

LisbonAddictions 2022 | 23 November 2022

Disentangling the 'COVID-19 alcohol paradox': reasons for changes in alcohol-specific disease burden during the COVID-19 pandemic in Germany

Jakob Manthey^{1,2}, Carolin Kilian³, Ingo Schäfer¹, Marielle Wirth¹, Bernd Schulte¹

¹ Center for Interdisciplinary Addiction Research (ZIS), University Medical Center Hamburg Eppendorf (UKE), Germany

² Department of Psychiatry, University of Leipzig, Leipzig, Germany

³ Institute of Mental Health Policy Research, Centre for Addiction and Mental Health, Toronto, Canada

Disclosure

Funding:

The study was funded by a federal fund for health research in Germany (“Innofonds”), grant number VSF1_2021-131

Author disclosure:

JM, CK

- have worked as consultant for public health agencies (e.g., World Health Organization; European Monitoring Centre for Drugs and Drug Addiction);

JM, CK

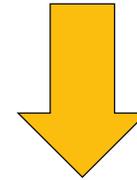
- has received honoraria for presentations/workshops/manuscripts funded by various public health agencies;

Other authors declare no conflict of interest.

There are no (alcohol) industry links for any author.

What happened between 2010 and 2019 regarding alcohol and health in Germany?

- Parallel (small) declines in alcohol consumption and harm
 - Recorded alcohol per capita: 11.6 → 10.6 Liters (-9%)
 - Alcohol-specific deaths: 15,031 → 13,426 (-11%; age-standardized: -12%)

