Alcohol use and women with and at risk for HIV

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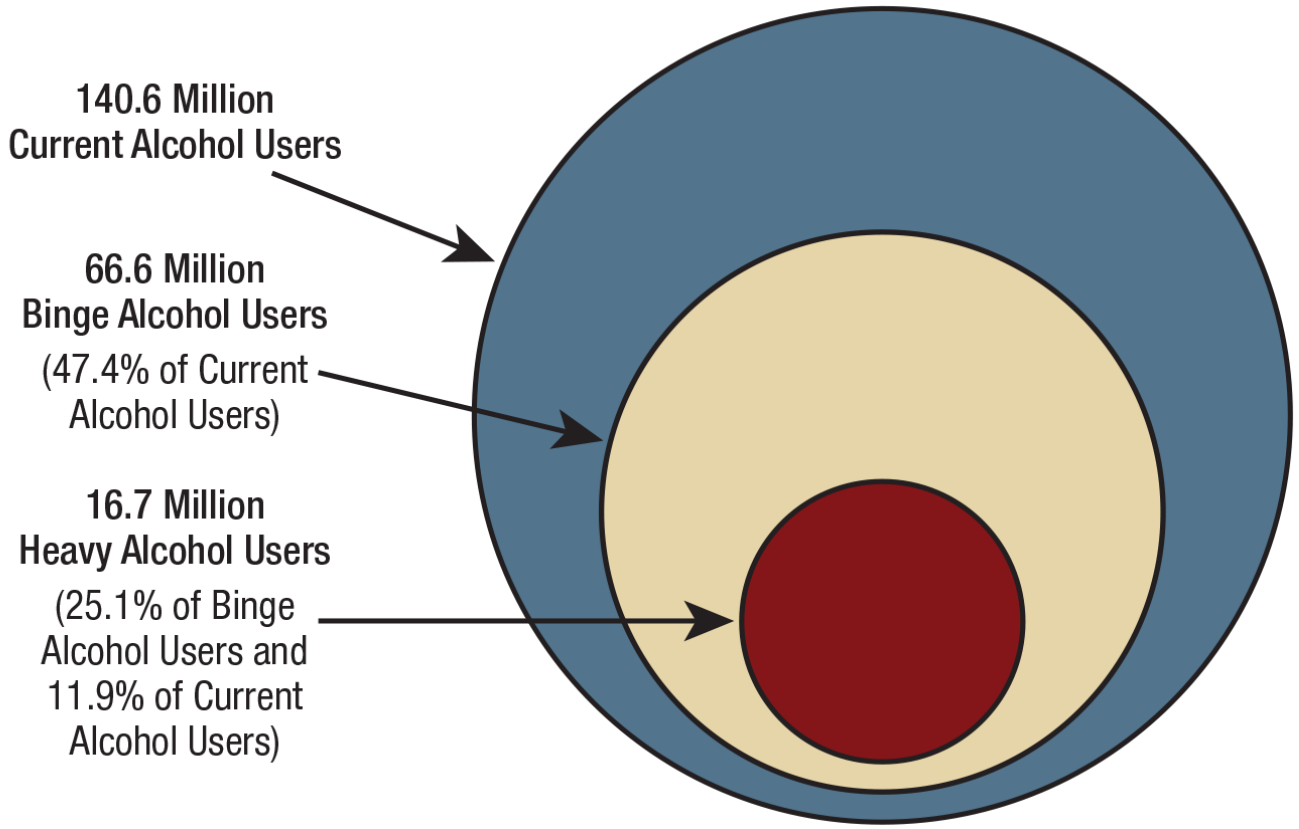
Disclosures

