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Interdisciplinary Program Designed to Prepare Student Health Professionals for the Cultural Aspects Affecting Medical Service Delivery in Rural Areas

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ABSTRACT
Minorities are significantly underrepresented in the medical professions as compared to the US population as a whole. This discrepancy highlights the need to prepare students to practice in a culturally competent manner. This is especially true for those students who plan to practice in rural areas. Rural practice requires not only the skill of cultural competence, but also the ability to work with other disciplines as part of a team, due to the shortage of health professionals. This article outlines a month-long clinical rotation developed by the health professions programs in Oklahoma and funded through a grant to Oklahoma's Area Health Education Centers. This funded program combines mentoring, clinical experience, and didactic information on cultural awareness to prepare students to work together to provide care for members of the Choctaw Nation.

INTRODUCTION
The geographical distribution of health care providers is currently inadequate to meet the health care needs of rural America. The result of the disparity in health services between rural and urban areas is illustrated by examining the health status of a geographically large mid-western state. Oklahoma faces unique issues in health service delivery due to having both a high number of rural residents and a high percentage of persons of American Indian descent. Approximately 81% (63 out of 77) of the counties in Oklahoma are classified as rural.[1] In 2000, 39.2% of the state's population lived in these non-metropolitan counties.[1] Census figures report that 11.2% of the population in Oklahoma is either completely or partially of American Indian descent.[2] These two factors introduce cultural and geographic considerations that affect the provision of health care.

The state's recent health report card showed a dismal rating of its overall health and wellness when compared to the level enjoyed by residents living in other states.[3] Seventeen indicators of health were graded. Oklahoma earned eight grades of "F" and only two of the remaining indicators received grades higher than a "C." Consequently, Oklahoma ranks 45th out of the 50 U.S. states for the overall health of its citizens.[4] These results indicate a critical need for improvement of accessibility and availability of health care resources, especially in the rural portions of the state.

The Health Resources and Services Administration's (HRSA) Bureau of Health Professions has established health professional shortage areas (HPSA) and medically underserved areas (MUA) in response to this problem. In addition to providing federal grants for medical clinics to these designated areas, HRSA has also developed the Area Health Education Centers (AHEC). The AHECs serve as a link between the universities and surrounding communities by developing educational programs for recruitment, support, and retention of rural practitioners.[5] The AHECs offer educational opportunities for current practitioners and for students who may potentially become rural health providers. The universities participate by modifying the traditional curriculum to allow students of all disciplines to participate in rural health educational experiences.

The Talihina Project at the Choctaw Nation Health Care Center (CNHCC)

The health professions educational programs in Oklahoma have a strong interest in improving the availability of health care services throughout the state. Faculty and administrators believe that involving student health practitioners in opportunities to provide care to traditionally underserved areas and populations might increase the likelihood that these students will enter rural practice after graduation.[6] Achievement of this outcome could significantly improve the quality and quantity of healthcare available for persons living in rural areas.

In 2002, a three-year Quentin N. Burdick grant for $423,876 was awarded to the AHEC sponsored by the Oklahoma State University College of Osteopathic Medicine**.** The grant provided funding for Rural Interdisciplinary Training Programs**.** The state's AHEC program used the monies to develop interdisciplinary educational experiences throughout the state. These programs pair health professions students with mentors who can provide opportunities to work with and understand the underserved populations in rural areas.[7] The AHEC programs offer on-going educational experiences that familiarize students with the issues affecting delivery of culturally sensitive health services in rural parts of the state. Clinical and academic faculty work closely with the AHEC staff and rural clinician-mentors to train teams of medical, nursing, occupational therapist, physical therapist, physician assistant, dental, optometry, social work, dietetics and pharmacy students from five universities throughout Oklahoma and Illinois.[8] These universities are the University of Oklahoma, Oklahoma State University, Southwestern State University, Northeastern State University, and Midwestern University in Chicago. Healthcare students from these disciplines participate in month-long projects that offer patient-centered and interdisciplinary care in the rural northeastern, northwestern, southeastern and southwestern areas of Oklahoma. The grant makes it possible to fund not only the administrative costs, but also pays for student housing, mileage, and a generous stipend. These benefits act to aid in recruitment of interested students by removing any potential financial hardship that otherwise might be associated with a clinical rotation at a rural site.[5, 9]

