



*Fetal Alcohol Spectrum Disorders
Prevention Project*

Screening and Brief Intervention: An Overview

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*Fetal Alcohol Spectrum Disorders
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- I have no conflicts of interest.

Overview

- Scope of the Issue
- Finding the Target
- The “Ws” of Brief Intervention
 - Why, what, when, where and who
- Research Results

Scope of the Issues

- Women and Alcohol
 - Over 50% of U.S. women age 18–44 use alcohol.
 - Nearly 33% binge drink.
 - National Center for Health Statistics, 2008
 - Women who binge drink are at increased risk of an unintended pregnancy and an alcohol exposed-pregnancy.
 - CDC, 2009
 - About 18% of pregnant women report drinking and 6.6% report binge drinking in previous 30 days (1st trimester)
 - SAMHSA, 2013

State-Specific Weighted Prevalence Estimates of Alcohol Use
(Percentage of Any Use*/Binge Drinking†)
Among Women Aged 18–44 Years —
Behavioral Risk Factor Surveillance System, 2010



Women and Alcohol

- “Women are more sensitive to the consumption and long-term effects of alcohol and drugs than men...”
 - SAMHSA TIP 51
- Differences in body structure and chemistry cause women to absorb more alcohol, and take longer to break it down and remove it from their bodies (metabolism).

Women and Alcohol

- Women:
 - Develop damage at lower levels of alcohol consumption
 - Have a higher proportion of body fat and lower volume of body water
 - So...higher concentration of alcohol
 - Lower first-pass metabolism of alcohol in the stomach and upper small intestine before it enters the blood stream
 - In women <50

Risks for Women Drinkers

- Alcohol can have a dramatic, negative effect on women, including:

- **Health Risks**

- Liver Disease
 - Increased Risk of Cancer
 - Weight/Nutrition
 - Mood Disorders

- **Safety Risks**

- Increased Risk of Sexual Assault

- **Reproductive Risks**

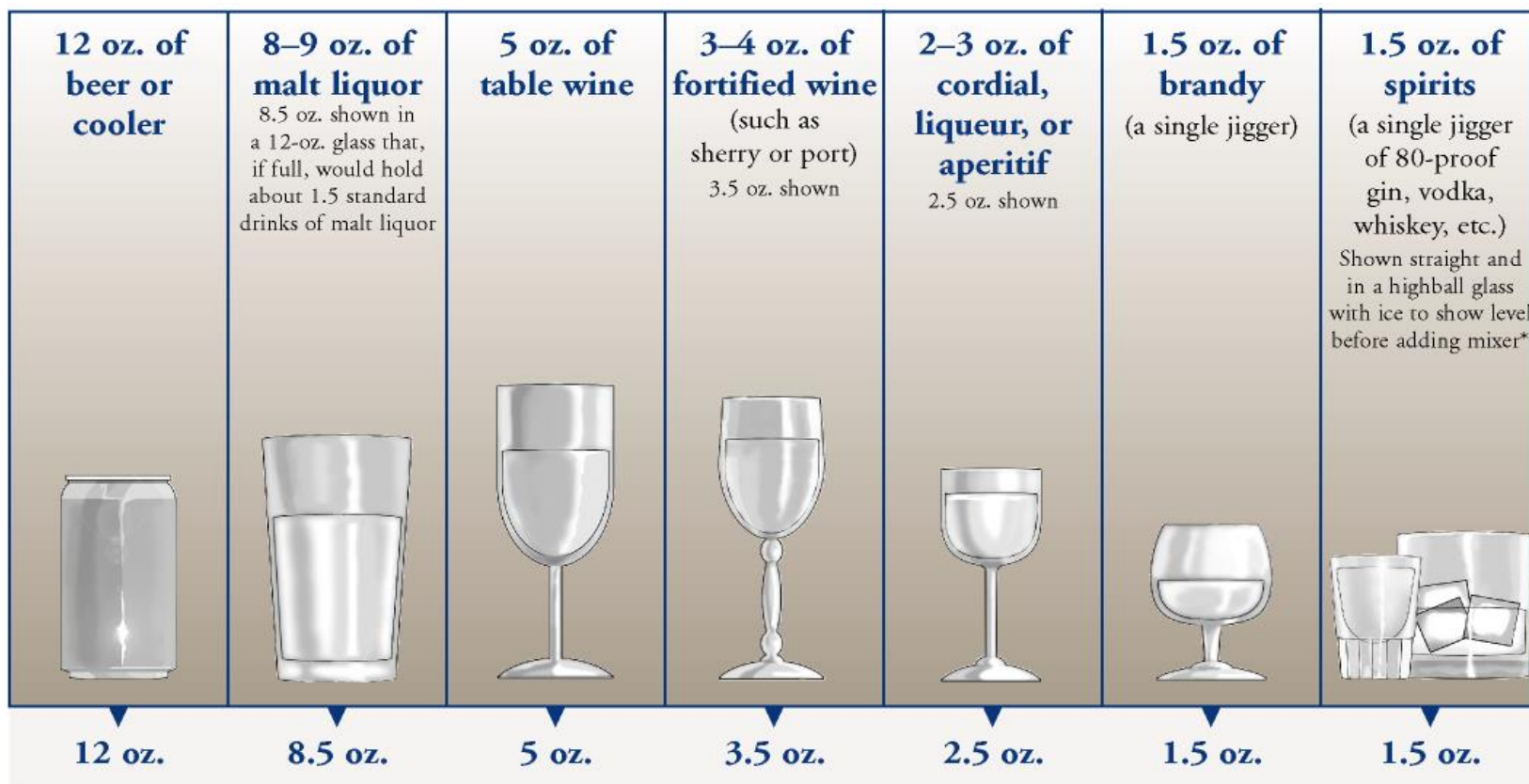
- Decreased fertility
 - ***Risk of an Alcohol-Exposed Pregnancy***

