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Cancer Prevention & Research Institute of Texas

Alcohol Use and Chronic Hepatitis C Virus (HCV) Infection: Essential to Address

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Disclosures

- No Conflicts of Interest
- This presentation supported by a grant from the:

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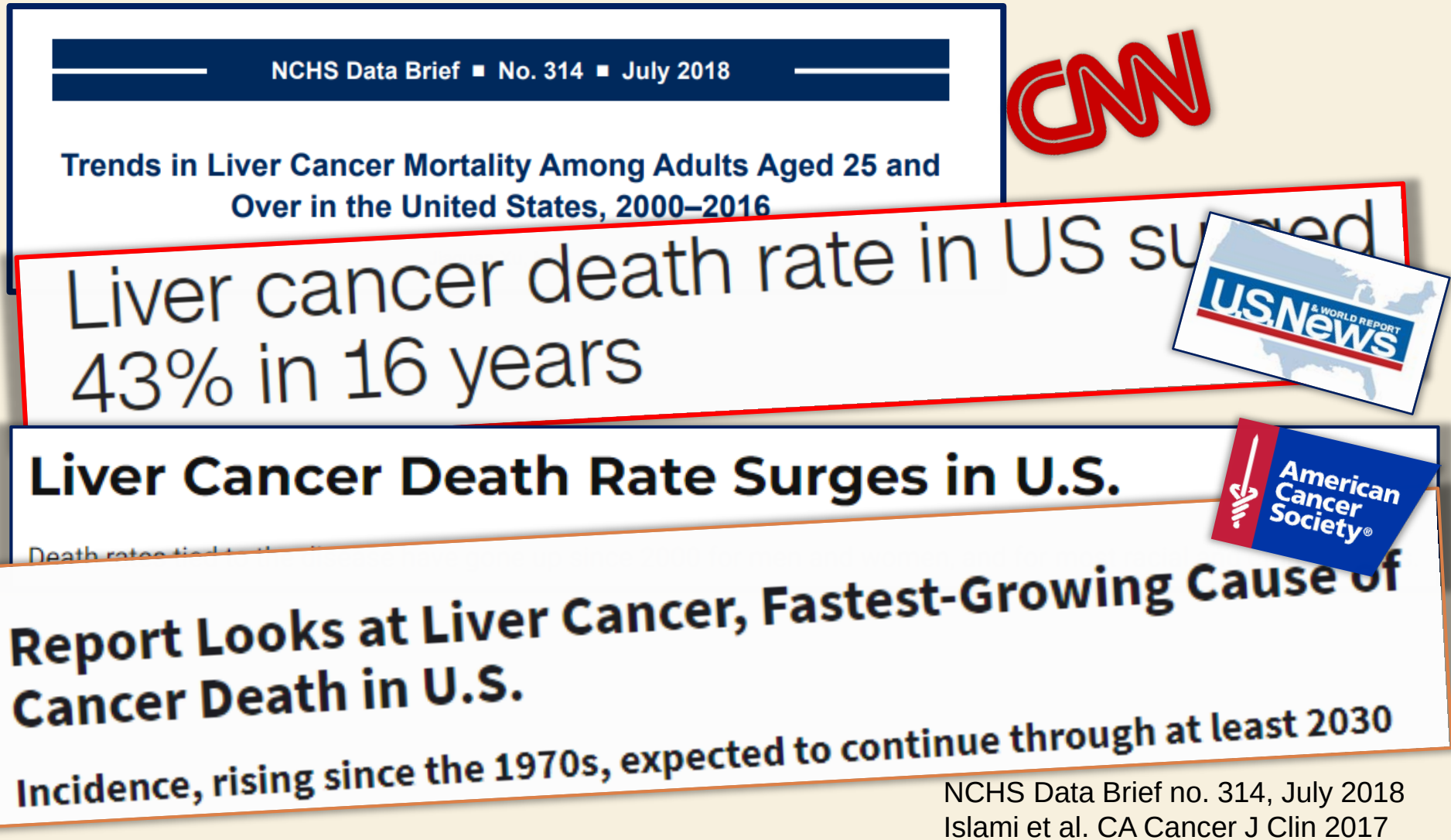
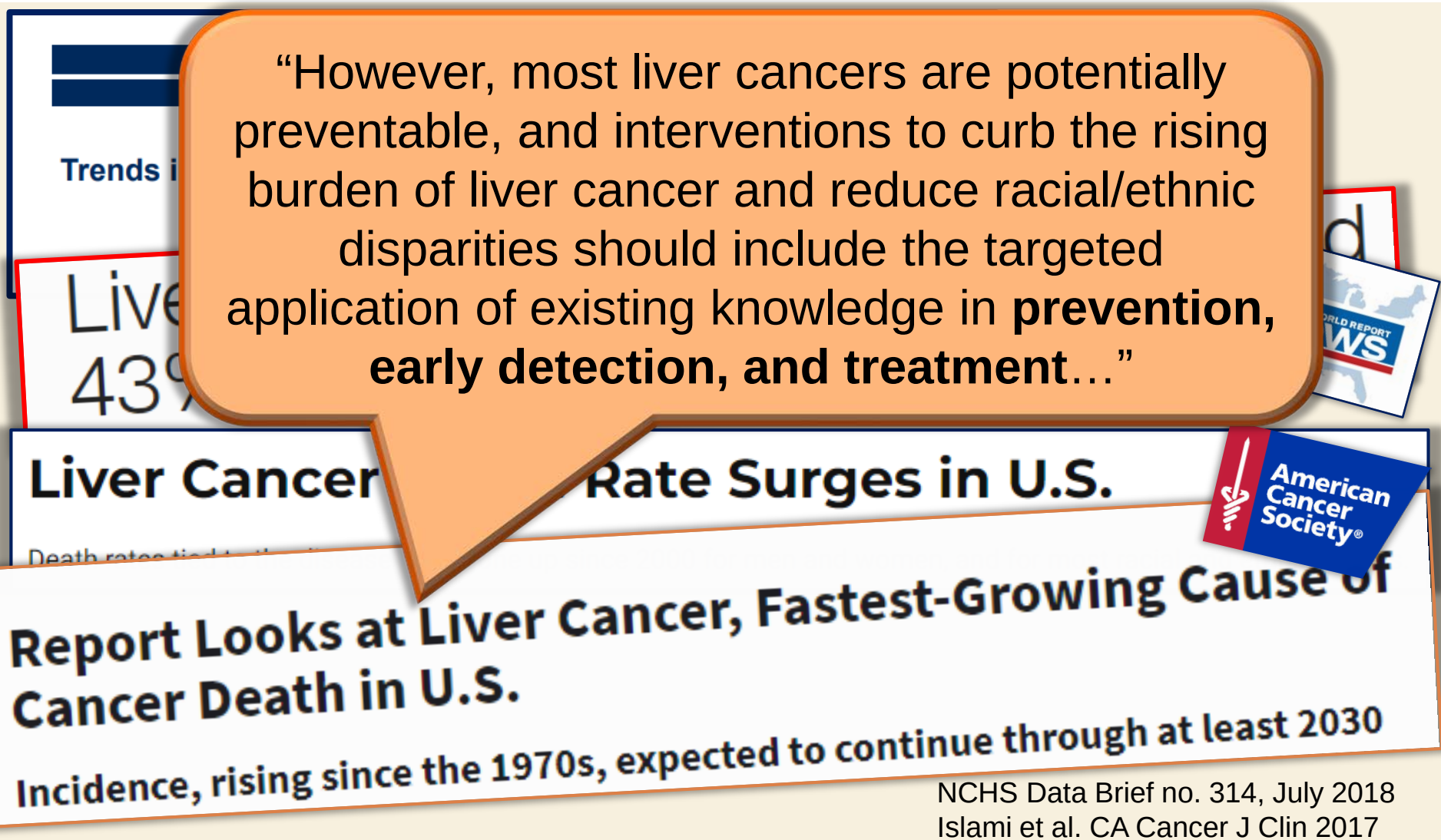
The growing liver cancer epidemic



NCHS Data Brief no. 314, July 2018
Islami et al. CA Cancer J Clin 2017

The growing liver cancer epidemic



"However, most liver cancers are potentially preventable, and interventions to curb the rising burden of liver cancer and reduce racial/ethnic disparities should include the targeted application of existing knowledge in **prevention, early detection, and treatment**…"

NCHS Data Brief no. 314, July 2018
Islami et al. CA Cancer J Clin 2017

Hepatitis C virus and liver cancer

- Hepatitis C virus (HCV) is the most common cause of hepatocellular carcinoma (HCC)
- HCC is the most common type of primary liver cancer
- Fortunately HCV can be treated and the risk of HCC reduced
- This is particularly important in Texas that has one of the highest age adjusted rates of liver cancer in the nation!

Hepatology 2014 Nov;60(5):1767-75.

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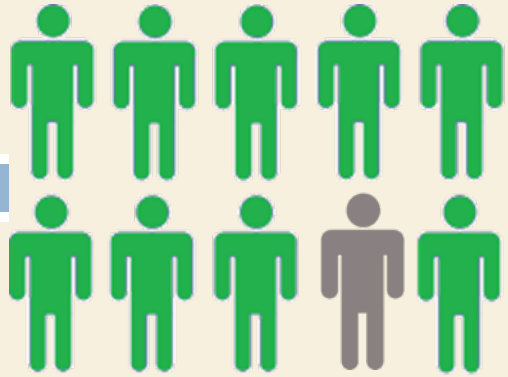
The good news!



- HCV can be treated!
  - Cure rates **>90%**, even for advanced fibrosis or cirrhosis
- The treatment is well tolerated and most patients can be managed in primary care
- **However, alcohol use is a major problem for patients with HCV and also has to be managed as well to reduce the risk of HCC and liver failure**

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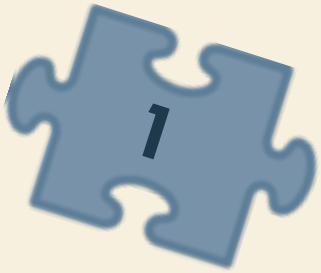
Addressing alcohol in HCV patients

This presentation is 1st of a 3-part series:



Rationale for addressing alcohol use in HCV

Practical approaches for delivering *Screening and Brief Intervention* (SBI)

Treatment options for heavy alcohol use

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Questions about your experience addressing alcohol problems

What has been your experience with screening for and managing heavy alcohol use?

Do you feel that you have been well trained in helping patients to reduce their alcohol consumption?

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Learning objectives

- Understand patterns of alcohol use in persons with HCV infection
- Describe consequences of alcohol use in persons with chronic HCV
- Describe Screening Brief Intervention (SBI) to reduce alcohol use in HCV
- Summarize evidence from systematic reviews of outcomes of SBI for alcohol use

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Understand patterns of alcohol use in persons with HCV infection

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Standard alcohol units

What counts as “a drink”?

12 oz beer

5 oz wine

1.5 oz liquor

NIAAA 2018. ReThinking drinking: Alcohol & your health.

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Safe limits for alcohol consumption

OR

BUT there is no safe level of alcohol use with chronic HCV infection

NIAAA 2018. ReThinking drinking: Alcohol & your health.

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Alcohol consumption definitions

Abstinence – no alcohol use

Low-Risk – <4 drinks/d or 14/wk for men and <3 drinks/d or 7/wk for women

Unhealthy – exceeds low limits

Binge – > 5 drinks men or >4 drinks women on an occasion (usually 2 hours)

Alcohol use disorder – loss of control, compulsive drinking and negative emotional state when not drinking. Getting into dangerous situations.

NIAAA, 2018.

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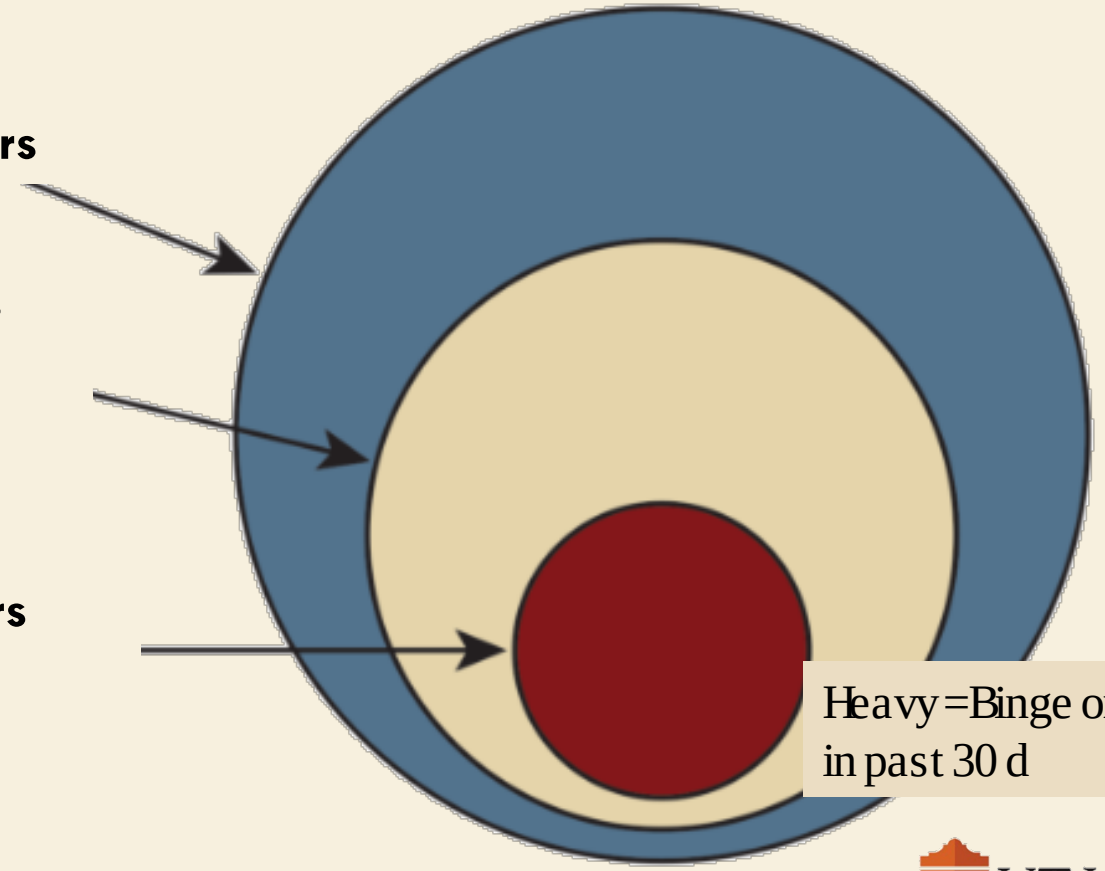
Binge drinking and heavy use

