

Podcast: Using Culturally Appropriate Messages to Promote Smoke-Free Homes

[Intro Music]

Ashley Ahearn (Narrator): You're listening to Environmental Health Chat - a show from the National Institute of Environmental Health Sciences that explores the connections between our health and our world.

I'm Ashley Ahearn.

Dr. Patricia Henderson was the first Native American woman to graduate from Yale University School of Medicine. She thought she'd go into cancer research, but her life path took her in a different direction – one that you might say tackles cancer from another angle.

Dr. Henderson has dedicated her career to public health – specifically, studying smoking and secondhand smoke exposure in Indian Country. She's the vice president of the Black Hills Center for American Indian Health in South Dakota.

Today, we're going to hear about her work with Indian Nations across the West – how she gathers her data, builds trust, and uses her findings to educate people in the communities she studies so they can take control of their own health.

For Dr. Henderson, the science is personal. Smoking rates are higher in Native American communities than the general population of the U.S. – which leads to a litany of other health problems.

Dr. Henderson: When you look at the data, among tribes, you will see that there are higher rates of certain types of cancer, especially here in the northern Plains. Lung cancer, which we know is directly related to smoking is very high compared to other populations. And then, in terms of secondhand smoke exposure, SIDS is very high among infants here in the northern Plains, as well as other respiratory illnesses.

Ashley Ahearn: Dr. Henderson was raised on the Navajo Reservation in Arizona.

Dr. Henderson: I guess the earliest exposure of smoking that I'd see was from my grandfather. He was a medicine man and my cousin I used to go over to his hogan and he would just be sitting on his bed smoking, and I never thought oh my goodness, he's going to die from this, because during that time, I didn't know anything about smoking and its relationship to lung cancer or asthma. I just found it really fascinating, you know that he could just put something in his mouth and light it up and smoke would be coming from him.

Ashley Ahearn: Smoking is often part of Native American ceremonies, which adds an interesting – and sometimes challenging – layer to public health outreach around lowering smoking rates.

Dr. Henderson says it takes a degree of cultural sensitivity – and an understanding of the origins of cigarette smoking in Native American communities – to find effective ways to communicate about the health risks.

Dr. Henderson: Back in the 1800s, late 1800s, the federal government actually banned all forms of cultural and religious practices for tribes. And during this time, they couldn't practice, but they did it underground. It was just easier to have a product like a cigarette, which the government wouldn't question if you were caught with it. And they just started using these products in their ceremonies. And it continues to now.

Ashley Ahearn: It's been a difficult bond to break, between cigarettes and ceremony, but Dr. Henderson has found that by building long term relationships with the Indian Nations she serves, leaders and elders have opened up to her – and her science.

Dr. Henderson: I think it's just that one-on-one relationship, they trust us. So, they were able to kind of bring us into that circle and begin that conversation. And years later, now one of the organizations actually passed a policy on their end where that they will not use commercial tobacco products in their ceremonies. I believe that in order for change to happen, our traditional healers are the ones that really pave that way for us, and just having this great, you know, relationship with them, up to this point has just been a blessing.

Ashley Ahearn: Dr. Henderson works with more than nine different Indian Nations across the Great Plains and the Southwest, making regular visits, speaking to elders, tribal councils, and doing home visits. Those home visits are an important part of how she gathers data about smoking and secondhand smoke exposure as part of her research funded by the NIEHS.

The project focuses on the Cheyenne River Sioux Tribe, where 50 percent of the population smokes.

Dr. Henderson tailored an intervention process that would encourage members of the Cheyenne River Sioux to stop smoking in their homes. She wanted to design a process that would actually connect with people – and help them understand the dangers of secondhand smoke exposure. So, she asked tribal members for advice. They told her to use storytelling.

Dr. Henderson: Storytelling is such a huge part of native culture and many cultures as well. And we've taken that approach to several of our projects. And you know, you're able to implement a lot of the things that are important to the community into these stories.

Ashley Ahearn: Storytelling was one important part of the process, but Dr. Henderson learned she also needed to appeal to Lakota cultural values to get her message through.

