Minnesota Action on Alcohol:

Curbing Excessive Alcohol Use in Minnesota

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Executive Summary

The prevalence of excessive alcohol consumption is a challenge that the state of Minnesota currently faces. Although Minnesota has been considered one of the healthiest states in the nation, it has consistently ranked poorly in prevalence and prevention of excessive alcohol consumption. In a survey conducted by the United Health Foundation that ranked states from best to worse in excessive drinking, Minnesota ranked 44th (2014). In addition, the Centers for Disease Control and Prevention (CDC) estimates that excessive alcohol use results in 1,257 deaths a year in Minnesota and deprives Minnesota of $3.5 billion annually from loss of workplace production, crime, and healthcare expenses (2013). Lastly, excessive alcohol consumption contributes negatively to the long-term health of Minnesota as it can lead to an increase in chronic and infectious diseases, driving accidents, unplanned pregnancies, and household violence (Minnesota Department of Health, 2012)

Current policies to deter overconsumption of alcohol in Minnesota have fallen short of their desired effects as a recent study found that Minnesota had the 5th highest rate of binge drinking within the U.S. (Dwyer-Lindgren et al., 2014). Serious change in residents’ perceptions and relationships with alcohol must be addressed across the state to ensure a healthier community. The following strategies provide an efficient, cost-effective plan of action to tackle the widespread problem of excessive alcohol use across the state:

- **Require that all state universities and colleges adopt a web-based personalized normative feedback program to all incoming students:** This initiative would use an evidence-based, online alcohol intervention and personalized feedback program to increase students’ understanding about alcohol.

- **Implement community outreach programs that discuss the harmful effects of excessive alcohol use and misconceptions via use of media outlets:** These programs offer the community a preventative plan of action combined with evidence-based alcohol education.

- **Improve health care providers application of evidence-based interventions for excessive drinking:** Provider-patient relationships offer a unique opportunity to recognize and intervene on behalf of this high-risk population by utilizing brief intervention and motivational interviewing.
- Create a coalition to combat excessive alcohol use among university students that includes representatives from both the community and the University of Minnesota: Partnerships between students and community liaisons can work together to change the environment of the university campus to promote safer drinking practices.

- Create sobriety checkpoints across the state in order to deter drivers from drinking while intoxicated (DWI): Risk of unexpected legal repercussions is viewed as a likely deterrent from drinking and driving.

- Decrease the legal blood alcohol concentration (BAC) from 0.08 to 0.05\% in an effort to reduce the number of alcohol-related crashes: Drivers with a BAC of 0.05\% have been shown to be as high risk for alcohol-related crashes as those with a BAC of 0.08\%.

This issue brief will expound both the difficulties faced by the state of Minnesota with regards to overconsumption of alcohol and the steps needed to curb this problem.
Introduction

State Context

Minnesota is a mid-western state that is bordered by Wisconsin, Iowa, South Dakota, North Dakota, and Canada. The majority of the state is composed of rural pine, while Minneapolis and St. Paul, the Twin Cities, form the one major metropolitan area (Figure 1). The Minneapolis-St. Paul metropolitan area is home to 62% of the state’s population. By contrast many of the northern regions have less than one person per square mile (Forbes.com LLC, 2016).

In 2014, Minnesota’s population was estimated to be 5,457,173 people, 23.4% of which were persons less than 18 years old. Racial demographics show that Minnesota’s population is composed of 85.7% Caucasian, 5.9% African American, 5.1% Hispanic or Latino, 4.7% Asian, and 1.3% American Indian. Educational demographics illustrate that Minnesota has the second highest percentage of high school graduates in the United States at 92.1%. In addition, 32.9% have a bachelor’s degree or higher, which is also above the U.S. average. The median household income calculated from figures from 2009 to 2013 was $59,836, again above the U.S. average. Additionally, Minnesota’s poverty rate is 11.5% and unemployment rate is 3.7%, both of which are below the U.S. averages. (United States Census Bureau, 2015; Bureau of Labor Statistics, 2016).

