Changing Driver Behavior Using Corridor Safety

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Target Zero Challenges

- 1,336 people lost their lives between 2012 and 2014
- Zero deaths and zero serious injuries by 2030 because every life counts
- It’s a big assignment and it’s not easy
  - Data driven
  - Interdisciplinary approach
  - Blend proven practices and innovation
  - Measure results and persist
Target Zero Key Data

- High risk behaviors in fatal crashes
  - Impairment – 56.6%
  - Speeding – 38.0%
  - Distraction – 29.6%

- Crash type in fatal collisions
  - Lane departure – 56.1%
  - Intersection related – 20.7%

- Road User in fatal crashes
  - 16 to 25 years old – 31.7%
  - Motorcyclists – 16.8%
  - Pedestrians – 15.3%
Human factors contribute to 94% of crashes.
Some Keys to Behavior Change

- Use fear the right way
- Use questions to persuade
- Enlist the crowd
- Give people an easy off ramp
- Put a face on it
- Reinforce the message
- Try stuff
Corridor Safety Program Basics

- **Goal**
  - Reduce fatal & serious injury crashes

- **Scale**
  - Low-cost, near term

- **Emphasis Areas**
  - Education, enforcement, engineering, emergency medical services
Proven Success (37 Projects)

- Total collisions down 7%
- Total injuries down 12%
- Alcohol-related collisions down 14%
- Fatal & serious injury collisions down 29%
- Costs to society (based on collisions) have dropped from $34.4 million per year to $25.7 million per year, a savings of $8.7 million per year per project
- Projected lives saved = 290
- Average project funding (2 years) = $279,000
Partnership Ideas

**State Level**
- Department of Transportation
- Washington Traffic Safety Commission
- State Patrol

**Local Level**
- Engineering: City/County/Tribal Public Works
- Enforcement: City Police, County Sheriff, Tribal Police
- EMS Providers
- Elected Officials
- Media
- Transit
- Schools
- Businesses
- Citizens
Funding History

- **WSDOT – Engineering**
  - State safety funds
  - Federal safety funds (Highway Safety Improvement Program)
  - Local funds/in-kind services
  - From $10,000 – $400,000 per project

- **WTSC – Education/Enforcement**
  - Federal funds
  - Overtime for law enforcement
  - Various materials/media for education
  - From $25,000 – $75,000 per year per project
Data Needs

- Develop criteria – what constitutes a good location?
  - What types of crashes?
  - What types of behaviors?
- What sources of data are available?
  - Crash history
  - Roadway characteristics
  - Traffic volumes
  - Emergency response calls for service
Snapshot of a Project’s Life

- Project Identification
- Initial meeting
- Problem identification (1-3 meetings)
- Review corridor
- Develop solutions (4-10 meetings)
- Kickoff project
- Implement the plan (2 years)
- End project
Starting a Project

- Data analysis
- Build partnerships
  - Agencies must be willing to participate and work together
- Identify local leadership/interest
  - Depending on situation – talk to elected officials
- Invite all key stakeholders (including the public) to a first meeting
  - Make sure decision-makers are at the table
Problem Identification

- Set expectations
- Share data
- Most people want to jump straight to solutions
- Make data-driven statements about problems
  - Engineering, enforcement, education, EMS
  - Don’t phrase problem in the form of a solution
- Anecdotal is OK, but try to focus on data
- Review the corridor (in person or virtually)
Develop Solutions

- Address each problem (use any E’s as needed)
- Should primarily fall within resources available
  - Bigger issues may be identified but not addressed
- Also determine time frame to implement and agencies responsible
- Put all the information into an action plan
Implement the Plan

- Kick off the project
  - Try to have all E’s have something ready to go
  - Identify project on the road (signs)
- Implement solutions
- Track progress (crashes)
- Monitor data for new issues
- Education may go through multiple phases
- Meet regularly for updates
Case Studies
Cape Horn Details

