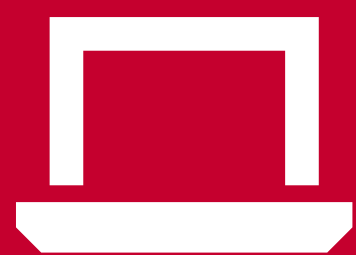


VIRTUAL TEACHING & LEARNING (VTL): Adapting an effective commercial tobacco dependence treatment intervention and prevention education program for virtual platforms



“Are you able to see my screen?”

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ABSTRACT

Virtual teaching & learning (VTL) is vital in meeting the challenges and opportunities posed by the COVID-19 pandemic and the rapid development of information technology. VTL's popularity lies in the use of the Internet to deliver a broad array of learning modalities such as self-paced, instructor-led, and hybrid learning to enhance knowledge and performance. VTL can potentially reach diverse audiences and facilitate focus in busy environments.

BACKGROUND

During the COVID-19 pandemic, government and tribal officials limited in-person services to reduce virus transmission. Traditional teaching methods quickly shifted to online platforms. Although Internet access remains limited on many tribal lands (Wang, 2018), American Indian practitioners turned this challenge into an opportunity to support their communities. Certified Instructors with the University of Arizona HealthCare Partnership (HCP) – from the Albuquerque Area Indian Health Board, Albuquerque and Portland Area Indian Health Services, the Cowlitz Indian Tribe, and the Inter-Tribal Council of Michigan – collaborated to adapt a Nicotine Dependence Treatment Continuing Education & Certification Program for virtual delivery.

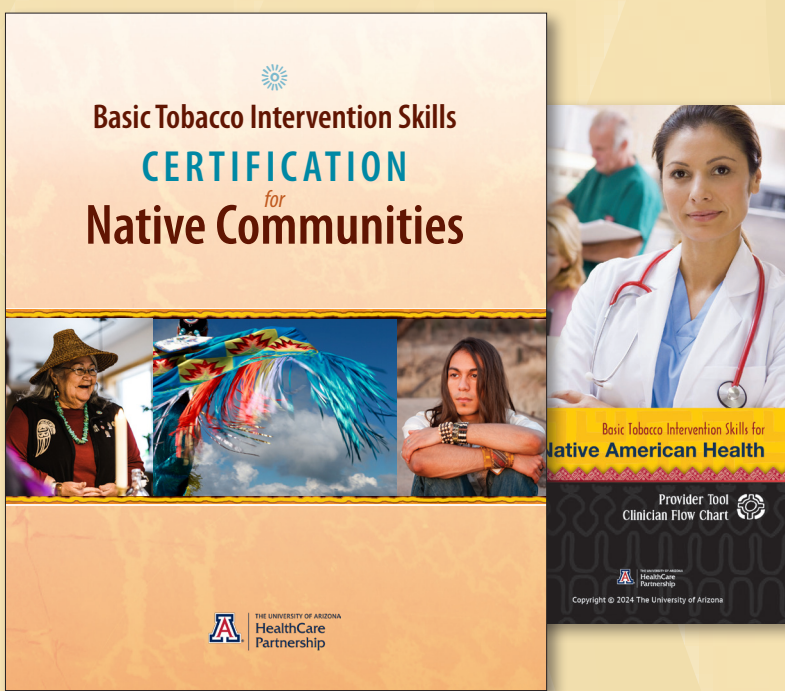
METHODS

PROGRAM MODEL

Since 1998, the University of Arizona HealthCare Partnership (HCP) has created 15 accredited, evidence-based continuing education and certification programs for different healthcare roles and settings. These programs equip providers in delivering brief commercial tobacco use interventions and referring patients to more intensive care when needed. Learn more at: healthcarepartnership.arizona.edu