Clinical Perspective

- *How much alcohol is too much?*



Defining the Standard Drink



Source: National Institute on Alcohol Abuse and Alcoholism. (2005a). *Helping patients who drink too much: A clinician's guide*, Updated 2005 Edition. NIH Pub. No. 07-3769. Bethesda, MD: U.S. Department of Health and Human Services.

Computing the Standard Drink

- .60 ounces of absolute alcohol (aa) = 1 standard drink
- $$\frac{\text{ounces of drink} \times \% \text{ alcohol}}{.60} = \# \text{ standard drinks}$$

Audience Poll..

- A 'Colt 45' (45 ounces of beer at 6% alcohol) is equivalent to how many standard drinks?
 - a) 1
 - b) 2.3
 - c) 3.4
 - d) 4.5
 - e) 5.6

Previous Definition of Risky Drinking for Women

NIAAA, 1999

- **Abstainers**

- Do not consume alcohol at all or have less than 1 drink per month

- **Low-risk drinkers**

- Consume no more than 1-2 standard drinks per day, and no more than 3-4 times per week.

- **At-risk drinkers**

- Consume 8-21 standard drinks per week and might experience problems from such drinking
 - behavioral, family, medical, mental health, employment, social, legal

- **Problem drinkers**
 - Consume more than 21 standard drinks per week and might experience problems from such drinking.
- **Alcohol-dependent drinkers**
 - Cannot stop drinking once they start.
Experience repeated and multiple problems.
- **BUT...definitions miss the following:**
 - No alcohol use before driving, when pregnant, when breastfeeding, or with certain medications or medical conditions

NIAAA, 2010

- Low Risk Drinking Limits
 - MEN:
 - No more than 4 per day
 - No more than 14 per week
 - WOMEN:
 - No more than 3 per day
 - No more than 7 per week
- Heavy or At-Risk Drinking
 - Drinking above low-risk levels

Binge Drinking

niaaa.nih.gov

- “...drinking so much within about 2 hours that blood alcohol concentration (BAC) levels reach 0.08g/dL...”
 - CONCENTRATION
- Typically...
 - Women: ≥ 4 (same as >3)
 - Men: ≥ 5 (same as >4)

Drinking Patterns in the US

NIAAA, 2010

- Abstainers: 35%
- Low Risk: 37%
- Increased Risk: 19%
 - Drink more than **either** single-day or weekly limits
- Highest Risk: 9%
 - Drink more than **both** the single-day and weekly limits

“Sensible” Drinking Guidelines for Women

- Drinking no more than 7 drinks per week
- Drinking no more than 1-2 drinks on any day, and no more than three days per week
- No drinking if pregnant, breastfeeding, planning to become pregnant, or sexually active and not using contraception
- No drinking if planning to drive, if taking certain medications, with certain medical conditions, or have history of alcohol or drug abuse/dependence
- <21??

