

# How Has Drinking Behavior Changed During the COVID-19 Pandemic?

Carolina Barbosa, PharmD, PhD

Alexander J. Cowell, PhD

William N. Dowd, BA



# Presenters



**Carolina Barbosa,**  
PharmD, PhD



**Alexander J. Cowell,**  
PhD



**William N. Dowd,**  
BA

The background of the slide is a solid blue color. It is decorated with several white, stylized icons of viruses or microorganisms. These icons consist of a central circle with several smaller circles or protrusions radiating outwards, resembling a sun or a virus particle. The icons are scattered across the top half of the slide, with some larger and some smaller.

# Alcohol Consumption and Related Harms



## Alcohol consumption in the U.S.

### About 70%

of the U.S. population aged 18 or older consumed alcohol in 2018, and more than half drank alcohol in the past 30 days.

### About 27%

of the adult population reported binge drinking in the past month.

# Excessive Alcohol Use: the Toll on Society



More than 200 diseases and injury-related health conditions



A 62% increase in Emergency Department visits between 2006 and 2014. A particularly large increase among females



88,000 annual deaths → fourth-leading preventable cause of death



Societal costs of nearly \$250 billion in 2010

The background of the slide features several stylized, light blue virus icons of varying sizes, scattered across a dark blue field. These icons consist of a central circle with several smaller circles or protrusions radiating from it, resembling a simplified representation of a coronavirus. The icons are positioned in the upper half of the slide, above the main title.

# Alcohol Policy and the COVID-19 Pandemic

# Policies to Limit the Spread of COVID-19



44 states + DC enacted stay-at-home orders.



All states closed bars. Most states restricted dine-in service at restaurants.

Source: <https://www.kff.org/coronavirus-covid-19/issue-brief/state-data-and-policy-actions-to-address-coronavirus/>

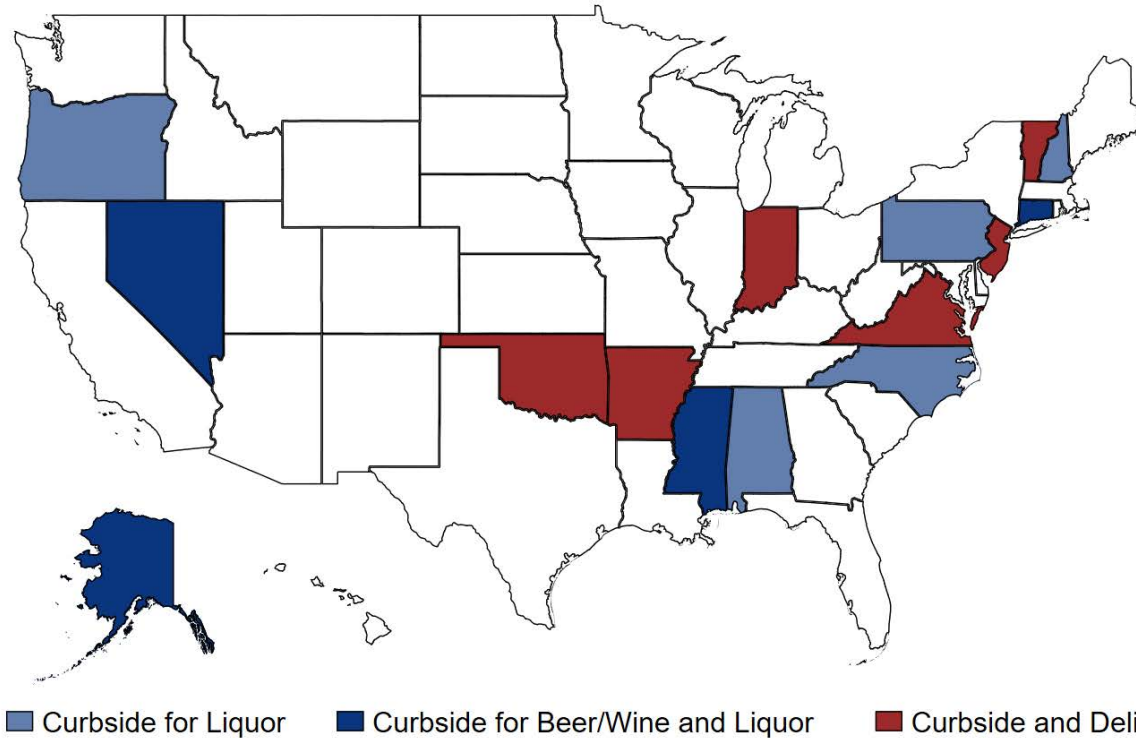








# With Stay-at-Home Orders, States Relaxed Curbside and/or Delivery Restrictions for Off-Premise Operators



Source: <https://www.nabca.org/covid-19-resources>



The background of the slide is dark blue and features several stylized, light blue virus-like icons. These icons consist of a central circle with several lines radiating outwards, some ending in small circles, resembling a simplified representation of a virus particle. The icons are scattered across the top half of the slide, with some larger and some smaller.

# What Do We Know About Drinking During the Pandemic in the U.S.?

# Changes in Alcohol Sales in the US

## How The COVID-19 Pandemic Is Upending The Alcoholic Beverage Industry



Joseph V Micallef Contributor

Spirits

I write about wines and spirits and the hidden corners of the world

## REBALANCING THE 'COVID-19 EFFECT' ON ALCOHOL SALES

### Coronavirus brings quick changes to state alcohol laws

### Nielsen Says Beverage Alcohol Retail Sales Are Soaring During The Crisis

### Alcohol sales surge during pandemic, lockdowns. Here's what people are drinking

### eCommerce drives triple-digit growth in alcohol sales

Alcohol sales jump 234 percent during COVID-19



### Alcohol Sales Are Not Spiking Or Even Stabilizing. Here's Why The Misconception Matters.

### Coronavirus: How the pandemic is relaxing US drinking laws

By Marianna Brady  
BBC News, Washington

© 15 May 2020

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GETTY IMAGES

# Anecdotal! Consumption in the U.S.



**America is drinking its way through the coronavirus crisis – that means more health woes ahead**

April 8, 2020 8:11am EDT

 Alcohol Memes  
@AlcoholMemes

Half of us are gonna come out of the quarantine as amazing cooks and the other half is gonna come out with a drinking problem. There is no in between

Travel around the world during Zoom happy hours with these global drinking traditions

**'Quarantinis' and beer chugs: Is the pandemic driving us to drink?**


Alcohol sales have soared as people use drinking to relax during the Covid-19 crisis, and experts are raising concerns

COMMENTARY  
**What Past Disasters Tell Us About COVID-19 and Substance Abuse**

**Happy Hours: More People Drinking While Working from Home During COVID-19**

**'More Zoom Parties, More Alcohol Consumption': Hard Seltzer, Tequila Sales Boom During COVID-19 Lockdown**

**STRESS DRINKING: ALCOHOL CONSUMPTION INCREASES DURING COVID-19**

The background of the slide is dark blue and features several stylized, light blue icons of viruses or microorganisms. These icons are scattered across the top half of the slide, with some larger and more prominent than others. The icons consist of a central circle with several smaller circles or protrusions around it, resembling a simplified representation of a virus particle.

# The RTI Survey on Alcohol Consumption During the COVID-19 Pandemic



# Research Questions

How did overall alcohol consumption change after the onset of policies to tackle COVID-19?

How did excessive consumption change?

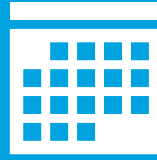
Was the change larger among certain groups (e.g., women, people experiencing unemployment)?

# The Survey



## What?

Web-based survey  
using Ipsos'  
KnowledgePanel  
Academic Omni



## When?

May 8–15



## How?

We asked about the following in  
February and April:

- Alcohol consumption
- Mental health
- Employment status

### Plus:

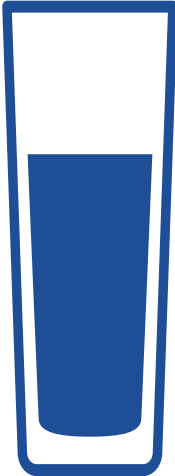
- Lifetime alcohol experiences

# A Standard Drink: "0.6-oz/14g of alcohol"

A 12-oz beer  
(5% ABV)



A 5-oz glass of wine (12% ABV)



1.5-oz of 80-proof  
spirits (40% ABV)



ABV = Alcohol by Volume. Source: <https://www.rethinkingdrinking.niaaa.nih.gov/How-much-is-too-much/what-counts-as-a-drink/whats-A-Standard-drink.aspx>

# Survey Questions: Alcohol Consumption

How often did you have one or more drinks?

← Frequency

---

How many drinks did you usually have?

← Quantity

---

What was the largest number of drinks you drank in a single day?

← Maximum quantity

---

How often did you drink that larger-than-usual amount?

← Maximum frequency

---

How often did you drink four (female)/five (male) or more drinks within 2 hours?

← Binge drinking

# Survey Questions: Other Measures

Mental health



- Depressive symptoms
  - Anxiety symptoms
- 

Employment status



- Nine exclusive categories (e.g., work full-time, retired)
- 

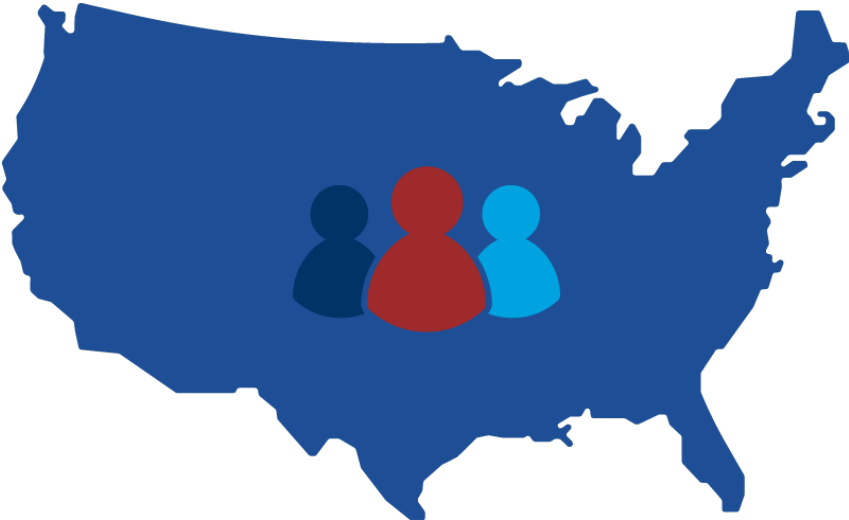
Lifetime experiences with alcohol



- Questions to understand need for, and access to, treatment for alcohol use

# Survey Respondents

**993 Surveyed**  
**555 Reported Drinking in February**



Female: **52%**  
Male: **48%**



21–34: **25%**  
35–49: **25%**  
50–64: **30%**  
65+: **20%**



White, non-Hispanic: **66%**  
Black, non-Hispanic: **9%**  
Other, non-Hispanic: **7%**  
Hispanic: **19%**



Northeast: **22%**  
South: **30%**  
West: **24%**  
Midwest: **24%**



# Analysis

- Compared February and April estimates
  - Used regression methods to adjust for gender, age, race, and other factors
- Examined what dimension of alcohol consumption changed the most (e.g., quantity versus frequency)





