# WELCOME TO
# AK LIVER DISEASE ECHO

ALASKA NATIVE TRIBAL HEALTH CONSORTIUM

NPAIHB
Indian Leadership for Indian Health

This project is supported by a grant from the Northwest Portland Area Indian Health Board and funding is provided from the HHS Secretary's Minority HIV/AIDS Fund.

PLEASE PUT IN THE CHAT BOX:

Your name
Where you are located
What brings you to the LD ECHO today

# WHAT WE DO

- Didactic Presentations pertaining to ECHO topics
- We're accepting **case presentations and questions pertaining to:**
  - Elevated Liver Function Tests
  - Cirrhosis
  - Managing Complications of Decompensated Cirrhosis – Ascites, encephalopathy, esophageal varices
  - Alcohol-related liver disease, including Alcohol Hepatitis
  - Autoimmune liver disease – Autoimmune Hepatitis, Primary Biliary Cholangitis, Overlap
  - Nonalcoholic fatty liver disease/Nonalcoholic steatohepatitis
  - Hepatocellular carcinoma
- Provide Expert Panelists

# CONSULTANT TEAM

- Brian McMahon, MD Hepatologist
- Youssef Barbour, MD Hepatologist
- Lisa Townshend, ANP Hepatology Provider
- Annette Hewitt, ANP Hepatology Provider
- Leah Besh, PA-C HIV/Hepatology Provider
- Anne Fleetwood, MS, RDN, NDN
- Brittany Keener, PharmD, MPH, BCPS
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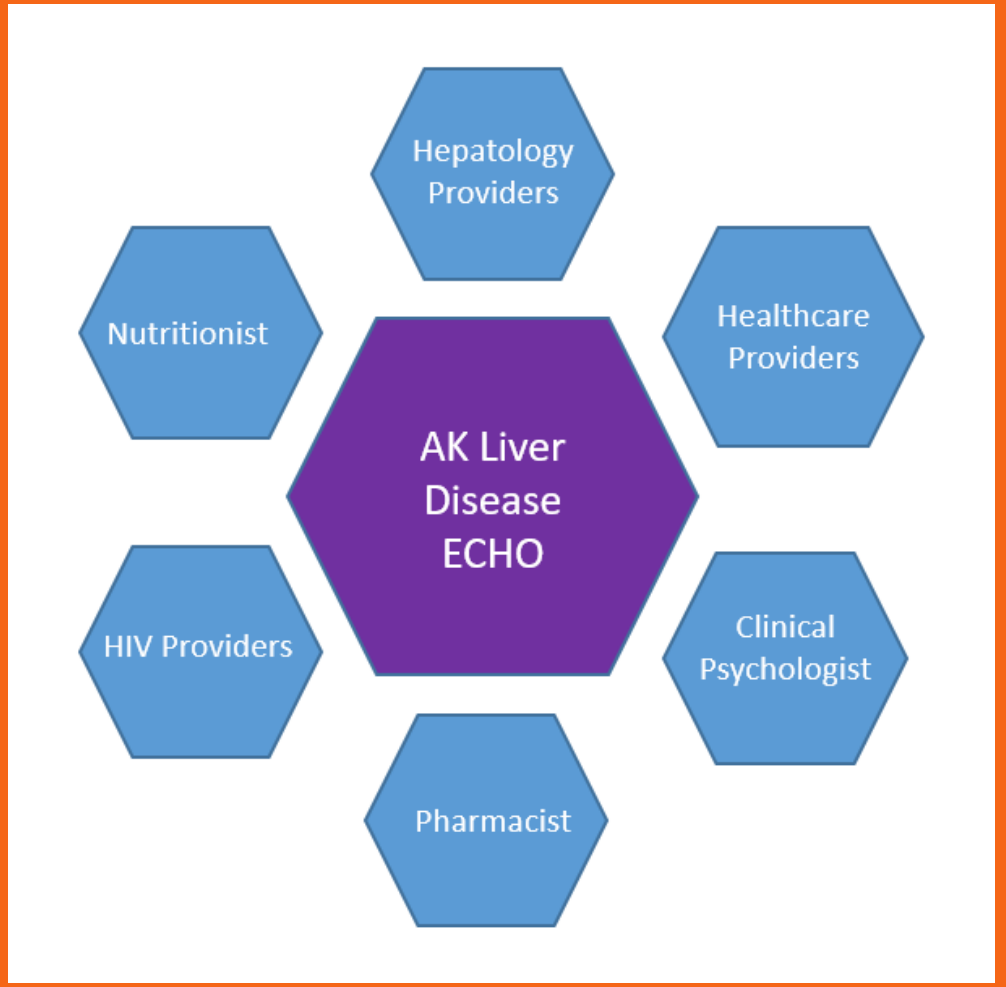