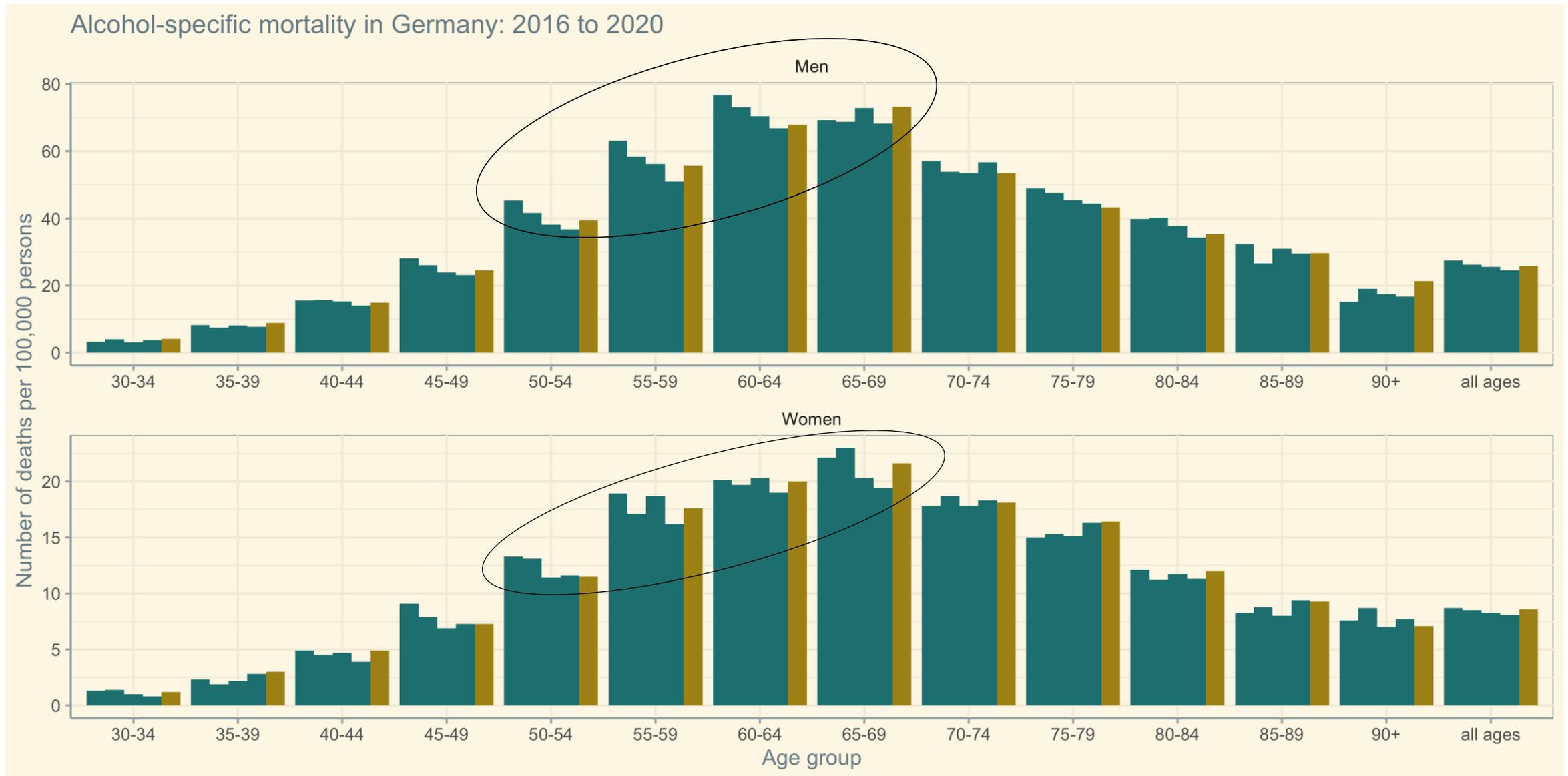


What happened in 2020?

- Alcohol use continued to **decline** according to survey and sales data
 - **Decreases** in low-risk and **increases** among heavy drinkers
- Alcohol-specific deaths **increased** suddenly
 - **Increases** among women and men aged 50-69 years



Background: Changes in alcohol use and mortality during 2020



Motivation: COVID-19 alcohol paradox

