

(Abstract)

Objectives. We estimated the injury prevention impact and cost savings associated with alcohol interlock installation in all new US vehicles.

Methods. We identified fatal and nonfatal injuries associated with drinking driver vehicle crashes from the Fatality Analysis Reporting System and National Automotive Sampling System's General Estimates System data sets (2006–2010). We derived the estimated impact of universal interlock installation using an estimate of the proportion of alcohol-related crashes that were preventable in vehicles < 1 year-old. We repeated this analysis for each subsequent year, assuming a 15-year implementation. We applied existing crash-induced injury cost metrics to approximate economic savings, and we used a sensitivity analysis to examine results with varying device effectiveness.

Results. Over 15 years, 85% of crash fatalities (> 59 000) and 84% to 88% of nonfatal injuries (> 1.25 million) attributed to drinking drivers would be prevented, saving an estimated \$342 billion in injury-related costs, with the greatest injury and cost benefit realized among recently legal drinking drivers. Cost savings outweighed installation costs after 3 years, with the policy remaining cost effective provided device effectiveness remained above approximately 25%.

Conclusions. Alcohol interlock installation in all new vehicles is likely a cost-effective primary prevention policy that will substantially reduce alcohol-involved crash fatalities and injuries, especially among young vulnerable drivers.