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Utilization of the Native American Talking Circle to Teach Incident Command System to Tribal Community Health Representatives

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Abstract The public health workforce is diverse and encompasses a wide range of professions. For tribal communities, the Community Health Representative (CHR) is a public health paraprofessional whose role as a community health educator and health advocate has expanded to become an integral part of the health delivery system of most tribes. CHRs possess a unique set of skills and cultural awareness that make them an essential first responder on tribal land. As a result of their distinctive qualities they have the capability of effectively mobilizing communities during times of crisis and can have a significant impact on the communities' response to a local incident. Although public health emergency preparedness training is a priority of federal, state, local and tribal public health agencies, much of the training currently available is not tailored to meet the unique traits of CHRs. Much of the emergency preparedness training is standardized, such as the Federal Emergency Management Agency (FEMA) Training Programs, and does not take into account the inherent cultural traditions of some of the intended target audience. This paper reports on the use of the Native American Talking Circle format as a culturally appropriate method to teach the Incident Command System (ICS). The results of the evaluation suggest the talking format circle is well received and can significantly improve the understanding of ICS roles. The limitations of the assessment instrument and the cultural adaptations at producing changes in the understanding of ICS history and concepts are discussed. Possible solutions to these limitations are provided.

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The State of Arizona has 21 federally recognized tribes, representing a unique population of over 250,000 Native Americans and comprising over a quarter of Arizona's land mass [1]. There are many factors which affect a tribe's ability to effectively prepare, mitigate, respond, and recover from a public health emergency incident. First, many tribes are located in remote and rural areas making communications and timely transportation difficult. In addition, such constraints reduce the likelihood of most Arizona tribes receiving timely assistance from urban areas. There are also political barriers as tribal members are often vastly dispersed over several reservation communities with some tribes crossing over state and international borders. Second, tribes have limited financial resources placing additional stress on the tribal public health infrastructure. This, in turn, mandates a highly efficient use of existing personnel and their skills and expertise. Third, each tribe has unique cultural practices and spoken dialect; some tribal members are non-English speakers, and language barriers pose a significant challenge particularly in rendering emergency services.

Given this reality, arguably the wisest strategy for Arizona tribes is to prepare for the worst case scenario and prepare with the assumption there will be no external support during an emergency. Fortunately, Arizona's tribal nations are tight-knit societies who have learned to depend on their own community in times of crisis.

A key tribal resource on native land is the Community Health Representative (CHR). The CHRs are

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paraprofessionals whose role as a community health promoter, educator, and health advocate has expanded into an integral part of the health delivery system of most tribes, nations, and villages. The CHR has been part of a long history of international health care, yet considered a fairly new category of public health service providers. Werner describes CHRs as "cultural brokers, serving as the voice for the voiceless poor because they are trusted they can serve as effective conduits of information, resources, services, and advice on how to access those services" [2]. The CHRs are bridges between their community and the public health system providing health care, health promotion, and disease prevention services ranking them as front line public health responders among many tribal nations [3]. A profile of CHR in the 1992 Statewide California Survey showed that "CHRs are involved with their communities providing predominantly health education, information/referrals and translation services in the areas of A[cquired] I[mmuno] D[efficiency] S[yndrome]/S[exually] T[ransmitted] D[iseases], Maternal and Child Health/Perinatal, Family Planning, Tobacco Control and work with youth" [4].

More recently, the potential of CHRs to assist in emergency preparedness related activities is being recognized. Tribal emergency preparedness and response has gained momentum across the country and many tribes have started to work on developing emergency response plans alongside state and county jurisdictions. The CHR is part of the tribal public health force whose function includes the capacity to respond to a public health incident. However, since public health emergency response is still considered a new role for public health, there is a need to adequately build the workforce capacity to integrate with existing responders like Fire, EMS, and Police to effectively respond. For tribal communities, the CHR can fulfill a gap of qualified public health workers if properly trained. CHRs are respected among their communities and have a niche for connecting with the clients they serve because of their cultural knowledge and awareness. For example, the CHRs can mitigate a surge during large scale incidents, particularly when emergency response personnel are scarce. Proper and culturally appropriate preparedness training can build the public health workforce within tribal regions, which ultimately benefits the entire community.

