Increasing Capacity to Treat Tobacco Use and Dependence in the Alaska Tribal Health System

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Abstract
The goal of this project was to create an online tobacco treatment specialist training program that increases the accessibility and ease for healthcare providers and professionals to be trained on how to help individuals quit tobacco. American Indian/Alaska Native people have the highest tobacco use rates in the nation and have a higher risk of experiencing tobacco-related disease and death due to high prevalence of cigarette smoking and other commercial tobacco use (Centers for Disease Control and Prevention, 2017). Moodle was used as the learning management system to create 10 modules that cover core competencies for providing tobacco treatment to patients. 15 students from regions across Alaska completed all 10 modules, as well as a pre-test and posttest to measure changes in knowledge. The average pre-test score was 67% while the average post-test score was 86%.

Key words: online tobacco treating specialist training, tobacco treatment specialist, Alaska Native Tribal Health Consortium, Alaska Tribal Health System, Association for the Treatment of Tobacco use and Dependence, Council on Tobacco Treatment Training Programs, Moodle

Objectives:

- Adapt the in-person tobacco treatment specialist training curriculum into an online tobacco treatment specialist training program to increase accessibility for healthcare professionals to be educated about tobacco, to explain the risks of using tobacco and how to help individuals quit tobacco.
- Complete an initial pilot of the Alaska Native Tribal Health Consortium (ANTHC) online tobacco treatment specialist training program with preselected Alaska Native Medical Center (ANMC) clinics by April 2016.
- Complete a regional pilot of the ANTHC online tobacco treatment specialist training program for at least one healthcare professional in each of the 12 tribal regions of Alaska by October 2016.
- Promote the online training program on two statewide and three national websites in order to increase future and sustained participation in the online training program.
- Launch a user-friendly, interactive online learning platform that allows participants to complete all required modules of the training on their own time and at their own pace within a given timeframe by April 2017.

Scope

Tobacco use is the number one cause of preventable death among Alaska Native people, and American Indian/Alaska Native people have the highest tobacco use rates in the nation (Centers for Disease Control and Prevention, 2017). While overall tobacco use rates among adults in the United States and Alaska are decreasing, since 1996, the tobacco use rate among Alaska Native adults has remained steady and has not decreased significantly. Alaska Native adults are still twice as likely to smoke as their non-Native counterparts. However, the majority of Alaska adults who currently smoke want to quit; over half of smokers tried to quit in the last 12 months (DHSS, 2017).

The ANTHC Tobacco Prevention and Control Program provides direct cessation services at the Alaska Native Medical Center (ANMC). ANMC shares a campus with ANTHC and is the hospital that provides tertiary medical care for American Indian/Alaska Native beneficiaries in Alaska. The ANTHC tobacco program works with ANMC to develop policies and protocols that ensure providers and healthcare

professionals are using the United States Public Health Service Best Practice Guidelines for Treating Tobacco Use and Dependence as part of their treatment. Systems for the treatment of tobacco use and dependence have been created and implemented into the electronic health record system that follow standards required by Joint Commission and the Centers for Medicare and Medicaid Services.

According to best practices for treating tobacco use, healthcare providers play an important role in helping individuals quit tobacco. Tobacco treatment programs that assist tobacco users in quitting can produce significant health and economic benefits. Evidence-based clinical practice guidelines outline effective cessation strategies that encourage providers to advise and help patients quit tobacco using both counseling and Food and Drug Administration (FDA) approved pharmacotherapy. In addition, implementation of care systems that ensure patients are asked about and treated for their tobacco use are critical to the success of cessation interventions.

Tobacco Treatment Specialists and Certified Tobacco Treatment Specialists, or TTSs, are nationally recognized professionals who are trained to provide treatment for individuals seeking to stop using tobacco. A TTS understands the science behind tobacco addiction, nicotine withdrawal symptoms and effective treatments for the use of tobacco. In addition, a TTS can provide clear and accurate information about the causes and consequences of tobacco use through the development of an individualized treatment plan using comprehensive, evidence based assessments and treatment strategies. A TTS provides effective treatment for all types of tobacco use while working closely with a variety of populations including those with specific health issues. A TTS often serves as an educational resource for organizations, other healthcare providers and the general public regarding tobacco use treatment issues. When an individual has completed a TTS certification, it means that the TTS has demonstrated a high level of proficiency in the treatment of tobacco dependence by completing training, passing an examination and depending on professional credentials, demonstrating either 240 or 480 hours of experience providing tobacco treatment.

