

Priority Level Three: Opposite-Direction Multi-Vehicle Collisions

An opposite-direction multi-vehicle crash typically occurs when one vehicle crosses over a roadway center line or a median and crashes into a vehicle traveling in the opposite direction. It can also occur when a vehicle is traveling the wrong way in a traffic lane. Occasionally, a driver's deliberate actions (such as passing on a two-lane road) can cause this type of collision, but more frequently an opposite-direction multi-vehicle collision is caused by a driver's impairment, speed, or distraction. Addressing those behavioral issues will reduce this type of collision.

Between 2006 and 2008, Washington State experienced 860 serious injuries and 323 deaths related to opposite-direction multi-vehicles collisions. This represents 10.3% of serious injuries and 18.7% of fatalities during this period.

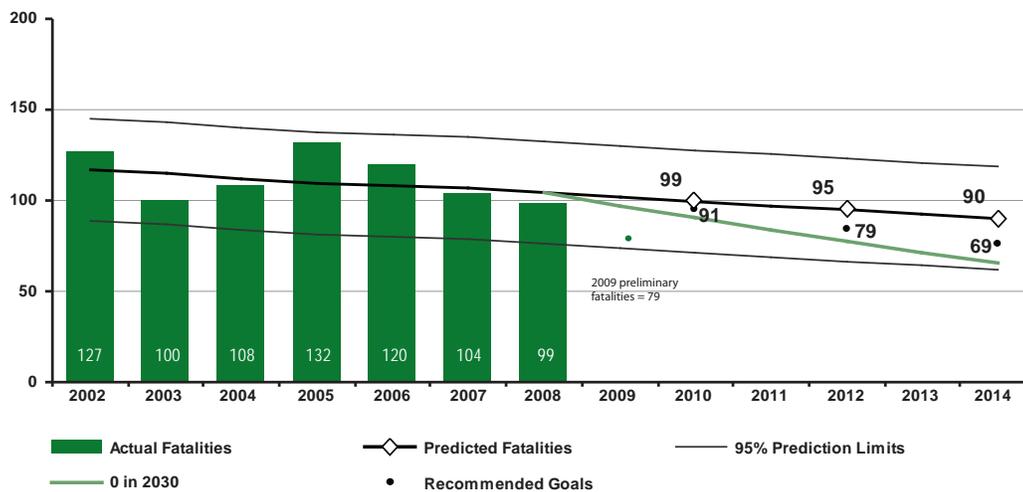
From 2006-2008, speed was a factor for 16% of drivers involved in fatal or serious injury opposite-direction multi-vehicle crashes; impairment was a factor 16% of the time. During the same time period, only 2% of drivers involved in fatal or serious injury opposite-direction multi-vehicle collisions were making an improper passing maneuver.

Engineering strategies can help reduce the likelihood of opposite-direction multi-vehicle fatalities and serious injuries. These strategies include the installation of center line rumble strips on two-lane roadways, the placement of median barriers on divided highways, and the creation of safe passing opportunities where possible on two-lane roadways. Installation of center line rumble strips on Washington state routes has led to a 57% decrease in fatal and serious injuries in cross-over collisions, of which opposite-direction multi-vehicle crashes are a subset. (This study also showed an 80% reduction on tangents and 24% reduction on curves).

Why Doesn't *Target Zero* Focus on Cross-Over Collisions?

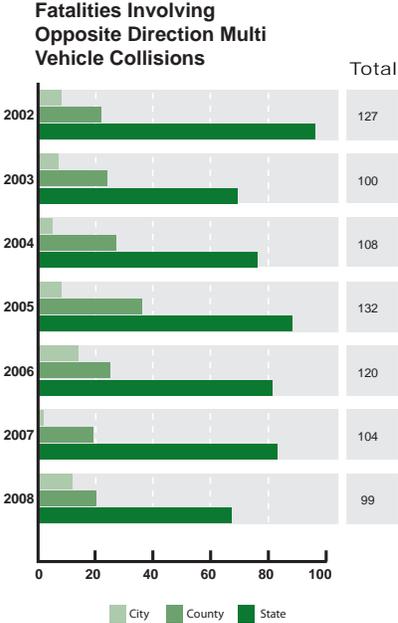
Current data collection methods only allow for statewide collection of opposite-direction multi-vehicle crashes, and not for cross-over collisions involving only one vehicle. Current studies of crossover collisions have focused on specific locations where centerline rumble strips were installed. Improvements planned for future data collection methods will allow for collection of all cross-over collisions in future versions of *Target Zero*.

