WalkSafe
Pedestrian Injury Prevention
State Workshop

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Jackson Memorial Medical Center

Sponsors and Funding

Agencies

• WalkSafe is sponsored by University of Miami Miller School of Medicine/Jackson Memorial Medical Center/Ryder Trauma Center

• Funding for WalkSafe is provided by:
  The Florida Department of Transportation:
  – Transportation Enhancement
  – Safe Routes to School
  The Children’s Trust
  FDOH: Florida Bureau of Emergency Medical Services
  The Miami Project to Cure Paralysis
  FedEx
10 Leading Causes of Death by Age Group, United States, 2007

| Unintentional Injury |

<table>
<thead>
<tr>
<th>Age Group (Years)</th>
<th>Total Deaths</th>
<th>Pedestrian Deaths</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;5</td>
<td>508</td>
<td>106</td>
<td>21</td>
</tr>
<tr>
<td>5-9</td>
<td>470</td>
<td>93</td>
<td>20</td>
</tr>
<tr>
<td>10-15</td>
<td>1,044</td>
<td>155</td>
<td>15</td>
</tr>
</tbody>
</table>

Pedestrian Deaths and Injuries by Age Group, 2007

<table>
<thead>
<tr>
<th>Age Group (Years)</th>
<th>Total Injured</th>
<th>Pedestrians Injured</th>
<th>% of Total Injured</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;5</td>
<td>56,000</td>
<td>2,000</td>
<td>4</td>
</tr>
<tr>
<td>5-9</td>
<td>65,000</td>
<td>5,000</td>
<td>7</td>
</tr>
<tr>
<td>10-15</td>
<td>106,000</td>
<td>9,000</td>
<td>8</td>
</tr>
</tbody>
</table>

A total of 4,654 fatalities and 70,000 reported pedestrian injuries in 2007.

Children 15 years and younger accounted for 8% of the pedestrian fatalities in 2007 and 23% of all pedestrians injured in traffic crashes.
Mission and Aims

- Decrease pediatric pedestrian injury and fatality
- Increase physical activity levels of elementary school-aged children
- Improve walkability around elementary schools

5-E Prevention Model & Partners

- MDC Public Schools
- Florida DOT
- The Children’s Trust
- Honda IXII
- Federal Express

- Miami-Dade County Prevention Coalition
- Community Traffic Safety Teams
- Safe Kids
- Reber Silverstein Advertising
- Injury-Free Coalition
- Consortium for a Healthier Miami-Dade/Health and the Built Environment Committee
- PTA

- MDC Department of Public Works
- MDC Metropolitan Planning Organization

- MIX: School Board Policies
- MDC Police
- City of Miami Police
- Coral Gables Police
- Florida Highway Patrol

- UM Miller School of Medicine
- Jackson Memorial Medical Center/Ryder Trauma Center
- Miami Children’s Hospital
Political Support

March 30, 2009 Downtown Miami Meeting with Miami-Dade County Mayor Carlos Alvarez.

October 8, 2008 WalkSafe Kick-Off
IWALK Left-to-Right: County Commissioner Audrey Edmondson
and City Mayor Herta Holly

Program Phases:
2001-2003

Phase I (2001)
Reviewed literature and data; developed prospective surveillance system

Phase II (2001-02)
Developed pediatric pedestrian study and formed community partnerships

Phase III (Feb. 2002)
Piloted project in 4 schools in 2 districts

Phase IV (Feb. 2003)
Implemented WalkSafe educational component in 16 Liberty City elementary schools

Phase V (March 2003)
Mandated by School Board

Phase V (Oct 2003)
Implemented in 203 Miami-Dade elementary schools
**Program Phases: 2004-2009**

**Phase VI (2005-06)**
Implemented WalkSafe educational component in 32 District 1 Miami-Dade elementary schools

**Phase VIII (2007-08)**
First year of SRTS and TE Behavioral Study
Statewide dissemination pilot

**Phase VII (2006-07)**
Implemented WalkSafe educational component in 16 elementary schools in Little Havana & Overtown

**Phase IX (2008-present)**
Second year of SRTS and TE
Second year of statewide initiative
Behavioral Study
Sociocultural study

