



Insurance Institute for Highway Safety
Highway Loss Data Institute

How research drives vehicle safety improvements

Then and Now: Looking Forward
Lifesavers Conference
Long Beach, CA
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iihs.org

IIHS is an independent, nonprofit scientific and educational organization dedicated to reducing the losses — deaths, injuries and property damage — from crashes on the nation's roads.

HLDI shares this mission by analyzing insurance data representing human and economic losses from crashes and other events related to vehicle ownership.

Both organizations are wholly supported by auto insurers.



People drive more safely because of research



Click It Or Ticket campaign, North Carolina



Graduated driver licensing



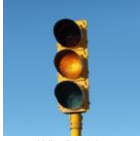
Automated enforcement



Alcohol-impaired driving



Roads are safer because of research



Yellow-light timing



Roundabouts



Rumble strips



Low-cost countermeasures



Vehicles are safer because of research



Fuel tank integrity



Airbags



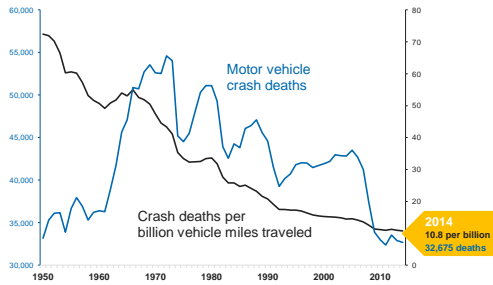
Electronic stability control



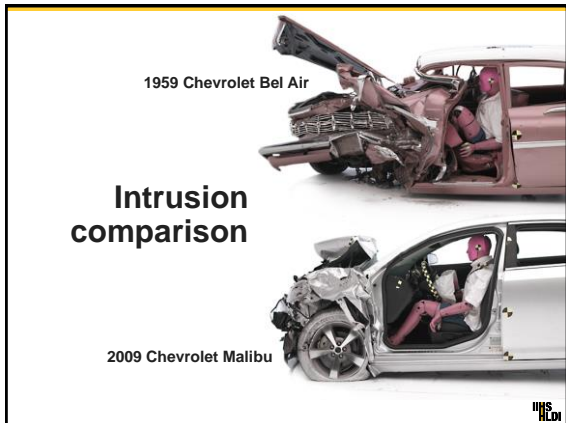
Structural integrity

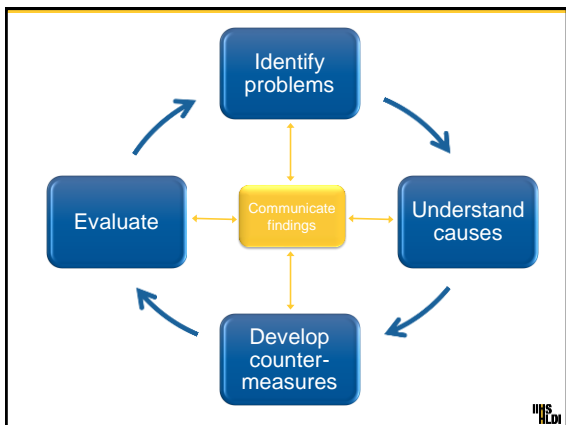


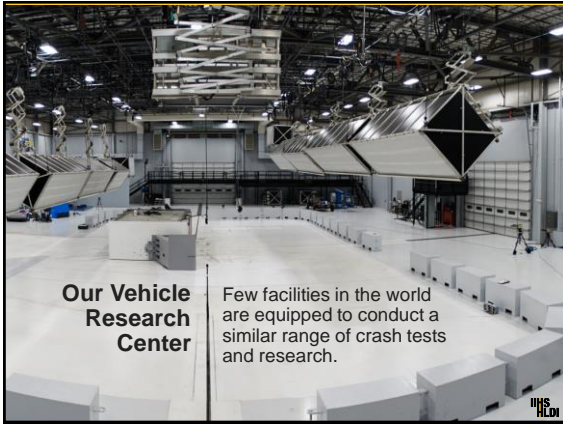
Research is a key factor in the decline of motor vehicle crash deaths during the past 50+ years