# Welcome to Alaska Liver Disease ECHO

**Approved Provider Statements:**

JOINTLY ACCREDITED PROVIDER™
INTERPROFESSIONAL CONTINUING EDUCATION

In support of improving patient care, Alaska Native Medical Center (ANMC) is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

**Contact Hours:**

ANMC designates this activity for a maximum of 12 contact hours, including 3 total pharmacotherapeutics contact hours, commensurate with participation.

**Financial Disclosures:**

Youssef Barbour, MD & Lisa Townshend-Bulson, APRN / faculty for this educational event, are primary investigators in an ANTHC sponsored hepatitis C study funded in part by Gilead Sciences. All of the relevant financial relationships listed have been mitigated.

**Requirements for Successful Completion:**

To receive CE credit please make sure you have actively engaged in the entire activity, your attendance is recorded by the facilitator, and complete the course evaluation form found here: https://forms.gle/R8vibUZgMbRcoScw9.

For more information contact
jlfielder@anthc.org or (907) 729-1387

ALASKA NATIVE TRIBAL HEALTH CONSORTIUM

# LIVER DISEASE ECHO SCHEDULE AT A GLANCE

- **October 20th – Screening for Alcohol Use Disorder**
- November 17 - Medication Assisted Treatment
- December 15 - HCC Surveillance – Are We Doing Enough?

# Screening Tests for Alcohol Usage

Brian J McMahon MD

Medical and Research Director: Liver Disease and Hepatitis Program

ANTHC

# Question Number One: Pick the Correct Answer

A. For a Woman 3-4 cocktails every evening is a safe amount of alcohol to drink

B. Persons who only drink alcohol on weekends will never suffer any liver damage

C. The Audit C test is the most reliable test to detect persons with current alcohol use concern

D. Two reasons alcohol limits for men are higher than for women are based on differences in volume of distribution and levels of alcohol dehydrogenase in gastric mucosa

E. C and D are correct

# Question Number Two: Select Incorrect Answer

A. Drinking only beer is much safer for persons than drinking hard liquor

B. Every patient admitted to the hospital for alcohol related liver disease should have a mental health consult shortly after admission

C. Clinical trials have shown that medication to decrease alcohol craving decrease readmission rates

D. Studies have shown that offering a mental health consult at each encounter for persons who consume excessive amounts of alcohol significantly increases odds of subsequent sobriety

E. Severe, life threatening liver disease may be the very first presentation for persons who drink alcohol heavily only in the evening but still can carry a full time job and operate effectively during the day

# Goals of Presentation

- Understanding the increase in overall alcohol related deaths and deaths due to alcohol associated liver disease in the past two decades
- Understand purported safe amounts of alcohol
- Learn how to screen persons for alcohol history
- Know what to do if a person is found to drink potentially excessive amounts of alcohol when screened for alcohol usage