COVID-19 alcohol paradox: *Increasing alcohol deaths despite decreasing alcohol use*

Possible mechanisms:

- 1) Differential changes in alcohol consumption (increases among heavy drinkers)
- 2) **Undertreatment of people with AUD**

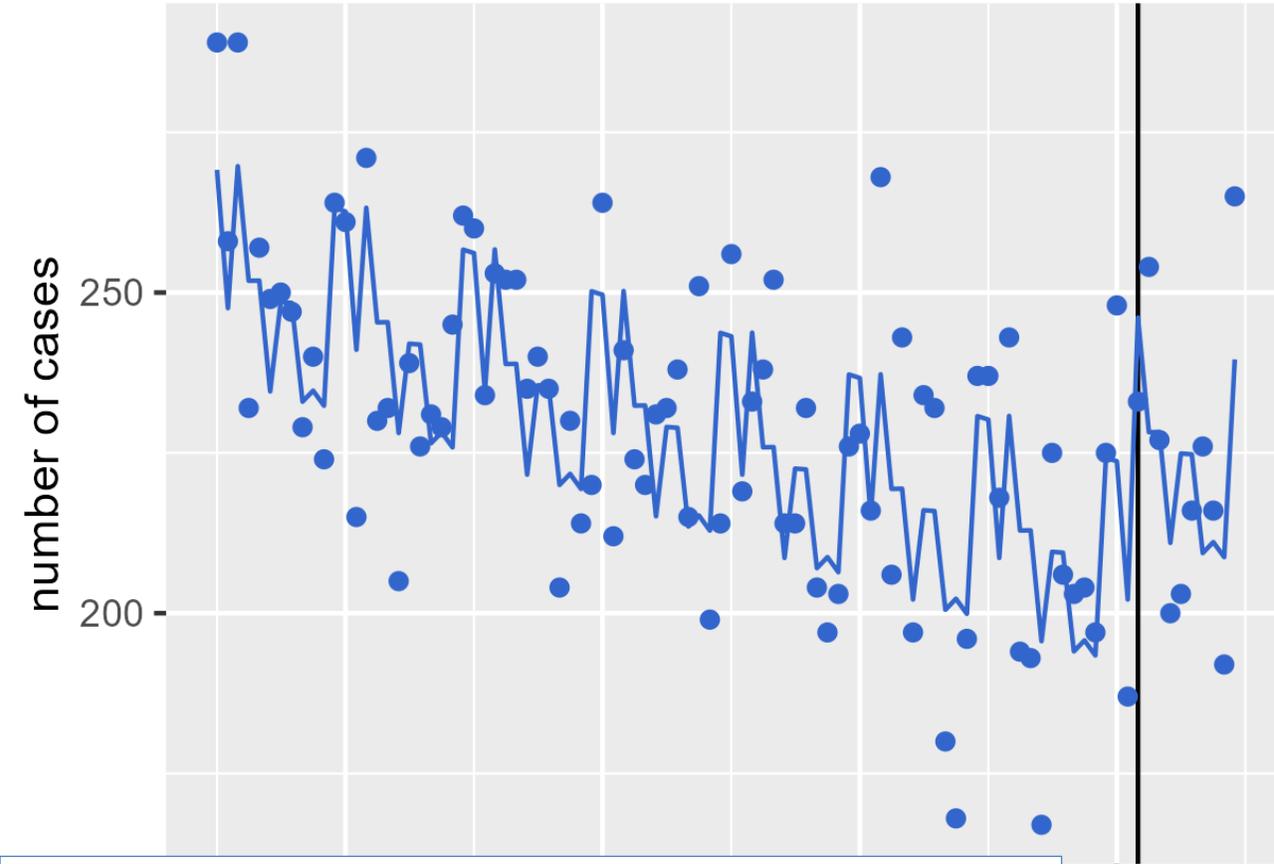
This study: Are increases in alcohol-specific deaths coinciding with reduced utilization of treatment for chronic alcohol-specific conditions (e.g., AUD, liver cirrhosis)?