CONTENT

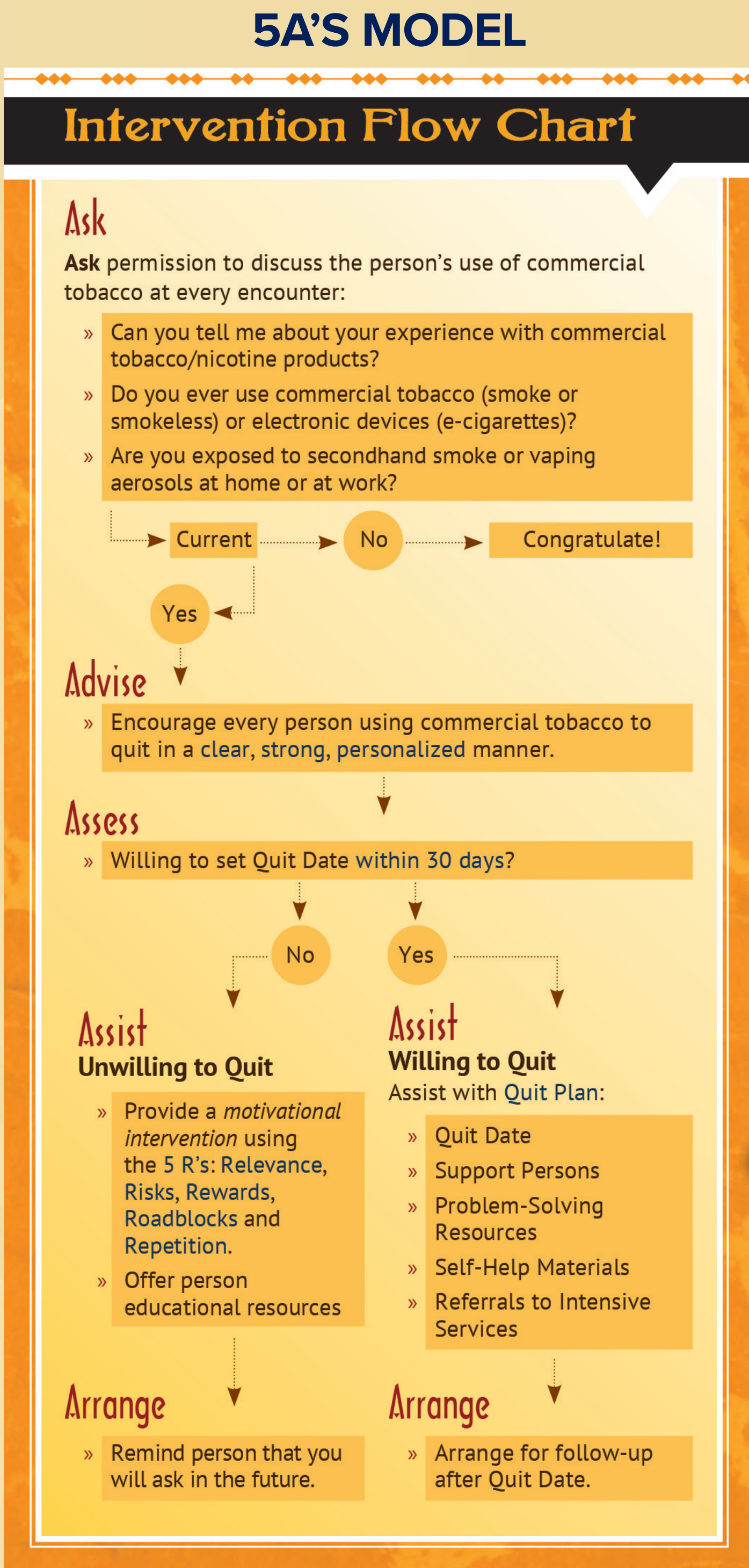
The Basic Tobacco Intervention Skills Certification for Native Communities program is designed to equip health and human service professionals with a clinically and culturally relevant program to consistently teach an evidence-based, evaluative process for delivering a 5 A's Model low-intensity/brief intervention to American Indian people who use commercial tobacco products and for documenting the intervention.



DELIVERY

In response to COVID-19 restrictions, HCP Certified Instructors in American Indian communities proposed adapting the Basic Tobacco Intervention Skills Certification for Native Communities from an in-person format to a Virtual Teaching & Learning (VTL) model. The University of Arizona HealthCare Partnership (HCP) agreed, and nine certified American Indian Instructors led the effort to continue meeting local educational needs.

From June 2020–August 2022, HCP Certified Instructors delivered 46 CE/ CME nicotine dependence treatment programs to 431 health and human service providers nationwide, advancing nicotine addiction treatment in Native communities.



