

Contingency Management as a Tool for Alcohol Use Disorders among American Indian and Alaska Native People

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Learning Objectives

After viewing this webinar, participants should be able to:

- Define contingency management
- Discuss how contingency management can be used for alcohol use disorders
- Identify how contingency management has been utilized among American Indian and Alaska Native communities

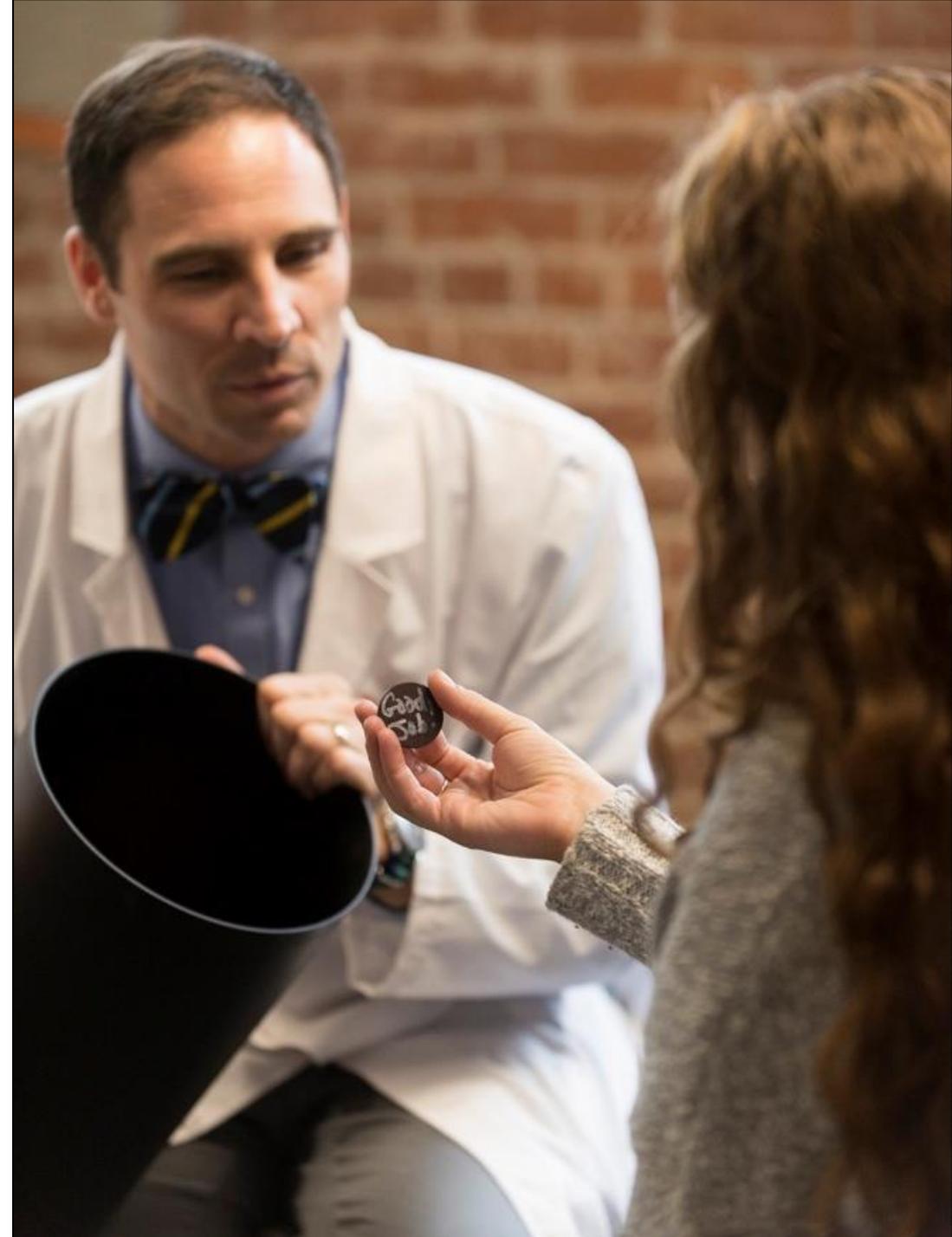
Why Do People Misuse Drugs and Alcohol?

