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Evaluation of American Indian Health Service Training in Pain Management and Opioid Substance Use Disorder

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We examined the benefits of a collaboration between the Indian Health Service and an academic medical center to address the high rates of unintentional drug overdose in American Indians/Alaska Natives.

In January 2015, the Indian Health Service became the first federal agency to mandate training in pain and opioid substance use disorder for all prescribing clinicians. More than 1300 Indian Health Service clinicians were trained in 7 possible 5-hour courses specific to pain and addiction.

We noted positive changes in pre- and postcourse knowledge, self-efficacy, and attitudes as well as thematic responses showing the trainings to be comprehensive, interactive, and convenient. (*Am J Public Health.* 2016;106:1427–1429. doi:10.2105/AJPH.2016.303193)

The number of prescription opioid overdose deaths has increased by 4 times between 1999 and 2011 and continues to exceed the number of deaths owing to heroin and other illicit drugs.[1] In parallel, the Institute of Medicine estimates that 100 million Americans suffer from chronic pain.[2] The costs of chronic pain care and drug overdose, lost workplace productivity, and societal burdens involve billions of dollars each year and exceed the costs owing to all other medical conditions.[2] Primary care clinicians treat the majority of patients suffering from pain and addiction, yet clinicians prescribing controlled substances often lack the confidence and knowledge to effectively manage chronic pain.[3]

The rate of people aged 12 years and older initiating opioid analgesics for nonmedical use continues to grow, with a US average growth rate of 4.2% in 2015. This rate is higher for specific populations: Hispanics at 4.3% and American Indians/Alaska Natives (AI/AN) at 6.9%.[1] To address these challenges, on January 15, 2015 the Indian Health Service (IHS) mandated that prescribing clinicians be trained in pain and opioid substance use disorder. A presidential memorandum—"Addressing Prescription Drug Abuse and Heroin Use"—followed on October 21, 2015, that requires that all prescribing clinicians in federal facilities obtain continuing education, including case-based courses (Figure A, available as a supplement to the online version of this article at http://www.ajph.org).[4]

BACKGROUND

The IHS is an agency of the US Department of Health and Human Services tasked with providing health care to AI/AN. In January 2015, IHS deployed 5-hour pain and addiction training.

These virtual educational sessions, sponsored in collaboration with the IHS Telebehavioral Center of Excellence, were grounded on the mandated State of New Mexico continuing medical education training initiated in 2012.[5]

THE CONTINUING MEDICAL EDUCATION COURSE

We designed an IHS continuing medical education course to educate prescribing clinicians on appropriate pain management and safe opioid prescribing. Course faculty included the facilitators of the IHS Pain and Addiction TeleECHO Clinic as well as faculty from the University of New Mexico Pain Center and ECHO (Extension for Community Healthcare Outcomes) Pain. Clinicians received 5 hours of no-cost continuing medical education and continuing education credits.

Didactics included the following: "Overview of Public Health Crises of Pain and Drug Overdose Deaths," "Safe Opioid Prescribing," "Use of Non-Opioid Medications in Pain Management," "Pediatric/Adolescent Pain Management," "Opioid Substance Use Disorder/Screening," "Federal Regulations Pertaining to Opioid Prescribing," and 2 case vignettes "Controlled Substance Agreement" and "Comorbid Pain/Psychiatric Condition."

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METHODS

The intervention included the study of changes in knowledge, confidence, and attitudes among participants. Our short-term objective was to evaluate changes in course participant knowledge, self-efficacy, and attitudes to demonstrate capacity building, especially among frontline primary care clinicians. Our longer-term objective was to consider the association between specific educational interventions and their potential applications for federal and state educational efforts. Our broader public health goal was to achieve a reduction in unintentional prescription opioid and heroin deaths among AI/AN populations.

The informed consent process that we employed reflects the voluntary and anonymous nature of the study survey. Before and after the course, clinicians completed 3 surveys, each with 12 items: a multiple choice pain and opioid knowledge questionnaire, a self-efficacy survey, and an attitude survey.[6] Following the course, we asked participants 2 open-ended qualitative questions to inform future training. We downloaded the written participant responses into NVivo qualitative software version 10 (QSR International, Burlington, MA), and we open coded them to identify the range of responses and emerging themes. We grouped these into broader overarching themes using a thematic analysis approach.[7]

RESULTS

Survey results comparing pre- and postcourse scores demonstrated a positive change in the knowledge, self-efficacy, and 12-item attitude surveys. We found significant improvement ($P < .001$) in knowledge, self-efficacy, and attitudes as demonstrated by answers to surveys taken before compared with answers to surveys taken immediately after the course. The knowledge questions included questions on screening for opioid substance use disorder, naloxone as a harm reduction measure for opioid overdose, and the use of nonopioid medications (Table 1).

