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Cultural Competency in Workforce Development: Perspectives from a Rural, Native American Project in **Pathways to Careers in Health Care**

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Cultural Competency in Workforce Development

Perspectives from a Rural, Native American Project

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There is a critical shortage of American Indian and Alaskan Native health professionals who can provide competent, culturally sensitive health care that draws from traditional and Western wisdom and practices. The shortage of American Indian health professionals poses significant challenges for recruitment of qualified providers, especially on rural reservations. According to the Indian Health Service (IHS), the vacancy rates and total number of vacancies for key professional providers continue to remain high, even when compared to federally funded health centers. For example, in 2015 vacancy rates for physicians were 25 percent; for nurse practitioners, 25 percent; for nurses and dentists, 18 percent; and for pharmacists, 6.6 percent (IHS 2015).

As the demand for American Indian health care professionals increased across the United States, North Dakota also experienced greater workforce needs, especially in rural areas and on tribal reservations. In 2011, of the 15,600 nurses in North Dakota, 95 percent were Caucasian and only 1.4 percent were American Indians, which

decreased from 2 percent in 2009 (Moulton 2012). A pressing need existed to establish evidence-based interventions that built sustainable career pathways while increasing the diversity workforce.

Through partnerships and interdisciplinary approaches, several projects and strategies were implemented that educated multi-age American Indians about health care careers (i.e., building the pipeline), and recruited students into health care programs (i.e., filling the pipeline), and placed graduates into health care positions (i.e., proving the pipeline) (NDSU School of Nursing and Cankdeska Cikana Community College 2013, 2014, 2015, 2016). Accordingly, the Sustaining Career Pathways for American Indian Health Professionals in North Dakota: Building Workforce Options with the Next Steps Health Profession Opportunity Grants (HPOG) program was launched to research and evaluate the interventions designed to increase American Indians' health professional capacity. This chapter provides an overview of the North Dakota American Indian demographics, HPOG Next Steps Program, HPOG University Partnership Research Grants, interdisciplinary projects, nursing recruitment/retention projects, and lessons learned.

AMERICAN INDIAN DEMOGRAPHICS AND SOCIAL DETERMINANTS

In 2010, the total population of all races in North Dakota was 672,591. Of that number, 42,996 (6.4 percent) were American Indians of one race alone or in combination with one or more other races. From 2000 to 2010, the American Indian population, one race alone or in combination with one or more other races, increased by 22.1 percent. While 16,628 (45.4 percent) American Indians of one race live off North Dakota reservations, 19,963 (54.6 percent) of one race live on one of the five reservations communities (North Dakota Indian Affairs Commission 2010).

North Dakota American Indian populations have more substandard social determinants than others who live in the state, including a lower health status. Life expectancy (54 years vs. 76 years) and extreme disease burden exists because of historical trauma, insufficient education, disproportionate poverty, discrimination, and cultural differences (IHS

2018). In North Dakota, American Indians have a significantly greater prevalence of diabetes, heart disease, smoking, obesity, and heavy alcohol use than the general population (Holm et al. 2010). These diseases are rooted deeply in economic adversity, poor social conditions, and insufficient education (IHS 2018).

American Indian high school graduation rates continue to be much lower than the overall North Dakota graduation rate of 86.3 percent. When comparing graduation rates over time, the economically nondisadvantaged rate is at 93.4 percent and continues to increase, whereas the economically disadvantaged rate is 70.9 percent, a slight increase. In 2015–2016, the graduation rate in North Dakota was 88.3 percent compared to 65.16 percent for American Indian students (Emerson 2017).

According to the 2010 census, the median American Indian household income was \$25,255 compared to \$48,670 for North Dakota. Overcrowding is the most common substandard concern on the reservations, with Spirit Lake having slightly larger proportions of overcrowding in both owner- and renter-occupied housing than North Dakota overall (31 percent and 12 percent, respectively). Standing Rock has the largest proportions of both owner- and renter-occupied housing units lacking complete plumbing and kitchen facilities (all less than 4 percent).

Poverty and unemployment continue to be an issue in the five North Dakota reservation communities. There are 13,230 (39.8 percent) American Indians living below poverty level compared to 84,895 (13.0 percent) in North Dakota (U.S. Census Bureau 2015). The percentage of American Indians living below the poverty level include Fort Totten, 65.8 percent; Fort Yates, 38.0 percent; Turtle Mountain, 31.6 percent; and Fort Berthold, 18.5 percent (U.S. Census Bureau 2016). While North Dakota's seasonally adjusted unemployment rate for the whole state (December 2017) was 2.6 percent, unemployment rates in reservation communities were much higher (Bureau of Labor Statistics 2018). In 2010 the percentage of North Dakota Tribes that were unemployed was 57 percent for Spirit Lake (Lindquist 2016), 63 percent for Standing Rock Sioux Tribe, 44 percent for Three Affiliated Tribes of the Fort Berthold Reservation, and 60 percent for Turtle Mountain (U.S. Department of the Interior 2014).

