

The banner features a background image of the Golden Gate Bridge in San Francisco at dusk. The bridge is illuminated with warm lights, and the city lights are visible in the distance. The sky is a deep blue. In the top left corner, there is a red teardrop shape containing the year '2022'. The main text is in white and red, with 'HYBRID' in red. The date and location are also in white.

20
22

NCSCG
7TH ANNUAL **HYBRID**
LIVER SYMPOSIUM

January 29, 2022 | San Francisco

Alcohol-Related Liver Disease in the Era of COVID

Robert Wong, MD, MS

Clinical Associate Professor of Medicine (Affiliated)
Stanford University School of Medicine

Staff Physician – Gastroenterology and Hepatology
Veterans Affairs Palo Alto Healthcare System

Disclosures

- No relevant disclosures

Objectives

- Review current trends in the epidemiology of alcohol associated liver disease in the U.S.
- Understand how alcohol associated liver disease epidemiology and outcomes have been affected by the onset of the COVID-19 pandemic
- Understand the unmet needs in addressing ALD during the pandemic and into the post-pandemic recovery period

ALD Related Morbidity and Mortality Was Rising Even Before the Pandemic

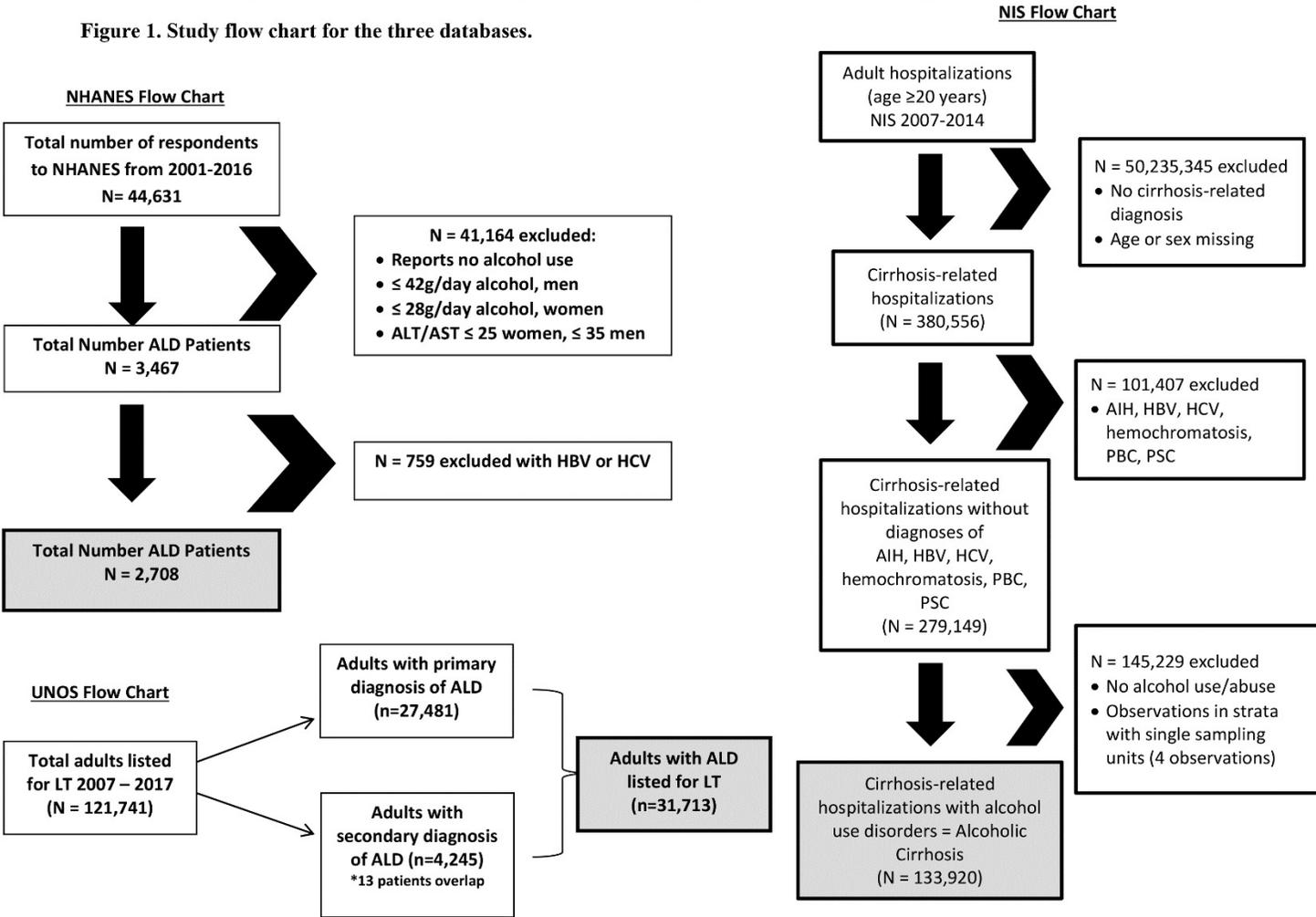
- Existing studies have demonstrated the rising prevalence of ALD in the U.S.
- Similarly concerning, rising trends in ALD patients with advanced liver disease have been observed (e.g. alcoholic hepatitis, cirrhosis, end stage liver disease)
- This has led to significant impact on patient morbidity and mortality, as well as major impact on healthcare resource utilization
- The COVID-19 pandemic has fueled this continued rise in ALD morbidity and mortality

Alcoholic Liver Disease Epidemiology in the United States: A Retrospective Analysis of 3 US Databases

