EM0202: The Globe and Mail, January 5, 2002, page A12

Drawing the line on drinking and driving

Even people who agree about the curse of impaired driving disagree about how best to combat it. Consider the current dogfight between Mothers Against Drunk Driving (MADD) and the Canada Safety Council.

It is illegal under the Criminal Code to drive with a blood-alcohol-concentration level of 0.08 or more – a measure of the proportion of alcohol in the bloodstream. MADD has taken out advertisements saying the level is too high and should be reduced to 0.05 to protect public safety. The Safety Council says it would be "mad" to lower the level because that would place a greater burden on police and the court system and have little practical effect beyond criminalizing the social drinker.

The blood-alcohol limit in Canada is not a monolith. Provinces impose zero tolerance on young and novice drivers and use graduated licensing to ease them into the world of safe driving. Most provinces authorize the police to take away the car keys of a driver who measures between .05 and .08 and suspend his licence for 12 or 24 hours.

The question is whether lowering the general criminal limit would be good public policy. Even a small intake of alcohol may result in some degree of impairment – drowsiness, greater problems with divided attention – that begins before the level reaches .08. A report last April from the U.S. National Highway Traffic Safety Administration, a branch of the Department of Transportation, said: "Widely accepted public health research has identified .05 as the BAC [blood alcohol concentration] level at which driving skills begin to deteriorate. Because of this, some organizations – most notably the American Medical Association – officially support .05 as the safest limit."

But is the degree of impairment between .05 and .08 of sufficient concern to bring the weight of criminal law down on those found driving with that amount of alcohol in their system? The Safety Council says the risk of involvement in a fatal crash within that range is 1.2 or 1.8 driver deaths per 100 million kilometres travelled (the risk without drinking anything is 0.6) and is comparable to driving five kilometres per hour over the speed limit. The U.S. report itself added, one sentence after the lines quoted above: "Even those organizations that have adopted such policies [promoting .05] accept .08 as the best reasonable and acceptable compromise that will save lives, prevent injuries and reduce costs to society." (The United States is still trying to persuade some states to lower their limits of .10 to .08.)

What does it take to reach .08? That's hard to say, because so much depends on an individual's weight and metabolism. The U.S. Traffic Safety Administration says the average 170-pound (76-kilogram) male will reach .08 after five drinks in two hours on an empty stomach, and a 120-pound (54-kilogram) woman will reach it after three drinks. Commenting on the belief that one may safely down one standard drink an hour before driving, Transport Canada says the "'one drink per hour' rule works only for the first two or three hours. It does not work for women. Restrict yourself to no more than two drinks. Better yet, don't drink if you are going to drive."

The Ottawa-based Traffic Injury Research Foundation estimates that 5 per cent of drivers account for 84 per cent of trips made while impaired. The Canada Safety Council says lowering the blood-alcohol level would do nothing to catch this hard core. If there are new resources, it argues, let them be devoted to enforcing the law more stringently against these repeat offenders – many of them previously convicted, often driving while under suspension – rather than chasing after less impaired drivers who pose far less of a threat. MADD Canada responds that the Council underestimates the threat posed by those under .08.

It is important to tread carefully. There has been great public support for a law that strikes out against significantly impaired drivers while not making criminals of those who have had a beer, glass of wine or shot of liquor with dinner. Awareness has grown; people are conscious of the dangers, both of harming others and of being stopped by the police. The risk in lowering the level below a point many Canadians might consider reasonable is that it would encourage disdain for the law, which might in turn weaken the resolve of those officers and courts assigned to enforce the law – independent of the increased burden on both.

Driving while impaired is a serious crime. Polls show the great majority of Canadians feel that way. It is heartening to read of technological advances – including an ignition-interlock that prevents a car from starting unless the driver passes a sobriety test – that can stop even unregenerate drinkers from driving. It is important that police officers and the courts more stringently and determinedly enforce the existing criminal law, and be given the resources they need to do it.

But before Canada thinks of lowering the legal limit, and redefining impairment to cover more than it now does, there should be a more comfortable weight of evidence that this is necessary and, being necessary, is politically achievable and desirable.

1. A matter of statistical interest underlying the article EM0202 reprinted above is *measuring* blood alcohol levels, either at the roadside or with a blood test. How are the inaccuracy and the imprecision of such measuring processes relevant to the discussion in the article? Explain briefly.

2. Another matter of statistical interest is the *relationship* between blood alcohol level and degree of driving impairment.
   - What does the article EM0202 reprinted above indicate about this relationship?
   - What does the article indicate about *variation* in this relationship among individuals?
     - Explain briefly how this variation is relevant to the discussion in the article.

3. The article EM0202 reprinted above discusses dfferent values (such as .05 and .08) as a legal threshold for impaired driving. What matters does the article indicate are relevant to choosing an appropriate value?

The article EM0202 reprinted above is used in Chapter 14 in the STAT 231 Course Materials and in Statistical Highlight #37.