North Dakota American Indians are employed primarily in one of seven sectors, listed here from highest employed to lowest: 1) public

administration; 2) arts, entertainment, and recreation; 3) accommodation and food services; 4) construction; 5) retail trade; 6) health care and social assistance; and 7) educational services (North Dakota Census Office 2015).

HPOG NEXT STEPS PROGRAM

To address the severe underrepresentation of American Indians in the health care sector, Cankdeska Cikana Community College (CCCC) partnered with the University of North Dakota Recruitment-Retention of American Indians into Nursing (RAIN) Program to implement an HPOG program titled “Next Steps Program: An Empowerment Model for Natives Entering Health Professions” (University of North Dakota College of Nursing 2011). This statewide program provided opportunities for American Indian citizens to access “educational pathways” that led to careers in various health professions.

The Next Steps program incorporated a comprehensive mentor model developed by the RAIN Program staff. RAIN mentors were strategically placed at CCCC, the primary grant site; each of the three secondary sites—United Tribes Technical College, Nueta Hidatsa Sahnish College on the Mandan, Hidatsa and Arikara Nation, Sitting Bull College on Fort Yates Reservation—and a statewide mentor located at the University of North Dakota RAIN Program. These five mentors provided comprehensive oversight to American Indian students, including intensive mentoring, case management, counseling/advising, and referrals to public assistance and behavioral health programs when needed. The Next Steps Program provided funding for tuition, uniforms, fees and books, transportation, and support services such as child care (Meit, TenBroeck, and Miesfeld 2015). If students graduated from a program requiring licensure to practice, funding was provided for the review course and licensure testing. Additionally, the Next Steps Employment Specialist provided career counseling, job search and placement assistance, and employability and life skills training to assist the graduates in securing employment (Meit, TenBroeck, and Miesfeld 2015). In the provision of these services, CCCC partnered with three other tribal colleges in North Dakota and collaborated with 13 other educational

institutions that included two- and four-year colleges and universities, employment and training organizations, and health care agencies across the state.

The overall five-year Next Steps Program outcomes included 269 American Indian students enrolled in health care occupational education and training, with 216 (80 percent) completing one health care training. Among students who completed and exited the Next Steps Program, 191 (71 percent) were employed by their completion of the program (see Table 7.1). The Next Steps Program has made a significant impact on the health delivery system in North Dakota and its ability to serve Indian populations by increasing the number of health care professionals.

THE HPOG UNIVERSITY PARTNERSHIP RESEARCH GRANT

In 2011, North Dakota State University School of Nursing (NDSU SON) and CCCC collaborated on a four-year Health Professions Occupations University Partnership (HPOG UP) research grant to study the Next Steps Program's outcomes (Forster and Mueggenborg 2015). The first goal of this partnership was to engage in evaluation and research projects that explored how to encourage interest in health careers among American Indian youth and college students. The second goal was to discover best practices for supporting the recruitment and retention of American Indian people into professional nursing programs in North Dakota (Meit, TenBroeck, and Miesfeld 2015).

INTERDISCIPLINARY PROJECTS

While many American Indian students want to pursue college, they are less prepared than any other racial or ethnic group in the United States, according to the ACT data. In 2013, more than half (52 percent) of the roughly 14,000 American Indian students who completed the ACT met none of the four college benchmarks, which attempted to

Table 7.1 Number of American Indian Students Enrolled, Completed, and Employed in Their Chosen Occupation

Occupation	Total enrolled	Gender		Age (mean) ^a	Total completed	Gender		Age (mean) ^a	Total employed	Gender		Age (mean) ^a
		Male	Female			Male	Female			Male	Female	
Registered nurses	39	2	37	34 (24–53)	28	1	27	33 (24–50)	22	0	22	34 (24–50)
Licensed practical nurses	69	3	66	33 (22–59)	65	2	63	33 (22–59)	64	2	62	33 (22–59)
Social work	15	0	15	35 (27–48)	11	0	11	34 (27–48)	9	0	9	34 (27–48)
Dietitian	15	1	14	39 (25–63)	12	1	11	37 (25–63)	2	1	1	34 (25–63)
Certified nurse aids	121	6	115	31 (19–66)	93	5	88	30 (19–66)	87	5	82	30 (19–66)
Health information technology	4	0	4	37 (30–43)	2	0	2	38 (35–41)	2	0	2	38 (34–41)
Certified medical assistant	5	1	4	37 (25–46)	4	1	3	39 (25–46)	2	0	2	42 (42–42)
Emergency medical technician	1	0	1	31	1	0	1	31	1	0	1	31
Total	269	13	256	35	216	10	206	34	189	8	181	35

^aAge range is given in parentheses.

