SOCIAL NORMS

RECOVERY IS POSSIBLE
HOPE STARTS HERE
ALCOHOL USE DURING PREGNANCY

# of Drinks a Pregnant Woman Can Drink at a Time Without Harm ing the Baby

(N=1,462)

73% None, no drinks

19% 1 drink

3% 2+ drinks

5% Not Sure/Refused
ALCOHOL USE DURING PREGNANCY

Region

(A) Anchorage Mat-Su
(B) Gulf Coast
(C) Interior
(D) Northern
(E) Southeast
(F) Southwest

- None, no drinks
- 1 drink
- 2+ drinks
- Not sure/Decline to answer
ALCOHOL USE DURING PREGNANCY

PRE-PREGNANCY ALCOHOL CONSUMPTION

57.7%

16.2%

3 Months pre-pregnancy

3 Months pre-pregnancy binge drinking

1 in 10 pregnant women reports alcohol use*

*Defined as at least one drink of any alcoholic beverage in the past 30 days.

Source: CDC Behavioral Risk Factor Surveillance System (BRFSS), United States, 2011-2013
44% said it is safe for people < 21 to drink alcohol.
UNDERAGE ALCOHOL USE

(A) Anchorage Mat-Su (N=582)
Under 18: 15
Age 18: 34
Age 19-20: 26
Age 21: 25
Age 22+: 25
Never: 34
Not sure: 11

(B) Gulf Coast (N=175)
Under 18: 16
Age 18: 34
Age 19-20: 25
Age 21: 25
Age 22+: 15
Never: 15
Not sure: 11

(C) Interior (N=176)
Under 18: 15
Age 18: 36
Age 19-20: 25
Age 21: 13
Age 22+: 6
Never: 45
Not sure: 11

(D) Northern (N=175)
Under 18: 10
Age 18: 40
Age 19-20: 32
Age 21: 13
Age 22+: 6
Never: 46
Not sure: 11

(E) Southeast (N=176)
Under 18: 13
Age 18: 48
Age 19-20: 45
Age 21: 13
Age 22+: 6
Never: 34
Not sure: 11

(F) Southwest (N=178)
Under 18: 9
Age 18: 48
Age 19-20: 45
Age 21: 13
Age 22+: 6
Never: 34
Not sure: 11
UNDERAGE ALCOHOL USE

YOUTH
First drink prior to age 13

Nationwide 15.5%
Alaska Average 12.9%

Source: Youth Risk Behaviors Survey
UNDERAGE ALCOHOL USE

Current use
Nationwide 29.8%
Alaska 22.8%

Binge Drinking
Alaska 13.8%
Nationwide 13.5%

Source: Youth Risk Behavior Survey

Teens age 12 to 20 drink 11% of all alcohol consumed in the U.S. each year. (CDC)
UNDERAGE ALCOHOL USE

65% of youth obtain alcohol from friends and family.
(The Foundation for Advancing Alcohol Responsibility)
Reducing Underage Drinking: Effectiveness of
\( (N=1,462) \)

- Parents setting a good example of responsible alcohol use
  - Extremely: 53%
  - Very: 26%
  - Somewhat: 15%
  - Slightly: 4%

- Talking with children about consequences
  - Extremely: 44%
  - Very: 26%
  - Somewhat: 23%
  - Slightly: 4%
ADDICTION, TREATMENT, AND RECOVERY

88% say Always/Often/Sometimes
52% say Always/Often
29%
24%

Always ❄️Often ❄️Sometimes
ADDICTION, TREATMENT, AND RECOVERY

Easy to get into treatment (N=1,462)

- Yes: 42%
- It depends: 40%
- No: 13%
- Not sure/Decline to answer: 5%

Treatment Barriers (N=874)

- Cost: 67 Major (84%)
- Location of treatment: 59 Major (83%)
- Lack of Transportation: 46 Major (78%)
- The waiting list: 56 Major (75%)

Major barrier | Minor barrier
### Knowledge of Health Risks

Drinking is associated with increased risk of...

