



Center on  
Rural Addiction  
UNIVERSITY OF VERMONT





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Rural Addiction**  
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**Community Rounds Workshop Series**

## **Recommendations for Culturally Recentering Reinforcement-Based Substance Use Disorder Interventions in Collaboration with Rural Tribal Communities**

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# Disclosures

There is nothing to disclose for this UVM CORA Community Rounds session.

## **Potential Conflict of Interest:**

All potential conflicts of Interest have been resolved prior to the start of this program.

All recommendations involving clinical medicine made during this talk were based on evidence that is accepted within the profession of medicine as adequate justification for their indications and contraindications in the care of patients.

This activity is free from any commercial support.



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# ACKNOWLEDGMENTS

## Tribal Partners

### WSU Team

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- Kelsey Bajet, MA
- Alex Granbois
- Michelle Peavy, PhD
- Diana Tyutyunnyk, BA
- Debbie Vogel, MA
- John Roll, PhD
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## LEARNING OBJECTIVES

- Describe evidence around substance use disorder (SUD) in rural American Indian and Alaska Native communities
- Discuss the importance of cultural adaptation for SUD treatment among members of rural Tribal communities
- Define reinforcement-based SUD interventions
- Outline ways to culturally adapt and implement contingency management among rural Tribal communities

## SIGNIFICANCE

Alcohol use prevalence rates vary between Tribes and regions

American Indian and Alaska Native (AI/AN) adults have high rates of alcohol abstinence

Health-related inequities due to alcohol misuse higher than the national average

Need for culturally appropriate interventions for substance-related health issues



Source: IHS, 2014; NSDUH, 2019





## THE HONOR STUDY



### OVERALL GOAL

To see if CM leads to reductions in alcohol use among AI/AN adults in a rural reservation community, Alaska Native healthcare center and a city in the Northwest

### SPECIFIC GOALS

Adapt CM to maximize cultural acceptability for AI/AN communities

Determine if people who receive CM use alcohol less than those who don't receive CM

Source: McDonnell, Hirchak, et al., 2021





# HONOR STUDY: METHODS

## STUDY DESIGN

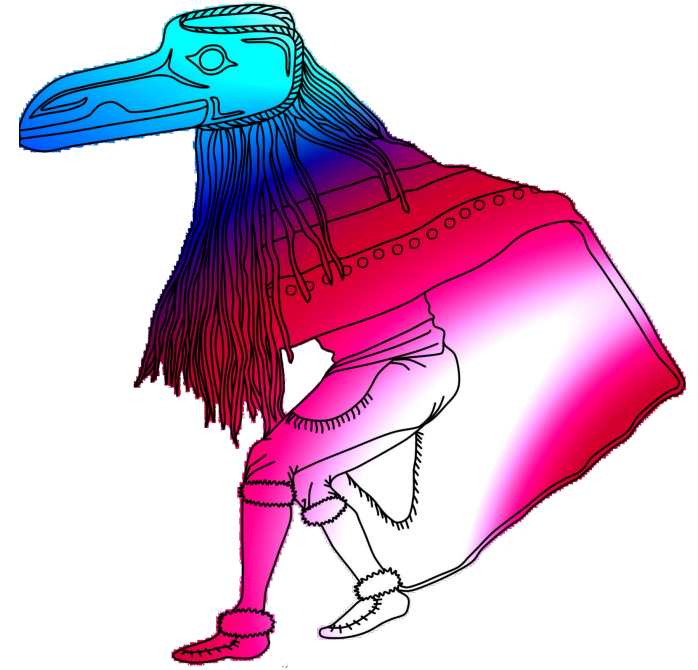
- 12 weeks
- Urine tests and CM rewards 2 times a week
- CM group received rewards for alcohol abstinence, the control group received rewards for attending study visits and providing urine samples

Statistical analysis:

- Outcomes: Alcohol use, secondary substance use
- Generalized estimating equations and single logistic generalized linear mixed effects model

## ELIGIBILITY

- American Indian/Alaska Native adult 18+ years old
- Diagnosis of Alcohol Dependence (DSM-IV)
- Alcohol use greater than other substance use in the last 90 days