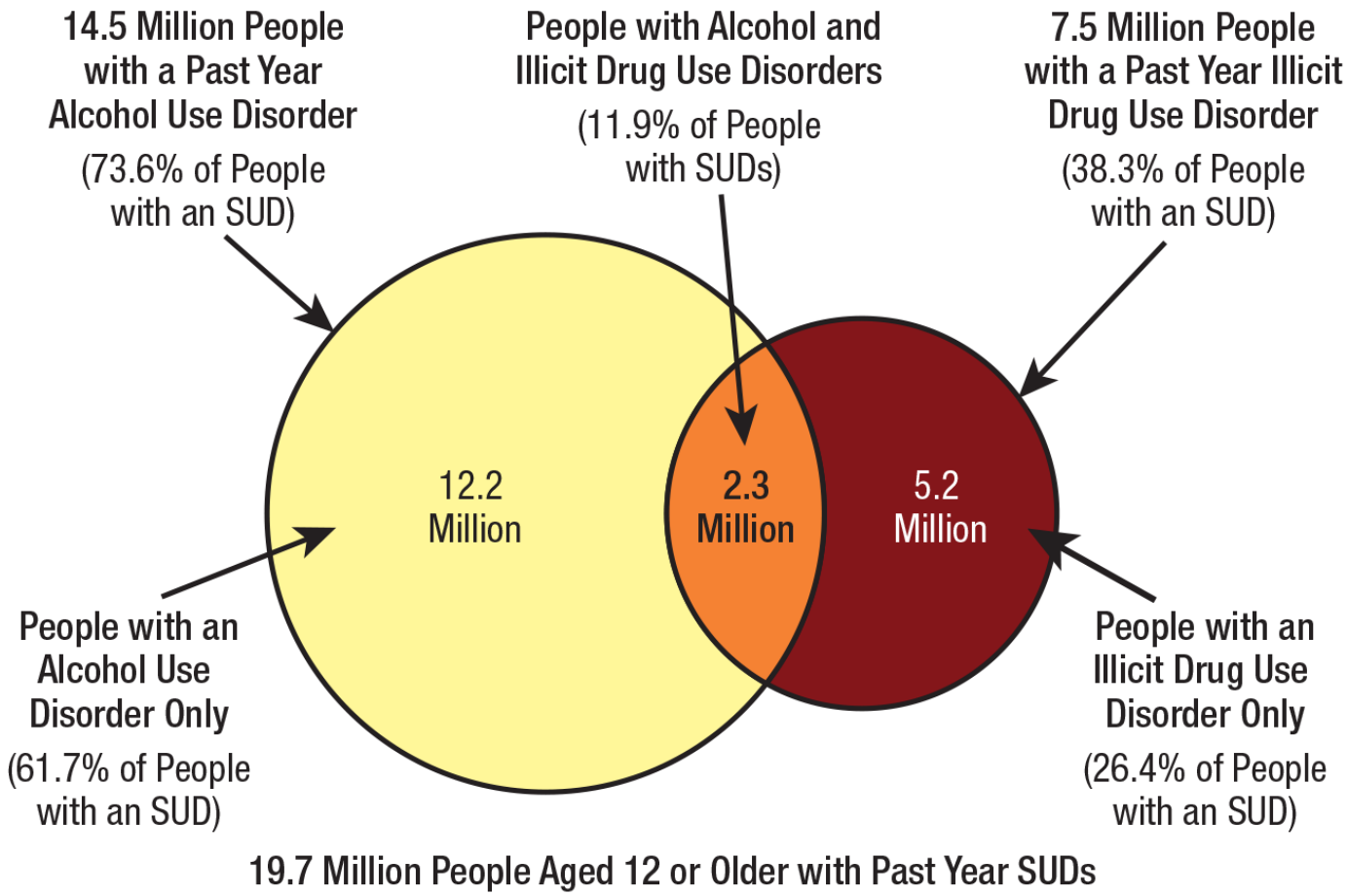
- None

Current, Binge, and Heavy Alcohol Use among People Aged 12 or Older: 2017



Note: Since 2015, the threshold for determining binge alcohol use for males is consuming five or more drinks on an occasion and for females is consuming four or more drinks on an occasion.

Alcohol Use Disorder and Illicit Drug Use Disorder in the Past Year among People Aged 12 or Older with a Past Year Substance Use Disorder (SUD): 2017



Women and Alcohol

- **Prevalent**
  - **46% women report any alcohol use in the past one month[1]**
  - **12% of women report binge drinking 3 times per month with an average of 5 drinks per binge drinking episode[1]**
  - **2.5% of women meet criteria for past year alcohol use disorder[1]**
- **Women experience adverse effects of alcohol at lower levels of use**
  - **Differences in body water, differences in alcohol dehydrogenase result in higher BAC**
  - **Increased impairment in lower levels of use which an result in hangovers, blackouts, regretted behaviors**
  - **Results in alcohol related diseases (liver, neurological, cardiac) after shorter period of drinking compared to males**
- **Alcohol use among women can be comorbid with other substance use and mental health disorders**
  - **Anxiety, Depression, Trauma and PTSD more prevalent among women with AUD**
  - **Other substance use associated with alcohol use**
  - **Alcohol use among women also associated with history of IPV**

[1]https://www.cdc.gov/alcohol/fact-sheets/womens-health.htm; Fetzner MG, McMillan KA, Sareen J, Asmundson GJ. What is the association between traumatic life events and alcohol abuse/dependence in people with and without PTSD? Findings from a nationally representative sample. Depress Anxiety. 2011 Aug;28(8):632-8. doi: 10.1002/da.20852. Epub 2011 Jul 18. PubMed PMID: 21769995.

Women and Alcohol and Sex:

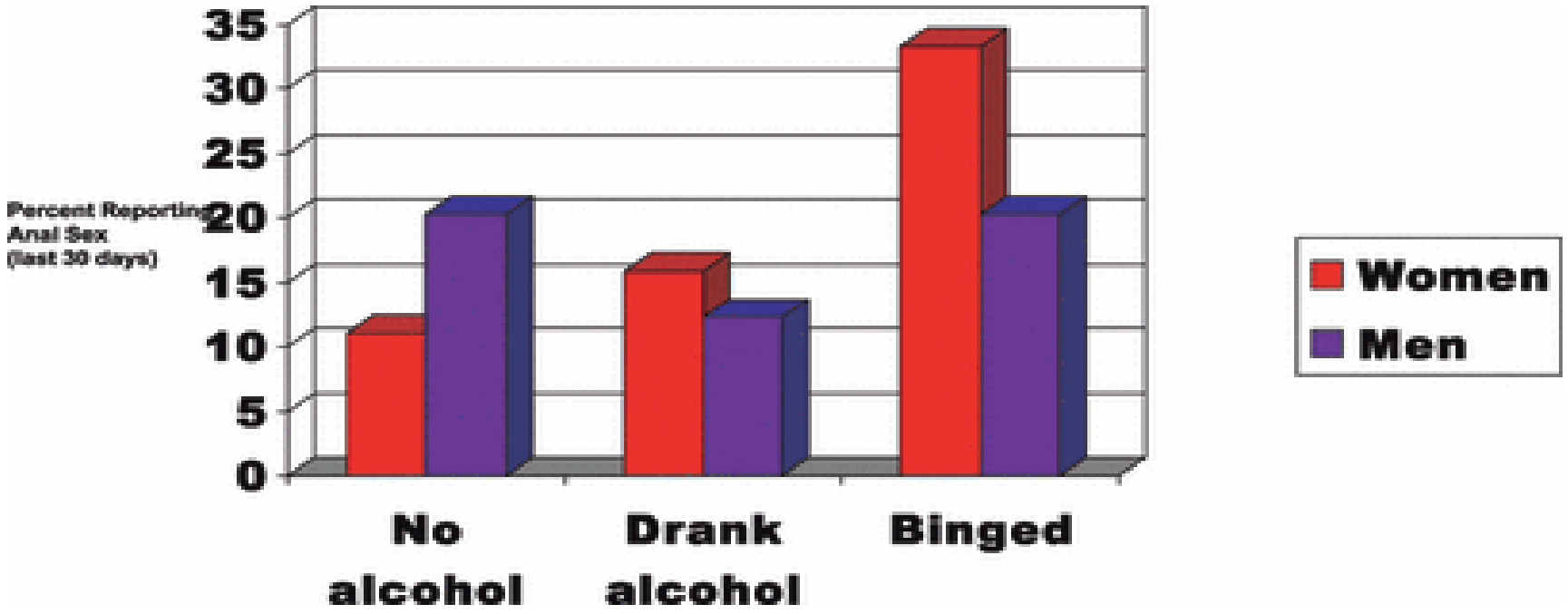
Why PrEP can benefit women who drink alcohol and have sex

- **Alcohol use is lower among women than men but women are more likely than men to report alcohol use before sex**
- **80% of first sexual experiences occur under the influence of alcohol**
- **~ 50 % of unplanned sexual encounters occur when one or both persons are under the influence of alcohol**
- **67% of women were intoxicated when an unplanned pregnancy occurred.**
- **60% of STIs were transmitted when the partners were intoxicated**
- **50% of convicted rapists were drinking at the time of the assault**
- **38% of women reported being under the influence of alcohol during their assault**
- **A woman who is drinking alcohol is perceived by both women and men to be less attractive, more sexually available, and more likely to have sex than a nondrinking woman; no such finding for men**

Women, Alcohol, Sex and HIV

- **Exceeding daily and weekly ‘safer’ limits of alcohol use increases likelihood of sexual behaviors**
- **Compared with nondrinkers, women drinkers had:**
  - **2.5x odds of having multiple sex partners**
  - **4x odds of having anal sex, typically condomless**
  - **Binge drinking in particular associated with gonorrhea diagnosis at BCHD**
- **Generally see more alcohol-sexual behavior associations among women compared with men**
- **Behavioral interventions to promote condom use are less effective among women than men living with HIV**

The Relationship Between Recent Alcohol Use and Sexual Behaviors: Gender Differences Among Sexually Transmitted Disea Patients