Current, Binge, and Heavy Alcohol Use among People Aged 12 or Older: 2016

136.7 Million
Current Alcohol Users

65.3 Million
Binge Alcohol Users
(47.8% of Current Alcohol Users)

16.3 Million
Heavy Alcohol Users
(24.9% of Binge Alcohol Users and 11.9% of Current Alcohol Users



Heavy=Binge on 5+d in past 30 d

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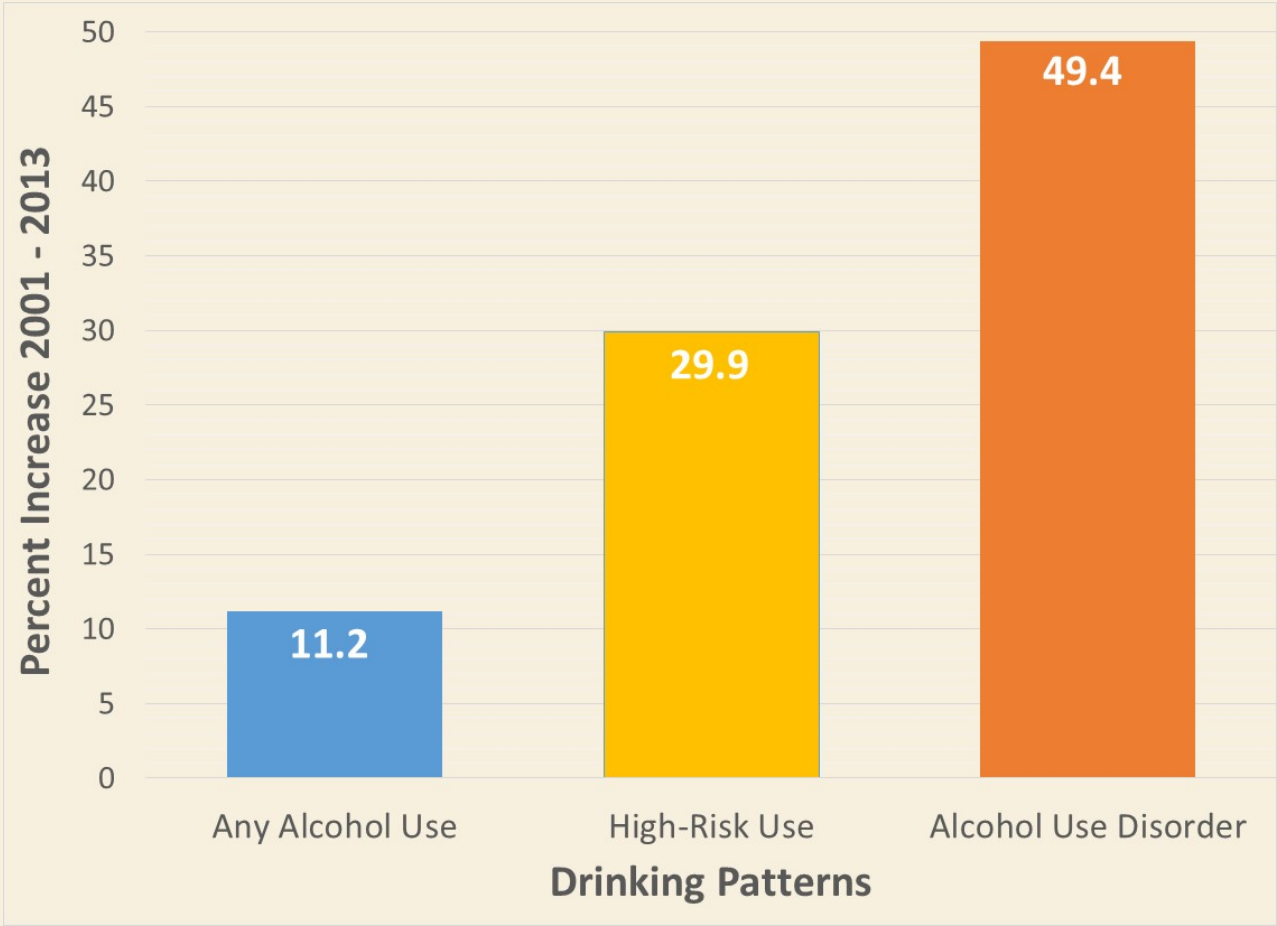
IOGT. USA: Pervasive Alcohol Harm Starts Early

Rising national prevalence of unhealthy alcohol use

National survey of alcohol use in the USA 2001-2002 (N=43,093) to 2012-2013 (N=36,309).

Proportion of USA population who consume alcohol increased from 65.4% to 72.7%

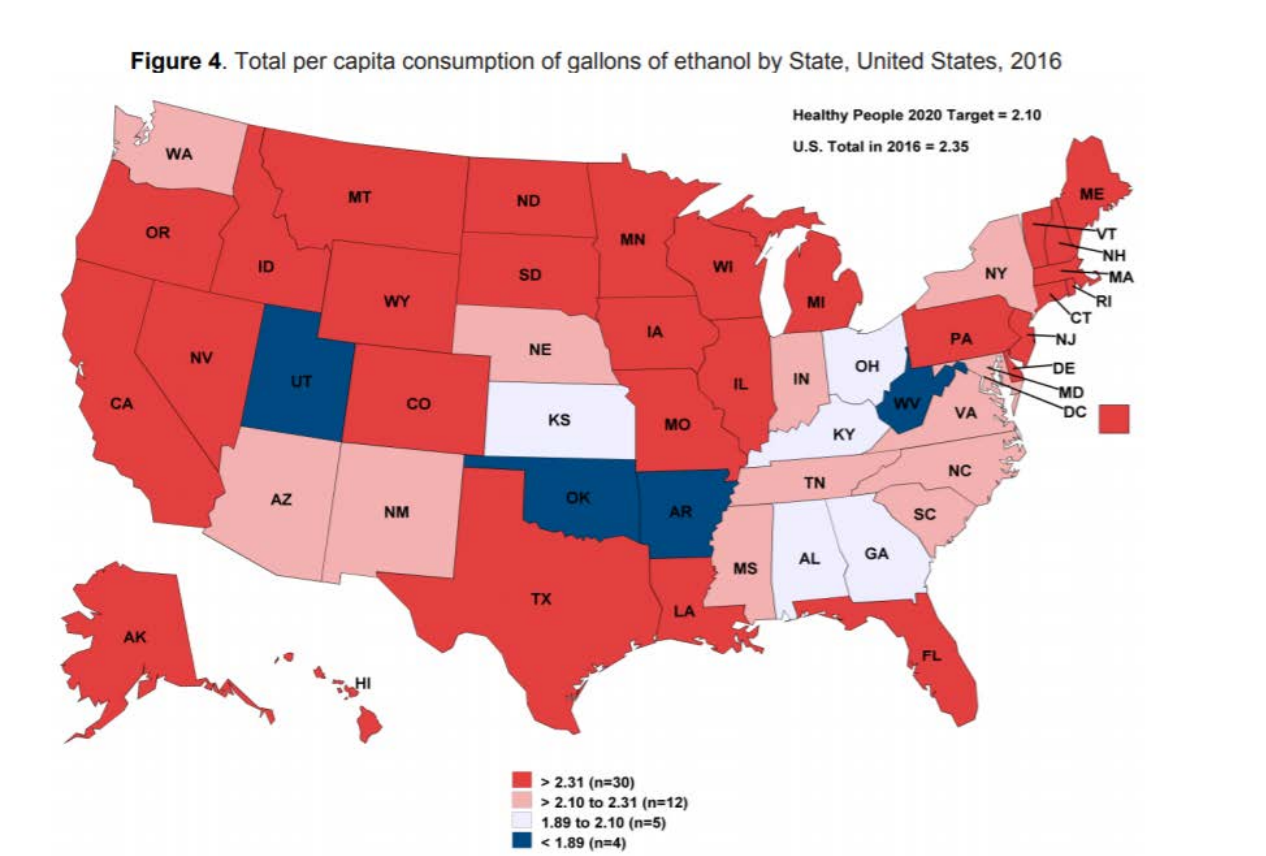


Grant et al 2017. JAMA Psychiatry, 74, 911-923.

Texas is among states with most alcohol consumption

Healthy People 2020 goal < 2.10 gallons per capita.

Texas per capita alcohol use = 2.34 gallons



Haughwout & Slater 2018. Surveillance Report #110 NIAAA.

Alcohol use in HCV infection

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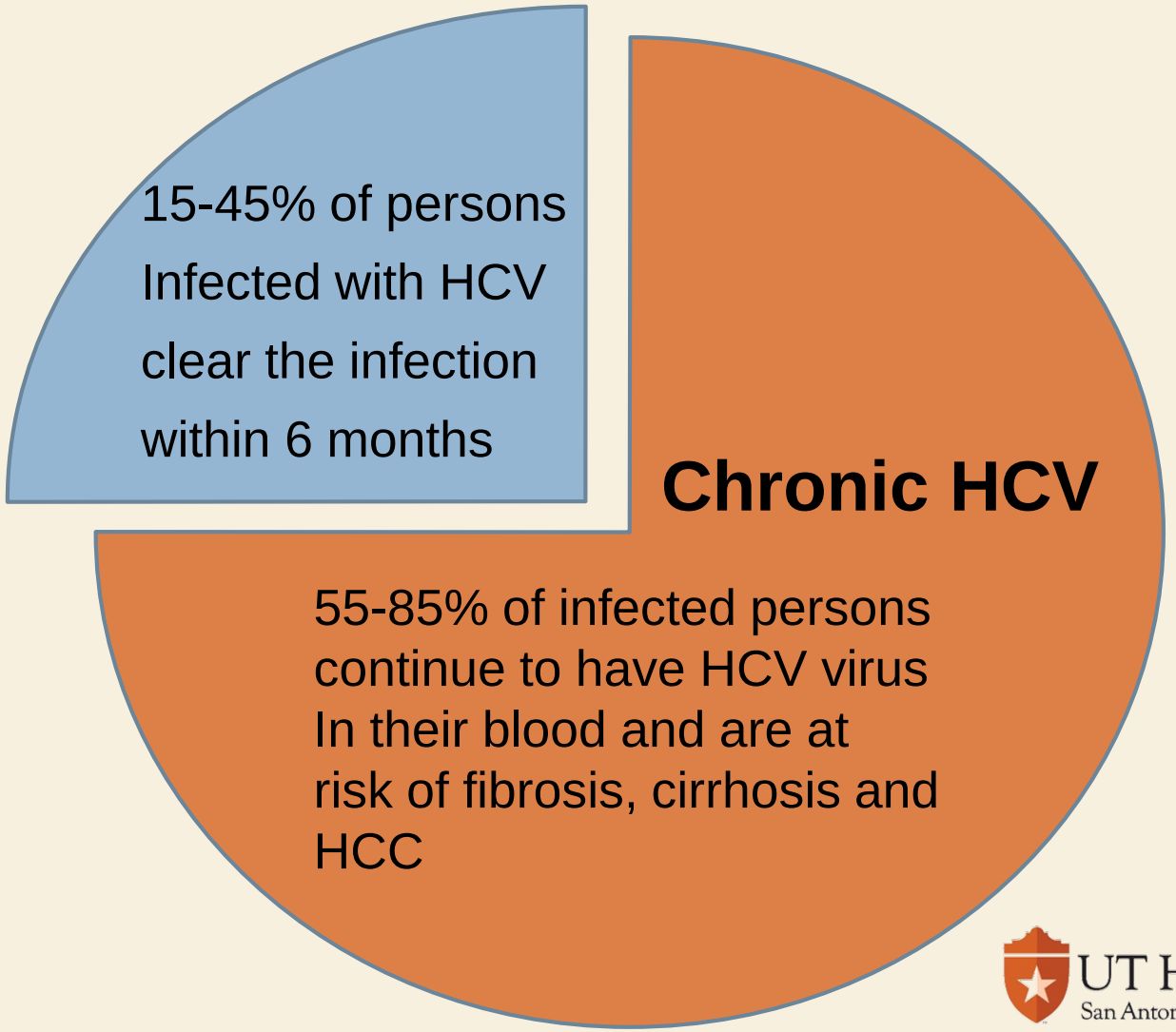
Focus on chronic HCV infection



WHO, 2016.

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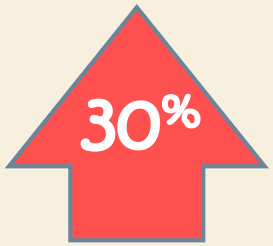
Excessive alcohol use in chronic HCV infection

In a national survey of 21,173 adults from 2003-2010, those with chronic HCV

more likely to report having over 5+ drinks/day on most days in the past

- 43.8% with HCV vs 13.7% without HCV



higher prevalence of currently having 5+ drinks/day

Taylor et al 2016. Am J Prev Med. 51, 206–215

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Especially big problem in veterans

Among 4,084 veterans receiving care for chronic HCV in 1999-2000

had 3+ drinks/day regularly in the past and 26% within past year [1]

Among 31,841 veterans in care for chronic HCV in 2009-2013

had a diagnosis of alcohol use disorder[2]

1. Bini et al 2005. Am J Gastroenterol.100, 1772-1779
2. Owens 2018. Drug Alcohol Depend. 188, 79-85

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Understand patterns of alcohol use in persons with HCV infection

- Alcohol consumption is increasing in the U.S. as is heavy drinking and alcohol use disorder
- However, persons with HCV infection are much more likely to have a history of drinking heavily and a high proportion continue to drink heavily

Describe consequences of alcohol use in persons with chronic HCV

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Alcohol increase the risk of chronic HCV infection

- From 15% to 45% of persons with acute HCV infection spontaneously clear the infection

However, persons with history of alcohol use disorder are half as likely to clear acute HCV infection

- This contributes to a higher prevalence of chronic HCV infection in heavy drinkers

Piasecki et al 2004. Hepatology, 40, 892–899.

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Alcohol use increases HCV-related liver damage

- Stimulates greater viral replication[1]
- Activates the inflammatory cascade that accelerates liver damage[2]
- Compromises mitochondrial function leading to damage from oxidative stress[3]
- Remember, alcohol itself is a liver toxin

1. Zhang et al 2003. Hepatology, 38, 57–65.
2. Szabo 2003. Curr Gastroenterol Rep. 5, 86–92.
3. Rigamonti et al 2003. Hepatology, 38, 42–49.

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Alcohol's dose-related effect on HCV-related liver disease

- FIB-4: stage liver disease from age and lab tests
  - (age × aspartate aminotransferase) / (platelet count × alanine aminotransferase)
- FIB-4 >3.25 associated with advanced fibrosis/cirrhosis
- FIB-4 increases with more drinks
  - Much greater increase for only 14+ drinks/week
  - Signifies likely advanced liver disease

Drinks per week	10-Year Increase in FIB-4
1-3	.04
4-7	.06
8-14	.40
≥14	**2.50***

Kelly, 2017 Clin Infect Dis. 65, 2050–2056.

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Alcohol increases HCV-related complications

Among 28,101 adults with chronic HCV, adjusted odds ratio (AOR) of complications markedly higher for alcohol use disorder vs those without it

- AOR=7.19 (95% CI 6.90-7.50) for any liver-related complication
- AOR=4.28 (95% 3.80-4.82) for liver failure requiring transplantation

Schwarzinger et al 2017. J Hepatol. 67, 454-461

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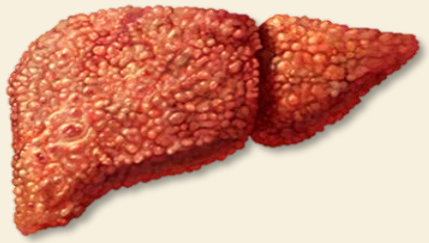
Alcohol increases risk of hepatocellular carcinoma (HCC)

In persons with compensated cirrhosis, alcohol use increases risk of HCC regardless of HCV viremia (RNA+)

	HCC (%)	
	No alcohol N= 118	Alcohol use N= 74
No HCV RNA	No HCC	6.2%
+ HCV RNA	15.9%	29.2%

As few as 1-2 drinks/day increases HCC risk in patients with HCV-related cirrhosis



Vandenbulcke et al 2016. J Hepatol 65, 543-551.

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Alcohol increases HCV-related mortality

AOR of death among 8,985 adults with chronic HCV followed for 18 years vs. those without HCV infection:

- AOR >5-fold higher (95% CI 1.97-13.28) for 2+ drinks/day
- AOR 2.4-fold higher (95% CI 1.59-3.75) for “moderate” drinkers who consume <2 per day

Younossi et al 2013. Aliment Pharmacol Ther. 37, 703–709

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How does alcohol use affect treatment for HCV?