The training of CHRs for their various roles currently includes proficiency in providing health care, health promotion, and disease prevention services [5]. The CHR performs a variety of health-related tasks and it is expected that CHRs maintain a high level of proficiency and knowledge on the health subjects applicable to their tribal needs and specific job function [5]. The CHR is also required to participate in first responder training, offered by the US Department of Transportation (DOT), within 1 year of employment. The curriculum is a nationally accredited training program consisting of 48 h of didactic sessions and applied skills designed to provide the participants with the knowledge, skills and abilities to:

1. Recognize that a medical or traumatic emergency exists.
2. Activate the EMS system.
3. Provide basic life saving treatments.
4. Be able to stabilize patients until the ambulance arrives.
5. Be able to immobilize unstable or potentially unstable extremities and the cervical spine.
6. Administer appropriate emergency medical care for life threatening injuries relative to airway, breathing and circulation.
7. Perform safely and effectively the expectations of the job description [5].

However, aside from this US DOT National Standard Curriculum there is no set core curriculum or training program requisite, much less one focused on emergency preparedness. Alarmingly, the extent of emergency preparedness training for CHRs is basic community preparedness, which focuses on training the communities they serve on having an emergency response kit and developing a family communication plan. While this initiative is important, it is clear the full potential of CHRs has not been realized. CHRs have the ability to mobilize community efforts and can assist as part of emergency response team in a variety of capacities.

Considerations in Training

The training requirements for the CHR vary by the specific community served within the Indian Health Services (IHS) healthcare facility in which they are employed, and may include an emergency preparedness training component. The gap in preparedness training can be addressed through special accredited courses, Associates of Arts degrees, licensure, and certification offered either through colleges, universities, or vocational technical schools. However, these educational opportunities require funding mechanisms to support CHRs which are not readily forthcoming.

Other factors that contribute to the challenge of providing quality training opportunities for CHRs include learning styles, learning environment, methods of delivery, and levels of available training [6]. For Native American populations, these variables may be accentuated by the lack of culturally appropriate training particularly since ethnic and cultural differences influence learningc [7]. Traditional classroom instruction typically does not take into account cultural values of the target audience. Furthermore, online

and web-based distance education is often not a feasible mechanism for delivering training. Many tribal nations are located in remote areas where internet access is sparse, yet many CHR programs are required to participate in the Federal Emergency Management Agency (FEMA) online Independent Study (IS) courses, which include IS-100, IS-200, IS-700, and IS-800, in accordance with Homeland Security Presidential Directive (HSPD)-5.

The adoption of the National Incident Management System (NIMS) is a requirement to receive Federal preparedness assistance, through grants, contracts, and other activities [8]. The FEMA online training, most online courses and traditional classroom instruction formats do not take into account cultural differences of the audience. Similarly, emergency preparedness training programs throughout the country constitute standard concepts, and cultural adaption is limited. Cultural differences among tribes, jurisdictional and sovereignty issues and geographic isolation are other issues needing consideration in designing training programs for tribal emergency responders. Research supports that one of the factors affecting learning styles is cultural differences [9] and American Indian/Alaska Native students "generally learn in ways characterized by factors of social/affective emphasis, harmony, holistic perspectives, expressive creativity, and nonverbal communication. Underlying these approaches are the assumptions that American Indian/Alaska Native students have been strongly influenced by their language, culture, and heritage, and American Indian/Alaska Native children's learning styles are different—but not deficient" [10] (Fig. 1).

To identify education and training needs for public health preparedness and emergency response activities in tribal communities, the Centers for Disease Control and Prevention, Centers of Public Health Preparedness (CPHP) Tribal Resources Collaborative Group (TRCG) conducted a nationwide survey [11]. Questionnaires and interviews were conducted with at least seven key informants representing each of three groups across the United States involved in tribal preparedness education and training: (1) tribal nations (eight); (2) intertribal area health boards/intertribal councils (nine); and (3) states (seven). The target audience included tribal bioterrorism coordinators/emergency managers, intertribal area health boards, and tribal liaisons and bioterrorism coordinators for the state. Data was collected on 18 different categories, including customized/tailored preparedness training, effective delivery methods for training, important issues in state/county partnerships, and priority needs for tribal preparedness training [9]. The survey showed on-site face-to-face instruction was the preferred method of delivery over web conferences and online/Internet formats which "are felt to be the least effective means for training due to a general lack of appropriate equipment" [9]. Recommendations were categorized into three themes: Planning and Collaboration, Content and Approaches to Training, and Funding and Resource Needs separated out for Tribes, Inter Tribal Area Health Boards, and State/Local Government. An excerpt of the recommendations appears in Table 1 [9]. As described, a key recommendation for tribes is to become NIMS compliant to maintain eligibility for preparedness funding. Completion of Incident Command System (ICS) training is required for NIMS compliance. The ICS is a standard element of incident management utilized by emergency management and response personnel as a tool to coordinate equipment, facilities, personnel and other resources during an incident [12]. The ICS was developed as a result of the problem of managing California's wildfires in the early 1970s. An interagency task force developed the ICS as a standard emergency management system to remedy the number of problems that emergency mangers faced during the wildfire season [13]. Although initial ICS applications were designed for use by fire agencies, it has proven a robust system, being adopted by emergency managers, law enforcement, public health and other public safety agencies. Additionally, it is endorsed by several federal agencies, including the Federal Emergency Management Association (FEMA), Occupational Safety and Health Administration (OSHA), the Environmental Protection Agency (EPA) and others.