EVALUATION DESIGN

The program evaluation measured changes in knowledge, confidence, skills, intentions, and practice using established learning and behavior models:

- » Bandura's Self-Efficacy (1977, 1997) and Social Cognitive Theory (1986)
- » Moore's Outcomes Assessment Model (1994, 2009)
- » Ajzen's Theory of Planned Behavior (1991)
- » Knowles' and Freire's adult learning principles (Knowles, 1979, 1980; Freire, 1972)

Evaluation tools included:

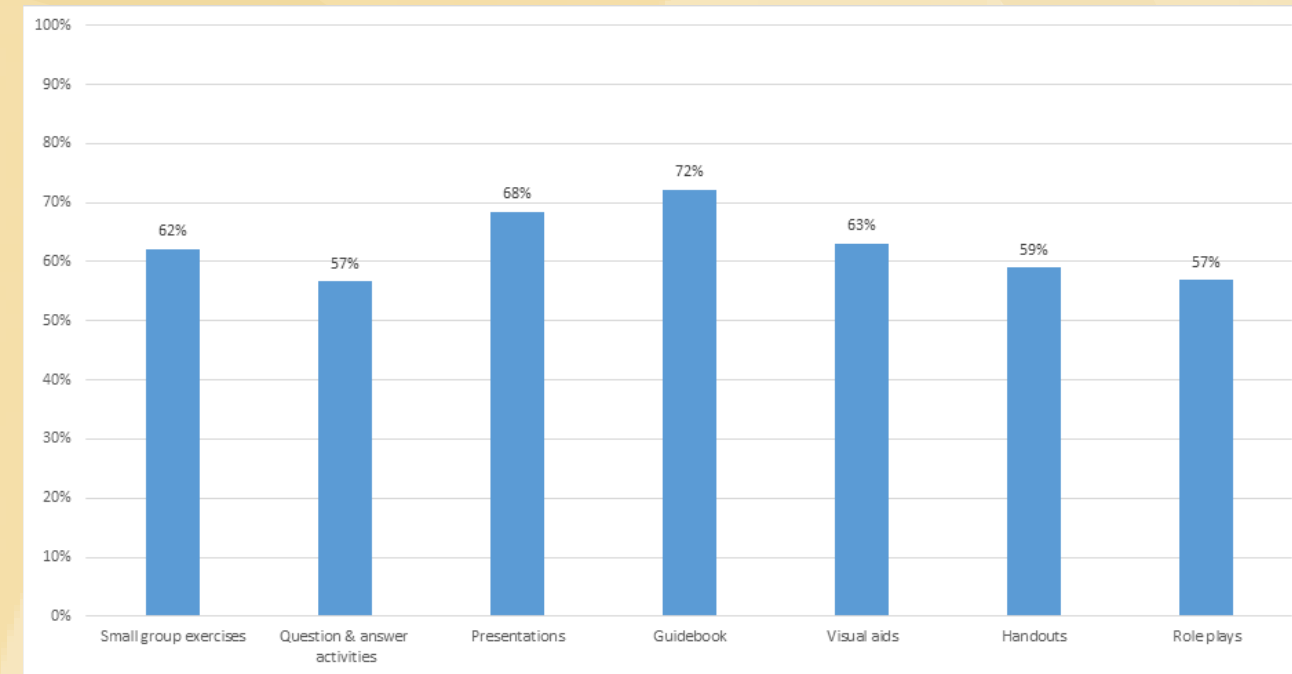
- » Pre/Post Knowledge Tests
- » Pre/Post Self Confidence Ratings
- » Surveys on Current vs. Intended Practice
- » Skills Demonstrations
- » Satisfaction Survey
- » Follow-up Assessment to track application of skills and system-level change