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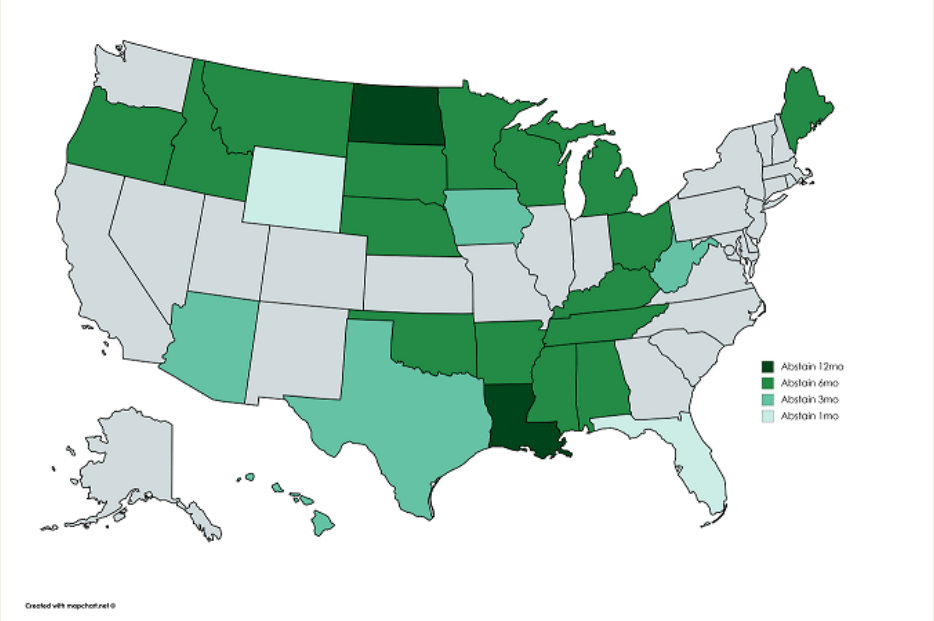
Alcohol and HCV treatment

Medicaid programs often require no alcohol use before treatment with direct-acting anti-HCV (DAA) drugs

Required abstinence:

- 12 mo
- 6 mo
- 3 mo (includes Texas)
- 1 mo
- no restriction



Hepatitis C: the State of Medicaid Access. NVHR and Harvard Law School. October 23, 2017

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Access to DAAs for HCV

Continued drinking after HCV diagnosis is a barrier to treatment with DAA drugs

3/4 of heavy drinkers not treated after HCV diagnosis [1]

1/6 patients in HCV specialty care were not treated due to ongoing alcohol use[2]

1. Sims et al 2017. Eur J Gastroenterol Hepatol. 29, 1219-1222.
2. Lin et al 2017. Aliment Pharmacol Ther. 46, 992-1000.

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Concern about adherence to DAAs

Persons consuming 6+ drinks/occasion on a weekly basis were:

more likely to miss DAA doses

increases risk of treatment failure

This effect was independent of other factors including:

- drug use
- depression
- cognitive impairment
- lack of social support
- lack of housing

Mason et al 2017. Int J Drug Policy. 47, 202-208.

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Yet NIH guidelines state:

- Alcohol abuse is not a contraindication to therapy…
  - because the benefit of treatment is great
- Therefore, clinicians need to address heavy alcohol use because it:
  - can reduce adherence to DAAs and lead to treatment failure
  - will continue to damage the liver

NIH Consensus Program Information Center (2002). Gastroenterology, 123, 2082-2099.
AASLD/IDSA Guidelines Recommendations for Testing, Managing, and Treating Hepatitis C

Consequences of alcohol use in persons with chronic HCV

- Alcohol has direct effects on HCV and liver that accelerates damage
- Dose-related effect on advancing liver disease, with relatively modest amounts of alcohol
- Endstage liver disease and HCC are more likely in heavy drinkers vs no drinkers with HCV
- Heavy alcohol use can prevent effective cure with DAAs

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Describe Screening Brief Intervention (SBI) to reduce alcohol use in HCV

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Assessing alcohol use

If someone is using too much alcohol, how are you detecting that in your current practice?

Healthcare Effectiveness Data and Information Set (HEDIS)

As of June 2017, alcohol screening and follow-up added as HEDIS quality measure for reporting

$$\text{Screening performance} = \frac{\text{\# screened for unhealthy alcohol use}}{\text{\# of adults 18 and older}}$$

$$\text{Follow-up performance} = \frac{\text{\# receiving follow-up care}}{\text{\# positive for unhealthy alcohol use}}$$

AHRQ 2017. HEDIS Measure: Unhealthy Alcohol Use Screening and Follow-Up

NCQA Measuring quality. Improving health care.

What do people with HCV say about alcohol use?

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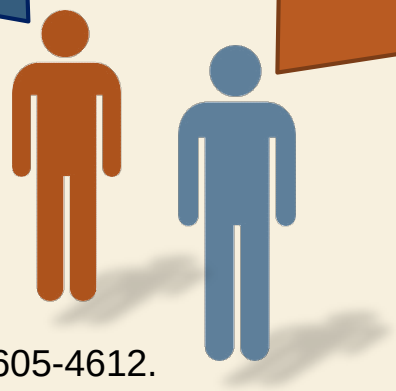
Diagnosis of chronic HCV: Teachable moment

In interviews, patients diagnosed with chronic HCV in San Antonio acknowledged the need to stop drinking:

"If you continue that same life, the drinking or whatever, it's gonna come back to you.."

"...I have to go on to the treatment, and as soon as I start seeing the doctors, I stopped drinking. With this treatment, I can't. ***I know I can do it because I've done it before.***"



Turner et al 2017. J Clin Nurs. 26, 4605-4612.

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Describe Screening Brief Intervention (SBI) to reduce alcohol use in HCV

Take Action: Screening Brief Intervention (SBI) to reduce alcohol consumption

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Usual approach to alcohol in clinical practice

- Inconsistent screening and limited follow-up of unhealthy alcohol use
- Refer patients to specialty care for substance use treatment. But…
  - poor access, failure to follow through, cost, are barriers.
  - specialty care is not appropriate for patients who drink above guidelines, but without AUD.

AHRQ 2012. Publication No. 12-EHC055-EF

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Screening and Brief Intervention (SBI) approach

Screen for alcohol use

- Standardized, quick (**<1 min**) for all patients
- Guides both type and intensity of intervention

Brief intervention for unhealthy drinking

Motivate and guide reductions in alcohol use for all patients (up to **15 min**)

SAMHSA 2017. About Screening, Brief Intervention, and Referral to Treatment (SBIRT).

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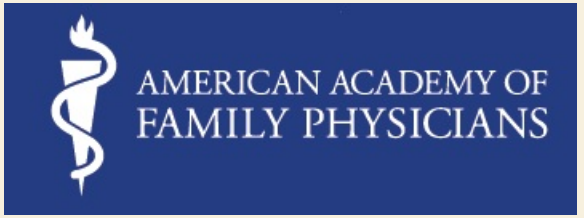
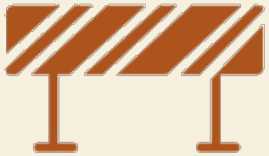
SBI broadly endorsed

SBI promoted by major health organizations and physician groups.



Strengths of SBI

- Can be delivered quickly in primary care setting
- Avoids barriers to third-party specialty care



- Effective for reducing alcohol use at all levels of use
  - Especially important for HCV where no alcohol use is safe!

National Council 2018. Screening, Brief Intervention, and Referral to Treatment (SBIRT).

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Tips for SBI integration into practice

Screen: Ask when taking vital signs or in patient questionnaire while waiting to be seen

Inform: Describe cut points for heavy alcohol use for men and women. Let patients know if too high

Brief intervention: Counsel at that visit or next

Follow-up: Ask about plans and progress on cutting alcohol use

Ongoing heavy alcohol use: Consider referral for behavioral support or alcohol treatment

SAMHSA 2017. About Screening, Brief Intervention, and Referral to Treatment (SBIRT).

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Widely used screening tool: AUDIT - C

	Scoring				
Questions:	0	1	2	3	4
How often do you have a drink containing alcohol	Never	Monthly or less	2-3 times/ month	2-3 times per week	4+ times per seek
How many standard drinks containing alcohol do you have on a typical day?	1 – 2	3 – 4	5 – 6	7-9	10+
How often do you have six or more drinks on one occasion?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily

Unhealthy drinking cut point in the general population:

Score >3 for women and men over age 65.

Score >4 for men ages 21-65.

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Brief Intervention

To motivate and guide patient to reduce or discontinue alcohol use (usually **15 min**)

1. Feedback about screening results
2. Elicit patients' feelings about their drinking
3. Negotiate plan for reducing alcohol use

SAMHSA 2017. About Screening, Brief Intervention, and Referral to Treatment (SBIRT). https://www.samhsa.gov/sbirt/about

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SBI effectiveness from meta-analyses

Relative to control, SBI reduces alcohol use

Publication	# studies in meta-analysis	Mean reduction in drinks/week (95% CI)
AHRQ, 2012	23	3.6 (2.4-4.8)
CDC, 2012	22	2.7 (1.6-3.9)
Cochrane, 2018	34	1.5 (0.1-2.9)
AHRQ, 2018	45	1.6 (1.0-2.2)

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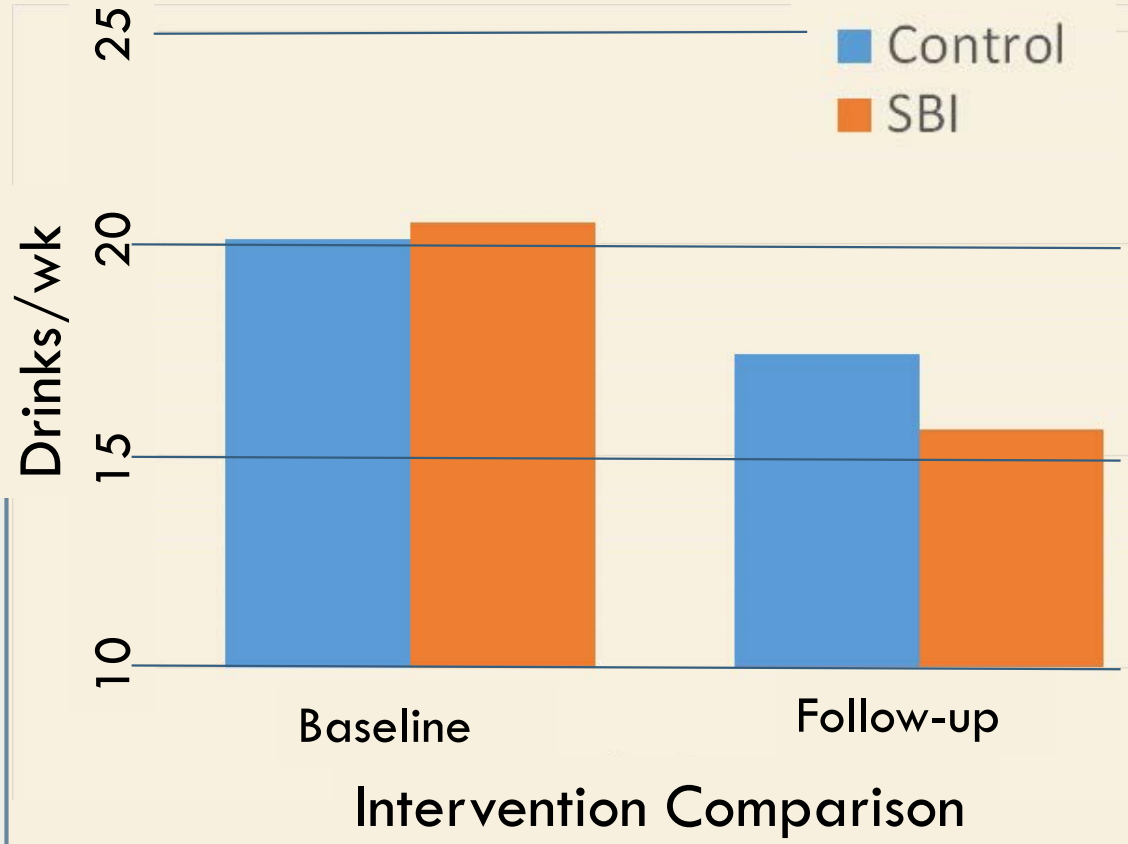
SBI effectiveness

Agency for Healthcare Research and Quality
Advancing Excellence in Health Care • www.ahrq.gov

Meta-analysis of 45 trials concluded greater reduction in drinking with SBI versus treatment-as-usual

40%

Lower odds of drinking more than guidelines after SBI



AHRQ 2018. No. 18-05242-EF-1.

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Long-term effects

Cochrane Library
Cochrane Database of Systematic Reviews

Meta-analysis of 34 studies with 15,197 adults from general population:

- Moderate quality evidence that SBI associated with reduction in alcohol consumption after 1 year follow-up

Kaner et al 2018. Cochrane Database of Systematic Reviews 2018, Issue 2. Art. No.: CD004148. DOI: 10.1002/14651858.CD004148.pub4.

Photo credit: https://www.healthdiary365.com/2018/05/13/what-is-alcohol-withdrawal/

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SBI in HCV-risk populations

Meta-analysis: 22 studies of 5,860 adults (born 1945-1965) who were screened for HCV:

- 2.7 fewer drinks/week (95% CI 1.6-3.9) for SBI versus control
- Strong evidence from randomized controlled trials
- Limitation: Only patients at risk for HCV, might be even stronger for those with chronic HCV

CDC 2012. MMWR 2012;61(No. RR-4):[pages 11; 23-24].

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Unhealthy drinking: a priority for disease prevention

Based on the following CDC metrics:

- **Clinical Preventable Burden** (CPB): the disease, injury, and premature death prevented if delivered to the full target population
- **Cost Effective** (CE): savings relative to cost of delivering the intervention

CDC 2014. Planning and Implementing Screening and Brief Intervention for Risky Alcohol Use

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Rankings of Preventive Services for the U.S. Population[1]

Rank	Clinical Preventive Services	Clinically Preventable Burden	Cost Effectiveness	Total Score
1	Discuss daily aspirin use—men 40+, women 50+	5	5	
2	Childhood immunizations	5	5	10
3	Smoking cessation advice and help to quit—adults	5	5	
4	**Alcohol screening and brief counseling—adults**	**4**	**5**	**9**
5	Colorectal cancer screening—adults 50+	4	4	
6	Hypertension screening and treatment—adults 18+	5	3	8
7	Influenza immunization—adults 50+	4	4	
8	Vision screening—adults 65+	3	5	
9	Cervical cancer screening—women	4	3	
10	Cholesterol screening and treatment—men 35+, women 45+	5	2	7
11	Pneumococcal immunizations—adults 65+	3	4	
12	Breast cancer screening—women 40+	4	2	6

CDC 2014. Planning and Implementing Screening and Brief Intervention for Risky Alcohol Use

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U.S. Preventive Services TASK FORCE

The USPSTF recommends SBI for alcohol

- Concludes with moderate certainty that there is a moderate net benefit to SBI for unhealthy alcohol use in the primary care setting for adults

Population	Recommendation	Grade (What's This?)
Adults age 18 years or older, including pregnant women	The USPSTF recommends that clinicians in primary care settings screen for unhealthy alcohol use in adults age 18 years or older, including pregnant women, and provide persons engaged in risky or hazardous drinking with brief behavioral counseling interventions to reduce unhealthy alcohol use.	B

USPSTF 2018

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SBI versus SBIRT

"I've heard it called SBIRT, what's the difference?"

SBIRT – **Referral to Treatment** – specialty care is usually needed for those found to have an alcohol use disorder.

Focus on SBI to emphasize management within practice.

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SBI Is Billable

Who can bill for SBI?

- Physicians
- Registered nurses
- Advanced practice nurses
- Physician assistants
- Psychologists
- Licensed clinical social workers
- Licensed professional counselors
- Certified nurse midwives

- Other health care personnel may deliver and bill for SBI under the supervision of a licensed provider
- For contexts without billing consideration, non licensed personnel (e.g. health educator, clergy, etc.) deliver SBI in health settings

Texas Medicaid Provider Procedures Manual January 2018. Volume 2 Provider Handbook.

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Reimbursement for SBI Services

Medicare[1]		
Code	**Description**	**Fee Schedule**
G0396	Alcohol and/or substance abuse structured SBI services; 15 to 30 min	$29.42
G0397	Alcohol and/or substance abuse structured SBI services; > 30 min	$57.69
Commercial Insurance [1]		
Code	**Description**	**Fee Schedule**
99408	Alcohol and/or substance abuse structured SBI services; 15 to 30 min	$33.41
99409	Alcohol and/or substance abuse structured SBI; > 30 min	$65.51

SAMHSA 2017. Coding for Screening and Brief Intervention Reimbursement.

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TX Medicaid payment

Texas Medicaid [1]		
Code	**Description**	**Fee Schedule**
H0049	Alcohol and/or drug screening	$13.47
90853	Alcohol and/or substance abuse structured SBI services	$23.52
99408	Alcohol and/or substance abuse structured SBI services; 15-30 min	$28.35

Texas Medicaid Provider Procedures Manual January 2018 Volume 2.