- Because drugs and alcohol feel good
- Drugs and alcohol are powerful when life is not rewarding (poverty, unemployment, family conflict, depression etc.)
- Feeling good acts like a reward that makes people use alcohol and drugs more and more

of Choices



- Contingency Management (CM): tangible reinforcers are provided for demonstrating drug abstinence
- Steps of CM
 - Monitor target behavior (alcohol or drug abstinence)
 - Provide reward when target behavior occurs
 - *Longer period of abstinence = larger reward*
 - Remove reward when target behavior doesn't occur
- Evidence
 - CM is the most effective, non-pharmacological treatment for initiating abstinence.



Contingency Management

Can be used for any drug that can be detected for more than 2 days:

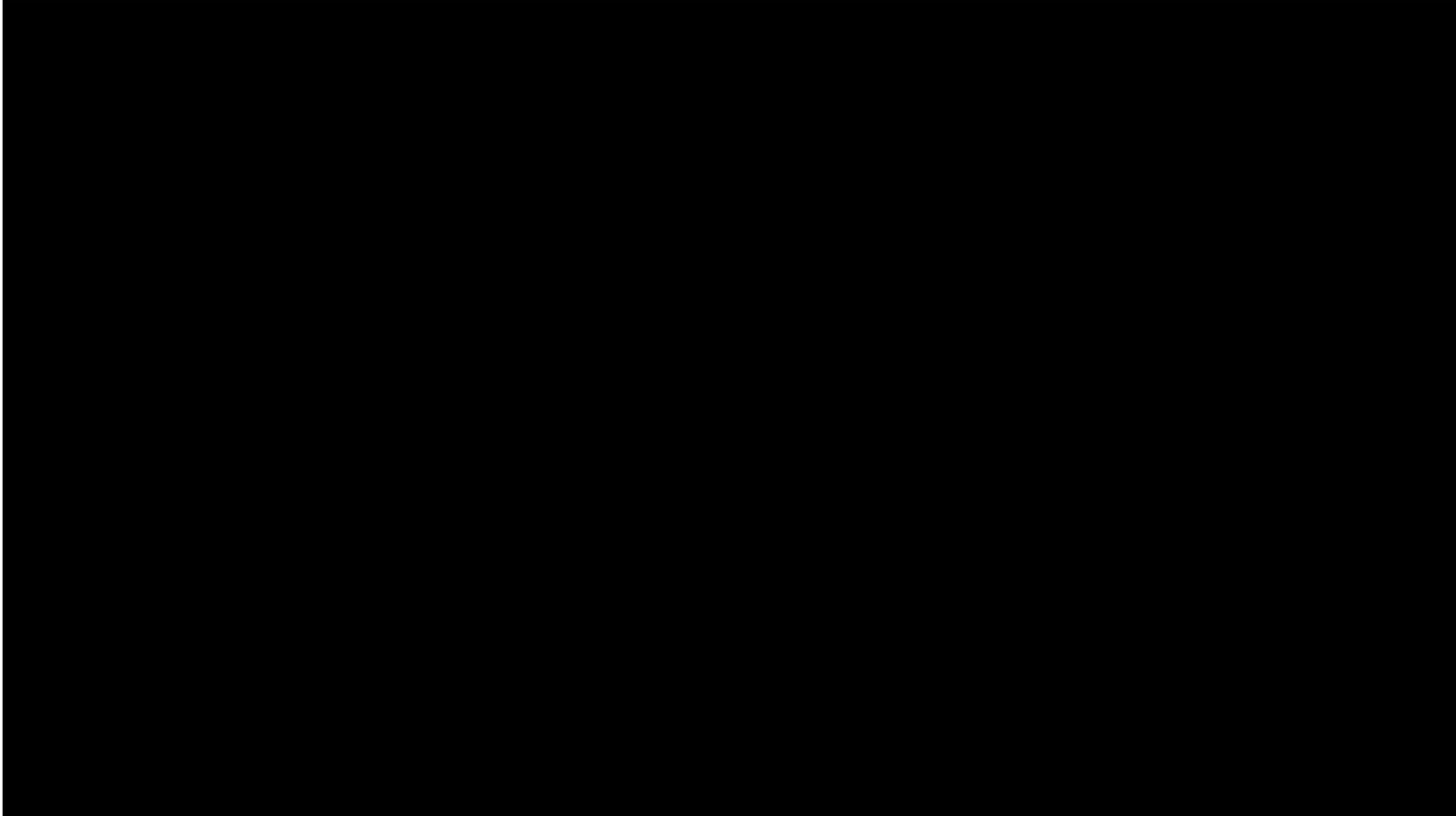
- Methamphetamines
- Cocaine
- Nicotine
- Cannabis
- Opioids
- Benzodiazepines

Rewards

- Teach new behaviors
- Promote relationships/connection between those giving and receiving rewards
- Promote positive atmosphere and communication
- Promote self-esteem and self-confidence
- Teach accountability

- CM Video:

<https://www.youtube.com/watch?v=gD1dMBWCR4w&t=4s>



What About Alcohol?