Contributing to Minnesota’s low unemployment rate, is the fact that the Twin Cities region is a major economic hub and is the central headquarters site for multiple major corporations, such as Target, U.S Bancorp, General Mills, 3M, and Medtronic (Forbes.com LLC, 2016). In addition, Minnesota’s agriculture contributes to several industries, such as food.

Figure 1: Minnesota state population density map based on U.S. Census Bureau 2010 data
processing. Other common industries include machinery, printing/publishing, fabricated metal products, electronic equipment, mining, and tourism (United States Census Bureau, 2015). As a result of these booming industries,

Minnesota is largely considered a democratic state and elected Mark Dayton, a Democrat, as governor in 2011 (State of Minnesota, 2011). Since being elected, Mark Dayton has encouraged Minnesota’s citizens to focus on issues related to health care such as expanding Medicare. Making health a priority has contributed to the state’s high level of access to primary care and low rates of being uninsured (America’s Health Rankings, 2016). Due to Minnesota’s emphasis on healthcare, the state has experienced lower health care costs which have contributed to a $2 billion budget surplus (Stassen-Berger & Montgomery, 2015).

The Problem

Excessive alcohol use is defined as heavy episodic drinking, binge drinking, and any consumption of alcohol by pregnant mothers and people under the age of twenty-one (CDC, 2016). Although Minnesota ranked 4th healthiest state, it ranked 44th worst state in a survey that ranked states from best to worst in excessive drinking (America’s Health Rankings, 2016; United Health Foundation, 2014)

Excessive alcohol use leads to an estimated 1,257 deaths per year in Minnesota (Figure 2) and deprives Minnesota of $3.5 billion annually from loss of workplace production, crime, and health care expenses (CDC, 2013). Furthermore, it is estimated that 21% of violent crimes in Minnesota are alcohol-related (Campbell, 2016).

Statistics from Minnesota’s Office of Traffic Safety found that alcohol use contributes to 24% of all Minnesota motor vehicle accidents and that 2,040 people suffered injuries in alcohol-related crashes. In addition, 25,258 motorists were arrested for Driving While Intoxicated (DWI) and that 5% of the DWIs issued were to people less than 21 years of age. This same report also concluded that one out of every seven licensed motorists has a DWI (Minnesota Department of Public Safety, 2016)

![Figure 2: Alcohol Attributable Deaths by Cause in Minnesota, based on 2007 data](image)
A study done by Dwyer-Lindgren et al. found that Minnesota has the 5th highest level of binge drinking with 30.2% of men and 17.3% of women admitting to binge drinking (Figure 3). This same survey also showed that 66.6% of adults within Minnesota consumed an alcoholic beverage within the last 30 days. This is above the national average of 56% (2015). A survey by CORE Institute discovered that 63.2% of college students admit to drinking alcohol and that 25.1% admit to binge drinking with the last 30 days (2013). In addition, The National Survey on Drug Use and Health found that Minnesota ranked low in its perception of binge drinking being a detriment to one’s health across all age groups (2014).

**Proposed Solutions & Strategies**

1) **Strengthening Individual Knowledge and Skills**

**Proposed Solution:**

We propose all public universities in Minnesota to require the web-based normative feedback program, electronic Check-Up to Go (e-CHUG), to all incoming students will help decrease excessive drinking among this age group. E-CHUG is an “evidence-based, online alcohol intervention and personalized feedback tool developed by counselors and psychologists.
at San Diego State University. This brief web-based program is designed to reduce high-risk drinking by providing personalized feedback and normative data regarding drinking and the risks associated with drinking” (Doumas, Christina, Navarro, and Roman, 2011).