(N=1,462)

<table>
<thead>
<tr>
<th>Risk</th>
<th>Yes</th>
<th>No</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harm to unborn babies</td>
<td>98%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression/Anxiety</td>
<td>92%</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>Stroke</td>
<td>64%</td>
<td>16%</td>
<td>18%</td>
</tr>
<tr>
<td>Reduced fertility</td>
<td>52%</td>
<td>23%</td>
<td>23%</td>
</tr>
<tr>
<td>Cancer</td>
<td>42%</td>
<td>31%</td>
<td>25%</td>
</tr>
</tbody>
</table>
KNOWLEDGE OF HEALTH RISKS

Awareness of risks associated with drinking
(N=1,462)

3.5 Average Number of Harms Known

- Know 5: 26%
- Know 4: 25%
- Know 3: 19%
- Know 2: 26%
- Know 1: 26%
ADVOCACY
Local Option
(Alcoholic Beverage Control)
Outcome Evaluation Findings

Janet Johnston, PhD, MPH
Community Systems Program Manager
Anchorage Health Department

Conducted study while working at the
Institute for Circumpolar Health Studies
UAA College of Health

Funder: Recover Alaska
A Little History:

Title 4 of Alaska Statutes regulates the sale and dispensing of alcohol throughout the state. Title 4 empowers incorporated municipalities and unincorporated communities (established villages), to adopt one of five local options related to prohibition and sale of alcohol.
A Little History:

Local Option 1: Prohibits sale; (allows importation and possession)
Local Option 2: Prohibits sale, except by selected licenses
Local Option 3: Prohibits sale, except on premises operated by the Municipality
Local Option 4: Prohibits sale and importation
Local Option 5: Prohibits sale, importation, and possession
Natural Experiment:

Bethel voted to withdraw from local option control in 2009. The first liquor store to open after that vote opened in 2016.

We wanted to learn what happened to demand for health and safety services:

• After withdrawing from local option
• While the liquor store was open
Secondary Data:

De-identified monthly counts for service use from:
- Yukon-Kuskokwim Health Corporation (YKHC)
- Bethel Fire Department (BFD)
- Bethel Police Department (BPD)
- Alaska State Troopers (AST)
- Bethel Search and Rescue (BSAR)
- Alaska Office of Children’s Services (OCS)
Time Periods:

• Thirty-four months before the vote to remove Bethel from local option prohibition on sale of alcohol (January 2007 – October 2009)
• Six and a half years between vote to leave local option and opening of first liquor store (November 2009 – April 2016)
• Twenty-five months during which the AC Quickstop liquor store was open (May 2016 – May 2018)
• Seven months after the AC Quickstop liquor store closed (June 2018 – December 2018)
Yukon-Kuskokwim Health Corporation (YKHC): Data

Data were available for 2013 through 2018 and provided for:

• The Sobering Center,

• The Ayagnirvik Healing Center (residential treatment for substance use disorder),

• Inpatient visits (admit and discharge date and time) and

• Emergency room visits with an alcohol-related visit diagnosis.
Yukon-Kuskokwim Health Corporation (YKHC):

ER and Sobering Center Combined
Yukon-Kuskokwim Health Corporation (YKHC):

ER and Sobering Center, predicted vs. actual
Yukon-Kuskokwim Health Corporation (YKHC):

Inpatient and Residential Treatment, excluding residential opioid treatment, 2013 - 2018

Inpatient and Residential Treatment, excluding residential opioid treatment, 2013 - 2018
Yukon-Kuskokwim Health Corporation (YKHC):

Residential treatment admissions, excluding opioid admissions, predicted vs. actual
YKHC Summary:

The Emergency Room and Sobering Center data is best analyzed together, while the inpatient and residential treatment data is best analyzed separately.

ER and Sobering Center use varies by month. However, over and above this monthly variation, the combined ER and Sobering Center use increased approximately 15% while the liquor store was open.
YKHC Summary:

Residential treatment admissions excluding opioid treatment were substantially elevated, approximately 90% increase, while the liquor store was open, although some of this increase may be related to an increasing trend over time.

Inpatient admissions increased at a small but steady rate from 2013 through 2018. However, admissions were approximately 14% lower than would otherwise have been expected when the liquor store was open.
Provided monthly counts from January 2007 through December 2018 for:

- All BFD runs
- Runs noted as having alcohol involvement
- Runs related to assault
- Motor vehicle incidents
- Suicide attempts
Total BFD Runs by month
Predicted vs Actual, Total BFD Runs
BFD Summary

The Bethel Fire Department has seen an increase in the number of runs per month over time during the course of this study.

