

Alcohol consumption, impact of COVID-19 and alcohol-attributable disease burden: a global update

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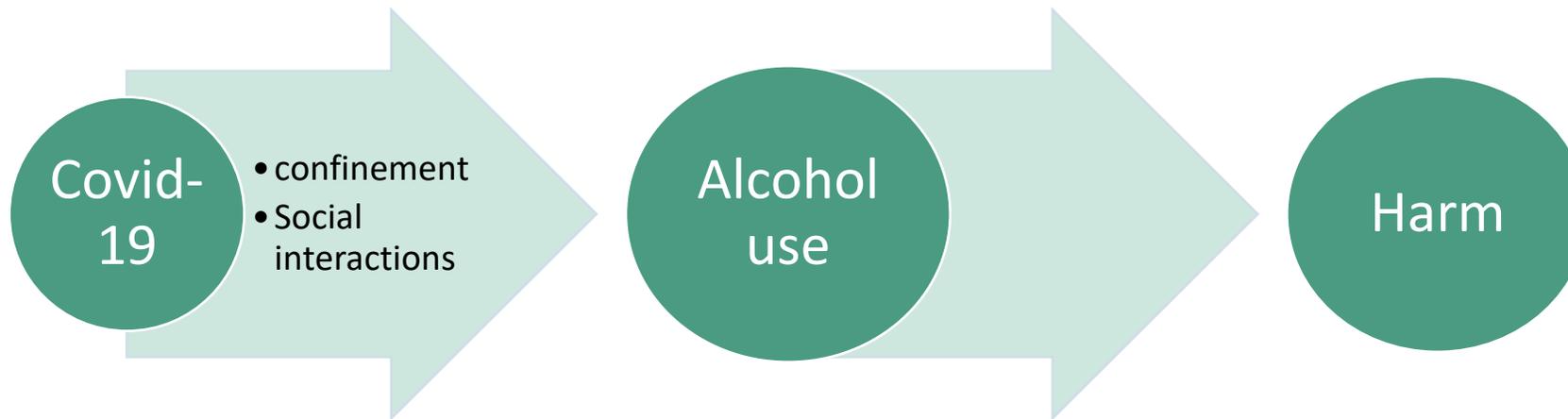
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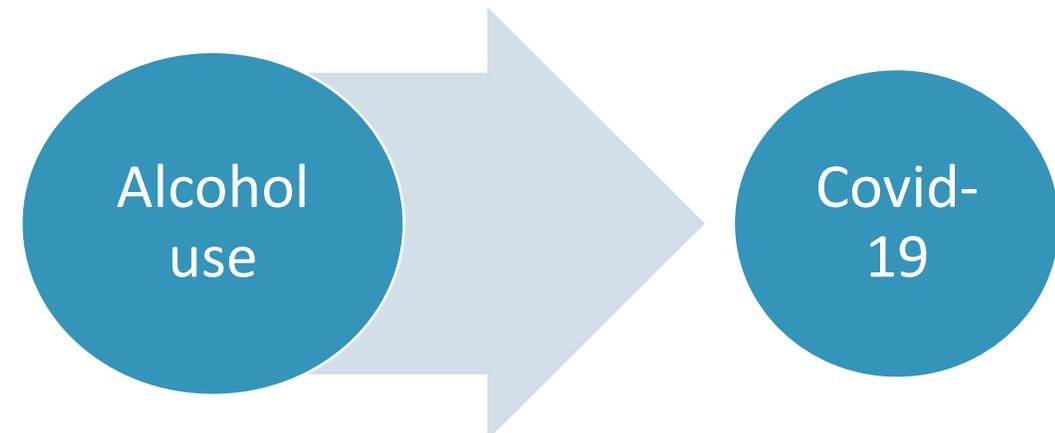
No conflicts of interest!

Two causal directions possible and detectable

- COVID-19 and the environment created by the pandemic impacts on alcohol use, and/or alcohol-attributable harm



- Alcohol use or alcohol use disorders impact on COVID-19 and attributable consequences





Global overviews

- In adult *per capita* consumption (WHO data), globally a drop of 7-8% between 2019 and 2020, mainly in low (- 11.7%) and lower middle income countries (-17.3%). In high-income, the drop was only 2.4%.