SOURCE: Next Steps HPOG PRS system.

measure students' probability of earning Cs or higher in four postsecondary core subjects: English, reading, mathematics, and science. Only 10 percent of the American Indian test takers met all four benchmarks (Bidwell 2014). Although 60 percent of U.S. high school students continued to college, only 17 percent of American Indian students were able to continue their education because they contend with many challenges that average students do not encounter: the lack of awareness of many health careers, inability to navigate higher education systems especially if they are first-generation students, inadequate preparation in sciences and mathematics, financial barriers, and lack of role models and mentors from similar cultural backgrounds (Oliff 2017; Suez Mittman and Sullivan 2011). Additional challenges include geographic isolation of reservations, lack of cultural inclusion off the reservations, and lack of internet access at home for online courses (Oliff 2017; Tapia 2017). According to the 2018 *Broadband Deployment Report*, 85 percent of the 1.7 million American Indians living on rural reservations lack access to high-speed internet (Federal Communications Commission 2018).

Considering the underrepresentation of American Indians in health professions, limited preparation in STEM, along with the challenges American Indians encounter, a multifaceted approach was used to study the recruitment of American Indian students into health professions. As part of this grant, several educational efforts were initiated to increase awareness and interest in health professions: HPER 172 Introduction to Community and Public Health Course, Photovoice Project, Health Careers 4 U (HC4U) Summer Program, and Health Careers Edventures. Educational interventions that focus on health career opportunities have been successful in encouraging the pursuit of health careers by minority students (Brooks et al. 2013; Gefter et al. 2018; Grumbach and Mendoza 2008; Sequist 2009).

HPER 172 INTRODUCTION TO COMMUNITY AND PUBLIC HEALTH COURSE

Cankdeska Cikana Community College continued its partnership with Icahn School of Medicine at Mount Sinai and Columbia Univer-

sity Mailman School of Public Health of New York City and later with NDSU SON to provide a college-level course titled HPER 172 Introduction to Community and Public Health. This three-credit summer course addressed public health issues at the international, national, state, and Tribal Nation levels. Previous papers have described the course content and format (Austin et al. 2019; Heuer et al. 2016; Weintraub et al. 2015). This course was conducted using an interdisciplinary, interactive approach, with medical students, residents, and public health students from Icahn and Columbia, along with faculty and staff from all four educational institutions. Additionally, multiple guest speakers, many of whom were American Indian professionals, were invited to share their personal and professional experiences in achieving their careers. Many of the speakers shared their personal and professional stories, which included their successes and challenges as they transitioned into area universities and completed their professional degrees (Austin et al. 2019; Heuer et al. 2016; Weintraub et al. 2015).

Course objectives, along with CCCC students' satisfaction with the course content and educators, were evaluated on a five-point Likert scale. The students consistently rated 4.0 or above for meeting the objectives and overall satisfaction with the course.

During the four years of the HPOG UP grant, 57 American Indian students enrolled, and 51 completed the course.¹ Initially, the course was designed for high school and college students, but some of the enrolled participants included older-than-average students and elders who wanted to learn about public health issues. Of the 51 participants, 13 were older than average or elders. Thirty (59 percent) were female, whereas 21 (41 percent) were male. Two students had their GEDs and 5 were enrolled in GED courses; one student had previously completed a bachelor's degree. Twenty students completed their associate's degree at CCCC, and 8 of these students continued their education at area Tribal Colleges or universities. Five were retired. Educational information was missing on 20 students who completed the course.

Students' knowledge of public health issues increased after their participation in the course. Their knowledge of health careers also increased, and they indicated they were more likely to pursue health careers after completing this course. Over half of the students believed they could improve the health of their community (NDSU SON and CCCC 2013, 2014, 2015, 2016). Students interested in health careers

listed nursing, medicine, pharmacist, dentist, physical therapist, social worker, and emergency medical technician as their preferred choices.

HPER 172 INTRODUCTION TO COMMUNITY AND PUBLIC HEALTH COURSE PHOTOVOICE PROJECT

In 2014 and 2015, CCCC and NDSU SON implemented community-based participatory research photovoice projects to enable the HPER 172 students to learn about a specific research method while studying how the environment impacts their health (Schell et al. 2009). The students participated in a presentation on photography and utilization of digital cameras. They were given one week to take pictures that promoted or challenged good health practices on their rural tribal nation. After the students submitted their photos, they were randomly placed into focus groups with facilitators who asked them questions about each of their pictures (Weintraub et al. 2015). Themes were identified from the focus groups.