Factors Associated with Risky Drinking in Women

(CDC, 2009)

- Ethnicity and acculturation
- Lower socioeconomic status
- Age at first drink
 - First drink before age 14
- Genetic predisposition
 - Individuals may have genetic protective factor against FASD
- Depression
 - Depression may contribute to increased drinking levels
 - Increased drinking may lead to depression

Clinical Perspective

- *How can I find out if my patient (client) is drinking too much?*



We need to ask!

- Self-Report
- Face-to-Face Interview
- Computer-Assisted Interviews
- Laboratory Screening Measures
 - GGT: gamma glutamyltransferase
 - CDT: carbohydrate-deficient transferrin

Screening Tools

- Timeline Follow Back (TLFB)
 - Trauma Questionnaire
 - Etc...
- Short Questionnaires
 - T-ACE
 - TWEAK
 - AUDIT
 - CAGE
 - RAPS
 - NOTE:
Variations on a theme...

T-ACE

- **TOLERANCE:** How many drinks does it take to make you feel high?
 - Does it take you more than 2 drinks...
- Have people **ANNOYED** you by criticizing your drinking?
- Have you ever felt you ought to **CUT DOWN** on your drinking?
- **EYE OPENER:** Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover?
 - 1 Pt. for “yes” to A, C, E (2 pts for preg. Woman w/tolerance >2).
Pos. screen = ≥ 2 pts.

TWEAK

- **TOLERANCE** for alcohol
- **WORRY** or concern by family or friends about drinking behavior
- **EYE OPENER**, the need to have a drink in the morning
- “Blackouts” or **AMNESIA** while drinking
- The self-perception of the need to **CUT DOWN** on alcohol use

AUDIT-C

- During the last 12 months, about how often did you drink ANY alcoholic beverage?

A=Never B=Monthly or less C=2-4 times/month D=2-3 times/week E= \geq 4 times/week

- How many drinks did you USUALLY have on days when you drank during the last 12 months?

A=1 or 2 B=3 or 4 C=5 or 6 D=7 to 9 E= \geq 10

- During the last 12 months, about how often did you drink FIVE OR MORE drinks on a single day?

A=Never B=Less than monthly C=Monthly D=Weekly E=Daily or almost daily

Scoring: A=0 B=1 C=2 D=3 E=4 Pos. score in women \geq 3 (\geq 4 for men)

CAGE

- **C** - Have you ever thought you should **CUT DOWN** on your drinking?
- **A** - Have you ever felt **ANNOYED** by others' criticism of your drinking?
- **G** - Have you ever felt **GUILTY** about your drinking?
- **E** - Do you have a morning **EYE OPENER**?

**Scoring: Each affirmative response = 1 point
≥ 2 is concerning for women**

RAPS-4

- Have you had a feeling of guilt or remorse after drinking?
- Has a friend or a family member ever told you about things you said or did while you were drinking that you could not remember?
- Have you failed to do what was normally expected of you because of drinking?
- Do you sometimes take a drink when you first get up in the morning?
 - Positive Screen = 1 'Yes'
 - Cherpitel, 2000

Scoring Caution...

- A safe dose or pattern is not consistent across individuals
- Scoring options should be viewed as “guidelines”
- Even low dose or moderate alcohol use may be of concern for individuals with certain medical conditions, taking certain medications, or who are pregnant.

EXAMPLE: Scoring 'Glitch'

- 28 year-old woman scored **1** on T-ACE (positive response to item 'C' *Have you ever felt you ought to cut down*)
- Woman deemed not at risk and no advice was given
- **Did clinician miss an opportunity??**

Who Should Receive Screening??

- **ALL WOMEN**
 - Women of childbearing potential
 - Pregnant women
 - High-risk female drinkers
 - Women who have previously abuse alcohol
 - Teens and young adults
 - Nursing mothers
- Towards routine alcohol screening for all...

Questions??

