A Public Health Professional-Research Partnership to Reduce Adolescent Risk for Substance Use and Suicide on the Navajo Nation

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Group Introductions

Name

Organization

What do you hope to learn in this presentation?

JOHNS HOPKINS
BLOOMBERG SCHOOL
of PUBLIC HEALTH

JOHNS HOPKINS
CENTER FOR AMERICAN
INDIAN HEALTH

Overview

- Introduction
  - Johns Hopkins Center for American Indian Health (CAIH)
  - Navajo Area Indian Health Service Chinle Service Unit: Health Promotion Program (CHP)
  - Methamphetamine and Suicide Prevention Initiative (MSPI)
- What is Arrowhead Business Group (ABG)?
- Chinle Implementation
- ABG Activity Demonstration
- Pilot Results
- Sustainability

Partnership

"Alone we can do so little;
together we can do so much."

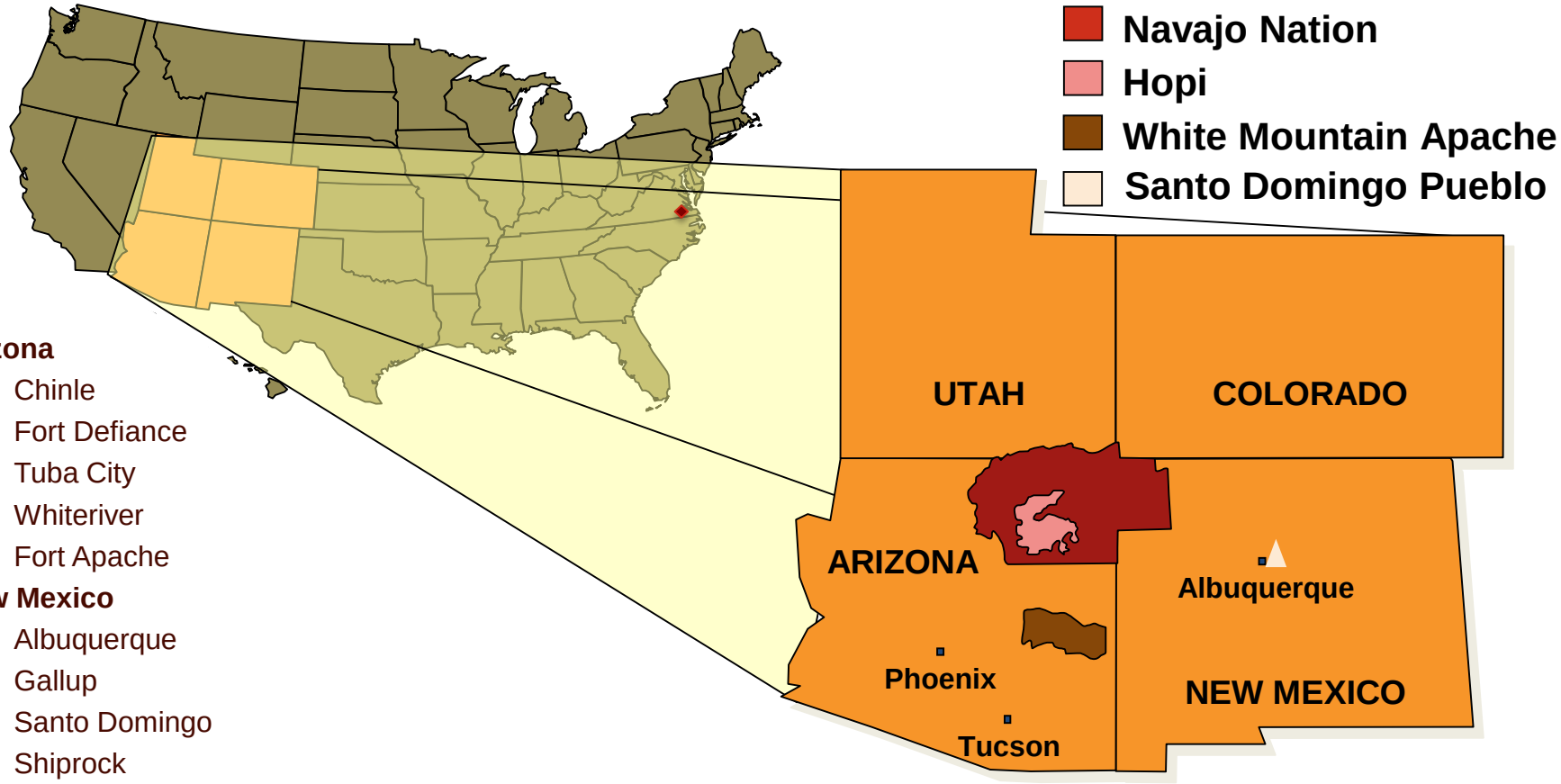
– Helen Keller

Johns Hopkins Center for American Indian

Founded in 1991 by Dr. Mathu Santosham, based on 10+ years work with Southwest tribes

Mission: To work in partnership with American Indian and Alaska Native communities to raise AI/AN health status, self-sufficiency and health leadership of AI/AN people to the highest possible level

