The Caring for Our Own Program

A Model for American Indian and Alaska Native Nursing Students to Practice, Manage, and Lead in Indian Country

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ABSTRACT

Background: Research has identified workforce diversification as influential in improving health outcomes. The Caring for Our Own Program (CO-OP) set out to achieve classroom and workforce parity for rural Native American nurses and communities.

Purpose: In this study, we report quantitative results of the first 20 years of the CO-OP and explore the extent to which the CO-OP model influenced degree completion for Native American students.

Approach: The CO-OP employs a 4-pillar program model where sense of place, financial security, academic readiness, and social connection empower students as they progress. One hundred twenty-one Native American students have earned nursing degrees since inception. In addition, more than 10% of CO-OP undergraduates have returned to become nurse practitioners.

Conclusions: The CO-OP model replicated elsewhere may also succeed by adapting key concepts in that context to achieve health equity.

Keywords: cultural diversity, health workforce, holistic admissions, Native Americans, nursing education

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Health care workforce research has identified racial concordance as an influential factor in improving health outcomes and may help reduce health status disparities. Montana’s American Indian (AI) communities are vital to the economy; yet, rural isolation is often accompanied by increased poverty. Education and degree acquisition are 2 influential factors in attaining higher earnings and lower unemployment rates. In a national report, one-third of Montana AI families live below the federal poverty line compared with a quarter of Native American (NA) families nationwide.

Education and health disparities in the United States have disproportionately affected educational attainment and career opportunities for AI/AN populations. In addition, AI/AN students comprise less than 1% of American college and university student population.

NA groups also earned less than all other racial groups with comparable educational levels. Analysis of US labor force data for the 2016-2018 period found that AI/AN groups have a higher unemployment rate when living in an AI/AN area than when living elsewhere, suggesting that special attention to pairing AI/AN students with skills in high demand in AI/AN areas could address the workforce participation rate and health status disparities.

According to the Montana Department of Health and Human Services, community assessments reveal an overall shortage of baccalaureate and graduate-prepared registered nurses (RNs) and a critical shortage of AI/AN health professionals who can provide culturally competent care to a large and growing number of AI/AN people living on, or near, rural reservations.

Existing health disparities between Montana’s AI/AN population and the rest of Montana pose an urgent need for more qualified AI/AN nurses with bachelor’s, master’s,
and doctoral degrees. Recent data from the National Center for Health Workforce indicate that 0.4% of RNs in the United States identify themselves as AI/AN. The advantages of a degree in nursing are even more evident now as the US Bureau of Labor Statistics predicts sharpened growth over the next 20 years in health care fields.

At Montana State University (MSU), the College of Nursing’s (CON’s) Caring for Our Own Program (CO-OP) has responded to the demonstrated need to work with AI/AN students to complete 4-year degrees toward classroom parity and workforce concordance. The CO-OP has held a long-range vision to achieve health equity for AI/AN populations. CO-OP’s enhanced curriculum has provided financial, social, and academic readiness for more than 2 decades. The program demonstrates success in the number of AI/AN students who continue to graduate from the program each year and in the alumni, who return for graduate-level education. A primary outcome of the program is for CO-OP graduates to deliver culturally responsive health care services to AI/AN people in remote, rural settings, and, to a lesser degree, urban areas with high numbers of AI/AN populations. More importantly, CO-OP’s insistence on growing qualified AI nurses who can meet the health care needs of AI/AN populations through better access to culturally responsive, clinically excellent AI/AN health care providers is especially salient, given the impact of COVID-19 on AI communities.

Overall NA representation in health care disciplines remains among the lowest of any ethnic or cultural group. The reasons behind these trends are, undoubtedly, complex. However, there is evidence that a lack of congruence between the typically emphasized goals in nursing and the cultural and community values of many NA students contributes to low participation rates and limited persistence. Specifically, many students perceive a conflict between communal values, including the desire to “give back” to the community, and the individual achievement-oriented culture characteristic of nursing programs. The CO-OP, on the contrary, empowers students to personalize and reconcile the competing value systems between their home culture and public health and nursing cultures. Focused and intentional programming supported by this project helped students explore connections between academic engagement and cultural values. More than one-third (34%) of all degrees conferred at MSU were earned by AI/AN nursing students. CO-OP’s approach honors the deep community connections that Native students have while inspiring students to become engaged leaders in health care and increasing tribal communities’ capacity in rural primary health care.