Methods:

- Correlations and time-series analyses (generalized additive models) of monthly data on
 - a) Alcohol-specific deaths (>95% are chronic conditions)
 - b) Hospital discharges for *acute* (alcohol intoxication, poisonings) and *chronic* (AUD, liver cirrhosis) conditions
 - c) Beer sales (in million litres)
- Sex-stratified analyses for the years 2013 to 2020 for 45-74 year olds

Findings: Changes in deaths following March 2020

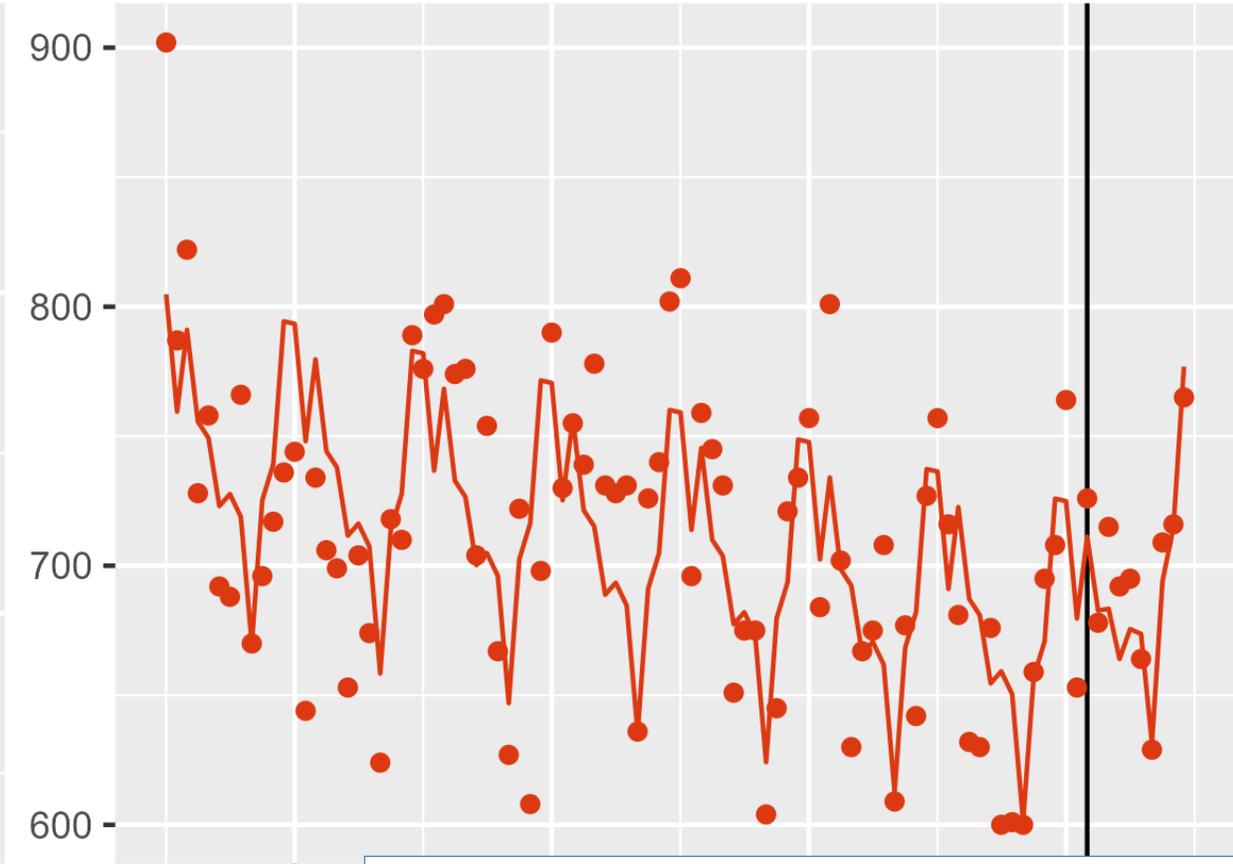
women



**Significant immediate increase
among women:**

+23 deaths per month
= +218 deaths in the year 2020
= 10% more than expected

men



**No significant *immediate* increase
among men:**

Increase in deaths probably in
fall/winter 2020/2021