This program is commercially available and customized for the participating university. It provides personalized feedback to each participant about drinking behavior. Findings from a study in 2011 about the efficacy of the e-CHUG program showed that the e-CHUG group had reductions in heavy drinking and alcohol-related consequences. Additionally, high-risk 1\textsuperscript{st} year students in the e-CHUG groups reported a 58% reduction in peak drinking, 65% reduction in frequency of drinking to intoxication, and 34% reduction in weekly drinking compared with 11%, 15%, and 10% increases, respectively, in the control group at the three-month follow-up (Doumas et al, 2011).

**Strategies for Implementation:**

To implement the use of web-based normative feedback programs in all public universities and colleges, the support of state legislation is required. This support will allow for a collaborative and uniform effort against excessive alcohol consumption in all tertiary educational institutions throughout the state of Minnesota.

When support is obtained, public universities would be able to easily subscribe to and download the software program electronically. After the program is downloaded, it can be made available to an unlimited number of students through the Internet and can be accessed on computers, mobile devices, and tablet devices. Once the survey is completed, students would receive results and personalized feedback immediately. School administrations would also have immediate results to student’s results as well as statistical analyses of said results. Schools would be required to pay an annual subscription to the program. On average, the estimated cost of a subscription per university is $975 annually (San Diego State University Research Foundation, 2016).

As mentioned above, the cost of such a software program is relatively inexpensive and provides educators with on-line administration reports as well as documentation of program participants (San Diego State University Research Foundation, 2016). These reports and tracking can be used to measure the effectiveness of the program on a quarterly basis. In addition, alcohol-related incident rates, such as public intoxication and operating under the
influence, could be compared before and after implementation of the web-based feedback program since there is a strong correlation between excessive drinking and alcohol-related incidents (Doumas et al, 2011).

Projected Outcomes:

E-CHUG will provide basic knowledge about alcohol and also help students identify risk factors and patterns that lead to dangerous drinking. Students will be able to recognize alcohol as a problem, thus decreasing overall binge drinking/excessive drinking rates and alcohol-related consequences. At a time when alcohol and peer pressure are at its most prominent, such interventions will provide students the opportunity to explore their own understanding of alcohol and their own personal support systems. Students will be able to identify differences between types of alcohol and its effects on one’s behavior, while acknowledging how one might behave in a similar situation in the future.

2) Promoting Community Education

Proposed Solution:

We propose using various media outlets to implement community outreach programs that discuss the harmful effects and misconceptions of excessive alcohol use will change drinking behaviors on the community level. The most effective and inexpensive way to increase public support reductions in alcohol availability is to use local newspapers, radio, and television. Without skillful media work, it is very difficult to implement policy-driven structural changes within a community. Media advocacy can be used to make retailers, underage buyers, parents, and other adults more aware of the likelihood of legal consequence for selling or providing alcohol to people who are underage (National Institute on Alcohol Abuse and Alcoholism, 2015). In university settings, when students feel a connection to the community and help take responsibility for their friends, the number of tragedies in college communities decreases (Minnesota, 2008).

Strategies for Implementation:

To properly execute this proposal, funding from state legislation and the support of local media outlets and local businesses is required. Through their assistance, information on
excessive alcohol consumption and its negative effects can be disseminated to individuals of all ages within all socio-economic levels. These means of communication are especially useful to educate adolescents – the age group which studies suggest is most influenced by media advertisements (Anderson, de Brukin, Angus, Gordon, & Hastins, 2009).

Funding obtained from state and local legislation would help contribute to the production and delivery of informational pamphlets and media advertisements. Local media outlets and business can also contribute to this effort through marketing, distributing pamphlets, and sponsoring community programs and fundraisers. In addition, social media can be used as an inexpensive, yet effective, avenue to target adolescents and warn them of the risks and health dangers of excessive drinking (Moreno & Whitehill, 2014).