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Screening Brief Intervention (SBI) to reduce alcohol use in HCV

- SBI offers straightforward way to screen and then initially address unhealthy drinking
- SBI designed to work a busy, primary care environment
- SBI is billable $
- Brief intervention can be conducted in a separate visit when there is more time

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Conclusions

- Adults with chronic HCV often have a history of heavy drinking and many still drink more heavily than the general population
- Alcohol use increases morbidity and mortality of chronic HCV
- Can reduce effectiveness of HCV treatment
- SBI is an evidence-based approach in primary care to reduce alcohol use
- **For more info on HCV, visit:**

StopHepatitisC.com

HCV STOP HCC

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Thank you!

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Additional resources

Centers for Disease Control and Prevention
https://www.cdc.gov/ncbddd/fasd/documents/alcoholsbiimplementationguide.pdf

Institute for Research, Education, & Training in Addictions
http://ireta.org/webinar-library/sbirtrm-a-conceptual-framework-for-managing-substance-use-disorders-in-primary-care-settings/

NORC at University of Chicago SBIRT education
http://hospitalsbirt.webs.com/primarycare.htm

Texas Health and Human Services SBIRT continuing education
http://www.txhealthsteps.com/148-introduction-screening-brief-intervention-and-referral-treatment-sbirt

SAMHSA SBIRT portal
https://www.samhsa.gov/sbirt

US Preventive Services Task Force
https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/alcohol-misuse-screening-and-behavioral-counseling-interventions-in-primary-care

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Screening & Brief Intervention (SBI) for Alcohol Use: Focus on Chronic Hepatitis C: Part 1

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Charles W. Mathias, Ph.D.

Disclosures

- No Conflicts of Interest
- This presentation supported by a grant from the:

CANCER PREVENTION & RESEARCH INSTITUTE OF TEXAS

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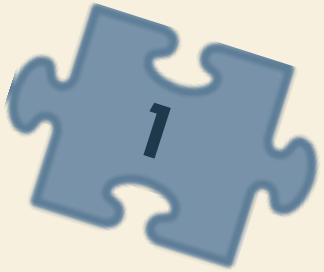
Addressing alcohol use: Priority for chronic hepatitis C virus (HCV)

This presentation is 2nd of a 3-part series:



Rationale for addressing alcohol use in all patients but especially in HCV

Practical approaches for delivering *Screening and Brief Intervention* (SBI) – **2 parts**

Pharmacologic therapies for alcohol use disorder

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Learning objectives

Part 1

- Be able to justify assessing alcohol use in all adults and in HCV care
- Define 3 components of Screening & Brief Intervention (SBI) to reduce alcohol use
- List 3 evidence-based alcohol screening measures

Part 2

- Identify 3 key aspects of Brief Intervention for alcohol use
- List 3 key motivational interviewing skills

Be able to justify assessing alcohol use in all adults and in HCV care

Alcohol consumption: A common health threat

Alcohol attributable risk of cancer and death

Largest proportion of alcohol-attributable deaths for persons over 50 due to alcohol-related cancer:

- 27% in women and 18.9% in men

Alcohol use as a cause of death globally

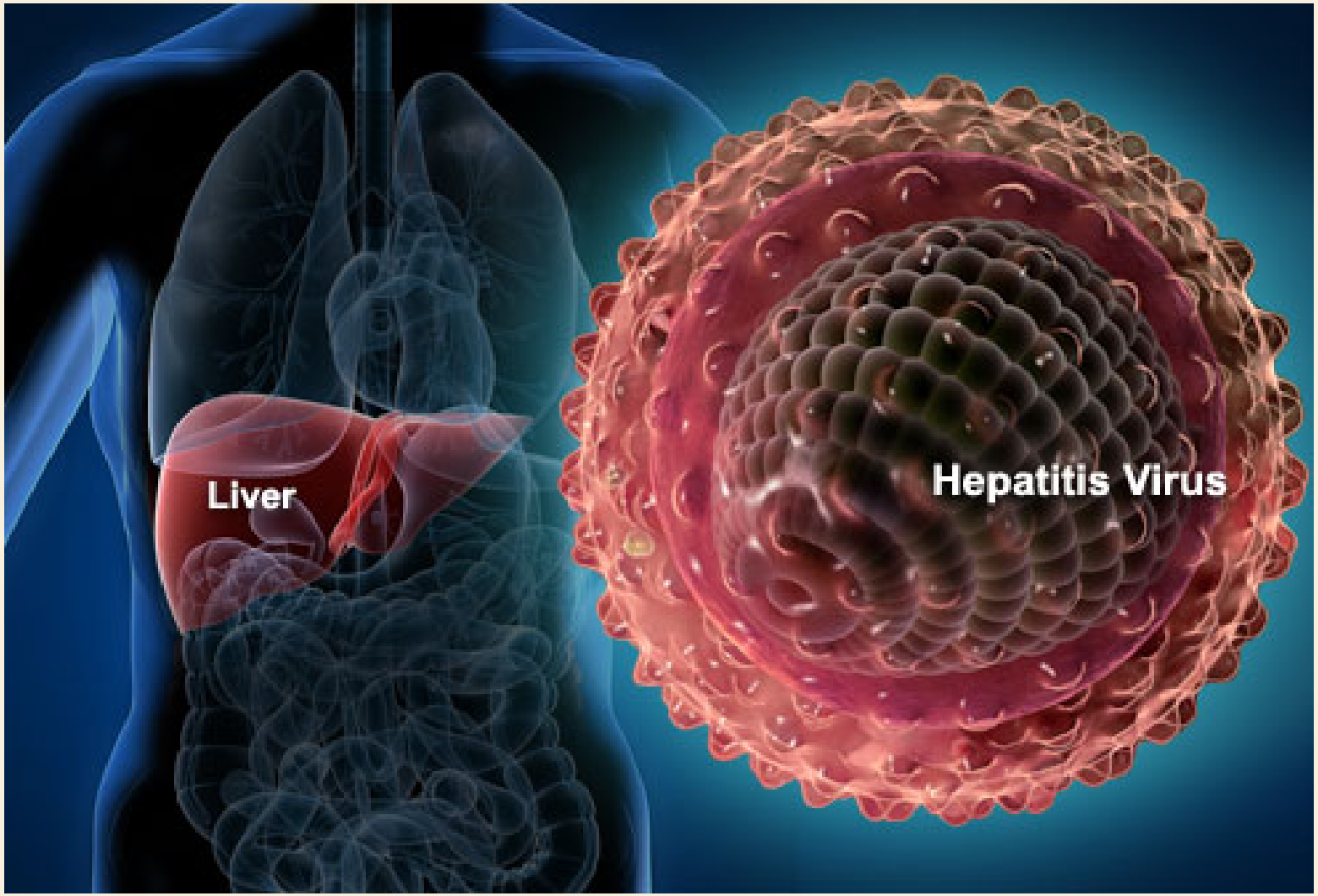
- 6.8% in men and 2.2% in women

Risk of death is increasing faster for women than men:

- 67% ↑ for women and 29% ↑ for men between 2007 and 2017

GBD 2016 Alcohol Collaborators, 2018. Lancet, 392, P1015-1035.

Hepatitis C virus (HCV): Another health threat



Hepatitis C: Understanding the threat

- Leading cause of serious liver disease including: cirrhosis, liver failure, and liver cancer
- 4-5 million persons have been infected by HCV
- At least half (2.4 million) have chronic HCV infection
- Over half of these persons have not been diagnosed
- New cases are increasing related to illicit opioid use and needle sharing
- HCV causes more deaths in the U.S. than 60 other infectious diseases combined, including HIV

US Preventive Services Task Force (USPSTF) Guidelines - 2012

- One time screening of all baby boomers (born 1945 through 1965) for HCV infection (USPSTF Rating: Class I, Level B)
  - However, new draft guidelines recommend screening **all adults** from ages 18-75

Alcohol use in the U.S. and in persons with HCV

General U.S. population:

- 25% of adults exceed drinking guidelines and 12.6% have an alcohol use disorder based on national epidemiologic surveys[1]

Persons with chronic HCV:

- 44% with HCV vs. 14% without HCV reported 5+ drinks/day on most days in the past[2]
- Any alcohol use increases the severity of HCV-associated liver disease
- Any alcohol use can result in progression of liver disease even after HCV has been cured!

1. Grant et al 2017. JAMA Psychiatry, 74, 911-923.
2. Taylor et al 2016. Am J Prev Med. 51, 206–215

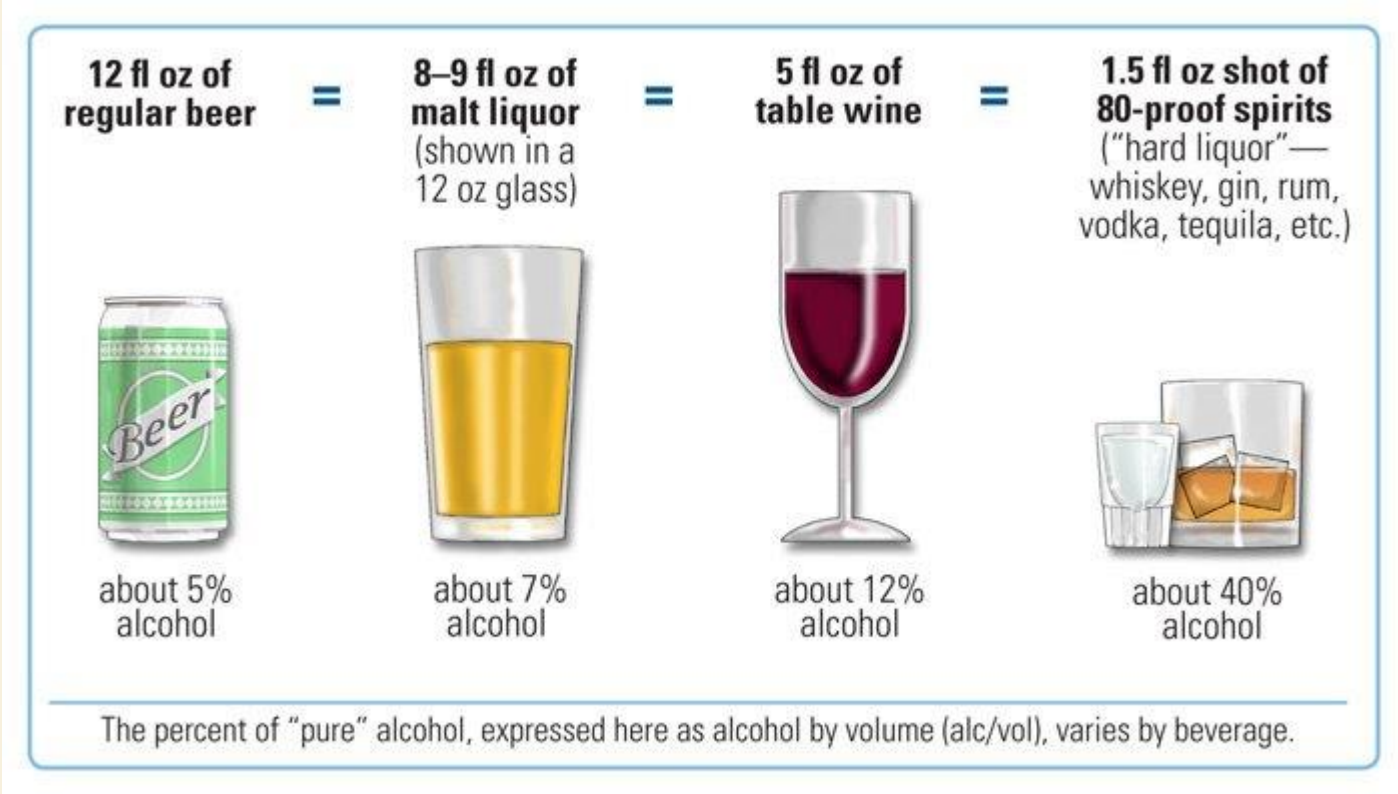
Assessing alcohol consumption in clinic

- Screening for alcohol use is a basic component of patient care but often not addressed
- Essential to quantify alcohol use in patients diagnosed with chronic HCV
- Alcohol consumption measures use a standardized “drink” that patients often don’t understand

What counts as a drink?

*How many **standard drinks** containing alcohol do you have in a typical day?*

Standard drink =
12 oz beer
8 oz malt liquor
5 oz wine
1.5 oz spirits



Note: a standard drink is often smaller than most patients realize

NIAAA, 2018. Rethinking Drinking

Number of standard drinks and driving impairment

Blood alcohol concentration (BAC) and impairment after 2 hr drinking			
Men drinks	Women drinks	BAC	Impairment
5	4	.08	selective attention, speed control
		.07	
4	3	.06	information processing, judgement
		.05	coordination
3		.04	eye movement control, standing steadiness
	2	.03	tracking, steering
2		.02	divided attention, choice reaction time
		.01	
Male 195 lb	Female 168 lb		

Legal Driving Limit:

.08 BAC legal limit in most states.

.05 BAC limit in Utah and 91 countries (pending in other states)

Fell 2018. Research Society on Alcoholism. San Diego, CA

Alcohol consumption definitions

Abstinence – no alcohol use

Lower Risk – ≤4 drinks/d or 14/wk for men (ages 21-64)
≤3 drinks/d or 7/wk for women and men ages 65+

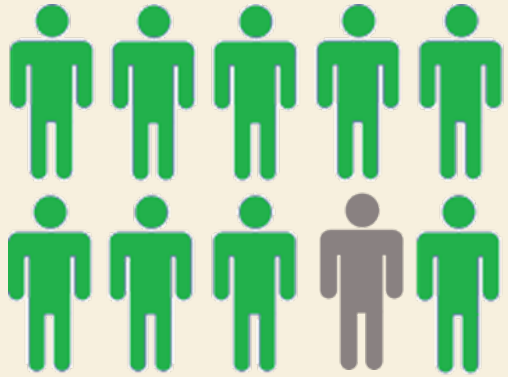
Unhealthy – exceeds lower-risk limits

Binge – ≥5 drinks men or ≥4 drinks women in a day (SAMHSA definition)

Alcohol use disorder (AUD) – ≥2 of 11 symptom criteria such as: loss of control of use, social or medical problems due to use, and tolerance or withdrawal symptoms related to use

NIAAA, 2018. Rethinking Drinking.
SAMHSA 2015. Binge Drinking: Terminology and Patterns of Use

Now to HCV and good news



- HCV can be treated!
  - Cure rates **>90%**, even for advanced fibrosis or cirrhosis
- The treatment is well tolerated and most patients can be managed in primary care
- However, alcohol use is common in patients with HCV and needs to be addressed to reduce the risk of advanced liver disease and liver cancer, **even after HCV cure**

Key aspect of HCV care

- Goals for addressing alcohol use
  - Counsel and manage unhealthy drinking, binge drinking, and alcohol use disorder
    - These individuals are at significant risk of advanced liver disease
  - Counsel patients with lower levels of drinking that any alcohol use can cause ongoing liver damage
  - Essential tool: Screening and Brief Intervention

Define 3 components of Screening & Brief Intervention (SBI) to reduce alcohol use

Three key components of SBI

Screen for alcohol use

- 1) Standardized, quick (**<1 min**) for all patients
  - Guides both type and intensity of intervention

Brief intervention for unhealthy drinking (typically **15 min**)

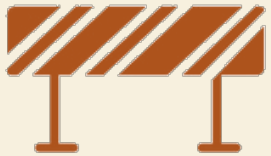
- 2) Provide feedback from screening
- 3) Motivate and guide reductions in alcohol use

SAMHSA 2017. About Screening, Brief Intervention, and Referral to Treatment (SBIRT).

