



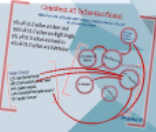
**Thank You!
Questions?**

Prepared by: 6/6/11
Office of Traffic Safety and Technology Safety
www.nhtsa.gov

Minimizing Mild and Serious Injury
(October 2010-2012 Strategy)
What can we learn from the relationships between crash types and injury severity?

2010
Fatal
19,000
Serious
195,000

Low-Severity Crashes (LSCs) (Less than 100 ft/sec)
More than 90% of LSCs result in minor or no injuries.
LSCs are the most common type of crash, accounting for 90% of all crashes.



What's beneath the surface of fatal and serious injury crashes?

Crash Type
10% Other Crashes
10% Wrong Drivers
8% Pedestrians
8% Bicyclists

Crash Cause
10% Speed
21% Overloaded/Impaired Driving
10% Unsafe Lane Changing
20% Unsafe Lane Change
10% Unsafe Lane Change

Crash Result
10% Fatal
10% Serious
10% Moderate
10% Minor
10% No Injury

What do we get to learn?

Crash Type	Crash Cause	Crash Result
High-Speed Crashes	Speed	Fatal
Low-Speed Crashes	Impaired Driving	Serious
Wrong Drivers	Unsafe Lane Change	Minor
Pedestrians	Speed	Fatal
Bicyclists	Speed	Fatal
Other Crashes	Speed	Fatal

No single crash problem stands alone.
In order to reach our TZD Goals, we must embrace this complexity through our strategies and partnerships.