Community-based participatory research is grounded in real-world context and identifies important problems and implements solutions that benefit members of the community (Cook 2008; Hergenrather et al. 2009; Stedman-Smith et al. 2012). Both photovoice projects increased the students' awareness of environmental factors that impact the health of American Indians residing on Spirit Lake Tribal Nation. The students who participated in these two projects applied the theoretical concepts they learned in the HPER 172 course about environmental health. Each year, some of their pictures, along with unidentified quotes describing the pictures, were displayed in the CCCC People's Choice Art Shows.

HEALTH CAREERS 4 U SUMMER PROGRAM

With the goal of strengthening career pathways for American Indian health professions, CCCC recognized the need for a youth program aimed at increasing interest in health careers. The college continued its partnership with Icahn School of Medicine Mailman School of Public

Health and later NDUS SON to develop Health Careers for U (HC4U), a one-week educational program for students aged 11–14. The curriculum focused on the main concepts of healthy living, exercise, safety, and professional career opportunities. The HC4U Program included workshops, physical fitness activities, and professional community speakers (NDSU SON and CCCC 2013, 2014, 2015, 2016; Weintraub et al. 2015). CCCC staff taught the students how to develop public service announcement (PSA) videos and posters. Students were placed in small groups, and they chose and researched their topics, wrote and acted out their scripts, shot the scenes, and edited the video until there was a master cut. While some group members were working on the video PSA, others developed a visual poster with the same message. The final day of HC4U, families and Tribal members were invited for a lunch and a program that showcased “HC4U What Is It About?,” a video of student activities during the week; displayed students’ PSAs and posters, and honored their participation in the program (Weintraub et al. 2015).

One hundred and thirty-one students² participated in the summer programs. Students completed daily evaluations based on a three-point scale that measured how they liked the planned daily activities, change in knowledge level, comfort level, participation interest, and staff interaction. Four open-ended questions gave students the opportunity to share one thing they learned that day, their favorite and least favorite activity, and anything that could have been done to make the day better.

The evaluation results were consistently positive over four years. The top health careers of interest listed by the students were medicine, nursing, veterinary, dietitian, and emergency medical technician. Over half of the students said they learned more than they expected. Their general knowledge increased in the following areas: public service announcements, healthy eating, emergency services, and various health careers. Most of the students enjoyed the activities and would recommend the HC4U Program to their friends. Over two-thirds of the students reported they would participate in future HC4U Programs.

HEALTH CAREERS EDVENTURES

American Indian students older than age 14 were no longer eligible to enroll in the HC4U Program, but they still wanted to participate in health-related activities while continuing to learn about various health professions. As a result, CCCC and NDSU SON developed the Health Careers Edventure Program for 15-to-19-year-old American Indian students on Spirit Lake Nation. This program aimed to teach students about educational pathways to various health careers at Tribal Colleges, state colleges, and universities. The curriculum focused on traditional healing, educational and employment skills, interview skills, physical activities, hands-on skills lab activities (e.g., taking blood pressure, making hand lotion in the pharmacy concept lab), and patient simulation scenarios. Other learning experiences included immersing the students in various campus activities so they could learn about student life and explore student associations on the campuses. The second year of the program, students volunteered for a day at the Spirit Lake Nation Casino and assisted staff in laundry, housekeeping, and maintenance (NDSU SON and CCCC 2015, 2016).

Sixteen American Indian students enrolled both years, but 10 attended and completed in 2014 and 8 completed in 2015. Twenty-eight percent of the participants were male and 72 percent were female.³ The program evaluations from these two summer programs were overwhelmingly positive. Top health careers of interest were nursing, medicine, and veterinary. Students were excited to tour universities and participate in hands-on experiences in the skills labs (e.g., nursing, veterinarian, pharmacy) and patient simulator scenarios. Through their participation in multiple patient simulator scenarios, students learned how to assess respirations and heart sounds and participated in patient codes. They enjoyed extracurricular activities (e.g., movies, basketball, shopping), as well as many of the non-health-care-related educational activities. The days were long and filled with 8–10 activities per day, and some evaluation comments reflected the need to scale back the number of events.

YOUTH EDUCATION AND EMPLOYMENT SURVEY

According to the U.S. Department of Education, college enrollment among American Indian/Alaskan Native students decreased by 26 percent, from 179,000 to 132,000 between 2000 and 2010 (National Center for Educational Statistics 2017), and Native Americans have the highest unemployment rates of any racial or ethnic group in the United States (Bureau of Labor Statistics 2016). To gain an understanding of the transition of American Indian high school students into higher education and/or employment, NDSU SON and CCCC collaborated with Dr. Phillip Young P. Hong and his team from Loyola University, Illinois, to use the Perceived Education Barrier Scale and the Perceived Employment Barrier Scale (Hong, Polanin, and Pigott 2012) to conduct the Youth Education and Employment Survey. The purpose of this study was to assess American Indian eleventh- and twelfth-grade students' hope for obtaining their goals in higher education and employment.