However, the total run volume increased by approximately 40% while the liquor store was open, and the run volume appeared to drop when the store closed.
Bethel Police Department (BPD) : Data

Monthly counts from January 2010 through November 2018 for police calls in the following categories:

- Crimes against people
- Crimes against property
- Death/Suicide
- Traffic
- Other offenses
Bethel Police Department (BPD): Intoxicated Pedestrian and Disturbance Calls by month
Bethel Police Department (BPD):

Predicted vs Actual, Intoxicated Pedestrian Calls

![Graph showing predicted vs actual intoxicated pedestrian calls]

- Predicted number of events
- Intox. Ped

Date:
- 2012m1
- 2014m1
- 2016m1
- 2018m1
Bethel Police Department (BPD): Crimes against people
Bethel Police Department (BPD) : Crimes against people

Actual vs Predicted calls for Crimes against People, by month
DUI, by month
Bethel Police Department (BPD) : DUI

Actual vs predicted calls for DUI, by month
BPD Summary:

BPD calls for intoxicated pedestrians were almost 50% higher while the liquor store was open, on top of the small but steady increase over time that was observed for the entire study period.

Call volume for assault and for all crimes against people combined were approximately 20% higher when the liquor store was open.

On the other hand, our analysis did not show evidence of higher call volume for property crimes.
BPD Summary:

DUI calls were also approximately 20% higher when the liquor store was open.

Hit-and-run calls were also up, but the absolute number of hit-and-run calls is low making it difficult to model.

Monthly volume of calls for a number of other categories – including suicide, unattended death, and weapons offenses – were higher than in earlier years when the liquor store was open, but the increase started before the store opened and in some cases continued after the store closed.
BPD Summary:

While there are many factors related to a liquor store that could affect BPD call volume, our analysis suggests that the liquor being open was associated with an increase in the number of calls to BPD for certain types of offenses resulting in both an increased workload for BPD and a lower quality of life for some Bethel residents.
Alaska State Troopers (AST):

AST provided incident records from January 2007 through September 2017 for calls in the Bethel, Kusilvak, and Yukon-Koyukuk census areas for the following categories:

- Crimes against people
- Crimes against property
- Traffic
- Other crimes
- Activities
Alaska State Troopers (AST):
Alaska State Troopers (AST): All incidents

Actual vs predicted total monthly incident counts, all three census areas
AST Summary:

The total monthly count of Trooper incidents increased by just over 50% higher than what would have been expected in the Bethel, Kusilvak, and Yukon-Kuyokuk census areas combined after Bethel exited local option.

When the AC Quickstop liquor store was open in Bethel, these monthly counts were an additional 23% than otherwise would have been expected.

The association was even more pronounced when the data were restricted to the Bethel census area, even when Bethel itself was excluded from the analysis.
AST Summary:

Similarly, monthly counts for alcohol crimes such as possession or transport of alcohol were more than twice what otherwise would have been expected after Bethel exited local option, and twice as high again when the liquor store opened.

DUI incidents were approximately 90% higher after Bethel left local option, although this increase attenuated when the liquor store opened with levels only 33% higher than expected.
AST Summary:

Monthly counts for deaths other than homicide were approximately 25% higher than expected after Bethel left local option, but there was no additional elevation when the liquor store was open.

Crimes against property were also higher than expected after Bethel left local option, about 50% higher in the Bethel census area and about 25% higher in the three census areas combined. But again there was no additional association with the liquor store being open.
Conclusion

After looking at many data points, it is clear that increased access to alcohol is associated with some increases in demand for safety and health services, which is consistent with what many people told us when we first came to town.

There is also a lot of noise in the data, so there is likely more than one reason for observed increases.
Quyana ~ Thank you

This Project could not have happened without your collaboration:
Alaska State Troopers (AST)
Bethel Fire Department (BFD)
Bethel Police Department (BPD)
Bethel Search and Rescue (BSAR)
Alaska Office of Children’s Services (OCS)
Yukon-Kuskokwim Health Corporation (YKHC)
Quyana ~ Thank you

Questions?