Opposite Direction Multi-vehicle Collision Fatalities: Trends, Forecasts, and Goals

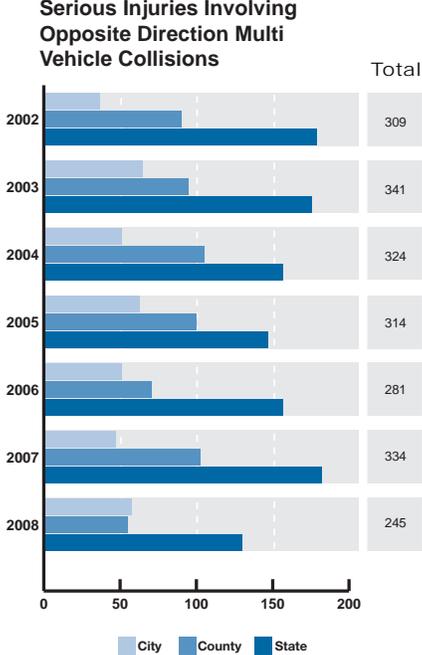


Source: WSDOT Collision Database

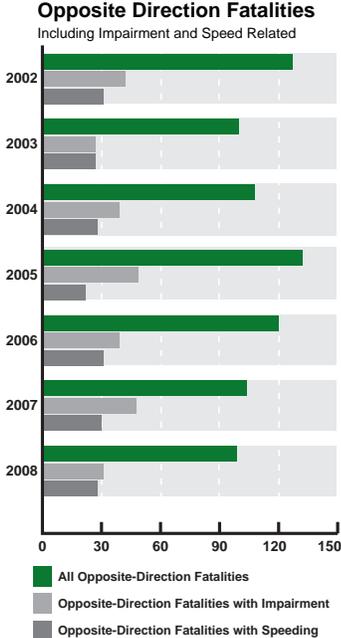
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Source: WSDOT Collision Database

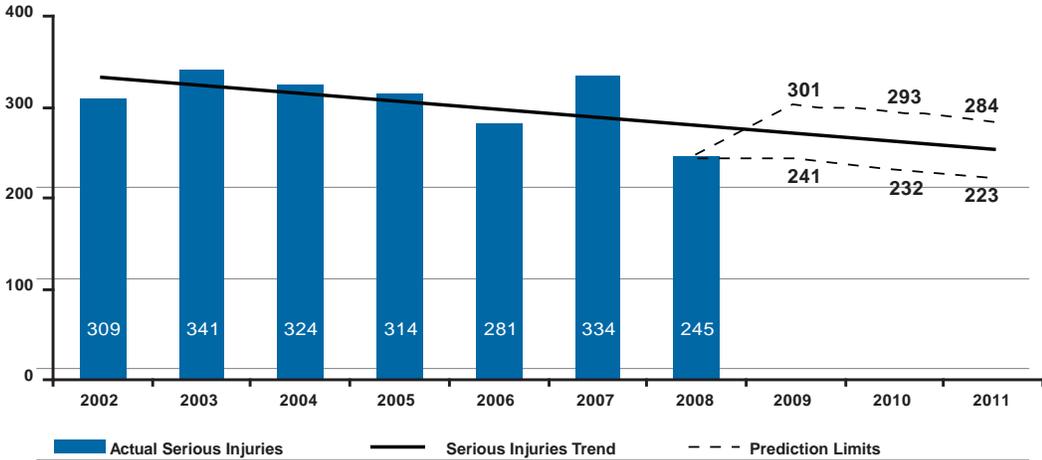


Source: WSDOT Collision Database



Source: WSDOT Collision Database

Opposite Direction Multi Vehicle Collision Serious Injuries



Source: WSDOT Collision Database

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3.1 Strategies to Reduce Opposite Direction Multi-Vehicle Collisions

3.1.A Reduce opposite-direction multi-vehicle collisions

3.1.A1 Implement centerline treatments such as rumble strips to reduce head-on crashes on all two lane highways where possible. (P)

3.1.A2 Provide safe passing opportunities on two-lane rural highways by constructing passing lanes where cost effective. (T)

3.1.A3 Install appropriate median barrier on highways with narrow medians. (P)

3.1.A4 Add raised medians or other access control on multi lane arterials. (P)

3.1.A5 Improve maintenance practices in regard to snow and ice control.