**Characteristics**

- Rural, winding 2-lane, high speed

**Top Crash Types**

- Hit Fixed Object (36% FS, 49% Total)
- Overturn (21% FS, 13% Total)
- Opposite Direction Sideswipe (14% FS, 9% Total)
- Wildlife (7% FS, 9% Total)

**Top Contributing Circumstances**

- Speeding (30% FS, 51% Total)
- Over Centerline (30% FS, 18% Total)
- Under the Influence of Alcohol/Drugs (9% FS, 7% Total)
- Improper Passing (9% FS, 3% Total)
Cape Horn Outcomes

Accomplishments

• Curve signing, rumble strips, enforcement

Results

• Fatal/Serious Crashes = Down 65%
• Total Injuries = Down 55%
• Alcohol-Related Crashes = Down 57%
• Total Crashes = Down 14%
• Speeding (#1 Behavior) = Down 37%
Driving 101
Details

**Characteristics**
- Rural, 2-4 lanes, high speed

**Top Crash Types**
- Rearend (18% FS, 35% Total)
- Angle (9% FS, 21% Total)
- Hit Fixed Object (33% FS, 14% Total)
- Hit Pedestrian (15% FS, 2% Total)

**Top Contributing Circumstances**
- Following Too Close (9% FS, 27% Total)
- Failing to Yield (17% FS, 24% Total)
- Speeding (19% FS, 13% Total)
- Over Centerline (13% FS, 3% Total)
Driving 101

Outcomes

Accomplishments

• Rumble strips, counting days sign, targeted PSA's

Results

• Fatal/Serious Crashes = Down 15%
• Total Injuries = Down 9%
• Following Too Close (#1 Behavior) = Down 3%
• Failing to Yield (#2 Behavior) = Down 18%
Aurora Details

Characteristics
• Urban, 6-8 lanes, high speed, high density

Top Crash Types
• Rearend (14% FS, 33% Total)
• Angle (14% FS, 19% Total)
• Hit Fixed Object (22% FS, 10% Total)
• Hit Pedestrian (33% FS, 3% Total)

Top Contributing Circumstances
• Failing to Yield (14% FS, 24% Total)
• Inattention/Distraction (11% FS, 16% Total)
• Under the Influence of Alcohol/Drugs (14% FS, 5% Total)
• Failing to Yield to Ped/Cyclist (10% FS, 1% Total)
Aurora Outcomes

Accomplishments

- Billboards, senior outreach, radar speed signs, targeted enforcement
Aurora Outcomes

Results

• Fatal/Serious Crashes = Down 29%
• Total Injuries = Down 22%
• Total Crashes = Down 23%
• Failing to Yield (#1 Behavior) = Down 34%
• Inattention/Distraction (#2 Behavior) = Down 30%
Lake City Way Details

Characteristics
- Urban, 4-6 lanes, community area

Top Crash Types
- Rearend (14% FS, 33% Total)
- Angle (33% FS, 31% Total)
- Hit Pedestrian (29% FS, 6% Total)
- Hit Cyclist (10% FS, 2% Total)

Top Contributing Circumstances
- Failing to Yield (26% FS, 26% Total)
- Inattention/Distraction (7% FS, 15% Total)
- Speeding (15% FS, 5% Total)
- Failing to Yield to Ped/Cyclist (15% FS, 5% Total)
Lake City Way
Outcomes

Accomplishments

• Upgraded pedestrian facilities, signal timing changes, pedestrian awareness
• http://www.seattle.gov/transportation/lcw_safety.htm
Lake City Way Outcomes

Results

- Fatal/Serious Crashes = Down 41%
- Failing to Yield (#1 Behavior for Total & Fatal/Serious)
  - Down 15% Total, Down 38% Fatal/Serious
- Failing to Yield to Ped/Cyclist (#2 Behavior for Fatal/Serious)
  - Down 50% Total, Down 100% Fatal/Serious
Questions??
Long Term – Total Crashes

Corridor Safety Projects
Total Collisions Comparison

After Data - Year (# Projects)
Long Term – Severe Crashes

Corridor Safety Projects
Fatal / Serious Injury Collisions Comparison

After Data - Year (# Projects)