Dr. Henderson: And using Lakota values about humility, respect, wisdom, generosity – these are just some of the values that the Lakota people hold very true to them. And using that to create change for these individuals and giving them the power so that they can advocate for smoke-free policies on their reservation.

Ashley Ahearn: Dr. Henderson is testing the intervention in over 150 households on the reservation. But there's another layer to the process – in half of these households, she will also measure markers of secondhand smoke exposure in urine samples collected from study participants. She expects that the combination of the culturally tailored intervention, with data collection and sampling, will be the best way to encourage people to limit or quit smoking in their homes.

This work builds on one of Dr. Henderson's previous projects. She measured cotinine, a metabolite of nicotine, in blood samples of study participants.

Dr. Henderson: And the results were just striking. Basically, nonsmokers, nontobacco users have the same level of cotinine as an individual who smokes daily. This basically shows that there's high levels of secondhand smoke exposure among these individuals, whether it's at a workplace or within their homes, their cars. And so we wanted to really work with the Cheyenne River Sioux tribe to address this issue.

Ashley Ahearn: Henderson's research has shown that, more broadly, 19 percent of Lakota nonsmoking adults, including the Cheyenne River Sioux, have cotinine levels which are comparable to levels typically seen in active smokers. Children in another Lakota community Henderson studied showed similarly high levels of nicotine metabolites and cancer biomarkers in urine samples.

So, what do you do with those results? How do you get people to change their behavior – to give up smoking or be careful about when and where they smoke? Henderson says it's about appealing to Lakota values, like respect and care for the generations to come.

Dr. Henderson: And kind of talking with family members saying, hey, like, these are the Lakota values. And, you know, it's our children. And if you introduce the children, and let them know that by smoking in homes, it impacts children very, very much, it just has a huge impact on them.

Ashley Ahearn: Oftentimes, in public health research, the goal is getting results published in peer-reviewed journals. For Dr. Henderson, that's part of it, but it's more important to her that her results reach the ears of the people she studies – and affects positive change.

And the way to do that, she's found, is by visiting – showing up again and again.

Dr. Henderson: When working with tribal communities, often times, you have to just sit down, have a cup of tea with them or coffee and kind of explain to them the results of the study. And we did this with one of the tribes here in the northern Plains, it was a young father, he was a part of our research project, and he had a young son. And he smoked a lot, not only outside, in his vehicle, but in his home. And he just didn't understand the connection between his smoking and the health of his child, his son was less than eight years old. And the son was actually going a lot to the hospital for asthma attacks. And he didn't understand why none of the medications that this young child had was working.

Ashley Ahearn: Dr. Henderson analyzed a urine sample from the man's son and found elevated levels of cotinine and NANL, a cancer biomarker. So, she went back and visited with the father, again, to share those results.

Dr. Henderson: And he was first of all very, very surprised. And then second of all, I think he was just devastated by the fact that it was his behavior that was causing things to happen with his son in terms of his son's illness.

Ashley Ahearn: And then, three months later, Dr. Henderson went back again.

Dr. Henderson: He had reduced the amount of smoking he did daily. But more importantly, he was not smoking inside the home. So, it's stories like this that we've seen throughout Indian Country where, it's just that one-on-one relationship and just letting people know, like, hey, I care about you. And for me, it even goes further than I care about you, I let people know I love you. And I think it's when you take this extra step as a scientist to say, I'm doing this because I love you, it just creates that change, that shift among individuals.

And at the end of my career, I want to look back and say that the work that we've done has been impactful. We're doing this for the babies that are going to be born tomorrow. And in the many native cultures we talk about the seventh generation, we're doing this for them, that they will have a different upbringing where it's a healthier home, basically. And that's the message that we continue to advocate for both here in South Dakota, as well as on the Navajo Nation.

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Ashley Ahearn: Dr. Patricia Henderson is the vice president of the Black Hills Center for American Indian Health in South Dakota.

I'm Ashley Ahearn. Thanks for listening to Environmental Health Chat.