OUTCOMES

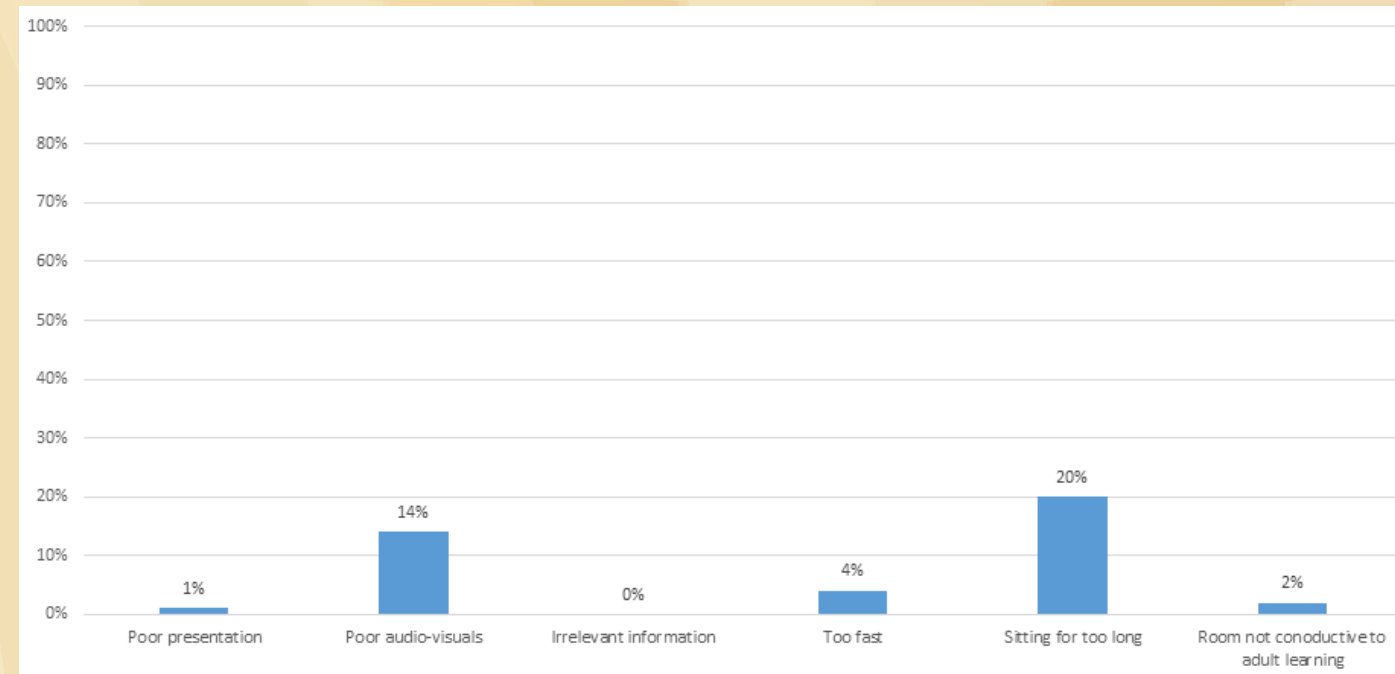
PROGRAM SATISFACTION

- » Participants rated satisfaction with program objectives, format, and delivery highly (mean score: 4.6 out of 5).
- » 94% (n = 431) agreed the content was appropriate for their professional roles.