We offered the courses on 7 dates, and 1315 clinicians across the country attended them. We received consent from 1079 clinicians with matching pre–post surveys (82%) to participate in the research study, with 92% coming from IHS, tribal, or urban AI/AN programs. More than 90% of the interprofessional group of clinicians attending the course had prescriptive authority (Table A, available as a supplement to the online version of this article at http://www.ajph.org).

Answers to the qualitative questions illustrate the 5 most common themes that developed. Of the 1079 participants, there were 909 responses to question 1 and 818 responses to question 2. Answers to question 1 showed that participants found the survey to be useful, comprehensive, interactive, well presented, and in a convenient web-based format. In response to question 2, participants suggested that training sessions be shorter, more frequent, and adaptable; include more details on pain medications; and resolve some technical issues (Figure B, available as a supplement to the online version of this article at http://www.ajph.org).

To cover the vast geographic spread of the IHS system (from Alaska to Maine) and to minimize the impact on patient care, we conducted this training session via Adobe Connect (Adobe Systems, San Jose, CA). This allowed clinician participation connection from any Internet-connected device. ECHO Pain and other initiatives serving remote communities have provided successful educational training; however, the large number of participants during a single event has been unique to this initiative.[8]

Clinicians from 28 states participated in this study. The states were heavily skewed to the large states with large rural areas in the West, Southwest, and Midwest regions, which mirror the distribution of the AI/AN population. The states with the largest representation of participating clinicians included Arizona (251), New Mexico (154), Minnesota (128), and Oklahoma (103). Other states had fewer than 100 clinicians participating. Seventy-four percent of these clinicians practice full time.

TABLE 1—US Indian Health Service Training in Pain Management and Opioid Substance Use Disorder—Pre–Post Knowledge, Self-Efficacy, and Attitudes: Indian Health Service Telebehavioral Center of Excellence Virtual Training, January–June 2015

Survey: Measure	Precourse Mean	Postcourse Mean	Difference in Means (SD)
Knowledge:			
Overall (max 12)	8.16	10.04	1.88 (2.05)
Score (max 100%)	68.04	83.73	15.69 (17.09)
Self-efficacy:			
Overall (max 6)	3.70	4.41	0.71 (0.81)
Score (max 100%)	61.71	73.61	11.90 (13.43)
KnowPain-12:			
Overall (max 6)	3.53	3.79	0.26 (0.55)
Score (max 100%)	58.90	63.19	4.29 (9.25)

Note. The sample size was n = 1079.

DISCUSSION

The collaboration between the University of New Mexico Pain Center, ECHO Pain, and the IHS Telebehavioral Center of Excellence increased clinician knowledge and self-efficacy and improved attitudes toward pain and opioid substance use disorder treatment. Prelicensure pain education across many disciplines does not instill the optimal skills for many practicing clinicians, who sometimes lack the knowledge and confidence to care for patients with pain, opioid substance use disorder, and co-occurring mental health conditions.[9]

Because the AI/AN population is at increased risk for the nonmedical use of opioid analgesics, with an earlier age of onset and an increased risk for substance use disorder in general, we contend that clinician education is of paramount importance for reducing drug overdose deaths.[1,10,11] The IHS realizes the potential to educate their clinicians by using technology to provide a multipronged approach with best practices, virtual mandated training, and optional weekly IHS Pain and Addiction Tele-ECHO clinics that deliver case-based learning and structured didactics. The October 2015

presidential memorandum suggests that the IHS is forward thinking and committed to improving the public health of AI/AN throughout the United States.[4]

Although federal agencies now require continuing medical education to address the epidemic of opioid prescription and heroin use by including best practices pain management, only 5 states (Kentucky, Massachusetts, New Mexico, Vermont, West Virginia) require pain management and opioid education for their prescribing clinicians.[12] It is vital that evidenced-based pain education be included with opioid training so that clinicians can increase their knowledge and confidence in caring for patients with pain and substance use disorders.

Over the next 2 years, we will continue to monitor AI/AN opioid prescription and death rates to ensure that chronic pain is being managed safely and effectively. Best practice pain management education can provide clinicians with the skills and confidence to care for both patients suffering with chronic pain and those who may be at risk for opioid substance use disorder. AJPH

CONTRIBUTORS

J. G. Katzman developed the study concept and design. J. G. Katzman and C. Fore were the primary authors of the article. J. G. Katzman and S. Bhatt were the cofacilitators of the Indian Health Service Pain and Addiction TeleECHO clinic. J. G. Katzman, G. C. Comerci, C. Camarata, L. Marr, D. Taylor, and J. Dillow developed the Pain and Addiction course curriculum, taught the course, and contributed to article preparation. S. Bhatt, N. Greenberg and J. Griffin Salvador performed the data analysis. R. Monette prepared and wrote the institutional review board application. S. Arora, A. Bradford, and S. Karol contributed to article preparation.

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HUMAN PARTICIPANT PROTECTION

The institutional review board of the University of New Mexico Health Science Center approved this study.

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