NINE OFFICES SERVING RESERVATION COMMUNITIES



Arizona

- Chinle
- Fort Defiance
- Tuba City
- Whiteriver
- Fort Apache

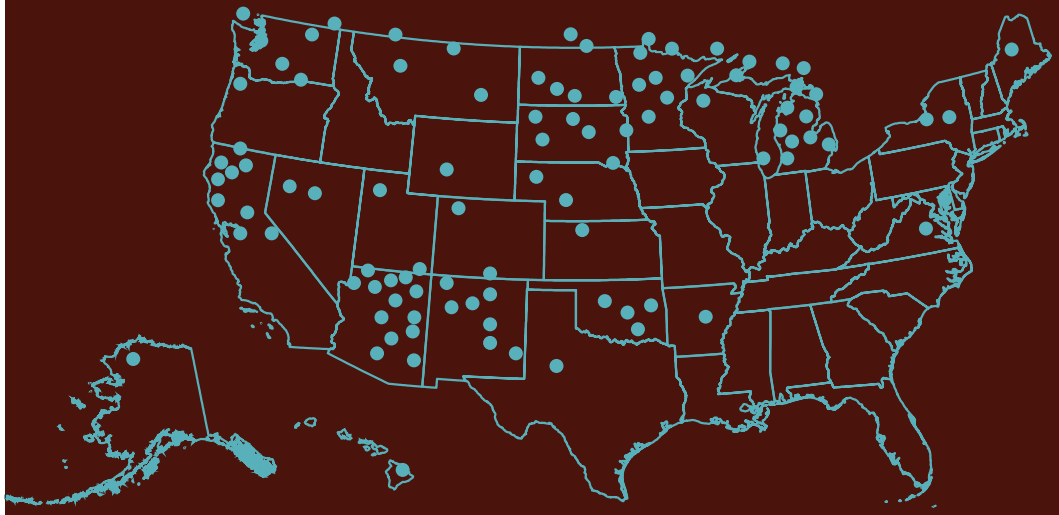
New Mexico

- Albuquerque
- Gallup
- Santo Domingo
- Shiprock

FACTS ABOUT OUR CENTER

The Center's work now serves 120+ tribal communities across 17 states.

OUR PARTNERSHIPS TODAY



Addressing tomorrow's most daunting challenges

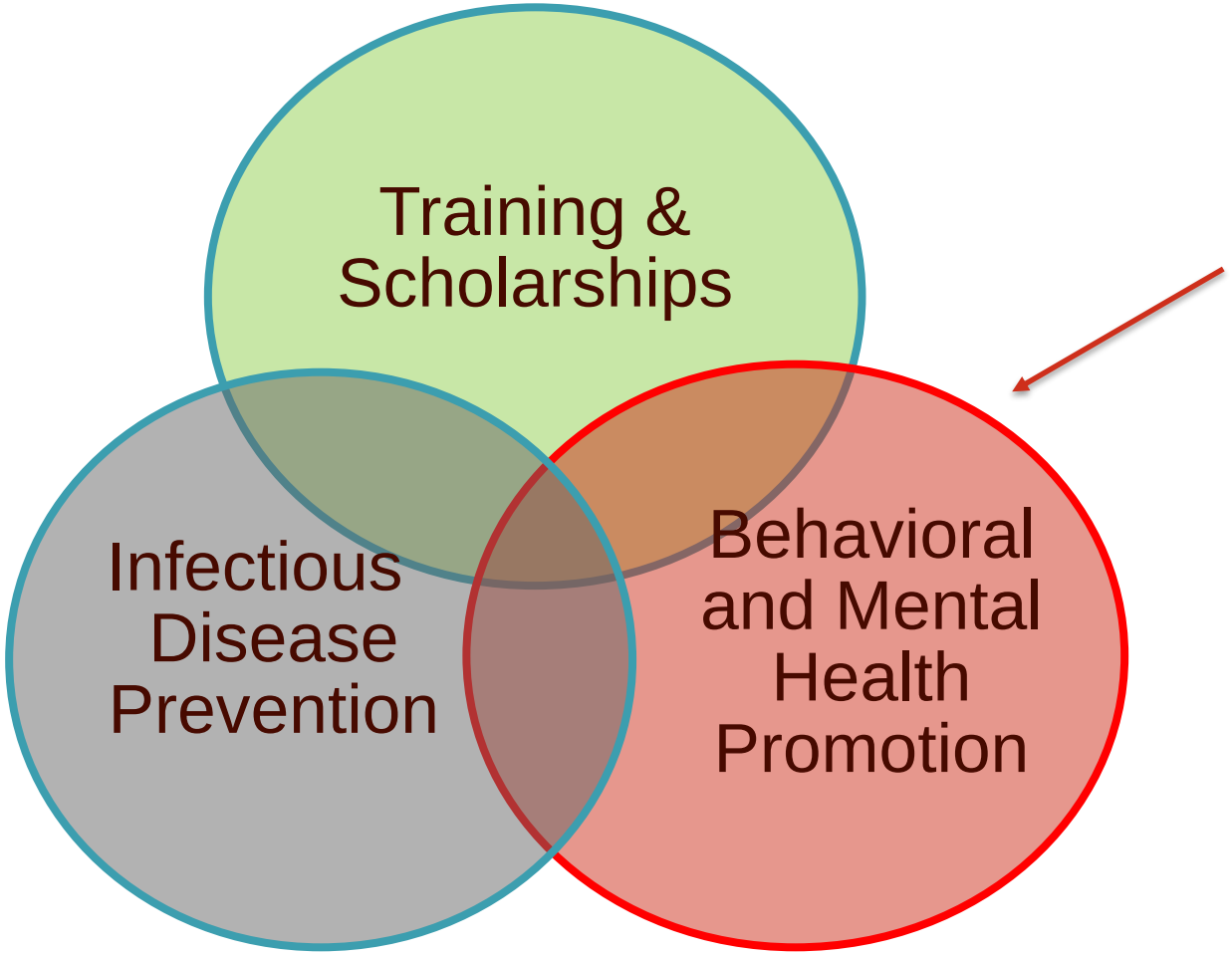
- Launching 500 Scholars Initiative to accelerate efforts to improve educational and employment opportunities—and reduce health disparities—for American Indians and Alaska Natives
- Addressing obesity across the lifespan, beginning in pregnancy
- Equipping young people with entrepreneurship and workforce skills
- Impacting multi-generational health through family-based outreach
- Innovating the use of communication and social media technologies to promote adolescent health
- Pioneering community-based strategies to promote mental health