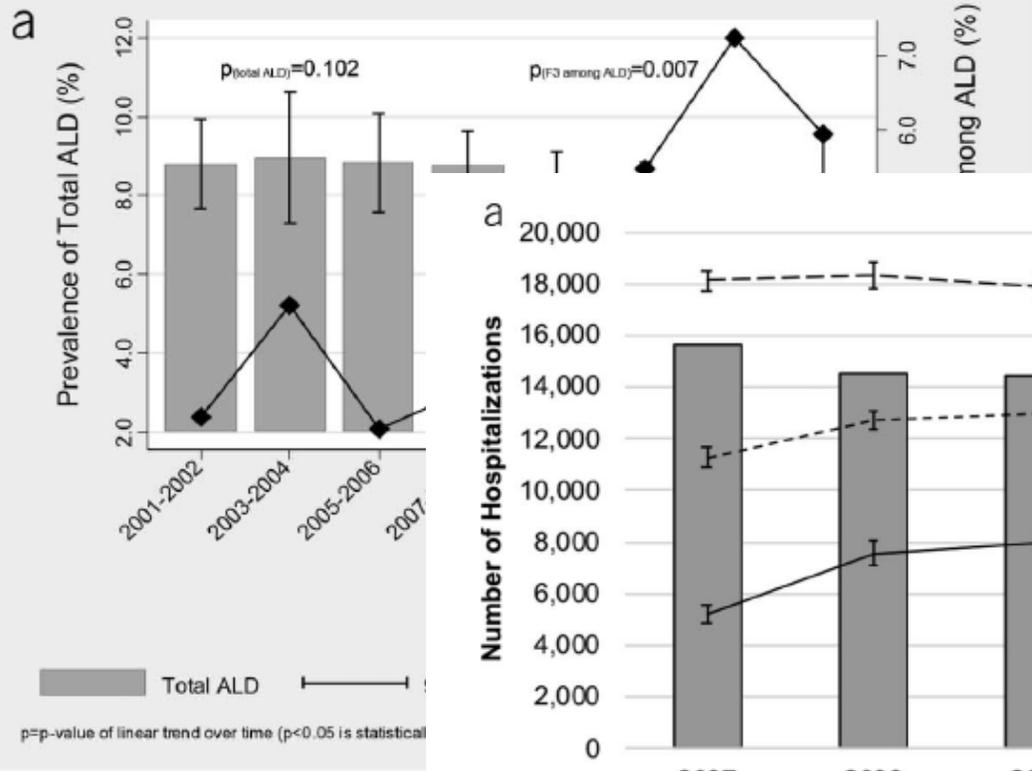
Katherine Dang, MAS¹, Grishma Hirode, MAS¹, Ashwani K. Singal, MD, MS², Vinay Sundaram, MD, MSc³ and Robert J. Wong, MD, MS¹

Am J Gastroenterol 2020;115:96–104. <https://doi.org/10.14309/ajg.000000000000380>

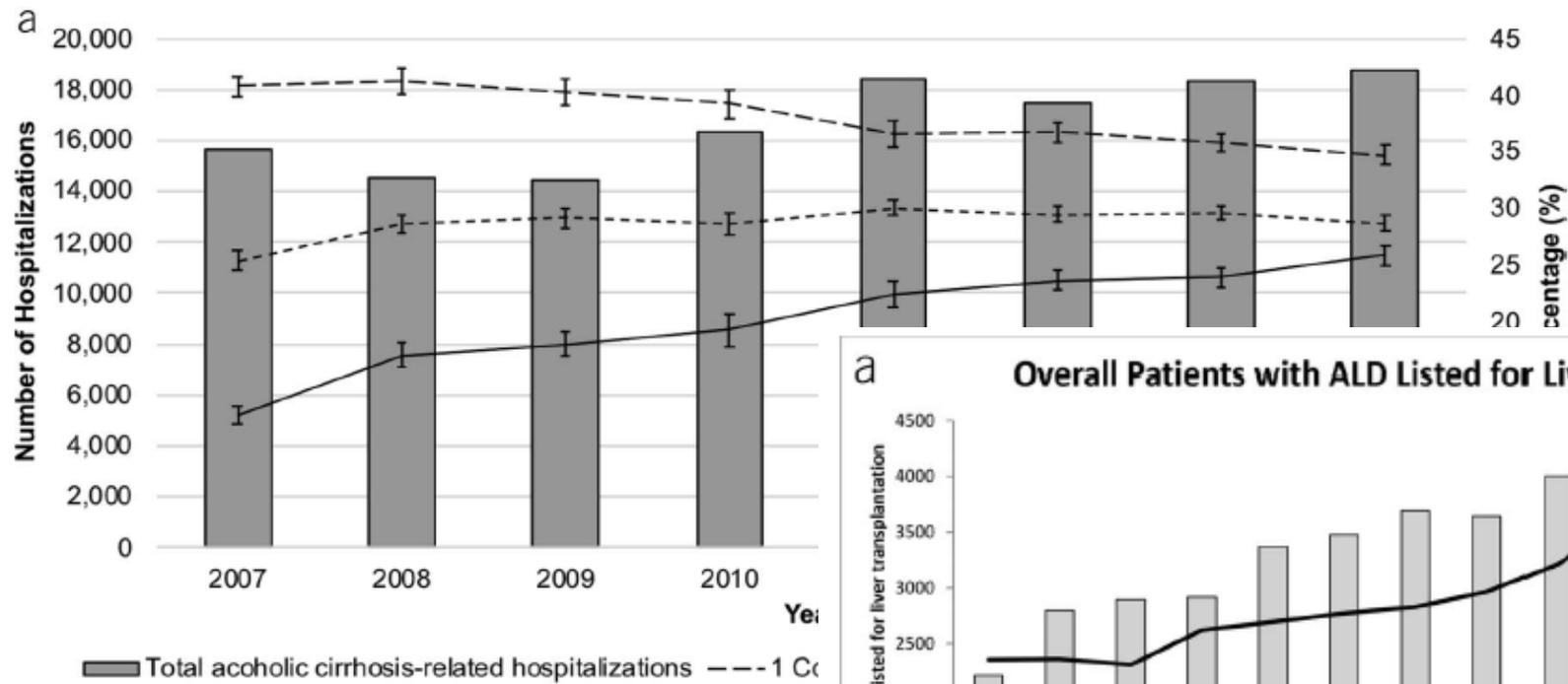
Figure 1. Study flow chart for the three databases.