The first clinical rotation was sponsored at Choctaw Nation Health Care Center (CNHCC) in Talihina, located in southeastern Oklahoma. The CNHCC provides healthcare services only to American Indians identified as eligible for services.[10] Eligibility is established by meeting two criteria. First, the patient must provide proof of membership in one of the tribes recognized by the federal government. Most use the Certificate Degree of Indian Blood (CDIB) card, or a tribal membership card as proof. Once eligibility was established, the patients could receive basic care if the patient resided within the boundaries of the ten and a half counties that make up the Choctaw Nation service area. Although basic medical services are then available for any person who meets these two criteria, special services such as MRI or elective operations are provided only if the patient has already resided for least at six months in one of the Choctaw Nation counties.[10]

The Talihina program's theme focused on the problem of diabetes among American Indians.[11] Diabetes is one of the leading causes of death in the U.S and the prevalence in American Indians in Oklahoma is much higher than the national average.[12] Twenty-six percent of the population in Southeast Oklahoma is identified as American Indian and as much as 20% of that population has diabetes.[13] According to one study, there is a higher mortality rate among diabetic American Indians in Oklahoma than is found in the rest of the diabetic population of the United States.[14] The CNHCC in Talihina established a Diabetes Wellness Center to provide specialized medical services for this population, and the AHEC program works closely with that center.

The students enrolled in the Talihina site project worked together in teams of four to six students. Each interdisciplinary team served the Choctaw Nation population both in the hospital and in the community. In the hospital, the team members often shared the care of a patient. After completing the initial examinations, the student team met to discuss the goals set by the patient and to decide how to efficiently and economically meet these needs. The month-long rotation culminated with a project designed to meet a specific community need identified by the tribal council.

While participating in the project, each student provided medical services within their specific disciplines. Students developed interdisciplinary treatment plans based on each patient's goals and needs. In addition to the traditional clinical rotation activities, students participated in interdisciplinary team rounds and attended lectures each week on cultural issues that can affect the delivery of medical services. Students spent time shadowing a variety of health professionals, to learn first hand what each discipline does and how each specialty contributes to the functioning of the interdisciplinary care team. This provided a view into the personal and professional lifestyle of rural practitioners. The literature indicates that this type of mentored experience is a crucial part of helping students decide about rural practice.[15, 17]

During the rotation, students lived in housing provided by the Choctaw Nation. This housing, located on the grounds of the CNHCC, allowed students to experience many of the realities of rural living that are commonly faced by rural practitioners. One of the first shocks was their inability to use cell phones. Talihina is in such an isolated location that no cellular signal tower is

available. Students were required to wait their turns to use the pay phones located at the hospital. The CNHCC is located in the middle of the Talihina Trail in Ouachita National Forest, which made it a challenge to obtain meals. The only alternatives to the tiny grocery store in Talihina were to eat meals at the hospital or drive more than an hour over winding and narrow roads to the next town. The hospital also did not have a medical library available for student research, so students either used their personal computers for Internet access or brought textbooks and journals with them on the rotation.

During the month-long rotation, the students were paired with a preceptor. In addition to the usual responsibilities of a clinical supervisor, these preceptors discussed the advantages and drawbacks that exist in rural practice. Rural communities with a large percentage of minority residents pose a special challenge for health providers. Cultural dissimilarity from the population served and the confidentiality issues that result from the inevitable overlap of professional and personal roles in small towns act to complicate the role of health care providers.[16]

Students and mentors discussed the impact of culture and geographic isolation on the provision and acceptance of medical services during both the weekly meetings and informally as they worked together. At the end of the rotation, each student wrote a summary paper that discussed any changes that may have occurred in their attitudes and expectations concerning life as a rural practitioner.[17]