"Children were dying from preventable diseases. Now children have the opportunity to live to 100 years or more."

—**RONNIE LUPE**, Chairman, White Mountain Apache Tribe

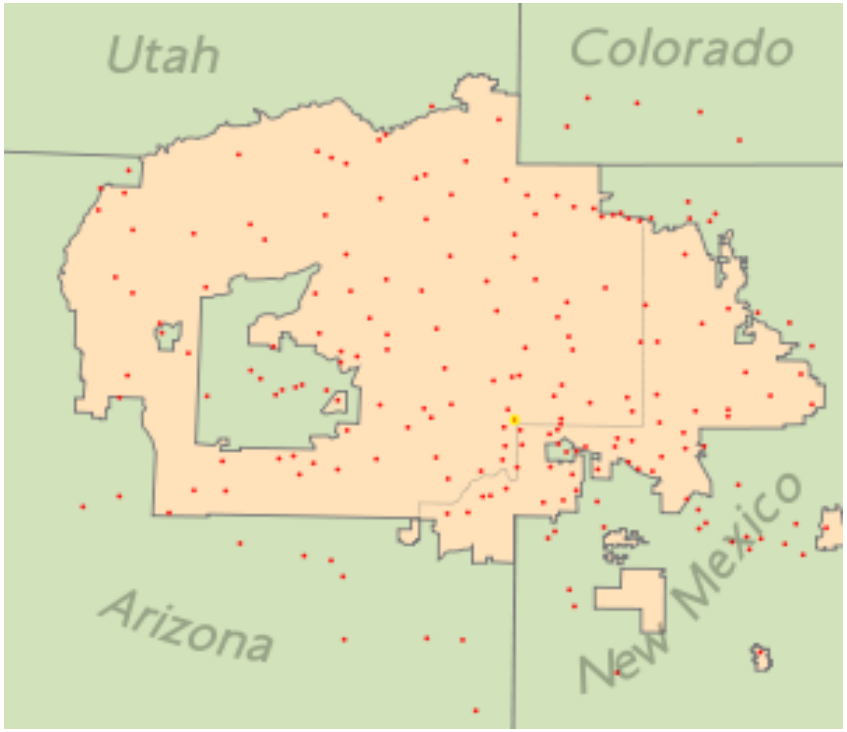
Learn more at AmericanIndian.jhu.edu

Our Center's Core Programs



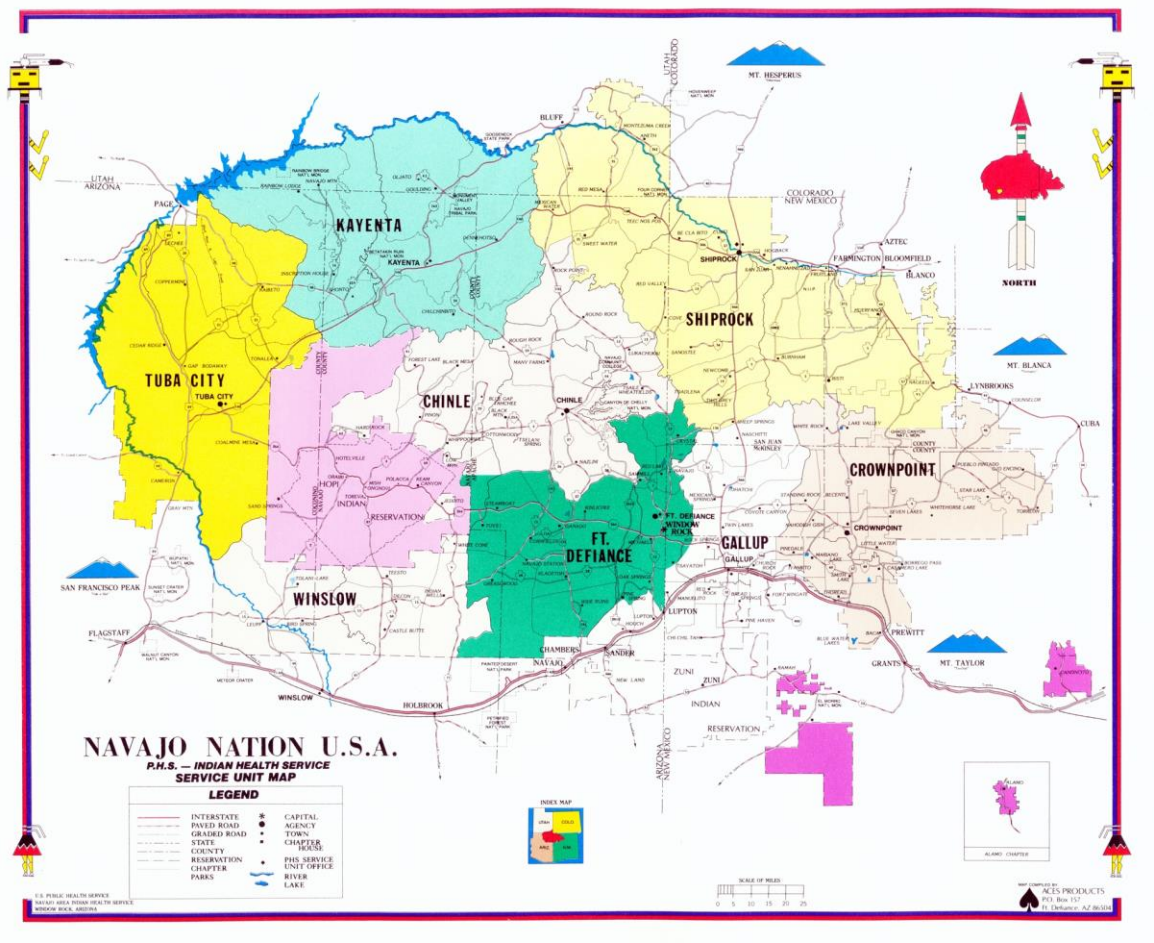
Navajo Nation

- The largest federally recognized land-based tribe in the United States
- Approximately 350,000 members nationwide
- 168,000 members reside on the reservation



Information from Chinle Service Unit Recruitment Presentation

Navajo Area I.H.S. Service Areas (includes federal sites & PL93-638)



Information from Chinle Service Unit Recruitment Presentation

Navajo Area Indian Health Service: Chinle Service Unit

- Includes:
  - Chinle Comprehensive Health Care Facility
  - Tsaile Health Center
  - Pinon Health Center
- Serves ~40,000
- Half of population <25
  - Growth rate nearly 4x US

Chinle Service Unit

Navajo Area Indian Health Service

Information from Chinle Service Unit Recruitment Presentation

Chinle Health Promotion Program

- **Mission**: To create safe environments that support optimal health wellbeing and quality of life
- **Vision**: Self empowered holistic communities
- **Core Values**: Communication, learning, integrity and passion

Chinle Health Promotion Programs

- Coordinated community wellness
- School health
- Injury prevention
- Workplace wellness initiative
- Health communication
- Community health improvement initiative
- Domestic Violence Prevention Initiative
- Methamphetamine and Suicide Prevention Initiative

Methamphetamine and Suicide Prevention Initiative (MSPI)

- Started in 2009 as pilot demonstration project for 130 IHS, tribal, and Urban Indian Health programs
- Nationally-coordinated