Benefits of SBI for unhealthy alcohol use

- Delivered within a short time and can bill for service

- Avoids barriers to accessing third-party specialty alcohol counseling and treatment



- Effective for reducing all levels of alcohol use

- Promotes abstinence when alcohol is contraindicated such as in persons with chronic HCV

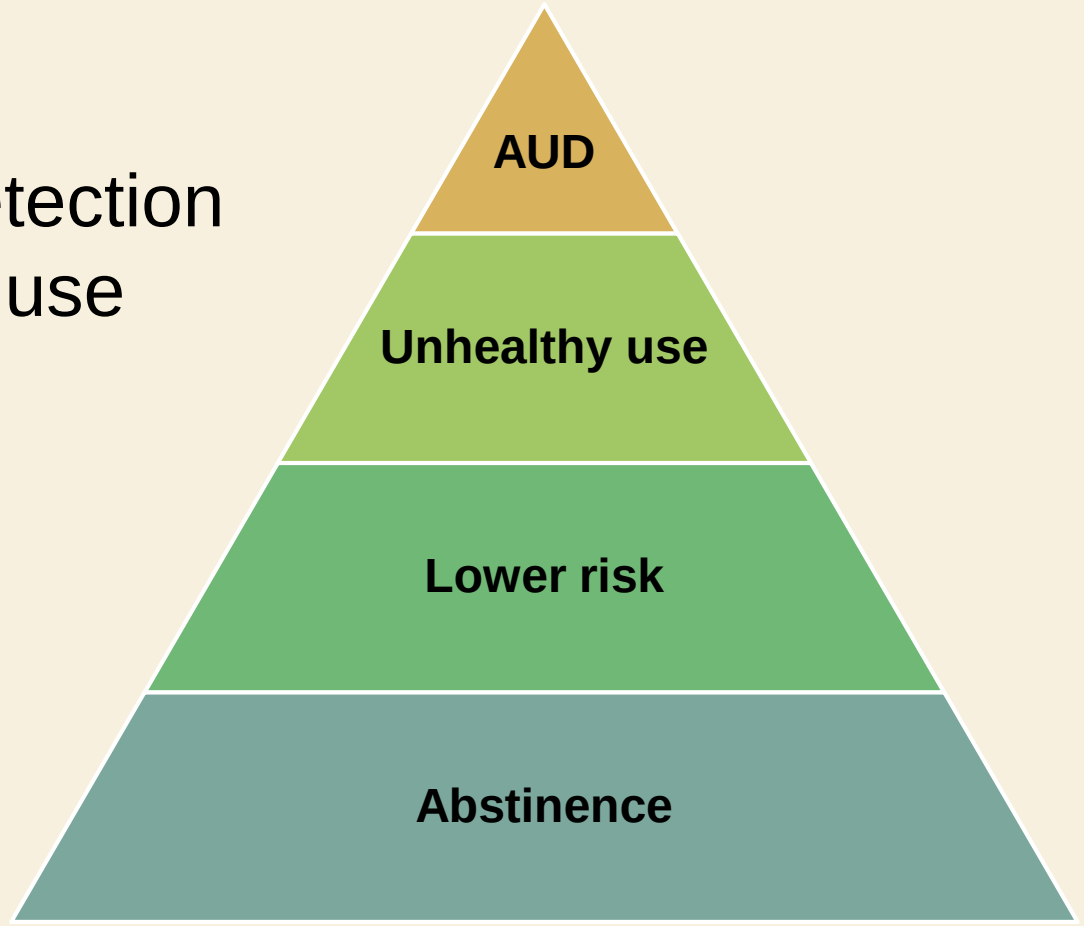
National Council 2018. Screening, Brief Intervention, and Referral to Treatment (SBIRT).

List 3 evidence-based alcohol screening measures

Rationale for alcohol use screen

Systematic screen allows for earlier detection and identifies a full range of unhealthy use

- **Six** unhealthy drinkers for every **One** with Alcohol Use Disorder (AUD)



Babor, Higgins-Biddle 2001 Brief Intervention for Hazardous and Harmful Drinking.

Short alcohol screening measures

1. **Single Question Alcohol Screen:** (1-item)
2. **AUDIT-C:** Alcohol Use Disorders Identification Test (3-item)
3. **AUDIT:** Alcohol Use Disorders Identification Test (10-item)
4. **NIDA Quick Screen:** (4 items; alcohol, tobacco, recreational use of Rx, and illegal drugs)
5. **ASSIST:** Alcohol, Smoking, and Substance Involvement Screening Test (8-items)

Single Question Alcohol Screen[1]

Focus on binge drinking as initial screener

Men	How many times in the past year have you had **5 or more** drinks in a day?
Women	How many times in the past year have you had **4 more** drinks in a day?

- One time is considered positive screen
- For age 65 year or over: these limits should be 3 or more[2]

1. NIAAA Clinician's Guide 2005
2. Lehmann & Fingerhood 2018. NEJM, 379:24; 2351-2360

AUDIT – C Score

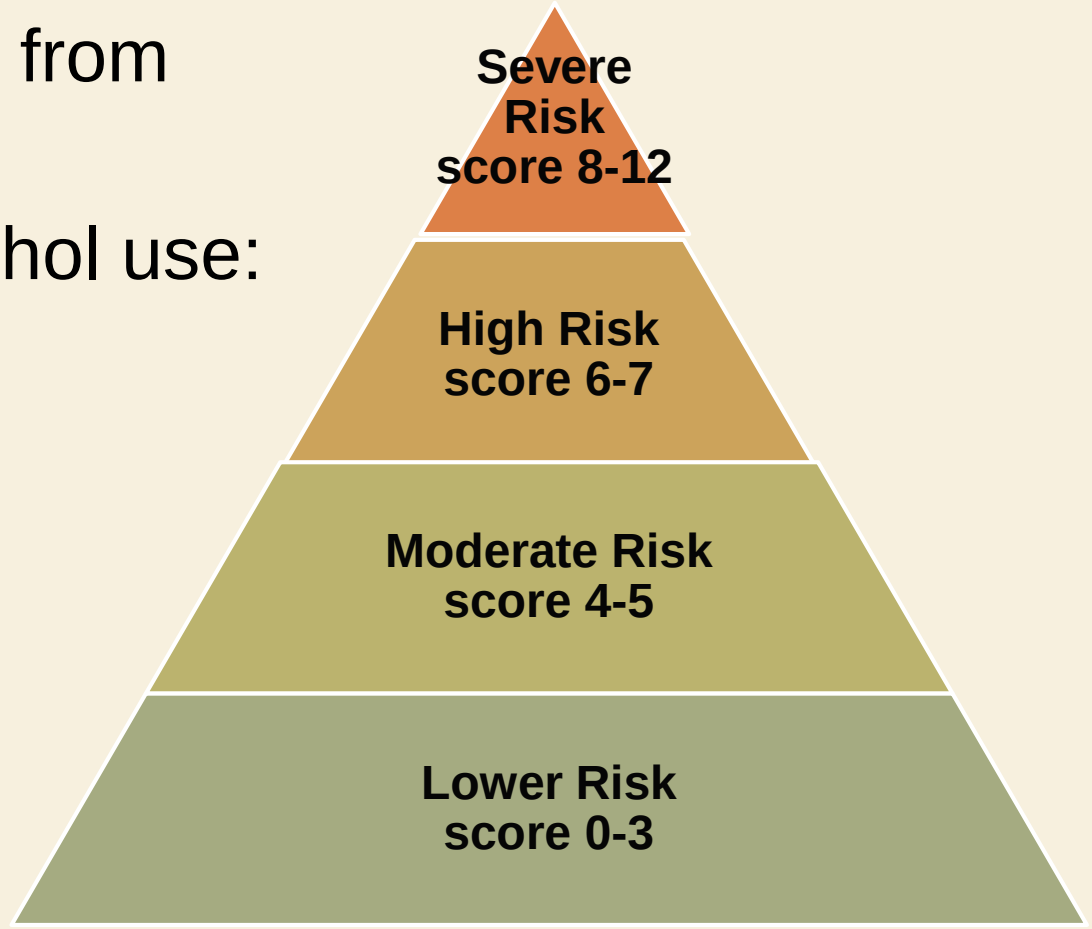
Focus on daily quantity-frequency and binging as initial screener

	Score				
Questions:	**0**	**1**	**2**	**3**	**4**
How often do you have a drink containing alcohol	Never	Monthly or less	2-3 times per month	2-3 times per week	4+ times per week
How many standard drinks containing alcohol do you have in a typical day?	1 – 2	3 – 4	5 – 6	7-9	10+
How often do you have six or more drinks on one occasion?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily

Bush et al 1998. Arch Intern Med 158; 1789-1795

Interpreting the AUDIT – C Score

- Score indicates severity of health risks from alcohol
- For general population, unhealthy alcohol use:
  ≥4 all women and men over 65
  ≥5 men 21-65
- For patients with HCV:
  Score ≥1 because abstinence is the goal.
- **Score informs your brief intervention**



Alcohol screen performance characteristics

Comparison of the specificity and sensitivity of the Single Question Screen to the AUDIT-C Screen to detect unhealthy alcohol use and alcohol use disorder (AUD) among 394 primary care patients

	Unhealthy use	AUD
Screener	**Sensitivity -- Specificity**	
Single Question Alcohol Screen	79% -- 82%	67% -- 88%
AUDIT-C	74% -- 83%	72% -- 88%

Smith et al 2009. J Gen Intern Med 24(7) 783-788

AUDIT 10

10-item AUDIT may follow “positive” AUDIT-C pre-screen

- Additional questions (similar to CAGE):
  - alcohol dependence symptoms
  - harmful consequences from drinking
- Higher scores indicate likely alcohol use disorder

Babor et al 2001. WHO/MSD/MSB/01.6a

Box 4

The Alcohol Use Disorders Identification Test: Interview Version

Read questions as written. Record answers carefully. Begin the AUDIT by saying "Now I am going to ask you some questions about your use of alcoholic beverages during this past year." Explain what is meant by "alcoholic beverages" by using local examples of beer, wine, vodka, etc. Code answers in terms of "standard drinks". Place the correct answer number in the box at the right.

1. How often do you have a drink containing alcohol?
   (0) Never [Skip to Qs 9-10]
   (1) Monthly or less
   (2) 2 to 4 times a month
   (3) 2 to 3 times a week
   (4) 4 or more times a week

2. How many drinks containing alcohol do you have on a typical day when you are drinking?
   (0) 1 or 2
   (1) 3 or 4
   (2) 5 or 6
   (3) 7, 8, or 9
   (4) 10 or more

3. How often do you have six or more drinks on one occasion?
   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily
   Skip to Questions 9 and 10 if Total Score for Questions 2 and 3 = 0

4. How often during the last year have you found that you were not able to stop drinking once you had started?
   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

5. How often during the last year have you failed to do what was normally expected from you because of drinking?
   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?
   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

7. How often during the last year have you had a feeling of guilt or remorse after drinking?
   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?
   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

9. Have you or someone else been injured as a result of your drinking?
   (0) No
   (2) Yes, but not in the last year
   (4) Yes, during the last year

10. Has a relative or friend or a doctor or another health worker been concerned about your drinking or suggested you cut down?
    (0) No
    (2) Yes, but not in the last year
    (4) Yes, during the last year

Record total of specific items here

If total is greater than recommended cut-off, consult User's Manual.

Alcohol assessment in your practice

- **When** is alcohol use assessed?
- **Who** is responsible for this assessment?
- **What** screening method is used?
- **Where** is alcohol use documented in medical record?
- **What** systems insure that unhealthy alcohol use is addressed?
- **What are your practice's challenges in screening and acting on the results**?

American Academy of Family Physicians. 2017. Addressing alcohol use: Practice Manual.

Practical points

- Unhealthy alcohol use is highly prevalent in the general population
  - In particular binge drinking is common
  - Single question screening for binge drinking performs reasonably well to identify unhealthy drinking
- Unhealthy alcohol use is common and a significant risk for patients with chronic HCV
- AUDIT 10 asks both quality-frequency and about symptoms of dependence and harmful consequences of drinking

Part 1 Question and Answer

Be able to justify assessing alcohol use in all adults and in HCV care

- High prevalence, serious consequences of heavy alcohol use in all adults, especially with underlying liver disease from HCV

Define 3 components of Screening & Brief Intervention (SBI) to reduce alcohol use

- Measure alcohol use with screener, give feedback and education, address unhealthy use (or any use in HCV)

List 3 evidence-based alcohol screening measures

- Single question screener, AUDIT C, full AUDIT 10

Thanks!

- **You can do it!**
- **For more about HCV, visit**

  www.StopHepatitisC.com

HCV STOP HCC

UT Health San Antonio
Center for Research to Advance Community Health

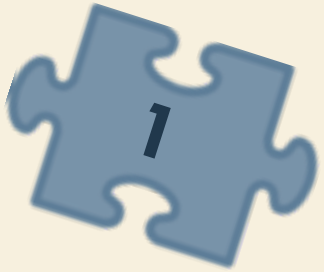
Cancer Prevention & Research Institute of Texas

Screening & Brief Intervention (SBI) for Alcohol Use: Focus on Chronic Hepatitis C – Part 2

Barbara J Turner MD, MSEd
Charles W. Mathias, Ph.D.

Addressing alcohol use: Priority for chronic hepatitis C virus (HCV)

This presentation is 2nd of a 3-part series:



Rationale for addressing alcohol use in all patients but especially in HCV

Practical approaches for delivering *Screening and Brief Intervention* (SBI) – **2 parts**

Pharmacologic therapies for alcohol use disorder

UT Health San Antonio

Learning objectives

Part 1

- Be able to justify assessing alcohol use in all adults and in HCV care
- Define 3 components of Screening & Brief Intervention (SBI) to reduce alcohol use
- List 3 evidence-based alcohol screening measures

Part 2

- Identify 3 key aspects of Brief Intervention for alcohol use
- List 3 key motivational interviewing skills

Identify 3 key aspects of Brief Intervention for alcohol use

Implementing a Brief Intervention

1. Structure your counseling using 3 A's:
   Advise, Assist, Arrange
2. Customize your discussion to reflect patients' **Stage of Change**
3. Use **Motivational Interviewing (MI)** as a conversational strategy to build self-efficacy in reducing alcohol use

3 A’s approach

Advise

About risk based on screening measure results with recommendation to reduce the risk

Assist

Stimulate motivation, setting drinking reduction goals, agreeing on a plan that reflects the patient’s **Stage of Change**

Arrange

Reinforce adherence, schedule follow-up, rescreen and renegotiate (if needed) alcohol reduction goals

Structure and strategy of the conversation depends on stage of change

Stage of Change	Advise	Assist	Arrange	Strategy
Precontemplation	X			Personalize risk; offer to help when the patient feels ready
Contemplation	X			Discuss benefits of change; identify barriers
Preparation	X	X		Set goals and change date; provide resources
Action	X	X	X	Identify triggers; teach behavioral skills; link to support
Maintain	X	X		Reaffirm behavioral skills; resolve problems
Relapse	X	X	X	Facilitate another change attempt; reinforce not a failure; follow-up

ADVISE

Feedback – About personal alcohol use, guidelines, and risks in the context of their health and medical problems

Recommendations for all adults

- educate on drinking limit guidelines (3 or 4 drinks per day)
- clarify standard alcohol unit
- recommend limiting drinking to within guidelines

Additional recommendation for chronic HCV

- No alcohol use is safe

American Academy of Family Physicians. 2017. Addressing alcohol use: Practice Manual.

ADVISE – SPECIFICS FOR HCV

Abstinence

Why

- promotes persistent HCV infection[1]
- accelerates HCV-related liver damage[2]
- reduces HCV treatment adherence [3]
- compromises benefits of HCV treatment

1. Piasecki et al 2004. Hepatology, 40, 892–899.
2. Kelly, 2017 Clin Infect Dis. 65, 2050–2056.
3. Mason et al 2017. Int J Drug Policy. 47, 202-208.

ASSIST

- **Elicit** patient's reaction to recommendation to reduce alcohol use
- **Ask** about readiness to change

On a scale of **0 to 10** *how ready are you to change your drinking?*

If the patient is NOT interested in changing, ask:

- *What would it take to raise that number?*

If the patient IS interested in changing, ask:

- *How confident are you that you can change your drinking?*

American Academy of Family Physicians. 2017. Addressing alcohol use: Practice Manual.