## HONOR STUDY: PARTICIPANT CHARACTERISTICS

Table. Participant Characteristics

Characteristic	No. (%)	
	Contingency management group	Control group
Total participants, No.	75	83
Age, mean (SD), y	42.2 (11.1)	41.9 (11.7)
Sex		
Female	31 (41.3)	44 (53.0)
Male	44 (58.7)	39 (47.0)
American Indian or Alaska Native	75 (100)	83 (100)
American Indian or Alaska Native only	65 (86.7)	70 (84.3)
American Indian or Alaska Native plus other race/ethnicity	10 (13.3)	13 (15.7)
≥High school education	65 (86.7)	68 (81.9)
Married or long-term domestic partnership	33 (44.0)	46 (55.4)
Full-time or part-time employment	54 (72.0)	48 (57.8)
Stable housing	49 (65.3)	46 (55.4)
Maternal alcohol use	58 (77.3)	61 (73.5)
Current smoking	43 (57.3)	53 (63.9)
Ethyl glucuronide-negative test result (<150 ng/mL) at baseline	31 (41.3)	41 (49.4)
Site		
1	10 (13.3)	11 (13.3)
2	32 (42.7)	37 (44.6)
3	33 (44.0)	35 (42.2)



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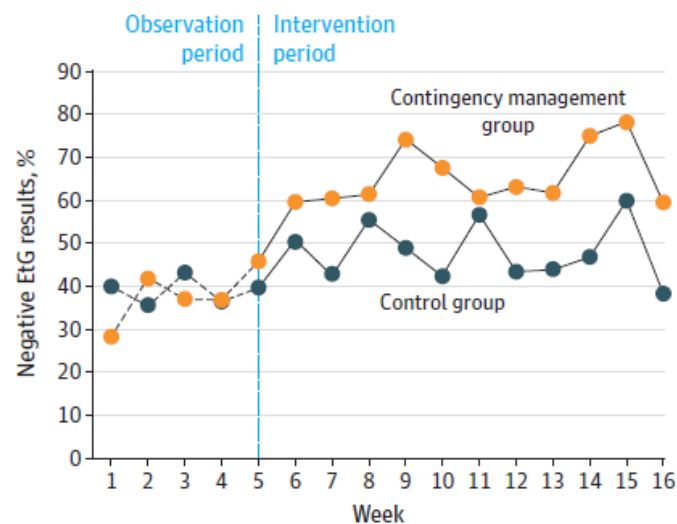


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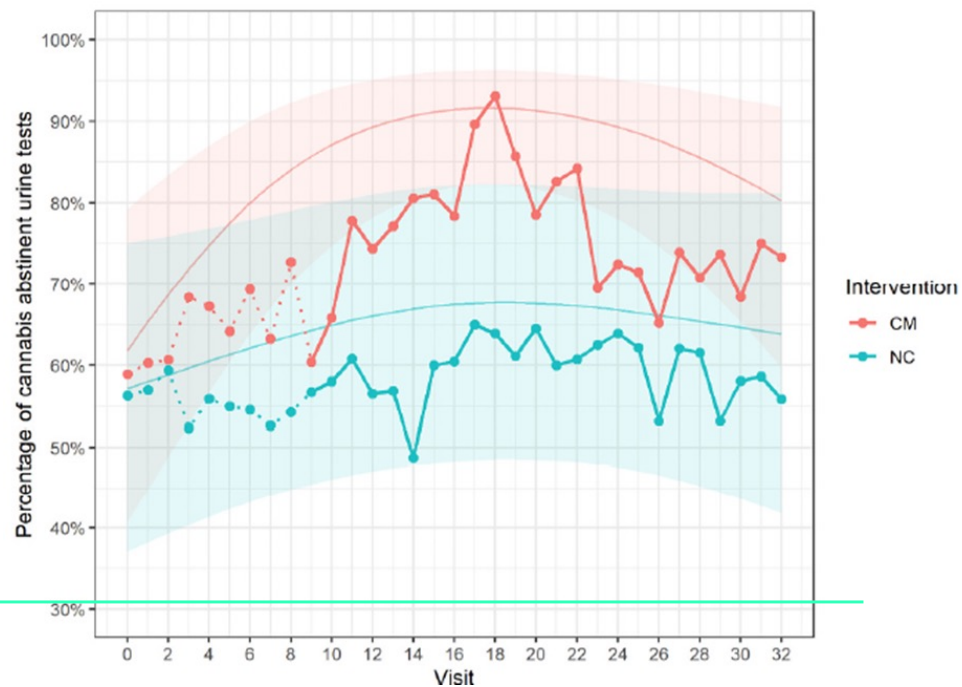
## OUTCOME: ALCOHOL USE