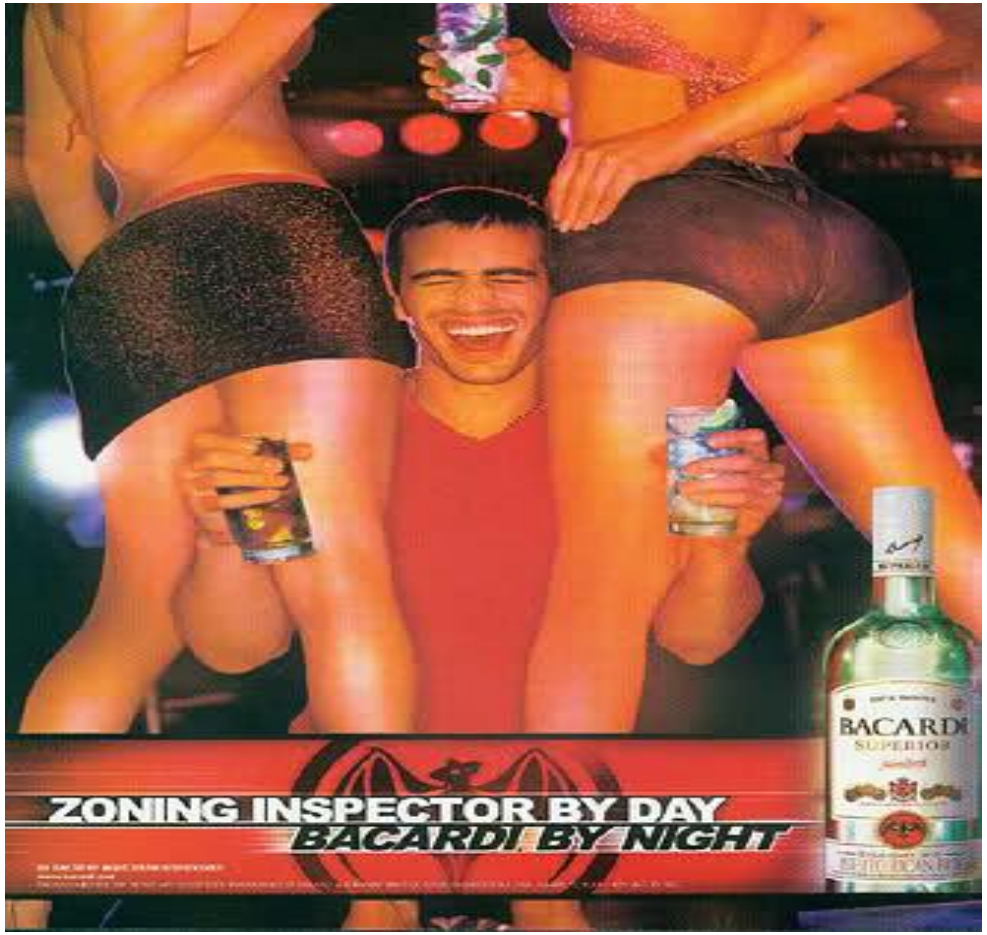


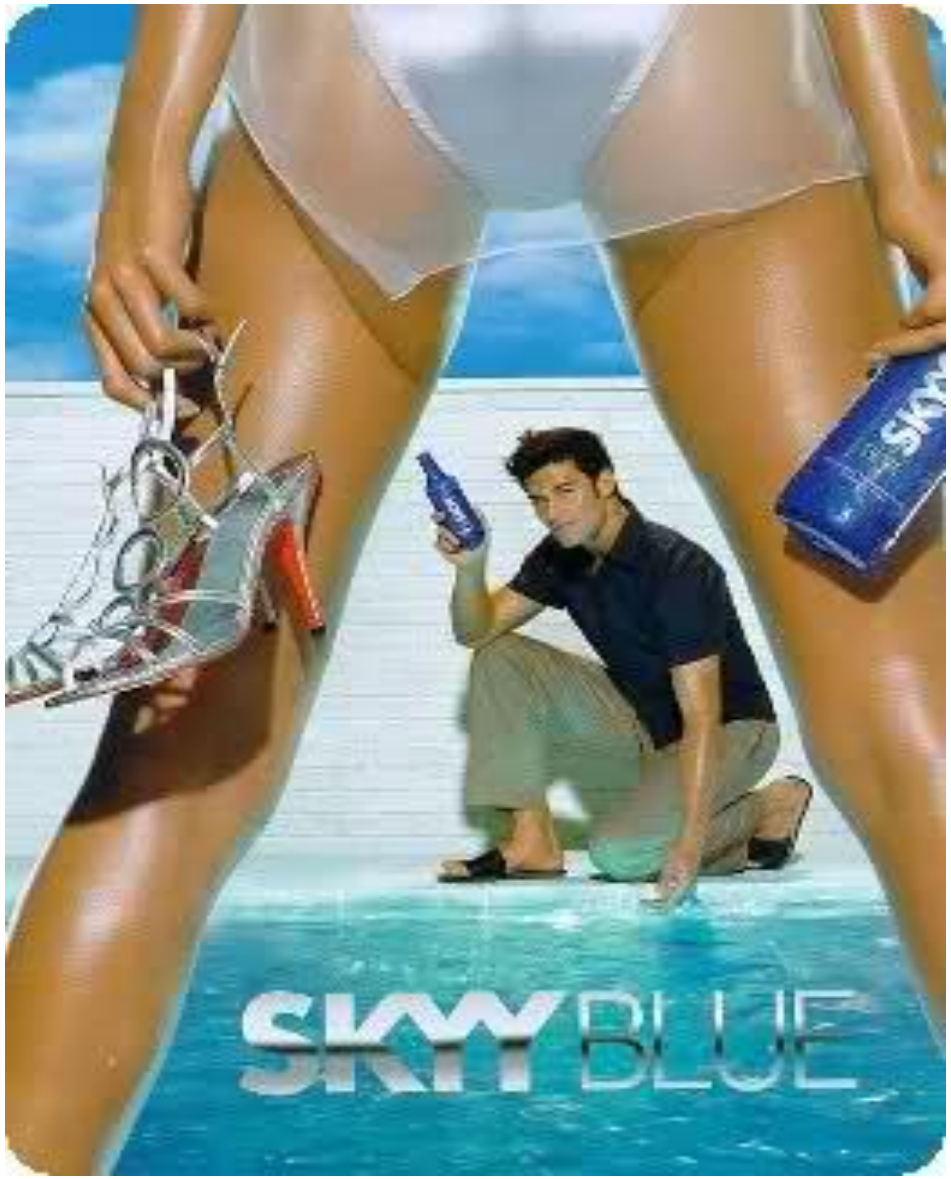
The Relationship Between Recent Alcohol Use and Sexual Behaviors: Gender Differences Among Sexually Transmitted Disease Clinic Patients, Volume: 32, Issue: 11, Pages: 2008-2015, First published: 21 October 2008, DOI: (10.1111/j.1530-0277.2008.00788.x)

Expectancies and Realities

- **Alcohol influences sexual behaviors by:**
  - **Increasing sexual disinhibition**
  - **Increasing myopia for consequences, focus on present**
- **Sex-related alcohol expectancies = beliefs about the physical, emotional and behavioral effects of alcohol consumption on sexual behavior**
  - **Powerful and reinforced by culture**
  - **“Alcohol improves sexual pleasure”**
  - **Women who hold this expectancy drink more alcohol before sex and are more likely to have casual partners, multiple partners and/or condomless sex after drinking**
  - **And more likely to report sexual victimization**

What's the message?





