Michigan Alcohol Policy Promoting Health & Safety
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February 13, 2013

House Committee on Criminal Justice
Room 327, House Office Building
124 North Capitol Avenue
Lansing, MI

Good Morning Chairman Heise and Members of the Committee:

My name is Mike Tobias and I represent Michigan Alcohol Policy Promoting Health and Safety (MAP). MAP, as we're commonly known as, is a grassroots, nonprofit organization with no paid staff or formal funding. I appreciate the opportunity to testify in support of HB4093 and HB4191.

MAP strongly supports keeping .08 the BAC standard for the State of Michigan; the commercial driving BAC at .04; and keeping zero tolerance at .02 BAC. Research is clear that lowering the BAC to .08 has reduced fatalities due to alcohol-related motor vehicle crashes and saved lives. The information below was taken from a presentation "Determining the Feasibility, Benefits, and Acceptability of Lowering the BAC Standard in the U.S." given by David W. Eby, Lidia P. Kostyniuk, Lisa J. Molnar from the UM Transportation Research Institute Behavioral Sciences Group on December 14, 2012 and summarizes some research that demonstrated what happened when states began lowering BAC limits to .08 in the early 1990s:

- An analysis of the first 5 states to make this change (Utah, Oregon, Maine, California, Vermont) found a reduction in AID fatalities of 16-18%.
- Later studies of lowering the BAC to 0.08% found AID fatalities were reduced by 5-16%.

Large amounts of research have been done that demonstrate lowering BAC is protective. From this research that's been done it's safe to assume that if the BAC level is raised we can expect an increased rate of harmful outcomes such as alcohol impaired driving fatalities. For more information you can go to: http://www.thecommunityguide.org/mvoi/AID/BAC-laws.html.

Blood Alcohol Concentration (BAC)[1]	Typical Effects	Predictable Effects on Driving
.02%	▪ Some loss of judgment ▪ Relaxation ▪ Slight body warmth ▪ Altered mood	▪ Decline in visual functions (rapid tracking of a moving target) ▪ Decline in ability to perform two tasks at the same time (divided attention)
.05%	▪ Exaggerated behavior ▪ May have loss of small-muscle control (e.g., focusing your eyes) ▪ Impaired judgment ▪ Usually good feeling ▪ Lowered alertness ▪ Release of inhibition	▪ Reduced coordination ▪ Reduced ability to track moving objects ▪ Difficulty steering ▪ Reduced response to emergency driving situations
.08%	▪ Muscle coordination becomes poor (e.g., balance, speech, vision, reaction time, and hearing) ▪ Harder to detect danger ▪ Judgment, self-control, reasoning, and memory are impaired	▪ Concentration ▪ Short-term memory loss ▪ Speed control ▪ Reduced information processing capability (e.g., signal detection, visual search) ▪ Impaired perception
.10%	▪ Clear deterioration of reaction time and control ▪ Slurred speech, poor coordination, and slowed thinking	▪ Reduced ability to maintain lane position and brake appropriately
.15%	▪ Far less muscle control than normal ▪ Vomiting may occur (unless this level is reached slowly or a person has developed a tolerance for alcohol) ▪ Major loss of balance	▪ Substantial impairment in vehicle control, attention to driving task, and in necessary visual and auditory information processing

[1] Information in this table shows the BAC level at which the effect usually is first observed, and has been gathered from a variety of sources including the National Highway Traffic Safety Administration, the National Institute on Alcohol Abuse and Alcoholism, the American Medical Association, the National Commission Against Drunk Driving, and www.webMD.com.

Q: What can I do to stay safe when I plan on drinking?

A: If you plan on drinking, plan not to drive. You should always:

- Choose a non-drinking friend as a designated driver, or
- Ask ahead of time if you can stay over at your host's house, or
- Take a taxi (your community may have a Safe Rides program for a free ride home), and
- Always wear your safety belt – it's your best defense against impaired drivers.

U.S. Department of Transportation
National Highway Traffic Safety Administration

DOT HS 809 844
February 2005

www.nhtsa.dot.gov
nhtsa
people saving people

The ABCs of BAC

The ABCs of BAC

A Guide to Understanding Blood Alcohol Concentration and Alcohol Impairment

Q: What is "BAC"?