2020

2014

date

sex



women

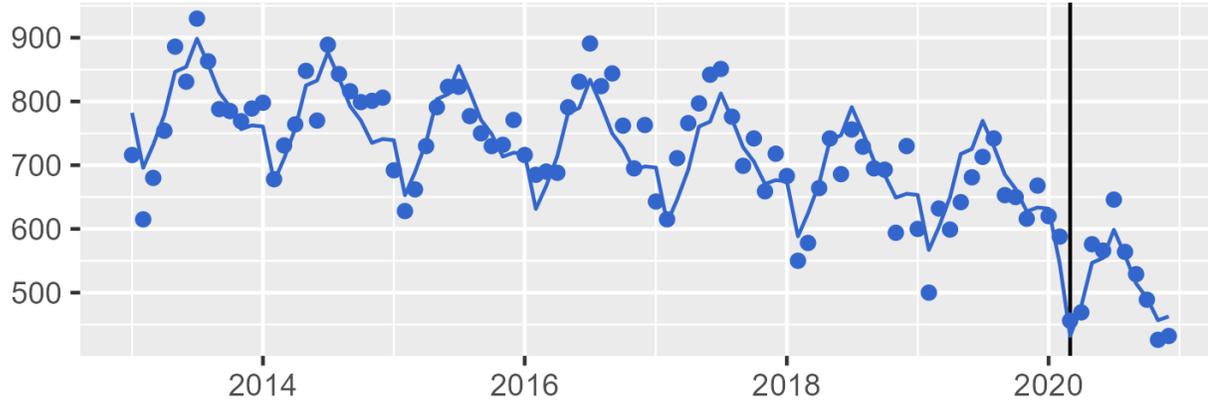


men

Findings: Changes in hospital discharges following March 2020

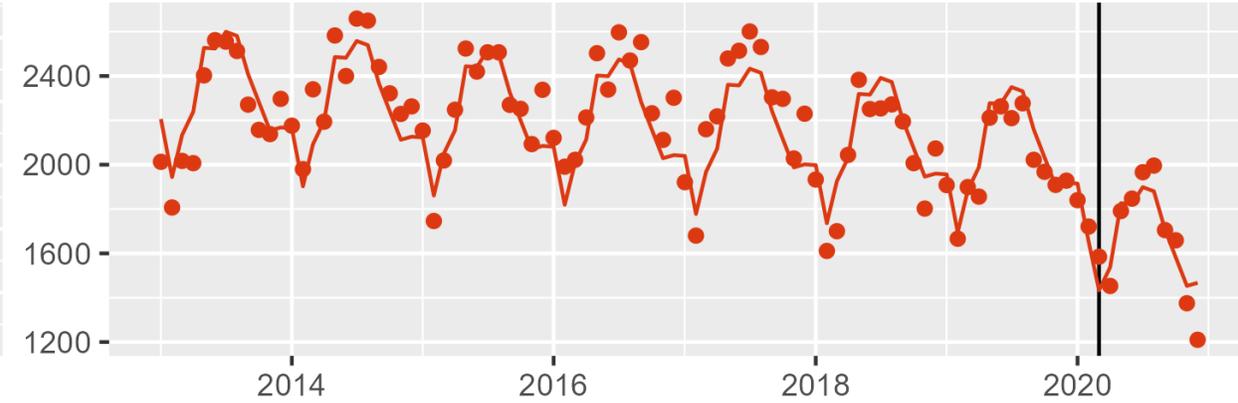
acute conditions

women



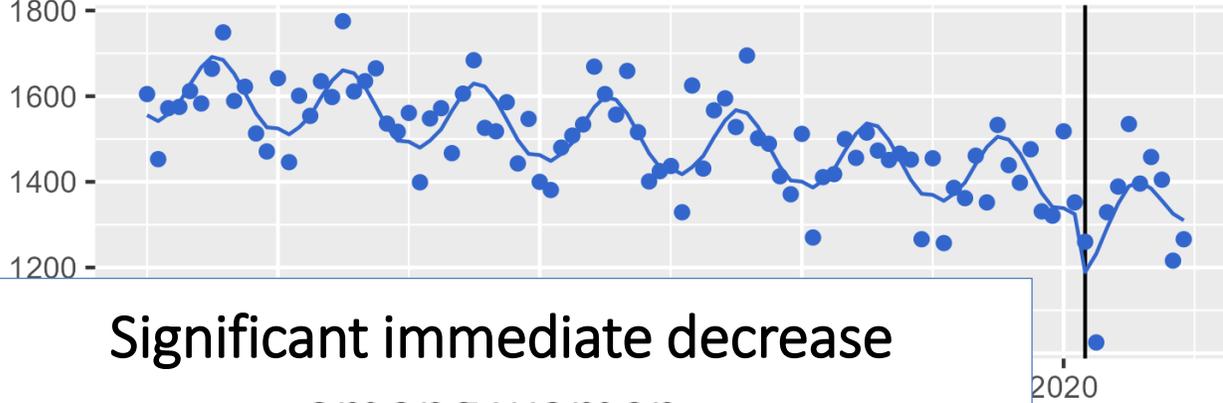
acute conditions

men



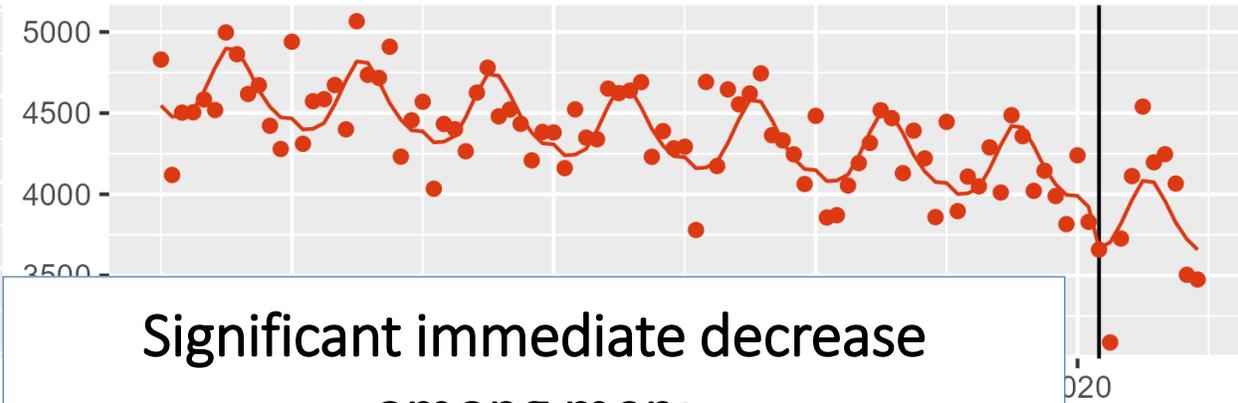
chronic conditions

women



chronic conditions

men



**Significant immediate decrease
among women:**

- 24% discharges for acute conditions
- 11% discharges for chronic conditions

sex



**Significant immediate decrease
among men:**

- 15% discharges for acute conditions
- 5% discharges for chronic conditions

Findings: Changes in deaths and hospital discharges following March 2020

Alcohol-specific deaths:

- immediate *increases* among women (+10%) but not among men

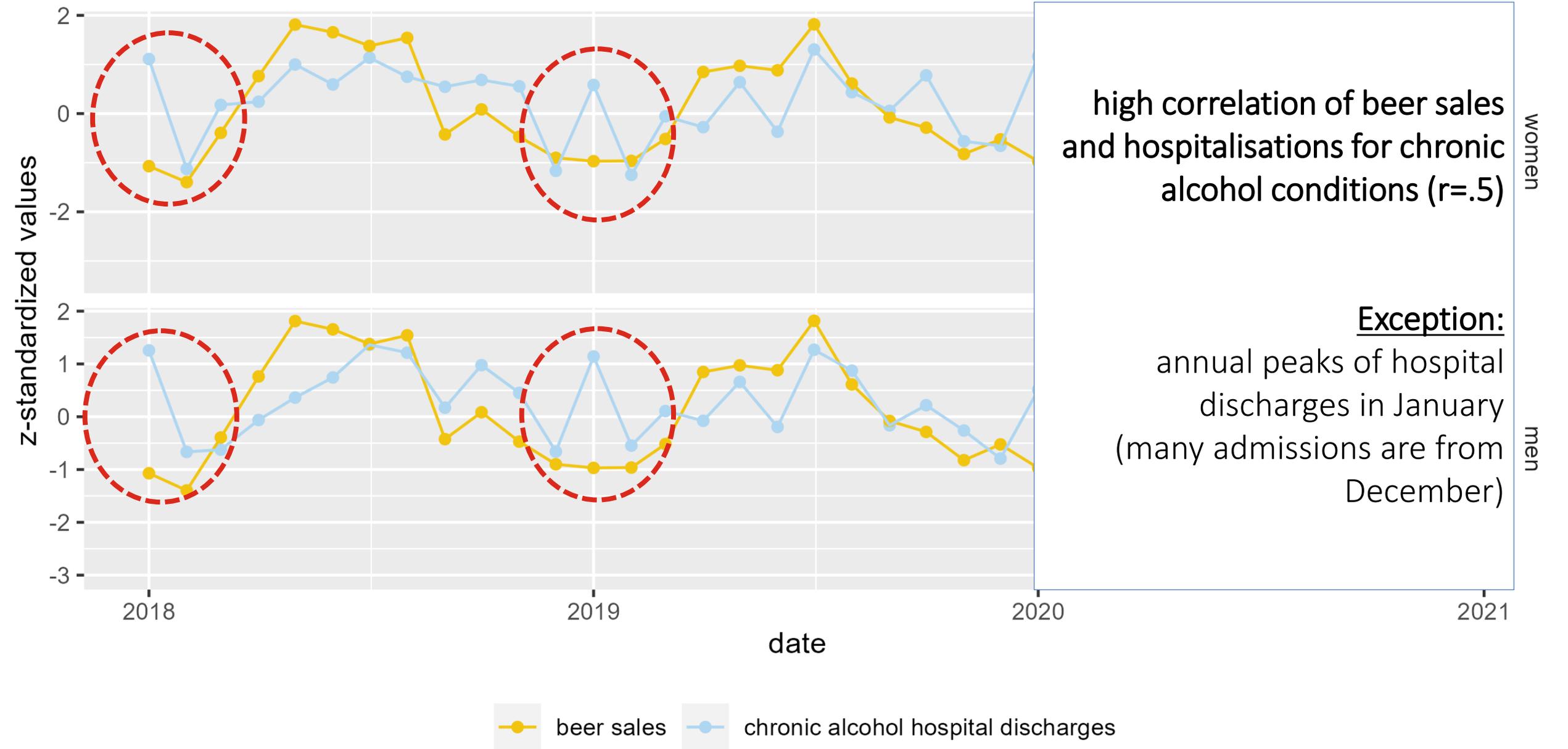
Hospital discharges for acute and chronic alcohol conditions:

- Immediate *decreases* among women and men
- Stronger decreases among women as compared to men

