Speed management and IIHS research

NCSL Traffic Safety Preconference 2022
July 31, 2022
Saving lives. Preventing harm.

IIHS-HLDI mission:

To reduce deaths, injuries and property damage from motor vehicle crashes through research and evaluation and through education of consumers, policymakers and safety professionals.
Dangers of speed

- It increases the **distance a vehicle travels** from the time a driver detects an emergency to the time the driver reacts.
- It increases the **distance needed to stop a vehicle** once the driver starts to brake.
- It increases the **risk** that an evasive steering maneuver will result in **loss of control**.
- It increases the **crash energy** exponentially.

- Speeding has been a factor in **more than 25% of crash deaths** for decades.
Pandemic Revs Up Bad Driver Behavior, U.S. Traffic Fatalities
February 11, 2021

Reckless driving has increased since pandemic
April 15, 2021

The Verge
The pandemic was the bloodiest year for driving in over a decade
June 4, 2021

Uptick in Speeding, Reckless Driving During Pandemic Hasn’t Let Up
August 9, 2021

4 Washington
Pandemic Didn’t Slow Down Drunk Driving or Speeding
October 30, 2021

Global Health NOW
Reckless Driving: An Unexpected Pandemic Trend
September 4, 2019
In 2020, fatalities increased in speeding-related crashes 17%
Addressing speeding is challenging
Inconsistencies between perception of speeding and speeding behavior

A 2020 national survey (AAA Foundation for Traffic Safety)

<table>
<thead>
<tr>
<th>Respondents who thought it was extremely, very, or moderately dangerous to drive</th>
<th>Respondents who admitted doing so in the past 30 days</th>
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<tbody>
<tr>
<td>15 mph over the speed limit on freeways</td>
<td>80%</td>
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<tr>
<td>10 mph over the speed limit on residential streets</td>
<td>88%</td>
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NHTSA launches its first national paid media campaign on speed

Speeding Wrecks Lives
NHTSA launches its first national paid media campaign on speed

**Speeding Wrecks Lives**

- Several states are conducting speed enforcement campaigns alongside NHTSA’s national effort
Cities are lowering speed limits
Research has found reductions in speeds and crashes, especially crashes with severe and fatal injuries, associated with lowering speed limits in urban areas.

- From 60 km/h (37 mph) to 50 km/h (31 mph) in Australia
- From 50 km/h (31 mph) to 40 km/h (25 mph) in Canada
- From 30 mph to 20 mph in the United Kingdom
In 2016, the Massachusetts state law was amended to allow lowering speed limits from 30 mph to 25 mph on municipal roads inside densely settled areas or business districts, without conducting engineering studies or seeking further authority from the state.

Effective January 9, 2017, the default speed limit on City of Boston streets was reduced from 30 mph to 25 mph.

25 mph signs were posted at gateways into the city or onto city-owned streets.
Percent change in mean speeds and odds of vehicles exceeding 25, 30, or 35 mph
Relative to expected without speed limit reduction
Other tools available for managing speeds

Traffic-calming measures, such as roundabouts and speed humps

Self-enforcing roadways

Automated speed enforcement
Automated enforcement program checklist

Outlines best practices for establishing successful red light camera and automated speed enforcement programs with broad public support.
Automated enforcement program checklist

Outlines best practices for establishing successful red light camera and automated speed enforcement programs with broad public support.
A comprehensive program is necessary to address speeding. Speeding is a complicated issue involving:

- Driver behavior and attitudes
- Roadway design and characteristics
- Traffic engineering
- Law enforcement

Many speed management programs do not always involve all the necessary strategies. These programs tend to be implemented in urban areas.
Two speed management pilot programs selected for funding

On a rural road in Maryland

In an urban area (Richmond) in Virginia

$100,000 for each state

Combined countermeasures: engineering, enforcement, communications/education
Maryland speed pilot program

- A 2.4-mile corridor on MD 367 in Bishopville
- Program took place in summer 2021
MD 367-Bishopville Rd

- Rural two-lane undivided road with no access control
- A popular route for beach traffic in summer
- Speeding a known problem
Engineering treatments

White and yellow striping widened from 5’ to 10”

Two radar-based speed feedback signs
Public outreach

Flyers distributed to local businesses and residents

Roadside signs placed along the MD 367 corridor
Paid media and high-visibility enforcement waves

- Four waves throughout August
  - Five days per enforcement wave
  - Media wave preceded each enforcement wave and continued through the end of wave

- Enforcement
  - Requested no tolerance for 10 mph or more over speed limit – discretion left to officer making stop

- “Be the SLOW DOWN Driver” media campaign
Social media
Facebook, Instagram, and Snapchat
Full page inserts in *The Dispatch*

Billboards

Waze ads
Speed data collection before program
Speed data collection during program
Speed data collection after program

Before surveys
After surveys

June 2021
July
August
September
October

Week 1 | Week 2 | Week 3 | Week 4
--- | --- | --- | ---
Public outreach | Engineering treatments installation | Paid media & enforcement Wave #1 | Wave #2
| | | Wave #3 | Wave #4

Program ended

Wave #1
Wave #2
Wave #3
Wave #4
Public awareness of the speed pilot program

<table>
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<tr>
<th>Week</th>
<th>Public outreach</th>
<th>Engineering treatments installation</th>
<th>Paid media &amp; enforcement Wave #1</th>
<th>Wave #2</th>
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Program ended
Whether residents were aware of program elements

- Widened edge and center lines
- Speed feedback signs
- Special police enforcement
- Message
Proportion of survey respondents who were aware of program elements

- Saw widened center and edge lines
- Saw speed feedback signs
- Aware of special police enforcement
- Aware of messaging encouraging drivers not to speed

Before vs. After comparison.
Public awareness

- Whether residents were aware of program elements
- How much of a problem was speeding on MD 367
- How likely drivers who speed would get stopped by police on MD 367

Widened edge and center lines
Speed feedback signs
Special police enforcement
Message
Proportion of survey respondents who thought…

- Speeding was a major problem on MD 367
- Drivers who speed will very likely or likely be stopped by police on MD 367

Graph showing the comparison before and after an intervention.
Program effects on speeds

Speed data collection before program
Before surveys

June 2021

Speed data collection during program
After surveys

July

Week 1 | Week 2
Public outreach | Engineering treatments installation
Paid media & enforcement | Wave #1
Wave #2 | Wave #3
Wave #4

Speed data collection after program

August

Week 1 | Week 2 | Week 3 | Week 4
Wave #1 | Wave #2 | Wave #3 | Wave #4

Program ended

July

Week 1 | Week 2
August

Week 1 | Week 2 | Week 3 | Week 4
Wave #1 | Wave #2 | Wave #3 | Wave #4

September

October

Week 1 | Week 2
Percent change in mean speeds, and odds exceeding speed limit and exceeding speed limit by more than 10 mph
Relative to expected without pilot program

- Mean speed
- Odds of exceeding speed limit
- Odds of exceeding speed limit by more than 10 mph

During the program vs. After the program ended
Comprehensive speed management program can reduce speeding

- Similar program is recommended for use in other communities to reduce speeding and change speeding culture
- Program should be long-term sustainable
  - Speed cameras
  - Engineering treatments
  - Periodically repeated enforcement and communication countermeasures
Next steps

- Speed management program in Richmond, Virginia will begin
  - Speed cameras in school zones
  - “OUR TOWN, SLOW DOWN” media campaign
  - Engineering countermeasures: speed tables in residential areas
Insurance Institute for Highway Safety
Highway Loss Data Institute

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