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**Identification of High Risk Areas**

**Data Sources:**
1. Prospective Data from Miami-Dade County Trauma Centers
2. Florida Crash Data
3. AHCA Data
4. Vital Statistics (VS)
### Crash Data
**Miami-Dade County**

**Miami-Dade County: PHBC**

<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
<th>0yr-4yr</th>
<th>5yr-9yr</th>
<th>10yr-14yr</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>Injuries (Fatalities)</td>
<td>50 (1)</td>
<td>97 (1)</td>
<td>260 (0)</td>
<td>393 (2)</td>
</tr>
<tr>
<td>2002</td>
<td>Injuries (Fatalities)</td>
<td>52 (1)</td>
<td>105 (1)</td>
<td>310 (1)</td>
<td>577 (4)</td>
</tr>
<tr>
<td>2003</td>
<td>Injuries (Fatalities)</td>
<td>27 (1)</td>
<td>68 (1)</td>
<td>185 (2)</td>
<td>220 (4)</td>
</tr>
<tr>
<td>2004</td>
<td>Injuries (Fatalities)</td>
<td>31 (1)</td>
<td>75 (1)</td>
<td>185 (0)</td>
<td>277 (3)</td>
</tr>
<tr>
<td>2005</td>
<td>Injuries (Fatalities)</td>
<td>29 (0)</td>
<td>55 (1)</td>
<td>90 (1)</td>
<td>174 (2)</td>
</tr>
<tr>
<td>2006</td>
<td>Injuries (Fatalities)</td>
<td>21 (1)</td>
<td>52 (1)</td>
<td>87 (1)</td>
<td>166 (4)</td>
</tr>
</tbody>
</table>

*Note: Since 2001, there has been over a 40% decrease in the total amount of PHBC injuries for children aged 0-14 in Miami-Dade County.*

### Trauma Center Injury Data
**Miami-Dade County**

**Trauma Center Injury Data PHBC <14 yrs, 2002-2007**

<table>
<thead>
<tr>
<th>Fiscal Year (10/01-9/30)</th>
<th>JMH/Ryder Trauma Center</th>
<th>Miami Children’s Hospital</th>
<th>Liberty City</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002-2003</td>
<td>47</td>
<td>51</td>
<td>9</td>
<td>98</td>
</tr>
<tr>
<td>2003-2004</td>
<td>30</td>
<td>38</td>
<td>5</td>
<td>68</td>
</tr>
<tr>
<td>2004-2005</td>
<td>20</td>
<td>27</td>
<td>5</td>
<td>52</td>
</tr>
<tr>
<td>2005-2006</td>
<td>22</td>
<td>30</td>
<td>5</td>
<td>57</td>
</tr>
<tr>
<td>2006-2007</td>
<td>16</td>
<td>30</td>
<td>2</td>
<td>48</td>
</tr>
<tr>
<td>2007-2008</td>
<td>19</td>
<td>14</td>
<td>3</td>
<td>36</td>
</tr>
</tbody>
</table>

*Note: Since 2002, there has been over a 60% decrease in the total amount of PHBC injuries for children aged 0-14 in Miami-Dade County.*
Since 2002, there has been a 64% decrease in the amount of children hit by cars that are being sent to two major trauma centers in Miami-Dade County.

AHCA & VS Data

Pedestrian Injury Rate/100,000 Residents Aged 0-13 Yrs
Deaths & Hospitalizations by Age Group, Miami-Dade Co. 2000-2006

0.0 5.0 10.0 15.0 20.0
Rate/100,000

2000 2001 2002 2003 2004 2005 2006

5-13 yrs 16.9 15.4 15.0 15.1 13.1 12.9 8.8
5-11 yrs 18.0 16.2 16.3 15.6 14.4 14.8 9.8
0-4 yrs 8.8 10.5 6.6 4.5 5.5 4.7 6.6
Statewide Dissemination Model