A: The amount of alcohol in a person's body is measured by the weight of the alcohol in a certain volume of blood. This is called the blood alcohol concentration, or "BAC."

Alcohol is absorbed directly through the walls of the stomach and the small intestine, goes into the bloodstream, and travels throughout the body and to the brain.

Alcohol is quickly absorbed and can be measured within 30 to 70 minutes after a person has had a drink.

Q: Does the type of alcohol I drink affect my BAC?

A: No! A drink is a drink, is a drink.

A typical drink equals about half an ounce of alcohol (.54 ounces, to be exact). This is the approximate amount of alcohol found in:

- one shot of distilled spirits, or
- one 5-ounce glass of wine, or
- one 12-ounce beer.

Q: What affects my BAC?

A: How fast a person's BAC rises varies with a number of factors:

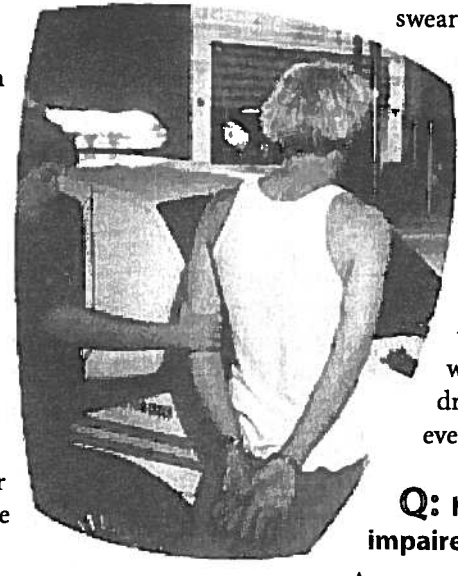
- **The number of drinks.** The more you drink, the higher the BAC.
- **How fast you drink.** When alcohol is consumed quickly, you will reach a higher BAC than when it is consumed over a longer period of time.
- **Your gender.** Women generally have less water and more body fat per pound of body weight than men. Alcohol does not go into fat cells as easily as other cells, so more alcohol remains in the blood of women.
- **Your weight.** The more you weigh, the more water is present in your body. This water dilutes the alcohol and lowers the BAC.
- **Food in your stomach.** Absorption will be slowed if you've had something to eat.

Q: What about other medications or drugs?

A: Medications or drugs will not change your BAC. However, if you drink alcohol while taking certain medications, you may feel – and be – more impaired, which can affect your ability to perform driving-related tasks.

Q: When am I impaired?

A: Because of the multitude of factors that affect BAC, it is very difficult to assess your own BAC or impairment. Though small amounts of alcohol affect one's brain and the ability to drive, people often swear they are "fine" after several drinks – but in fact, the failure to recognize alcohol impairment is often a symptom of impairment.



While the lower stages of alcohol impairment are undetectable to others, the drinker knows vaguely when the "buzz" begins. A person will likely be too impaired to drive before looking – or maybe even feeling – "drunk."

Q: How will I know I'm impaired, and why should I care?

A: Alcohol steadily decreases a person's ability to drive a motor vehicle safely. The more you drink, the greater the effect. As with BAC, the signs of impairment differ with the individual.

In single-vehicle crashes, the relative risk of a driver with BAC between .08 and .10 is at least ***11 times greater*** than for drivers with a BAC of zero, and ***52 times greater*** for young males. Further, many studies have shown that even small amounts of alcohol can impair a person's ability to drive.

Every State has passed a law making it illegal to drive with a BAC of .08 or higher. A driver also can be arrested with a BAC below .08 when a law enforcement officer has probable cause, based on the driver's behavior.