Reviews

- Acuff SF, Strickland JC, Tucker JA, Murphy JG. Changes in alcohol use during COVID-19 and associations with contextual and individual difference variables: A systematic review and meta-analysis. *Psychology of Addictive Behaviors*. 2022;36:1-19.
- Bakaloudi DR, Jeyakumar DT, Jayawardena R, Chourdakis M. The impact of COVID-19 lockdown on snacking habits, fast-food and alcohol consumption: A systematic review of the evidence. *Clinical Nutrition*. 2021;Apr 17:S0261-5614(21):00212-0. doi: 10.1016/j.clnu.2021.04.020
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- Roberts A, Rogers J, Mason R, Siriwardena AN, Hogue T, Whitley GA, et al. Alcohol and other substance use during the COVID-19 pandemic: A systematic review. *Drug and alcohol dependence*. 2021;229:109150.
- Schmidt RA, Genois R, Jin J, Vigo D, Rehm J, Rush B. The early impact of COVID-19 on the incidence, prevalence, and severity of alcohol use and other drugs: A systematic review. *Drug and alcohol dependence*. 2021;228:109065.
- Sohi I, Chrystoja BR, Rehm J, Wells S, Monteiro M, Ali S, et al. Changes in alcohol use during the COVID-19 pandemic and previous pandemics: A systematic review. *Alcoholism: clinical and experimental research*. 2022;46(4):498-513.

What did the global overviews find on the impact of COVID-19 on alcohol use?

- Globally, and in most countries, alcohol (and illegal drug use) decreased during COVID-19.
- Availability of alcohol was often reduced due to measures of confinement (especially in low- and lower middle-income countries).
- However, there were marked differences between countries based on whether alcohol was deemed an essential good or not.
- In addition, there is evidence that those who already consumed alcohol heavily (or people with alcohol use disorders) increased their consumption.

Mechanisms which were confirmed in the reviews

Two plausible mechanisms (Rehm et al. 2020)

I. Distress mechanism:

Alcohol use as a maladaptive coping strategy to manage the psychological distress due to the pandemic

**Alcohol
use ↑**

II. Availability-affordability mechanism:

Reduced number of drinking occasions due to closure of outlets and consumption sites, and reduced affordability due to growing unemployment and financial insecurity