WalkSafe™
Resource Office

Trauma Centers

Task Force

Select High Risk Areas

Select Schools

Training

Implementation

Evaluation

Identification and Action on Pedestrian Issues

Local Coordinator

Educational Component:
Implementation Sites/Summary

2008/2009 State and County-wide Summary

<table>
<thead>
<tr>
<th></th>
<th>Miami-Dade County</th>
<th>All Other Counties</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Schools Participated</td>
<td>98</td>
<td>71</td>
<td>169</td>
</tr>
<tr>
<td># of Students Educated</td>
<td>68,197</td>
<td>40,161</td>
<td>108,358</td>
</tr>
<tr>
<td># of Teachers Trained</td>
<td>2,275</td>
<td>3,094</td>
<td>5,369</td>
</tr>
</tbody>
</table>
Comparison of Crash Data Trends

Since 2000, there has been approximately a 40% decrease in the total amount of PHBC injuries for children in Miami-Dade County.

Educational Component:

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Session 1</th>
<th>Session 2</th>
<th>Session 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades 4-5</td>
<td>Objectives: Traffic safety vocabulary. Video: &quot;Walking with your Eyes&quot;</td>
<td>Outside Simulation: Street crossing activity. Reinforce crossing safety by working on workbook.</td>
<td>Poster Contest: Demonstrate understanding by creating an original poster about being a safe pedestrian.</td>
</tr>
</tbody>
</table>

* Each session will take approximately a ½ hour to complete.
Educational Analysis

Results

- Consistent educational results for Pre/Post and 3-month testing

- All grades made significant knowledge gains over time (p<0.01)
  - Grades K-3 made the most significant gains
  - Significant differences between grades K-1, 2-3, and Grades 4-5

Engineering Component

- In 2003/2004 all 232 elementary schools were assessed.
- A group of high risk schools were identified.
- Engineering modifications at 46 schools have been completed.
- Current Funding: SRTS Infrastructure projects have matched MDC Non-Infrastructure 07-09 (35 schools).

- Sidewalks
- Pavement Markings
- Road enhancements
- Relocation of Speed and loading zones
- Crosswalks
- Enhanced Street Signals
- Flashing lights
**Enforcement Component**

Exceptional level of support:
- Special Projects, Miami-Dade School Police
- Neighborhood Resource Unit, Miami-Dade Police
- Community Affairs Office, Miami Police Department

Primary program objectives:
- Increase traffic surveillance
- Increase traffic ticketing

Challenges:
- Data Waiver

Future research initiatives:
- Neighborhood Speed Watch
- DOT Devices for evaluation of traffic speeds
- Use of Mutual Aid Agreements

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**Encouragement Component**

**Walk More. Walk Safely.**

- **Community Partnerships**
  - Community Traffic Safety Team
  - Bicycle Pedestrian Advisory Committee
  - Health and the Built Environment
  - Safe Kids
  - Parent Teacher Association, MDC Parent Academy, Certified Volunteers
  - Miami-Dade Prevention Coalition

- **Social Marketing**
  - Radio, newspapers, TV, newsletters, faith-based announcements

- **Outreach Events**
  - Community presentations
  - WalkSafe Kick Off
  - IWALK
  - Health and Safety Fairs

- **Policy**
  - Educational Component Resolution
  - Health Element of the Comprehensive
  - Development Master Plan
**Evaluation: SRTS**

Completed Non-Infrastructure in 35 Schools, 2007-2009

National Center for Safe Routes to School (SRTS)

- Assists communities in enabling and encouraging children (K-8th grade) to safely walk/bike to school
- Provides SRTS programs with the knowledge, tools, and technical information to implement safe and successful strategies

### 2008-2009 SRTS Evaluation Tool Summary

<table>
<thead>
<tr>
<th></th>
<th>Student Tallys Collected</th>
<th>Parent Surveys Collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>607</td>
<td>4,960</td>
</tr>
<tr>
<td>Post</td>
<td>536</td>
<td>2,357</td>
</tr>
<tr>
<td>6-Months Post</td>
<td>442</td>
<td>3,628</td>
</tr>
<tr>
<td>Total</td>
<td>1,585</td>
<td>11,449</td>
</tr>
</tbody>
</table>