Fig. 1 Preparedness cycle. Source: FEMA 2009. IS-700 a

Based on the recommendations from the survey, the Arizona Center for Public Health Preparedness (AzCPHP) developed a half-day interactive ICS workshop delivered face-to-face at five regional locations throughout Arizona, and an additional training at the 2008 National native American association of community health representatives conference. The workshop was delivered using the Native American Talking Circle, a culturally accepted method of educating. The purpose of this paper is to report on the

Table 1 Recommendations for content and approaches to training

Recommendations for tribes:

- Identify culture, belief, jurisdictional, and governmental specific tribal characteristics to be communicated to state/local government and other organizations to promote culturally competent training.
- Conduct a preparedness priority assessment and communicate results openly to all stakeholders.
- Become NIMS compliant to maintain eligibility for federal preparedness and disaster relief funding.

Recommendations for inter tribal area health boards:

- Assist tribes in communicating needs to state/local governments and other organizations.
- Provide guidance to state/local governments and other organizations in development and delivery of individualized training programs.

Recommendations for state/local government and other organizations:

- When developing training materials, request and integrate input from tribes on culture, belief, jurisdictional, and governmental specific tribal characteristics that affect training efficacy.
- Delivery of preparedness trainings and educational programs need to meet the unique needs of each tribe while taking into account differences in culture, demographics, beliefs, and needs.
- Utilize a combination of face-to-face instruction, exercises, printed materials, and electronic media (CD/DVD) in training delivery.
- If trainers are not always available, consider having a tribal representative in the classroom on site, who could facilitate the group, but then play a video with relevant information.

Source: Centers for public health preparedness network; 2006–2007 ASPH/CDC tribal preparedness resources collaboration group; improving partnerships for tribal preparedness

development, format, and success of this ICS workshop to the native American context.

Methods

Designing a Culturally Appropriate ICS Workshop

Discussions with Tribal representatives suggested the ICS workshop should not exceed more than a half-day. To ensure the workshop was culturally appropriate, six tribal stakeholders were recruited as subject matter experts (SMEs) in the design and delivery of the workshop. Developers engaged in an iterative process receiving input and vetting materials through tribal leaders around the state to ensure key concepts, values, and beliefs were integrated into the materials. As a result, the workshop was comprised of six sections (Table 2). Five of the sections were didactic and incorporated culturally relevant context.

One approach to making the ICS terminology relevant to the Native American context was to illustrate principles by drawing comparisons to the Indian Reorganization Act of 1934. This Act was a US federal legislation which secured certain rights to Native Americans and Alaska Natives, such as a return to local self-government on a tribal basis and the management of their assets [14]. The result of the Act was the institutional adoption of Tribal Administration Departments across the country. Tribal administrations may vary in their structure among tribes but each has a conceptual framework comparable to the ICS structure. The Tribal Administration Department is typically charged with the monitoring of the day-to-day operations of the Tribe. Within the administration, for example, there are offices that initiate and monitor contracts, grants, and budgets to ensure that they are in compliance with the established goals and objectives, which would be comparable to the Finance Section of the ICS Structure. Similarly, there are departments that handle Logistical issues and

Table 2 Incident command system curriculum

Section	Title	Content	Delivery Method
1	History of ICS	California wild fires	Didactic learning Intragroup communication
2	ICS as a management tool	Indian reorganization act	Didactic-culturally relevant
3	ICS use in public health	September 11, 2001	Didactic
4	ICS structure	Public health scenario (Hepatitis A Outbreak) *Delivered in Focus Groups*	Native American talking circle
5	Chain of command	FEMA	Didactic learning Intragroup communication
6	Unity of command	FEMA	Didactic learning Intragroup communication

Operations. Furthermore, communications and operational function within a tribal government system helped illustrate the Chain of Command and Unity of Command to the CHR training participants. Like in ICS, information must flow up to the Incident Commander; in this case it would be the Tribal Administrator or Lt. Governor (again the title may vary among tribes).