Clinical Perspective

- *What are my options to address alcohol use with my patients?*



Treatment/Support Options

- Residential/In-Patient Treatment
- Outpatient Treatment
- Counseling/Therapy
- Pharmacotherapy
- Self-Help/Support Groups
 - AA
- **Brief Intervention**

Treatment Considerations for Women

- “Buzz” word: gender-responsive
 - Must take into account:
 - Gender
 - Biology

Gender-Responsive Treatment Considerations

- Factors influencing treatment outcome
 - Relationships
 - i.e., support from partner, behavioral couples therapy
 - Age
 - <21 not as likely to complete treatment
 - H.S. diploma or higher more likely to stay in treatment
 - TIP 51

Gender-Responsive Treatment Considerations

- Factors influencing treatment outcome
 - Race/ethnicity
 - Lower retention rates for women of color
 - May be related to limited economic resources
 - Referral or involvement with CPS
 - Increasing retention
 - Pregnancy
 - Decreases retention

Gender-Responsive Treatment Considerations

- Factors influencing treatment outcome
 - Supportive therapies vs. other therapeutic approaches
 - Incl: characteristics of empathy, warmth in treatment provider, environment that is nurturing and non-confrontational, focus on treatment goals
 - Therapeutic alliance is key!

SBI

**BSI: BRIEF SCREEN
AND INTERVENE**

Brief Counseling

SBIRT

**Brief
Intervention**

aSBI

Brief Intervention (BI)

- Effective, low-cost treatment alternative for risky drinking
- Time-limited, typically ≤ 4 sessions
- Self-help
- For use in non-dependent individuals (or for referral of dependent individuals)
- Performed in non-treatment clinical setting by non-AODA professionals
- Combines techniques of Motivational Interviewing, Cognitive Behavior Therapy

Brief Interventions Can Be...

- Less expensive
- Offered via a variety of methods
 - Face-to-face
 - Individual
 - Group
 - By Telephone (including texting...)
 - Web-based
- Used by a variety of clinical and community staff

Brief Interventions, *continued*

- Can be performed in any environment
 - ER, hospital, medical clinic, outpatient tx, communities of faith, etc.

Components of BI

- **F**eedback of personal risk
- **R**esponsibility for personal control
- **A**dvice to change
- **M**enu of ways to reduce or stop drinking
- **E**mpathetic counseling style
- **S**elf-Efficacy
 - Hester and Miller, 1995.

Examples

- Feedback and Responsibility
 - “you report drinking about 12 drinks each week—mainly on weekends. Did you know that health risks increase for women who drink more than 7 drinks weekly, or more than 3 drinks on any one day. These risks include things like breast cancer...”

Examples

- *“Are you saying that I’m an alcoholic?”*
- *“What I’m saying is that based on what **you’ve** told me, I’m concerned about your health and safety. I’d like to talk with you more about this...”*

Audience Poll

- Which of the following is **NOT** a stage in the 'Readiness to Change' continuum:
 - a) Precontemplation
 - b) Contemplation
 - c) Preparation
 - d) Cessation
 - e) Maintenance

Readiness to Change

- Not everybody will be able to “hear” the message
- Stages of Change
 - Precontemplation
 - Contemplation
 - Preparation
 - Action
 - Maintenance
 - Prochaska and DiClemente, 1983.

Moving along the stages...

- Screen itself may produce change
- Readiness ‘rulers’ help focus the discussion
 - On a scale of 1-10...
- Adverse events
 - Calories
 - Money spent
 - Risk(s) to health
- Meet your patient where she is at...

Assessing Readiness

Readiness Ruler									
Not ready					Very ready				
1	2	3	4	5	6	7	8	9	10

Efficacy of Brief Alcohol Intervention (BAI)

- Meta analyses of BAI found significant reductions in:
 - Alcohol use
 - Alcohol-related harms
 - Alcohol-related costs
 - Bertholet et al., 2005; Whitlock et al., 2004
- Reduction in aggression in adolescents
 - Walton et al., 2010
- Reduced risk of alcohol-exposed pregnancy
 - Floyd et al., 2007

