Road fatalities are so common they are often relegated to the back pages of newspapers. Yet Minnesota’s upcoming Toward Zero Deaths conference will, for the moment, give this critical problem the attention it deserves. We need to re-examine our efforts in reducing the seemingly never-ending number of fatalities on our roads.

Although the vast majority of crashes occur in urban areas, more than two-thirds of fatal crashes occur in rural areas. And of fatal crashes in Minnesota, nearly 75 percent are either intersection crashes or lane-departure crashes. At the Institute, we have focused on these two problem areas for a number of years. Technologies that would enable the deployment of systems to mitigate the rural crash fatality problem have been developed; the costs, however, are considerable. The open question is how to best deploy these technologies to achieve the most benefit for the least cost.

The contrast between urban and rural fatalities in Minnesota is also reflected in crash statistics for other states. When ranking all states by their rural fatality rate (Fig. 1), Minnesota is 36th in the country (for which the top rank is associated with the worst fatality rate). However, a rate of 1.8 fatalities per 100 million vehicle miles traveled (MVMT) is still unacceptable.

When one examines the causal factors associated with road fatalities (Fig. 2), it is clear why fatalities are more commonly associated with rural driving. Failure to keep in the proper lane, or running off the road altogether, is the most significant factor leading to rural road fatalities, while excessive speed is number two (by a factor of almost 2:1). Helping drivers stay in their lane by providing in-vehicle lane-departure warnings should be our number-one priority if we want to significantly reduce fatalities. This is an area where our research has led to a number of major new capabilities and in which we hope to continue leading the country.

Two population groups are most seriously affected—teenagers and older drivers. As shown in Figure 3, run-off-the-road crashes (and speeding) are
the predominant killer of younger drivers in Minnesota. This past year we seeded a program to develop new ways to reduce teenage fatalities. Crashes at intersections are the dominant type of fatal crashes among senior citizens. Our existing research program, with assistance from the Minnesota Department of Transportation and funding from a consortium of states and the Federal Highway Administration, is researching new ways to help drivers decide when it is safe to enter a rural unsignalized intersection.

There is a danger of becoming desensitized by the constant barrage of news of real people dying on our roads. We must find solutions—and we certainly hope to do our part at the ITS Institute. We are indeed gratified that our researchers are addressing the real problems that all of us face on our roads every day.

Whatever strides we do make are a testament to the help that we receive from others. We are thankful for the assistance of the members of our research selection and review panels and of our board for their selfless efforts. Furthermore, none of the progress that we have made to date would have occurred without the assistance, long hours, and diligent efforts of our staff. Their support is very much appreciated. And we cannot forget Mn/DOT, which has made our partnership to explore and expand our transportation horizons so successful.

Finally, we thank the taxpayers and their legislative representatives who have entrusted us to help solve the really tough problems.

Max Donath

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Figure 2. Causal factors associated with road fatalities: rural vs. urban (2002 FARS)

Figure 3. Driver fatalities per 100,000 licensed drivers in Minnesota (does not include vehicle occupants, which increases the numbers substantially)