



Changing Driver Behavior Using Corridor Safety

MATTHEW ENDERS, P.E., WASHINGTON STATE DOT

CARLA SAWYER, PROGRESSIONS, CONSULTANT TO WTSC

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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

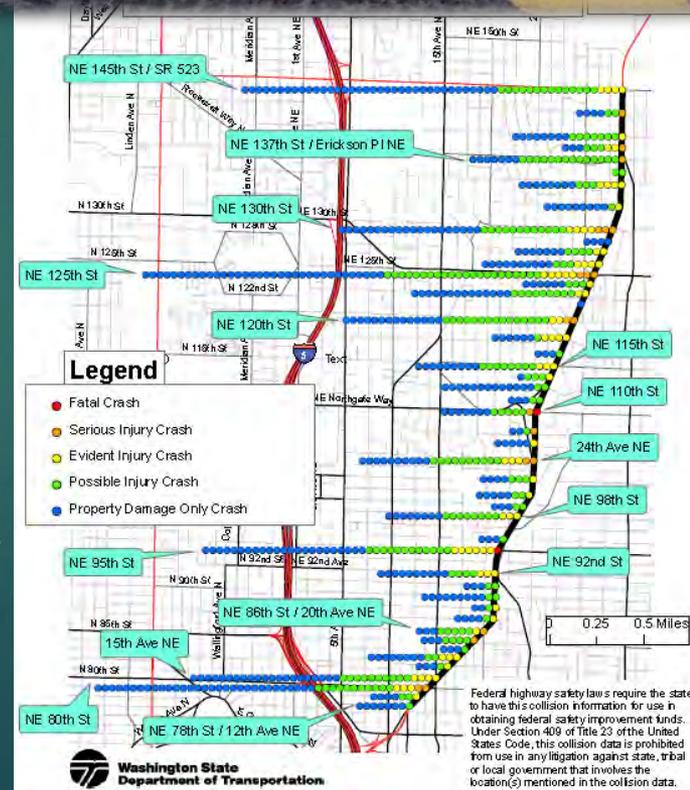
Snapshot of a Project's Life

- ▶ 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

- ▶ Kickoff 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 PSAs

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/Distracted (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



STOP for Pedestrians
It's the law



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/Distracted (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



STOP for
Pedestrians.
It's the law.

Lake City
Way

Traffic Safety Project

Lake City Way Outcomes

Results

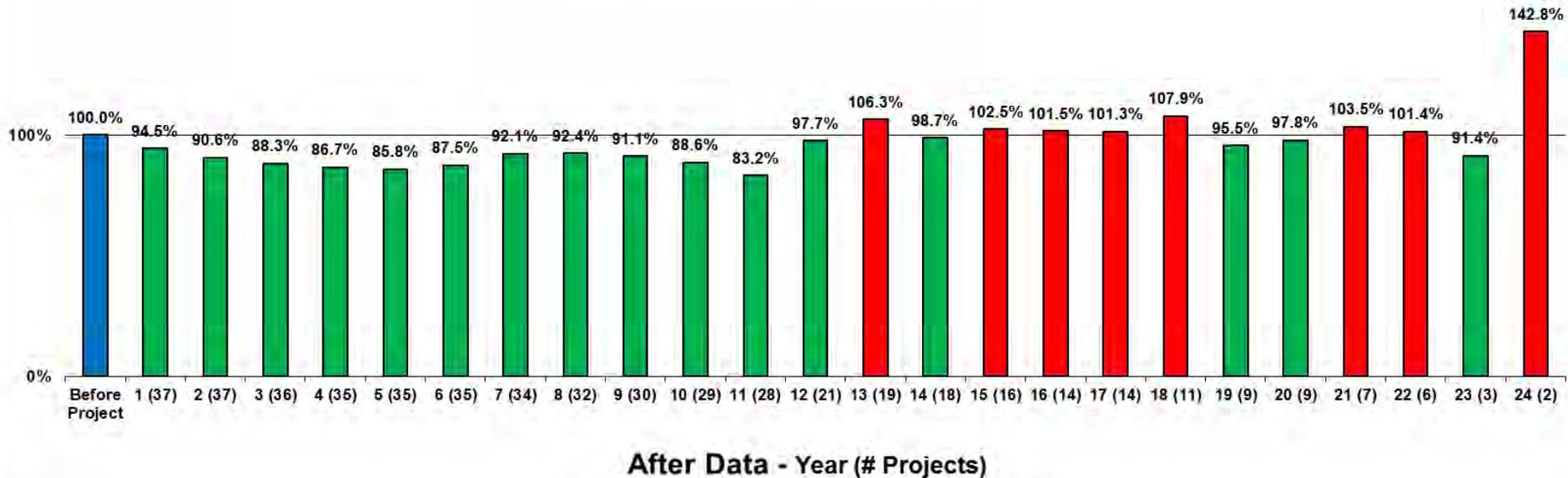
- Fatal/Serious Crashes = Down 41%
- Failing to Yield (#1 Behavior for Total & Fatal/Serious)
 - Down 15% Total, Down 38% Fatal/Serious
- Failing to Yield to Ped/Cyclist (#2 Behavior for Fatal/Serious)
 - Down 50% Total, Down 100% Fatal/Serious

Questions??



Long Term – Total Crashes

**Corridor Safety Projects
Total Collisions Comparison**



Long Term – Severe Crashes

**Corridor Safety Projects
Fatal / Serious Injury Collisions Comparison**