- Focus on providing methamphetamine and suicide prevention and intervention resources for Indian Country
- MSPI promotes:
  - Development of evidence-based and practice-based models
  - Culturally-appropriate prevention and treatment approaches
  - Community-driven solutions to prevent suicide and substance use
- Chinle Health Promotion approached JHU with interest in Arrowhead Business Group program

Information from MSPI Website

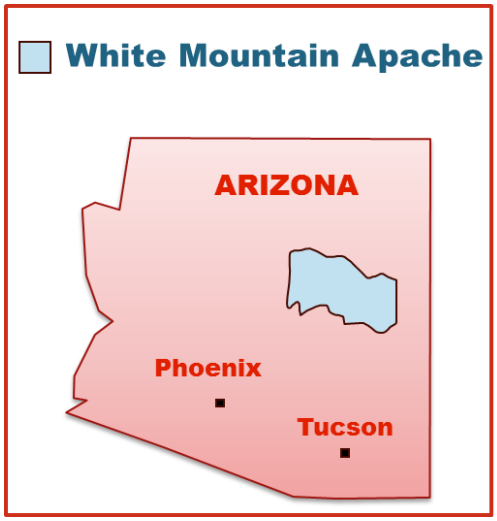
What is Arrowhead Business Group Youth Entrepreneurship Program (ABG)?

Background

- Divergent patterns of substance use among adolescents and adults in Native communities
  - Teens: high lifetime rates; binge use; early initiation (<13)
  - Adults: majority abstain completely
  - Marked differences between tribes and general U.S. population
- **What prevents or promotes substance use and progression to binge behavior among adolescents from the same community?**
  - Foster low-risk use and/or abstinence
  - Advance strength-based and culturally salient prevention strategies

White Mountain Apache Reservation (Apache)

- ~17,000 tribal members
  - almost half <20 years of age
- Reservation size of Delaware
- Tribal-Academic partners for 30 years
- 40+ local Apache/JHU staff



Original Study Design

- Community-engaged approach
  - Native and non-Native researchers
  - Community Advisory Board
- Cross-sectional data collection
  - Quantitative: survey
  - Qualitative: in-depth individual interview (by Apache research assistants)
- Case-control
  - Apache youth ages 10-19
  - Case: Binge alcohol or drug use, past 90 days
  - Control: No lifetime binge use
- Analysis
  - Risk and protective factors
  - Individual, peer, family, cultural/community levels
  - Opportunities for prevention and intervention