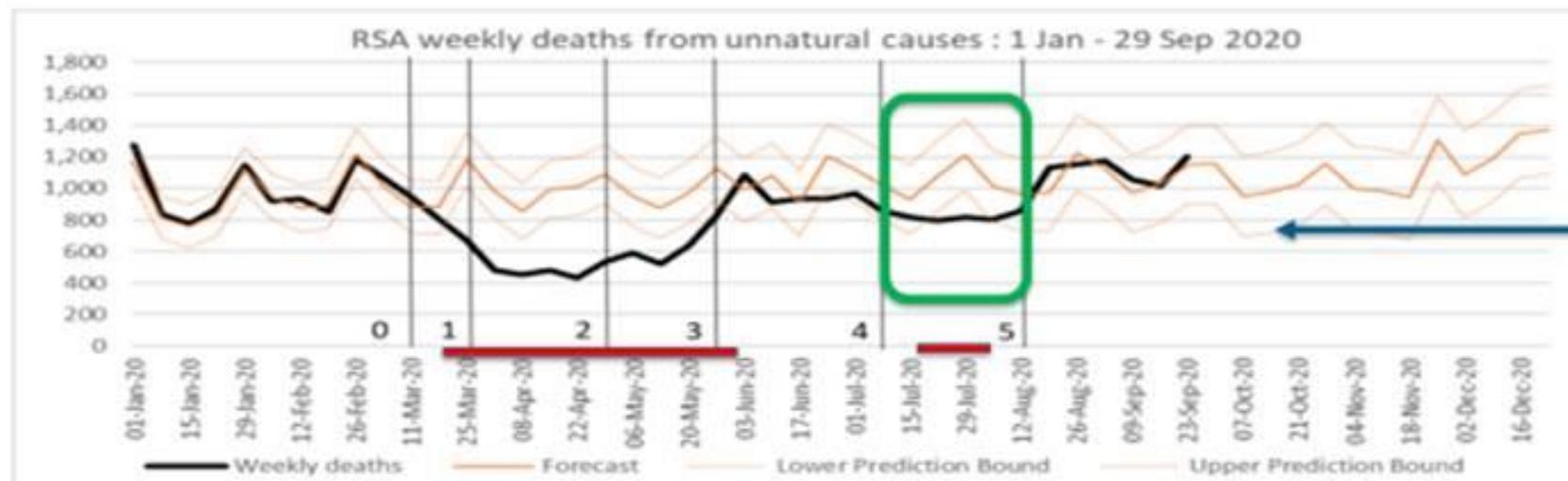
**Alcohol
use ↓**

Example Canada (Stockwell et al., 2022)

- Adult (15+) *per capita* consumption increased by 7.1% ($P = 0.013$) during the pandemic versus previous years, with increased private liquor store sales partly offset by reduced bar/restaurant sales. Consumption was positively associated with stringency of public health measures.

Different ways of handling substance use during the pandemic: The example of South Africa (banned alcohol and tobacco for several weeks with positive public health consequences)

Unnatural deaths – South Africa (SAMRC)

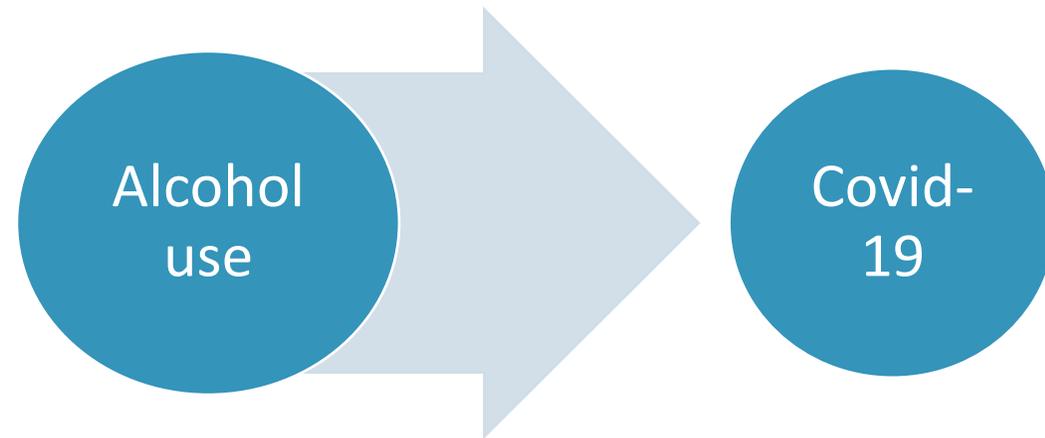


Saved ~21 lives per day

Vertical time lines:

0. Week Disaster Management Act implemented
1. Week lockdown level 5 introduced
2. Week lockdown changed to level 4 with curfew
3. Week lockdown changed to level 3 including unbanning sale of alcohol
4. Week sale of alcohol re-banned and curfew re-introduced
5. Week lockdown changed to level 2, including unbanning of alcohol