The next challenge was deciding on a culturally appropriate mode of delivery. To do this, one section of the workshop incorporated oral tradition and storytelling in a Native American Talking Circle. The Native American Talking Circle is an ancient customary technique used to teach culture and traditions [15], and for health education and promotion [16, 17]. Story-telling is considered the preferred method of oral communication among American Indian populations passed on from one generation to the next [18].

The AzCPHP curriculum developers utilized the standardized FEMA Introduction to Incident Command System (IS-100) course available as an online training program to establish the foundation for the content of the Talking Circle component of the workshop because it had to remain true to the basic concepts, principles, and terminology of ICS. (Table 2, Sect. "Discussion").

Traditional native American Talking Circles are commonly composed of 5–10 participants who sit shoulder to shoulder in a circle facing one another. A facilitator opens a session with a traditional story and health topic, and then the floor is opened to the participants for discussion. Each member is typically afforded the opportunity to share information, ideas, and stories without fear or challenge of interruption by other members. The process is initiated by the facilitator and typically a stick, arrow, feather, rock, or other talisman is passed around the circle. The participant who wishes to talk holds the talisman and when finished, he or she passes it on [18]. The sharing of information among participants is in a supportive, comforting environment.

The following is a comprehensive list of talking circle elements: (1) exploring points of difference or difficulty balanced by protocols of listening and respect for varied viewpoints, (2) space is provided for productive possibilities rather than criticism and confrontation, (3) burden basket, ("an Apache ornately hand-woven basket typically hung outside door, where prior to entering one symbolically places their "burdens" into the basket so concerns do not disrupt the harmony of home or place.") (4), [19] clearing ritual which starts the talking circle, (5) closing ritual, were the talisman or talking stick is passed around to ensure nothing remains unsaid prior to closing. The structure for the talisman includes speaking honestly and being brief. When the participant receives the talisman, he/she should state a feeling word describing the secret, burden or issue being addressed and states how he or she can relate, while other group participants should listen attentively with respect. Group members may speak only when holding the talisman, questions and verbal exchanges may take place, but only by permission from whoever is holding the stick or talisman [20]. When anyone is asked a question they may choose to answer or pass the talisman.

The ICS section of the workshop held true for most of the components of a talking circle and only minor adaptations were necessary. For example, the burden basket was deemed unnecessary by SMEs as it mostly was used for talking circles dealing with other issues often revolved around familial resolution. Another adaptation included a tent card which served as a talisman. At the beginning, after the clearing ritual which initiated the talking circle, participants were given a tent card with an ICS role assigned. Key components of the talking circle for this part of the workshop are described further in the Sect. "Procedure".

Recruitment

In Arizona there are over 100 CHRs, representing 22 tribes. The CHR classifications in Arizona are diverse and encompass the general workforce including managers, administrative assistants, certified nursing assistants, and others. Several of the tribal communities also assign a CHR to a specific discipline, such as in the Havasupai tribe which has one CHR designated to maternal and child health. Some Arizona tribes also require specific certifications for their CHRs. For example, Gila river indian community CHRs are required to be Certified Nursing Assistants to facilitate home care of individuals within the community.

In an effort to maximize outreach to CHRs, the AzCPHP contacted the three regional CHR directors, representing the three area offices for the Indian Health Services (IHS) in Arizona. Gaining buy-in from the CHR Directors was the first step in ensuring a successful training program. The CHR Directors worked with the AzCPHP to enlist participants by recruiting staff from various departments within their respective IHS service area. CHR directors also identified key tribal stakeholders. The AzCPHP staff followed up and scheduled in-person meetings and teleconference calls with the key tribal stakeholder identified, which included representatives from IHS, Intertribal Council of Arizona (ITCA), and the Public Health Emergency Preparedness Coordinators from certain tribes in Arizona. The tribal stakeholders helped recruit additional CHRs and other tribal paraprofessionals, such as Health Educators. The Tribal Bioterrorism Response Coordinator from ITCA enlisted participants via monthly tribal conference calls as well as onsite visits to the smaller, isolated tribes. Informational flyers were distributed electronically

to listsservs which included all 15 Tribal Public Health Emergency Preparedness Coordinators and other tribal emergency responders. Information regarding the training was also posted on the AzCPHP website.