Results: Quantitative

- Risk Factors
  - Aggression
  - Emotion regulation
  - Impulsivity
  - Depressive symptoms
  - Stressful events
  - Deviant peer group
  - Poor social relations
  - Argument with friends
  - Poor family functioning
- Protective Factors
  - Social problem solving skills
  - Currently in school
  - Number in the home
  - Residential stability
  - Follow traditional AI beliefs
  - Believe its important to have traditional AI values
  - Ethnic identity

Results: Qualitative

- Peer groups both prevent and promote substance use: *"I think of it as two sets of friends. Friends I drink with, and the group who I just hang out with." (case)*

- Family influence on substance use initiation and modeling: *"I used to see my dad drink and my uncle too. That's what made me drink." (case)*

- Good communication and parental monitoring is protective: *"She'll give me advice, even if it's not comforting, she reminds me that she's my mom and not my friend." (control)*

Results: Qualitative

- Youth need structured activity: Controls described regular involvement (i.e. sports, clubs, camps); cases said often bored and *"are walking around; being everywhere."*

- School connectedness is essential: Cases negative about school; many dropped out. Controls were strongly attached, viewed academics as a means to long-term goals. *"What do I like about myself? That I do well in school." (control)*

- Both groups participate in traditional ceremonies & want to continue as adults: *"I love our culture. We're one of the few cultures left and need to take our traditions seriously." (control)*

Intervention Development

- Promote school connectedness
  - Increase college matriculation and aspiration
- Teach life skills, academic and employment skills
- Improve hopefulness and goal setting
- Foster relationships with positive peers and caring adults
- Reinforce Apache identity and culture
- *Entrepreneurship Education: Arrowhead Business Group (ABG)*

Intervention Structure & Delivery

- 16-sessions:
  - 10 during summer residential camp
  - 6 post-camp workshops
- Delivery by 2 Native facilitators to mixed-gender groups of youth
- Participation and mentorship from Native entrepreneurs, Elders and key stakeholders
- Opportunity for business incubation and start-up

Intervention Evaluation

- Randomized controlled trial (2:1)
- Youth ages 13-16 (N=450)
- 3 cohorts
- Surveys: Baseline through 24 months, assess 4 domains:
  1) Psychosocial
  2) Behavioral health
  3) Educational
  4) Economic

ABG Evaluation Results

	Baseline		Post-Intervention			6 Month			12 Month			24 Month		
	ABG	Control	ABG	Control	p-value	ABG	Control	p-value	ABG	Control	p-value	ABG	Control	p-value
Used Marijuana, Last 30 Days % (n)	20.2% (53)	16.0% (20)	24.6% (35)	22.5% (14)	0.6718	21.2% (44)	28.1% (28)	0.0428	21.8% (39)	31.7% (26)	0.0151	23.4% (35)	31.4% (23)	0.0444
Suicide Attempt, Last 12 Months % (n)	15.6% (42)	15.1% (19)	11.7% (19)	15.2% (10)	0.4364	9.7% (20)	6.5% (6)	0.446*	10.2% (19)	10.2% (9)	0.908*	9.9% (14)	11.4% (9)	0.665*
Fight, Last 12 Months % (n)	36.1% (98)	31.5% (39)	18.8% (29)	34.6% (21)	0.0014	21.1% (44)	18.5% (16)	0.8538	19.4% (38)	21.0% (15)	0.3283	11.7% (20)	23.1% (16)	0.005
Fight on School Property, Last 12 Months % (n)	22.6% (61)	16.6% (21)	11.6% (19)	14.1% (8)	0.2019	11.6% (25)	10.0% (9)	0.6012	8.7% (18)	6.1% (5)	0.9398	6.1% (9)	16.3% (12)	0.0029
Total Knowledge % (n)	14.0% (0.36)	14.7% (0.52)	15.5% (0.36)	14.3% (0.55)	0.0044	16.6% (0.33)	15.6% (0.49)	0.0061	16.6% (0.33)	15.6% (0.49)	0.0061	17.8% (0.36)	17.6% (0.53)	0.1821

Chinle, AZ Implementation

CAIH & CHP Partnership

- **Determining ultimate goal** of replication strategy
- **Identifying leaders** & key staff
- **Training Facilitators**
- **Selecting implementation sites**
- **Building relationships** with local stakeholders
- **Adapting curriculum** to be culturally relevant
- **Ongoing technical assistance**