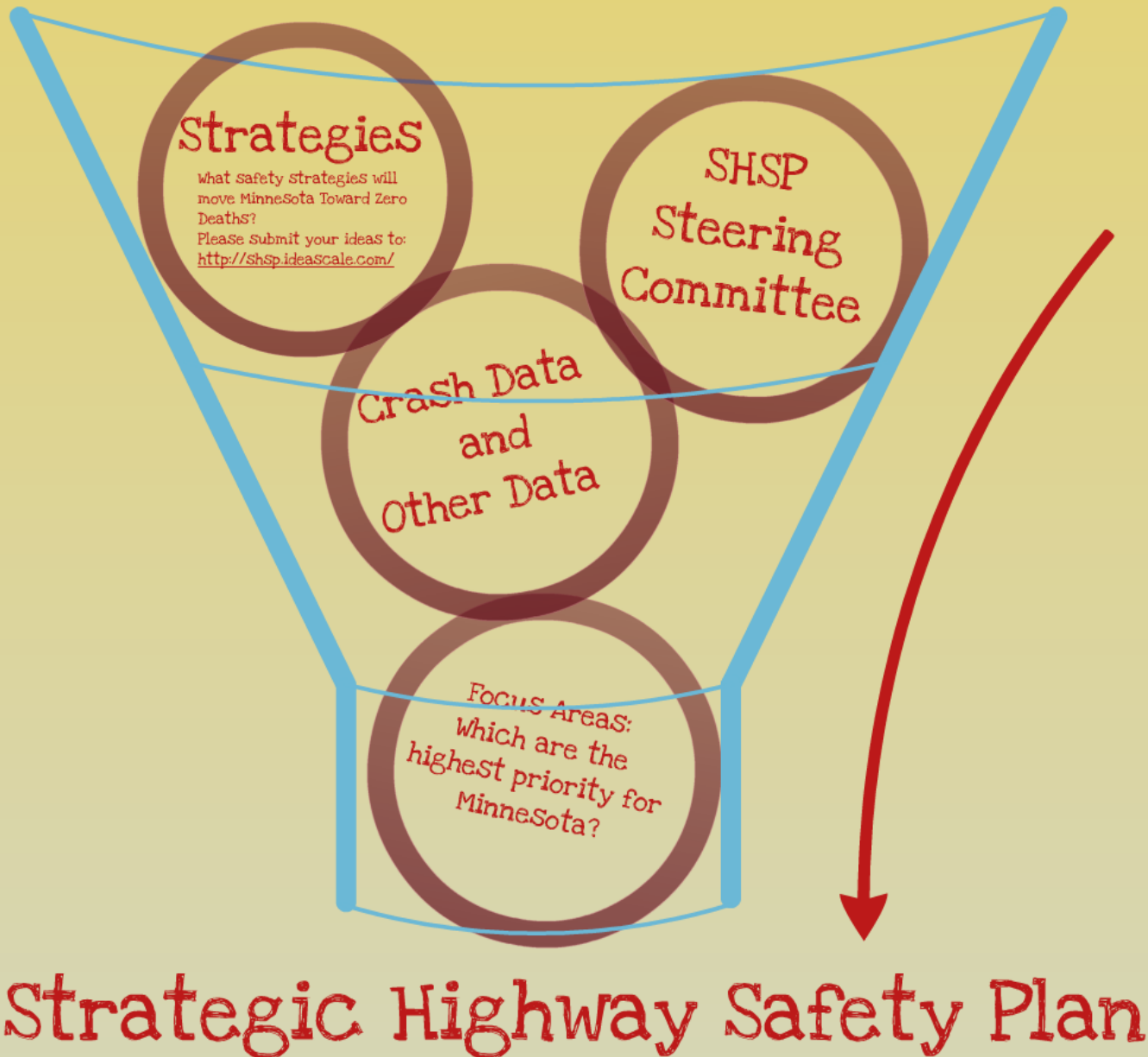


Minnesota Fatal and Serious Injury
Crashes 2008-2012 (Preliminary)

**What can we learn from the relationships
between crash types and behaviors?**

7,071
Fatal & Serious
Injury Crashes

A Plan for Minnesota Traffic Safety!



What's beneath the surface of
fatal and serious
injury crashes?

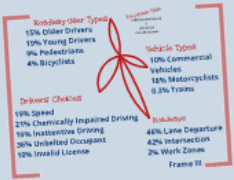
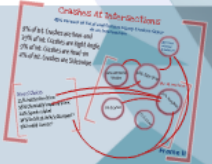


Minnesota (MnDOT) and National Injury Crashes 2009-2012 (VitalSource)
 What can we learn from the relationships between crash types and behaviors?

2011
 Total & Serious Injury Crashes

**Thank You!
 Questions?**

Prepared by MnDOT
 Office of Traffic, Safety, and Technology Safety
 Source: MnDOT TIS Crash Data



What's beneath the surface of fatal and serious injury crashes?

No single crash problem stands alone.

In order to reach our TZD Goals, we must embrace this complexity through our strategies and partnerships.



Lane Departure Crashes: Leaving One's Lane of Travel

46% of Fatal and Serious Injury Crashes are Lane Departure!

- 36% of LD are Run-off-road right
- 29% of LD are Run-off-road left
- 25% of LD are Head-on (undivided roads)
- 4% of LD are Sideswipe opposing (undivided roads)
- 4% of LD are Cross-median (divided roads)

Drivers' Choices
31% Chemically Impaired Drivers
25% Speed-related
16% Inattentive Drivers
46% Unbelted Vehicle Occupant*
11% Driver with an Invalid License*

Who IS involved?

15% Motorcycles

Consequences of Lane Departure

27% of Fatal and Serious Injury Lane Departure Crashes were Roll-overs

36% of Fatal and Serious Injury Lane Departure Crashes Struck a fixed object

3% of Fatal and Serious Injury Lane Departure Crashes were Multi-vehicle Cross Median Crashes

Frame I

Lane Departure!

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(Roads)

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Crashes At Intersections

42% Percent of Fatal and Serious Injury Crashes Occur At an Intersection

9% of Int. Crashes are Rear-end
39% of Int. Crashes are Right Angle
9% of Int. Crashes are Head-on
4% of Int. Crashes are Sideswipe

Drivers' Choices

21% Inattentive Driver
16% Chemically Impaired Driver
14% Speed-related
34% Unbelted Vehicle Occupant*
9% Invalid License*

12% Commercial Vehicles

18% Older Driver

22 Train-related Crashes**

who is involved:

20% Young Driver

6% Bicyclist

11% Pedestrian

Frame II

Crashes At Int

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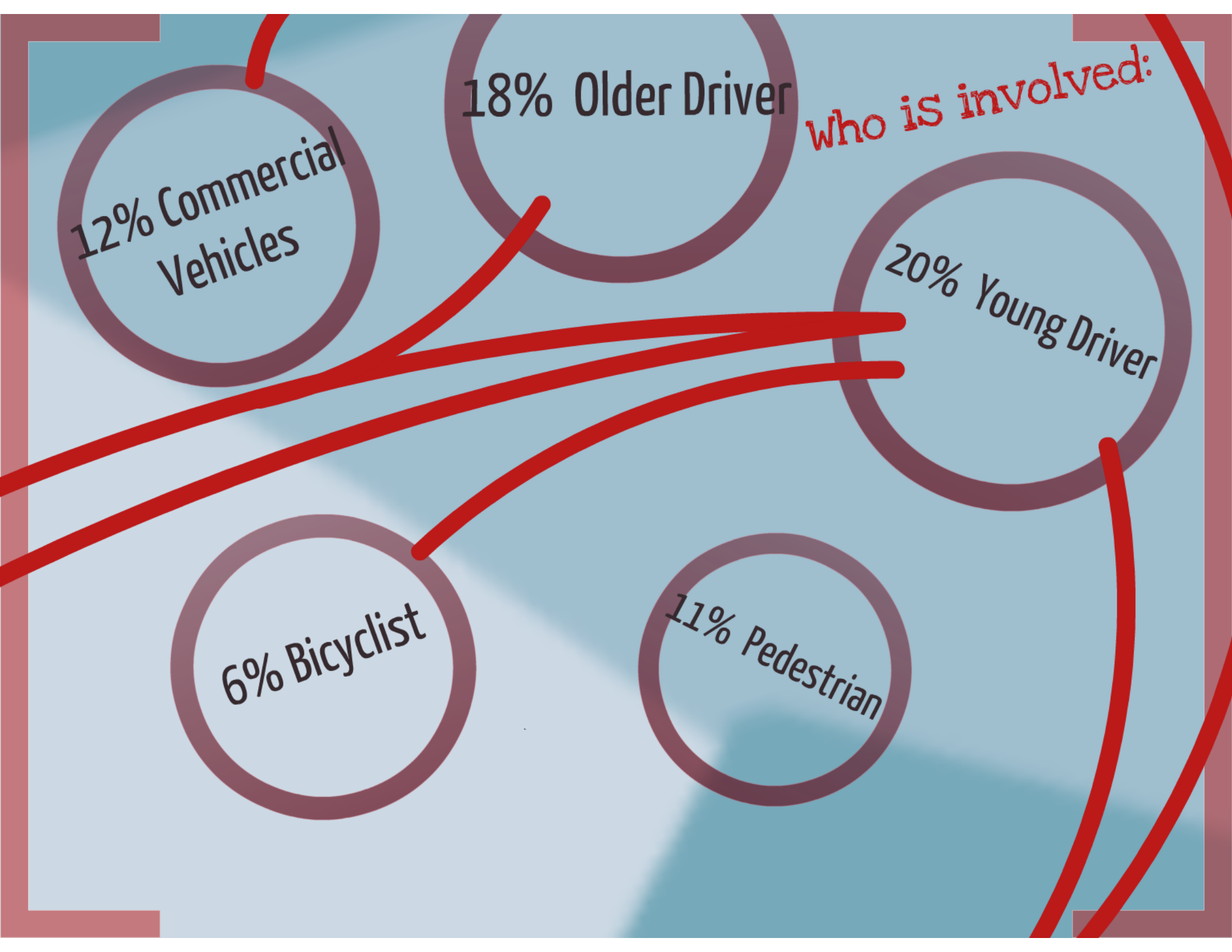
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Frame II

Recognize that:

crashes are interconnected

&

there is often

more than one cause

Roadway User Types

- 15% Older Drivers
- 19% Young Drivers
- 9% Pedestrians
- 4% Bicyclists

Recognize that:

crashes are interconnected
&
there is often
more than one cause

Vehicle Types

- 10% Commercial Vehicles
- 18% Motorcyclists
- 0.3% Trains

Drivers' Choices

- 19% Speed
- 21% Chemically Impaired Driving
- 19% Inattentive Driving
- 36% Unbelted Occupant
- 10% Invalid License

Roadways

- 46% Lane Departure
- 42% Intersection
- 2% Work Zones

How do we get to zero?

Emergency
Response

Education

Roadway Safety
Improvements

Enforcement

Interdisciplinary
Partnerships
Local - Regional
State

Frame IV

Traffic Safety

Behavioral
Expectations

Education

Social
To

Traffic Safety Culture

Behavioral
Expectations

Social Values
Toward Safety

Sense of Community

Education

Beliefs
About Traffic Safety

Judicial

Legislature

Planning for Growth

Workplace Policies

Vehicle
Enhancements

Roadway Safety
Improvements

No single crash problem stands alone.

In order to reach our TZD Goals, we must embrace this complexity through our strategies and partnerships.

A Plan for Minnesota Traffic Safety!



Strategies

What safety strategies will
move Minnesota Toward Zero
Deaths?

Please submit your ideas to:
<http://shsp.ideascale.com/>



Thank You!
Questions?

Prepared by MnDOT
Office of Traffic, Safety, and Technology-Safety
Source: MnDOT TIS Crash Data