A total of 515 students completed the survey from 12 high schools located on or near the four North Dakota Tribal Nations. The overall survey response rate was 64 percent based on the total number of students enrolled in eleventh and twelfth grade at participating schools compared to the number of students who participated the day of the survey (NDSU SON and CCCC 2015, 2016).

Individual reports were developed that compared each school's results to the Tribal Nation or reservations and all 12 schools. Results for the Spirit Lake Nation included the four individual schools' results, tribal nation aggregate, and all schools' data. The results were based on mean or average (\bar{x}) scores to ensure that all schools of varying size received an individualized report of their results. In addition, the use of mean or average scores provided a standard way of viewing results across all schools, regardless of size. Forty percent of the "all schools" students were interested in health careers: nursing, medicine, social worker, sports medicine, and physical therapist (Heuer et al. 2016).⁴

NURSING RECRUITMENT/RETENTION PROJECTS

Three million nurses compose the largest segment of the health care workforce in the United States, and the nursing profession is the fastest growing occupation in the country. Despite the growth, the demand for nurses is outpacing the supply. The Bureau of Labor Statistics (2019) projects the employment of registered nurses to grow 15 percent by 2026, which is higher than the average for all occupations. Primary reasons for this looming nursing shortage are the increased emphasis on preventive care, heightened rates of chronic conditions, and the aging of the baby boomer generation along with their need for additional health care services. According to the National Council on Aging (2018), about 80 percent of elders have one chronic disease, and 68 percent have at least two chronic conditions.

In 2017, North Dakotans aged 65 and older represented 15 percent of the total population. By 2025, 18 percent of the state's population is expected to be over 65, and many will be diagnosed with one or more chronic diseases such as obesity, diabetes, or mental illness (North Dakota Compass 2019). In addition to the aging population, the North Dakota nursing shortage will continue to be affected by four main drivers: 1) bottleneck of entry into nursing programs, 2) barriers to expanding nursing programs, 3) retention of North Dakota nurses in the state, and 4) need for immigration of nurses into the state (Moulton 2017).

While North Dakota leaders and administrators search for innovative recruitment strategies to increase the nursing workforce, the American Indian population continues to be overlooked. In 2010, North Dakota's nursing workforce lacked the racial and ethnic diversity that reflected the largest minority population, American Indians (Heuer, Moulton, and Klug 2013). As a result, multidimensional educational and research methodologies were implemented to identify best practices for supporting the recruitment and retention of American Indian students into the profession of nursing. This section highlights a variety of nursing projects that were undertaken, including a nursing school survey, a health care facility survey, the North Dakota American Indian Nursing Demographic Study, American Indian Annual Nursing Conferences, Voices of American Indians in Nursing Research study/videos, and an oral history of American Indian nurses research project/documentary.

NORTH DAKOTA NURSING SCHOOL SURVEY

In 2012, NDSU SON and the Center for Nursing collaborated to develop a nursing program survey that assessed the characteristics of North Dakota nursing programs and identified trends of American Indian student enrollment and retention. Before this survey, there was only anecdotal information regarding enrollment and retention data for American Indian students. Survey questions focused on American Indian student enrollment, university support programs, nursing program support services, and recruitment and retention strategies for American Indian students. Invitations to participate in the study were distributed to all nursing program directors from the 10 higher education institutions that offered practical nursing degrees and the 14 institutions that offered registered nurse degrees (NDSU SON and CCCC 2013, 2014).

The survey was completed by 10 nursing program administrators. Two programs offered only practical nursing degrees, four offered both licensed practical nurses (LPNs) and registered nurse (RN) degrees, and four offered only bachelor of science nursing degrees. The number of applications ranged from 5 to 269, median of 57.5. The number of American Indian applications ranged from 1 to 35, median of 5, with one school not reporting.

The number of students accepted annually ranged from 5 to 112, median of 53.5. The number of American Indian students accepted yearly ranged from 1 to 18, median of 3, one program not reporting. The number of students currently enrolled ranged from 11 to 274, median of 69. The number of American Indian students currently enrolled ranged from 0 to 37, median of 2. The number of American Indian students who graduated in the past five years ranged from 0 to 42, median of 7.5, with four programs not reporting.

Nine institutions offered nonnursing tutoring services, and seven offered tutoring for nursing classes. Six institutions offered social support for American Indian students, while four nursing programs did. Eight institutions and four nursing programs offered financial assistance for American Indian students.