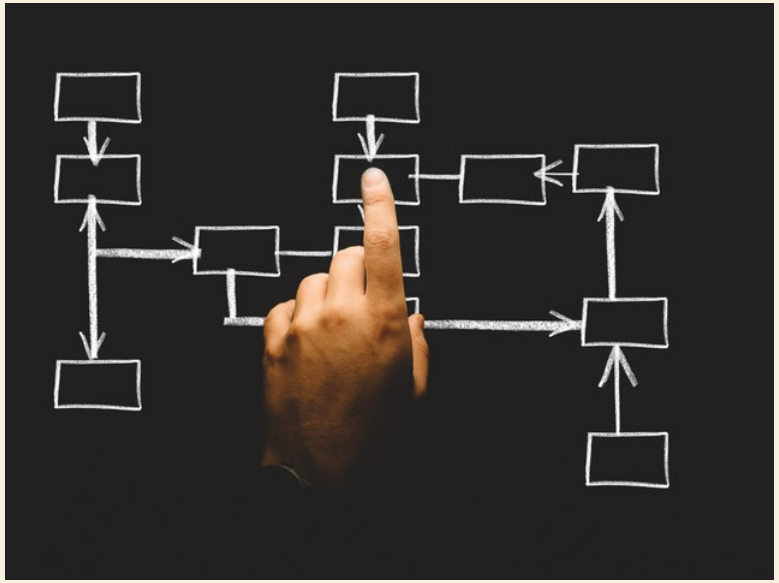
ASSIST

- **Facilitate** setting goals.
  - Elicit patient's ideas on <u>when</u> and <u>how</u> to change their drinking
  - Guide the patient in identifying steps to achieve their goals
- **Agree** on a plan
- **Restate** concern and reaffirm willingness to help

American Academy of Family Physicians. 2017. Addressing alcohol use: Practice Manual.

ARRANGE

- **Summarize** patient's statements in favor of change
- **Emphasize** patient's strengths
- **Review** patient's plan for change
- **Connect** patient to available resources
- **Schedule** follow-up appointment to monitor progress



American Academy of Family Physicians. 2017. Addressing alcohol use: Practice Manual.

SBI effectiveness

- **Evidence from meta-analyses:** Moderate quality evidence that alcohol consumption reduced up to 1 year after SBI[1,2]
- SBI endorsed by major health organizations as evidence-based:

1. AHRQ 2018. . AHRQ Publication No. 18-05242-EF-1.
2. Kaner et al 2018. Cochrane Database of Systematic Reviews DOI: 10.1002/14651858.CD004148.pub4.

List 3 key motivational interviewing skills

Motivational Interviewing (MI): Key component of effective counseling

MI: non-confrontational, patient-centered, empathetic

- Conversation addresses common reaction of ambivalence about changing behavior

MI aims to:

- strengthen personal motivation
- support commitment to a specific goal

Approach:

- explore reasons for change
- deliver within a context of acceptance

UMASS Amherst 2018. Definitions Principals Approach

http://www.stephenrollnick.com/about-mi.php

Integrating MI into the 3 A's

MI skills particularly relevant to the success of Assist and Arrange:

- During **ADVISE**, you provide information (if patient is willing) about personal alcohol use/risks and your recommendation
- During **ASSIST**, elicit patient's own goals and solutions using MI skills
- During **ARRANGE**, summarize patient's statements in favor of change and emphasize their strengths from MI perspective

MI Principles

Principle	Definition
Express Empathy	Non-judgmental approach, emphasizing patient's own experience and meaning
Develop Discrepancy	amplify discrepancies between patient's goals/values and their current alcohol use
Avoid Arguing	direct confrontation leads to resistance
Roll with Resistance	recognize push-back, reflect ambivalence, and approach in a different way
Support Self-Efficacy	endorse patient's ability to reduce their drinking

CH. 3 - TIP Series 35. SAMHSA 1999

MI Skills – open-ended questions

Open-ended - questions requiring more than a Yes/No answer

- Goal: open the door for personal disclosure, patient conveys more information, encourage engagement

- *What do you like about drinking?*
- *Tell me some of the not so great things about your drinking?*
- *What do you know about how alcohol can affect your health?*

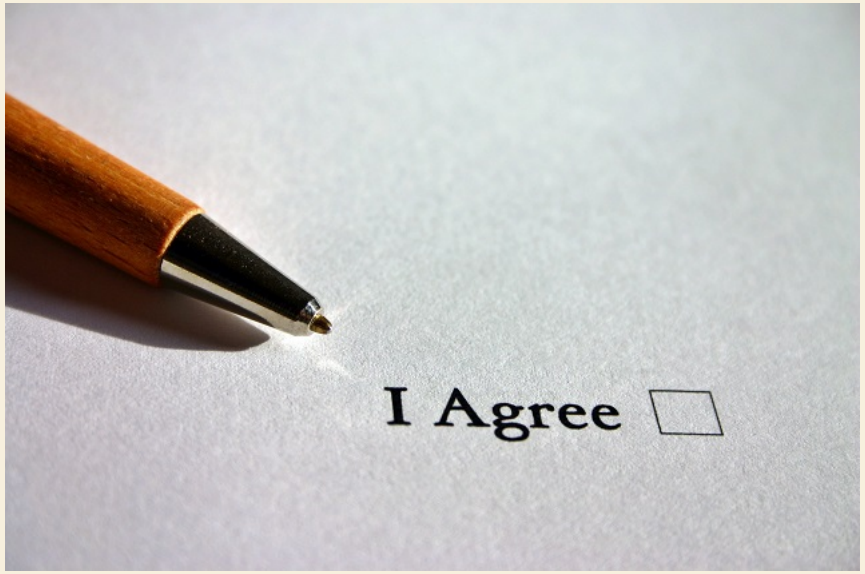
World Health Organization (2003)
Rush University
CH. 3 - TIP Series 35. SAMHSA 1999

MI Skills - affirmation

Affirmation – statements of appreciation and understanding

- Goal: create a supportive atmosphere, builds rapport, and reinforces open exploration

- *I appreciate your willingness to talk to me about your drinking*
- *You are coming up with some good ideas about how you can deal with drinking*



World Health Organization (2003)
Rush University
CH. 3 - TIP Series 35. SAMHSA 1999

MI Skills – reflective listening

Reflective Listening – mirror what the patient is saying or state the meaning of what was said

- Goal: highlight ambivalence, direct conversation toward he patient's concerns about drinking, and/or reinforce statements for change

You said that you enjoy drinking, but you also see that it can be a problem for your health, is that right?

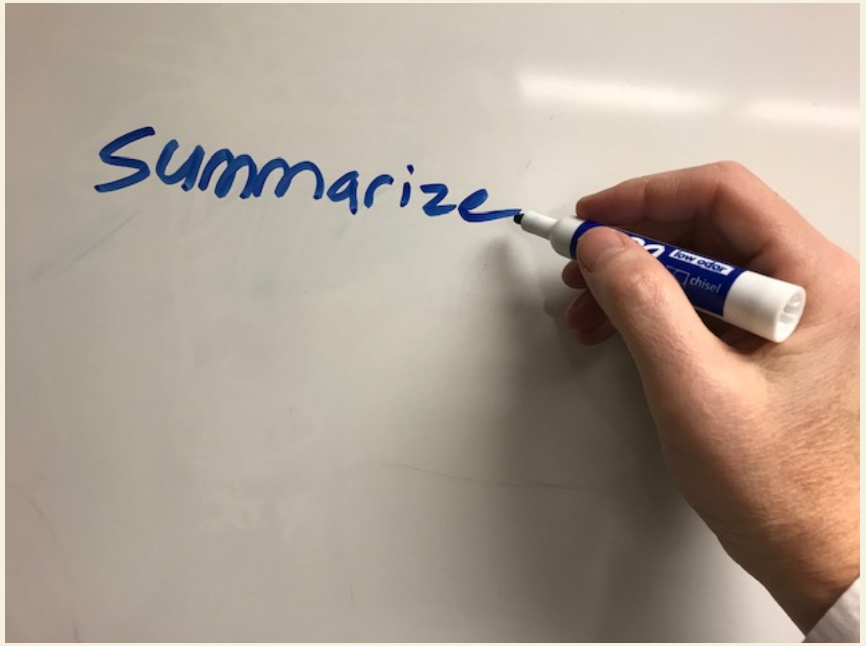
World Health Organization (2003)
Rush University
CH. 3 - TIP Series 35. SAMHSA 1999

MI Skills - summarize

Summarize – recap information to highlight what has been said in the direction of change

- Goal: reinforces concerns and change, prepares patient to move on

You said that you don't really know how much you drink and you now see that you might have to keep track in order to cut down



World Health Organization (2003)
Rush University
CH. 3 - TIP Series 35. SAMHSA 1999

Summary goals of brief intervention

- **Educate** patients about their drinking pattern relative to safe guidelines and harms of excessive alcohol use
- **Motivate** patients by eliciting their reasons to reduce alcohol use and/or engage in further alcohol treatment
- **Identify** strategies the patient is willing to try to reduce or eliminate alcohol use

Examples of doctor and patient in SBI interactions

SBI follow-up

At the next encounter:

1. Review patient's goals from the first discussion
2. Assess patient's level of drinking and any changes
3. Celebrate success or discuss new approaches
4. Address patient's motivation to maintain or start to change
5. Support ongoing success or help patient define new goals and strategies

CDC 2014. Planning and Implementing Screening and Brief Intervention for Risky Alcohol Use

Real-world lessons from implementation of SBI

Examples from two, large SBI projects:

- **Public:** Oregon Medicaid waiver SBI program
- **Private:** Kaiser Permanente Northern California SBI rollout

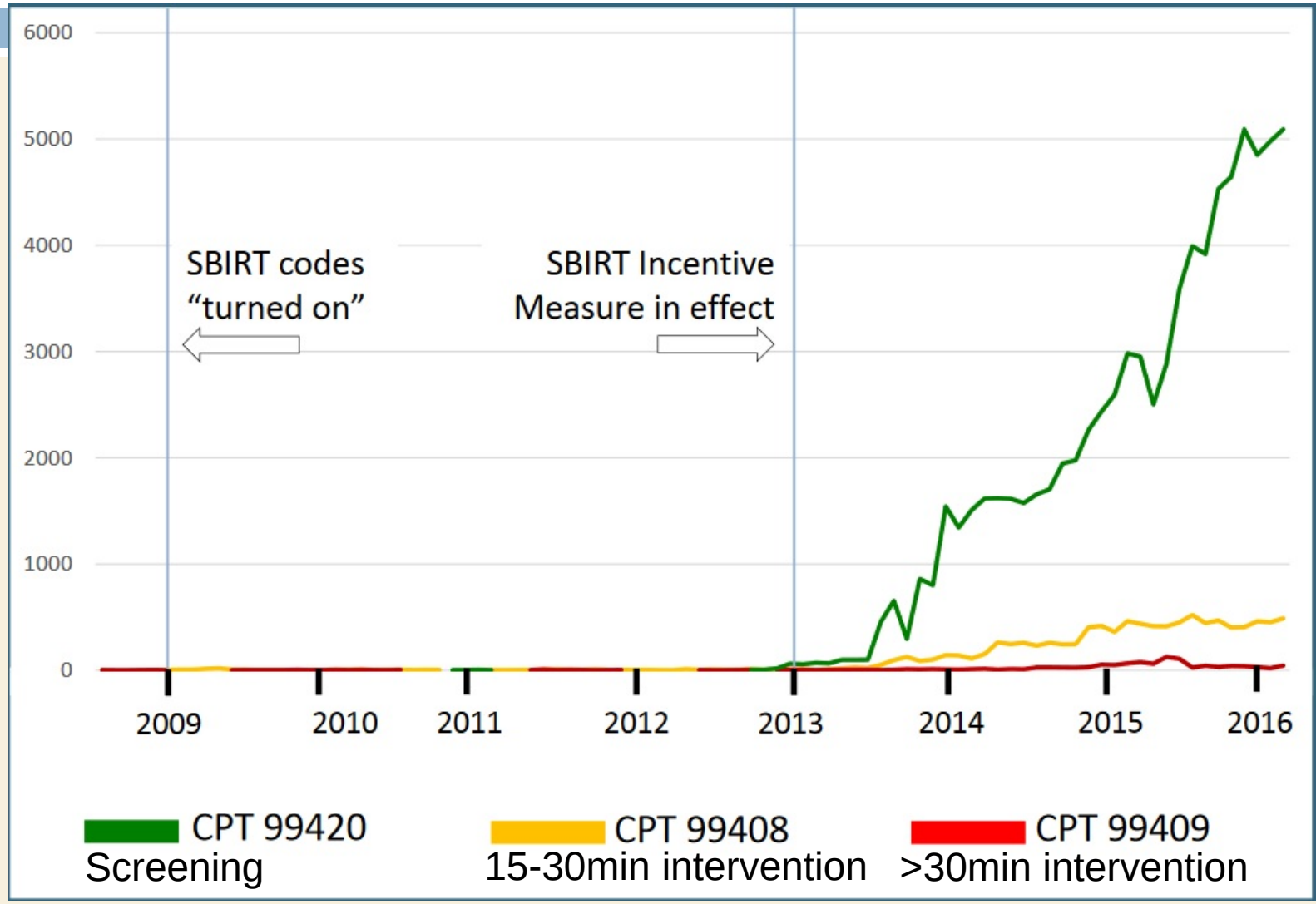
Alternative delivery format:

- Electronic delivery of SBI

Oregon's adoption of SBI

2009 - Added billing codes but no effect on SBI delivery

2013 – Added Medicaid performance incentives that increased *Screening* (green line) but little effect on delivery of *Brief Intervention* (yellow and red lines)

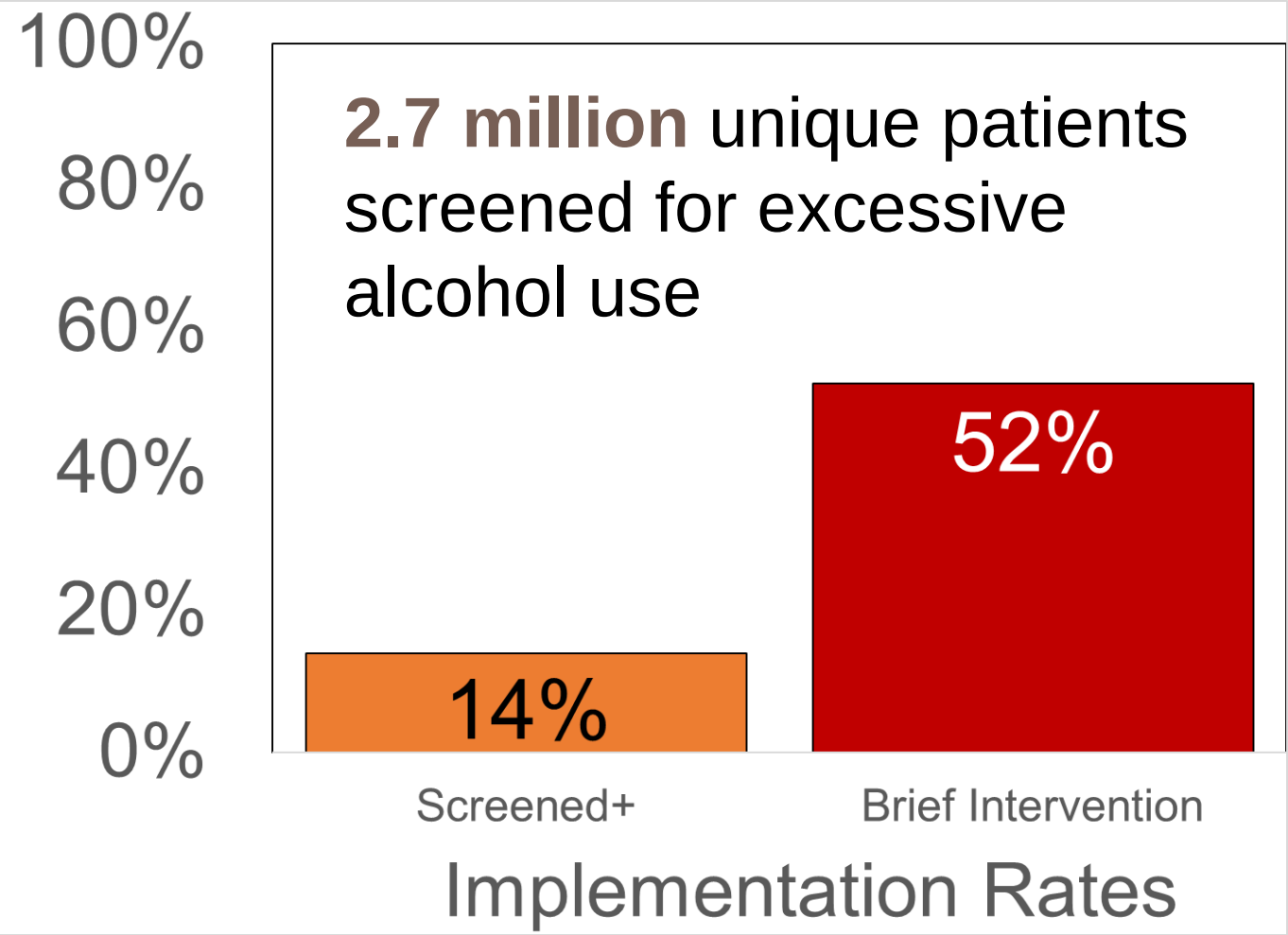


Winkle 2016. SBIRT Oregon avalable at IRETA.org.