An article by Bushy identifies three crucial elements that can affect the effectiveness of rural service delivery. The first factor is availability. There are fewer health services available for the rural community due to the small number of practitioners. A rural community may deal with a ratio of five times more patients per physician than is found in an urban area.[19] The second issue, affordability, refers to more than just the assigned cost of a particular service.[18] It includes all of the associated costs of time lost from work, transportation, special diets, and child-care arrangements. The third issue moves from quantitative to qualitative factors and considers the acceptability of the care.[18] Effective service delivery requires more than adequate numbers of providers or health facilities in a community. It includes the willingness of the intended recipients to accept and participate in the services provided. This requires health professionals to abandon a provider-centered mindset for a more culturally sensitive, patient-centered approach to patient-provider interactions.[9,20-21]

Patient-centered care requires more than good intentions on the part of the practitioners. The healthcare providers and patients must function together as a well-informed team. This relationship requires providers to understand and appreciate the cultural and ethnic background of their patients. The literature proposes many definitions of cultural competence, but most require that a practitioner possess a high degree of cultural sensitivity, cultural knowledge, and cultural skills.[21] The needs of the patient will vary according to cultural beliefs, geographic location, socio-economic levels, core values, and educational levels.[22] This variation may make it difficult for a patient to express feelings or participate fully in the decision-making process. A practitioner who approaches patient interactions without understanding the impact of culture on communication might view a patient's verbal or non-verbal response as approval of the provider's recommendations. In reality, the patient's response or failure to respond might reflect a lack of understanding or an actual repudiation of the recommendation. Western belief systems that value independence and individual autonomy may be at odds with cultural groups who value the interdependence of the family and choices made for the good of the social group.[23,31] This type of miscommunication can lead practitioners to believe that they are practicing patient-centered care, when the care they provide is still based on the culturally unaware, provider-centric model.

Cultural dissimilarity between the patient and the provider can contribute to these miscommunications. A lack of cultural awareness on the part of the provider, even if due to lack of awareness, can create barriers to health care for many Americans from minority backgrounds. A 1994 National Comparative Survey of Minority Health Care done by the Commonwealth Fund reported that 15% of the persons classified as minorities believed that, for reasons of income, sex, or race, they would receive better care if they were of another race or ethnicity. Significantly, only 3% of Caucasian persons expressed the same belief.[24]

Persons classified as minorities are significantly under-represented in all of the medical professions (See table 1). Nationally, the percentage of American Indians is 0.9%, but in Oklahoma, approximately 7.9% of the residents identify themselves as American Indian.[25]

Table 1: National Professional Associations Percentages of Minority Members#

Health Professions	% Self-identified as a minority	% Self-identified as American Indian or Alaskan Native (may identify with >1 race)
Nursing	14.20	0.50
Pharmacist	12.30	*
Physical Therapist	9.10	0.50
Physician	16.75	0.05

**no data provided*
 # For privacy reasons, individual state licensure boards will not release information on racial distribution of professionals.

These figures indicate that most of the healthcare available for persons of minority background in the U.S is provided by Caucasian providers.[26-29] Even when providers representing minority backgrounds are available to provide medical services; there is a very small likelihood that any of them will be American Indians. Although quality care delivery does not require a provider who is from the same racial or ethnic background as the patient population, recent research by Laveist & Nuru-Jeter indicates that a significant proportion of patients would prefer this, if such an option was available.[30] The lack of representation of minorities within all of the health professions makes it clear that non-members of racial or ethnic minority groups must take steps to ensure that the services they provide are both high quality and culturally sensitive.

Community Issues Affecting Delivery of Healthcare Services

Healthcare providers at the CNHCC experience high rates of cancellations and missed appointments. This may be due to scheduling appointments at times that are convenient for the provider but not the patient, or an inability of the providers to establish a relationship with the patient, or the lack of any financial incentive to attend the appointments. The Choctaw Nation provides healthcare to eligible American Indians at no cost to the patient. The hospital receives full reimbursement for services through the federal government. Patients may feel that keeping their scheduled appointments is not important or necessary since they incur no financial responsibility for the costs.