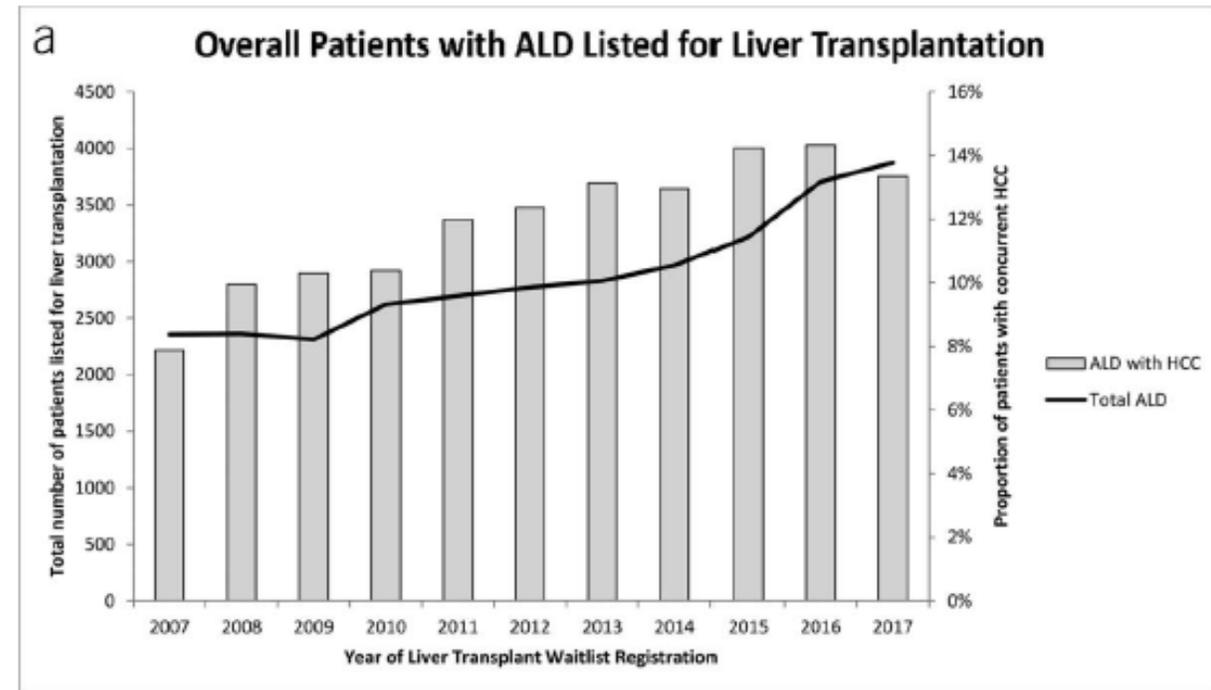
NHANES



NIS

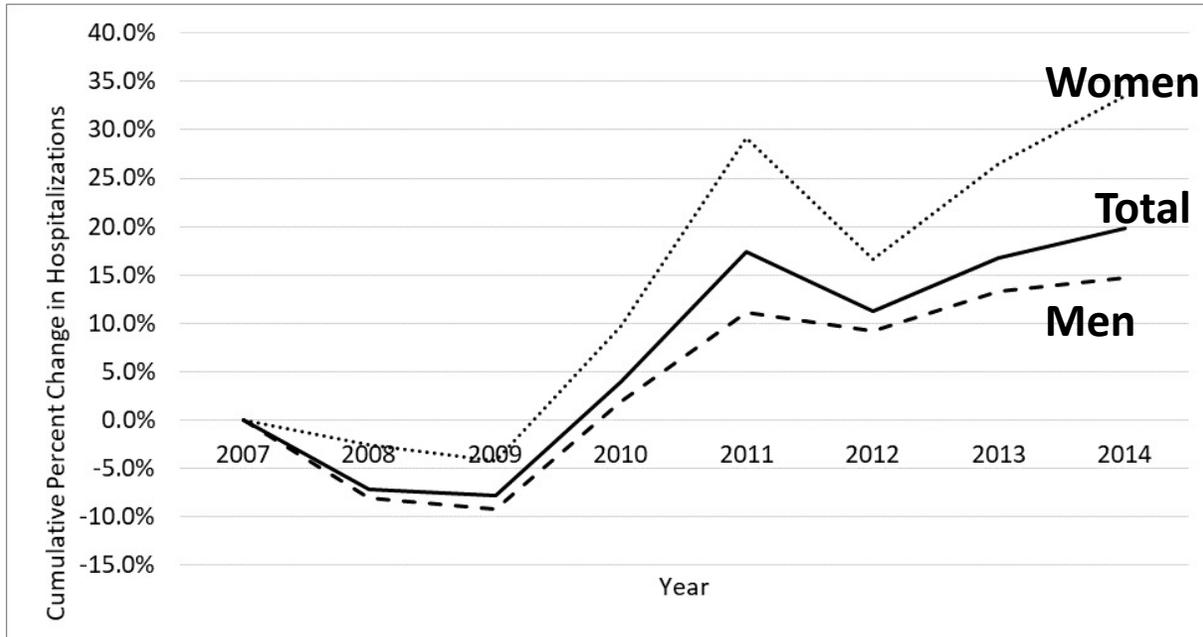


UNOS

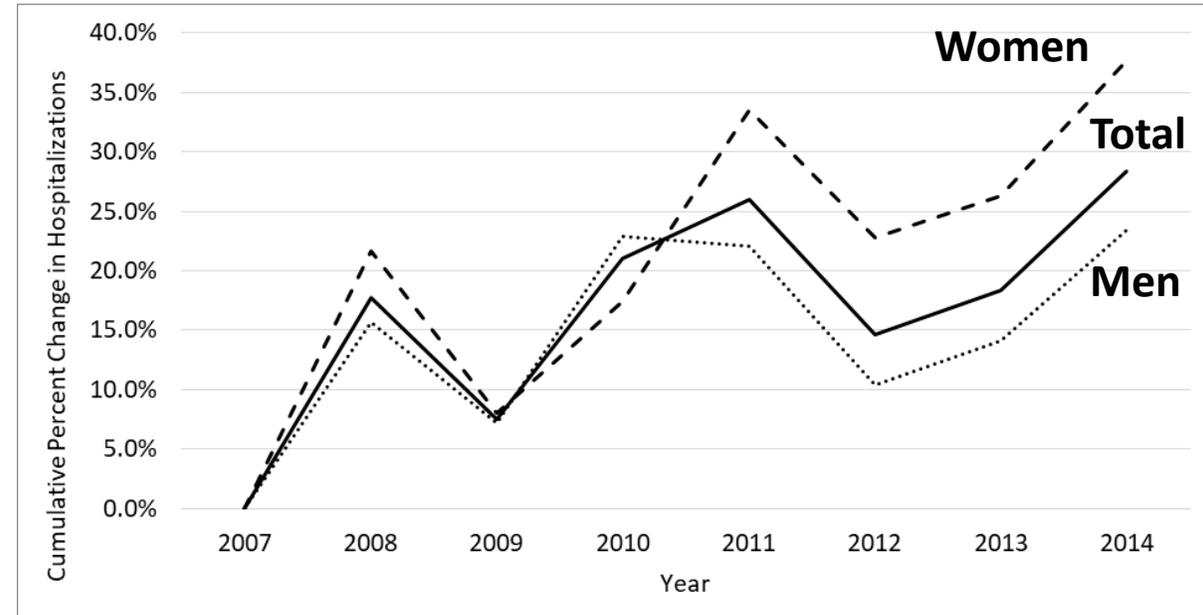


Increasing Hospitalizations Related to Alcoholic Cirrhosis and Alcoholic Hepatitis