The following chart contains some of the more common symptoms people exhibit at various BAC levels, and the probable effects on driving ability:

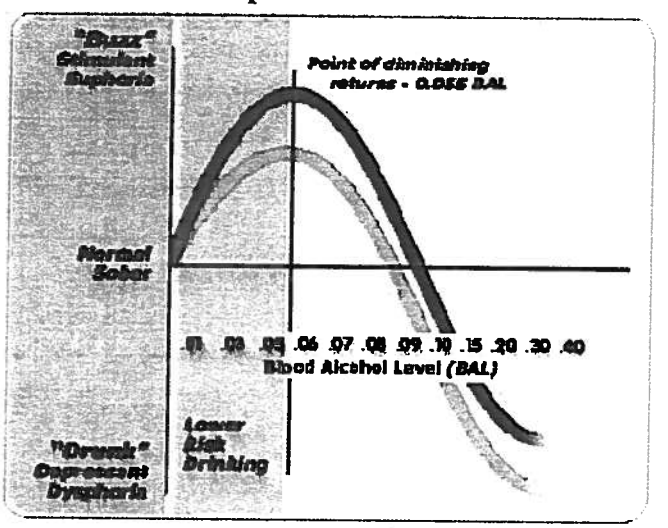
University Health Service (UHS)

Health Promotion Office

Understanding Blood Alcohol Content (BAC)

Blood Alcohol Content (BAC) refers to the milligrams of alcohol per 100 milligrams of blood, usually expressed as a percentage. In other words, .10 BAC is 1 part alcohol for every 1,000 parts blood. An absolute BAC can only be obtained by drawing a sample of blood. As that method is not always practical, the best way to determine a reliable estimate is by using a breathalyzer that takes a sample of alveolar (deep lung) air. Handheld breathalyzers are slightly less accurate, but are more convenient.

Alcohol's Biphasic Effect



As BAC slowly rises and is under .06%:

- The drinker experiences stimulating effects such as increased energy, self-confidence, sociability, and a feeling of wellbeing or "euphoria." This is the BUZZ Zone.

At a BAC of .06%:

- Peak stimulation and euphoria occur. After this "Point of Diminishing Returns," higher BACs will result in fewer and fewer positive effects.

As BAC surpasses .06%:

- The drinker begins to feel the depressant effects of alcohol such as sluggishness, fatigue, sloppiness, lack of balance, and coordination, slurred speech. To others, the drinker often appears "drunk."

Once the drinker has gone beyond the "Point of Diminishing Returns," it is impossible to return to the Buzz Zone. Remaining in the Buzz Zone maximizes the drinker's positive experience and

reduces harm. Tolerance (being able to "hold one's liquor") hampers alcohol's positive effects by reducing the initial stimulant qualities (yellow line). High tolerance makes drinking more costly in terms of calories and money, limits the euphoria, and worsens the depressant effects.

How much do you really drink?

One of the biggest problems with self-determining one's BAC is that few students keep track of how many drinks they actually consume. A standard drink contains ½ oz of alcohol, regardless of the quantity of surrounding liquid or sugar. Some alcoholic beverages are labeled with a percent alcohol by volume, but most beers are not. A general rule of thumb is that the darker and/or more bitter the beer, the more alcohol the beverage contains. With the exception of Chardonnay, red wines have a higher alcohol content than whites, and sweeter wines tend to have a lower alcohol content than dry wines. In similar fashion, dark liquor tends to have a higher alcohol content than light or clear liquor, and sweet liquor tends to have a lower alcohol content than dry liquor. Use the following chart to determine how much alcohol is in your favorite drink.

Percent Alcohol By Volume

Type of Drink	Percent Alcohol	
	Average	(Range)
Beer (Lager)		
Light	4.2	(3.8 - 4.4)
Regular	4.5	(4.1 - 4.9)
Ice	5.5	(5.0 - 5.9)
Ales	4.5	(4.0 - 6.0)
Porters/Stouts	6.5	(6.0 - 8.0)
Wines	12.0	(7.1 - 14.2)
Chardonnay	12.5	(11.0 - 14.0)
Other Whites	10.0	(7.1 - 12.0)
Red Wines	13.0	(12.0 - 14.2)
Vodka	40.0	(40.0 - 50.0)
Gin	42.5	(40.0 - 48.5)
Rum	45.0	(40.0 - 95.0)
Tequila	45.0	(45.0 - 50.5)
Brandy	42.0	(40.0 - 43.0)
Whiskey	50.0	(40.0 - 75.0)