Another factor that may contribute to the problem of missed clinical appointments is the lack of convenient transportation. The CNHCC provides healthcare to eligible Native Americans in a geographic area stretching from rural Southeast Oklahoma into Northern Texas, and Eastern Arkansas. Patients may travel up to two hours for healthcare services. The long distances prevent patients from attending numerous appointments that are spread throughout the week. Many patients have no vehicle, or cannot find transportation to the hospital. Others have transportation, but cannot afford to put gas in their vehicles. In response to this, the CNHCC provides transportation to the hospital. Twice a week patients can ride a hospital van to CNHCC from the outlying towns. The van arrives at the hospital at 10 a.m. and leaves at 4 p.m., so providers must schedule and treat all of the patients from the van within that timeframe. Since patients may have numerous appointments, the van riders often must wait hours until all those who rode the van have completed their appointments at the hospital before returning home. This leads some patients into prioritizing their appointments, instead of seeing all of the recommended providers. The priority established by the patient may be based on personal or cultural beliefs concerning the importance of a condition, as opposed to medical reasons.

Cultural Aspects of Providing Healthcare

Once the patient has entered the medical system at CNHCC, the issue of culture and traditional practices may affect the delivery of healthcare services. Even though the Choctaw Nation provides services at no cost to eligible patients, family income still influences medical outcomes. Many families still have no indoor plumbing, or running water in their homes. They may not have electricity or telephones, making patient follow-up very difficult for providers. A patient may believe that, due to the difficulty of attending any appointment, the issues of correct day or timeliness are not very important. Once in an appointment, the patient may wish to allow the medical discussion to unfold at a natural pace, allowing time for thought on both sides.[31] The number of patients treated by the CNHCC makes it essential that practitioners adhere closely to the daily schedule. Late patients or rambling responses to questions may be viewed as non-cooperation, rather than as culturally influenced behaviors.

Many members of the Choctaw Nation consume a diet high in fat and sodium as much due to cultural preference and traditions as to the difficulty in obtaining and storing fresh foods. This diet, combined with a sedentary lifestyle, genetics and family history, puts many of the American Indians in Oklahoma at a very high risk for diabetes.[32] The interdisciplinary student team spent the majority of its time educating patients about diabetes and its sequelae.

Educating someone from another culture on the importance of lifestyle changes without acting in a culturally insensitive manner is extremely difficult. The healthcare worker must gain the trust of the patient by making the effort to understand the culture of the Choctaw Nation. Behavior that shows respect, both for the patient and the patient's traditions, is a key element. The clinician who expects to interact with an American Indian by using a western model of interaction may have difficulty correctly interpreting the non-verbal body language. The healthcare worker may consider the American Indian patient as quiet, or reserved, shy, and slow to respond, when often the patient is just carefully considering what to say, or reveal. The clinician should return that respect, while assessing the patients' body language and facial expressions. A member of the Choctaw Nation must trust the healthcare worker. Without trust, the patient will not respond. Also, the provider must ensure that the patient understands the conversation, or the information provided. The patient is not likely to admit misunderstanding to prevent any embarrassment from occurring.[31]

As a sign of respect, patients may not look the clinician in the eye while speaking. Direct eye contact can be viewed as a sign of aggression instead of an expression of honesty and sincerity. The first meeting with a patient includes a handshake during introductions. Members of the Choctaw Nation do not welcome the firm, vigorous handshake used by most clinicians. Their customary handshake, especially among elders, is more a brushing of hands, or gentle grasp.[31] A strong, vigorous handshake may be viewed as aggressive. The Choctaw Nation does not describe itself as aggressive, but as a peace-loving and friendly people. This dates back to their early ancestry, and is made evident by the Great Seal of the Choctaw Nation. This belief in the peaceful and patient nature of the Choctaw Indian is represented in the Seal by an unstrung bow, and a pipe-hatchet, used for smoking around council fires during ceremonies.[10]

Conclusion

Census figures suggest that most healthcare providers will provide care to persons who are from dissimilar cultural backgrounds. Efforts to improve knowledge about different beliefs and practices can provide the insight necessary for practitioners to design treatment plans that patients find acceptable. Oklahoma's experiences with the Burdick Interdisciplinary Health Education project in Talihina offers an example of how to create an interdisciplinary educational module that familiarizes students with the impact that culture can have on rural service delivery. Participating in this type of opportunity for didactic instruction on cultural issues, clinical application of the information, and 1:1 mentoring by persons already involved in rural practice should encourage students to consider working in a rural setting after graduation.

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