



# American Indian & Alaskan Native Health, Creation of an Elective Course for Medical Students in the Rural Track at The University of Colorado School of Medicine

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## Background

- There are 574 federally recognized tribes within the United States, 326 tribal territories, and 9.7 million people that identify as American Indian or Alaskan Native (AI/AN).<sup>1-2</sup>
- AI/AN experience lower life expectancy, higher rates of chronic and preventable disease, and lower overall quality of life than other racial and ethnic groups in the US.<sup>3-5</sup>
- About 25% of deaths in the AI/AN population occur before the age of 45 as compared to 15% and 7% for African Americans and Whites, respectively.<sup>6</sup>
- AI/AN are more likely to die of diabetes, chronic liver disease, accidents, and suicide when compared to Whites.<sup>7</sup>
- AI/AN have a higher prevalence of health insurance as compared to Whites, while at the same time having a higher prevalence of self-reported poor health status and a lower prevalence of having a personal doctor.<sup>8</sup>
- Health disparities faced by AI/AN are directly impacted by lack of IHS funding, insufficient pharmaceuticals, aging technology, fewer than required healthcare staff, and lack of specialty services.<sup>9</sup>
- 23% of AI/AN reported experiencing discrimination within a healthcare setting, and 15% reported avoiding seeking medical care out of fear of discrimination or poor treatment.<sup>10</sup>
- The University of Colorado School of Medicine (CUSOM) is located on Apache, Ute, Cheyenne, Comanche, and Arapahoe lands and serves a state where 100,000 residents identify as AI/AN.
- The Anschutz Medical Campus is home to the Centers for American Indian & Alaskan Native Health.
- Although curriculum at CUSOM includes a thread related to health and society, there currently exists no specific courses on AI/AN health<sup>11-12</sup> presenting a unique opportunity to educate future doctors to better serve patients who identify as AI/AN.
- An elective course was designed for Rural Track students to pilot an approach to address the need for an AI/AN health curriculum at CUSOM with the goal of giving students a foundational knowledge of the factors affecting health and healthcare in AI/AN populations.
- Hypotheses were designed to test students' knowledge of health disparities and their likelihood of future engagement in AI/AN-related healthcare.

## Methods

- A four-hour lecture series was developed and delivered to CUSOM students who are members of the rural medicine track.
- A nine-question assessment tool was given to students before and after the course. The questionnaire included 5 Likert-style, 1 multiple choice, and 3 open response questions.
- The Wilcoxon Sign Rank Test was used to assess for change between pre and post-course assessments. Keyword analysis was used to assess open response questions.

## Results

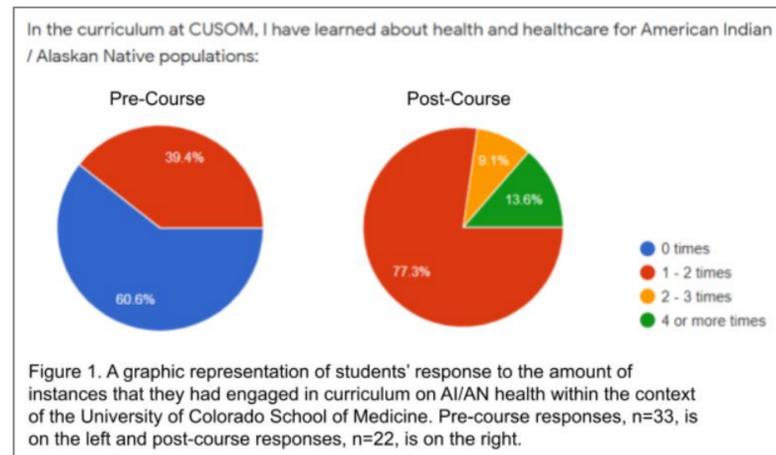
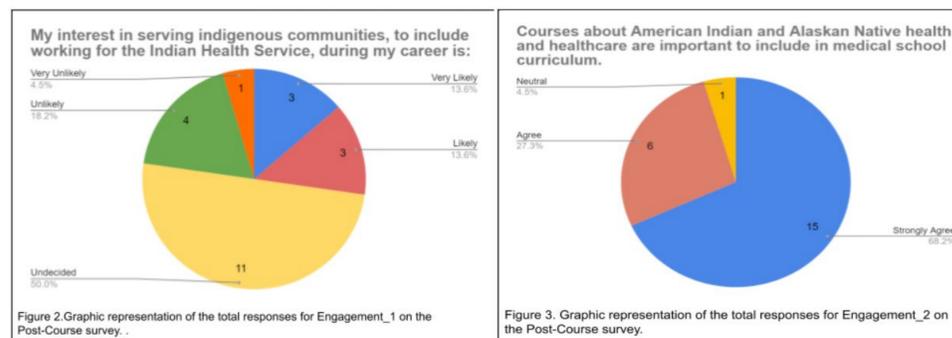


Table 1. Wilcoxon Sign Rank Test Data

| Question     | Test Statistic | # of non-tied pairs (n) | Critical Value | Outcome            |
|--------------|----------------|-------------------------|----------------|--------------------|
| Knowledge_1  | 0              | 17                      | 34             | Null rejected      |
| Knowledge_2  | 0              | 20                      | 52             | Null rejected      |
| Knowledge_3  | 36             | 12                      | 13             | Do not reject null |
| Engagement_1 | 7              | 6                       | 0              | Do not reject null |
| Engagement_2 | 3              | 5                       | n/a            | Do not reject null |



### Student Perspectives:

*"This curriculum was very interesting and informative. Thank you! It is not something that is really taught or discussed through the typical CUSOM curriculum, but I feel that it should be. I am glad that I was introduced to it."*

*"Through these lectures and discussions, I feel that I have a much better understanding of the concept of historical trauma, and specifically how it applies to groups of AI/AN. I learned that it is not necessarily something that goes away or disappears with new generations, thus it is an important factor to consider when working with populations who have suffered from historical trauma."*

*"The IHS is an extremely valuable resource, but they face a lot of obstacles due to the many [social determinants of health] that indigenous communities face and availability of medical providers."*

## Discussion

- Likert scale assessment showed significant findings in two of three knowledge-based questions and no significant results in engagement-based questions.
- 27.2% of students stated they are "likely" or "very likely" to serve indigenous communities at some point in their careers.
- 95.5% of students said they "agree" or "strongly agree" that AI/AN health curriculum should be added to medical school curriculum.
- 30% of students included terms of uncertainty about historical trauma before the course; this improved to 100% certainty after.
- 36% of students reported uncertainty about the work or mission of the IHS before the course; this improved to 100% certainty after.
- Considering the impact that provider microaggressions and discrimination play in the experiences of AI/AN patients, it is essential for medical students to develop a framework for caring for this population.
- Cultural values about illness and traditional healing practices have been implicated as factors for improving the quality of care for culturally diverse patients.<sup>13-15</sup>
- It has been proposed that dismantling structural racism in healthcare may be facilitated by providing a more complete version of US history to medical faculty and students.<sup>16</sup>
- The incorporation of AI/AN health curriculum into the Rural Track at CUSOM significantly increased students' understanding of historical context and contemporary health disparities.
- Interest in including AI/AN health content in the medical school curriculum was consistently high before and after the course.

## Limitations/Future Direction

- The study had a small sample size (n=33), 11 of which were lost to follow up (33%).
- Response bias considered given social desirability when answering questions about a vulnerable population.
- Survey fatigue also considered given that the post-course assessment was administered following 2 hours of lecture.
- Further investigation with a larger number of medical students should be considered.

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