HEALTH CARE FACILITY SURVEY

To better understand the perspectives of health care administrators and directors of nursing, the 2012 Health Care Facility Survey was developed in collaboration with the North Dakota Center for Nursing. The survey included questions that focused on the number of full-time nurses, vacancies, salaries, retention of nurses, scholarship or educational loan programs, recruitment, and retention of American Indian nurses (NDSU SON and CCCC 2013, 2014).

Approximately 200 North Dakota health care facilities were invited to participate in the study. Twenty-six hospitals and 51 long-term care facilities returned their surveys for a 39 percent return rate. Hospitals in general had more vacancies per full-time equivalents than long-term care facilities and took longer to fill these positions. This was especially true of RNs (median vacancies per FTE: 0.09 to 0.00, $p = 0.061$; median weeks to fill a vacancy: 6.0 to 3.0, $p = 0.055$).

Compared to urban long-term care facilities, those in rural areas have a much higher need for LPNs (19 percent) and RNs (4 percent). It also takes rural long-term care facilities much longer to fill LPN positions (nine weeks longer) and RN positions (one week longer). Starting salaries for LPNs are about the same, but average LPN salaries are more in rural areas (\$20 compared to \$19). For RNs, rural starting salaries (\$22) are much less than urban (\$24), while their average salaries are about the same.

Location, pay, and atmosphere were the key reasons nurses remained working at particular facilities. As for location, they wanted to work close to home and be near their families. They wanted to be properly compensated for their education and work. Finally, the facility atmosphere was a multifaceted reason given for retention. This included having opportunities for professional growth, job safety, and an enjoyable, stress-reduced environment that included a team or family-oriented approach. Long-term care facilities attracted workers who preferred a work location where they could develop a closer relationship with patients. About half of the facilities surveyed offer links to nursing schools or loan repayment programs. Few facilities provided special recruitment or retention programs designed for American Indian nurses.

NORTH DAKOTA AMERICAN INDIAN NURSING DEMOGRAPHIC STUDY

To gain an understanding of the North Dakota American Indian nursing workforce, NDSU SON, North Dakota Center for Nursing, RAIN Program, and NDSU Department of Agricultural and Biosystems Engineering partnered to conduct a demographic study using a geographical information system. The purpose of this project was to annually evaluate the numbers and distribution of American Indian nurses across the state. Only the American Indian nurses who resided and were employed in North Dakota were included in this study.

North Dakota consists of 53 counties, including 4 urban, 12 rural, and 37 frontier counties (Center for Rural Health 2011, 2019). Data sets included the 2010 North Dakota census, annual population estimates by the Census Bureau, annual North Dakota Nursing Licensure, and the Tiger/Line shapefiles from census.gov for geographical information system mapping. The North Dakota Board of Nursing data set contained only the ethnicity, licensure/certification (advanced practice, RN, or LPN), and North Dakota county employment (NDSU SON and CCCC 2013, 2014, 2015, 2016).

The study was limited to the American Indian nurses self-reporting their ethnicity. Nurses only have one opportunity to self-report their ethnicity, when they apply for their license the first time. Additionally, the study only reflects the American Indian nurses who reside and are employed in North Dakota. There may be others who reside in North Dakota but work in a neighboring state.

From 2010 to 2016, there was an increase of 94 American Indian nurses in North Dakota. American Indian nurse practitioners had an increase of 6, registered nurses increased by 53, and licensed practical nurses increased by 35 (Wamono, Heuer, and Moulton 2016).

AMERICAN INDIAN ANNUAL NURSING CONFERENCES

Four annual nursing conferences were offered to the Next Steps students, nursing administration, nurse educators, practicing nurses,

health care employers, and social workers in North Dakota and eastern Minnesota. NDSU SON, RAIN Program, CCCC, and North Dakota Center for Nursing collaborated to develop, implement, and evaluate the four conferences, which aimed to develop strategies for the recruitment and retention of American Indian students into the nursing profession. National, regional, and local speakers were secured as presenters. Selection depended on conference topics, speakers' expertise, and speakers' ability to inspire students and others in the audience.

The American Indian culture was integrated into conferences through the presence of an American Indian conference facilitator, the posting and removal of flags by veterans, inclusion of an American Indian drum group, opening/closing prayers, and a gift of a star quilt to the president of the educational institution in honor of his/her support of American Indian education and programs. Each year, participants' evaluations of the conference objectives, speakers, topics, and cultural activities were very positive (NDSU SON and CCCC 2013, 2014, 2015, 2016). Each conference included a community-based participatory evaluation/research component.

The number of participants in the four conferences was 217.⁵ From the evaluation/research data collection, one of the main themes was the difficulty of recruiting and retaining American Indian students into nursing and other health professions because of social determinants and the lack of role models. Thus, projects were developed that focused on the recruitment and retention of American Indians in nursing and incorporated American Indian role models in the recruitment and retention messaging.