Most Effective Aspects of the Program



Factors Hindering Learning

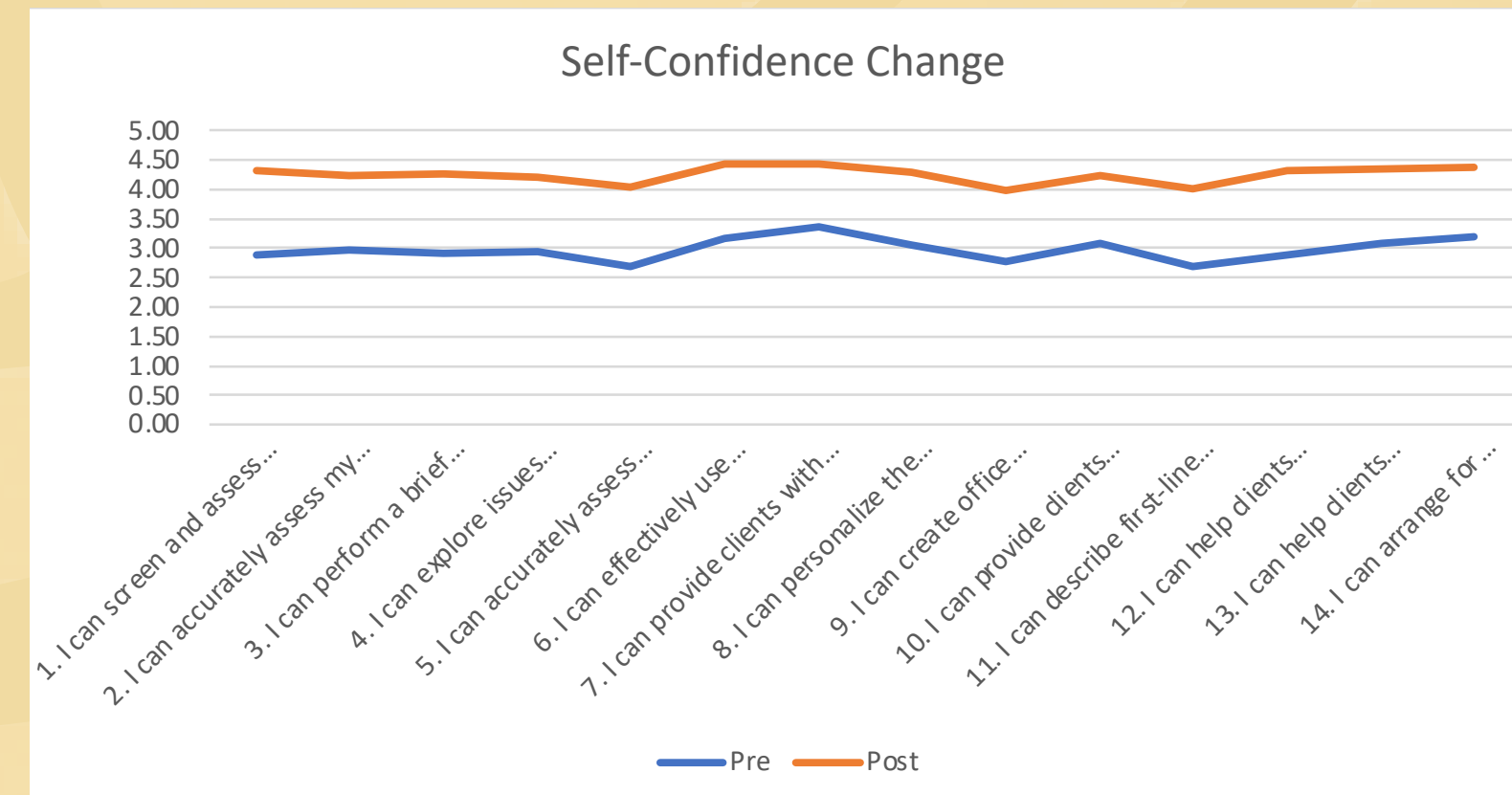


KNOWLEDGE AND SKILLS ASSESSMENT

- » On average, participants (n = 431) answered 14 out of 15 posttest knowledge questions correctly.
- » Participants completed two observed skills demonstrations using a simulated patient video and culturally adapted resources, scored with a checklist.