BAI in Pregnant Women

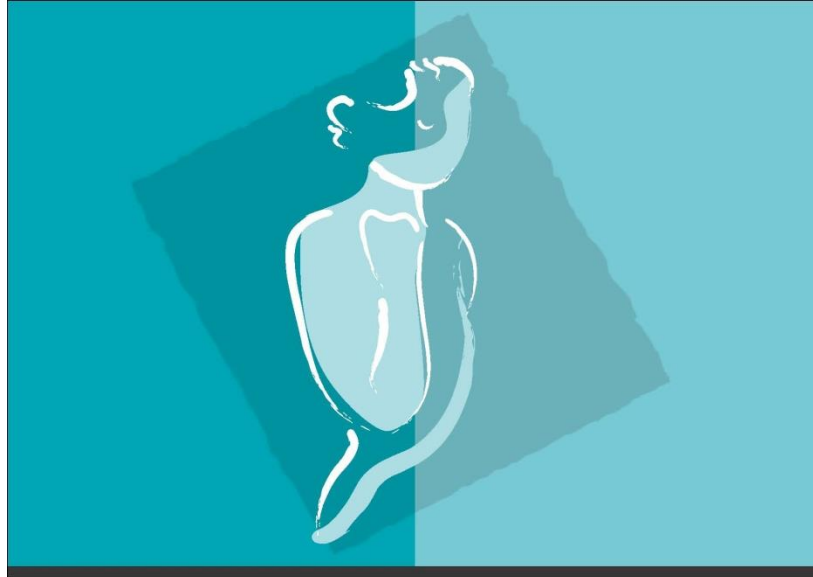
- Significant reductions in alcohol use
 - Chang et al., 2005; O'Connor and Whaley, 2007
- Higher birth weights
- Lower fetal mortality rates
 - O'Connor and Whaley, 2007

BAI in Postpartum Women

- **Healthy Moms Study**
 - Significant reductions in alcohol use
 - Mean # of drinking days
 - Mean # of total drinks
 - Mean # of ‘heavy’ drinking days
 - Fleming et al., 2008
 - Decrease in postpartum depressive symptomatology
 - Wilton et al., 2009

Questions??

The Healthy Choices Study



Healthy Choices
Personal Steps to a Healthier Lifestyle:
Intervention Workbook

University of Wisconsin School of Medicine and Public Health
Department of Family Medicine and
UW Population Health Institute

Project Team

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The Healthy Choices Study

- Randomized trial to test the efficacy of a BI in reducing the risk of an alcohol-exposed pregnancy
 - Testing difference between in-person administration and telephone administration
 - 2-4 session adapted from previous models within the dept. of family medicine and CDC
 - Healthy Moms; CHIPs, Project CHOICES
 - Combination of motivational interviewing/cognitive behavior therapy

Screening/Intake Protocol

- **Target Population:**
 - Sexually active, fertile women ages 18-44
 - Not using effective contraception
- **Start Date:** August 2006
- **Recruitment End Date:** January 2009
- **Recruitment Sites:**
 - Health Clinics
 - Institutions of Higher Learning
 - Community Events
 - Callers to Healthy Choices Information Line

Content

- Health review
- Targeted health information
- Alcohol use comparison
- Assessment of “readiness to change”
- Identification of life goals
- Making a plan
- Tools for tracking

Key Components

Likes/Don't Likes

Part 1: Phone Interview Review- Health Risks and Behaviors

Alcohol Consumption

You reported in the initial interview that you drink: _____

- Where do you tend to be when you drink? _____
- With whom do you usually drink? _____
- What do you usually drink? _____

Things you **like** about drinking:

Things that are **positive** about quitting or cutting down on drinking:

Things you **don't like** about drinking:

Things that **aren't positive** about quitting or cutting down on drinking:

1

Health Risks

Part 1: Phone Interview Review- Health Risks and Behaviors

The following is a list of health concerns associated with alcohol use. Those that are checked are health concerns that you reported in our initial phone interview. Even if none are checked, the information may be useful to you or your friends. There are, of course, other causes for each of these conditions, but alcohol use can be a contributing factor.

☐ Stomach or digestion _____

Your stomach makes very strong acid to help digest your food. Your stomach lining is supposed to protect the rest of your stomach from the acid. Alcohol can damage the stomach lining so that the acid can burn the rest of your stomach. This can lead to dangerous internal bleeding. Alcohol also interferes with the absorption of nutrients in the small intestine and can increase toxins in the intestines that can eventually damage the liver and other organs.

Bode & Bode, 1997

☐ Cancer Risk _____

Research suggests that women who drink—particularly at risky levels (more than 3 drinks on any one occasion or more than 7 drinks in a week)—increase their risk for breast cancer. There is evidence that drinking as few as one or two drinks per day can even increase your risk. Alcohol can also increase your risk for oral, laryngeal, pharyngeal, and esophageal cancers.