VOICES OF AMERICAN INDIANS IN NURSING RESEARCH STUDY/VIDEOS

To address the issue of a lack of role models for American Indian students and young adults, NDSU SON, NDSU Agriculture Communication, and the RAIN Program implemented a research and video project that focused on the recruitment and retention of American Indians into nursing. American Indians in the Voices of American Indian Nurses represent the five Tribal Nations/reservations in North Dakota. Partici-

pants included 11 American Indian nurses, 27 student nurses, four mentors, two Next Steps staff, and two RAIN staff.

The videos tell the stories of many American Indian nurses and student nurses who overcame obstacles to complete their nursing programs and achieve health care careers. They provide encouragement for others faced with similar challenges (NDSU SON and CCCC 2014, 2015, 2016).

At the 2013 American Indian Nursing conference, participants had an opportunity to watch and evaluate one video and offer suggestions for improvement. Forty-three participants completed the evaluations, and overall, feedback was very positive: on a scale of 1 (low) to 10 (high), the average rating overall was 9.3. The comments from the open-ended questions were used to revise the videos.

Six videos were completed; four focused on the successful attributes of the Next Steps and RAIN Programs, and the other two featured American Indian RNs and LPNs.⁶ North Dakota Nursing Programs can use any of these videos for recruitment and/or retention of American Indian students in their programs. The Next Steps Program job placement specialist has used these videos at recruitment events.

ORAL HISTORY OF AMERICAN INDIAN NURSES RESEARCH PROJECT/DOCUMENTARY

The 2013 conference participants who evaluated the short video draft suggested more in-depth interviews to fully tell the stories of American Indian nurses. They also commented that American Indians are practically invisible in the mass media, and when they are portrayed they are generally depicted in stereotypical or historical images (Leavitt et al. 2015). Because of these comments, NDSU SON, CCCC, Kat Communication, and RAIN Program staff partnered to develop the American Indian Nursing Oral History Study. The interviews explored the nurses' personal stories, highlighting the transitions they experienced through their educational programs and nursing careers. The interviews were videotaped, and edited portions were used to develop the documentary titled *Essence of Healing: The Journey of American Indian Nurses* (NDSU SON and CCCC 2015, 2016).

The film showcased the lives of 14 American Indian nurses who live and work in the upper Great Plains. While their lives and stories were different, their past life experiences and American Indian heritage made them extraordinary healers.

The purpose of the film was twofold. First, it intended to evoke pride among American Indian people and to convey honor within American Indian communities by expanding understanding both within American Indian communities and the institutions and organizations in the public that educate, employ, or interact with American Indian nurses. Second, it was a valuable recruitment tool to inspire choice by informing and educating the public, especially those that influence and support students (e.g., families, elders, schools, communities).

Two hundred individuals attended the premiere at North Dakota Heritage Center in Bismarck, and 44 of the attendees completed the evaluations for a 22 percent return rate. Ninety-eight percent of the respondents rated the quality of the film, content presented, and overall presentation with a four or higher on each question using the 1-to-5 Likert scale.

MEDIA AND EDUCATIONAL DISSEMINATION OF THE DOCUMENTARY

The documentary *Essence of Healing: The Journey of American Indian Nurses* is the only film that showcases the lives of American Indian nurses in the upper Midwest.⁷ A global multimedia awareness campaign was developed to promote the film's distribution in multiple media markets (Hyatt 2017; Lee 2017). This 58-minute film has been released on DVD. Some of the major media and educational milestones are discussed below.

Awards and Film Festivals. The documentary received the 2017 Sigma Theta Tau International (STTI) Nursing Media Award at the group's 44th biennial convention in Indianapolis, Indiana, in October 2017. STTI is an International Honor Society of Nursing that advances world health and celebrates nursing excellence in scholarship, leadership, and service. The organization reports more than 135,000 active

members in 85 countries. STTI honors health care professionals for their contributions to professional excellence.

It was awarded the Best Service Film Award from the 42nd American Indian Film Festival in San Francisco in November 2017, which is the world's longest-running exposition showcasing independent films of U.S. American Indians and First Nations peoples of Canada. During the past 42 years, the American Indian Film Institute has celebrated generations of Indian filmmakers, performing artists, and audiences with the best of the most current Indian cinema.

In addition, the documentary has received nine awards, was selected as a finalist or semifinalist in 3 festivals, and was screened at 11 film festivals.

GoodHealthTV®. For one year, starting during Nurses Week in May 2016 and ending during Nurses Week in May 2017, short clips from *The Essence of Healing: Journey of American Indian Nurses* were shown on GoodHealthTV®. These two- to three-minute videos were for the recruitment and retention of American Indian students into nursing. GoodHealthTV® is the nation's premiere health and wellness education network and was created to entertain, engage, and educate viewers when they are most receptive to health and wellness education. It is played in the IHS clinics and tribal colleges and thus is an opportunity for patients and family members to learn about nursing from an American Indian nurse.