*Chart adapted from Virginia Tech, www.alcohol.vt.edu

Alcohol Myopia

Alcohol Myopia literally means "cognitive nearsightedness", and refers to alcohol's ability to substantially decrease reasoning abilities, judgment, and the ability to concentrate. At BACs above 0.06 many individuals begin to focus exclusively on obvious cues and signals, and fail to take into account peripheral information and long-term consequences. Affected individuals literally zone in on one particular emotion or person, and lose sight of their surroundings. As a result, affected individuals may misperceive social cues and act inappropriately. While an

intoxicated individual's lack of social perception may be humorous to a sober on-looker, failure to appropriate read social signals puts both individuals at risk, and can lead to serious, life-changing consequences. Remember that intoxication is not an excuse for inappropriate or illegal behavior, and that you are responsible for your actions at all times.

Progressive Effects of Alcohol

When most people think about alcohol, they first think about the "buzz" or mild "up" feeling that occurs when a individual consumes moderate amounts of alcohol over a corresponding period of time (ex: one drink per hour for up to four hours consecutively). While alcohol can produce a positive, relaxed overall feeling, alcohol can also produce a series of negative feelings. Many people incorrectly assume that the more alcohol they consume the better they will feel. However, that simply is not the case. There comes a point, called the point of diminishing returns, when the "buzz" will not increase with more alcohol. In fact, at this point, (typically around a BAC of .06), drinking more alcohol is almost guaranteed to lead to a series of negative effects such as fatigue, impaired sexual performance, inappropriate social responses and behavior, and/or over-expressed emotions. Known as the biphasic effect or biphasic response, these up and down feelings can be avoided by drinking slowly to a maximum BAC of 0.06%. See below How to Maximize the Positive Effects of Alcohol for more information.

Blood Alcohol Concentration	Changes in Feelings and Personality	Physical and Mental Impairments
0.01 - 0.06	Relaxation Sense of Well-being Loss of Inhibition Lowered Alertness Joyous	Thought Judgment Coordination Concentration
0.06 - 0.10	Blunted Feelings Disinhibition Extroversion Impaired Sexual Pleasure	Reflexes Impaired Reasoning Depth Perception Distance Acuity Peripheral Vision Glare Recovery
0.11 - 0.20	Over-Expression Emotional Swings Angry or Sad Boisterous	Reaction Time Gross Motor Control Staggering Slurred Speech
0.21 - 0.29	Stupor Lose Understanding Impaired Sensations	Severe Motor Impairment Loss of Consciousness Memory Blackout
0.30 - 0.39	Severe Depression Unconsciousness Death Possible	Bladder Function Breathing Heart Rate
0.40 and	Unconsciousness	Breathing

greater	Death	Heart Rate

*Chart adapted from Virginia Tech, www.alcohol.vt.edu

How to Maximize the Positive Effects of Alcohol

An individual maximizes the positive effects of alcohol when s/he is able to keep his/her BAC at or below .06. Known as the "Pleasure Zone", a consistent BAC below .06 can significantly reduce the potential negative outcomes of drinking. The problem with this method is that, as discussed in Understanding BAC, it is near impossible to know one's own BAC without using an external device such as a breathalyzer. However, that doesn't excuse mindless imbibing. It is recommended that individuals consume no more than one drink per hour for up to four hours consecutively. This moderate level of alcohol intake will enable an individual to benefit from the positive effects of alcohol for a longer period of time than if you consumed all four drinks at once, thereby maximizing one's time in the Pleasure Zone.

THE
CENTURY COUNCIL

DISTILLERS FIGHTING DRUNK DRIVING & UNDERAGE DRINKING

RALPH BLACKMAN
President & CEO

February 11, 2013

The Honorable Kurt Heise
PO Box 30014
Lansing, MI 48909-7514

Dear Representative Heise:

The Century Council was founded in 1991 and is an independent, national not-for-profit organization headquartered in Arlington, Virginia. Funded by America's leading distillers (Bacardi U.S.A., Inc.; Beam, Inc.; Brown-Forman; Constellation Brands, Inc.; DIAGEO; Hood River Distillers, Inc.; and Pernod Ricard USA), The Century Council is dedicated to developing and implementing programs that fight drunk driving and underage drinking. To date, we have hosted more than 2,000 community events to launch our programs across the nation bringing them to millions of parents, youth, educators, law enforcement officials and traffic safety professionals.