Kaiser Permanente Northern California

SBI Delivery

- **14%** patients screened positive for excessive alcohol use
- **Half** of those who screened positive received a brief intervention



Sterling 2017. Large scale Implementation of SBIRT

Adoption over time at Kaiser

Use of Brief Intervention for excessive alcohol use rose **2.5x**

from

Oct 2013 (**25%**)

through

Mar 2016 (**62%**)

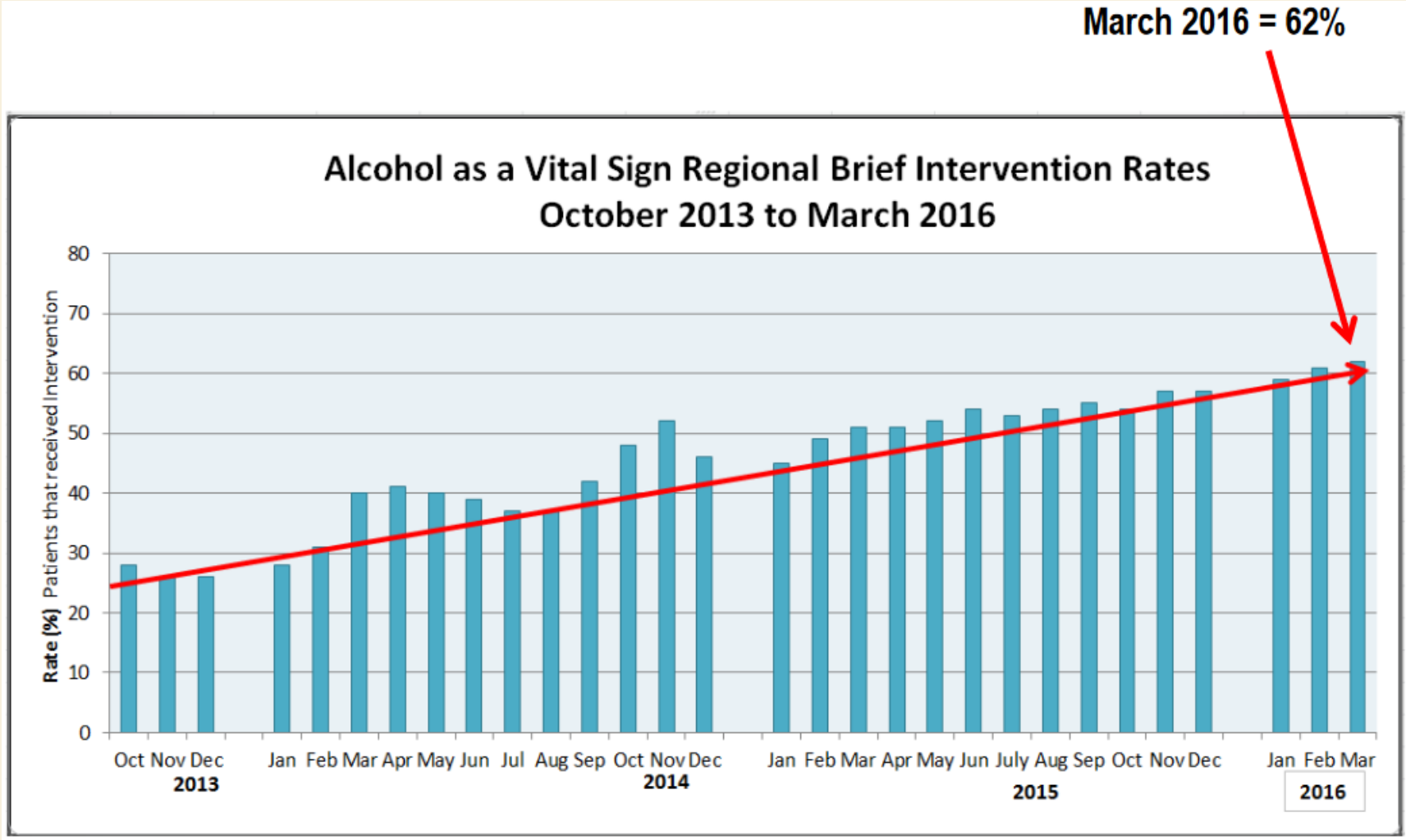


Photo Attribution - Sterling 2017. Large scale Implementation of SBIRT

Kaiser Permanente implementation strategy

Factors important for adoption of SBI

- Leadership support
- Implementation facilitator and technical assistance support
- Alcohol education with evidenced-based training for SBI
- Electronic health record support to identify and track
- Performance feedback
- Marketing and communications promote initiative

Sterling 2017. Large scale Implementation of SBIRT

Electronic health record support for SBI

- **Screening tracking –** prompt to screen
- **Workflow routing –** automate communication between staff to address alcohol use problems
- **Documentation –** templates for notes, auto-populate follow-up recommendations and discharge record
- **Decision support –** automate screen scoring, generate next steps or clinical support based on screening score
- **Information sharing –** share SBI notes with other providers, generate performance reports

Health Information Technology, Evaluation, and Quality Center, 2019

Tablet-based SBI

Randomized trial in women (N=439) recruited at routine OB/GYN visits with three arms:

1 UC - usual care; 2 SBI - clinician delivered brief intervention; 3 eSBI - electronic SBI delivered on tablet

	UC	SBI	eSBI*
Days abstinent	45.3	61.9	61.74
Cost/positive screen	$19.29	$48.79	$18.06
*includes licensing fee for eSBI			

Conclude that electronic tablet education may be as effective at lower cost

Olmstead et al 2019. Addiction, doi:10.1111/add.14668

Practical points

- SBI offers an evidence-based tool to address unhealthy drinking
- Target in general population: unhealthy alcohol use, commonly binge drinking
- Target patients with chronic HCV: any alcohol use due to ongoing liver damage even after cure
- Motivational interviewing skills promote patient engagement
- Supportive implementation infrastructure of value
- Can be delivered efficiently in primary care

Question and answers

Identify 3 components of Brief Intervention for alcohol use

- A – 3 A's (Advise, Assist, Arrange), Stage of Change, Motivational Interviewing

List 3 key motivational interviewing skills

- A - Express empathy, develop discrepancy, avoid arguing, roll with resistance, support self-efficacy

Thanks!

- **You can do it!**
- **For more about HCV go to**

  www.StopHepatitisC.com

HCV STOP HCC

UT Health San Antonio
Center for Research to Advance Community Health

Cancer Prevention & Research Institute of Texas

Pharmacologic Therapies for Alcohol Use Disorder and Care for Chronic HCV Infection

Barbara J Turner MD, MSEd
Charles W. Mathias, Ph.D.

Disclosures

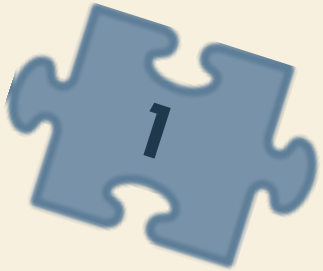
- No Conflicts of Interest
- This presentation supported by a grant from the:

CANCER PREVENTION & RESEARCH INSTITUTE OF TEXAS

UT Health San Antonio

Addressing alcohol in HCV patients

This presentation is 3rd of a 3-part series:



Rationale for addressing alcohol use in all patients but especially in HCV

Practical approaches for delivering *Screening and Brief Intervention* (SBI)

Management of alcohol use disorder

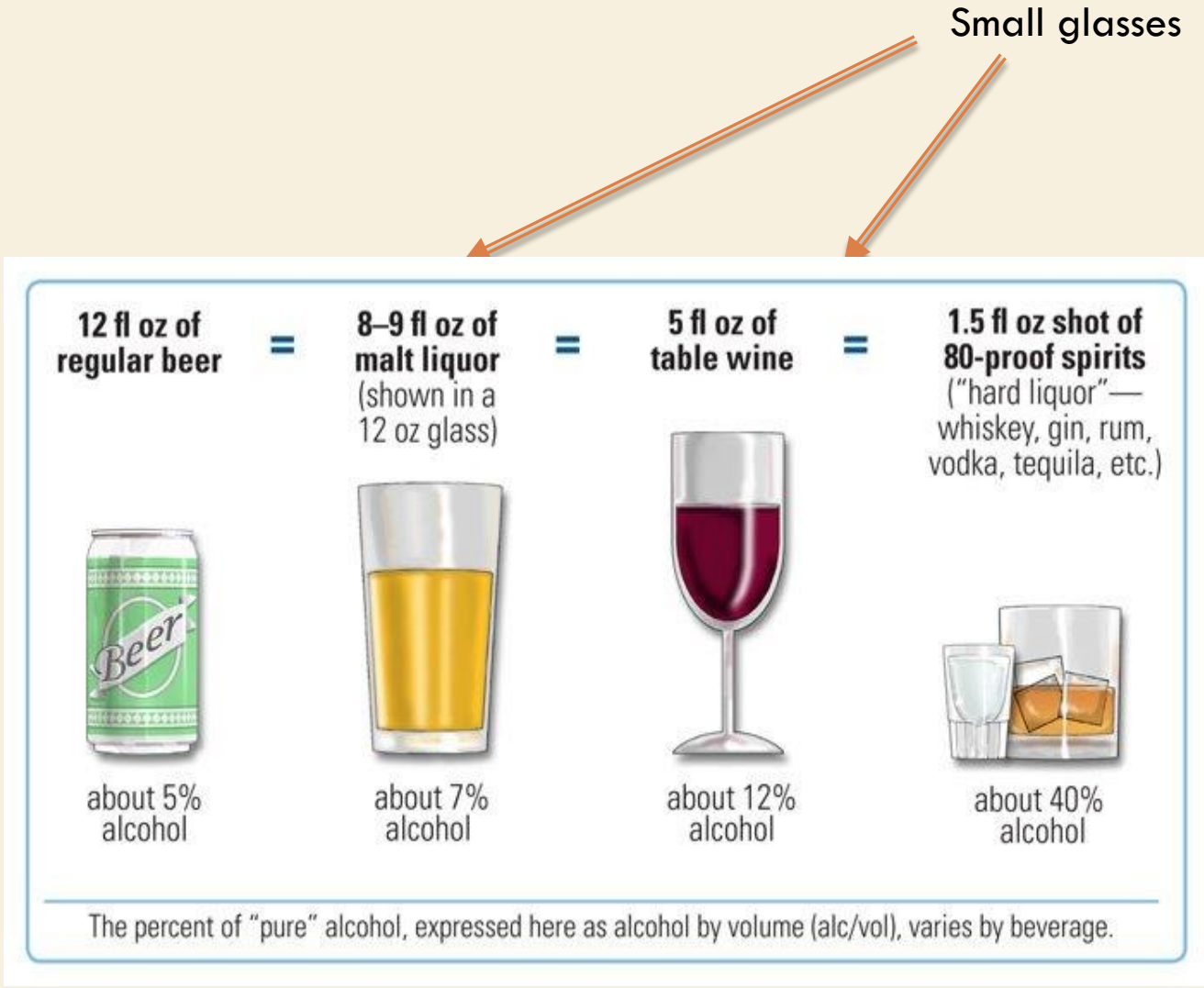
Alcohol: Unhealthy drinking

National Institute on Alcoholism and Alcohol Abuse (NIAAA):
<u>Patterns of Unhealthy or High-Risk Drinking</u>

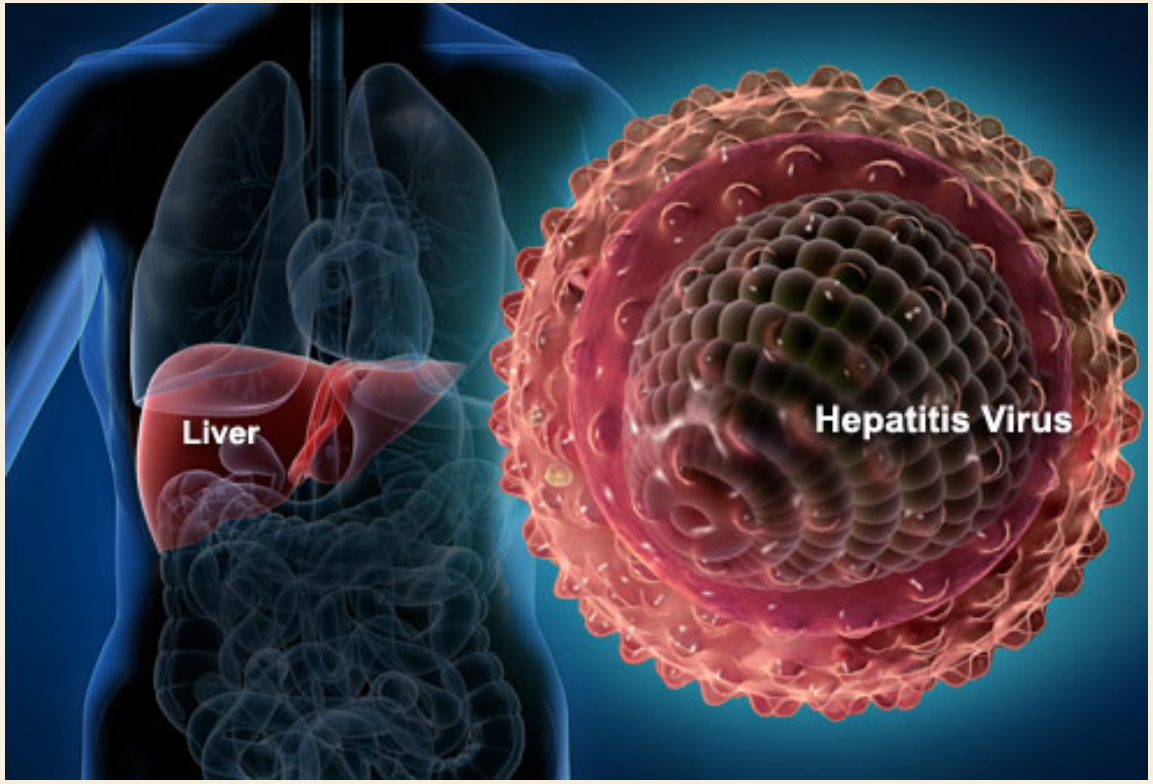
- ✓ For women or men ≥65, high-risk drinking is 4 or more drinks on any single day and more than 7 drinks per week.
- ✓ For men aged <65: 5 or more drinks on any single day and more than 14 drinks per week.

Assessing alcohol consumption in practice

- Screening for alcohol use is a key component of patient care but too often neglected
- Screening measures such as AUDIT rely on standardizing a ‘drink” and frequency



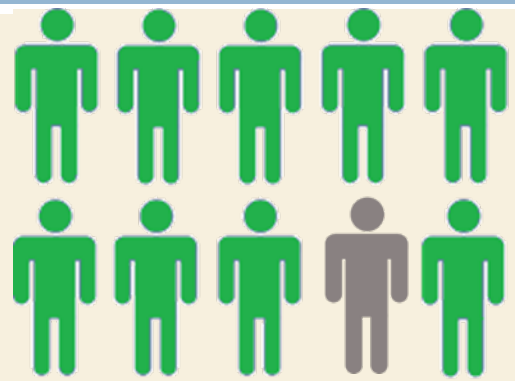
Reminder: Target alcohol use in persons with Hepatitis C virus (HCV)



HCV: Screening guidelines

- US Preventive Services Taskforce guidelines recommend screening all baby boomers (born 1945-65) for HCV
- Draft guidelines recommend screening all adults ages 18-75
- Rationale: cause of serious liver disease including: cirrhosis, liver failure, and liver cancer
  - At least 2.4 million persons have chronic HCV infection in the U.S.
  - Over half have not yet been diagnosed
  - In recent years, thousands of new cases related to illicit opioid use and needle sharing

Good news and a challenge!