There has been a demonstrated need in Alaska and the United States for training to be developed that is more accessible for providers. Many healthcare professionals work in settings that make it difficult to attend in-person trainings. Travel, time away from the clinic, finding replacement staff and accommodating training due to staff turnover are all expensive barriers. Online training platforms allow healthcare clinics to meet training needs for staff by increasing accessibility. The Association for the Treatment of Tobacco Use and Dependence (ATTUD) website lists 15 tobacco treatment specialist programs on their website. However, many of the healthcare providers that are required to address the use of tobacco do not participate in these trainings because of the time and resources necessary to attend. The ANTHC Tobacco Prevention Program has had multiple requests from physicians, dentists, pharmacists, nurses, community health aides and other health professionals in Alaska and nationally to develop an online Tobacco Treatment Specialist training to meet accessibility needs.

Physicians, mid-level providers, nurses, behavioral health clinicians, community health aides, health educators and a number of other healthcare professionals have a prime opportunity to intervene with individuals who use tobacco and the USPHS Best Practice guidelines (2008) indicate that these professionals make the most impact in encouraging a tobacco user to make a quit attempt. However, because of the time commitment and funding necessary to participate in an in-person five-day tobacco treatment specialist training, many of these health professionals are not afforded the opportunity for the necessary education to help individuals quit tobacco. An online Tobacco Treatment Specialist

training would allow these healthcare professionals to complete the training at their own pace, outside of a classroom setting. More of these healthcare professionals will be able to help their patients who use tobacco to quit, while meeting measures established by their healthcare organizations around tobacco use.

There are approximately 146,000 Alaska Native beneficiaries who receive services within the Alaska Tribal Health System. This project targeted 12 main tribal regions in Alaska to support at least one provider or healthcare professional to take the online training during the regional pilot of the TTS training session.

Methods

Design: The ANTHC in-person tobacco treatment specialist training is accredited by the Council on Tobacco Treatment Training Programs (CTTTP), which is the TTS training accrediting body of the Association for the Treatment of Tobacco use and Dependence (ATTUD). This means that the training has met standards based on the core competencies for the evidence-based treatment of tobacco dependence established by ATTUD. Accreditation is a key source of external validity for this program and provides an assurance of quality control, making the training program attractive to trainees while also enhancing marketability.

ANTHC designed a comprehensive online Tobacco Treatment Specialist training program based on the current accredited in-person Tobacco Treatment Specialist Training program. The online program included components that address the health implications of using tobacco and how tobacco specifically affects Alaska Native people, while focusing on action steps to implement clinical best practices for treating tobacco use and dependence in health systems.

The development of the online tobacco treatment specialist training involved adapting the current content of the ANTHC in-person TTS training into a user-friendly, interactive learning format. ANTHC reviewed the content, while the creative and technical expertise of an Alaska based contractor, Strength Based Strategies converted the content into online learning modules through the learning management system, Moodle.

The current in-person TTS training is a four and a half day training that traditionally includes 30-35 classroom education hours. Learning modules include:

- Prevalence and patterns of tobacco use, dependence and cessation and how these measures vary across demographic (including gender), socio-economic and cultural subgroups in Alaska, nationally and the world;
- The neuroscience of nicotine dependence and its treatment;
- Tobacco treatment strategies that include the basic knowledge about the process of quitting tobacco and the tobacco cessation theory and treatment;
- Pharmacotherapy for treating tobacco use and dependence;
- The incidence, prevalence, patterns and types of smokeless tobacco used in Alaska, the United States and the world;
- Working with tobacco users with substance abuse and mental health conditions;
- Laws and ethics of being a TTS;
- Relapse prevention;

- Motivational interviewing;
- How to intervene with individuals who experience other medical conditions; and the
- The intake, assessment and treatment planning process.

The ANTHC TTS training provides a supplemental module on the prevalence, patterns and types of tobacco used in Alaska with a particular focus on Alaska Native people.

The online training used a comprehensive, multi-tiered learning approach that included videos, slide decks, text content, live webinars, case study assignments, discussion boards, a learner's glossary, self-check quizzes and pre and post-tests. Each module was created separately and in segments to allow for continued modification and improvement as the training progressed.