# Survey Results



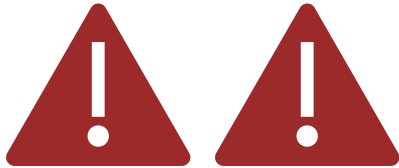
# Three Main Drinking Outcomes in This Presentation



Average drinks per day

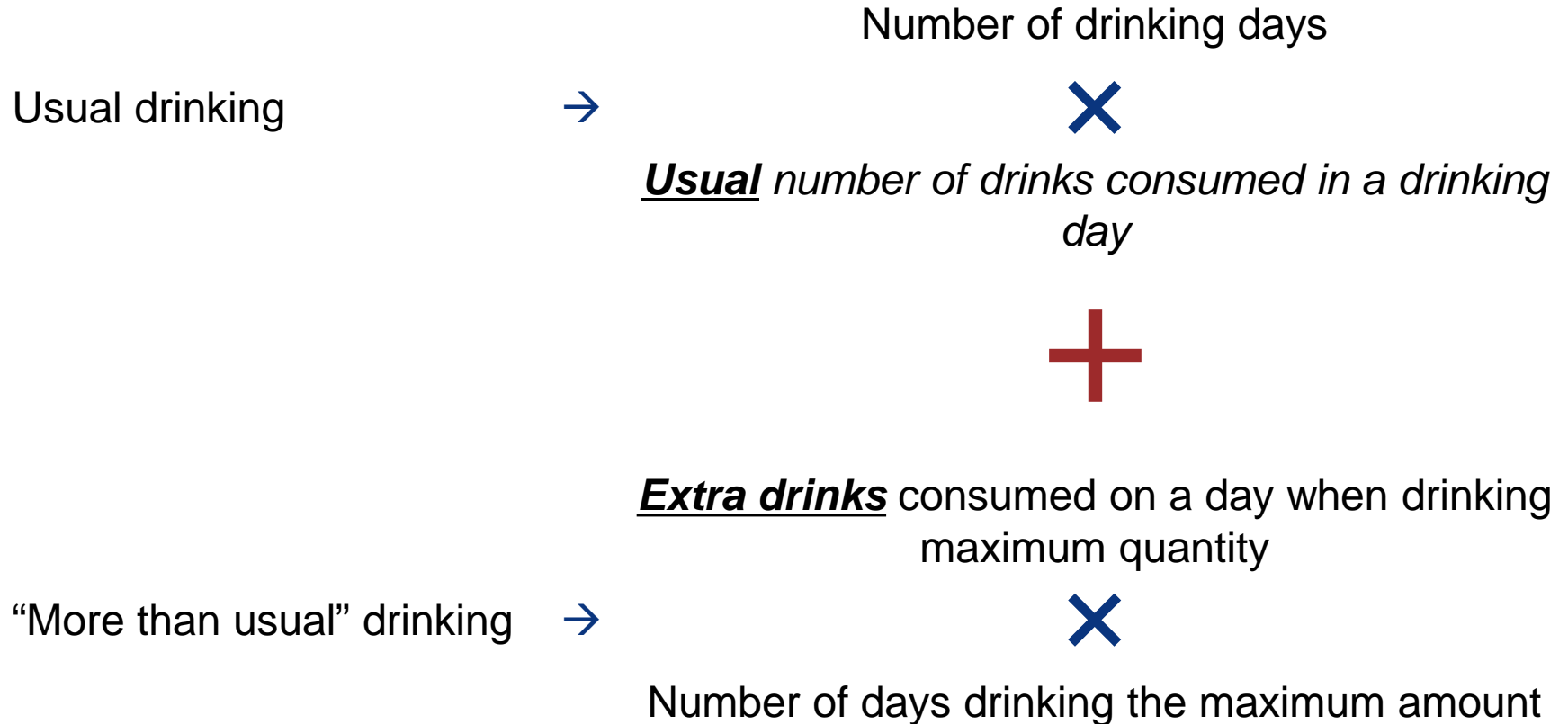


Percentage of people exceeding drinking guidelines



Percentage of people binge drinking

# Calculation of Drinks per Day

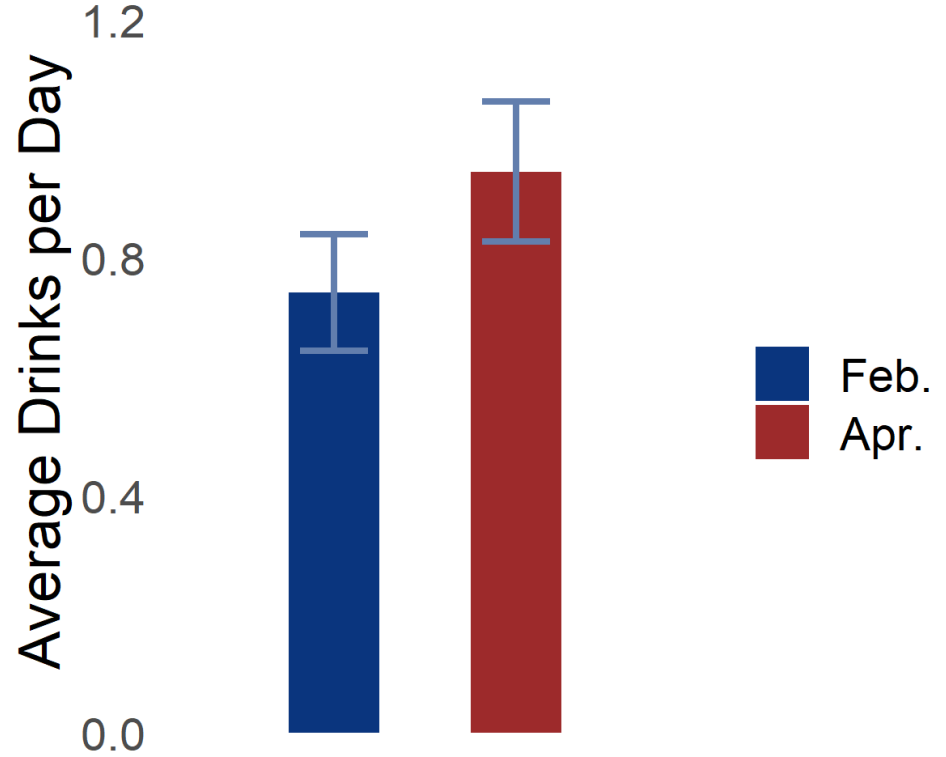


## Average Drinks per Day

**February:** 0.74 drinks per day

**April:** 0.94 drinks per day

**Result:** +27%,  $p < 0.001$



## What is considered low-risk drinking, according to the National Institute on Alcohol Abuse and Alcoholism?

The number of drinks below is determined by the U.S. National Institute on Alcohol Abuse and Alcoholism to minimize risk for development of an alcohol use disorder.

## Exceeding Drinking Guidelines

### WOMEN

### MEN

**DAILY**  
NO MORE THAN



3



4

**WEEKLY**  
NO MORE THAN



7



14

Image Source:  
<https://www.recoveryanswers.org/assets/V2-ALCOHOL-GUIDELINES-2.png>

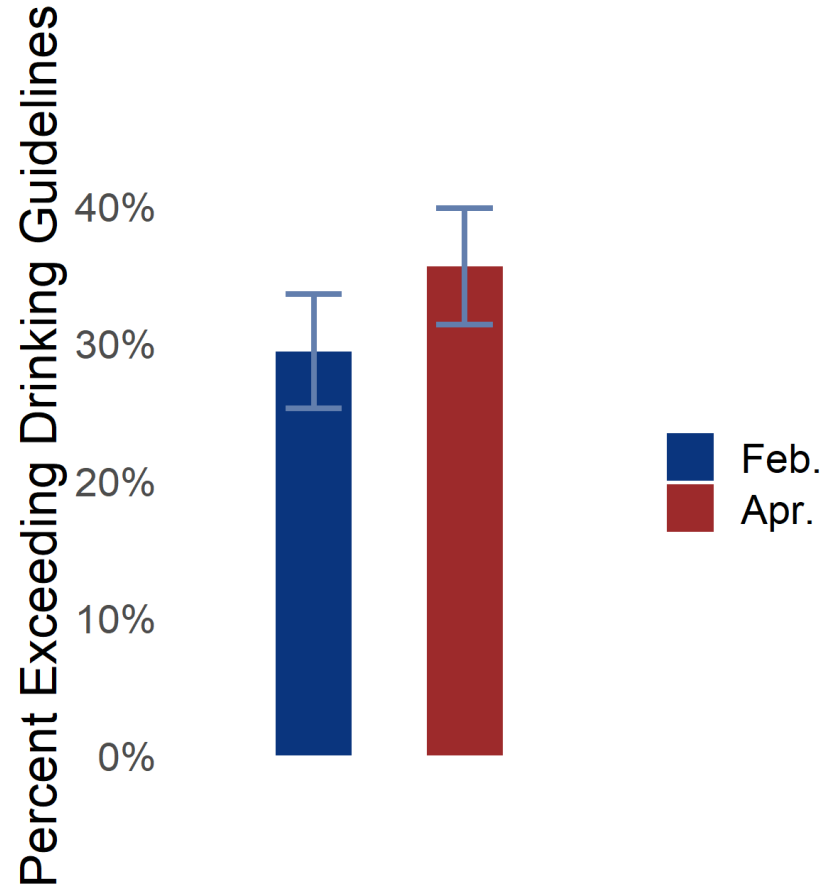


# Exceeding Drinking Guidelines

**February:** 29%

**April:** 36%

**Result:** +21%,  $p < 0.001$





# Binge Drinking

Having more than four (for men) or three (for women) drinks over a 2-hour period

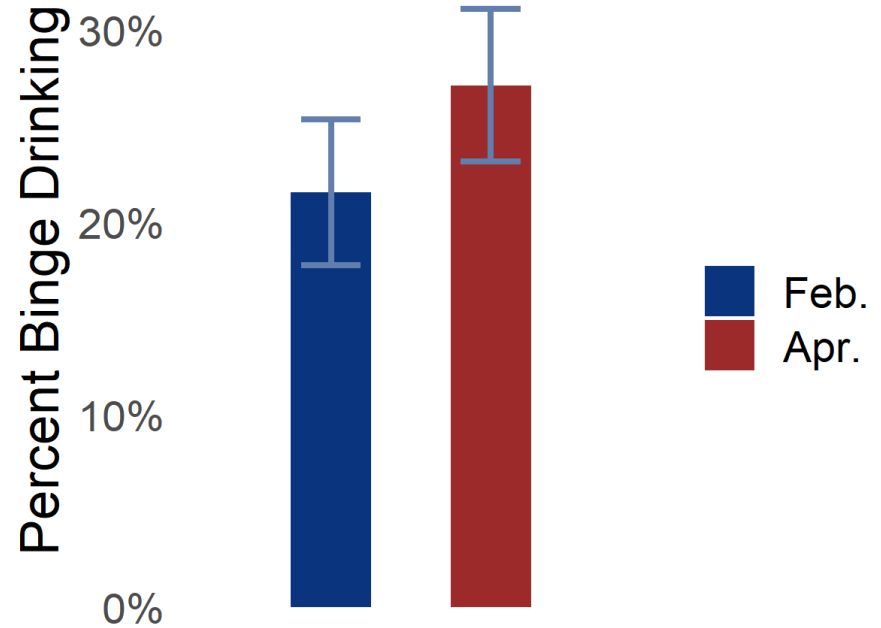
Source: National Institute on Alcohol Abuse and Alcoholism (NIAAA). Rethinking drinking: alcohol & your health. [Web page].  
<https://www.rethinkingdrinking.niaaa.nih.gov/>.  
Published n.d. Accessed May 29, 2020.

