Flipping the Pyramid: Policies and Practices to Decrease Alcohol-Related Crashes

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PROTECTING, MAINTAINING AND IMPROVING THE HEALTH OF ALL MINNESOTANS

What is a “standard drink” in the US?

12 ounces of beer
5% Alcohol

OR

1.5 ounces of distilled spirits
40% alcohol (80 proof)

e.g., vodka, whiskey, gin, rum

SOURCE: National Institute for Alcohol Abuse and Alcoholism.
Binge drinking is a pattern of drinking that raises a person’s blood alcohol concentration to 0.08%.

- 5 Five or more drinks on a single occasion for men
- 4 Four or more drinks on a single occasion for women
- 2 Two hours is considered a single occasion.
In Minnesota during 2018, alcohol-related MVC were responsible for...

- 123 Deaths
- 706 Inpatient Hospitalizations
- 3,293 Emergency Room Visits
- 5,945 EMS Responses

For every 1 death there were...

- Inpatient Hospitalizations 6
- Emergency Room visits 27
- EMS responses 48

About 3% of Minnesota adults said they drove after drinking “too much”...

- 9%
- 8%
- 7%
- 6%
- 5%
- 4%
- 3%
- 2%
- 1%
- 0%

3.2%

All Minnesotans

Minnesota Behavior Risk Factor Surveillance System, 2018
...while almost 1 in 10 binge drinkers said they drove after drinking “too much”

That’s more than 130,000 people!

In 2018, there were 26,414 DWI incidents*
• Or ~880 per month

How do these numbers fit with what you see in your work?

Between 2011 and 2018, 5 – 6% of crashes were alcohol-related

However, about 1/3 of crash deaths were alcohol-related
The number of alcohol-related crash deaths

![Graph showing alcohol-related crash deaths from 2011 to 2018. The highest number of deaths was in 2011 with 123 deaths.]

Minnesota Trauma Registry (MNTrauma)

- Collects data for the MN traumatic brain injury and spinal cord injury registries
- Hospitals are required to report cases that meet criteria for major trauma
The number of motor vehicle crash injuries reported in the trauma system, 2018

- In 2018, there were 5,412 MVC injuries reported in MNTrauma
  - 29% of those patients had a positive BAC
- Note: we do not have information on whether they were driving

The proportion of MVC injuries, by BAC level

- Eliminating those injuries with a BAC of .08 or above would mean about 520 fewer injuries
- Eliminating those injuries with a BAC of .01 to .079 would reduce the number of injuries by an additional 300
Severe injuries were more likely to have alcohol involvement >.08

The Injury Severity Score (ISS) is an anatomical scoring system that provides an overall score for patients with multiple injuries.

Males are more likely to suffer injuries from crashes overall, but the difference is greater when alcohol is involved.
Alcohol is costly

- DPS estimates traffic crashes cost Minnesota $1.9 billion each year\(^1\)
  - 15% of those costs were due directly to alcohol-related crashes in 2018 (more than $283 million).

- Other estimates of the costs from excessive alcohol use include costs due to lost productivity, criminal justice, services for children with FASD, and more.\(^2\)
  - The latest estimate shows that excessive alcohol use cost Minnesota $3.9 billion in 2010, or about $1.74 per drink.
  - 40% of these costs are born by state and local governments -- $1.5 billion in 2010, or $.69 per drink

\(^2\)Sacks, Gonzales, Bouchery et al, 2015

So what does this mean?

- Each year, investing in DWI prevention in Minnesota could save:
  - More than 100 premature deaths
  - More than 800 injuries requiring hospital treatment
  - Nearly $300 million dollars

- Each year, investing in prevention of excessive drinking (such as binge drinking and underage drinking) could save:
  - More than 1,700 deaths
  - $3.9 billion dollars -- \textbf{$1.74 \text{ for each drink consumed}$}
Thank you!

Comments?
Questions?

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