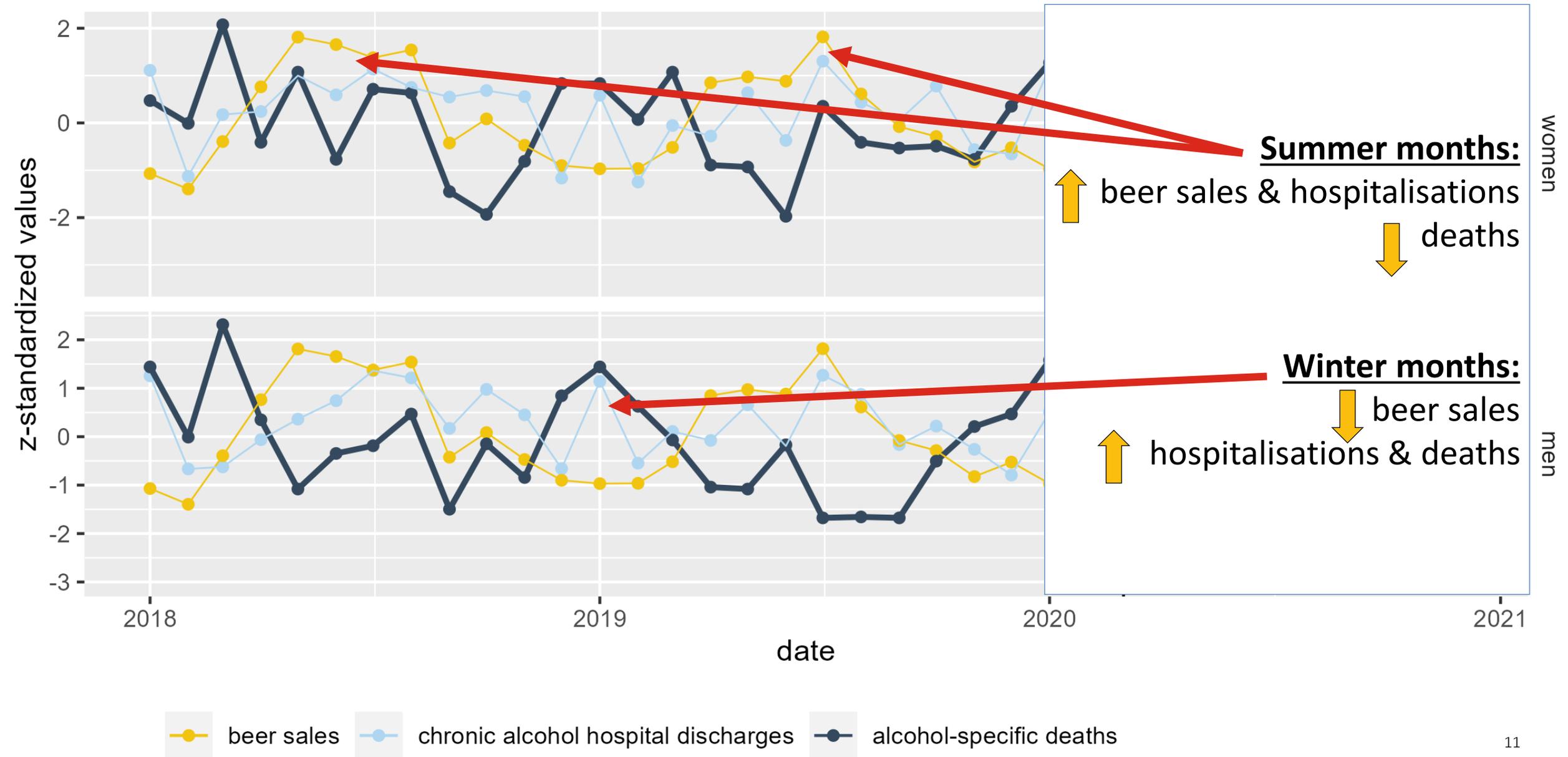
Can hospital discharges predict deaths?

How do beer sales factor in here?