No. of participants	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Control group	82	79	81	74	68	63	54	54	55	40	37	46	41	32	40	47
Contingency management group	74	69	65	65	61	52	43	44	35	37	28	38	34	28	23	32

CM group more likely to be alcohol-abstinent compared with the Non-CM Group (OR, 1.70; 95% CI, 1.05-2.76;  $p=0.03$ )

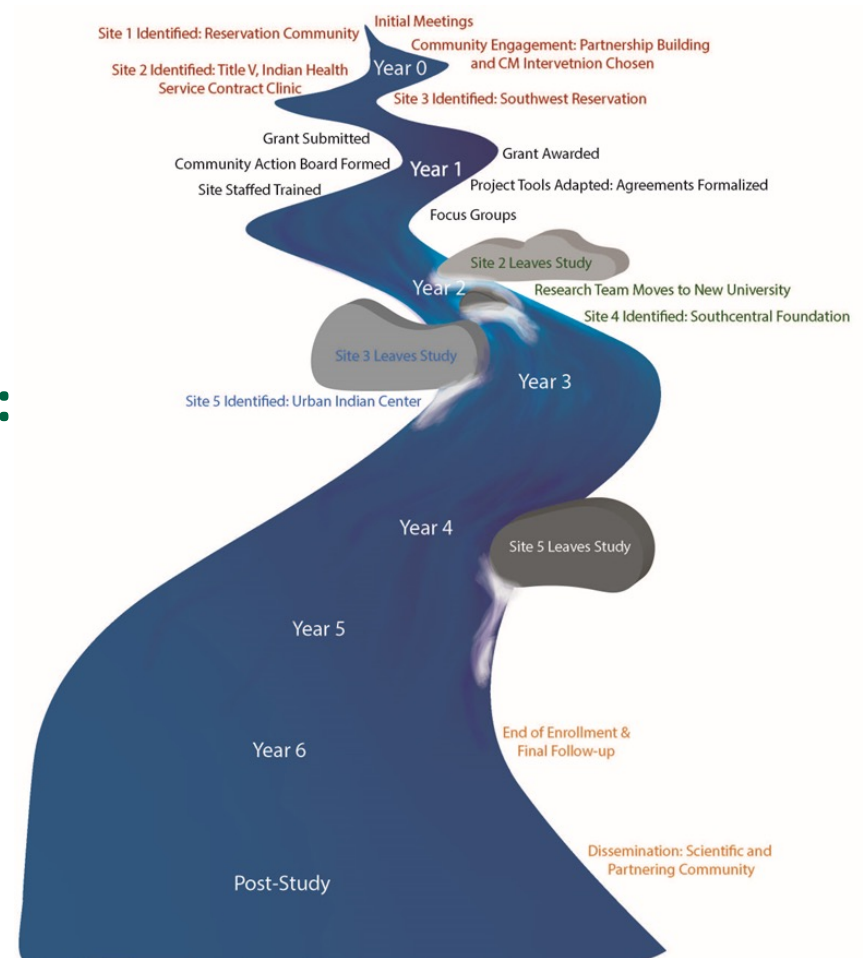
## OUTCOME: CANNABIS USE



Providing incentives for alcohol abstinence reduces cannabis use by almost 4X (95% CI, 1.23-12.46;  $p=0.02$ )

# River of Life Partnership Story: History and Future Directions

(Sanchez-Youngman & Wallerstein, 2018)



Source: Hirchak et al., 2021







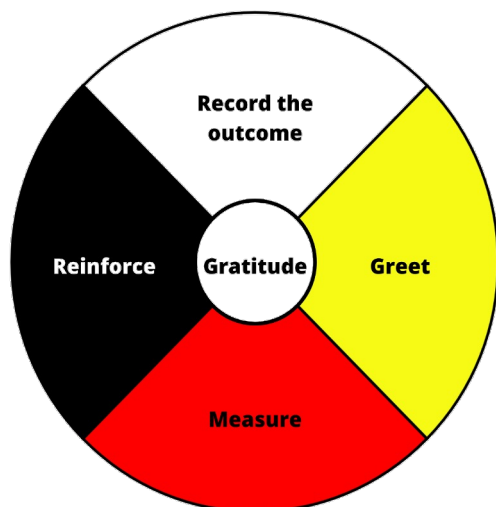
# Clinical Implementation in Rural Settings