Procedure

A total of five regional half-day workshops were conducted throughout the state of Arizona and one national workshop was conducted at the 2008 National Native American Association of Community Health Representatives Annual Conference. Table 3 lists the tribal profile among training participants which includes membership from tribes, nations, and communities in Arizona and across the country. Pre-registration forms were used to enroll participants for the workshop scheduled in their respective region and gather demographic information. On the day of the workshop, participants completed a pre-assessment focused on assessing curriculum content. The workshop began with facilitators introducing the day's activities and emphasizing Sect. "Discussion" of the training (Table 2) would be delivered in a traditional Native American Talking Circle format.

To explain the ICS structure the facilitator began by reading a public health scenario, "Hepatitis A outbreak," to the larger group. The participants were then divided into smaller groups, usually between 5 and 7 participants, and assigned a specific ICS role. A tent card with information pertaining to the role and responsibility of each section within ICS was provided to each participant. Prior to breaking out into smaller groups, ICS roles and responsibilities were discussed in detail in the didactic sections.

The small groups were presented with a total of eight paper injects. Injects are events designed to advance the scenario and help assess capabilities. The use of *paper* injects also helps maintain a low-stress environment, essential in the Talking Circle format, while simultaneously promoting learning [21]. The following is an example of an inject: "The Tribal Health Department needs to send out people to investigate the problem. Families need to be interviewed to find out if anyone is getting sick. Who should handle this problem?"

Following the traditional talking circle format, each participant had an opportunity to discuss with other group members what ICS role should respond to the inject. The use of their assigned tent card served as the talisman to initiate discussion. Each member shared why or why not they felt their specific ICS role assigned should respond to the inject, without interruption of other participants. Respecting the traditional talking circle format, the ICS role and responsibility was discussed exploring points of difference or difficulty balanced by protocols of listening and respect for varied viewpoints and criticism and confrontation was avoided by promoting productive possibilities.

Once the group agreed on the ICS role, further discussion would focus on projected actions by the ICS role, in response to what would likely unfold in the scenario as a result of the inject. Again each participant had an opportunity to share their understanding and knowledge without interruption by other members. Additionally, participants shared their experiences about how the specific ICS role they were assigned could be used in other customary traditions, such as planning for a ceremonial dance and the logistical aspects surrounding it. Extending the discussion in this domain was encouraged for two reasons. First, to demonstrate that ICS can be used in normal everyday activities as an organizational tool, such as planning a party, a business trip, ordering lunch or supplies. Second, the discussion promoted the traditional closing ritual were the talisman or talking stick is passed around to ensure nothing remains unsaid prior to closing.

At the end of the workshop, a post-assessment, parallel form to the pre-assessment was distributed to all participants.

Table 3 Arizona and national tribal representation

Arizona	National
Gila river Indian community	Cheyenne—Arapuho tribes of Oklahoma
Hopi tribe	Moapa Band of Paiute
Hualapai tribe	Navajo (covers three states including AZ)
Salt river Pima-Maricopa Indian community	Pueblo of Laguna, New Mexico
San Carlos Apache tribe	Pueblo de San Ildefonso
Tohono O'odham nation	Quapaw
Tonto Apache tribe	San Felipe
Yavapai Apache tribe	Shoshone/Bannock
	Standing Rock
	Turtle Mt. Chippewa

Results

A total of 85 CHRs and other paraprofessionals were trained using the talking circle ICS workshop. The demographic characteristics of participants are described in Table 5. Among those who participated in the workshops, 87% were female. A third of the participants were between 50 and 59 years of age and 58% had 15 years or less of work experience.