For 20 years, The Century Council has been active in the fight to combat drunk driving. In response to a growing body of research that points to high blood alcohol concentration (BAC) and repeat offenders as the source of a large and disproportionate share of highway crashes, in 1997 The Century Council created The National Hardcore Drunk Driver Project. The Project serves as a single, comprehensive resource to assist state legislators as well as highway safety officials, law enforcement officers, judges, prosecutors, community activists and treatment professionals in developing programs to reduce hardcore drunk driving.

The Century Council, along with the National Transportation Safety Board, American Automobile Association and the National District Attorneys Association, comprise the Coalition to Fight Hardcore Drunk Driving that supports state legislative proposals to enact comprehensive and effective solutions to the hardcore drunk driving problem.

Since 2005, every state has adopted a .08 percent BAC per se law for drunk driving offenders. According to the Centers for Disease Control (2001), legal .08 percent BAC limit laws reduce alcohol-related traffic fatalities by seven percent. Almost a decade ago, The Century Council was on the front lines of the effort to encourage every state to adopt this life saving legislation, and we support House Bill 4093 in order for the State of Michigan to maintain the per se legal BAC limit at .08 percent.

In an effort to identify and address the factors that influence DUI recidivism, The Century Council and the Division on Addiction at Cambridge Health Alliance, a teaching affiliate of Harvard Medical School, have begun work on a project to expand and test a Computerized Assessment and Referral System (CARS) for use with a structured diagnostic mental health assessment in DUI intervention and treatment settings. Already piloted with support from the National Institute on Alcohol Abuse and Alcoholism (NIAAA), the project will examine the relationship

between psychiatric profiles and driving under the influence among repeat DUI offenders. We hope this project will help states better identify, sentence and treat hardcore drunk drivers and reduce recidivism.

Based on our research, we believe that strong laws enabling swift identification, certain punishment and effective treatment are critical fundamental elements necessary to reduce the incidence of hardcore drunk driving and believe that these elements must be coordinated into a statewide system to be effective

If there is anything that The Century Council can do to support this effort, please contact Jaime Lotter, Director of Government Relations and Traffic Safety, at 202-637-0077 or LotterJ@CenturyCouncil.org.

Sincerely,

Ralph Blackman
President & CEO

Safe Kids
WORLDWIDE

Preventing accidental injury.

February 11, 2013

The Honorable Kurt Heise
N-699 House Office Building
P.O. Box 30014
Lansing, MI 48909

Dear Chairman Heise,

On behalf of Safe Kids Worldwide, I write in support of H.B. 4093 and H.B. 4131, which eliminate the 2013 sunset on the .08 grams per 100 milliliters blood-alcohol-content (BAC) threshold for drunk driving. We understand that there is some support in the state for allowing the more stringent threshold for drunk driving to sunset. We believe this would be an ill-conceived step back, and would risk the lives of kids. Thus, we join in support of these bills with MADD and other organizations dedicated to child safety.

As a fact-based and research driven organization, we believe a .08 BAC limit is important and effective. Since 2003, when the .08 BAC limit went into effect, drunk driving fatalities have dropped by 25% in Michigan. Research has shown that essentially all drivers, including those who are experienced drinkers, are significantly impaired at a .08 BAC. These are the results of a review of nearly 300 studies which show that drivers are impaired in the performance of crucial driving tasks such as: divided attention, complex reaction time, steering, lane changing and judgment. The facts are clear, a .08 BAC limit saves lives.

Michigan is the heart and home of the auto industry. It should not become the only state in the nation with such a high alcohol threshold and vulnerable to losing $50 million in federal funds. This is why we urge you to support H.B. 4093 and H.B. 4131. This reasonable, effective and lifesaving legislation will help ensure that more Michigan families are safe on the road. If there is anything we can do for you to aid in passing this legislation, feel free to contact me at 202.662.0600 or Anthony Green, our Director of Public Policy, at agreen@safekids.org, 202.663.0606.

Sincerely,

Kate Carr
President & CEO
Safe Kids Worldwide

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www.safekids.org