Alcoholic Cirrhosis

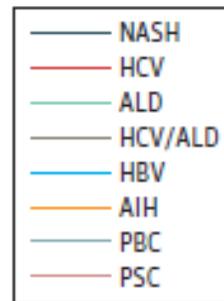
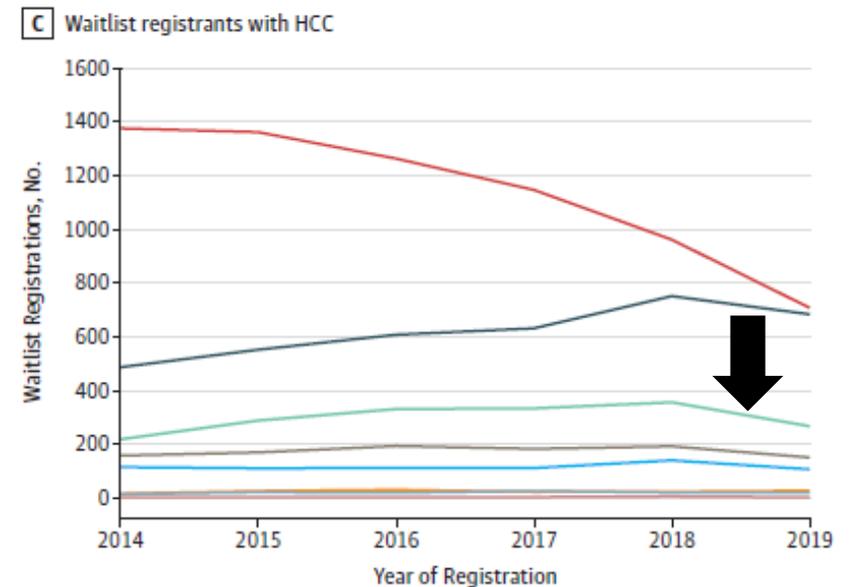
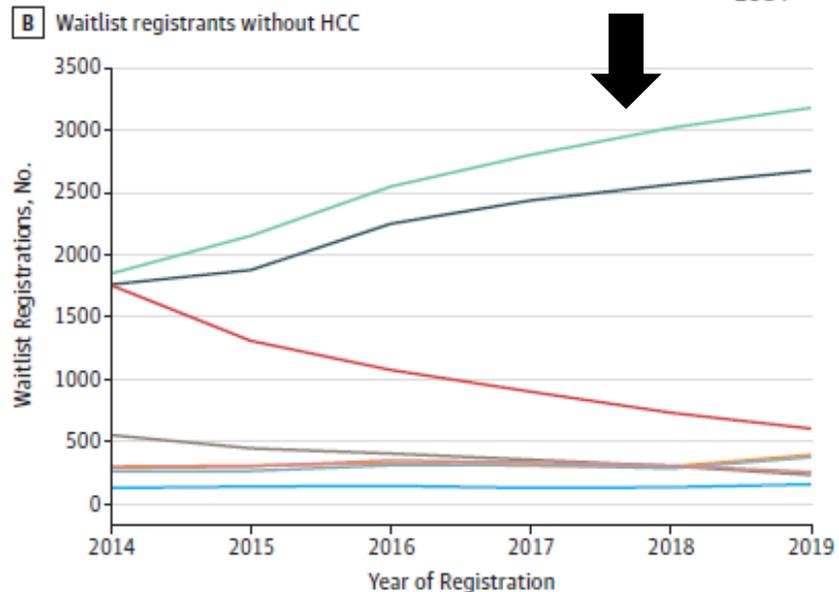
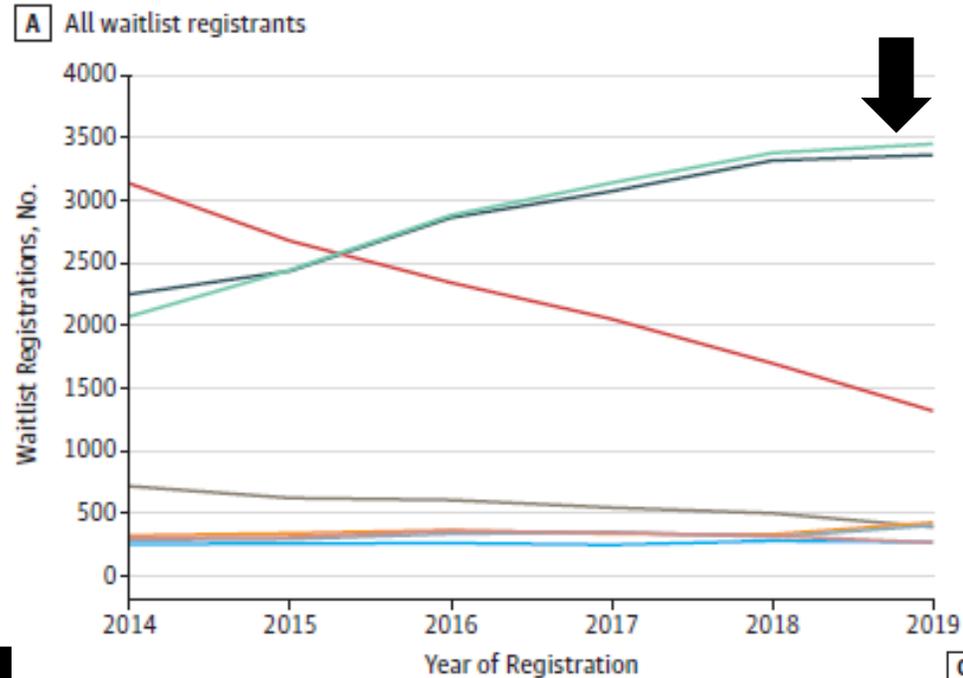