Prairie Public Broadcasting. Prairie Public Broadcasting is an award-winning radio, television, and public media service that educates, involves, and inspires the people of the prairie region. According to the program manager, Prairie Public Television will air the documentary over the next two years.

Native American Calling—Your National Electron Taking Circle. The national live call-in broadcast Native America Calling covered the documentary on its radio show, which was broadcast on over 70 stations.

***Essence of Healing: The Journey of American Indian Nurses* e-Campus Courses.** To nurture interest and provide educational information for prospective nursing students, Kat Communication and

NDSU SON partnered to develop access to two free, interactive, online educational programs focused on career preparation and career choices for students in grades 6–8 and 9–12. The goal of these two courses is to expose students in middle and high school to nursing as a future career. These courses are based on the profession of nursing and pathways into nursing; they feature stories of American Indian nurses in North Dakota and their experiences in school and work. Both online courses are divided into eight modules comprising educational videos, teacher-led and web-based games, and journal entries and forum questions that allow students to reflect on the given module and activities. These two online programs are designed to be used within existing classroom curriculum or as a guided activity for individual students. While the programs use nursing careers as examples, the information will be useful to all students as they prepare for high school and life after high school.

The e-Campus course was piloted with 10 American Indian high school students. Overall, the students' responses were extremely positive. The students said the course was interesting, and they learned a lot about nursing. Fifty-four percent of the students thought the course was easy to use. Students ranked the video clips, forums, and readings as their favorite parts of the e-Campus. Fifty-four percent stated they were very likely or somewhat likely to consider nursing as a career choice. Sixty-four percent of the students were extremely likely or very likely to recommend the e-Campus program to friends, and 37 percent reported somewhat likely.

LESSONS LEARNED

There is strong and significant interest among the Native population for health career pathways, and particularly for the nursing profession, that are rooted in cultural values of compassion, generosity, and helping others. Those pathways are never straight and clear, but with adequate resources, good information, and strong collaborations, successful student outcomes are accomplished. Sufficient and adequate resources to “follow” students throughout their respective pathways are essential, and although funding is the key, role models and mentoring are equally relevant.

The projects discussed reflect cross-cultural exchange that is mutually beneficial. For example, the Mt. Sinai medical students expressed how much they learned from living and working on a reservation and that it greatly contributed to their development as clinicians. Several have maintained relationships with the Dakota families they met and connected with while on the reservation. Likewise, the Native students enrolled in the various courses and programs were willing to share their experiences and engage in discussions about their culture with faculty and students.

Knowledge and understanding of “public or community health”—what it means, how it impacts the individual, and what can be done to change or improve health statistics—was expanded and enhanced via the various courses and activities.

While trying to establish a data set, the ratios of American Indian nurses to population in urban, rural, and frontier counties could not be studied because of the small numbers, which is a continuing issue for American Indian/Alaska Native populations. American Indian/Alaska Natives in the United States are less than 1 percent of the country’s population, and therefore data and statistics are minimal. More recently there has been a much greater emphasis on these data sets by tribal leaders and communities to assure better representation that is based on actual numbers, and because of the small size of most Tribes, the use of trends analysis is more the norm. The projects described in this chapter showcase how partnerships help develop infrastructure where none existed. Finding community-based nurse researchers is a goal for many tribal communities.

Each of the projects that were part of this work included outcomes measures that were tracked and reported. Goals were set, progress was tracked, and results were quantified. In general, the desired outcomes were achieved at the project level. However, impact of the project over time remains unknown. The original project design did not include longitudinal tracking of participants that would have gathered additional information about future career choice and whether or not participation in the programs ultimately resulted in pursuit of a health care career or a course change in plans for the future. While we can measure specific outcomes, we cannot measure the impact that program participation had on individual lives over time.

Notes

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1. 2012, N = 11; 2013, N = 12; 2014, N = 19; 2015, N = 9.
2. 2012, N = 22; 2013, N = 21; 2014, N = 40; 2015, N = 48.
3. Males, N = 5; females, N = 13.
4. Education and Employment Hope (Self-Reliance) Assessment of High School Junior and Seniors on North Dakota American Indian Reservations reports can be viewed at https://www.ndsu.edu/nursing/fargo_people/loretta_heuer/ (accessed August 13, 2019).
5. 2012, N = 49; 2013, N = 62; 2014, N = 51; 2015, N = 55.
6. The videos are available at https://www.ndsu.edu/nursing/fargo_people/loretta_heuer/ (accessed August 13, 2019).
7. The trailer for *The Essence of Healing* is available at <https://www.youtube.com/watch?v=qfO0KwOAE9s> (accessed August 13, 2019).

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