- Hundreds of studies have supported the effectiveness of CM for illicit drugs and smoking in countries throughout the world
- Few have been focused on alcohol because of the lack of a biomarker that can detect use for 2 or more days



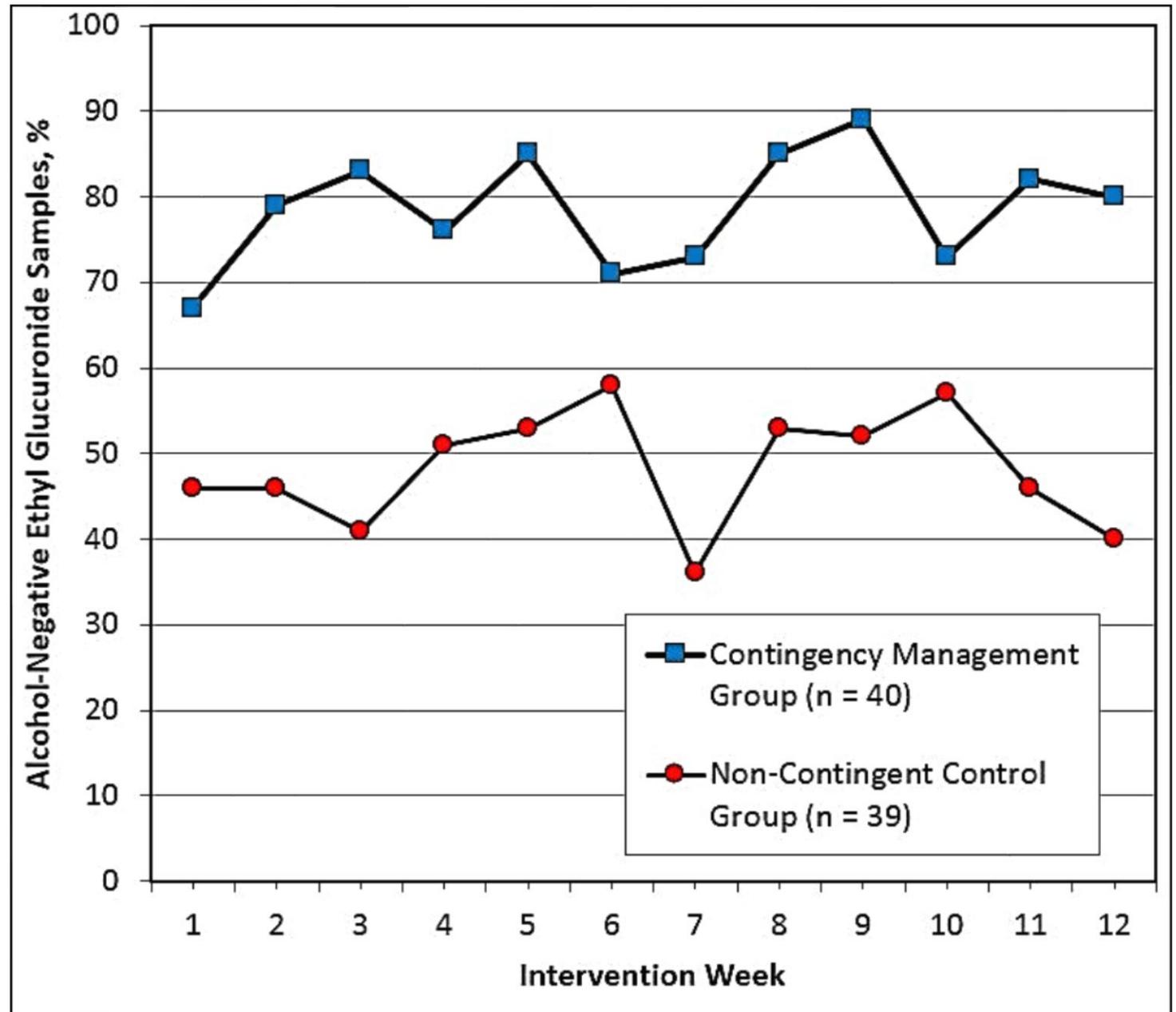
Ethyl Glucuronide (EtG)