Alcoholic Hepatitis



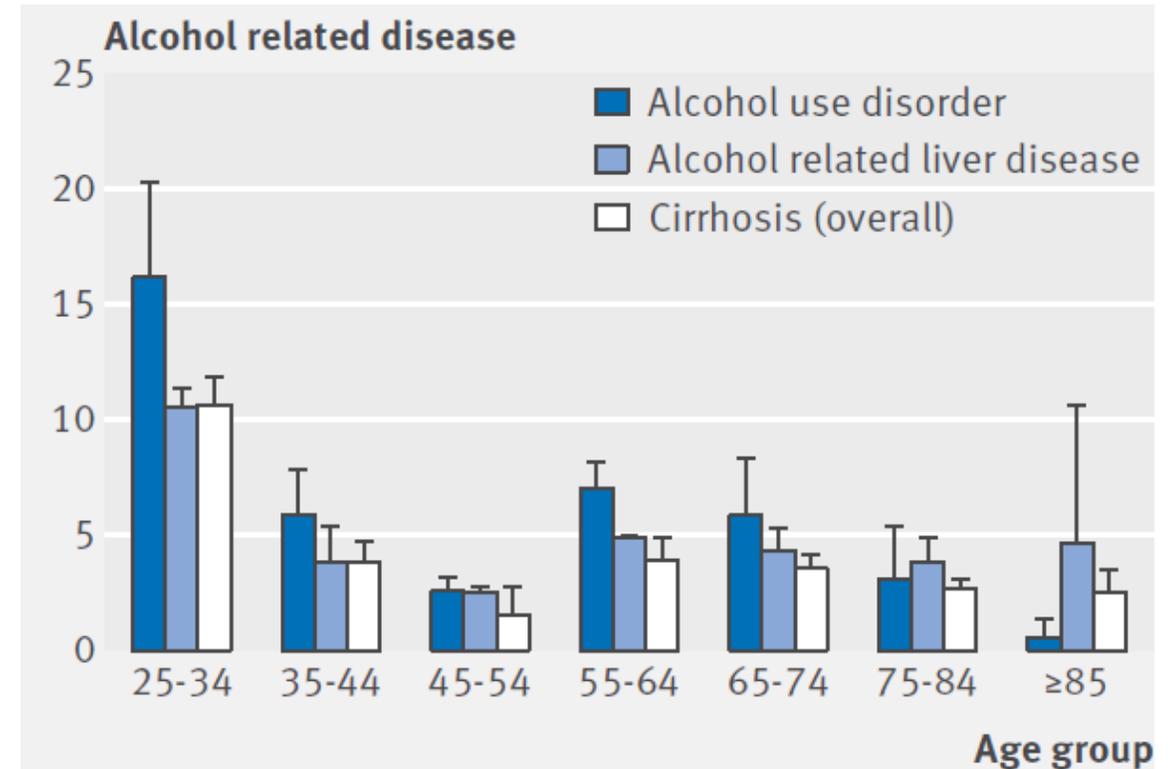
- While the number of hospitalizations related to alcoholic cirrhosis and alcoholic hepatitis were more than two times higher in men compared to women, the proportional increase over time was significantly greater in women

ALD as an Indication for Liver Transplantation



ALD Contributing to Increasing Liver Disease Related Mortality Particularly Among Young Adults

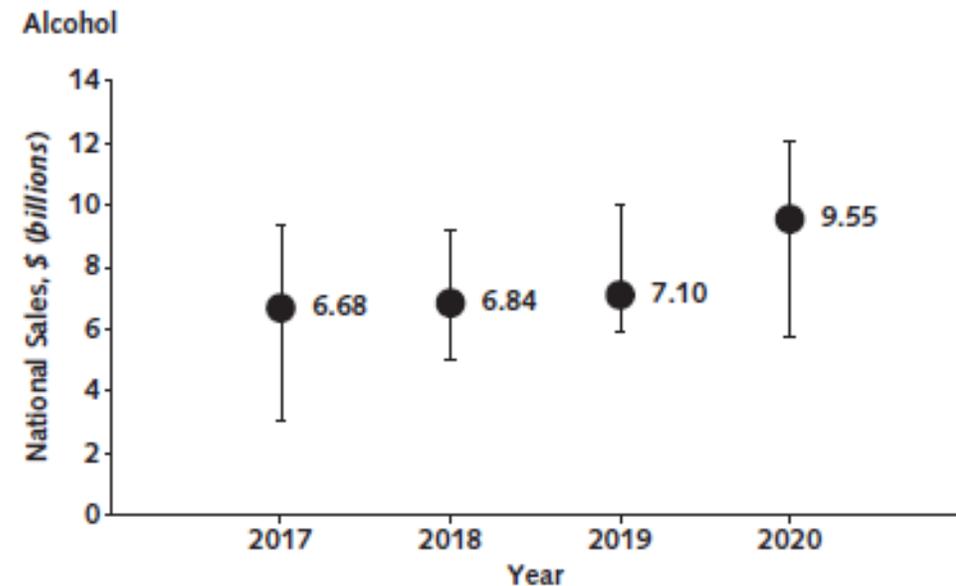
- Tapper, et al evaluated trends in cirrhosis mortality in the U.S. from 1999 to 2016 using data from the Vital Statistics Cooperative and the CDC's WONDER database
- Overall cirrhosis deaths increased by 65% and from 2009 to 2016, annual increase in cirrhosis deaths was 3.4%
- Increases in cirrhosis related deaths were most pronounced for adults age 25-34 years (AAPC, 10.5%), which seems to be driven primarily by ALD



Increasing Alcohol Consumption During Pandemic

- Lee, et al. evaluated the Nielsen National Consumer Panel, a longitudinal household cohort that collects retail and ecommerce purchase data.
- Retail purchases of alcohol (wine; liquor; and beer, malt beverages, and cider) in U.S. dollars were captured by household, aggregated by demographic and geographic category and compared from April 1 to June 30 for 2020 compared to pre-pandemic years (2017-2019).
- Total weighted alcohol sales increased by 34.4% from 2019 to 2020 (\$7.10 to \$9.55 billion dollars)

Figure. Weighted national estimates of retail sales.





Panda Express (2016 El Camino Real) 4.4
📍 • \$0.99 Delivery Fee • 20-30 min

\$20 off gift orders \$40+ on Drizly.
Use code: BESTGIFT

Terms apply

Shop Drizly →



Spend \$25, Save \$5

All Day Kitchens 4.7
📍 • \$0.49 Delivery Fee • 20-30 min



Spend \$20, Save \$5

Home Browse Orders Account



Gift Ideas Liquor Beer & More Drinks for All Ages

Get your party essentials delivered with Gopuff
Sips, bites and supplies virtually at your fingertips now, on your actual doorstep in minutes.
Available in select areas only. Assortment may vary.

Qvite

Gift Ideas VIEW ALL

 Iwai Traditional Japanese Whisky 750ml \$59.99 \$69.99	 Tenjaku Blended Japanese Whisky 750ml \$41.99 \$59.99	 Mill's and Mash Kentucky Whisky 750ml \$36.99 \$56.99	 Miagave A Tequila 750ml \$59.99 \$71.99
--	---	---	---

Liquor VIEW ALL

 Tanteo Habanero Tequila 750ml \$32.99 \$44.99	 Don Romeo Blanco Tequila 750ml \$29.99 \$39.99	 Bulleit Bourbon 750ml \$24.99 \$29.99	 Miagave A Tequila 750ml \$59.99 \$71.99
---	--	---	---

Beer & More VIEW ALL

Home My Bag Referrals

Holiday spirits, delivered.

Celebrate the season with everything you need for seasonal cocktails, champagne toasts, and more.

Let's raise a glass.