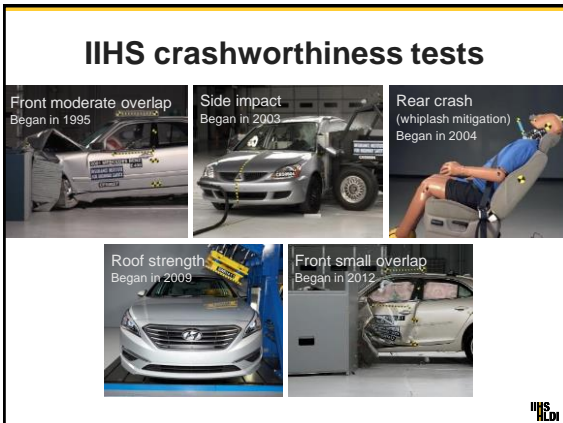














Rating vehicles

- G**ood
- A** cceptable
- M**arginal
- P**oor



Structural performance



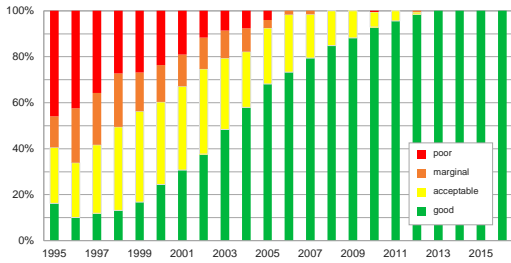
Injury measures from dummies



Restraints/ dummy kinematics



Moderate overlap ratings by model year





Ratings reflect fatality risk

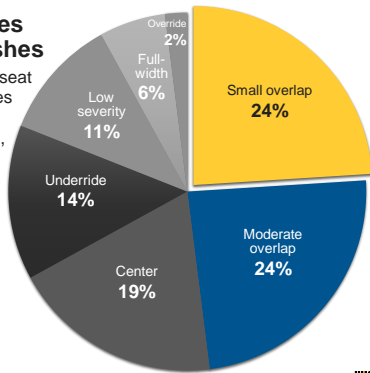
Reduction in risk for driver of IIHS Good rated vehicles vs. Poor

- ▶ Moderate overlap frontal – 45% lower fatality risk
- ▶ Side impact – 70% lower fatality risk
- ▶ Roof strength – 34% lower fatality risk
- ▶ Rear impact – 15% lower injury risk



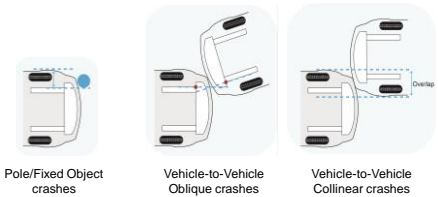
Serious injuries in frontal crashes

Among belted front-seat occupants in vehicles with good moderate overlap front ratings, by configuration



Understanding how small overlap configurations occur in real-world crashes

tree/post/pole (38%)	passenger vehicle (62%)	
head-on	oblique	head-on



Reconstructions of small overlap crashes

2004 Kia Rio

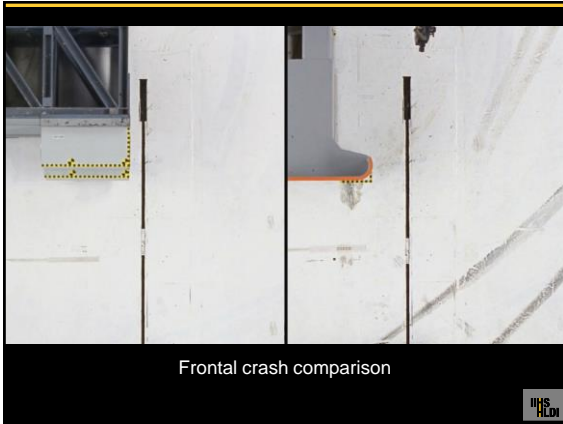
Occupant sustained fatal head injuries

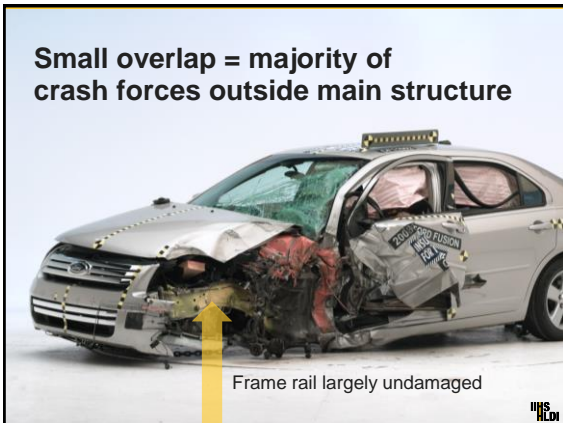
IIHS Crash Reconstruction

Tests of three small overlap crash configurations

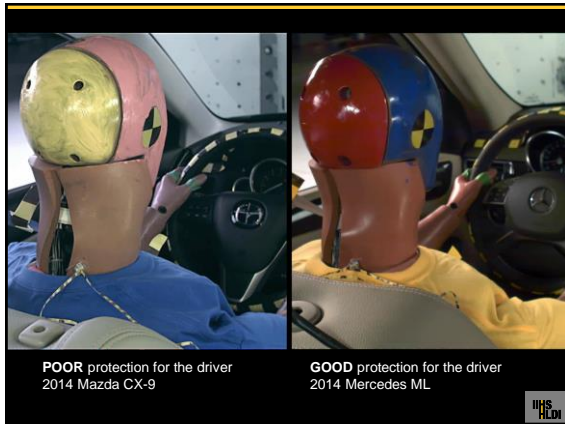
Small overlap tests

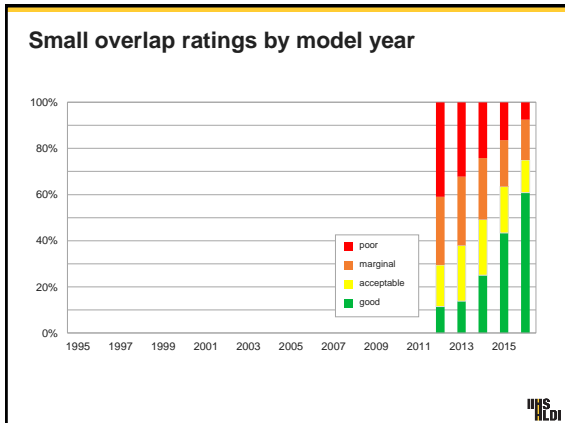
Four different barriers to determine which best replicate age and vehicle kinematics