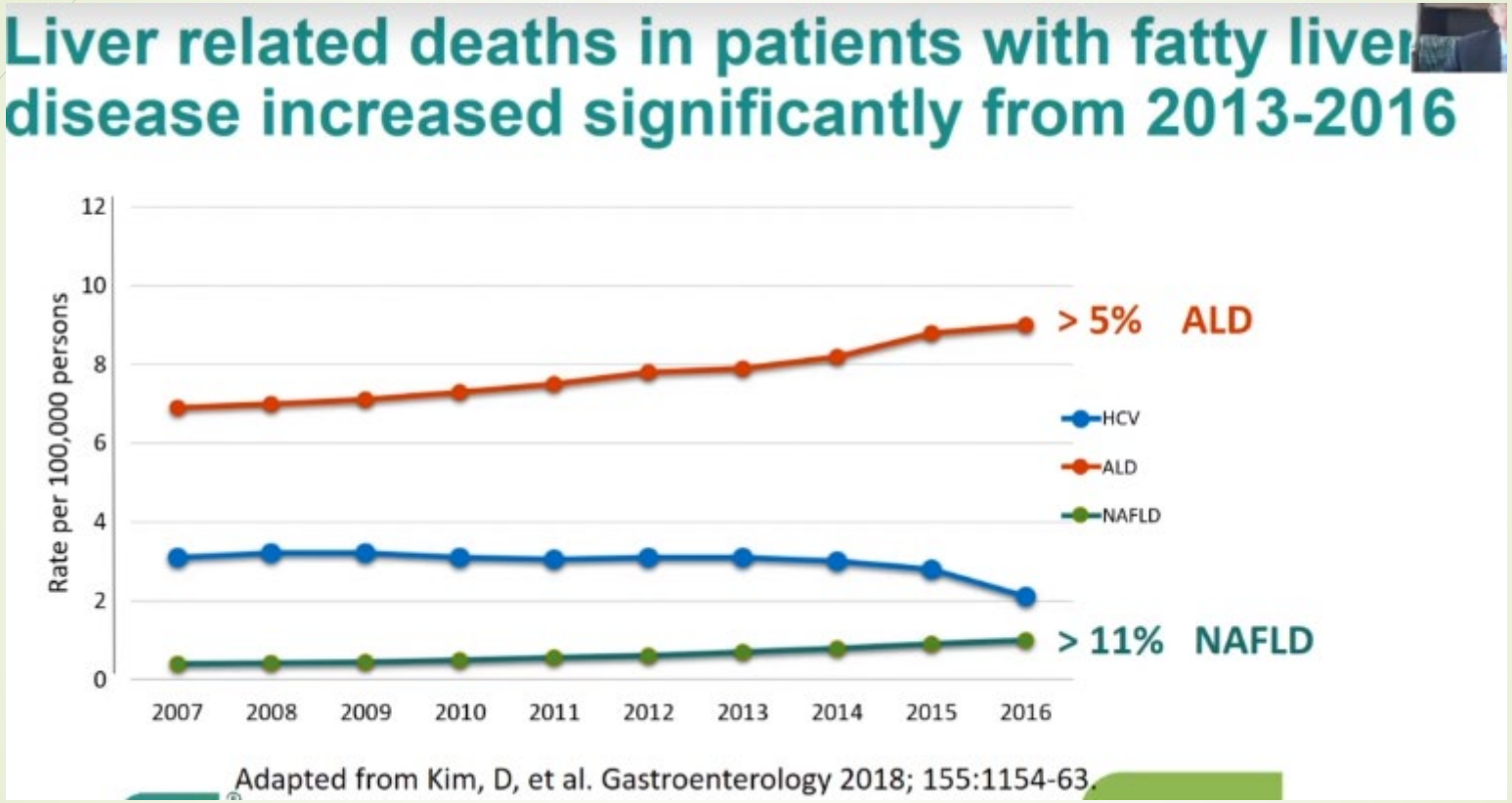
# Unhealthy Alcohol Usage in US

- 2020 National survey on Drug Use and Health
  - 7.0% of adults reported heavy alcohol use in the past month
  - Only 4.2% of persons with alcohol use disorder received treatment

