

**CDOT** 

New Pedestrian Safety Law Enforcement Products,  
Practices and Studies – Chicago Nighttime  
Pedestrian Crash Study

Lifesavers Conference  
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**Pedestrian Safety in Chicago**

Identified in 2006 as a "Focus City" by the FHWA



Year	Annual Chicago Pedestrian Crashes
2001	4,042
2002	4,073
2003	3,660
2004	3,441
2005	3,406
2006	3,781
2007	3,686
2008	3,484
2009	3,130

Annual Chicago Pedestrian Crashes

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**Pedestrian Safety Education**

- Mayor Daley's Safe Routes Ambassadors
- 2<sup>nd</sup> Grade Pedestrian Safety and 5<sup>th</sup> Grade Bicycle Safety – over 11,000 students educated annually
- Over 1000 adults educated annually
- Annual Walk and Bike to School Day



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### Pedestrian Safety Engineering



- Curb extensions to reduce crossing distances
- Raised crosswalks to improve pedestrian visibility and slow traffic
- Pedestrian refuge islands to allow staged crossings
- Countdown times
- Speed humps to slow traffic
- Accessible curb ramps



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### Pedestrian Safety Enforcements

- Partnership with Chicago Police Department
- Increasing Awareness and improving safety
- Police issue tickets to drivers who fail to yield to pedestrians in crosswalks
- Over 1000 violations issued annually
- Yielding rates have improved significantly since beginning enforcements



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### Planning and Outreach Initiatives

- Mayor's Pedestrian Advisory Council
- Chicago Pedestrian Plan
- Crash Data Analysis
- Pedestrian Safety Public Awareness Project



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## Nighttime Crash Reduction Study

- Partnership with Western Michigan University  
– Dr. Ron Van Houten
- Funded by NHTSA
- Focus on Identifying Key Strategies for Reducing Nighttime Pedestrian Crashes (Alcohol-related Crashes)

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## Process

- Crash Data Analysis
- Focus Area Identification
- Countermeasure Selection
- Evaluation of Effectiveness

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## Nighttime Crash Data Analysis

- From 2005-2009, 18% of Chicago's pedestrian crashes were at night
- Identified four focus areas



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### Four Focus Zones

- **Wrigleyville:** Near Wrigley Field, bars and restaurants
- **River North:** Immediately north of downtown, bars restaurants, dense storefront retail, tourists
- **Austin:** Far west side neighborhood, primarily residential, some storefront retail
- **79<sup>th</sup> Street Corridor:** Recently streetscaped commercial corridor, highest ridership bus route in the city, primarily residential on adjacent streets



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### Varied Characteristics of Crashes

- **Wrigleyville:** High taxi Involvement; Alcohol; Did not correlate to game days; Failure-to-Yield
- **River North:** Taxi Involvement; Alcohol; Failure-to-Yield
- **Austin:** Speed; Failure-to-Yield, Pedestrian conspicuity
- **79<sup>th</sup> Street Corridor:** Speed; Failure-to-Yield, Alcohol

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### Types of Crashes and Treatments

Target Crash Problems	Possible Interventions	Candidate Locations
Dart-outs from parked cars	<ul style="list-style-type: none"> <li>• Enforcement: pedestrian "sting" operations</li> <li>• Engineering: install "Look for Pedestrian" markings</li> <li>• Engineering: install 3-D illusions</li> <li>• Engineering: install street banners</li> </ul>	<ul style="list-style-type: none"> <li>• Locations experiencing high failure to yield</li> <li>• High dart-out locations</li> </ul>
Overrepresentation of taxi as striking vehicles	<ul style="list-style-type: none"> <li>• Education: explain the need to slow down and yield to pedestrians</li> <li>• Education: acknowledge taxi drivers who yield to pedestrians</li> </ul>	<ul style="list-style-type: none"> <li>• Taxi garages</li> </ul>
Turning vehicle crashes	<ul style="list-style-type: none"> <li>• Engineering: LPI</li> <li>• Engineering: re-time signals to allow pedestrians more time to cross</li> <li>• Engineering: prohibit RTOR</li> <li>• Engineering: install "Turning vehicles yield to pedestrians" signs</li> </ul>	<ul style="list-style-type: none"> <li>• Intersections with heavy turning movements</li> <li>• Locations where pedestrians are getting trapped while crossing</li> <li>• Intersections that have experienced RTOR crashes</li> </ul>
Heavy drinking by pedestrians	<ul style="list-style-type: none"> <li>• Education: explain the risk of night pedestrian accidents</li> </ul>	<ul style="list-style-type: none"> <li>• Liquor license holders</li> </ul>

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### Treatments: Engineering

- Experimental 3-D Markings (W)
- Yield-to-Pedestrian signs (W,RN,A,79<sup>th</sup>)
- Leading Pedestrian Intervals (W,RN,A,79<sup>th</sup>)
- No-Turn-On-Red Signs (W,RN,A,79<sup>th</sup>)
- Increased corner clearance/parking setbacks (W,79<sup>th</sup>)



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### Treatments: Outreach and Education

- Street banners (W,A)
- CTA ads (A,79<sup>th</sup>)
- Taxi program, nightly dispatcher reminders, feedback posters, nice going cards, flyers, posters (W,RN,A,79<sup>th</sup>)
- Earned media (W,RN,A,79<sup>th</sup>)
- Promotion by CUBS at night games (W)
- Posters in convenience stores, fast food outlets and liquor stores, outreach to servers (W,RN,A,79<sup>th</sup>)



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**Campaign Recognition**

- Increase (16.7% to 34.3%) in the number of respondents indicating they had “Recently read, seen or heard anything about nighttime pedestrian safety in Chicago.”
- Percentage of people responding in the affirmative that they had seen the *Walk/Drive Safe Tonight* logo the more than doubled from 16.4% in Wave 1 to 43.7%

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### Yielding Behavior

- Yielding behavior for left turning drivers at the signalized measurement locations increased (4 to 44 percentage points)
- Yielding by right turning drivers at the signalized locations also increased (ranging from 2 to 14 percentage points)
- Yielding at both uncontrolled sites increased after the interventions.

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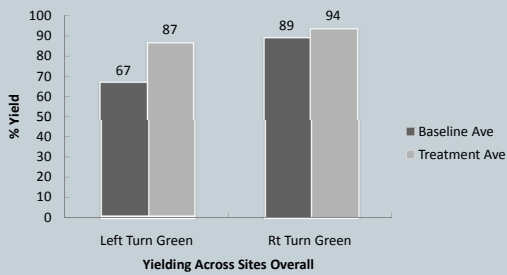
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### Average Across Controlled Sites



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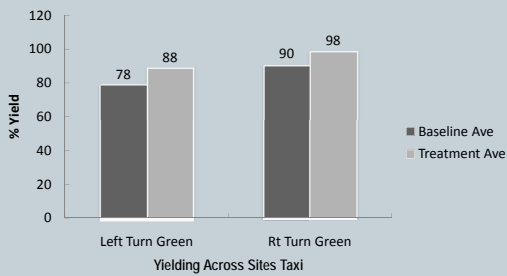
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### Average Across Controlled Sites - Taxi



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### Next Steps

- Nighttime Pedestrian Crash Study was incredibly useful in identifying future needs and possible treatments
- Strategies will be integrated into our upcoming NHTSA-funded Pedestrian Safety Public Awareness Campaign

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### Questions ?

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