Expectancies about alcohol and sex

- **[alcohol] raises sex drive tremendously. I mean, like, doing basically anything... like that S&M or anal sex, anything to satisfy that person, you are willing to do it because you had too much alcohol in your system, it can be anal sex, oral sex, or whatever… That's all you feel is pleasure.**
- **Well, some drink above their limit, and then, they are on the prowl. They go find their man - - this man who first looks like he can be a barber. All of a sudden look like, "Oh, my goodness, girl, he's so gorgeous. - - It just changes your eye sight. Just like—God, forgive me—a cancer patient will look like Vin Diesel in your eyes.**

And the consequences

- **Well, like you might get in a car with somebody that you normally wouldn't get in a car with, because, your mind is just so messed up at the time, you're just having a good time, next thing you know, he's like saying, well, I can give you a ride home, and you don't know him from a can of spray paint. You wake up the next day in a bed with somebody and you can be like, oh my God, who is this- or two, you know, you can get yourself raped, beat up real bad or even killed-**
- **He will put two drinks in your hands and one time, but before you can finish this one he's bringing you another one and he'll sit there all night, you know, small conversation. 'You want another one? You good? You're sure? You want a shot?' and they'll sit like vultures and wait and see who's stumbled off the bar stool or who falls down the steps and they're usually the victims. Then you feel bad, wash yourself in the morning, and you're thinking like 'What? Did I use a condom? Did I give him some head? Hopefully I didn't.' You know. It's the game of survival out there, it is.**

So…to summarize

- **Alcohol use and binge drinking are prevalent among women**
- **Alcohol use among women is associated with HIV transmission risk behaviors**
  - **Unprotected sex and increased other substance use (not discussed!)**
- **Consequences of use can be severe and dangerous**

Approach to Alcohol Use Among Women

1. Recognition of risky alcohol use
2. Treatment
3. Identification and treatment of co-occurring mental health disorder
4. Treatment retention

Approach to Alcohol Use in Women: Screening

- **Who should we screen?**
  - **All individuals presenting to care**
  - **Screen at baseline, and if negative, repeat <u>at least</u> annually, if positive, at every visit**
- **What should we use?**
  - **Alcohol: National Institute on Alcohol Abuse and Alcoholism recommends single question**
    - **How often in the last year have you had 4 or more drinks (women) or 5 or more drinks (men);[1]**
    - **if ≥1, follow-up with quantity/frequency questions;**
    - **Alcohol Use Disorders Test-Consumption (AUDIT-C); Clarify that alcohol includes beer, wine, liquor**

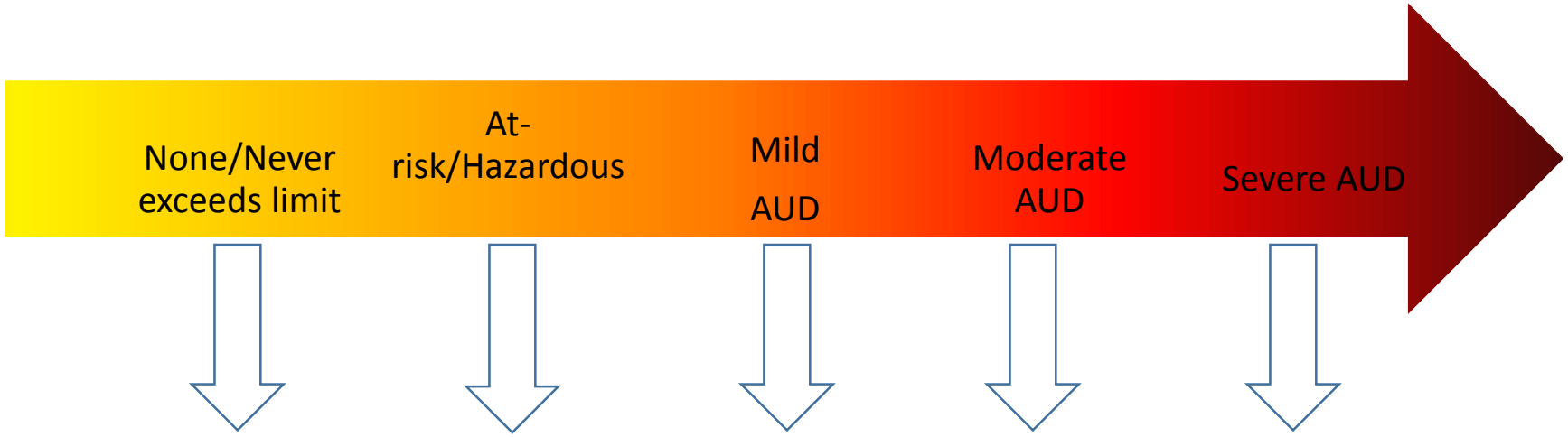
[1]Smith PC. J Gen Intern Med. 2009 24:783-8.