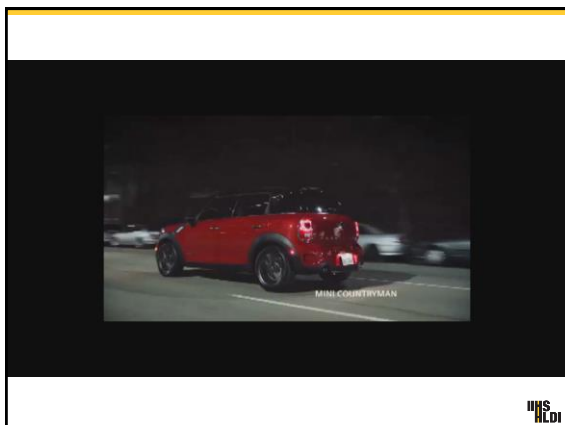










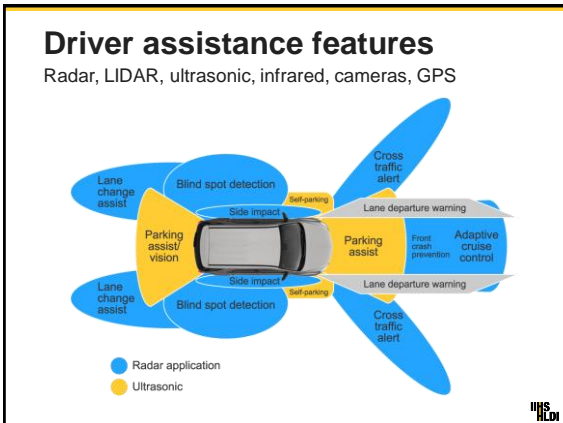


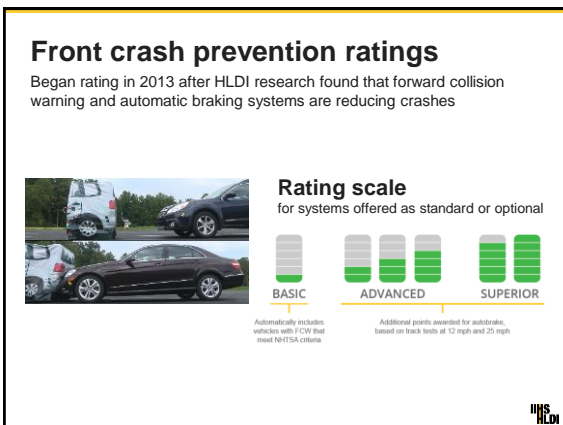


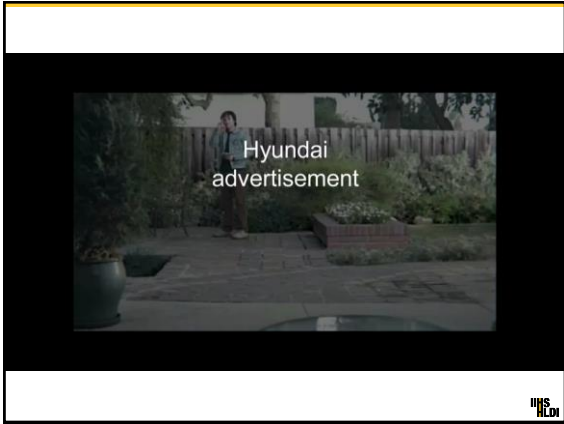
Our Vehicle Research Center

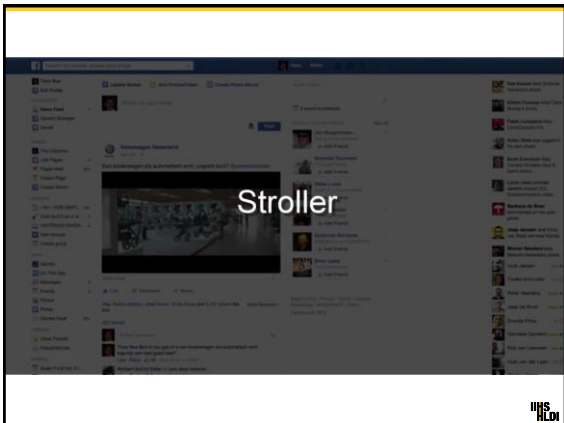
A major expansion is complete, extending our testing capabilities even further.











IIHS HLDI Insurance Institute for Highway Safety
Highway Loss Data Institute

More information and links
to our YouTube channel
and Twitter feed at iihs.org

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The background of the slide shows a road stretching into the distance under a cloudy sky.