**2008-2009 Participating Schools:**

1. Eugenia B. Thomas Elementary
2. Bob Graham Education Center
3. Van E. Blanton Elementary
4. North Miami Elementary
5. Riverside Elementary
6. W.J. Bryan Elementary
7. Pine Villa Elementary
8. Amelia Earhart Elementary
9. Miami Shores Elementary
10. Caribbean Elementary
11. Ludlum Elementary
12. Henry M. Flagler Elementary
13. Joella C. Good Elementary
14. Southside Elementary
15. Dr. Robert B. Ingram Elementary
16. Melrose Elementary
17. South Pointe Elementary
18. Barbara Hawkins Elementary
19. Fulford Elementary

**Evaluation: Educational Component**

Online Teacher Survey

Preliminary Analysis of Selected Teacher Survey Responses

- **Agree/Strongly Agree**
- **Disagree/Strongly Disagree**

**Total Number of Teacher Surveys Submitted to Date:** 813
**Conclusions**

The significant findings (p<.0001) included:

- Children are more likely to look Left-Right-Left than stop before crossing the street.
- Walking in groups negatively affects crossing behaviors.
- Children are more likely to cross at the corner than mid-street.

- Revision of pedestrian safety interventions.
- Need for injury prevention behavioral studies.

**Participants**
- 2,278 students (3 schools)
- 1,098 consented students
- 538 walkers

**Methods**
- Color coded backpack to identify grade level
- Videotaping and on-site tracked observation tallies

Behaviors measured:
- Stopping at a corner or mid-street
- Looking Left-Right-Left at a corner or mid-street
- Crossing at a corner or mid street

**Conditions**
- Walking alone
- Walking with an adult
- Walking in a group

**Evaluation: Behavioral Research Backpack Study**

**Participants**
- 2,278 students (3 schools)
- 1,098 consented students
- 538 walkers

**Methods**
- Color coded backpack to identify grade level
- Videotaping and on-site tracked observation tallies

Behaviors measured:
- Stopping at a corner or mid-street
- Looking Left-Right-Left at a corner or mid-street
- Crossing at a corner or mid street

**Conditions**
- Walking alone
- Walking with an adult
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- Children are more likely to cross at the corner than mid-street.

- Revision of pedestrian safety interventions.
- Need for injury prevention behavioral studies.
Publications/References

- June 2008

- June 2008
  - The National Center for Safe Routes To School. (March 2009). Many Steps...One Tomorrow. A report on the first three years of the National Safe Routes To School Program. (P. 17). Chapel Hill, NC.

- March 2009

- March 2009

- April 2009

Sociocultural Research
Little Haiti, Little Havana, Liberty City

**Educational Testing:** Morningside Elementary

- Purpose: identify potential differences in the knowledge gain of Haitian-American community members when compared with previously tested communities.
- Students were tested pre, post, and 3-months post implementation of the educational component.
- Data has been collected; data-analysis is in progress.

**Focus Groups:**

- **Target Population:** Teachers, Parents, and Students
- **Goal:** Identify cultural characteristics necessary to modify WalkSafe educational curriculum to meet community needs.
- **Secondary Goal:** Identify cultural differences that account for their distinctive attitudes towards walking.

**Sociocultural Community Comparisons:**

- Little Haiti
- Little Havana
- Liberty City
Challenges

- Presenting data to multiple agencies and attaining multiple partnerships
- Obtaining school board approval
- Identifying local partnerships that are working on specific focused initiatives
- Funding: Program & Research
- Continue to meet community cultural needs
- Sustaining Program
- Expanding Program
- Developing supporting policies
Safe Crossings/
“Caminando con Cuidado”
Elderly Pedestrian Education Program
Dr. Carl Schulman

- Approach: Identifying Risk Factors
  - Survey, Observational and Case-Crossover Study
- Funding:
  - Florida DOT
  - Robert Wood Johnson Foundation
- Methods: Program Replication (ie. WalkSafe)
- Currently:
  - Testing Newly Developed Curriculum
  - Knowledge, Acceptability, Cultural Tailoring

THANK YOU
for joining WalkSafe in keeping children safe and healthy!

For more information please visit our website:
www.walksafe.us