Since studies suggest that adolescents are most swayed by advertisements and media exposure, the best way to measure effectiveness of this proposal is through polling adolescents on their alcohol consumption pre and post-advertisement implementation. The most affordable way to survey students is to use The Minnesota Student Survey. This survey is administered by the Minnesota Departments of Education, Employment and Economic Development, Health, Human Services, and Public Safety every three years to students in the sixth, ninth, and twelfth grades within the Minnesota public school system. Within this survey, students’ perceptions of excessive drinking as well as their actual consumption of alcohol is measured (Minnesota Department of Health, 2014). Results prior to the use of media advertisements could be compared to results post-implementation help determine effectiveness of the advertisements.

**Projected Outcomes:**

The main focus of this policy is to raise awareness of binge drinking, and the effect that long-term alcohol use has on health. By exposing communities to statistics and educating the community on alcohol’s significant causative properties, this intervention may lead to a decrease in alcohol consumption. In turn, individual health will improve and subsequently improve the health of the entire community. The use of mass media increases capability to provide prevention services to larger and more diverse groups through media outlets.
3) Educating Providers

Proposed Solution:

Encouraging health care providers, especially in primary care, to use evidence-based interventions for excessive drinking will help reduce unhealthy drinking behaviors among people who seek medical care. Evidence-based interventions include brief interventions in primary care and motivational interviewing. Considering that Minnesota ranks high in the number of people who are insured and have access to primary care providers, this policy should offer a relevant intervention. A healthcare setting is also a natural setting for such interventions to take place.

A meta-analysis from the Cochrane library reviewed 22 RCT’s on the impact of brief interventions in primary care. The results of these studies indicate that brief interventions can reduce alcohol consumption (Kaner et al, 2007). Educating primary care providers on the effectiveness and implementation of these brief interventions can be a simple tool to reduce binge drinking in the state of Minnesota. Additionally, motivational interviewing is a skill that all healthcare professionals can utilize to collaborate with their patients to create significant lifestyle changes. Data on motivational interviewing has demonstrated its effectiveness in all types of settings. Many providers must learn to master their skills in motivational interviewing instead of performing it in a superficial manner (Miller & Rollnick, 2013).

Strategies for Implementation:

To implement the use of evidence-based interventions targeted to reducing excessive alcohol consumption within healthcare practices, the support of state legislation is necessary. Legislature mandating healthcare provider training and allocating resources to such providers would result in the successful application of this intervention. The American Public Health Association has already produced free resources and training available online for healthcare providers, thereby reducing program expenses for the state (2016). In addition to these online resources, healthcare providers could collaborate with one another to share experiences and build upon skills and knowledge. Identifying physician role models is particularly important during clinical training of medical providers.

The Institute for Healthcare Improvement (IHI) Triple Aim framework could be used to help evaluate the effectiveness of state-mandated training. The use of this framework could set the following three goals as ones for which healthcare providers should strive: improving quality
and satisfaction of care, improving the overall health of Minnesota residents by reducing excessive alcohol usage, and reducing the per capita cost of health care in relation to excessive alcohol use within Minnesota (IHI, 2015).

**Projected Outcomes:**

Such interventions will contribute by filling in the deficits in knowledge and clinical skills among physicians-in-training and those that practice in hopes to change the negative attitudes toward alcohol abusers. Overall, this intervention will cause a decrease in excessive alcohol intake in individual patients and their families that may eventually trickle down to changing cultural norms.

**4) Fostering Coalitions and Networks**

**Proposed Solution:**

Creating a coalition among university students that includes representatives from both the community and University of Minnesota will reduce excessive alcohol use among university students. As of January 2016, 48,231 students were enrolled at the University of Minnesota-Twin Cities campus. 17,116 students were under the legal drinking age of 21, which means that about 35.5% of all students were at risk for underage drinking (Regents of the University of Minnesota, 2016).

According to the University of Minnesota Board of Regents, the campus alcohol policy “prohibits the unlawful or unauthorized use, possession, distribution, consumption, promotion, marketing, or sale of alcoholic beverages on University property or as part of any University activity,” unless specifically authorized by the Board of Regents to do so (Regents of the University of Minnesota, 2016). However, alcohol is still allowed on campus for authorized events, and alcohol is very hard to control at off-campus events.