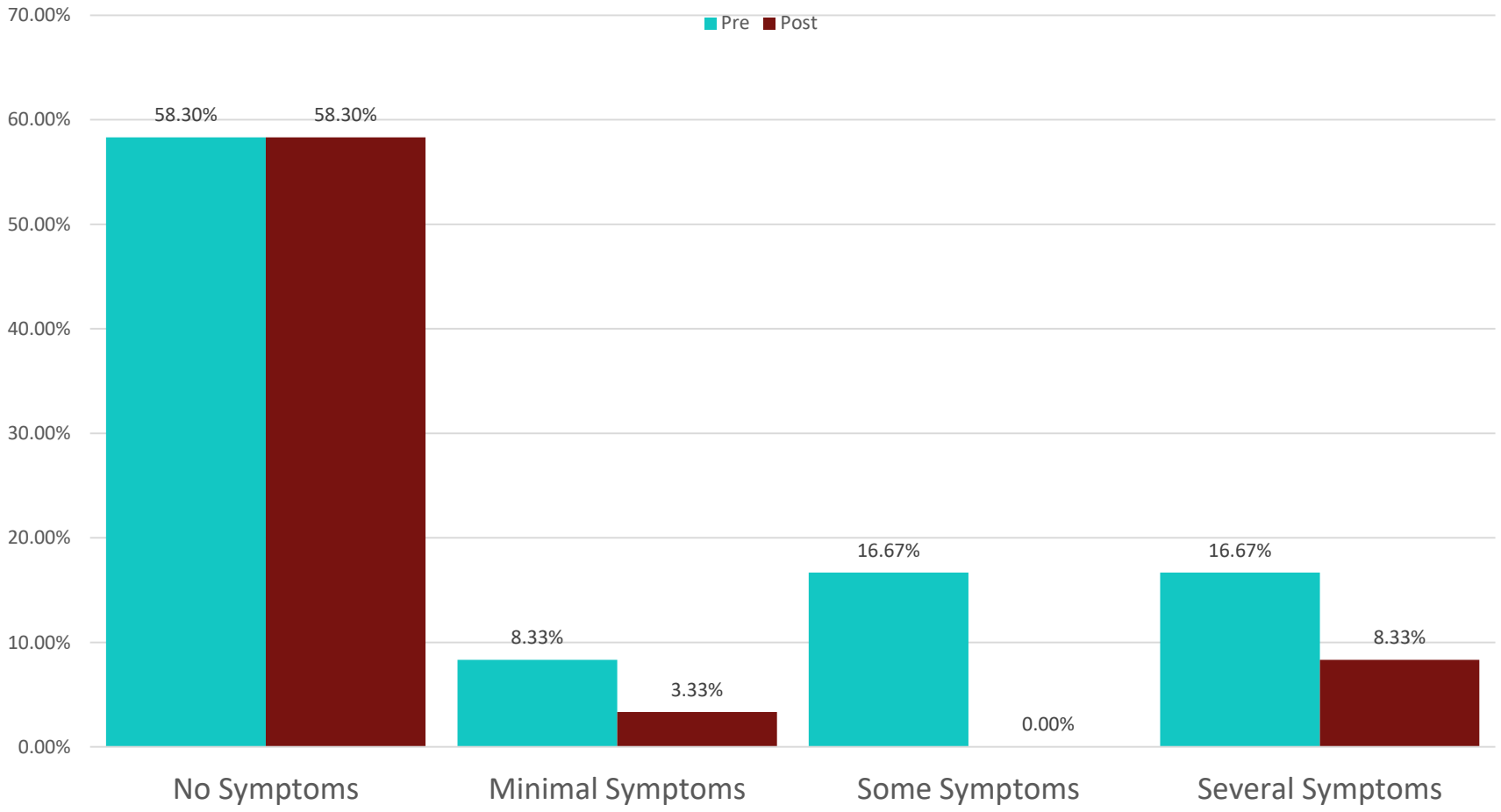
- **ABG Culturally adapted** for Navajo youth
- **Trained and certified 14 Navajo facilitators** in curriculum
- **Recruited 12 Navajo youth**
- **Delivered the 16-session ABG program** through residential camp at **Diné College**
- **Pilot evaluation of impacts** among Navajo youth

Demonstration of ABG Activities!

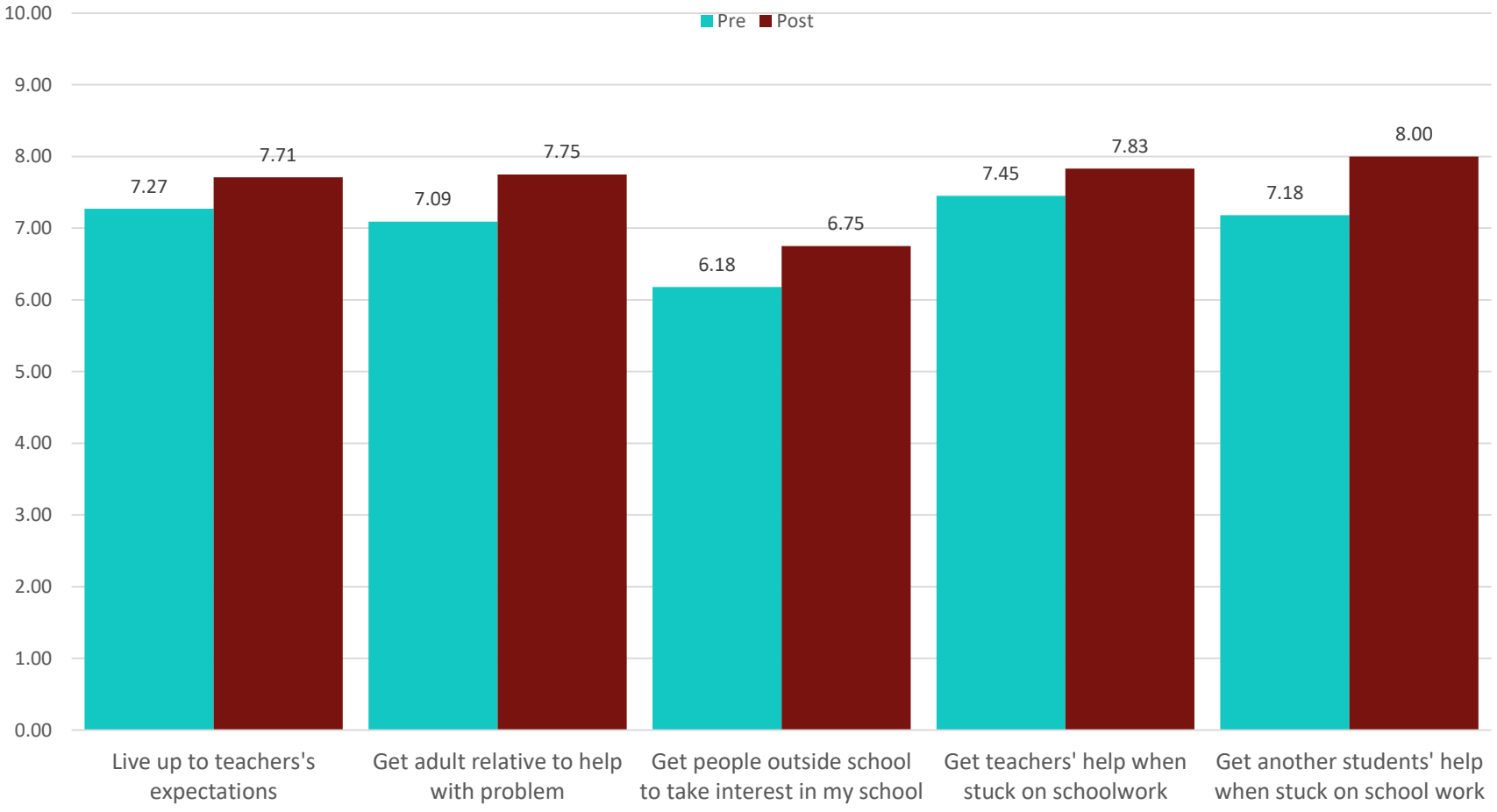
1. Personal Strengths
2. Values and Goal Setting