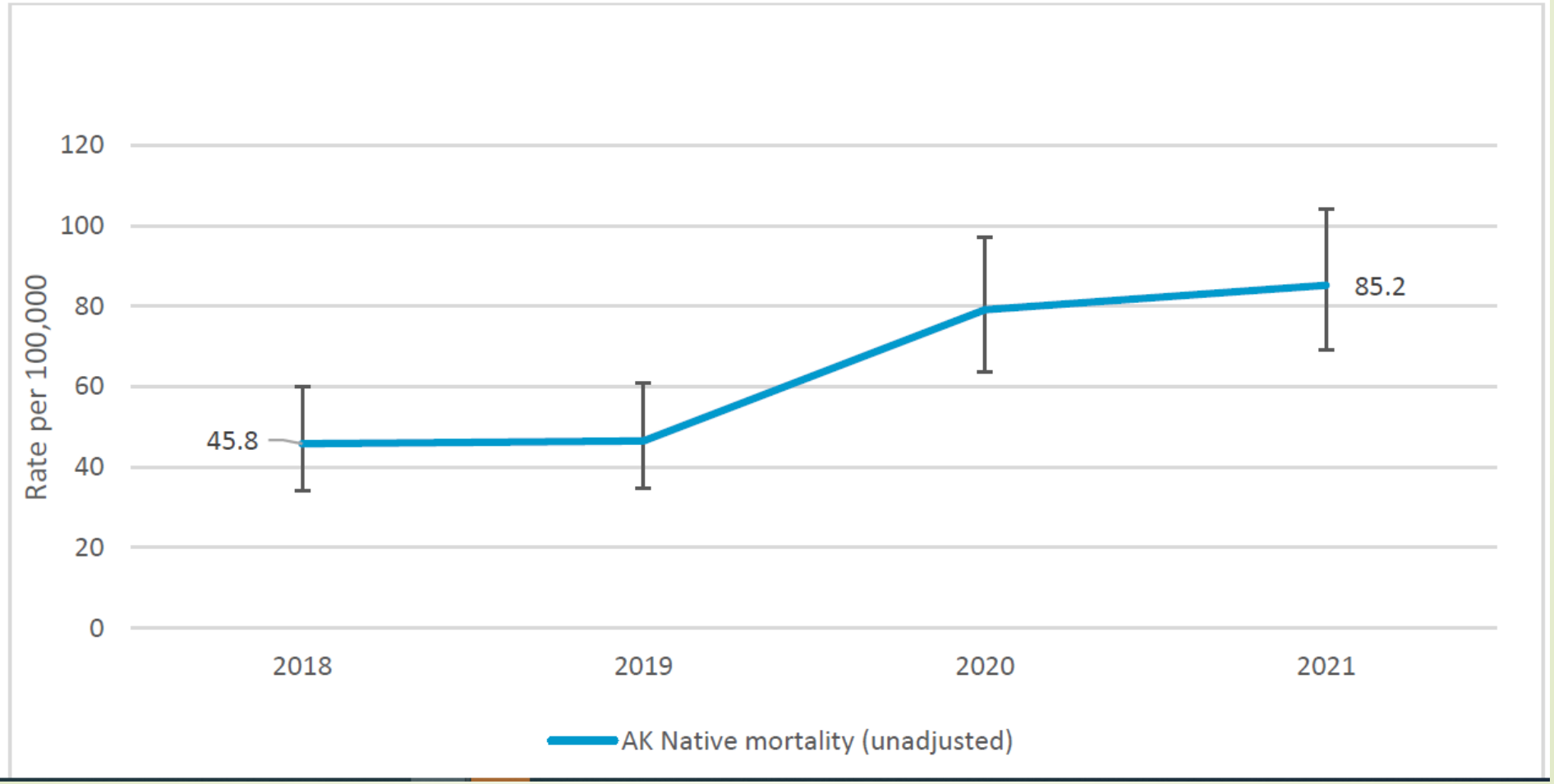
# Death rates for chronic liver disease and cirrhosis: MMWR September 29, 2017 / 66(38);1031and Alcoholism: Clinical and Experimental Research 2020

- From 2000 to 2015, in the United States alcohol related deaths increased 31% (from 20.1 per 100,000 to 26.4)
  - The COVID epidemic has further increased rates of heavy alcohol drinking, alcohol liver disease and alcohol related accidents
- Among persons aged 45–64 years. increased 21% for men (from 29.8 to 36.2) and 57% for women (from 10.8 to 17.0).
- Among persons aged 25–44 years, the death rate for men decreased 10% (from 6.1 to 5.5), and the rate for women increased 18% (from 2.8 to 3.3).
- Overall, among persons aged ≥65 years, rates increased 3% (from 29.4 to 30.2).
- Death rates for both men and women increased with age.