- Metabolite of alcohol created in the liver, assessed by urine
- At 100 ng/mL EtG can identify 80% of
 - Any drinking for 2 days
 - Heavy drinking 5 days
- Not associated with non-beverage alcohol use
- Can be assessed accurately in a clinic using a benchtop analyzer
 - Point of care dip card (300 ng/mL)
- Therefore, EtG is a suitable biomarker for a CM intervention for AUDs

Differences in EtG assessed abstinence

OR= 3.1 (95% CI: 2.2-4.5)

McDonnell et al., Am J Psychiatry, 2017



Contingency Management for Alcohol Use Disorders in American Indian and Alaska Native Communities



Background – Alcohol Use in AI/AN Communities

- AI/AN adults are more likely than other racial/ethnic groups to abstain from alcohol^{1,2,3}
- AI/AN adults are more likely than other groups to seek out treatment for AUDs, but are also more likely than non-AI/ANs to drop out of treatment^{4,5,6}
 - Higher dropout rate potentially due to not providing AI/AN adults treatment within their own communities and culture
- AI/AN communities are in need of accessible, feasible, culturally appropriate and evidence-based interventions
 - AI/AN culture is often minimized or not considered a part of evidence-based practice

The Rewarding Recovery Study

- Partnership with WSU and a rural AI community

Goals:

- To utilize the behavioral intervention, contingency management, to determine if it leads to reductions in alcohol and drug misuse in an AI population - *from NIH grant*
- To provide participants with a sense of accomplishment in a non-judgmental atmosphere and to help them create a routine in which they feel they have sense of purpose - *from our site staff*