- Members of the research team culturally adapted the CM training materials
- Extended collaborations with Kaufmann & Associates Inc and The University of California-LA in 2021
- Currently implementing CM in partnership with new rural Tribal communities on the West Coast





## Sample Cultural Adaptations



### Sample Cultural Adaptations

Concepts of recovery  
Importance of family  
Speaking in Native language  
Sharing worldview and teachings  
Staff were/are respected community members  
Recognition and honoring

“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...”



# Case Example: Lance

## Lance's Story\*

Lance is a 43-year-old living on a rural reservation. Growing up, Lance was very close to his father who helped him connect to his culture and taught him to play basketball. His father taught him how to find the sacred rocks for sweat lodges and taught him about spirituality. However, when Lance was 18, his father passed away. He stopped playing basketball and going to sweats. One of his cousins saw how depressed he became and introduced drugs and alcohol to help him feel better. Lance continued to use drugs and alcohol to cope with his father's loss until he ended up in the hospital. Lance has a strong family support system to help him stay in recovery and he is close with his children and extended family. For example, during the winters, he helps his family collect firewood and helps anyone whenever he can. At times, Lance goes to sweats and speaks with Elders to reconnect with his spirituality. Though these strengths keep him from using drugs and alcohol, Lance sometimes has periods of high use.

### Prompt:

How could you engage Lance into your CM program?

What other resources could help engage Lance?

How has trauma impacted Lance?


What are Lance's strengths?

How can clinicians help Lance rely on his many strengths?

\*Please note this is a fictionalized, composite account of the experiences some of our clients may have had.

# Contingency Management Example

**CM EXAMPLE**



**INITIAL VOUCHER**

**INITIAL CM VISIT**  
Hope is in a CM program targeting stimulant abstinence. She began by receiving a \$5 voucher for each stimulant drug negative urine drug test (UDT).

**ESCALATION BONUS**

**7 WEEKS OF NEGATIVE TESTS**  
After 7 weeks of consecutive stimulant negative UDTs, Hope was earning an extra \$7.50 escalation bonus for each stimulant negative UDT. So today, she earned a total of \$12.50.



**NO VOUCHER**

**A STIMULANT POSITIVE TEST**  
Today, Hope submitted a stimulant positive UDT, so she doesn't get a voucher.

**RESET**

**THE NEXT NEGATIVE TEST**  
The next visit, Hope submits a stimulant negative UDT. She only gets \$5.



**RECOVERY**

**A WEEK OF NEGATIVE TESTS**  
After a week of stimulant negative UDTs, she recovers her previous escalation bonus, plus one more! That makes a \$8.75 bonus on top of the \$5 base, for a total of \$13.75!




**CONGRATULATIONS, HOPE! YOUR URINE TEST IS NEGATIVE FOR STIMULANTS! HERE IS YOUR \$5 VOUCHER!**



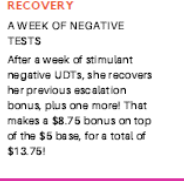
**CONGRATS, HOPE! YOUR URINE TESTS HAVE BEEN NEGATIVE! AND TODAY IS NO DIFFERENT! HERE IS A \$7.50 BONUS ON TOP OF YOUR \$5 VOUCHER!**



**SORRY, HOPE! YOUR URINE TEST IS POSITIVE FOR STIMULANTS. YOU DON'T GET A VOUCHER TODAY, BUT YOU STILL HAVE A CHANCE FOR NEXT TIME!**