A coalition that includes both community and campus representatives will help promote positive changes in the drinking culture both on and off campus. Social cognitive theory suggests that there is a relationship between the environment, the person, and the person’s behavior within the environment. Using this model, the purpose of this collaborative effort is to change the environment of the university campus to promote safer drinking practices for the individual (Newman, Shell, Major, & Workman, 2006).
Strategies for Implementation:

To form a coalition between representatives of government, community organizations, and the University of Minnesota, support from state legislation is necessary to help unite the group as well promote communication among the alliance. The coalition may include one or more representatives from City Council, mayor’s office, local hospitality industry, city/county police agencies, state government, local prevention organizations, city/county medical societies, student housing, Greek Affairs, student health center, student judicial office, vice chancellor for students, parents association, student government, and any other relevant community organizations. A communications committee will need to be established to organize communication between groups.

All members of the coalition will be utilized to perform the following alcohol-related interventions: involving students in the efforts, codifying community standards, consistently enforcing laws and policies, changing normative misperceptions, educating about policies and consequences through required seminars or through various media outlets, limiting access and availability of alcohol, eliminating high-risk promotions, eliminating/modifying high-risk traditions and celebrations, providing consistent messages about alcohol, and cultural change (Newman, Shell, Major, & Workman, 2006).

It is important that student groups organized against alcohol abuse include significant numbers of mainstream students so that their legitimacy is ensured. Without student participation, efforts by college administrators or faculty will have little effect.

By getting all interested parties involved, the coalition can gain several different perspectives on how to approach the issue and to change the drinking environment as a whole. Outcomes could be monitored by measuring the number of legislative policies proposed concerning underage drinking, incidence of underage drinking, incidence of binge drinking, and statistics that may connect underage drinking with academic performance (GPA).

Projected Outcomes:

This coalition will decrease binge drinking in university students overall, while simultaneously will decrease the incidence of alcohol-related problems, such as drunk driving and other fatalities. Doing so will also increase lobbying efforts for alcohol legislation reform.
The coalition will improve student participation, increase awareness of risks of binge drinking, and teach students how to change attitudes and behaviors about binge drinking on college campuses. As a result, the attitude that ‘drinking is a norm’ will be reduced.

5) Changing Organizational Practices

Proposed Solution:

Creating sobriety checkpoints across the state will deter drivers from drinking while intoxicated. Drinking and driving can be fatal to both the driver and any other people involved. Increasing security on the road can be an effective way to decrease mortality in Minnesota. According to a recent meta-analysis, DUI checkpoints regularly decrease the number of alcohol-related crashes by as much as 17%. The study also noted that a marked reduction in crashes could be seen in as soon as three to six months (Erke, Goldenbeld, and Vaa, 2009).

Strategies for Implementation:

To allow for the creation sobriety checkpoints within Minnesota, the support of state legislation as well as local police departments and sheriff’s offices is required. Sobriety checkpoints are currently illegal in Minnesota according to the state constitution based on search and seizure laws (Ascher v. Commissioner of Public Safety, 1994). With the support of state legislators, the state constitution could be amended to allow for the checkpoints. Legislature must pass an act proposing a change to the constitution, formulate a statement of the question that will be placed on the ballot, and it will be presented to voters at a general election. Approval is only achieved if the majority of those voting at the election vote “yes;” if voters skip the question, their vote will be counted as a “no.” Therefore, media outlets must be used to notify the public of the amendment and to gain their support prior to the general election (Gehring, 2011).

Local police departments can assist develop a protocol and to reallocate resources to allow for more checkpoints across the state. Research has illustrated that an increase in randomly located sobriety checkpoints has helped decrease drunk driving and alcohol-related motor vehicle crashes (Erke, Goldenbeld, & Vaa, 2009). Once this policy has been approved, Minnesota’s Police Department would be responsible for determining the location and time of sobriety checkpoints. These decisions would be based on statistics gathered from previous
Minnesota Department of Public Safety records that identify locations with high drunk driving incidences.