Modules selected for the online tobacco treatment specialist training included:

- Course Overview
- Course Orientation
- Introduction to Tobacco Dependence
- Overview of Pharmacotherapy
- Introduction to Motivational Interviewing
- Applying Motivational Interviewing
- Working with Tobacco Users with Medical Conditions
- Tobacco Use and Other Health Issues (i.e. substance abuse and mental health issues)
- Introduction to Ethics of Treating Tobacco Use
- Course Wrap-up and Post-test

Eight months was incorporated into the timeline to ensure a sufficient amount of time was spent reviewing and developing the online training format and content. ANTHC and Strength Based Strategies worked with content experts in tobacco treatment, a pharmacist, and a motivational interviewing trainer to review the course content and materials prior to launching the first pilot course.

Initial training pilot:

As part of the initial training pilot, subject matter experts from across the Alaska Native Tribal Health Consortium were selected to act as participants of the first pilot. 8 subject matter experts completed a full review. One reviewer approached the course like a student and moved through the entire course in the first week. This process proved to be very beneficial in identifying course content changes, navigation issues, broken links, format and order of modules, assignments and quizzes. The comments from the reviewers were collected and the content was updated to reflect their feedback.

A local Alaska Native artist and graphic designer was contracted to develop the color scheme, fonts, and course icons with a focus on Alaska Native culture. All of the course materials were created with this in mind and the graphic designer took the content and the intent into consideration. Ancient iconography found on petroglyphs throughout the state were used as a way to maintain a common perspective. All symbols and icons were chosen to reflect specific ideas and perspectives with regard to Alaska Native culture.

Regional training Pilot

The regional training pilot was offered to healthcare professionals within the 12 Alaska Tribal Health System regions. Outreach was done through personal email and telephone invitations and through a monthly electronic newsletter disseminated to tribal health organizations in Alaska. Twenty-three students registered on the course site and completed the pretest. Seventeen of those student went on to complete the course through Module 1. Fifteen of the students completed all 10 modules of the course as well as all assignments and the pre and post-test.

Data sources/collection: ANTHC worked with Strength Based Strategies to develop and ensure both quantitative and qualitative components were incorporated into the evaluation design. The quantitative component used self-check quizzes at the end of each module as well as a pre-test and post-test assessment. The pre and post-tests contained 52 questions that measured the knowledge as determined by the course core competencies and that corresponded to the course topics. Students were required to take the pretest prior to being able to engage with any course content. The pretest did not have any limitations on time but only allowed students one chance to complete the test.

As part of the qualitative evaluation, in-course feedback questionnaires were embedded into modules 1, 2, 3, and 6. A final feedback questionnaire was included after module 8. Topics for the in-course questionnaires were focused on course content, facilitation, preparedness to move forward, and student interactivity. In addition to the surveys, in-person telephone surveys were conducted at the completion of the regional training pilot. A request was made to all of the students who completed the pre-survey to participate in one-on-one interviews with the hope that a nonstarter (a student who took the pre-survey but did not proceed further), a non-finisher (a student who started the course but did not complete), and three students who successfully completed the course, would agree to an interview. The students were chosen by who responded to the request for interviews.

Interventions: Three staff from the project team were identified as course facilitators based on their knowledge and background in tobacco treatment. The facilitators were key to keeping students engaged in the regional training pilot.

Facilitators used a variety of interventions to engage students prior to the start of the regional training pilot, throughout the pilot and at the completion of the pilot. Students were required to take a pre-test and complete a course orientation in order to “unlock” module 1. On the first day of the regional pilot, facilitators also provided a live webinar where students could either join in-person or over an online webinar system. The webinar provided an opportunity for students to learn about the course requirements, expectations, and navigation, and allowed a forum for students to ask questions. A live webinar was offered again mid-course and post-course.

A discussion board and learner’s glossary were imbedded into the course so that students had the opportunity to share strategies with peers, and ask for feedback from the facilitators.

Students were also given access to facilitators via email and through a message board on the learning management system (LMS), Moodle. Additionally, students who were experiencing challenges with the technology were provided additional support including one-on-one sessions with a facilitator. Another strategy employed by the facilitators was to use video group chat technology to provide students the opportunity to ask questions about the content and the process.

At the completion of pre-identified milestones (mid-course and post-course), students were entered into a drawing to receive nominal prizes. Prizes were donated by ANTHC staff and the ANTHC Marketing Department.