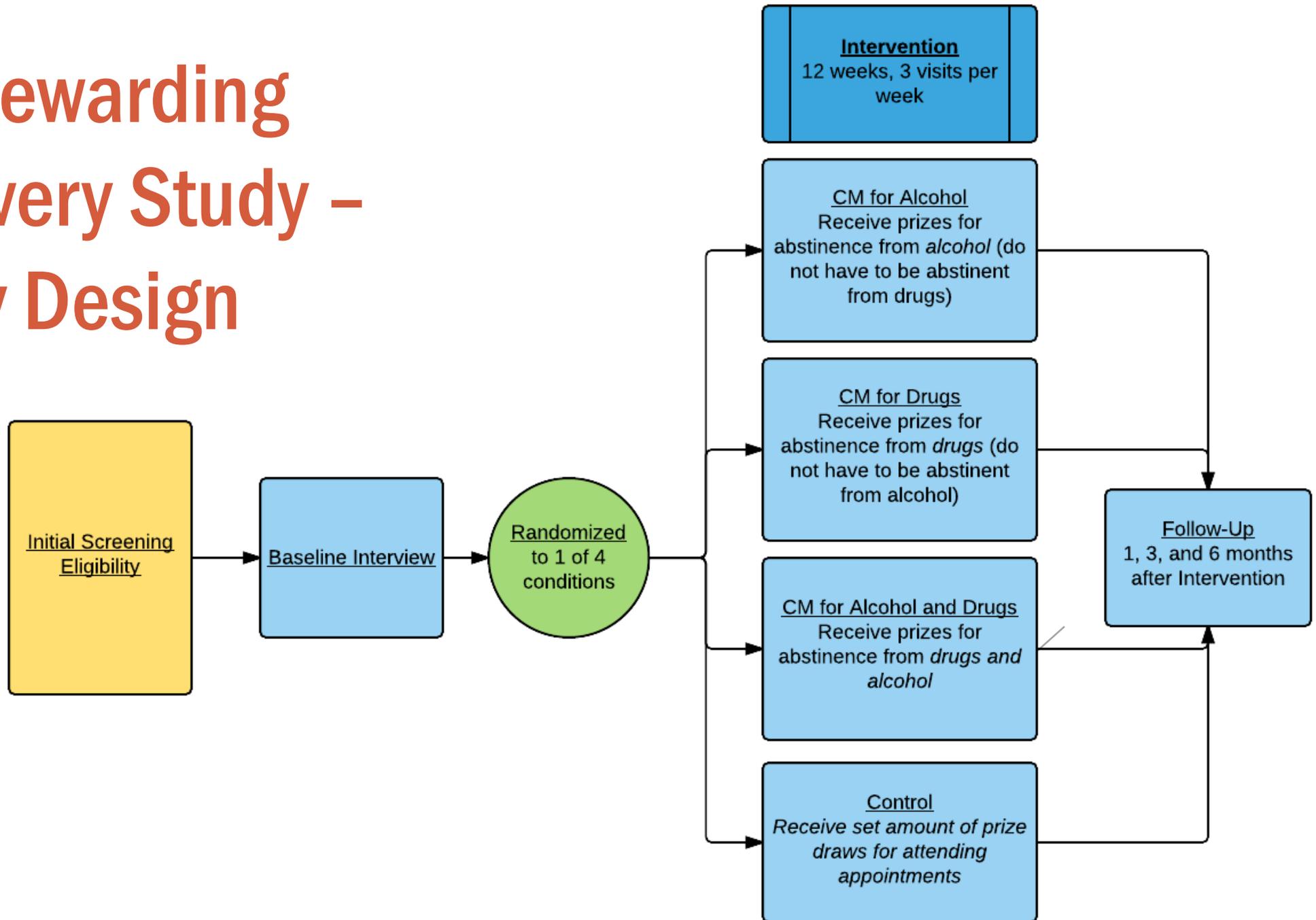


Recruiting for the study at a community event

The Rewarding Recovery Study – Specific Aims

- 1) Maximize the cultural acceptability of the CM intervention through provider interviews and focus groups;
- 2) Determine if participants randomized to CM use less alcohol or drugs than those in the control group;
- 3) Quantify group differences in secondary addiction-related outcomes and alcohol-associated health-impairing behaviors;
- 4) Identify demographic, cultural, and other predictors of treatment outcome in the CM groups.

The Rewarding Recovery Study – Study Design



Qualitative Research

- Interviews and focus groups were conducted with providers (n=8), consumers, family members, and community members (n=10)
- Participants suggested recovery promoting, family oriented, & culture specific rewards
 - Inspirational books
 - Gifts for participant's children
 - Art work, ceramics, bead work, sage, breast plates, drums, eagle feathers, cedar bands

Focus Group Quotes

“I could see like if the reward was a little different you know if at the end of the process, someone getting a drum or something, that would be totally amazing. Bead work. You know, things that are made by people that they know and care about...”

“...something for our kids that we can't afford at Christmas time or something you know we can build things up like that for them.”

Initial results, Next Steps

- Rewarding illicit drug abstinence appears to be the best way to decrease alcohol use and drug use
 - Targeting drugs may be the biggest bang for our buck
- Targeting alcohol abstinence or alcohol and drug abstinence may be less effective than targeting drugs
- Next Steps: Community and scientific dissemination

The HONOR Study

- Partnership with Washington State University and three AI/AN communities
- **Goal:** to determine if a culturally tailored version of contingency management leads to decreased alcohol use in AI/AN communities