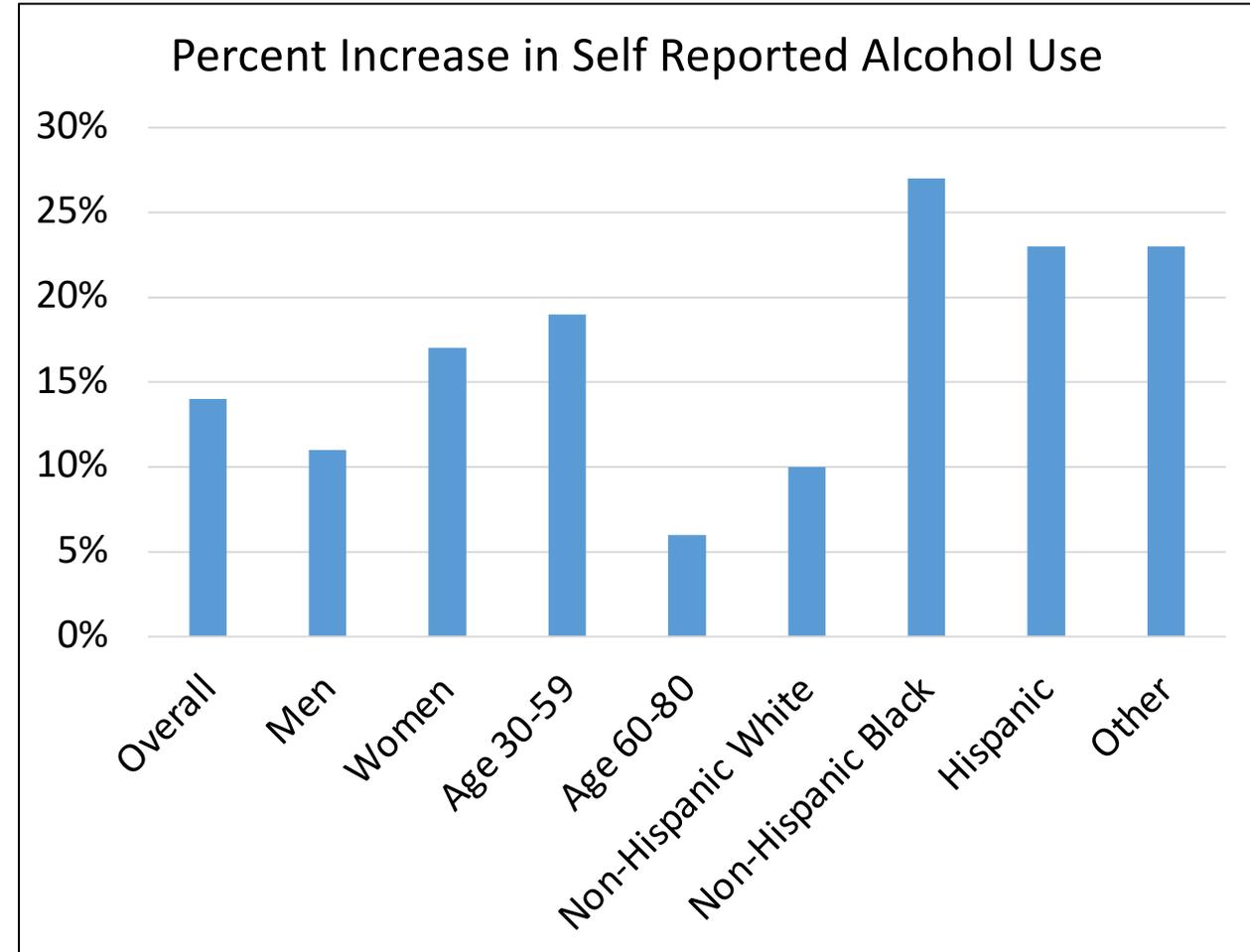
Enjoy 30% off your liquor store order of \$25+ (up to \$15 value) through December 11th with code: COCKTAIL

Shop now

Now serving: Spiked Hot Cocoa

Increasing Alcohol Consumption During Pandemic

- Pollard, et al. utilized the RAND Corporation American Life Panel, which conducts surveys nationally representative, probability sample cohort of adults
- Survey data assessing alcohol use in the past 30 days were compared from April 29-June 9, 2019 to May 28 to June 16, 2020.
- Overall alcohol consumption increased by 14%
- Significant variations by sex, age, and race/ethnicity were observed



Increasing Alcohol Use During Pandemic Likely to Exacerbate ALD Burden

- Alcohol abstinence particularly important for patients with chronic liver disease, especially those with advanced liver disease
- Pandemic driven increases in alcohol use will further increase incidence of ALD and trigger decompensation in patients with underlying ALD
- Increasing hospitalizations for alcoholic hepatitis and ACLF related to alcohol associated liver disease
- Increasing number of patients with ALD requiring liver transplant evaluation

COVID-19 Aftershocks on Alcohol-Associated Liver Disease: An Early Cross-Sectional Report From the U.S. Epicenter