Measures: Healthcare professionals in the Alaska Tribal Health System who participated in the regional training pilot of the online tobacco treatment specialist course were expected to demonstrate that the course increased their knowledge of how to treat patients with nicotine addiction and tobacco use disorder. Healthcare professionals who completed the regional training pilot were also expected to indicate that the course met their need for increased access to Tobacco Treatment Specialist training.

The online training was intended to reach healthcare providers from 12 main tribal regions in Alaska to support at least one provider or healthcare professional to take the online training during the regional pilot of the TTS training session.

For those that completed the regional training pilot, students were expected to pass the post-test with a score of 70% or higher.

Limitations: The project was limited to evaluating students in a pilot course which could have impacted their engagement. 15 students completed the course. Although this was well over our target number of 12, we do not know how learner engagement, facilitator engagement and course navigation will be impacted by a larger cohort.

Results

Findings: Of the 15 students that completed the regional training pilot, pre and post-test results indicated an increase in knowledge throughout each module. The average test score for the pre-test was 67% whereas the average test score on the post-test was 86% (see Table 1).

Table 1. Pre and post-test results

PRE AND POST-TEST RESULTS (N=15)		
Topic	Pretest	Post-test
Dependency	76%	89%
Stages of Change	66%	89%
Pharmacotherapy	67%	88%
Medical Conditions	64%	83%
Motivational Interviewing	61%	87%
Tobacco Use	63%	81%
Ethics	100%	100%
Average Test Scores	**67%**	**86%**

As part of the qualitative evaluation, in-course feedback questionnaires were embedded into modules 1, 2, 3, and 6. A final feedback questionnaire was included after module 8. Topics for the in-course questionnaires were focused on course content, facilitation, preparedness to move forward, and student interactivity. Overall, the students provided positive feedback about the course. The final feedback survey was more robust and asked for additional feedback about the content and facilitation

as well as process. The survey included questions about the content, facilitation, preparedness to move forward, and student interactivity. Table 2 shows the average scores for the final evaluation using the following scale: 1 - Strongly Disagree, 2 - Disagree. 3 - Neutral; 4 - Agree; and 5- Strongly Agree.

Table 2. End of Course Evaluation Results

End of Course Evaluation Responses	
Feedback for Staff	
TTS Staff communicated effectively prior to the beginning the course.	4
The TTS Staff was timely with answering questions.	4
The TTS Staff provided support and guidance.	5
Technology	
Accessing the course for the first time was quick and easy.	3
The directions for each lesson were clear and easy to follow.	3
The site was easy to navigate.	3
The site provided for connecting with your colleagues.	4
The site easily provided for uploading assignments and for downloading information.	4
Course Content	
The course allowed me to meet the course competencies.	4
I feel confident that I can provide effective Tobacco Treatment based on what I learned.	4
I feel prepared to complete the final test.	4

The following narrative is a synthesis of the responses along with recommendations that emerged from the in-person telephone interviews after the completion of the regional training pilot.

First, each person was asked to give their overall impression of the course. The hope was that students would raise a question or provide feedback before focusing on several points that emerged from the feedback surveys. From this general question the students provided very clear and focused feedback regarding a number of points. First, while navigation appeared to be a significant challenge for students based on the feedback from the first three modules, some students appeared to have either changed their perspective or did not consider the startup confusion a significant issue in the end. One student synthesized the experience:

The TTS was very seamless in the instruction. The overall learning environment structure was good. I went through the TTS in-person training and learned additional things from the online training. I prefer an in person human to human interaction, but there was a lot of support for learning. I enjoyed it."

Two students spoke specifically about choosing the course to explore the online option as a means of accessing education. Given the job responsibilities in the field, these two students felt that the flexibility of the online course was very important. However, one student found the course content and the course expectations to be far greater than they had originally anticipated and could not complete the course.

I really appreciated the online option because I was unable to attend the Anchorage training and it worked into my work schedule pretty well for me. And I really like taking classes where I can schedule my own time.

And one student offered this point about access, which is an ongoing challenge with online education in Alaska:

Internet issues were wild. That's a part of the problem or being able to do movies. We have poor Internet.

However, the most important point is that in spite of the Internet barrier this student expressed deep gratitude for the quality of the content and for how much they were able to learn and incorporate into their work. Overall, the general feedback from students was positive and all felt that the content was excellent. When speaking with students there were clear notes of excitement about the experience and the content. One student stated that the course had outcomes that improved their presentations and confidence to present information, as well as their ability to use Motivational Interviewing strategies for a variety of challenges their clients face.