To determine the effectiveness of this policy, records from the Safety would be assessed quarterly to measure the number of drunk driving incidences as well as alcohol-related accidents. These numbers could then be compared to statistics taken prior to the implementation of this policy.

Projected Outcomes:

Sobriety checkpoints provide police officers a means to identify impaired drivers. By creating checkpoints, the amount of alcohol-related crashes and number of DWIs will decrease. As a result of this intervention, legal fees incurred by both the state and driver for DWI prosecution will also decrease. Additionally, heightened media attention surrounding checkpoints can deter impaired driving by increasing drivers’ perceived risk of arrest.

6) Influencing Policy and Legislation

Proposed Solution:

Decreasing the legal blood alcohol concentration (BAC) from 0.08 to 0.05% will help reduce the number of alcohol-related motor vehicle accidents. Currently, all fifty states have a maximum allowable blood alcohol concentration of 0.08%. Recent studies have shown that most drivers exhibit some degree of impairment at BAC of 0.05%, and their risk of collision increases dramatically at this point. This level is well below the standardized 0.08% (Fell and Voas, 2014). In a Canadian study, researchers concluded that reducing the BAC to 0.05% could decrease the rate of fatal crashes by as much as two-thirds (Rehm and Popova, 2011).

Strategies for Implementation:

To implement the policy of reducing the legal blood alcohol concentration (BAC) limit in order to safely operate a motor vehicle from 0.08 to 0.05%, support from local and state legislation is required. In addition, support from local chapters such as Mothers Against Drunk Driving (MADD) and/or Students Against Destructive Decisions (SADD) can be used to help encourage and aid in the construction of this bill. Once the bill has passed, media outlets can be utilized to help inform the public of the change in legislation.
To measure the effectiveness of the passing of this new bill, data from Minnesota Department of Public Safety and from Minnesota Public Records can be used to measure the number of drunk driving incidences pre and post-passing of the legislation. In addition, statistics from the Department of Health can be used to determine the number of drunk driving hospitalizations and deaths.

**Projected Outcomes:**

This intervention will aim to decrease the amount of alcohol-related crashes, decrease medical expenses incurred from alcohol related crashes, and prevent permanent injury and death resulting from alcohol related crashes. With research citing how higher blood alcohol levels contribute to increasing costs secondary to personal and economic loss, lowering the BAC will aim to decrease legal fees incurred by both the state and driver.

**Conclusion**

As shown from this policy brief, the prevalence of excessive alcohol consumption is a challenge that the state of Minnesota currently faces. Not only does excessive consumption affect the overall health of Minnesota residents, such as increasing chronic diseases and unplanned pregnancies, but it also is an extremely expensive problem due to the loss of workplace production, increase in crime rates, and increase in healthcare expenses (CDC, 2013; Minnesota Department of Health, 2012). To combat excessive alcohol consumption within Minnesota, this policy proposes six interventions that span the spectrum of prevention (Figure 4).

By implementing these six policy changes, we hope to see a reduction in excessive alcohol consumption across Minnesota’s population. While certain strategies have been designed to target specific high-risk populations such as college students and adolescents, the policy as a whole is designed to target Minnesota’s entire population and thus decrease excessive alcohol consumption throughout the state among all age groups. In addition to lowering excessive drinking rates, this policy would help to decrease costs related to excessive alcohol usage, as well as improve the overall and long-term health of Minnesota residents.
Decrease Excessive Alcohol Use in Minnesota

- Require all public universities to offer E-CHUG to all incoming students
- Use various media outlets to implement community outreach programs
- Encouraging health care providers to use evidence-based interventions
- Creating a coalition among university students
- Decreasing the legal BAC to operate a motor vehicle from 0.08% to 0.05%
- Create sobriety checkpoints across the state

Figure 4
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