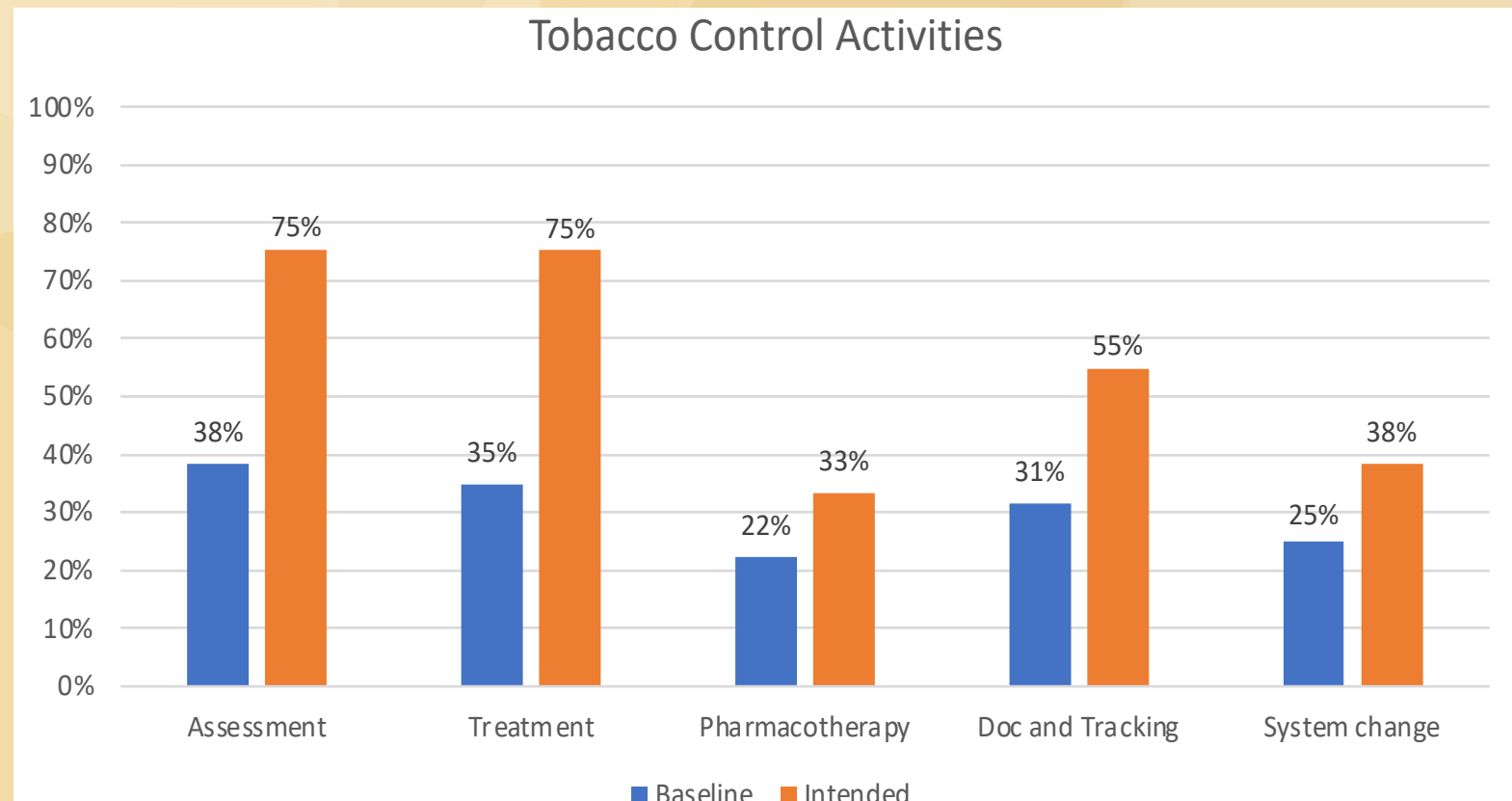
PARTICIPANT SELF-CONFIDENCE CHANGE: PRE & POST PROGRAM

The pretests (M=2.98; SD=0.99) and posttests (M=4.25; SD=0.48) resulted in a **significant increase** in self-confidence for assessing and administering brief interventions and treatment.



INDICATORS OF SYSTEMS CHANGE IN ACTION

The program's impact was measured by comparing the number of nicotine dependence treatment activities participants reported using before training with those they intended to implement afterward. Results showed a **significant increase** in intended activities, indicating positive systems change.



CONCLUSION

Arizona's adaptation of the Basic Tobacco Intervention Skills Certification for Native Communities to a virtual platform demonstrates that Virtual Teaching & Learning (VTL) is a promising approach for broad, population-based delivery of evidence-based commercial tobacco dependence treatment and certification in Native communities. Virtual delivery continues as a flexible and accessible option even after pandemic restrictions ended.

PROGRAM HIGHLIGHTS

- » Participant objectives were met for both content and virtual delivery.
- » Knowledge of commercial tobacco prevention and treatment interventions increased.
- » Use of the Program Guidebook, instructor-led sessions, and virtual breakout rooms strengthened participants' intent to apply new interventions.
- » Confidence gains in VTL matched those seen in in-person programs.
- » 431 health and human service providers trained, expanding the network of tobacco control health influencers.
- » Virtual delivery ensured continued education and support during the pandemic.
- » Flexible access accommodated participants with mobility limitations.

LESSONS LEARNED

Benefits:

- » Promotes engagement and self-directed learning (Miyah et al., 2022).
- » Enables ongoing community support despite physical distancing.

Challenges:

- » Internet connectivity issues and remote access limitations.
- » Technology barriers, including outdated equipment and limited device features.
- » Participation and communication occasionally disrupted by technical problems.

Summary:

The program was impactful and well received. Trained providers are better equipped to deliver evidence-based interventions, improving outcomes for people using commercial tobacco and nicotine products and their families. Importantly, virtual training remains a key delivery option, expanding reach and sustaining accessibility across communities.

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