Standard Drink Definition

Why these beers are not standard drinks

DSM–IV			DSM–5	
Any 1 = ALCOHOL ABUSE	Recurrent alcohol use resulting in a failure to fulfill major role obligations at work, school, or home (e.g., repeated absences or poor work performance related to alcohol use; alcohol-related absences, suspensions, or expulsions from school; neglect of children or household.	1	Alcohol is often taken in larger amounts or over a longer period than was intended. (See DSM–IV, criterion 7.)	The presence of at least 2 of these symptoms indicates an **Alcohol Use Disorder (AUD).** The severity of the AUD is defined as: **Mild:** The presence of 2 to 3 symptoms **Moderate:** The presence of 4 to 5 symptoms **Severe:** The presence of 6 or more symptoms
	Recurrent alcohol use in situations in which it is physically hazardous (e.g., driving an automobile or operating a machine when impaired by alcohol abuse).	2	There is a persistent desire or unsuccessful efforts to cut down or control alcohol use. (See DSM–IV, criterion 8.)	
	Recurrent alcohol-related legal problems (e.g., arrests for alcohol-related disorderly conduct). ****This is not included in DSM–5****	3	A great deal of time is spent in activities necessary to obtain alcohol, use alcohol, or recover from its effects. (See DSM–IV, criterion 9.)	
	Continued alcohol use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the alcohol (e.g., arguments with spouse about the consequences of intoxication, physical fights).	4	Craving, or a strong desire or urge to use alcohol. ****This is new to DSM–5****	
Any 3 = ALCOHOL DEPENDENCE	Tolerance, as defined by either of the following: a) A need for markedly increased amounts of alcohol to achieve intoxication or desired effect b) Markedly diminished effect with continued use of the same amount of alcohol	5	Recurrent alcohol use resulting in a failure to fulfill major role obligations at work, school, or home. (See DSM–IV, criterion 1.)	
	Withdrawal, as manifested by either of the following: a) The characteristic withdrawal syndrome for alcohol b) Alcohol is taken to relieve or avoid withdrawal symptoms	6	Continued alcohol use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of alcohol. (See DSM–IV, criterion 4.)	
	Alcohol is often taken in larger amounts or over a longer period than was intended.	7	Important social, occupational, or recreational activities are given up or reduced because of alcohol use. (See DSM–IV, criterion 10.)	
	There is a persistent desire or unsuccessful efforts to cut down or control alcohol use.	8	Recurrent alcohol use in situations in which it is physically hazardous. (See DSM–IV, criterion 2.)	
	A great deal of time is spent in activities necessary to obtain alcohol (e.g., driving long distances), use alcohol, or recover from its effects.	9	Alcohol use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by alcohol. (See DSM–IV, criterion 11.)	
	Important social, occupational, or recreational activities are given up or reduced because of alcohol use.	10	Tolerance, as defined by either of the following: a) A need for markedly increased amounts of alcohol to achieve intoxication or desired effect b) A markedly diminished effect with continued use of the same amount of alcohol (See DSM–IV, criterion 5.)	
	Alcohol use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance (e.g., continued drinking despite recognition that an ulcer was made worse by alcohol consumption).	11	Withdrawal, as manifested by either of the following: a) The characteristic withdrawal syndrome for alcohol (refer to criteria A and B of the criteria set for alcohol withdrawal) b) Alcohol (or a closely related substance, such as a benzodiazepine) is taken to relieve or avoid withdrawal symptoms. (See DSM–IV, criterion 6.)	

Management of Alcohol Use



Adapted from Willenbring ML, et al. *American Family Physician*. 2009. Volume 80, issue 1 and Willenbring ML. Addiction Professional 2008. http://www.addictionpro.com.

Brief Alcohol Intervention

- **Brief, directive interaction that provides personalized feedback based on alcohol use and related problems (e.g., elevated LFTs, depression, increased interpersonal conflicts, HIV medication adherence, etc.)**
- **Offers specific drinking reduction strategies, such as goal setting for “safer" drinking, alternatives to drinking, management of risky mood and situations**
- **Low cost, effective treatment to promote reductions in drinking in *non-alcohol-dependent individuals*, and to facilitate referral to treatment in dependent individuals .**

Addressing Unhealthy Use: Brief Intervention

FRAMES: Using a non-judgmental approach

Feedback and discussion of the potential effects of alcohol sexual risk behavior and other substance use, relationships, work-life, school, trauma