# This Data is Pre-COVID Period



Crude mortality rate (per 100,000), **alcoholic liver disease** (K70.0, K70.1, K70.2, K70.3, K70.4, K70.9)[1], Alaska statewide data (multiple cause of death), **Alaska Native people**[2], 2018, 2019, 2020, 2021 (provisional)



# Screening for Alcohol Use Disorder

- All adolescents and adults should be screened by providers for alcohol use disorder
- Best initial screening test is the Alcohol Use Disorders Inventory Test (AUDIT): Its abbreviated version AUDIT-C
  - This test is widely used, validated and also recommended by the US Preventive Services task Force (USPSTF)
  - AUDIT-C has only 3 questions and takes < 30 seconds to complete
    - Audit-C Sensitivity of 0.73 to 0.97; Specificity and 0.28 to 0.91 for Women
    - Sensitivity of 0.75 to 1.00 in men; Specificity of 0.34 to 0.89
  - Scores of $\geq$3 in women and $\geq$4 in men may indicate harmful alcohol use
  - AUDIT-C performs better than CAGE or other tests
  - The LDHP program administers AUDIT-C to all patients we see in clinic

## AUDIT-C Questionnaire

1. Within the past year, how often did you have a drink of alcohol?
   - ☐ a. Never
   - ☐ b. Monthly (e.g. Special occasions/Rare)
   - ☐ c. 2-4 times a month (e.g. 1x on weekend - "Fridays only" or "every other Thursday")
   - ☐ d. 2-3 times a week (e.g. weekends – Friday-Saturday or Saturday-Sunday)
   - ☐ e. 4 or more times a week (e.g. daily or most days/week)
2. Within the past year, how many standard drinks containing alcohol did you have on a typical day?
   - ☐ a. 1 or 2
   - ☐ b. 3 or 4
   - ☐ c. 5 or 6
   - ☐ d. 7 to 9
   - ☐ e. 10 or more
3. Within the past year, how often did you have six or more drinks on one occasion?
   - ☐ a. Never
   - ☐ b. Less than monthly
   - ☐ c. Monthly
   - ☐ d. Weekly
   - ☐ e. Daily or almost daily

*AUDIT-C is available for use in the public domain.*

**Scoring**

The AUDIT-C is scored on a scale of 0-12.

Each AUDIT-C question has 5 answer choices. Points allotted are:
a = 0 points, b = 1 point, c = 2 points, d = 3 points, e = 4 points

- **In men**, a score of 4 or more is considered positive, optimal for identifying hazardous drinking or active alcohol use disorders.
- **In women**, a score of 3 or more is considered positive (same as above).
- However, when the points are all from Question #1 alone (#2 & #3 are zero), it can be assumed that the patient is drinking below recommended limits and it is suggested that the provider review the patient's alcohol intake over the past few months to confirm accuracy.[3]

# How to Score and Interpret the AUDIT-C

**AUDIT-C score**
**0 points**
**Interpretation:**

- **Men**, a score of >4 is considered positive, optimal for identifying hazardous drinking or active alcohol use disorders.
- **Women**, a score of ≥3 is considered positive, optimal for identifying hazardous drinking or active alcohol use disorders.
- **NOTE**: If all points are from Question 1, assume the patient is drinking below recommended limits and the medical provider should review the patient's alcohol intake during the past few months.

