 33165 (Westchester area) 33155 (Coral Terrace area) and 33174 (Sweetwater) were among the 20 highest fall injury rates to children.

**Deaths, Hospitalizations & ED Visits Due to Unintentional Falls  
Injury Rate for Residents Aged 0-17 by Zip Code of Residence  
Miami-Dade Co., FL 2005-2009**



## Reducing the Risk of Falls

These simple home safety tips can help reduce the risk of falls:

- Use gates at the top and bottom of staircases.
- Baby walkers should never be used. They are very dangerous because they can tip over and allow children to reach things they wouldn't otherwise get to. Instead, use a playpen or stationary play toy without wheels.
- Never leave a baby or child alone on furniture like changing tables, beds or sofas- not even for just a moment.
- Fasten straps on equipment such as high chairs, changing tables, and strollers.
- Consider window guards or stops for windows above the first floor. Fixed guards or bars (ones that can't be removed in an emergency) should not be used.
- Children should not play on balconies. Spaces between the vertical rails on balconies should be no wider than 4 inches.
- Secure heavy furniture, like dressers and bookshelves, to the wall with brackets or straps. These can tip over when a child tries to grab something or climb up.
- Try using something else besides a shopping cart. Use a front pack, backpack or stroller. Consider bringing another adult to watch your child if you can.
- If you do use a shopping cart,
  - Try to use safer carts - ones with seats that allow children to ride close to the ground.
  - Always have the child sit in the seat using the safety strap. They shouldn't be in the basket or standing on the outside.
  - Never place an infant carrier in or on top of the cart.

Active play is an important part of healthy child development. Spending time at the playground allows children to use muscles and move their bodies in new and challenging ways. Unfortunately, not every playground is as safe as it should be. To help prevent injuries, keep these things in mind as you choose a play space for your child:

- Always supervise children on playground equipment. Make sure you can see all play areas.
- Equipment checks:
  - The surface under the equipment should absorb energy to help prevent fall injuries. Good surface covers are rubber, a deep layer of sand, or wood chips. Exposed concrete, grass or wood are not acceptable.
  - There should be no exposed sharp or rusty parts. Screws and bolts should be capped.
  - Swings should be made of soft material, not wood or metal.
  - High surfaces should have guardrails to prevent falls.
  - Any space between equipment should be less than 3 ½ inches or more than 9 inches, to prevent children from getting trapped.
- Age-appropriate play areas: Play areas are usually made for either preschoolers or school-age children. Children should stick to play areas for their age group only. Equipment for school-aged children is not safe for pre-school children. Older children can also become trapped in the smaller pre-school equipment.

### 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 & ED 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>