Stephanie M. Rutledge,¹ Thomas D. Schiano,² Sander Florman,³ and Gene Y. Im ²

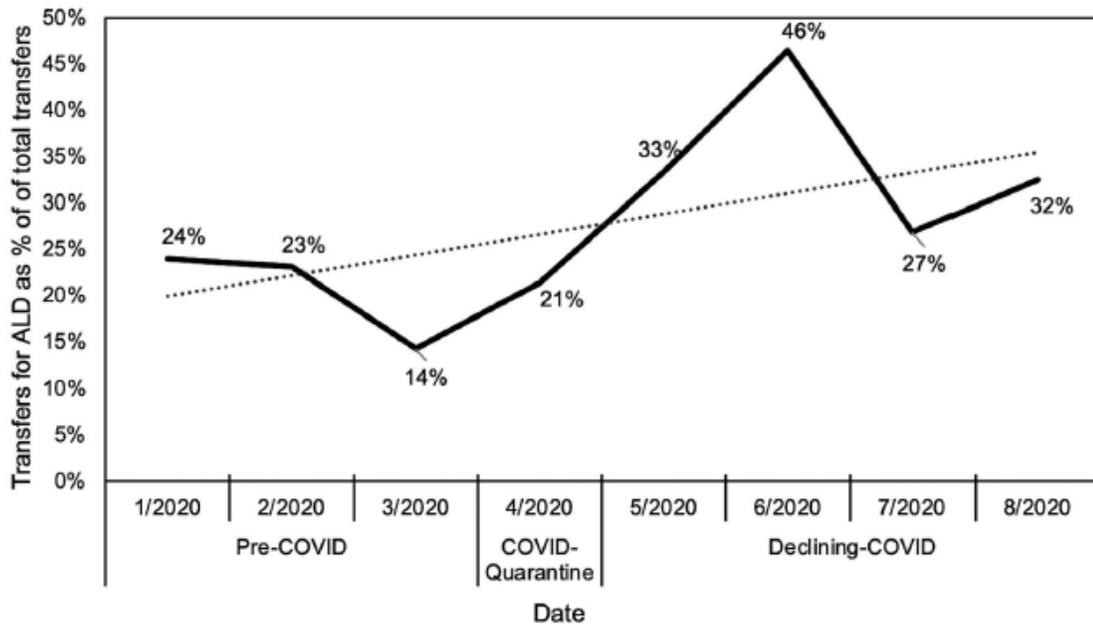


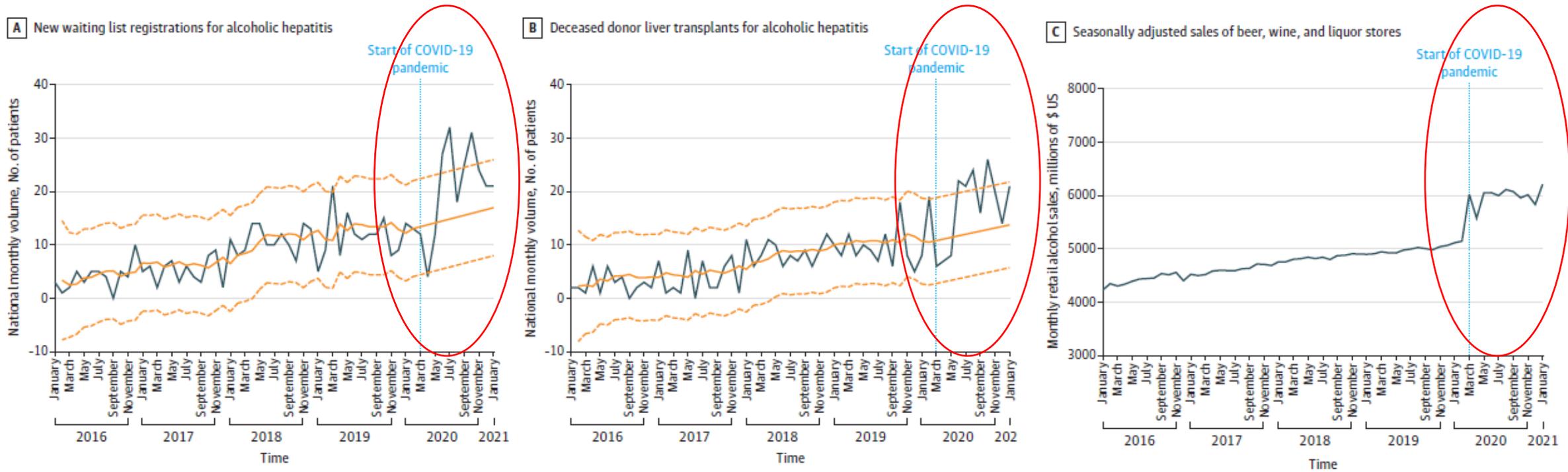
FIG. 1. Transfers for ALD as a percentage of total transfers in 2020.

- Single center cross sectional study of NYC LT Center to evaluate ALD trends
- Overall 62% increase in hospital transfers for ALD from pre-COVID to COVID era
- Proportion of total inpatient liver census increased from 35% to as high as 49% during the COVID period

Research Letter | Gastroenterology and Hepatology

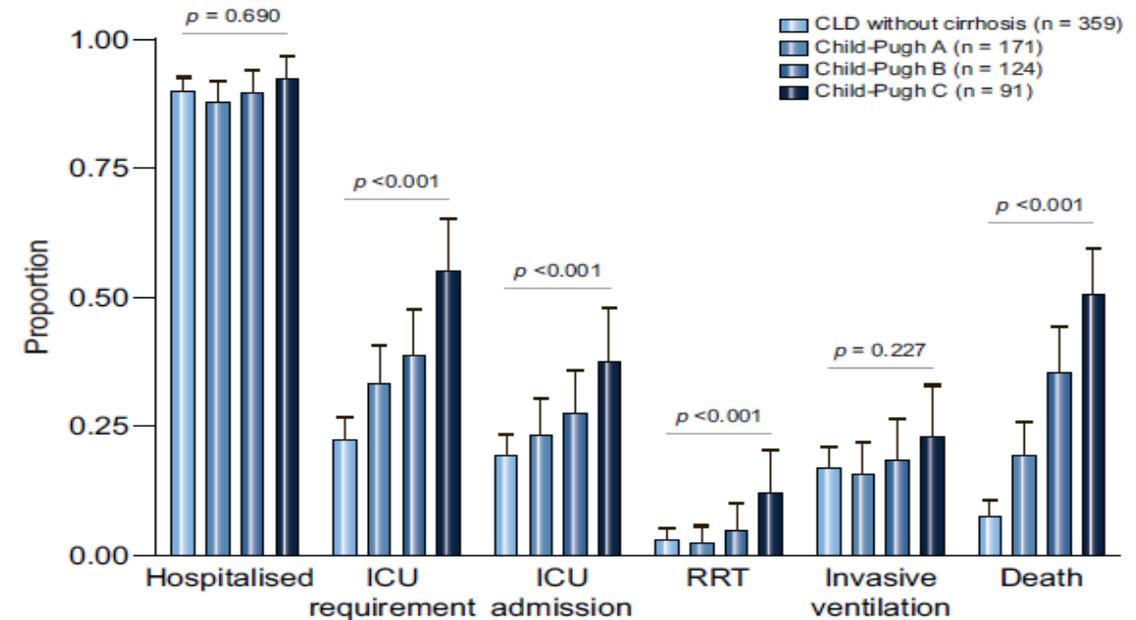
Association of COVID-19 With New Waiting List Registrations and Liver Transplantation for Alcoholic Hepatitis in the United States

Maia S. Anderson, MD; Valeria S. M. Valbuena, MD; Craig S. Brown, MD, MSc; Seth A. Waits, MD; Christopher J. Sonnenday, MD, MHS; Michael Englesbe, MD; Jessica L. Mellinger, MD, MSc



COVID-19 Outcomes in Patients with Chronic Liver Disease

- A recent multi-national study incorporating two international registries evaluated 745 patients with CLD+COVID-19 vs. 620 patients with non-CLD+COVID-19
 - Overall mortality was significantly higher in patients with cirrhosis (32% vs 8%, $p < 0.01$), with main cause of death related to respiratory failure.
 - Compared to patients without CLD, patients with Child's B cirrhosis had 20% higher mortality, and those with Child's C cirrhosis had 38% higher mortality.
 - **Patients with ALD had significantly greater odds of overall mortality (OR 1.79, 95% CI 1.03 – 3.31, $p = 0.04$)**



Effect of Increased Alcohol Consumption During COVID-19 Pandemic on Alcohol-related Liver Disease: A Modeling Study