The evaluation used qualitative and quantitative data methods to assess the process and impact of the ICS talking

Table 4 Pre and post assessment questions

ICS concept	Pre-assessment question	Post assessment question
ICS History	The incident command system (ICS) was first developed in:	The incident command system (ICS) was first developed for the purpose of:
	a. Montana	a. Fighting terrorism
	b. California	b. Managing California's public health system
	c. Arizona	c. Managing a public health department
	d. Nevada	d. Fighting wildfires
ICS and public health	The incident command system (ICS) is used in public health as a prevention tool.	As a result of the anthrax events after 9/11, the incident command system (ICS) is required in public health
	a. True	a. True
	b. False	b. False
Unity of command	An important part of Unity-of-command is:	Unity-of-command is important because it:
	a. Having an experienced team	a. Creates a new command system
	b. Having only one supervisor	b. Ensures you don't receive conflicting information
	c. Having one team	c. Guarantees only supervisors are in command
	d. Making sure everyone agrees	d. Makes sure resources are available
ICS command staff roles	The Liaison officer is responsible for:	The public information officer (PIO) is responsible for:
	a. Providing overall leadership	a. Providing overall leadership
	b. Working with outside agencies	b. Working with outside agencies
	c. Making sure all incident responders are safe	c. Making sure all incident responders are safe
	d. Providing information to the media	d. Providing information to the media
ICS general staff section roles	The planning section is responsible for:	The logistics section is responsible for:
	a. Field operations	a. Field operations
	b. Obtaining resources	b. Obtaining resources
	c. Tracking costs	c. Tracking costs
	d. Developing goals and objectives	d. Developing goals and objectives

circle, respectively. The qualitative method included verbal responses to three questions administered by the facilitator. The questions below were asked in the similar "talking-circle" format but as one large group opposed to smaller groups formed for the ICS role discussion:

1. Did the "talking-circle" help you learn the material presented today?
2. If yes, why did the "talking-circle" help you learn the materials presented today?
3. If no, why did the "talking-circle" not help you learn the materials presented today?

Verbal responses were documented for five of the six workshops. Upon completion of the series of workshops, the documented responses were reviewed to identify major themes. The participants agreed the talking circle helped them learn the material, particularly the ICS roles and the chain of command. Participants expressed a preference for face-to-face training of ICS principles versus the standard online FEMA training. Participants cited the following as reasons for successful completion of workshop objectives: (1) terminology was easily understood, (2) concepts were at an appropriate level of understanding for participants' respective disciplines and experiences, (3) participants were able to relate their previous real-life experiences with emergency response situations, (4) smaller group training (cap of 25 participants per workshop) allowed for more interaction among peers and encouraged participation (5) the workshop was less intimidating than larger-scale workshops, and (6) the visual ICS tent cards facilitated the learning process with little confusion. Overall, the feedback was positive and only one participant stated the use of more visual aids was warranted.

The quantitative evaluation included a five question multiple choice test delivered using a pre-post design to assess ICS history, concepts, and roles. The questions represented a small subset from the FEMA ICS-100 questions from the national training program (Table 4).

Sixty-two participants were included in the analysis. To be included in the analysis of any one question, participants needed to complete both the pre and post assessment. Participants demonstrated improvement in the concepts of Unity of Command, ICS staff roles, and an understanding of the purpose of different ICS sections. However, only the

Table 5 Sociodemographic characteristics of tribal participants

Category	Percent (%)
Race	
Native American/Alaska native	91.6
African American	1.2
Asian	1.2
Other	4.8
No response	1.2
Age	
0–19	0
20–29	8.4
30–39	18.1
40–49	21.7
50–59	33.7
60 and over	16.9
No response	1.2
Tribal member	
Yes	80.7
No	19.3
Gender	
Male	13.3
Female	86.7
Years of experience	
<5	36.1
5–10	18.1
11–15	3.6
16–20	8.4
21–25	4.8
26–30	4.8
31–35	4.8
>35	0
No response	19.3

understanding of staff roles proved statistically significant, $\chi^2(1) = 4.02$, $P < .05$. Results suggested no improvements in the understanding of ICS history.

Discussion

The CHR is an important tribal community advocate, who if properly trained can serve as a member of core emergency responders prepared to respond to disasters. The CHRs serve diverse roles and increasing their role in emergency response efforts can have many benefits, particularly to assist in a surge incident. During the initial onset of the emergency event, outside resources, personnel and support should not be expected for at least 72 h. This is when local community response is most critical and where CHRs can greatly impact the response and recovery effort.

Emergency preparedness training is vast and there are a multitude of excellent educational resources and training programs available in a variety of formats. This study examined whether tailoring and culturally adapting a standard curriculum such as the FEMA online IS-100, Incident Command System, can ensure retention of core concepts and principles.