**Sources**
National Institute on Alcohol Abuse and Alcoholism

# AASLD Guidance Recommendations for Screening for Alcohol-Use Disorder

- All patients in any primary or specialty clinic, ED departments and inpatient should be screened for alcohol use using validated questionnaires. Audit C Best
- Persons who on the Audit C score ≥ 3 female, ≥ 4 male should take the full Audit questionnaire of 10 questions
- Brief intervention, pharmacotherapy, and referral to treatment should be offered to patients engaged in hazardous drinking(AUDIT-C ≥4, AUDIT >8, binge drinkers)
- Persons with elevated Audit C or full Audit should be considered for screening for LFTs to identify persons at risk for alcohol associated liver disease www.AASLD.org/practice guideline

# AASLD Guidance 2019

- Referral to AUD treatment professionals is recommended for patients with advanced ALD and/or AUD in order to ensure access to the full range of AUD treatment options.
- Multidisciplinary, integrated management of ALD and AUD is recommended and improves rates of alcohol abstinence amongst ALD patients.

www.AASLD.org/practice guideline

# US FDA Approved Medications and Others Tested in Alcohol Use Disorder Patients

| Medication | Dosage | Pharmacologic Target | Possible Use in Alcohol Use Disorder Patients with Alcoholic Liver Disease? |
|---|---|---|---|
| **FDA-Approved Medications for Alcohol Use Disorder** | | | |
| Acamprosate | 666 mg TID | Possibly NMDA receptor agonist | Yes (no hepatic metabolism) |
| Disulfiram | 250-500 mg QD | Inhibition of acetaldehyde dehydrogenase | No (hepatic metabolism; cases of liver toxicity have been reported) |
| Naltrexone* PO or IM | PO: 50 mg QD<br>IM: 380 mg monthly | Mu opiate receptor antagonist | With caution (perceptions of liver toxicity limit use in advanced alcoholic liver disease) |
| **Not FDA-Approved Medications Tested for Alcohol Use Disorder** | | | |
| Baclofen | 10 mg TID; 80 mg QD max | $GABA_B$ receptor agonist | Yes (minimal hepatic metabolism)<br>Baclofen has been formally tested in clinical studies with alcohol use disorder patients with liver cirrhosis |
| Gabapentin | 900-1800 mg QD | Unclear: modulates GABA transmission | Yes (no hepatic metabolism) |
| Ondansetron | 1-16 µg/kg BID | $5HT_3$ antagonist | Yes, but with caution because liver toxicity has been reported, albeit relationship to ondansetron administration is not determined |
| Topiramate | 300 mg QD | Anticonvulsant multiple targets: −glutamate/+GABA | Yes (partial hepatic metabolism mostly by glucoronidation)<br>In patients with hepatic encephalopathy, use with caution: topiramate-related cognitive side-effects may confound the clinical course and treatment of hepatic encephalopathy |
| Varenicline | 2 mg QD | Nicotinic acetylcholine receptor partial agonist | Yes (minimal hepatic metabolism) |

Leggio and Lee, Am J Med 2017

# Pharmacotherapy for Alcohol-use Disorder (AUD) Updated

- Baclofen, a GABA-B receptor agonist has been tested in a randomized controlled fashion in AC patients with AUD as well as in two small, uncontrolled observational studies.
- FDA approved medications:
  - Disulfiram: liver metabolized, not safe in advanced liver disease
  - Naltrexone: liver metabolized: not safe in advanced liver disease
  - Acamprosate: not metabolized in liver, safer in cirrhosis. No randomized trials
  - Other medications with less evidence and not FDA approved: gabapentin, topiramate, ondansetron, and varenicline

# AASLD 2021: A. Vannier Mass General Hospital: Medical Alcohol Therapy (MAT) to Prevent ALD

- Mass General Data Base retrospective review:
  - Persons who received MAT before ALD less likely to develop ALD subsequently
  - Significantly effective MAT drugs: odds ration <1 with no overlap with 1
    - Gabapentin
    - Topiramate
    - Baclofen
  - Approaching effectiveness but not significant: odds ration <1 but overlap with 1
    - Naltrexone
    - Disulfiram
  - Odds Ration >1 with no overlap: Acamprosate