Longnecker, 1988; Hamajima, 2002

☐ Liver _____

Too much alcohol can cause damage to the liver. Your liver can fix mild damage, but if the damage is too severe, scarring can occur and your liver can't fix this. This scarring is called cirrhosis, which is a very serious medical problem.

Women develop alcoholic cirrhosis after ingestion of smaller daily amounts of alcohol than do men. Studies have found drinking more than 7 drinks in a week increases a woman's risk for liver disease. Women were found to be at higher risk of developing liver disease at any level of intake as compared to men.

NIAAA, 2005

☐ Pancreatitis _____

Too much alcohol can damage your pancreas. When this happens, many people get pain in their upper belly, sometimes with nausea and vomiting. Damage to your pancreas can lead to diabetes. If the damage gets serious enough, the pain may never go away. Pancreatitis is potentially fatal.

Apte, Wilson, & Korsten, 1997

2

Key Components

Comparison of Drinking

Readiness to Change

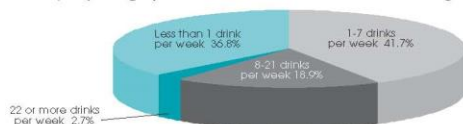
Part 1: Phone Interview Review- Health Risks and Behaviors

Notes:

How do you compare with other Wisconsin women?

In the initial interview, you reported that you typically drink about _____ drinks per week, and about _____ drinks per month. The most you reported on any one occasion was _____.

Frequency of Alcohol Use in Wisconsin Women Ages 18-40



*In a sample of 7,204 women of childbearing age coming into a clinic to see their primary care physician. These data were collected by researchers at the University of Wisconsin School of Medicine and Public Health.

This means that during a typical month you drink more than about _____ % of Wisconsin women in your age range.

The times when you have _____ drinks on one occasion, it would take approximately _____ hours for the alcohol to be out of your bloodstream.

Comments:

7

Part 1: Phone Interview Review- Health Risks and Behaviors

Recommended Guidelines for Alcohol Consumption for Women

Women who drink 7 or fewer drinks per week and 3 or fewer drinks at a time have much lower risk for alcohol-related problems with health, family, work, finances, and the law. Experts suggest that having any more than three drinks on any one occasion puts you at risk for health problems.

Comments:

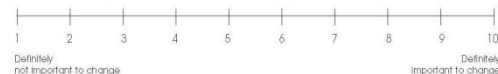
Costs Associated with Alcohol Consumption:

We estimate that you spend approximately _____ per year on alcohol.

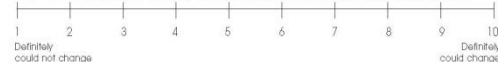
Other things you wanted to spend this money on include:

- | | |
|----------|----------|
| a. _____ | e. _____ |
| b. _____ | f. _____ |
| c. _____ | g. _____ |
| d. _____ | h. _____ |

On a scale of 1 to 10, "1" meaning It is DEFINITELY NOT IMPORTANT to change your drinking and "10" meaning It is DEFINITELY IMPORTANT to change your drinking, you placed yourself at:

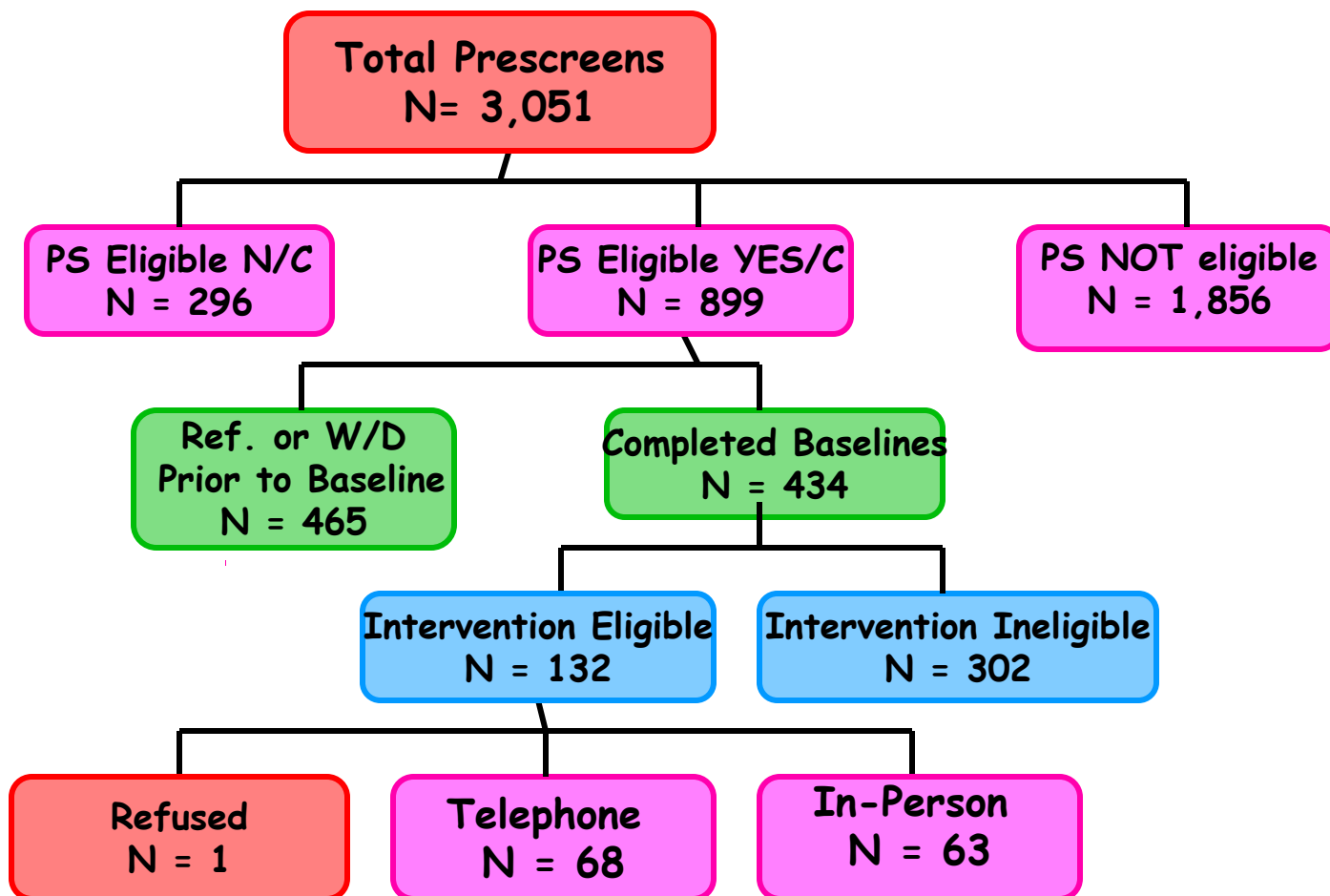


On a scale of 1 to 10, "1" meaning you are definitely sure you COULD NOT change your drinking and "10" meaning you're sure you COULD change your drinking, you placed yourself at:



8

Study Flow



Baseline Results

N = 131

	In-Person	Telephone
N=131	63	68
Average Age	25	26
Average Education	13 yrs	14 yrs
Race		
White	65%	62%
Black	26%*	15%
Hispanic	6%	4%
Other	3%	19%*

Baseline Results

N = 131

	In- Person	Telephone
Illegal Drug Use in Past 12 months	71%	65%
Average Total # Drinks in Past 30 Days	34	43
Average Total # Binges in Past 90 Days	14	13
Current Smoker	37%	46%

Follow-Up Results

Baseline	90 Day TLFB
Risk for Alcohol-Exposed Pregnancy	100%
Risk Based on Drinking Criteria	100%
Risk Based on Contraception Criteria	100%

6-Month Follow-Up	90 Day TLFB
Risk for Alcohol-Exposed Pregnancy	29%
Risk Based on Drinking Criteria	84%
Risk Based on Contraception Criteria	36%

In a nutshell...

- No significant difference between groups
 - In-person vs. telephone
 - **This is our BIG BANG**
- Significantly reduced risk of alcohol-exposed pregnancy

In a nutshell, *continued*

- Significant increase in effective use of contraception
- Significant reductions in levels of alcohol use from baseline to 6-month follow-up
 - Total drinks in past 30 days
 - Total drinks in past 90 days
 - Total number of drinking days (prev. 30 & 90)
 - Number of binges in past 30 and 90 days

**But what's really
interesting...**

Success Story

Sarah* is a college student who lives with chronic pain. She used alcohol to relax and help “deal with the pain.” She tended to binge on weekends, and was inconsistent in her use of birth control. Sarah participated in two intervention sessions and one brief check-in. She successfully reduced her drinking—below her goal of 2-3 drinks per week. By her exit interview (12-months), she had eliminated alcohol entirely and had completed six months of contraceptive compliance (she never missed her pill!).