Participant feedback about the process and the pre- and post assessment of knowledge and principles suggest, the use of the Native American Talking Circle to teach intricate ICS concepts, principles, roles, and responsibilities is a culturally appropriate and effective way to train the tribal public health workforce, specifically CHRs.

Tribal membership, among CHRs participating in the AzCPHP workshop, represented tribes, nations, and communities across the region, indicating the CHR is a predominant worker in the field in tribal communities. Many CHRs are likely to be female, adding to their supporting nurturing role they play in the community with their clients.

Limitations

Although the participant feedback forms supported the concept that the Native American Talking Circle was an efficient way to teach ICS, it was not compared to a traditional FEMA delivery. However, providing additional workshops, using the FEMA delivery method, to obtain a control group would have been unlikely for several reasons. First, our tribal SMEs expressed recruitment would be very low if the training was not culturally appropriate. Second, participants would lose interest since the concepts do not directly relate to their customary traditions if not adapted. Third, the FEMA ICS course is through online internet delivery, which poses another challenge due to sparse internet connectivity in tribal regions. So while it may be an interesting research question, the fact remains recruitment into a comparison group woulχd be very unlikely because tribal members are reluctant to want to participate in a non-traditional format.

The quantitative evaluation also suffered from a few methodological flaws. First, the pretest and posttest questions were parallel, not identical questions. For example the pretest question on ICS roles asked about the role of the Liaison Officer, while the posttest asked about the role of the Public Information Officer. Although the questions were borrowed from the FEMA IS-100 course, there is no assurance they are in fact equivalent. The question difference acts as a confounder, making it difficult to assess whether the failure to demonstrate statistical significance was due to the difference in questions or the failure of the Talking Circle format to impact on the participants knowledge of ICS roles. Having a longer test would certainly have added to the reliability of the assessment;

however, SMEs were clearly hesitant in exposing participants to a longer assessment which may have been viewed as intimidating. Clearly then the testing format itself needs to be considered as part of the cultural adaptation, which it was not. Since the completion of the ICS workshops the AzCPHP experienced success using a scenario-based assessment to evaluate the effectiveness of training programs. Using a scenario-based test might be more appropriate to assess the impact of the Talking Circle ICS workshop and should be considered in future evaluations. Another alternative would be to rely solely on a qualitative assessment of impact, which intuitively seems more aligned with the culture of a Talking Circle.

Despite the limitations with the quantitative assessment, results suggest the workshop was particular effective in the area of improving the understanding of ICS roles. Perhaps not coincidentally, this is the only area of the workshop which exclusively employed use of the Talking Circle format. Perhaps the failure to demonstrate significant impact of ICS knowledge and concepts could also be attributed to the failure to make the material culturally appropriate. Despite efforts to culturally adapt the materials the success of this adaptation was not formally tested. Alternatively, the results may also suggest it is plausible that even culturally appropriate material should be delivered using a Talking Circle format.

CHRs are often overlooked public health partners because they are not typically involved in the planning process. Typical emergency responders include individuals in emergency management, law enforcement, fire, EMS and public health officials. These groups frequently come together and plan to address issues requiring a multi-agency response effort, but fail to include CHRs. The CHRs can serve in a variety of capacities; one notably would be their ability to locate at-risk individuals within their communities. Additionally, CHRs' participation in these activities would help to identify further training gaps. Given the number of tribes participating in the workshops described in this study, the use of the Native American Talking Circle for preparedness training is applicable to tribes throughout the country and can serve as a model for training other tribal emergency response personnel.

If trained appropriately, the CHR has the capacity to augment the tribal public health workforce responsible for responding to disasters. The CHR can fill a surge role and serve as a core member of emergency responders in tribal communities. However CHRs are an overtaxed resource. Because of their versatility CHRs are called upon to assist in (1) community health promotion and disease prevention events like immunization clinics, well baby clinics, safety in the home, use of machinery/automotive vehicles, medication/drug storage, proper sanitation and maintenance of the community/personal buildings and grounds; (2) educate communities on health hazards and behaviors such as alcohol use, cigarette smoking, poor eating habits, poor hygiene; (3) offer transportation to health promotion facilities for those in need, enter diagnostic patient specific data into official patient medical record through the use of the CHR component of the RPMS (Resource and Patient Management System), arrange for police/ambulance transport in accident or emergency situations [5]. Therefore there is a need to increase the number of CHRs, perhaps even having specialized preparedness CHRs.

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