# Binge Drinking

**February: 22%**

**April: 27%**

**Result: +26%,  $p=0.001$**

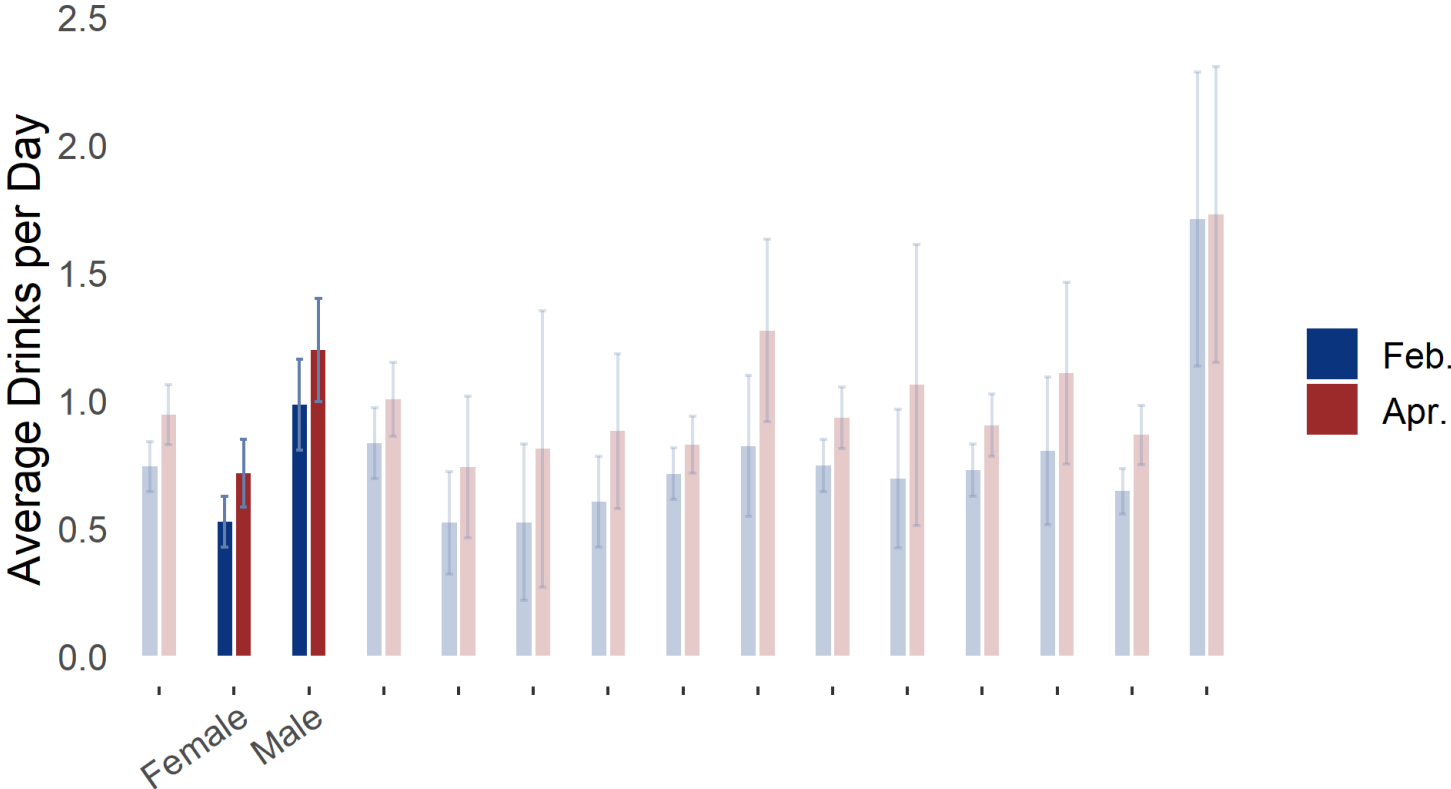




# Stratified Results

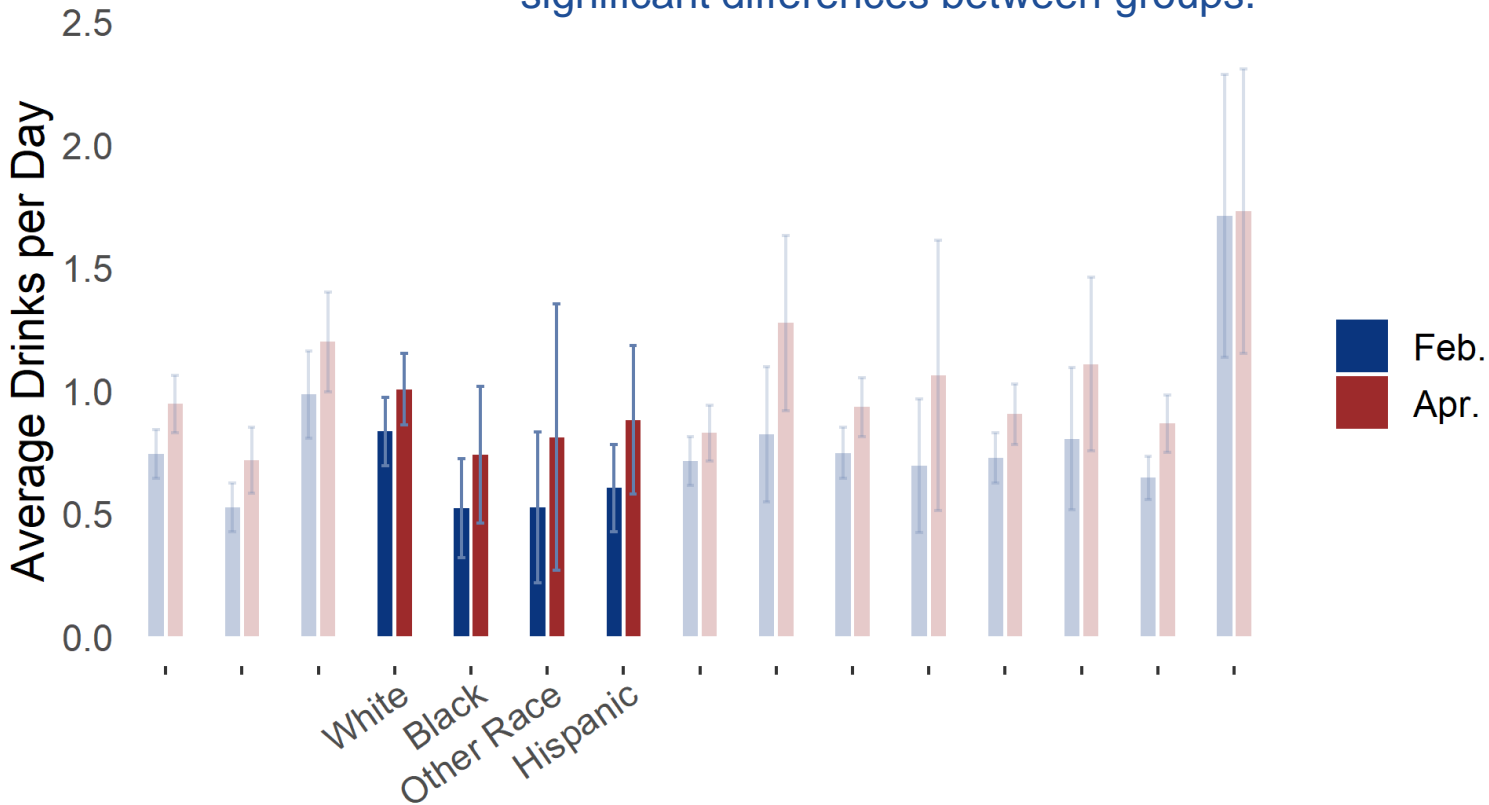
# Average Drinks per Day

\*Males increased drinks per day slightly more than females (0.21 versus 0.19,  $p=0.77$ )



# Average Drinks per Day

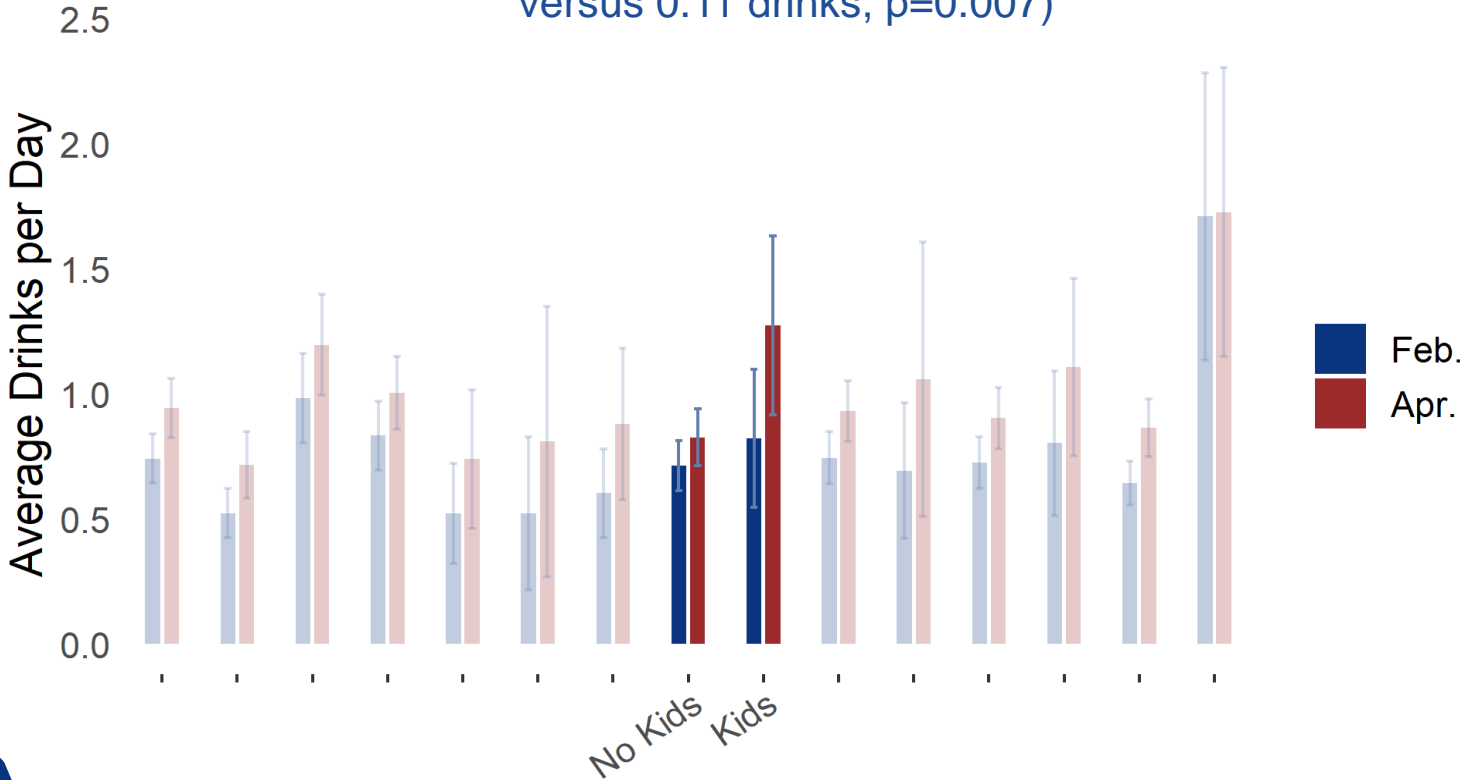
\*Change ranged from 0.17 (White, non-Hispanic) to 0.29 (other, non-Hispanic). No significant differences between groups.