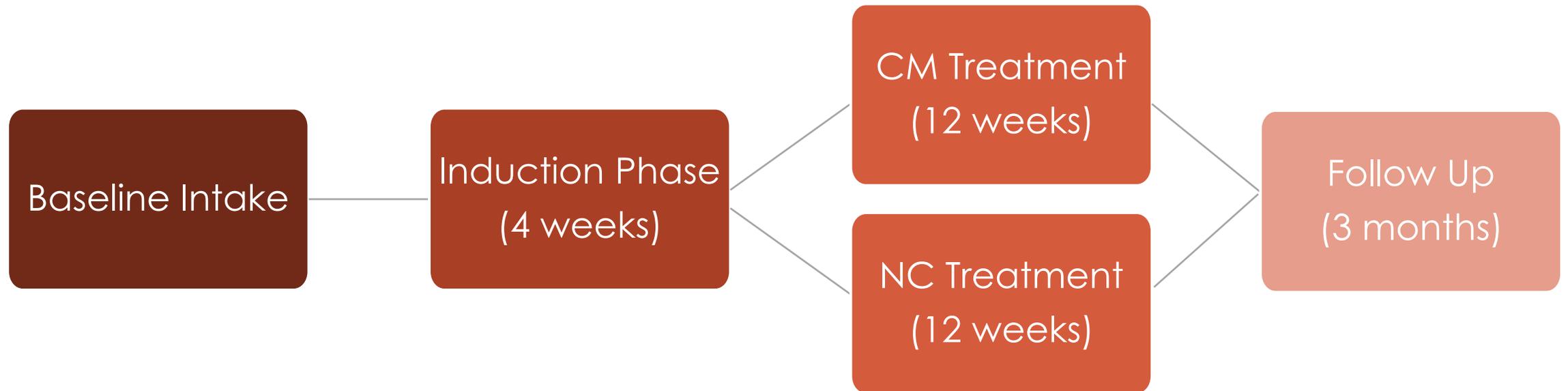


The HONOR Study – Specific Aims

- 1) Maximize the cultural acceptability of the CM intervention;
- 2) Determine if participants randomized to CM use less alcohol than those in the control group;
- 3) Quantify group differences in secondary addiction-related outcomes and alcohol-associated health-impairing behaviors;
- 4) Identify demographic, cultural, and other predictors of treatment outcome in the CM group.

The HONOR Project – Study Design

7 Months



Progress

- Completed recruitment N~400
- About 140 have been randomized
- Supported the dissertation research of Katherine Hirchak, PhD, now at UNM
- Next steps: complete data collection, data analysis, and dissemination
- Publication of study results in Fall 2019

Practical Lessons Learned

- Multiple challenges and strengths (need for individualized treatment)
- Many individuals not receiving treatment-as-usual (lots of different reasons)
- Transportation and outreach are key
- Allowing each community and team to determine how they will implement the intervention (practically and culturally)
- Frequent even short visits are not feasible for most people
- How can we pay for it? AI/AN communities may have unique advantages in paying for CM, that non-Native communities do not

For More Information

[A culturally-tailored behavioral intervention trial for alcohol use disorders in three American Indian communities: Rationale, design, and methods.](#)

McDonnell MG, Nepom JR, Leickly E, Suchy-Dicey A, Hirchak K, Echo-Hawk A, Schwartz SM, Calhoun D, Donovan D, Roll J, Ries R, Buchwald D.

Contemp Clin Trials. 2016 Mar;47:93-100. doi: 10.1016/j.cct.2015.12.010. Epub 2015 Dec 17.

PMID: 26706667 [PubMed - indexed for MEDLINE] **Free PMC Article**

[Similar articles](#)

[Focus groups to increase the cultural acceptability of a contingency management intervention for American Indian and Alaska Native Communities.](#)

Hirchak KA, Leickly E, Herron J, Shaw J, Skalisky J, Dirks LG, Avey JP, McPherson S, Nepom J, Donovan D, Buchwald D, McDonnell MG; HONOR Study Team.

J Subst Abuse Treat. 2018 Jul;90:57-63. doi: 10.1016/j.jsat.2018.04.014. Epub 2018 May 3.

PMID: 29866384 [PubMed - in process]

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[Contingency management intervention targeting co-addiction of alcohol and drugs among American Indian adults: Design, methodology, and baseline data.](#)

Burduli E, Skalisky J, Hirchak K, Orr MF, Foote A, Granbois A, Ries R, Roll JM, Buchwald D, McDonnell MG, McPherson SM.

Clin Trials. 2018 Dec;15(6):587-599. doi: 10.1177/1740774518796151. Epub 2018 Aug 29.

PMID: 30156433 [PubMed - in process]

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Quyana, Who-wee-hoo, Thank you!

- Funders: NIAAA, NIMHD, OBSSR, (Judy Arroyo, Brett Hagman, Deidra Roach)
- Partnering communities in Alaska, Northern Plains and Spokane
- Abram Lyons, Jalene Herron, Katherine Hirschak, CAB members, DSMB members, partnering IRBs
- Amazing participants for their passion and service to those seeking recovery

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- 3. *The NSDUH Report: Substance Use among American Indian or Alaska Native Adults*. (2010). Rockville, MD.
- 4. Evans, E., Spear, S.E., Huang, Y-C., Hser, Y-I. (2006). Outcomes of drug and alcohol treatment programs among American Indians in California. *American Journal of Public Health*, 96(5), 889-896.
- 5. Gone, J., & Trimble, J. (2012). American Indian and Alaska Native mental health: Diverse perspectives on enduring disparities. *Annual Review of Clinical Psychology*, 8, 131-160.
- 6. Beals, J., Novins, D., Spicer, P., Whitesell, N., Mitchell, C., Manson, S., & Team, A.-S. (2006). Help seeking for substance use problems in two American Indian reservation populations. *Psychiatric Services*, 57(4), 512-520