In her 12-month follow-up interview, she commented, “See, I actually learned something from your study” upon completing the contraception usage table. She particularly appreciated the educational section of the workbook and was not aware of the link between alcohol use and an increased risk of breast cancer.

**Not her real name*

Success Story

Karla* is a woman over the age of 40 who was drinking well above recommended levels. She was also in an abusive relationship that often led to inconsistent use of contraception. She had been in AODA treatment in the past and was trying to “manage” on her own. Karla participated in four sessions (two intervention sessions, and two check-in sessions). In her final interview, she admitted needing more support upon completion of the study and accepted a referral into treatment.

She also terminated her unhealthy relationship.

**Not her real name*

Participant Satisfaction Summary

(n=30)

Please rate your feelings for each of the statements below	Strongly Agree	Agree	Disagree	Strongly Disagree
Overall, participating in Healthy Choices was helpful to me	27%	63%	10%	0
The printed materials I received were useful to me	23%	54%	23%	0
I felt that the information in Healthy Choices was appropriate to my culture	40%	53%	7%	0
The sessions gave me information about alcohol use I did not know before	23%	44%	33%	0
The sessions gave me information about contraception use I did not know before	13%	50%	34%	3%
I would recommend participating in Healthy Choices to a friend	47%	43%	7%	3%

Limitations...

- Not as large of a sample as we'd have liked
- As with most BI—based on self-report of alcohol use
- IRB mandates re: exclusion of pregnant women
- More women who did not consent reported history of domestic violence and/or partner use/abuse

Is BI for Everybody?

- **NO!**
 - Alcohol Dependence
 - Conditions requiring medical management
 - Individuals with cognitive limitations
 - Whether developmental in nature, or due to mental health or chronic drinking problems
- Can act as a “screening” tool for referral

Some things to think about...

- Because of the non-directive, non-judgmental approach we may not be as happy with our options:
 - Is it okay for a pregnant woman to not be ready to cut down or quit drinking?
 - Is it okay for an individual with one OWI to not want to change her habits?
 - Are we comfortable with certain levels of illegal drug use?

Bottom Line...

- BI can affect be successful in changing a variety of health behaviors
 - Alcohol use/abuse
 - Tobacco use
 - Contraception use
 - Unhealthy eating habits
- Effective uses include stand-alone intervention or complementary to formalized treatment

Bottom Line,*cont.*

- ‘Side Effects’ of BI can also positively affect mental health concerns
 - Depression
- Easy to learn, Easy to teach
- Manualized protocols helpful for all professionals
- May be ‘protected time’ to interact with professional—not necessarily a verbatim rendition of the protocol

Varying Roles

- OB/Gyns
 - Prime time for screening and intervention
 - May be drawbacks re: patient comfort
- Family Physicians
 - Treat family systems
 - Can screen/intervene at all ages...make 'normal' part of care
- Pediatricians
 - Unique opportunity to screen new moms
 - Note developmental delays
 - Screen kids...starting early
 - 'normal' part of care

Varying Roles

- Home Visitors/Public Health Nurses
 - Prime time for screening and intervention
 - First line of identification/referral
 - In a position to notice patterns...
- AODA Treatment Providers
 - SBI can be used in addition to inpatient, residential, outpatient, etc.
 - Can target same or different areas
 - i.e., tobacco, nutrition, etc.

More Information on Brief Intervention

US Dept. of Health and Human Services
Substance Abuse and Mental Health
Services Administration (SAMHSA)
Center for Substance Abuse Treatment

www.samhsa.gov

- TIP Series

More Information on Brief Intervention

US Dept. of Health and Human Services
National Institutes of Health
National Institute on Alcohol Abuse and Alcoholism
(NIAAA)

Rethinking Drinking

www.niaaa.nih.gov

- Publication 10-3770
- Revised April 2010

For More Information on Brief Intervention

American Public Health Association and
Education Development Center (2008)
**Alcohol Screening and Brief
Intervention: A Guide for Public
Health Practitioners**

www.apha.org

Questions??



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THANK YOU!!

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