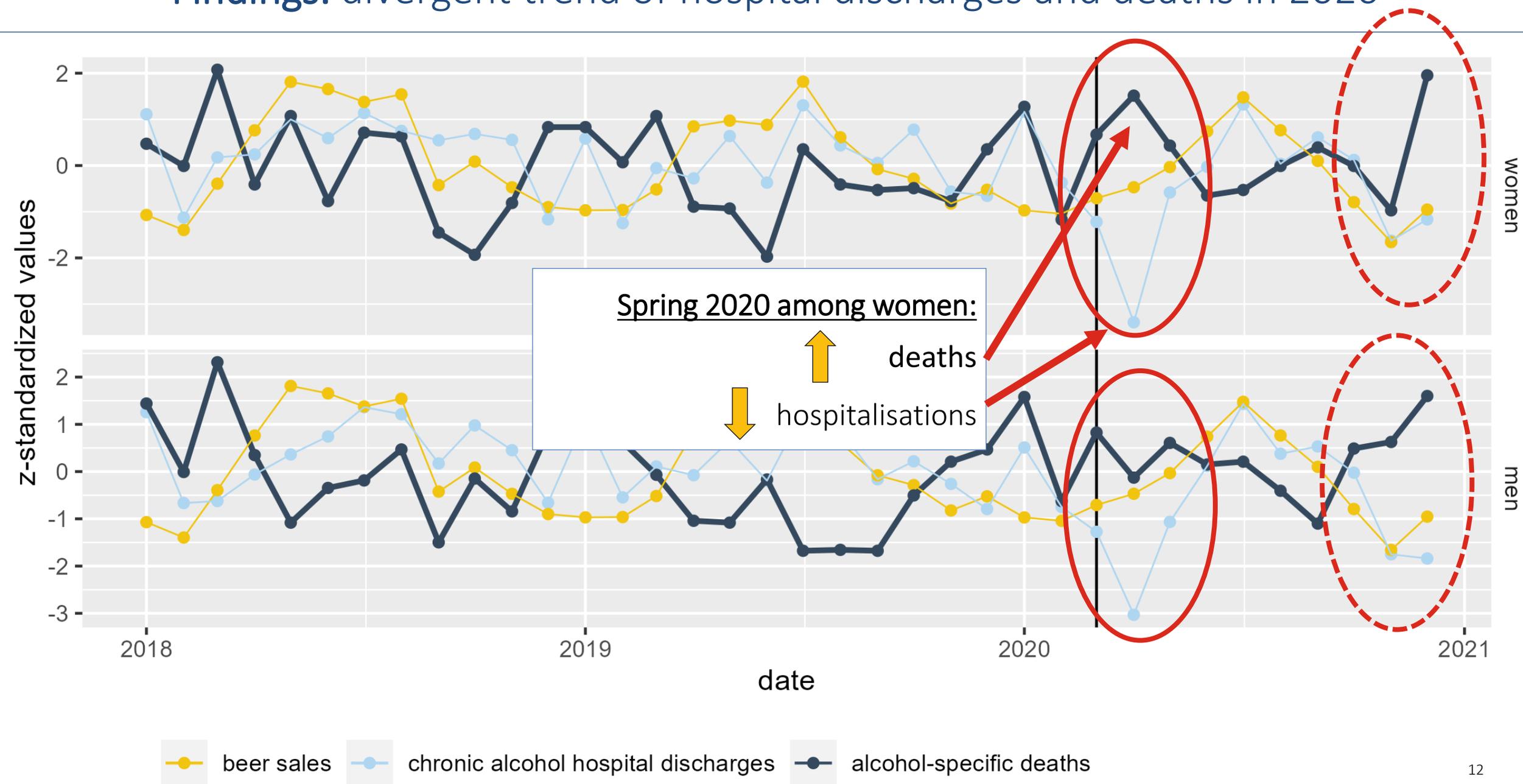
Findings: similar seasonal patterns of beer sales & hospital discharges



Findings: alcohol-specific deaths follow **different** seasonal patterns



Findings: divergent trend of hospital discharges and deaths in 2020



Conclusions

With the onset of the pandemic in March/April 2020:

- Increases in alcohol-specific deaths have co-occurred with decreasing number of people treated for chronic alcohol-specific diseases – ***among women but not among men***
- Possible explanation: stronger *relative* declines in treatment utilization among women
 - pandemic-related stressors more pronounced among women -> less likely to seek professional help

Limitations:

- Use of hospital *discharges; admission* data will only be available in 2023
- Further data required to understand peak of pandemic in winter 2020/2021
- Hospital data both an indicator of treatment *need* and treatment *provision*
- Sales statistics do not reflect differential changes in alcohol consumption

Conclusion:

- Treatment of AUD should remain a priority also during crises

Thank you for listening!

Dr. Jakob Manthey

Email: j.manthey@uke.de

Center for Interdisciplinary Addiction Research (ZIS), University Medical Center Hamburg-Eppendorf (UKE), Germany
Department of Psychiatry, Medical Faculty, University of Leipzig, Germany