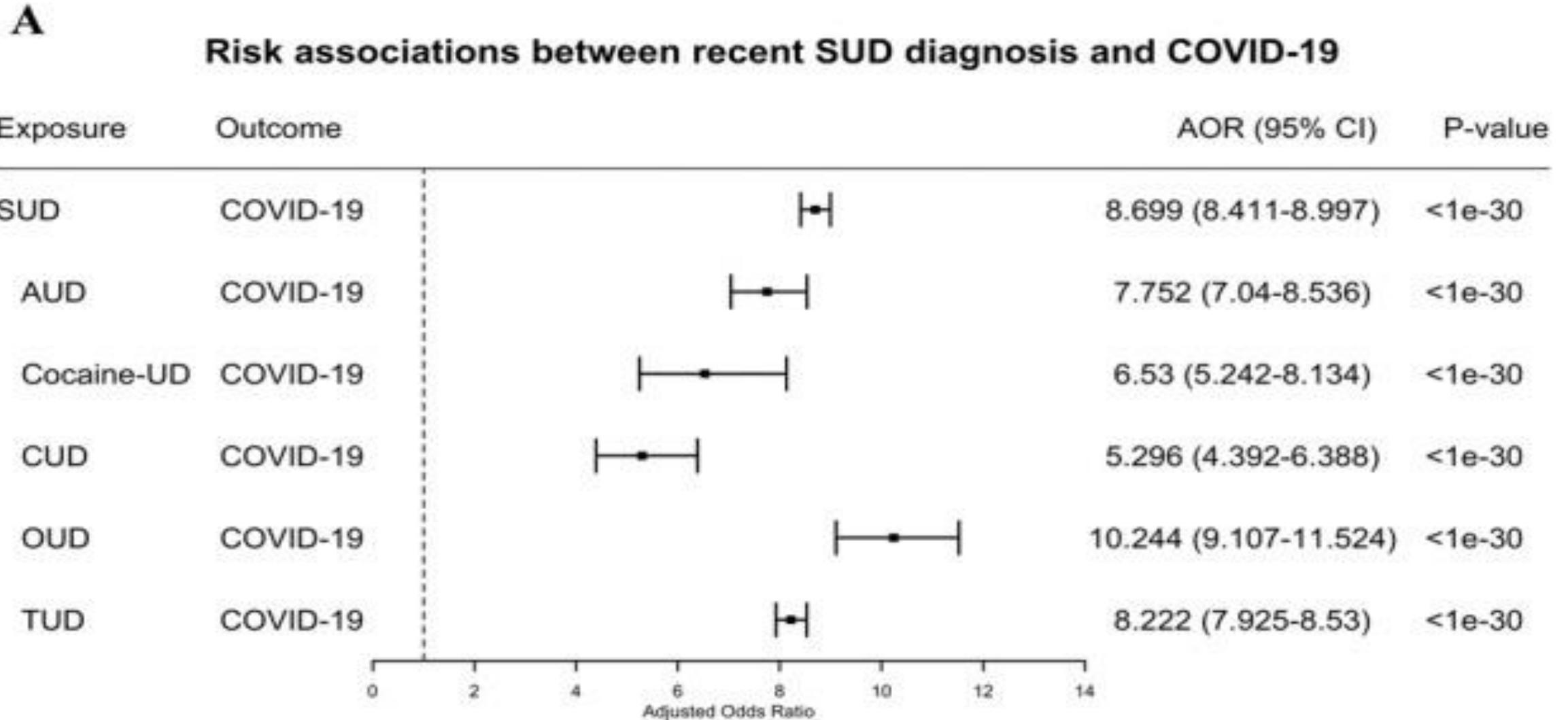
Numbers have been scaled to the estimated actual number of death and for the last week has been adjusted for delayed registrations



Does alcohol use contribute to COVID-19 (Morojele et al., 2021)?

- Yes, by heavy drinking and alcohol use disorders weakening the immune system
- Yes, by alcohol-attributable diseases contributing as risk factors for COVID
- However, evidence on light drinking is mixed

Risk associations SUD Covid-19 (Wang et al., 2021)



The role of systemic discrimination

- Schwarzsinger et al., in press
- Analyzed all COVID-19 deaths in hospitals in France and found that people with alcohol use disorders (AUD) had increased mortality risk

Why?

- Because people with AUD (and other mental disorders) were systematically denied intensive care during COVID phases when such intensive care places were rare

Conclusions

- Regarding effects of COVID 19 on alcohol use -> both main mechanisms seem to come into play globally.
 - Whereas globally, there was a decrease of alcohol consumption, many high income countries seem to even slightly increase, based on ill-advised policies of alcohol as an essential good.
 - The results above are mainly short term: if trends follow the trends seen following natural disasters in the past, there will be an increase in substance use disorders in the future.
- Regarding effects of alcohol on COVID-19:
 - Impact of light to moderate drinking not clear, but occasional and heavy drinking markedly increased the risk of COVID via weakening the immune system and via co-morbidities.