# Does Treatment for Alcohol Use Disorder affect Outcomes after Diagnosis of Cirrhosis?

- Large Retrospective cohort study from VA in patients with cirrhosis and alcohol use: 35,682 patients of whom 5,088 received AUD treatment in the first 180 days after diagnosis
  - 4,461 received behavioral therapy alone
  - 159 pharmacotherapy alone
  - 468 received both behavioral and pharmacotherapy
- In adjusted analysis, behavioral and/or pharmacotherapy significantly reduced the incidence of hepatic decompensation (6.5% vs. 11.6% adjusted odds ratio {AOR) 0.63; 95% CI 0.52-0.76)
- Extended beyond 180 days any AUD treatment significantly reduced mortality (AOR, 0.87, 95% CI 0.80-0.96)
  - Persons who received baclofen had significantly lower Audit C scores at last f/u
  - Audit-C scores were associated with death (AOR/point 1.06; 95%CI 1.04, 1.09)

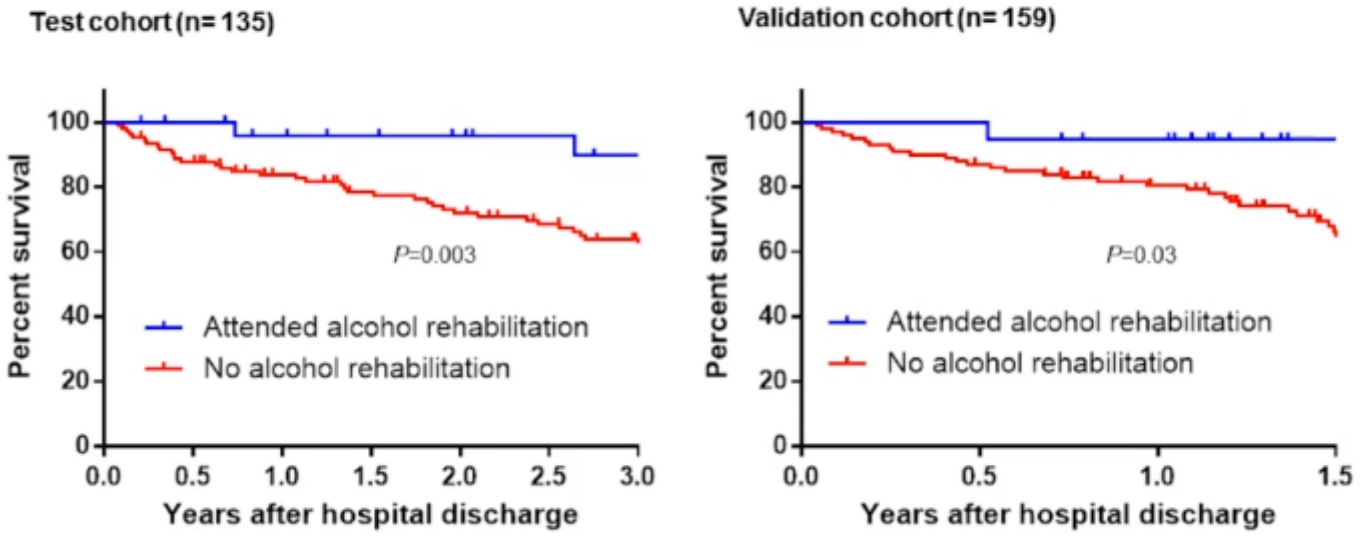
Rogal S et al. Hepatology 2020;71:2080-2092

# AASLD Guidance 2019

- Referral to AUD treatment professionals is recommended for patients with advanced ALD and/or AUD in order to ensure access to the full range of AUD treatment options.
- Multidisciplinary, integrated management of ALD and AUD is recommended and improves rates of alcohol abstinence amongst ALD patients.

www.AASLD.org/practice guideline

# Survival was better in patients who attended early alcohol rehabilitation



# Impact of Public Health Policy on Alcohol Associated Liver Disease (ALD)

- Data from 20 countries in Latin America population 628 million people
- ALD was main cause of cirrhosis (64.7%)
- Examination of Public Health Policies (PHP) on alcohol and liver disease by countries that included
  - Tax regulation
  - Drinking age and youth policies
  - Drunk driving policies
  - Control over advertising
  - National licensure for production and sales
  - National plans to fight harmful consequences of alcohol
  - Restrictions on alcohol access
  - Government monitoring systems