Responsibility –
emphasis on role of personal responsibility in making a change

Advise to avoid or reduce drinking

Menu of options

Empathy and encouragement of self-efficacy for successful change

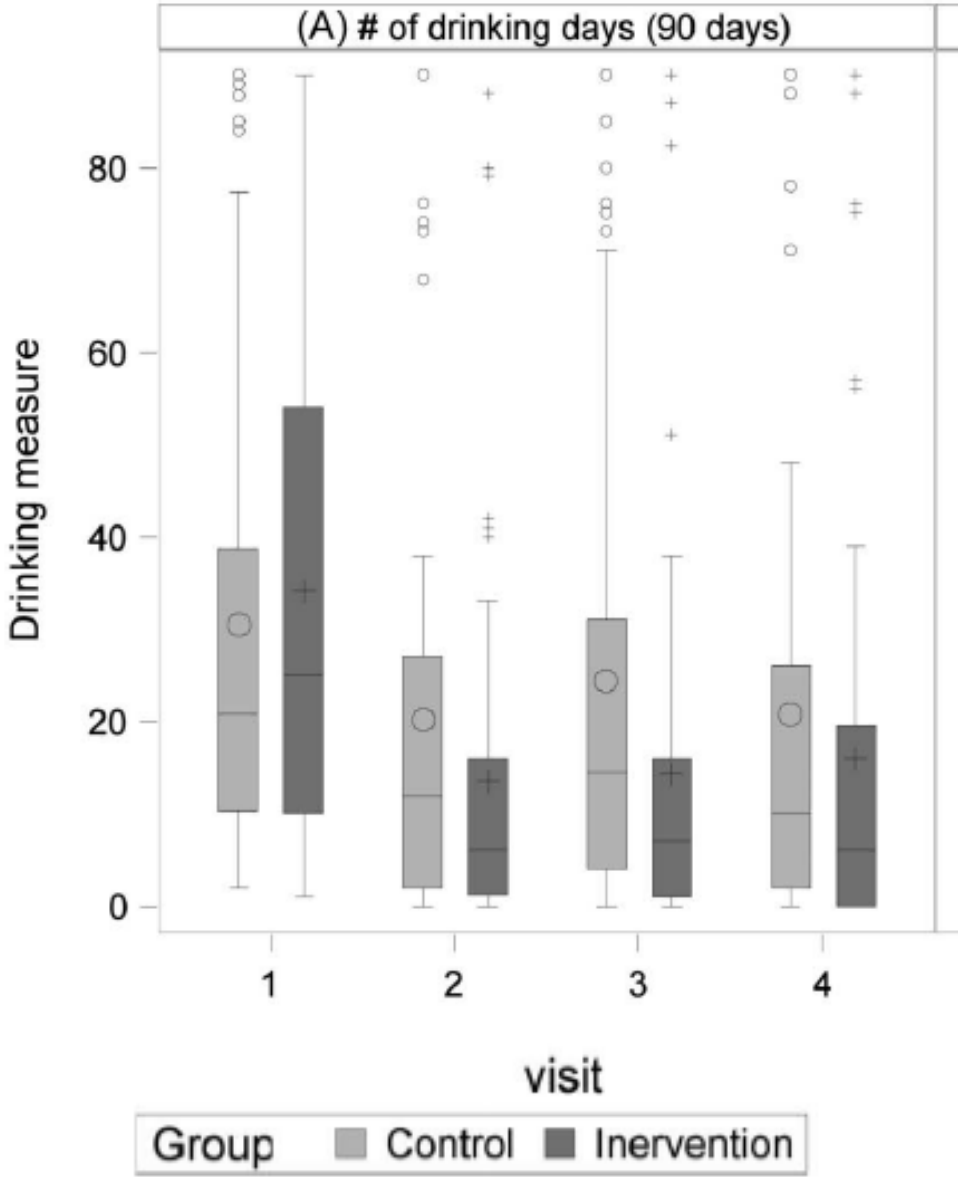
"You are drinking more than is safe for your health."

"My best medical advice is that you cut down or quit."

"What do you think? Are you willing to consider making changes?"

Brief Intervention for women with HIV

- **Aim: To compare the efficacy of brief intervention to treatment as usual for HIV+ women with unhealthy alcohol use**
- **Overview: Randomized trial in urban HIV clinic, n=148**
- **Brief intervention: 20 minute face-to–face sessions, one month apart**
  - **First session included: 1) patient health assessment and feedback; 2) goal setting and contracting**
  - **Second session: drinking diary cards, drinking agreement and take home exercises, barriers and facilitators to change**
  - **Content tailored for HIV-positive women**
  - **Follow-up telephone booster calls**
- **Assessments: 3, 6 and 12 months**



Drinking day: OR [95% CI] = 0.42 [0.23, 0.75]

Chander, Hutton et al *JAIDS* 2015

Project CHOICES for women at risk for HIV at an STD Clinic

- **Program to reduce alcohol exposed pregnancy (AEP) among women by her either reducing her alcohol use OR increasing effective contraception…her choice.**
- **2 session program emphasizing alcohol information, personal feedback, skill building and nonjudgmental approach**
- **Set at the BCHD STD clinic where there heavy alcohol use and ineffective contraception**
- **Majority of women (83%) reduced their AEP risk by reducing alcohol use (18%), using effective contraception (37%) or both (25%).**

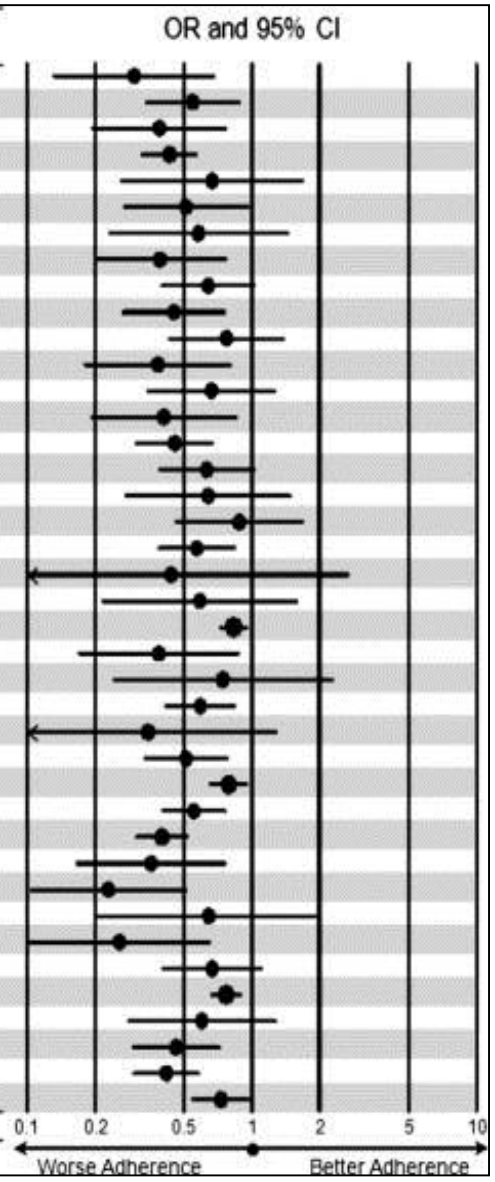
Implications for PrEP

- PrEP is part of a comprehensive care for women at risk for HIV
- Alcohol use in a variety contexts results in increased HIV risk
- Screening and counseling for alcohol reduction in the context of PrEP prescription will be important to the overall uptake and success of PrEP

- Many women who are at risk for HIV and use alcohol are not familiar with PrEP (so what are we going to do about this….)

