3 Questions: Joseph Coughlin on aging and driving

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An aging population brings with it a new set of demands -- such as the need to ensure safety among older drivers. As the Baby-Boomer generation begins reaching retirement age, this seems likely to become a growing concern.

Joseph Coughlin, the founder and director of MIT's AgeLab, and director of the New England University Transportation Center, testified this week in Washington at a forum on aging and driving held by the National Transportation Safety Board. Coughlin, who also teaches transportation policy in the MIT Engineering Systems Division, sat down to discuss the issue with MIT News.

Q. Many of us think about age and auto safety primarily in terms of younger drivers, not older ones. What are the primary problems surrounding aging drivers, and how acute are those issues?

A. We do tend to focus on the young as a safety issue. And while it is correct to do so, if you look at the statistics of fatalities per 100,000 miles driven, you see a U-shaped curve. It shows that between 16 and 24, testosterone, octane and alcohol don't mix. Then you have this period of relative safety among drivers into middle age. Then fatalities start to pick up again at about age 75. Among older adults, accidents may not simply lead to bruises or a broken rib, but can lead to complications that will kill a 75-year-old or 85-year-old. If there are accidents, they tend to be the victims of the accidents they are in.

Why is this a big issue? With any luck, all of us will get to be an older driver some day. Right now, 12 or 13 percent of the population in the United States is over 65. But in the next 20 to 25 years, you could be looking at as much as 40 percent of licensed drivers being over age 50 or age 60. And what is an older driver? You need 20 times more light to see well at night at age 40, compared to age 20. But very few people will want to say a 40-year-old is an older driver. Flexibility and strength begins to diminish in your late 30s. The Baby Boomer disease of choice is high blood pressure and diabetes, and that begins to kick in during your early 40s … The phrase I'm fond of, because the science backs us up, is that birthdays do not kill, health conditions do. Regardless of age, we need to think about enhancing driving performance across the lifespan.

Q. To what extent, then, can safety improvements come simply from broadly applied technologies — or to what extent must we still study the behavior of drivers, their health and the conditions in which they drive?

A. Since I'm in the Engineering Systems Division, the answer is going to be holistic, if you will. Technology certainly has a role; we're seeing it in the Aware Car and other research projects here on campus and around the world. Technologies can help drivers judge distances better and avoid collisions, and can wake drivers up a little if they're fatigued and bring them down if they're stressed.

But to look at it from a systems perspective, mobility and transportation for an aging society is an area of policy failure right now, not just in the United States but around the world. Many of us would like to retire to the mountains or the beach. But if you don't drive, those places become isolated. We have not designed our communities in a way where walking is possible, let alone inviting. And, frankly, transit is still being built around the paradigm of getting you to work. For many decades, the majority of trips we make are not going to work. They're to the donut

shop, your friend, the cleaners, the grocery store. Particularly for people who are 50-plus in age, of whom more than 70 percent live in suburban or rural areas of the United States, there is no alternative to the car. What we have here is a massive coming mobility gap. So technology has a role. But policy is virtually absent. And the understanding of behavior, in terms of understanding the new demands of an aging population, is nascent at best, and putting those things together is rare.

Q. What are the new problems that could emerge from the aging of the Baby Boomers, the first of whom will turn 65 starting in 2011?

A. I'd suggest that mobility, unlike almost any other time in history, could become a very serious point of political conflict. If the Baby Boomers stay where they are, aging in place as their parents did, you could go through a life where you went to school, went to work, raised a family, paid off your house, did everything you were supposed to do, and one day you wake up either not competent or not confident to drive. And that very icon of American success, that single-family house in the suburbs, now becomes house arrest, because you can't get around.

And I think it's going to be far different than for previous generations, for a couple of reasons. One, the Baby Boomers had fewer kids. So there's not going to be that support network their parents enjoyed. Secondly, the new generation gap is in expectations. The Baby Boomers have very high opinions of themselves and very high expectations as far as how they're going to live. The Baby Boomers believe there's always going to be a widget, a service or a technology that's going to make things better. Or a public policy that's going to fill the gap. This is a generation that had schools built for it, sidewalks built for it, shopping malls built around it. This has got the real potential of becoming a political issue about how we redesign our communities to make sure there are services in place. The problem is that transportation as a system takes years if not decades to change. Frankly, at best we've got about 10

years to put into place those services, designs and ideas reinventing the community to meet the needs of the largest set of expectations and population the country's ever had.

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