- HCV can be treated!
  - Cure rates **>90%**, even for advanced fibrosis or cirrhosis
- The treatment is well tolerated and most patients can be managed in primary care
- However, alcohol use is common patients with HCV and increases the risk of advanced liver disease and liver cancer, even after cure

Managing unhealthy drinking

- Screening and Brief Intervention for all unhealthy drinkers
  - Abstinence – Goal with chronic HCV
- Highest risk are those with an alcohol use disorder (AUD)
  - Medications for AUD can be prescribed in primary care
    - Especially for patients with limited access to or acceptance of specialist care

Let's examine the options!

Learning objectives

- Be able to define 3 of the 11 criteria for Alcohol Use Disorder (AUD)
- List 4 medications for treating AUD along with behavioral therapy
- List 3 main side effects of each medication for AUD
- Prioritize 4 medications for AUD by effectiveness and safety in patients with liver disease

Learning objectives

- Be able to define at least 3 criteria for Alcohol Use Disorder (AUD)
- List 4 medications for treating AUD along with behavioral therapy
- List 3 main side effects of each medication for AUD
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Changes in diagnostic criteria for AUD

- ✓ Diagnostic and Statistical Manual of Mental Disorders (DSM-5)
- **Alcohol use disorder** (AUD) in DSM-5 now replaces terms "alcohol abuse" and "alcohol dependence"
- Combines 7 dependence + 4 abuse criteria of DSM-4
- Eliminates having legal problems but adds craving
- AUD defined as meeting least 2 of 11 criteria within a year

NIAAA 2016. AUD: A Comparison Between DSM–IV and DSM–5. NIH 13-7999

Alcohol Use Disorder (AUD) DSM-5 criteria

Two (mild), 3-5 (moderate), >5 (severe)

1. Drinking more, or longer, than intended	7. Important activities given up or reduced because of drinking (social, work, recreation)
2. Persistent desire or unsuccessful efforts to cut down or control drinking	8. Recurrent use in situations where it is physically hazardous
3. Great deal of time spent to obtain, use, or recover from drinking	9. Continued drinking despite knowing about physical/psychological problems from alcohol
4. Craving or strong urge to drink	10. Tolerance (greater quantity to achieve intoxication, diminished effect from same amount)
5. Drinking resulting in failure to fulfill major roles (work, school, home)	11. Withdrawal (alcohol withdrawal syndrome, using alcohol to avoid withdrawal)
6. Continued use despite recurrent social problems from drinking	

Prevalence of AUD in U.S.

- Of adults over 18—about 15.1 million people—have an AUD
  - 9.8 million men and 5.3 million women

Alcohol Facts and Statistics. National Institute on Alcohol Abuse and Alcoholism, June 2017. https://www.samhsa.gov/data/sites/default/files/NSDUHServiceUseAdult-2015/NSDUH-ServiceUseAdult-2015/NSDUH-ServiceUseAdult-2015.htm.

National data: Risks and access to care for AUD

- AUD diagnosis: 13.9% past year and 29.1% lifetime
  - AUD rate by severity: 7.3% Mild, 3.2% Moderate, and 3.4% Severe
  - Rates higher for: men; white; <65 yrs; low income; urban residence
- In 2015, only 8.3% adults who said they needed treatment for alcohol problems received specialty care
- Sources of treatment: 4.5% 12-step, 3.6% health care, 2.0% outpatient, 1.8% rehabilitation

National Epidemiologic Survey on Alcohol and Related Conditions III, 36,309 adults

Alcohol Facts and Statistics. National Institute on Alcohol Abuse and Alcoholism, June 2017. https://www.samhsa.gov/data/sites/default/files/NSDUHServiceUseAdult-2015/NSDUH-ServiceUseAdult-2015/NSDUH-ServiceUseAdult-2015.htm.

Grant et al 2015. JAMA Psychiatry, 72(8), 757-766.

AUD management

Brief Intervention for all unhealthy drinkers – 15 min counseling

- Advise, Assist, Arrange to address unhealthy alcohol use
- Stage of change – tailor counseling
- Motivational interviewing skills – effective counseling

Management of AUD

- Pharmacotherapy
- Cognitive behavioral therapy (CBT)
- Motivational enhancement therapy
- 12-step programs such as Alcoholics Anonymous®
- Most effective if behavioral therapy and medication combined

Potential treatment benefits

AUD morbidity and mortality significantly reduced when treatment results in decline in:

- amount consumed overall
- heavy drinking days
- craving for alcohol

Laboratory measure of success:

- Reduce hepatic biomarkers of inflammation (e.g., serum gamma-glutamyl transferase-GGT, carbohydrate deficient transferrin-CDT)

For patients with chronic HCV

- Cutting out alcohol reduces risk of cirrhosis and liver cancer

Plunk AD, et al. Alcohol Clin Exp Res 2014;38(2):471–8.
Jonas DE, et al. JAMA 2014;311(18):1889–900.

Learning objectives

- Be able to define at least 3 criteria for Alcohol Use Disorder (AUD)
- List at least 3 medications for treating AUD along with behavioral therapy
- List 3 main side effects of each medication for AUD
- Prioritize 3 medications for AUD by effectiveness and safety in patients with liver disease

Medication-assisted treatment (MAT) for AUD

- FDA-approved
  - Naltrexone (oral or injectable) – first line option
  - Disulfiram
  - Acamprosate

- Not FDA approved,
  but with strong evidence
  - Topiramate

Oral naltrexone (ReVia®; Depade®)

- Nonselective antagonist of μ-, κ-, and δ-opioid receptors
  - First approved for opioid dependence
  - Reduces dopaminergic effects and beta-endorphins from drugs and alcohol
- Meta-analysis: modest benefits on stopping alcohol (NNT=20) and binge drinking (NNT=12).
- Do <u>not</u> use with opioids, can precipitate withdrawal
- No abuse potential or tolerance for its efficacy
- *Efficacy depends upon adherence*

Kranzler and Soyka. JAMA. 2018;320(8):815-824.

Naltrexone use in liver disease

- Metabolized primarily in the liver
- Generally not hepatotoxic at recommended doses
- But contraindicated in acute hepatitis or liver failure
- Monitor patients with active liver disease (e.g. every few weeks initially then 2 months) clinically and laboratory for hepatotoxic effects

Treatment Improvement Protocol (TIP) Series, No. 49. Center for Substance Abuse Treatment. Rockville (MD): Substance Abuse and Mental Health Services Administration (US); 2009.

Naltrexone dosing

Initial and average maintenance dosage for most patients	50 mg/day in 1 tablet
Reduce dosage for greater risk of adverse events: ✓ moderate liver disease (only if AST and ALT<5x normal), ✓ renal disease, ✓ shorter period of abstinence	12.5 mg/day (quarter tablet) or 25 mg/day (half tablet) for 1 week (or 2 weeks if needed) with food; gradually increase to 50 mg/day

- ✓ Treatment for 4+ months
- ✓ Take with carbohydrate to decrease nausea or can reduce dose
- ✓ Not demonstrated to be safe in pregnancy

Long-acting injectable Naltrexone (Vivitrol)

- Appropriate if patient can abstain from alcohol at least 4-7 days before starting
- Dosage: 380 mg monthly by IM gluteal injection, given in office (alternating buttocks)
- Similar effectiveness to oral naltrexone in a small trial
  - Injectable naltrexone arm reduced binge drinking from 14% to 78% at 45 days
- Once monthly dosing may increase adherence but *costly*

Kranzler and Soyka. JAMA. 2018;320(8):815-824.

Disulfiram (Antabuse)

Approved in 1949 for AUD, inhibits aldehyde dehydrogenase which metabolizes acetaldehyde, a toxic metabolite of alcohol

- Increases acetaldehyde level with drinking
  - Results in nausea, flushing, vomiting, sweating, hypotension, palpitations and, rarely, cardiovascular collapse
  - Effectiveness due to avoiding alcohol to prevent this reaction
- Higher success (abstinence, fewer drinking days) in open-label studies and *directly observed therapy*
- For abstinence – primarily in committed patients

Kranzler and Soyka. JAMA. 2018;320(8):815-824.

Prescribing Disulfiram

- Initial dose: 500 mg daily for 1-2 weeks
- Maintenance dose: 250 mg/d
- Do not take disulfiram <12 hours after drinking alcohol. Reaction begins about 10 mins after drinking and lasts for 1 hour or more
- Concern for use with HCV infection
  - Hepatitis (potentially fulminant)
- Drug interactions: Do not use with metronidazole, paraldehyde, alcohol, or alcohol-containing preparations (e.g., cough syrups, tonics)
  - Care with phenytoin – can increase blood level so monitor level

Acamprosate (Campral)

- Maintain abstinence from alcohol when patients are already abstinent
- Dose: 2 tabs (each 333 mg) TID (reduce for renal impairment)
- In a meta-analysis (N = 4827 subjects), acamprosate reduced risk of resuming drinking among abstinent patients (NNT = 12) but no significant effect on binge drinking
- Can be used with liver disease
- However, generally disappointing clinical experience

Kranzler and Soyka. JAMA. 2018;320(8):815-824.

Topiramate

- Approved as anticonvulsant therapy and for migraines
  - Generic for many years so FDA application for this indication unlikely despite benefit
- Unclear mechanism for how it works for AUD
  - Theories: blocks glutamate, promotes GABA, and inhibits dopamine release
- Small to moderate effects in trials
- Meta-analysis of early placebo-controlled trials from 2010
  - Topiramate resulted in fewer heavy drinking days, more abstinent days, and decreased GGT levels
- Topiramate superior in one trial to naltrexone on multiple measures of alcohol dependence and consumption at 6 months

Blodgett et al. Alcohol Clin Exp Res 2014;38(6):1481–8
Flo´rez et al. Alcoholism 2008;32:1251–1259.

Topiramate prescribing

- Key benefits:
  - does not require abstinence before initiating
  - *safer with liver disease* because not metabolized by the liver
- Dose: initial 25 mg/d orally and slowly titrate up weekly by 25 mg/d to a maximum dose of 300 mg/d
  - dose range from 75-300 mg/d but 100-200/d may be sufficient
  - dose reduction in renal disease
  - slow increase in dose reduces side effects

Review: Medications for AUD

Medication	Typical Dose	Comment
Naltrexone, oral	50 mg/d	Not for persons taking opioids (used as treatment for opioid use disorder)
Naltrexone, injected	380 mg monthly	As above – not for use with opioids – used as treatment
Disulfiram	250 mg/d	Not for persons actively drinking
Acamprosate	666 mg TID	Dose reduction for renal impairment
Topiramate	75-300 mg/d	Titrate up slowly, often100-200/d effective

Kinney and Merrill. National HIV Curriculum. 2017; Section 2, Topic 7.

Learning objectives

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Side effect summary

Medication	Key side effects			
Naltrexone	Somnolence/ sleep disruption	Nausea/ vomiting	Decreased appetite	Abdominal pain
Disulfiram	Sedation	Headache	Rash	Serious reaction to alcohol – even CV collapse
Acamprosate	Diarrhea	Anxiety		
Topiramate	Paresthesias	Decreased appetite/ taste perversion	Problems with memory and concentration	Pruritis

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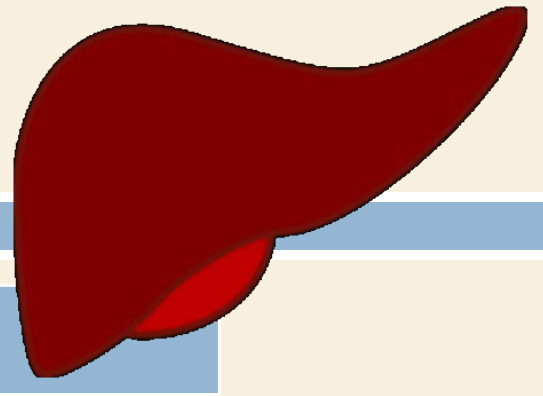
Prioritized by effectiveness and safety with liver disease



Medication	Effects with liver disease
Topiramate	Not metabolized in the liver Side effects managed with slow titration of dose
Naltrexone	Metabolized by the liver Avoid in acute hepatitis or advanced liver disease Monitor LFTs
Disulfiram	Do not use in patients with cirrhosis Monitor LFTs because hepatitis can occur
Acamprosate	Not metabolized in the liver Do not use with creatinine clearance <30 ml/min

Fuster and Samet. NEJM. 2018;379:1251-1261

Primary care clinicians need to be able to manage AUD

- Patients without insurance or other barriers to accessing specialty services
- Patients who refuse specialty care but receptive to primary care management
- Patient-centered medical home: Favorable setting when offer behavioral/addiction counseling in addition to medication

Effectiveness of treatment for AUD in primary care

VA randomized trial (N=163)

- Specialty care or
- Primary care – medication (naltrexone) and behavioral support

Results

- Naltrexone prescribed for 66% of participants in primary care vs 12% in specialty care $p < 0.0001$
- More participants in primary care remained in care after 6 months (41% vs 11%, P<0.0001)
- Fewer heavy drinking days in primary care (P=0.004)
- Abstinence did not differ

Oslin DW et al. *J Gen Intern Med*. 2013;29(1):162-8.

AUD or opioid use disorder management in primary care

Randomized trial in primary care (N=377)

- 6-session brief psychotherapy treatment and/or treatment with either sublingual buprenorphine/naloxone (opioid use) or long-acting injectable naltrexone (AUD) or
- Usual care

Results

- Both psychotherapy and medication increased 30 day abstinence from opioids or alcohol at 6 months (32.8% vs 22.3%; P=0.03)
- However few patients actually received medication – suggesting more education and support needed for primary care to deliver this care

Watkins KE. JAMA Intern Med. 2017;177(10):1480-1488.

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Question and answers

- Q - Define at least 3 criteria for Alcohol Use Disorder (AUD)
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  - Great deal of time spent to obtain, use, or recover from drinking
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  - Continued use despite recurrent social problems from drinking
  - Drinking results in failure to fulfill major roles (work, school, home)
  - Persistent use in situations when physically hazardous
  - Continued drinking despite knowing risks
  - Tolerance (need more for intoxication, diminished effect from same amount)
  - Withdrawal (alcohol withdrawal syndrome, use alcohol to avoid withdrawal)

Questions and answers

- Q - List 4 medications to treat AUD
- Q – List 3 common side effects of each medication

Medication	Key side effects			
Naltrexone	Somnolence/ sleep disruption	Nausea/ vomiting	Decreased appetite	Abdominal pain
Disulfiram	Sedation	Headache	Rash	Serious reaction to alcohol – even cardiovascular collapse
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Topiramate	Paresthesias	Decreased appetite/ taste perversion	Problems with memory and concentration	Pruritis

Question and answer

- Prioritize 4 medications for AUD by effectiveness and safety in patients with liver disease
  - Topiramate
  - Naltrexone
  - Disulfiram
  - Acamprosate

Conclusions

- AUD is a significant public health threat but especially dangerous for patients with chronic HCV
- Best practice for AUD treatment to combine pharmacotherapy with behavioral therapy
- Topiramate not FDA approved but with good evidence of effectiveness and safest for liver disease
- Naltrexone offers a reasonable alternative with LFT monitoring if active liver disease
- Studies have shown that AUD can be successfully managed in primary care
  - Take advantage of team-based care with behavioralist

Acknowledgements

The STOP HCC team would like to thank for their wise counsel and editing.

- John D. Roache, Ph.D. Professor of Psychiatry and Pharmacology and Chief of the Division of Alcohol and Drug Addiction in the Department of Psychiatry.
- Van King M.D., Professor of Psychiatry and Medical Director, Be Well Clinic

Both at University of Texas Health Science Center at San Antonio