Why do we need to think about alcohol use when we are prescribing PrEP? Adherence

Study	Drinking Intensity	OR	95% CI Lower	95% CI Upper	Z	p
Berg, 2004	1	0.300	0.130	0.691	-2.828	0.005
Bonolo, 2005	0	0.546	0.334	0.894	-2.407	0.016
Catz, 2001	0	0.388	0.193	0.782	-2.647	0.008
Chander, 2006	2	0.430	0.322	0.574	-5.730	0.000
Cook, 2001	2	0.666	0.261	1.698	-0.852	0.394
deJong, 2004	0	0.510	0.268	0.972	-2.047	0.041
Eldred, 1998	1	0.580	0.229	1.466	-1.151	0.250
Gollin, 2002	0	0.391	0.196	0.781	-2.658	0.008
Heckman, 2004	0	0.640	0.394	1.040	-1.801	0.072
Hicks, 2007	2	0.450	0.263	0.769	-2.918	0.004
Hinkin, 2004	2	0.772	0.423	1.407	-0.845	0.398
Holmes, 2007	0	0.382	0.178	0.818	-2.475	0.013
Holstad, 2007	0	0.662	0.342	1.278	-1.229	0.219
Howard, 2002	0	0.406	0.190	0.866	-2.333	0.020
Johnson, 2003	1	0.454	0.304	0.680	-3.840	0.000
Kalichman, 2003	0	0.631	0.384	1.039	-1.809	0.071
Kleeberger, 2001	2	0.640	0.272	1.505	-1.023	0.306
Lazo, 2007a	2	0.880	0.454	1.705	-0.379	0.705
Lazo, 2007b	2	0.570	0.381	0.852	-2.737	0.006
Liu, 2006	2	0.437	0.070	2.723	-0.887	0.375
Martini, 2004	1	0.587	0.214	1.609	-1.035	0.300
Moatti, 2000	0	0.830	0.719	0.958	-2.539	0.011
Mohammed, 2004	2	0.386	0.168	0.885	-2.248	0.025
Moss, 2004	2	0.744	0.239	2.315	-0.511	0.609
Mugavero, 2007	0	0.590	0.410	0.850	-2.837	0.005
Murphy, 2002	0	0.345	0.092	1.297	-1.575	0.115
Murphy, 2004	0	0.510	0.330	0.789	-3.024	0.002
Murphy, 2005	0	0.790	0.647	0.965	-2.308	0.021
Parsons, 2007	0	0.553	0.395	0.774	-3.452	0.001
Peretti-Watel, 2006	2	0.399	0.303	0.525	-6.546	0.000
Rothlind, 2005	2	0.357	0.164	0.775	-2.603	0.009
Samet, 2004	2	0.230	0.103	0.515	-3.573	0.000
Shannon, 2005	1	0.644	0.202	2.054	-0.744	0.457
Sharma, 2007	0	0.258	0.101	0.655	-2.848	0.004
Spire, 2002	0	0.667	0.399	1.114	-1.548	0.122
Sullivan, 2007	0	0.770	0.656	0.904	-3.190	0.001
Tesoriero, 2003	1	0.600	0.278	1.293	-1.304	0.192
Tucker, 2003	2	0.461	0.293	0.726	-3.338	0.001
Wagner, 2001	0	0.417	0.295	0.589	-4.951	0.000
Wilson, 2002	0	0.728	0.538	0.986	-2.051	0.040
Overall		0.548	0.490	0.612	-10.633	0.000



Alcohol Use and Antiretroviral Adherence: Review and Meta-Analysis.
Hendershot, Christian; Stoner, Susan; Pantalone, David; Simoni, Jane

JAIDS Journal of Acquired Immune Deficiency Syndromes. 52(2):180-202, October 2009.
DOI: 10.1097/QAI.0b013e3181b18b6e

Forest plot indicating the effect size contributed by each study, using the most extreme comparison per study. Drinking intensity: 0 = global (eg, any use vs. none); 1 = moderate drinking (that did not exceed the NIAAA definition of at-risk drinking or constitute an alcohol use disorder) vs. nonuse; 2 = problem drinking (that met the NIAAA definition for at-risk drinking or criteria for an alcohol use disorder) vs. nonproblem use/nonuse.

SHARP Women: CBPR to address alcohol use for women with and at risk for HIV across the HIV prevention and care continuum

- **<u>Intervention Mission</u>**
- **To develop a sustainable intervention for alcohol use, that is tailored to the unique and complex needs of woman, that includes PrEP**
- **Leverages community strengths/assets**
- **Instills optimism and hope**
- **Equips women with skills and internal strength to handle risky situations**
- **Is Trauma Informed**
- **Adaptable to different settings, ages**
- **Culturally Competent/Relevant**
- **Accessible beyond the clinic**
- **Tailored to a woman's needs**

SHARP Women

- **Interested in sharing your thoughts?**

- **Geetanjali Chander: gchande1@jhmi.edu**
- **Heidi Hutton: Hhutton@jhmi.edu**
- **Jennifer Gaver: jgaver1@jhmi.edu**