The second question was about the usefulness of the self-check quizzes and how students used them. Again, the students overwhelmingly applauded the self-check quizzes s and were very positive about the function. One student printed out the self-check questions and used them as a study guide throughout the course. They all felt that the self-check quizzes provided the guidance needed to confirm that they were on the right track with regard to the final test.

The self-check quizzes were phenomenally integral to the course. It was helpful to reaffirm the things that I learned. It better prepared me for the test.

The students were then asked about the technology and the complexity or usefulness of the learning management system. The students who were interviewed came with various levels of experience using technology. It is important to note that regardless of skill level, all of the students who completed the course (15 students) were able to learn the system and most became quite effective at navigating the system and interacting with the tools. The student with the most technology challenges suggested that a link to the course overview video be provided as an ongoing support. When queried whether or not they had actually gone back to review the instructions they stated that they had not even considered it until the question was posed. Another student suggested that the syllabus be provided prior to signing up for the course because many students did not understand the size of the course. While early in the course the students expressed significant challenges to learning the system, they were able to effectively manage the course. The only resulting recommendation from students was enhanced support for new users with reminders and clearer instructions.

The students were extremely active on the discussion boards and many of the students visited the discussion boards frequently and engaged in effective and useful discourse. For this course, one posting for each discussion was extremely rare with the majority of students having multiple postings for each discussion.

Outcomes: In the regional training pilot, twenty-three students registered on the course site and completed the pretest. Seventeen of those student went on to complete the course through Module 1. Fifteen of the students completed all 10 modules of the course as well as all assignments and the pre and post-test. The average knowledge score was 67% at pretest and 86% at post. Further analysis revealed that the smallest gain in pre/post-test scores was 4 percentage points and the largest was 41 percentage points. The average change for the cohort of 15 completers was 19 percentage points.

Discussion: In the regional training pilot, the post-test scores and the qualitative evaluations indicated that the course content was robust enough to meet the learning needs of the students. The students provided concrete feedback using various feedback methods and were pleased with the course content and felt that they were prepared to move on to the next step of the process to become certified tobacco treatment specialists. Additionally, the majority of students were located in rural areas where internet connectivity can be difficult. Although minor issues with uploading videos did occur, all students were able to overcome these barriers and complete all modules and assignments.

Conclusions: Based on student engagement and feedback, and pre and post-test results, the course met the expectations of ANTHC staff to develop a culturally responsive online tobacco treatment specialist training that reaches healthcare professionals in all regions of Alaska. There were a few lessons learned about the development process that allowed this pilot to be so successful.

1. The course developers, the evaluator, and the project staff all worked together from the outset of the process to intentionally design and test all components of the course while they were being developed.

2. There was an agreed understanding that the course would not have been as effective without the levels of facilitation that the staff provided. The feedback from the students affirmed that this assumption was valid.

3. There was agreed understanding on the course development process, which included end-users as crucial partners in the development.

4. The staff had to be actively engaged in developing the content and providing the necessary built in feedback that was crucial to enhancing student engagement.

Significance: American Indians/Alaska Natives have a higher risk of experiencing tobacco-related disease and death due to high prevalence of cigarette smoking and other commercial tobacco use (Centers for Disease Control and Prevention, 2017). While overall tobacco use rates among adults in the United States and Alaska are decreasing, since 1996, the tobacco use rate among Alaska Native adults has remained steady and has not decreased significantly. Alaska Native adults are still twice as likely to smoke as their non-Native counterparts. However, the majority of Alaska adults who currently smoke want to quit; over half of smokers tried to quit in the last 12 months (DHSS, 2017). Comprehensive training programs that provide healthcare professionals with the skills and knowledge necessary to assist tobacco users in quitting can produce significant health and economic benefits. These training programs need to be accessible to a wide range of healthcare professionals living in geographically diverse areas to ensure that all populations have access to appropriate resources to quit tobacco. Using an online platform to train healthcare professionals has the potential to increase the number of patients who make a quit attempt and eventually successfully quit tobacco.

Implications: While this appeared to be a simple certification course for Tobacco Treatment Specialists, it went far beyond that goal and became a means of building solid technology skills, supporting community engagement throughout the state amongst the students, and most importantly, the students can now, with confidence and skill, provide Tobacco Treatment services in their communities. This training not only increased access to a training opportunity for healthcare professionals from rural areas of Alaska, but it also increased access to local tobacco treatment resources for patients trying to quit.

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