- Validated microsimulation model that estimated the short- and long-term effect of increased drinking during the COVID-19 pandemic compared with a counter-factual scenario wherein no COVID-19 occurs and drinking patterns do not change
- One-year increase in alcohol consumption during the COVID-19 pandemic is estimated to result:
 - 8,000 [95% UI 7,500-8,600] additional ALD-related deaths
 - 18,700 [95% UI 17,600-19,900] cases of decompensated cirrhosis
 - 1,000 [95% UI 1,000-1,100] cases of HCC
 - 8.9 million disability-adjusted life-years between 2020 and 2040
- ***A sustained increase in alcohol consumption for more than 1 year could result in additional morbidity and mortality***

Need for Innovative and Multidisciplinary Approach to Address the Rising ALD

- Renewed interest and focus from advocacy groups, societies (AASLD, EASL), funding agencies (NIH), and health policy to address this rising tide of AUD, particularly the impact of ALD among young adults
- While the pandemic has disrupted traditional care delivery for liver patients, does the rapid adoption of tele-health create novel opportunities for us to better assess and treat AUD and ALD?
- How can we better engage multidisciplinary teams to optimize the complex management of AUD and ALD?
- What opportunities exist for us who care for liver disease patients to develop necessary skill sets to treat AUD?

TABLE 1. ADDICTION MEDICINE TRAINING OPPORTUNITIES

Program Type	Program Title	Details
Immersion programs	Fellow Immersion Training Program in Addiction Medicine Host: Boston University School of Medicine Sponsor: National Institute on Drug Abuse ASAM: Fundamentals of Addiction Medicine	<ul style="list-style-type: none">• Multiple-day immersion training for clinical subspecialty fellows to learn state-of-the-art skills to integrate addiction medicine into clinical research• 40-hour CME program to help clinicians recognize, screen, treat, and refer patients with substance use disorders through interactive, case-based learning
Conferences	ASAM National Conference American College of Academic Addiction Medicine Annual Meeting International Society of Addiction Medicine	<ul style="list-style-type: none">• Multiple-day conferences, featuring oral and poster sessions, with a focus on high-quality, innovative addiction medicine education
Fellowship	Addiction Medicine Fellowship	<ul style="list-style-type: none">• 12-Month clinical fellowship for those who have completed residency training in 24 primary specialties• Greater than 80 addiction medicine fellowships are accredited by the Accreditation Council for Graduate Medical Education• Those who complete the fellowship may sit for the addiction medicine certification examination by the American Board of Preventive Medicine.• Trainees able to accrue 1920 hours of addiction medicine practice over at least 24 months may sit for the certification examination through 2025.

Program For Advanced Training Of Hepatologists In Alcohol Use Disorder Management (PRATHAM)

April-May 2021

Objectives

At the end of the courses, learners will be able to:

1. Screening and evaluation of persons with Alcohol Use Disorder
2. Identification and management of Alcohol Withdrawal Syndrome
3. Selection of an appropriate pharmacological agent for long term management
4. Delivering brief psychological interventions for persons with AUD



Take Home Points

- The burden of ALD in the U.S. has been rising even before the onset of the COVID-19 pandemic
- The pandemic driven increases in alcohol consumption, particularly among young adults will have dire consequences in fueling ALD-related morbidity and mortality in the near term
- Long term impact of these trends on ALD epidemiology and outcomes are unclear, but prediction models paint a concerning view
- Innovative interventions that incorporate multidisciplinary teams and capitalize on the advent of telehealth may improve access to care and delivery of addiction medicine services

Future Directions

- There remains significant gaps in our understanding about the impact of increased alcohol use during pandemic on ALD epidemiology and outcomes
- Long term impact of ALD outcomes also requires further research

TABLE 1. RESEARCH PRIORITIES FOR COVID-19 AND ALD

Research Priority	Clinical/Policy Implications
<i>Risk and Outcomes of COVID-19 in ALD</i>	
Incidence of COVID-19 infection in ALD	<ul style="list-style-type: none"> • Inform recommendations regarding shielding (i.e., avoidance of all person-to-person contact in extremely vulnerable) for patients with ALD
COVID-19 outcomes in patients with ALD	<ul style="list-style-type: none"> • Better understanding of relative influences of alcohol use and underlying liver disease on COVID-19 outcomes • Tailored clinical care guidelines for patients with ALD
Treatment of alcohol-associated hepatitis and COVID-19	<ul style="list-style-type: none"> • Determine the optimal use of corticosteroids in patients with alcohol-associated hepatitis and COVID-19
<i>COVID-19 Therapies/Vaccination</i>	
Efficacy of COVID-19 therapies in ALD	<ul style="list-style-type: none"> • Provide clinical guidance for SARS-CoV-2 infections in patients with ALD
Risks of COVID-19 therapies in ALD	<ul style="list-style-type: none"> • Provide clinical guidance for SARS-CoV-2 infections in patients with ALD • Better inform patients on expected risks of these therapies
Safety and efficacy of COVID-19 vaccinations in ALD	<ul style="list-style-type: none"> • Magnitude/duration of vaccine response • Effect of liver disease severity on vaccine response • Need for additional booster doses for adequate immunologic response and protection • Risk of liver injury
<i>Alcohol Use During COVID-19 Pandemic</i>	
Patterns of alcohol consumption during the COVID-19 pandemic	<ul style="list-style-type: none"> • Determine whether increased online sales of alcohol translate into increases in overall consumption • Inform policy that could reduce harms from alcohol use during the pandemic
Factors associated with unhealthy alcohol use during COVID-19	<ul style="list-style-type: none"> • Ascertain policy priorities (e.g., alcohol pricing, depression/anxiety treatment, unemployment benefits) to address AUD during COVID-19
Disparities in alcohol consumption by sex and race/ethnicity	<ul style="list-style-type: none"> • Identify high-risk populations who may benefit from targeted interventions • Assess effects of concurrent non-COVID-19-related stressors, including social unrest, because of racial disparities and polarizing politics
<i>AUD Treatments During COVID-19 Pandemic</i>	
Efficacy of remote alcohol use counseling and monitoring	<ul style="list-style-type: none"> • Inform reimbursement policy in the post-COVID-19 era • Assess benefits of continuing remote alcohol-use treatment for select patients • Determine care delivery models (e.g., telemedicine, video counseling) that are best suited for AUD
<i>Downstream Effects of COVID-19 on ALD</i>	
Incidence of alcohol-associated hepatitis, alcohol-associated acute-on-chronic liver failure and cirrhosis	<ul style="list-style-type: none"> • Address disparities by sex and race/ethnicity • Better account for hepatology care needs in the post-COVID-19 era • Expansion in AUD counseling resources
Transplant considerations for patients with ALD who relapsed	<ul style="list-style-type: none"> • Inform transplant-listing policy decisions for patients who experience relapse during COVID-19 pandemic

Thank you

- Northern California Society for Clinical Gastroenterology
- NCSCG Liver Symposium Organizing Committee