Hepatology 2021;74:278-289

# Impact of PHP on ALD Continued

- The higher number of PHP associated with lower adverse outcomes
  - ALD mortality (PR, 0.76; 95% CI 0.61-0.93)
  - Lower Alcohol Use Disorder (PR, 0.80; 95% CI 0.65-0.99)
  - Lower Alcohol-attributable road deaths (PR, 0.81; 95% CI 0.65-1.00)
- Conclusions: Public Health Policies on access to alcohol (e.g. age), Tax, Drunk Driving Regulations and Penalties, control over advertising, and other Policies can improve

# Alcohol-associated Liver Disease vs NAFLD

- Obesity increases the risk of alcohol-associated liver damage as well as NAFLD
- Many of the histological findings are similar
- Genetic risk is similar:  A single nucleotide polymorphism in PNPLA3 increases and a splice variant in HSD17B13 decreases the risk for both ALD and NAFLD
- Separating ALD and NAFLD may be difficult in obese patients who drink and is often based on an arbitrarily-defined amount of consumption

# Acetaminophen and Alcohol

- Acetaminophen can be toxic to the liver in persons actively drinking excessive amounts of alcohol
- Person with a high Audit C score should be counseled regarding acetaminophen usage
  - No only those drinking daily but also persons who binge drink on weekends cautioned against acetaminophen to treat their hangovers
- Acetaminophen in doses <3gms/day is safe in persons with compensated liver disease who do not drink any alcohol

# Conclusions

- Overall alcohol use has increased dramatically in all ethnic and racial groups in the USA
  - Binge drinking rates have increased in young people including those in high school and college
- Alcohol associated deaths have more than doubled in the past 2 decades
- Screening all teenagers and adults for alcohol use should be done at each visit
  - Audit-C test or equivalent is recommended
  - The Liver Disease and Hepatitis Program is developing a Strategic Initiative to present to Tribal and Clinical Leadership to make it a goal that Audit-C questionnaire be given to each patient at every visit
- Persons found to drink excessively should be referred for counseling and/or offered medications to decrease alcohol craving

# Question Number One: Pick the Correct Answer

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B. Persons who only drink alcohol on weekends will never suffer any liver damage

C. The Audit C test is the most reliable test to detect persons with current alcohol use concern

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# Question Number Two: Select Incorrect Answer

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B. Every patient admitted to the hospital for alcohol related liver disease should have a mental health consult shortly after admission

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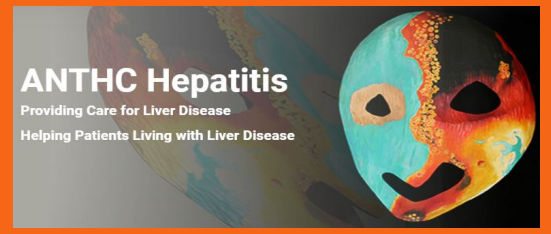
# ADDITIONAL LEARNING OPPORTUNITIES

- HCV Simplified Treatment Training – Available Online until December 2nd
  https://www.anthc.org/provider-resources/new-provider-webinars/
  - Scroll down to topic titled: **HCV Treatment Training**
- AK ID ECHO: HCV, HIV, PrEP, STIs
  - The 2nd Tuesday of every month from 12:00-1:00PM Alaska Standard Time
    - 1CE/CME offered per session
  - anthc.org/project-echo/hcv-hiv-prep-stis-echo
- LiverConnect Webinar Program
  - Second Tuesday of every month 8:00-9:00AM Alaska Standard Time
    - Full Hour didactic topics on Liver Disease and related topics 1CE/CME offered
  - anthc.org/what-we-do/clinical-and-research-services/hep/liverconnect/



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  - Jessica Leston: Clinical Programs Director, jleston@npaihb.org

# Thank you

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