Chinle, AZ Pilot Results

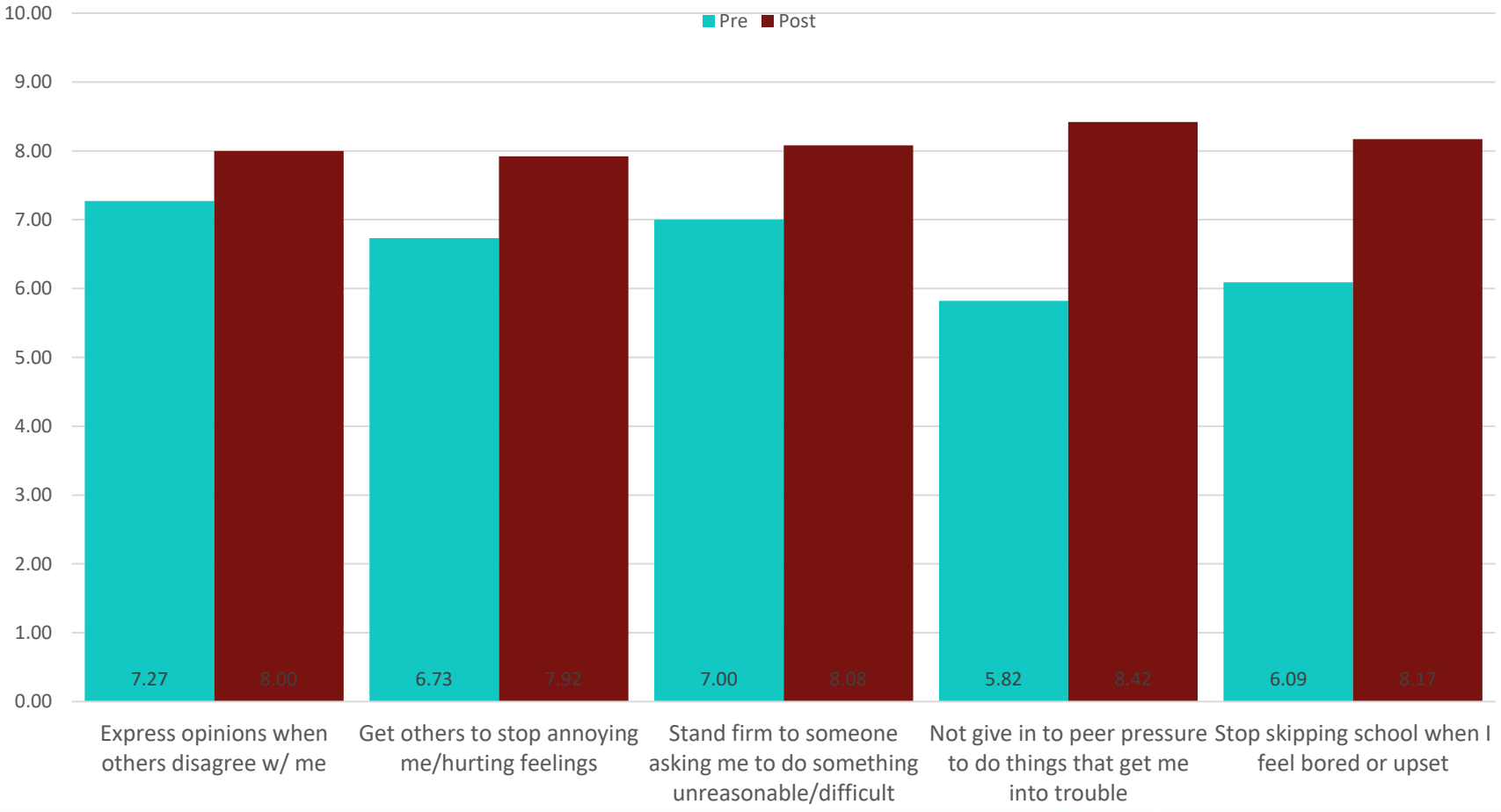
Pilot Results: Depression



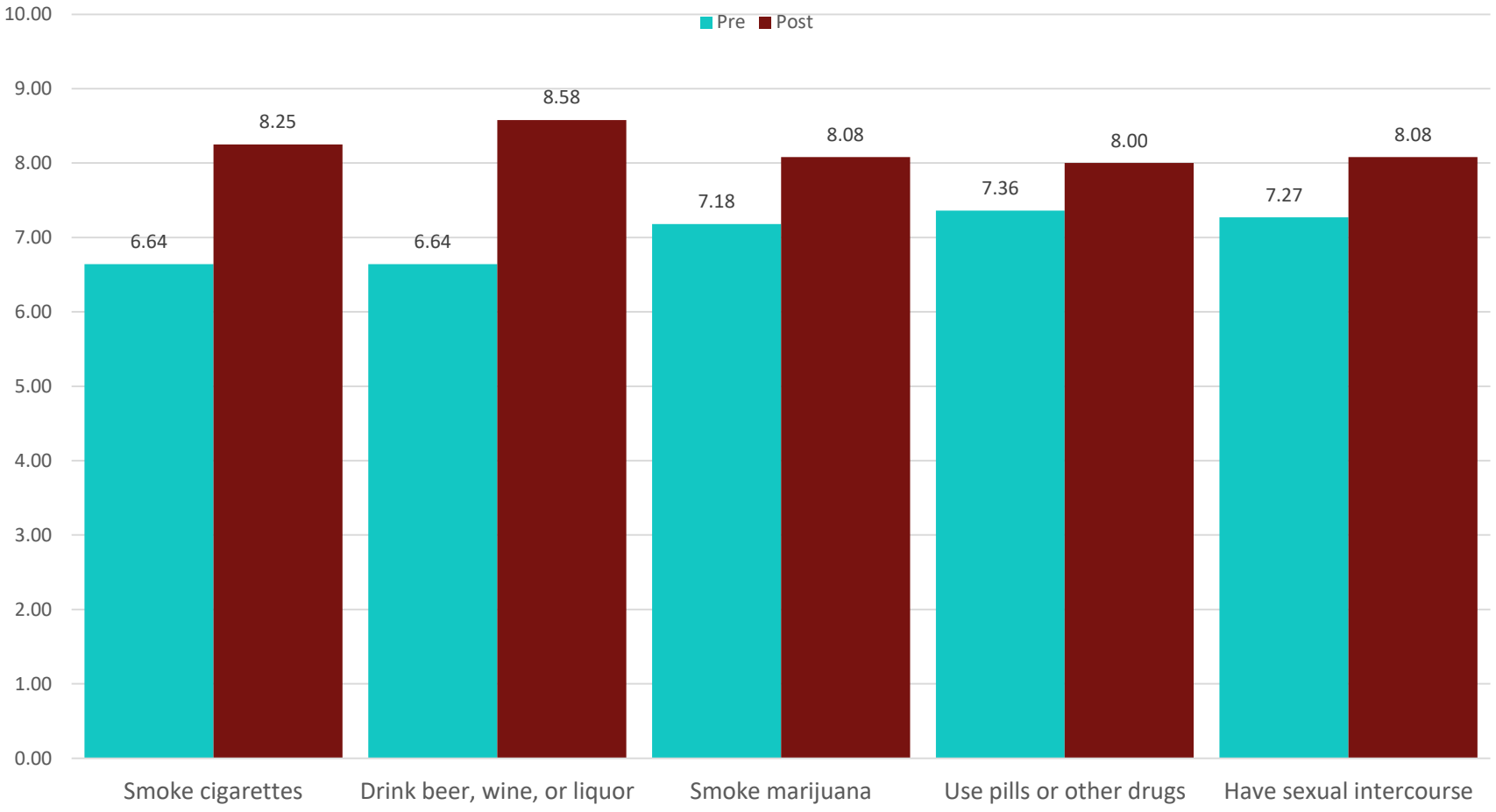
Life Skills and Connectedness Confidence: *Seeking Aid*



Life Skills and Connectedness Confidence: *Speaking Out & School Attendance*



Life Skills and Connectedness Confidence: Substance Use & Sexual Coercion (11 point scale)



Connectedness

Connectedness (Mean, SD)			
	Pre	Post	Change
Neighbors	3.24 (1.10)	3.32 (0.85)	0.08
Current self	3.86 (0.60)	3.98 (0.66)	0.12
Future self	4.15 (0.73)	4.21 (0.59)	0.06
Community	3.49 (0.83)	3.72 (0.97)	0.23

Program Feedback

Helpfulness of the ABG program	
Information presented during lessons	3.91 (1.58)
Facilitator(s) of the lessons	3.73 (1.56)
Materials provided during lessons	3.75 (1.60)
Activities conducted during lessons	3.92 (1.56)

Sustainability

Next Steps

- Summer 2019: Two More Camps
  - Implementation at Diné College in Pinon and Tsaile
- Continued Evaluation
  - Expanding to include 3-months post-intervention
- New partnerships
  - Locals schools
  - After school programs
  - Community-based programs
  - Office of economic development
- Possible credit course at Diné College

Thank you!

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