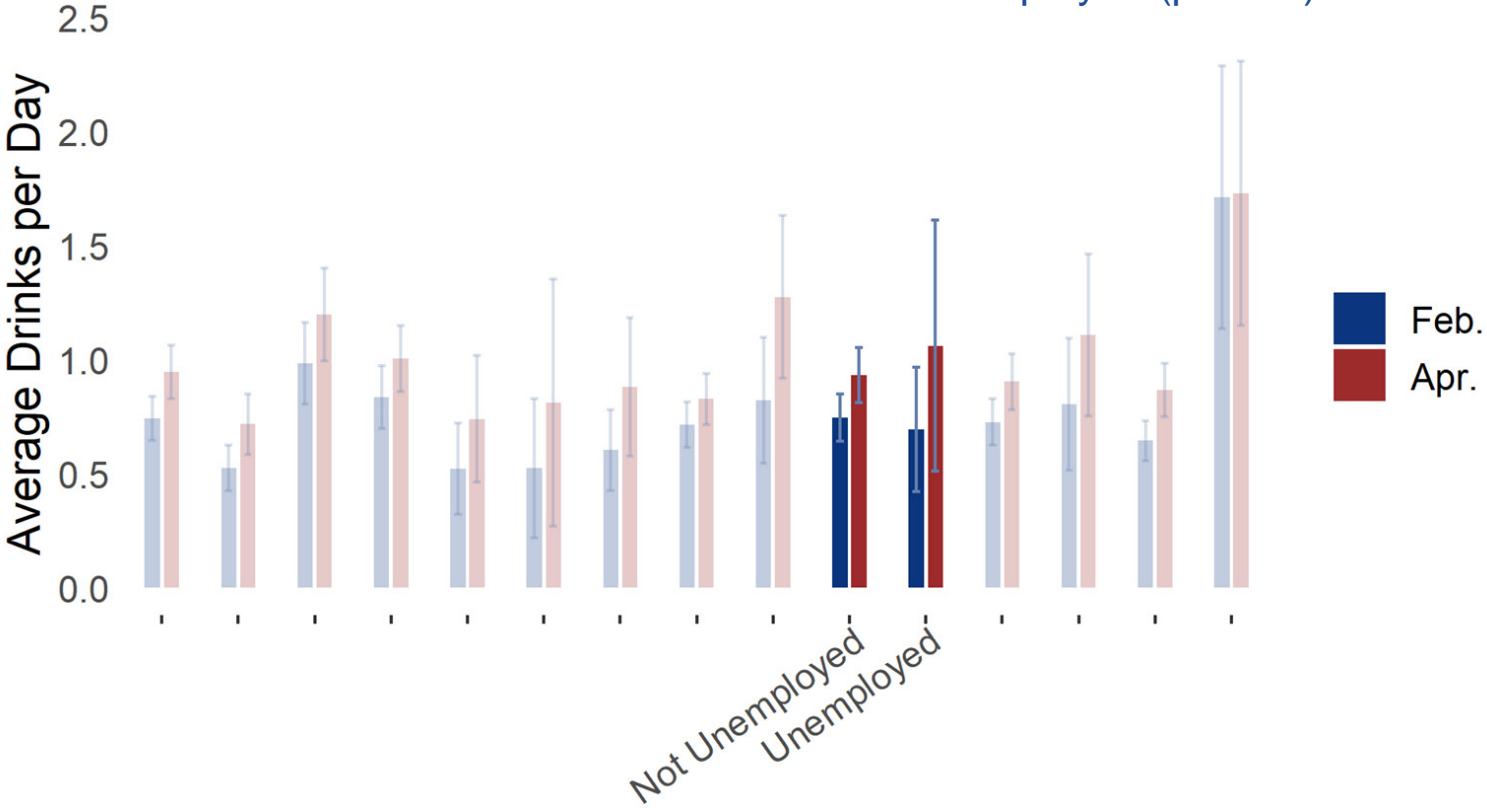
# Average Drinks per Day

\*Respondents with kids in the household increased more than those without kids (0.45 versus 0.11 drinks,  $p=0.007$ )



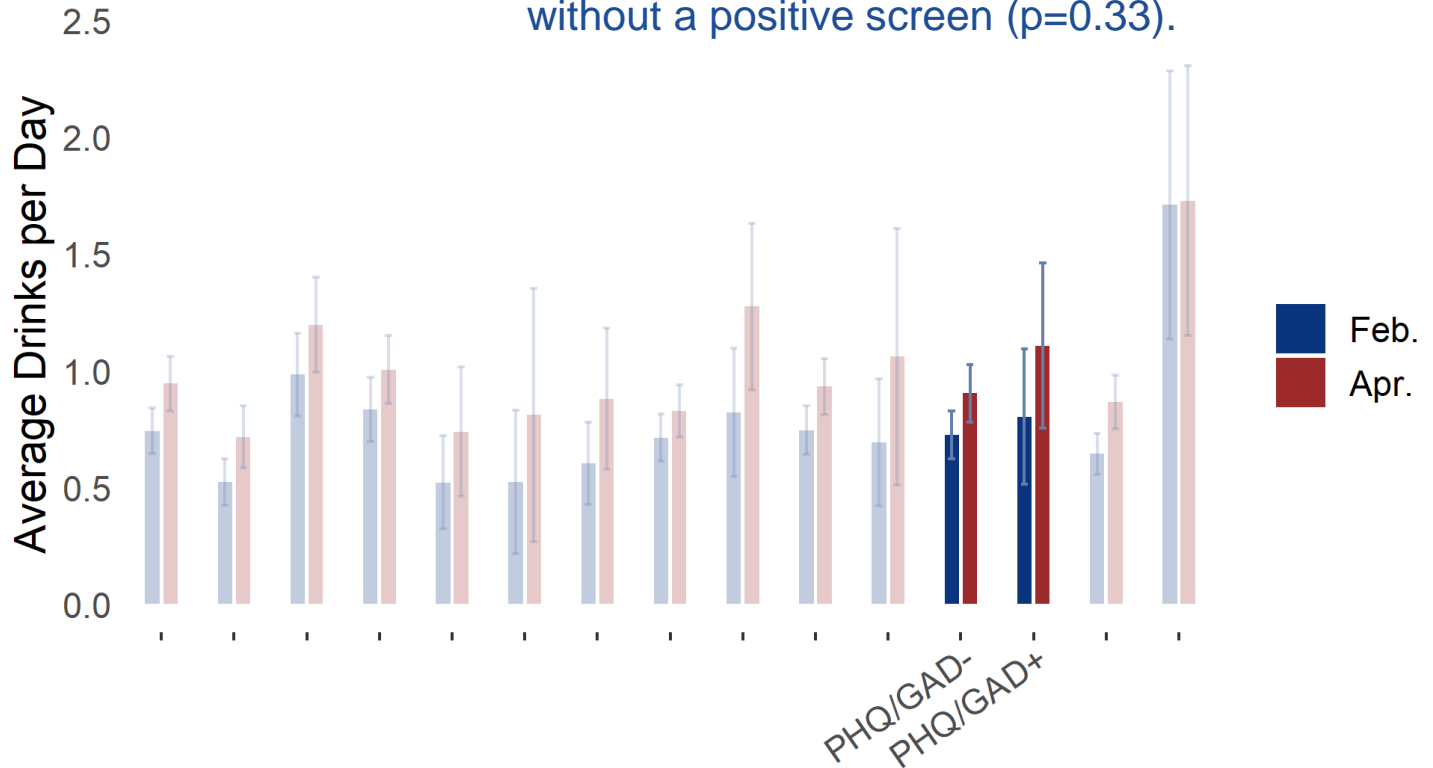
# Average Drinks per Day

\*Respondents who were unemployed in Feb. or Apr. increased drinks per day by 0.37, compared to 0.19 for those not unemployed (p=0.49)



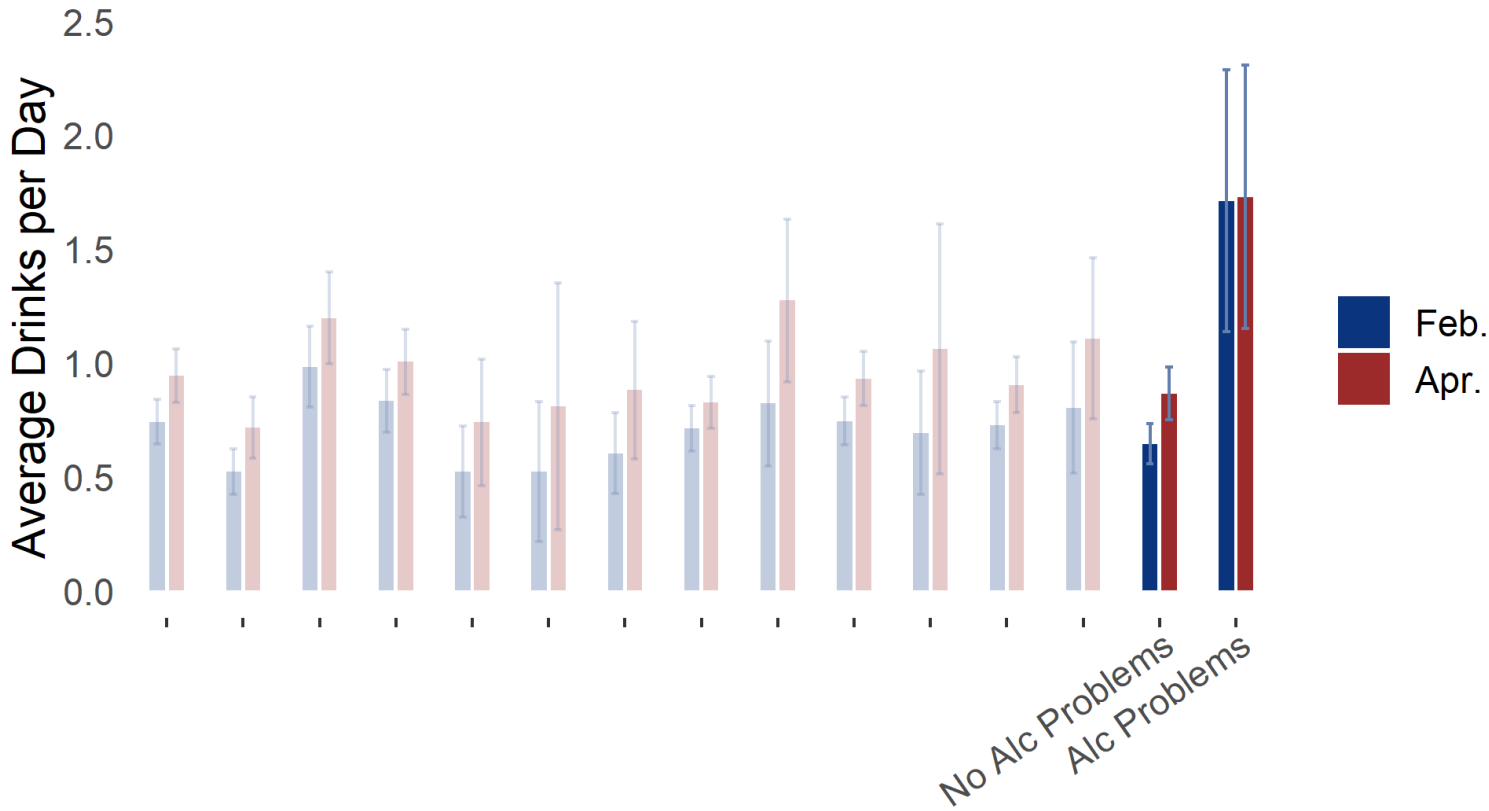
# Average Drinks per Day

\*Respondents with positive mental health screens in Feb. or Apr. increased drinks per day by 0.30, compared to 0.18 for those without a positive screen (p=0.33).