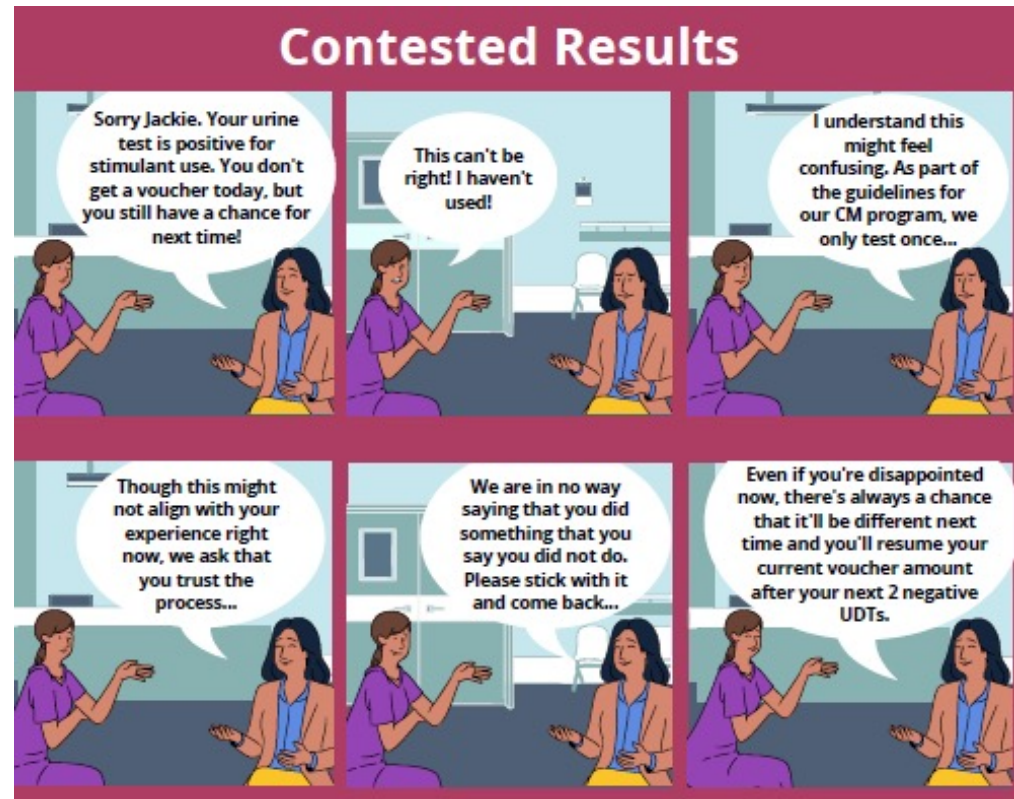


**WAY TO STICK WITH IT, HOPE! YOUR URINE TEST IS NEGATIVE FOR STIMULANTS! HERE IS YOUR \$5 VOUCHER!**

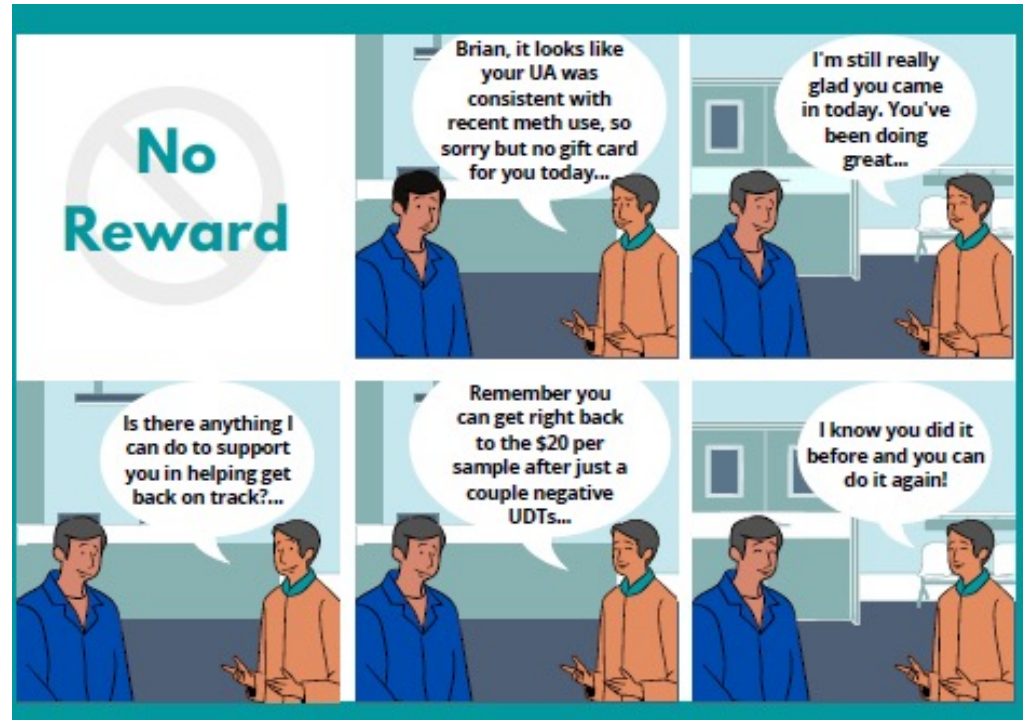


**AWESOME JOB, HOPE! YOUR TESTS HAVE BEEN NEGATIVE FOR A WEEK! NOW YOU'VE EARNED BACK YOUR PAST BONUSES PLUS ONE MORE, FOR A TOTAL OF \$13.75!**

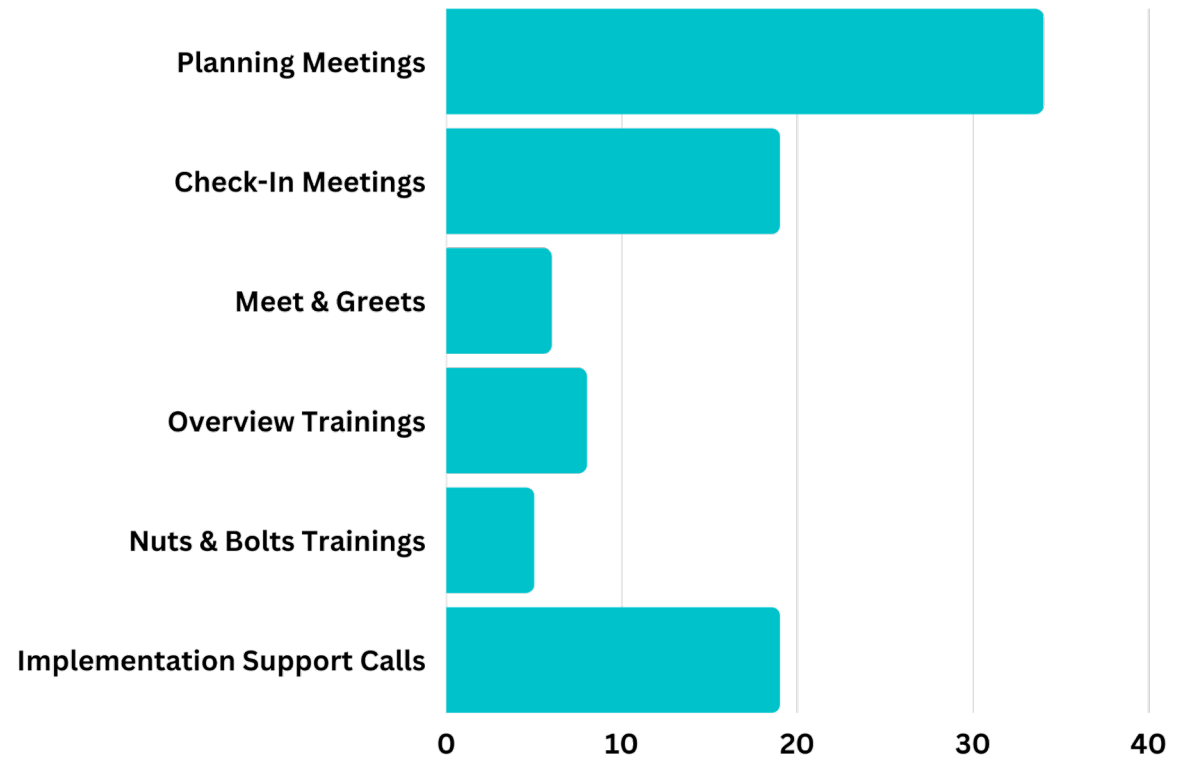
# Contingency Management: Contested Results



# Contingency Management: No Reward



## Partnership Activities



## SUMMARY

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CM is a culturally responsive treatment that rural AI/AN communities can continue to adapt

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Supporting and enhancing community capacity is essential to success in rural communities

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Lower buy-in from organization and community leaders results in lack of fit and withdrawal from participation

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Provide on-going support and TA to rural communities





**THANK YOU!**

- KAIT HIRCHAK, PHD
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