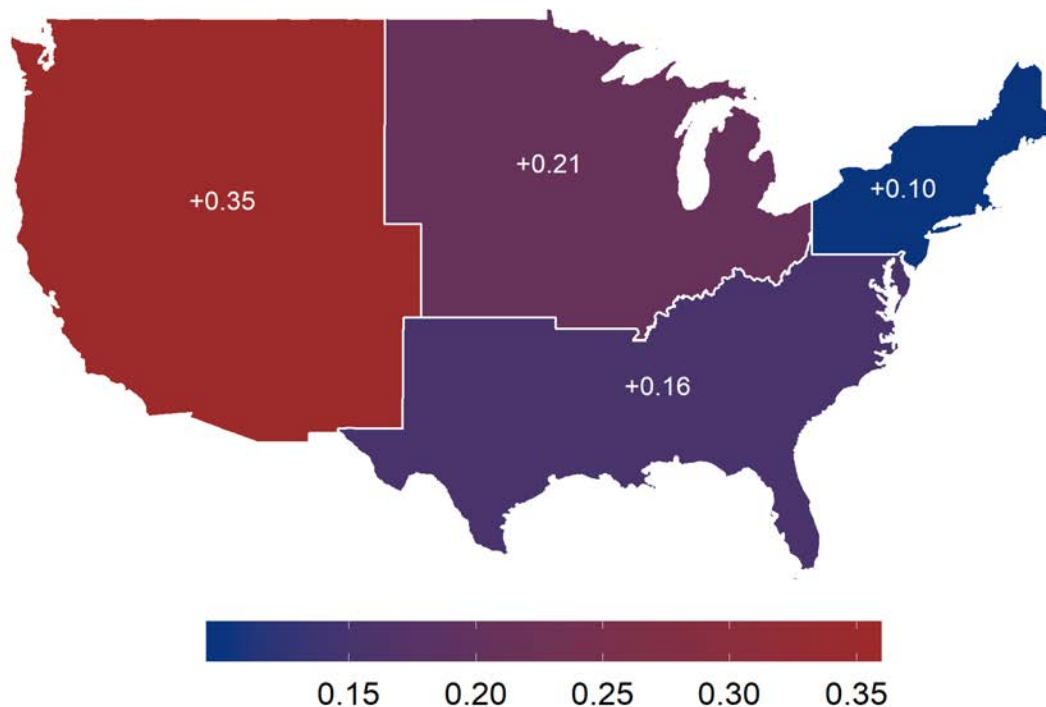
# Average Drinks per Day

\*Respondents with evidence of alcohol problems barely increased their drinks per day (+0.02).



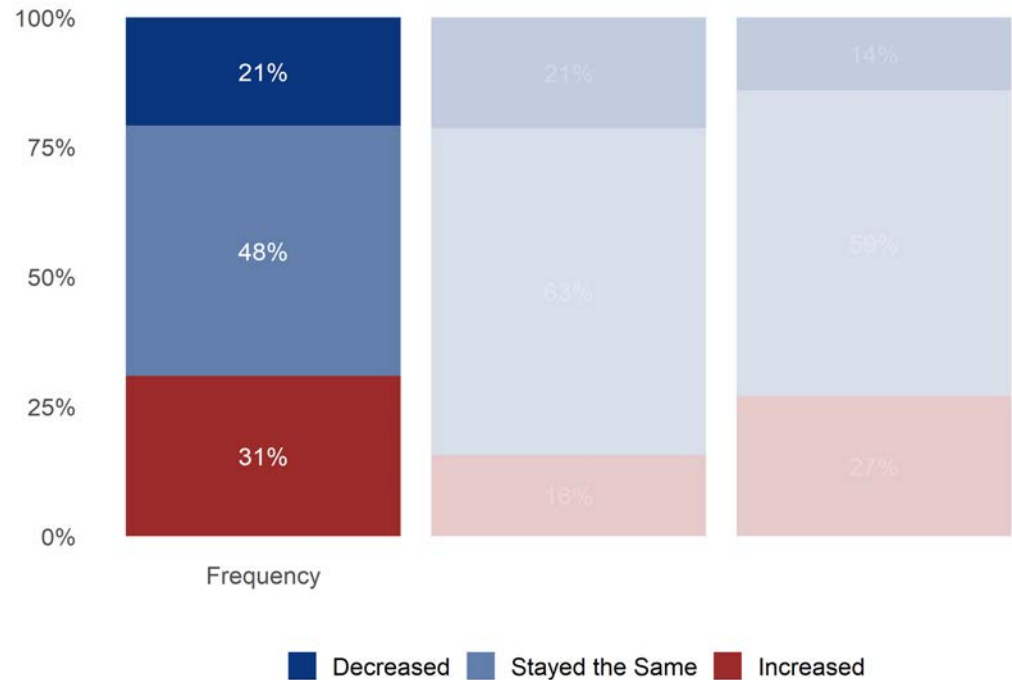
## Average Change in Drinks per Day February to April, by Census Region

Average  
Drinks  
per Day

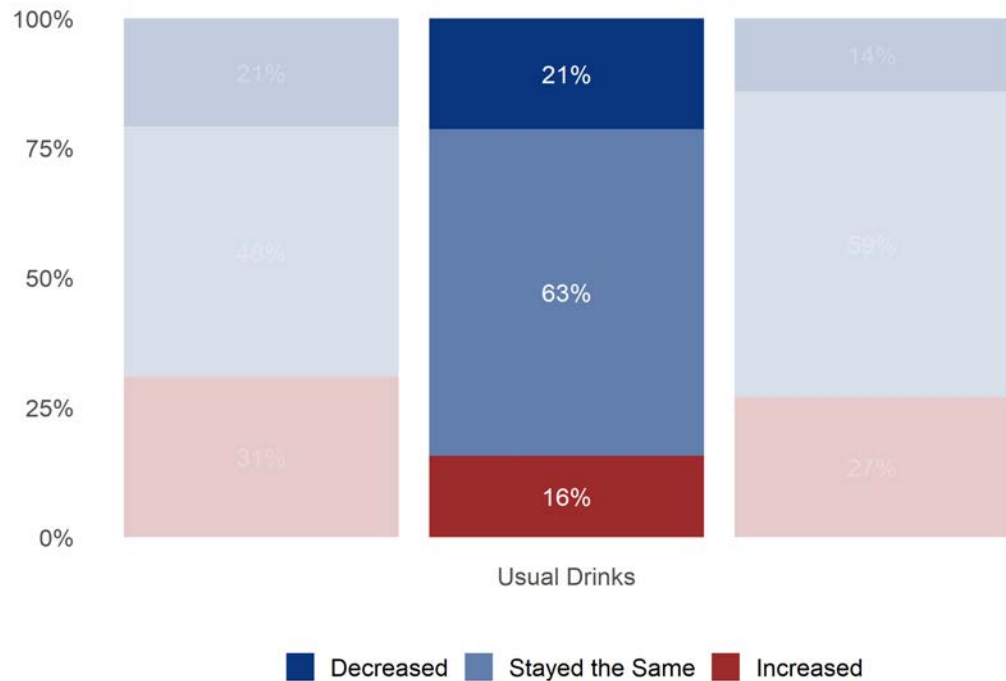


Note: Alaska and Hawaii are included in the West region.  
Change in West region significantly larger than change in Northeast ( $p < 0.05$ ).

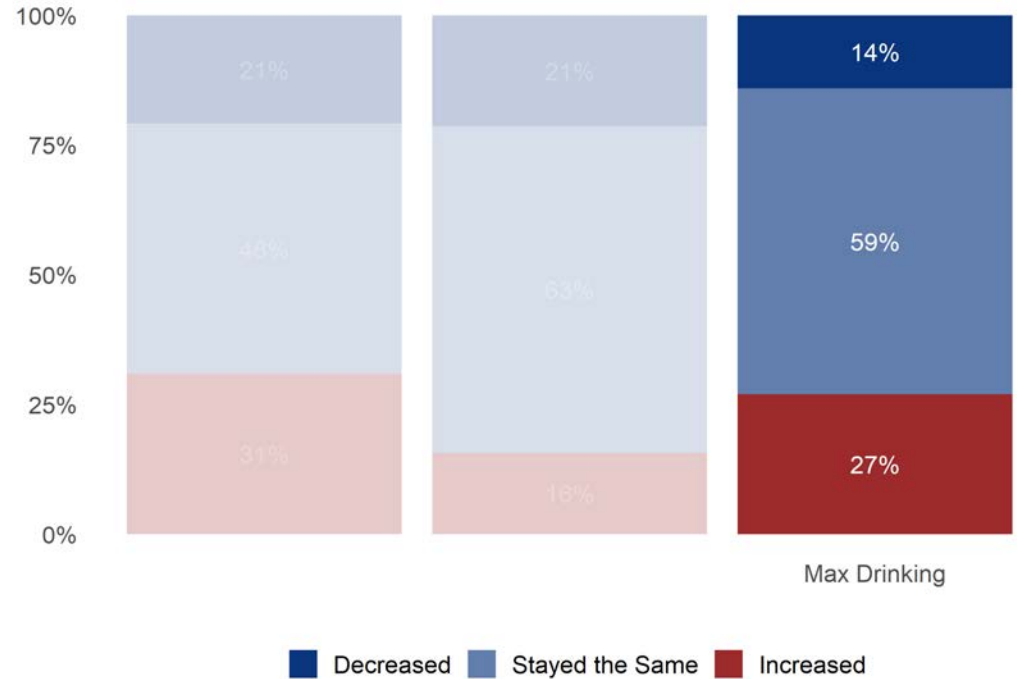
31% of respondents increased their **drinking frequency** by an average of more than 7 days.



16% of respondents increased their **usual quantity** by an average of almost 2 drinks.

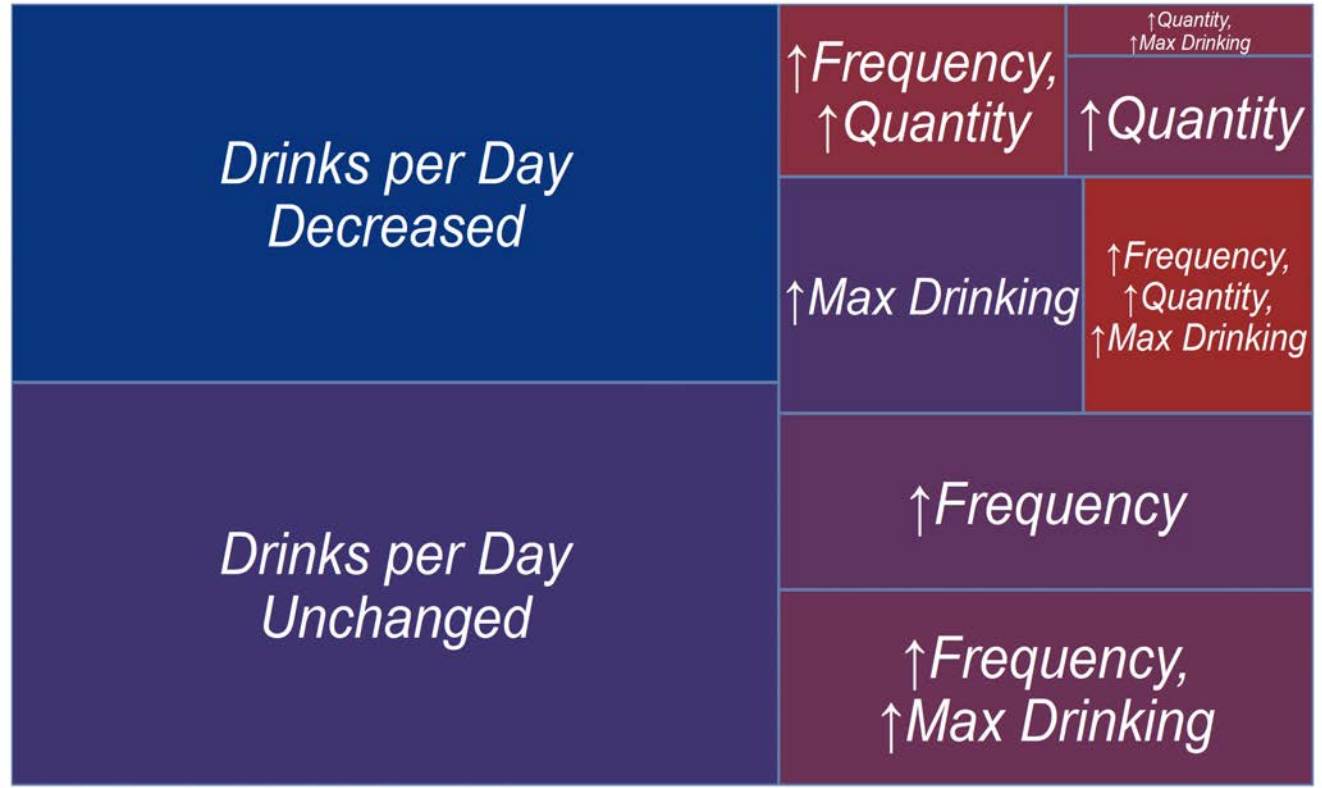


27% of respondents increased **total drinks consumed** on “more than usual” days by **almost 4.5 drinks.**





# Changes in Alcohol Consumption





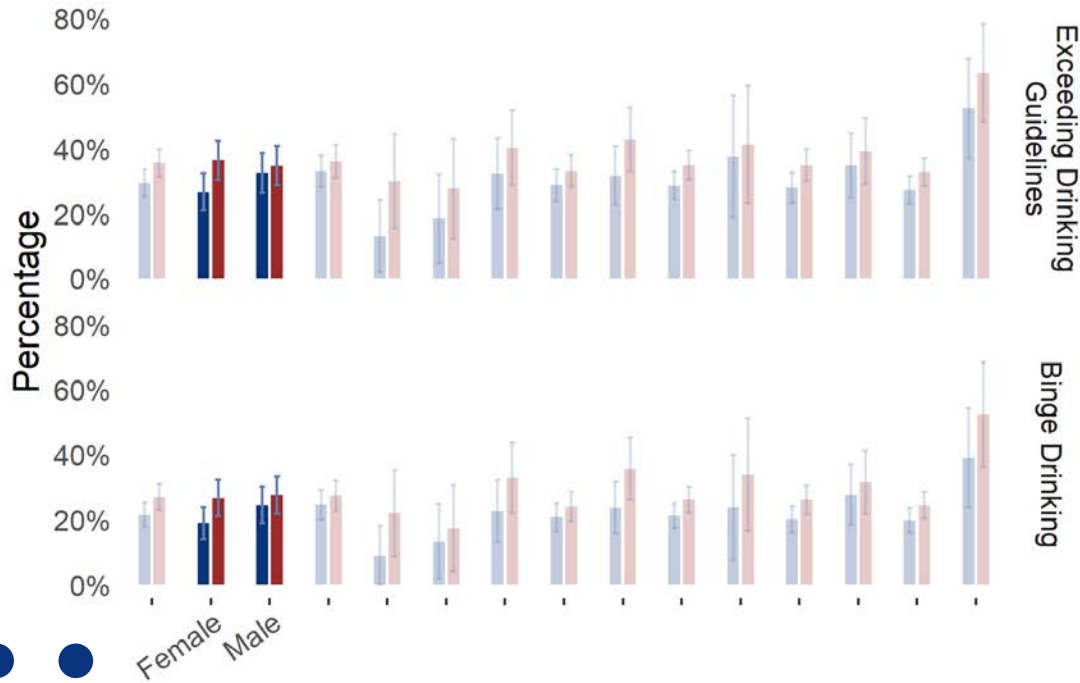
## Changes in Alcohol Consumption

- 5% of respondents increased alcohol consumption from February to April in each of the three main dimensions:
  - They drank more every day.
  - They drank on more days of the week.
  - They increased consumption on days when they drank more than normal.
- This group accounted for over 40% of the increase in alcohol consumption for all respondents.

The background of the slide is dark blue and features several stylized, light blue virus-like icons. These icons consist of a central circle with several smaller circles or protrusions around it, resembling a simplified representation of a microorganism or a data node. The icons are scattered across the top half of the slide, with some larger and some smaller.

# Excessive Consumption Behaviors

# Excessive Consumption Behaviors



■ Feb.  
■ Apr.

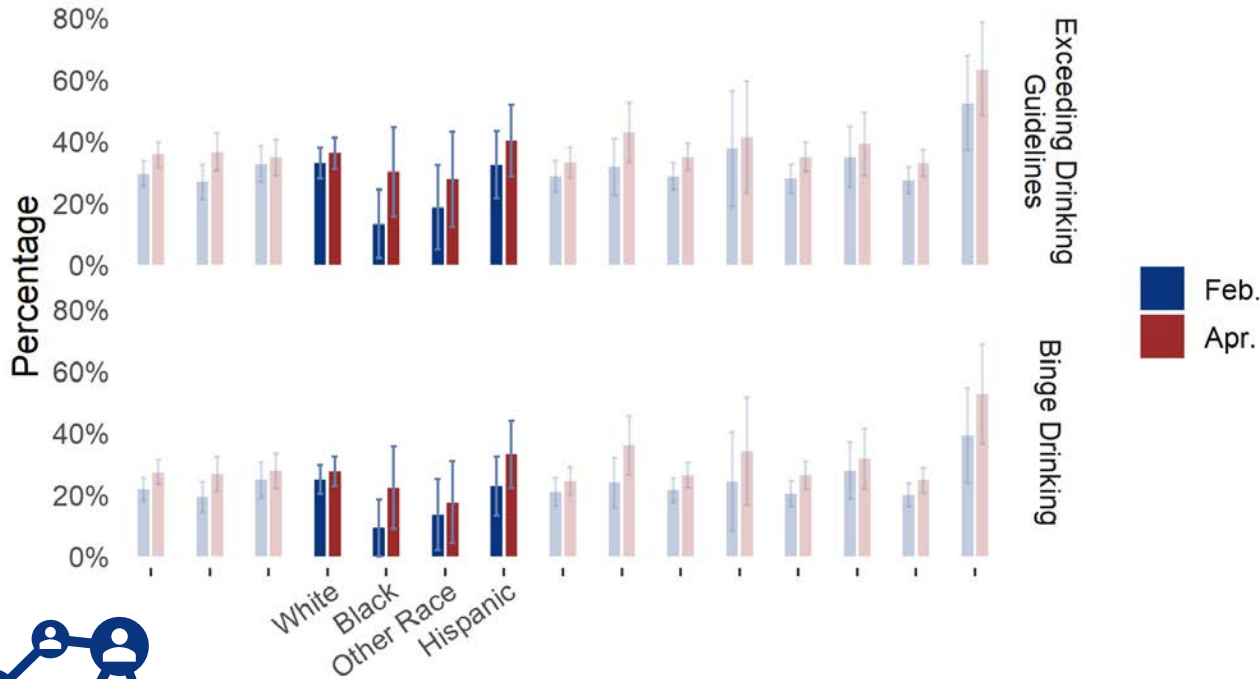
Excessive consumption increased considerably for females:

- Drinking guidelines (10% versus 2%,  $p=0.026$ )
- Binge drinking (8% versus 3%,  $p=0.12$ )



Female  
Male

# Excessive Consumption Behaviors

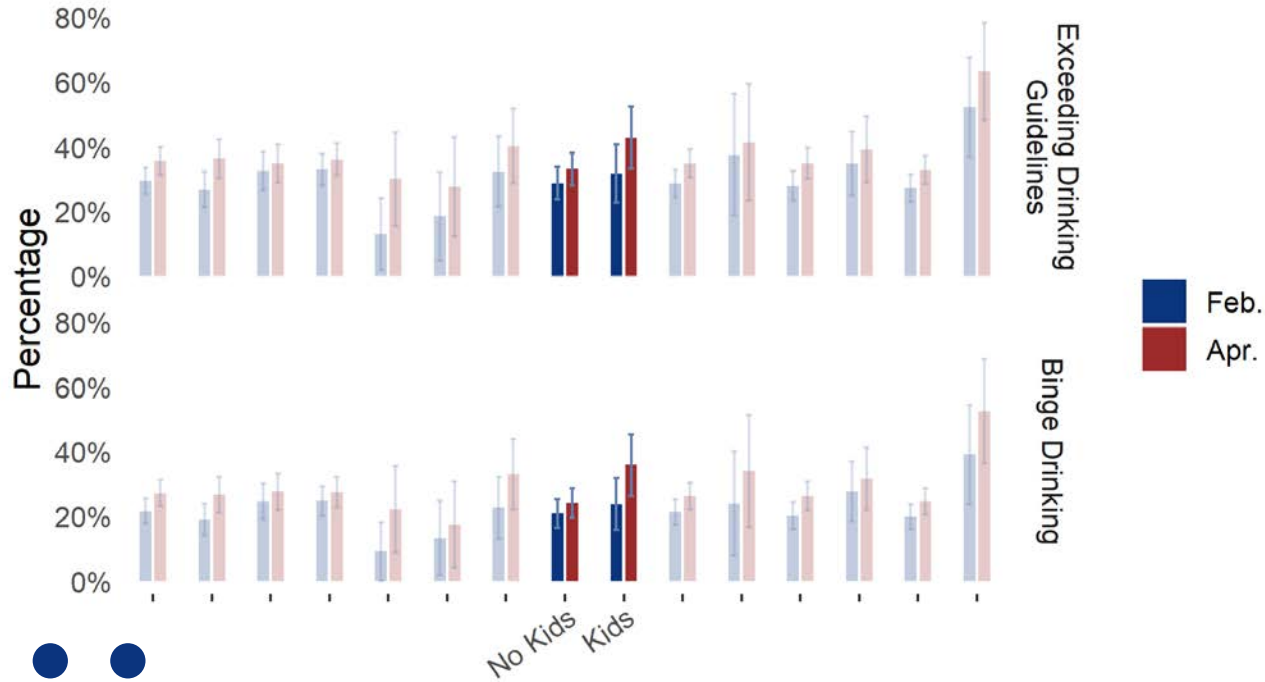


Excessive consumption increased considerably for Black respondents:

- Drinking guidelines (17% versus 3% among Whites,  $p=0.028$ )
- Binge drinking (13% versus 3% among Whites,  $p=0.07$ )



# Excessive Consumption Behaviors



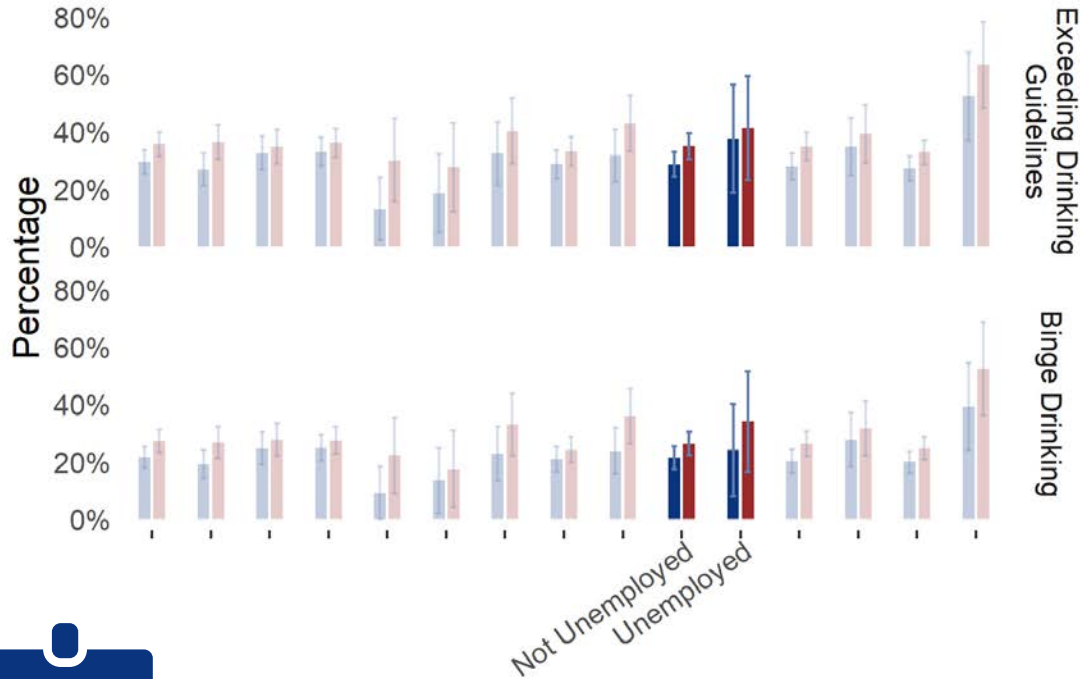
Excessive consumption increased more for respondents with kids:

■ Feb.  
■ Apr.

- Drinking guidelines (11% versus 4%,  $p=0.21$ )
- Binge drinking (12% versus 3%,  $p=0.09$ )



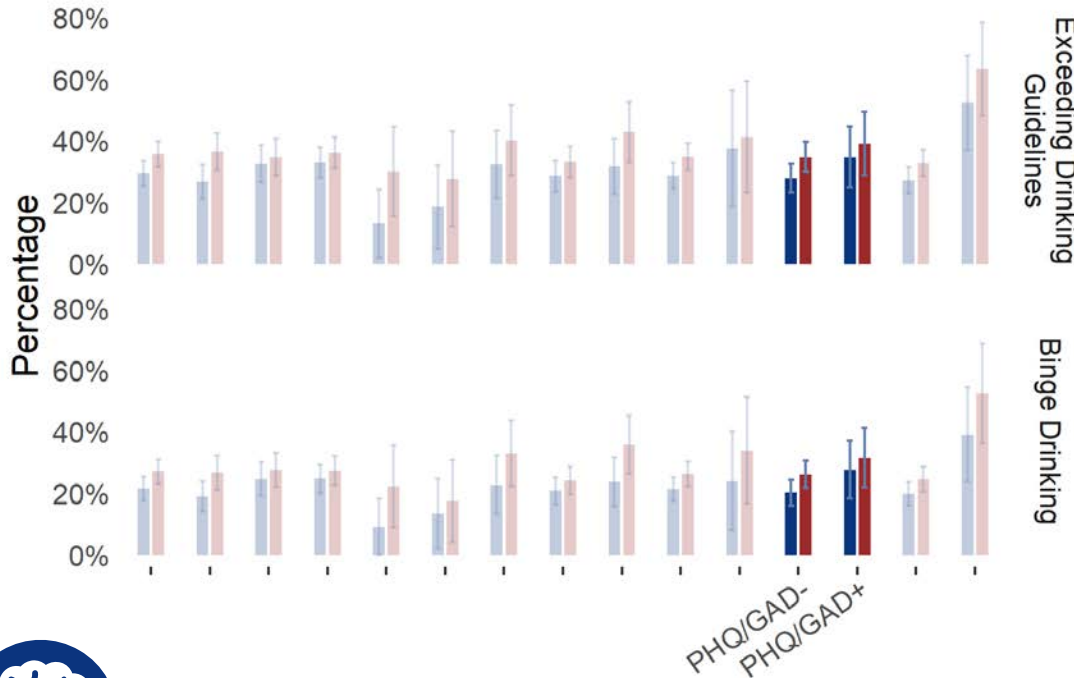
# Excessive Consumption Behaviors



- Exceeding drinking guidelines increased more for respondents who **were not** unemployed (6% versus 4%,  $p=0.72$ )
- Binge drinking increased more for respondents who **were** unemployed (10% versus 5%,  $p=0.56$ )



# Excessive Consumption Behaviors



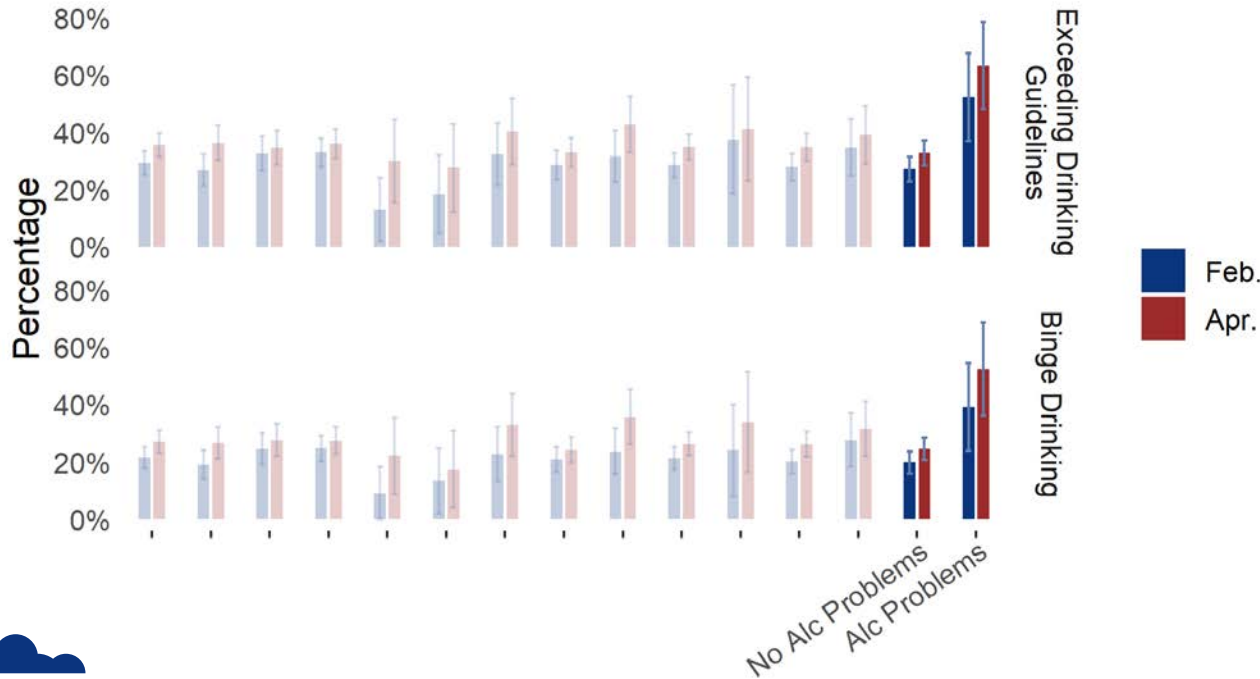
Both measures of excessive consumption increased slightly more for those **without** positive mental health screens:

- Drinking guidelines (7% versus 4%,  $p=0.54$ )
- Binge drinking (6% versus 4%,  $p=0.54$ )





# Excessive Consumption Behaviors



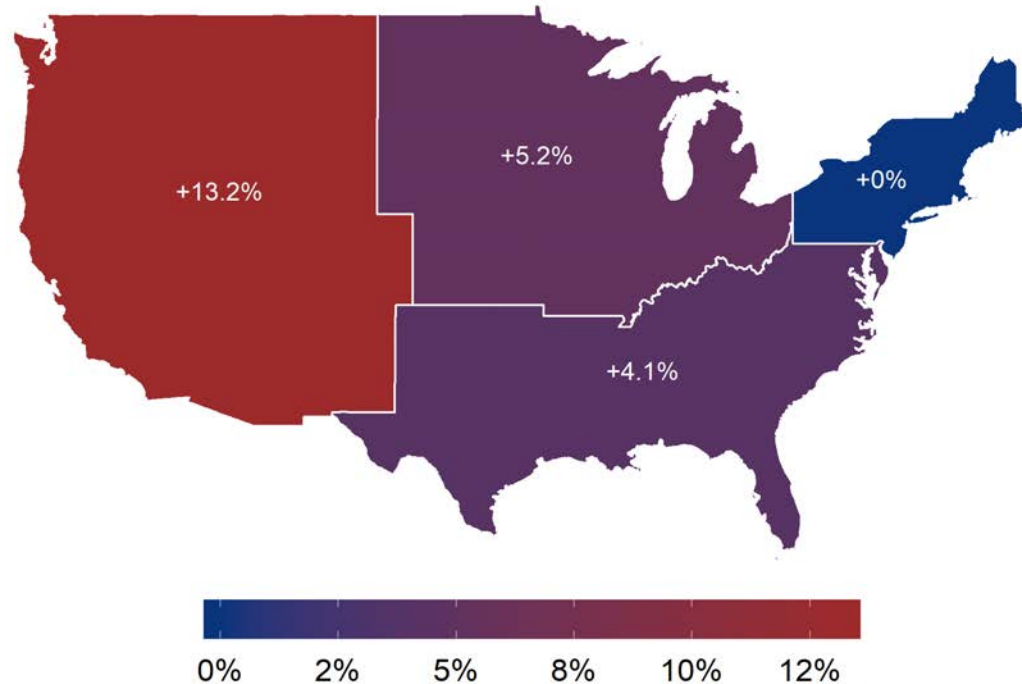
Unlike average drinks per day, excessive consumption did increase for respondents with evidence of alcohol problems:

- Drinking guidelines (11% versus 6%,  $p=0.51$ )
- Binge drinking (13% versus 5%,  $p=0.42$ )



# Excessive Consumption Behaviors

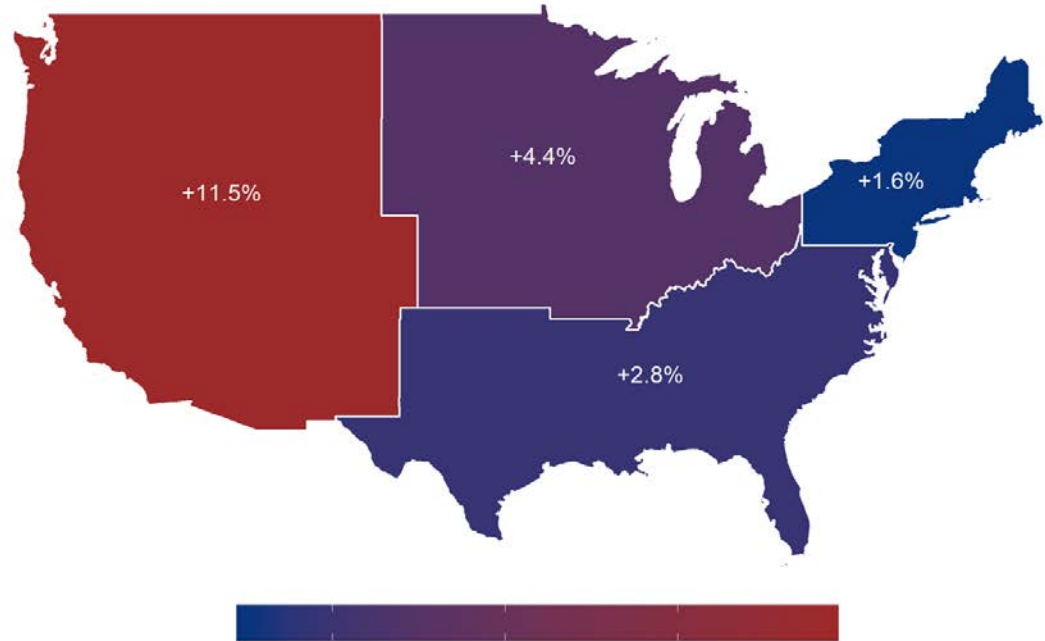
## Change in Percentage Exceeding Drinking Guidelines February to April, by Census Region



Note: Alaska and Hawaii are included in the West region.  
Change in West region significantly larger than change in Northeast ( $p < 0.01$ ).

## Change in Percentage Binge Drinking February to April, by Census Region

Binge  
Drinking



3% 6% 9%

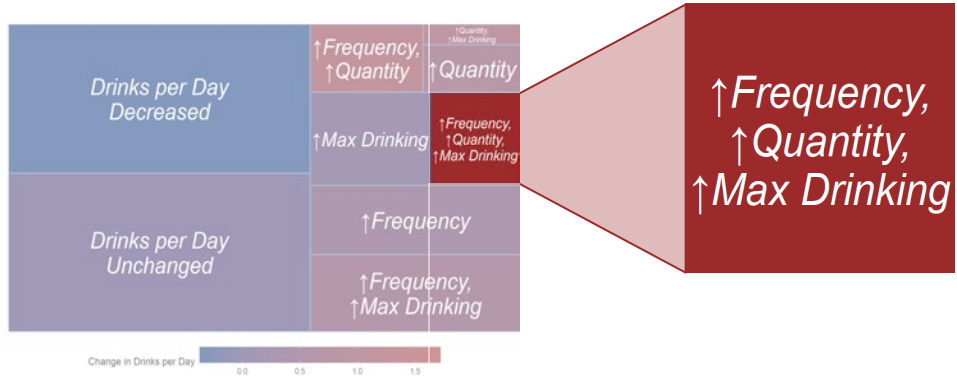
Note: Alaska and Hawaii are included in the West region.

# Of Those Exceeding Drinking Guidelines in April...



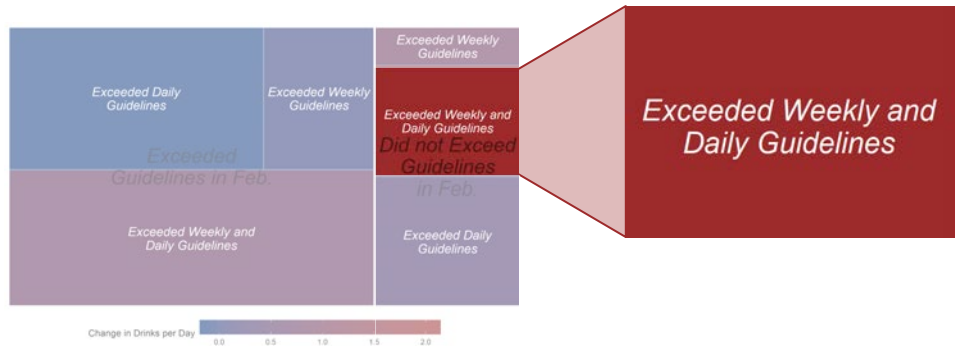
The largest changes in alcohol consumption were concentrated among people who did not exceed drinking guidelines in February.

# The Big Picture



**50%** overlap

**7%** of respondents



**65%** of total increase in drinks per day

**85%** did not exceed guidelines in February



# Conclusions

# Key Takeaways

Alcohol consumption, including excessive consumption behaviors, has increased overall and across several groups.

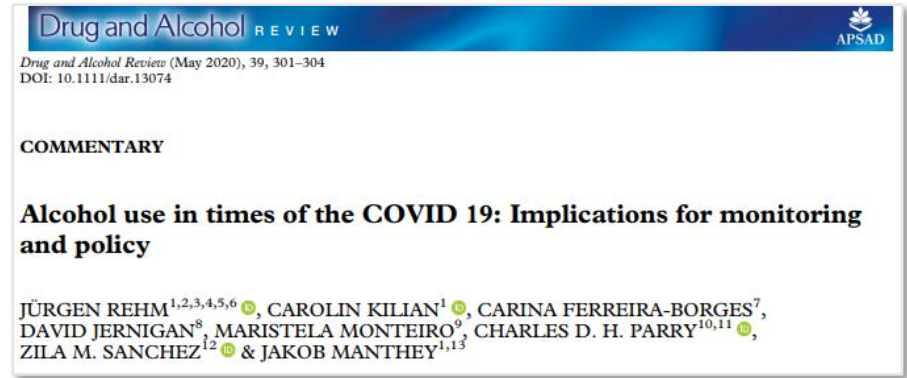
The largest increases in all measures were observed in the Western U.S.

Being female, Black, or having children in the household was associated with significant increases on at least one measure.

The largest increases in alcohol consumption were among people who increased their usual quantity consumed and those who were *not* drinking in excess of recommended guidelines in February.

# Why Did Alcohol Consumption Increase?

- **Some studies predicted lower alcohol consumption**
- Why might that not be the case?
  - Expectation of lower access to alcohol offset by policy changes
  - More leisure time and fewer alternative activities
  - Response to stress





# Why Did Alcohol Consumption Increase?

- Some studies predicted lower alcohol consumption
- Why might that not be the case?
  - **Expectation of lower access to alcohol offset by policy changes**
  - More leisure time and fewer alternative activities
  - Response to stress



## Curbside service expands at Pa. liquor stores starting today



PITTSBURGH POST-GAZETTE  
Got a news tip? 412-263-1601  
localnews@post-gazette.com

APR 27, 2020

7:32 AM

# Why Did Alcohol Consumption Increase?

- Some studies predicted lower alcohol consumption
- Why might that not be the case?
  - Expectation of lower access to alcohol offset by policy changes
  - **More leisure time and fewer alternative activities**
  - Response to stress

## Coronavirus: Alcohol fears amid lockdown boredom

By Tomos Lewis  
BBC News

© 28 April 2020

FOOD // WINE

The coronavirus is driving us to drink.  
Maybe that's OK

Plus: Resources for keeping yourself fed while sheltering in place, in this week's Drinking with Esther newsletter


# Why Did Alcohol Consumption Increase?

- Some studies predicted lower alcohol consumption
- Why might that not be the case?
  - Expectation of lower access to alcohol offset by policy changes
  - More leisure time and fewer alternative activities
  - **Response to stress**

**Elsevier Public Health Emergency Collection**  
Public Health Emergency COVID-19 Initiative

[Lancet Public Health](#). 2020 May; 5(5): e259.  
Published online 2020 Apr 8. doi: [10.1016/S2468-2667\(20\)30088-8](https://doi.org/10.1016/S2468-2667(20)30088-8)

Alcohol use and misuse during the COVID-19 pandemic: a potential public health crisis?  
[James M. Clay<sup>a</sup>](#) and [Matthew O. Parker<sup>b</sup>](#)

 Social Science & Medicine  
Volume 131, April 2015, Pages 131-146

Review  
How economic crises affect alcohol consumption and alcohol-related health problems: A realist systematic review  
Moniek C.M. de Goeij<sup>a,\*,</sup> Marc Suhrcke<sup>b, c, d,</sup> Veronica Toffolutti<sup>b,</sup> Dike van de Mheen<sup>e, f, g,</sup> Tim M. Schoenmakers<sup>h, f,</sup> Anton E. Kunst<sup>g</sup>

**Frequent binge drinking five to six years after exposure to 9/11:  
Findings from the World Trade Center Health Registry**

**Alice E. Welch<sup>a,\*</sup>, Kimberly Caramanica<sup>a</sup>, Carey B. Maslow<sup>a</sup>, James E. Cone<sup>a</sup>, Mark R. Farfel<sup>a</sup>, Katherine M. Keyes<sup>b,c</sup>, Steven D. Stellman<sup>a,b</sup>, and Deborah S. Hasin<sup>b</sup>**

# Implications of Increased Alcohol Consumption

## ○ Short-term

- Uncertain impact on accidents and injuries
- Potential impact of increased drinking at home on domestic violence and child neglect
- Impact of alcohol on immune system and complications of COVID-19

## ○ Long-term

- Potential for escalation into alcohol use disorder
- Morbidity and mortality associated with increased alcohol consumption





## Research Priorities Moving Forward

- Monitor alcohol consumption and alcohol policies as COVID-19-related restrictions are lifted.
- Monitor alcohol-attributable harms during and following the COVID-19 pandemic.
- Support wider implementation of public awareness campaigns that encourage people to drink less or at least not drink more than usual.
- Understand connection between policy changes and alcohol consumption.
- Conduct more waves of the current survey.



# Contact Us



**Carolina Barbosa,**  
PharmD, PhD  
cbarbosa@rti.org



**Alexander J. Cowell,**  
PhD  
cowell@rti.org



**William N. Dowd,**  
BA  
wdowd@rti.org