Evidence of this claim is reported in this article with a 20-year longitudinal assessment of CO-OP student outcomes, including those who serve as leaders in health care, have returned to graduate school in nursing, or serve as clinical preceptors to the next generation of nursing students. Our goal was to describe program outcomes through longitudinal analysis of CO-OP recruitment, retention, and completion patterns.

The CO-OP Model

The processes and philosophy of the CO-OP depend on the 4-pillar program model, a heuristic that organizes some of the foundational components essential to CO-OP’s success and sustainability over time. Through the CO-OP, we strive to increase the enrollment and retention of AI/AN nursing students in the CON and build a strong pool of AI/AN nurses. The CO-OP is threaded throughout the prenursing and nursing curriculum for both traditional and accelerated baccalaureate students, master’s students, and doctoral nurse practitioner (NP) students. Students who elect to participate in the CO-OP are prepared for practice, management, and leadership to serve Indian Country, mainly through work in Tribal or Indian Health Service (IHS) facilities. The CO-OP thrives through the application of the 4-pillar program model where a sense of place, financial security, academic readiness, and social connection work in concert to empower AI/AN students as they become highly skilled leaders in the nursing profession and to improve the quality of health care within Native communities (see Supplemental Digital Content, Figure, available at: http://links.lww.com/NE/B85).

Sense of Place

On-campus, fostering peer, mentor, and institution-wide relations promotes early engagement and social connection that persists across the student’s life cycle. Once students accept their placement in the CO-OP, staff organize ceremonial events and gatherings to offer social support and build professional learning communities among students. As CO-OP students transition from prerequisite coursework into the nursing curriculum, their academic nurse mentors, advisors, and faculty play vital roles in facilitating student success and pairing students with tailored resources. CONs can gather much from how tribal colleges and universities in Montana instill a home away from home, family-oriented, and welcoming academic environment. Students may feel less isolated and share their challenges if they have spaces available in multiple places on campus such as the CO-OP student center and the American Indian Student Services Office in the Native American Studies Department. Family presence can be a source of support and difficulty for AI students. Sometimes, educational pursuits are viewed with distrust by family, although attaining a higher education may also benefit the family system over time. Scholars suggest that programs involve family members, given the importance of family involvement to AI/AN students’ persistence. Furthermore, the CO-OP model has developed flexible policies around time to degree and reviews unexpected departures independently, such as death(s) in their community or family. This
Financial Security
Poverty and lack of financial capital are barriers that directly impact the potential for AI/AN students to succeed in school.\textsuperscript{18,20} Currently, 66\% of the AI/AN nursing students in the CO-OP are economically and educationally disadvantaged, as defined by the Department of Education. In addition, 90\% have unmet financial needs as determined by financial aid data. These factors are what drive the federally allowable award amount. While not all CO-OP members receive financial support, most receive some aid. MSU estimates the minimum cost of attendance for 1 year to be $23,128 for resident undergraduate tuition, fees, room, board, books and supplies, and personal transportation. It is not surprising that without financial assistance, staff support, and other assistance made possible by programs such as CO-OP, few AI/AN students could consider a university education in nursing.

The CO-OP operates on an annual budget of $1.3 million, comprising public (90\%) and private (10\%) grants. The successful use of the public dollars awarded through foundational funding from the IHS and Health Resources and Services Administration has increased the visibility of the CO-OP and sparked investment from the private sector. The CO-OP allocation of funds is 75\% on students (scholarships, tutoring, NCLEX-preparation, enrichment) and 25\% on operations (staff, travel, and supplies). The public-private partnership is critical to program and student success as funds for student emergencies, hospitality, cultural gifts, and honoring ceremonies are fundamental to the identity of the CO-OP, yet cannot be purchased with public dollars.

Academic Readiness
A barrier that affects the competitiveness of potential AI/AN nursing students is in the quality of basic preparation offered in reservation and near-reservation schools. The Montana Office of Public Instruction data reveal a consistently large achievement gap on criterion referenced tests between White students and AI/AN students in reading, mathematics, and sciences. For example, AI/AN students consistently scored 22\% to 25\% below White students on reading proficiency.

In response to this barrier, the CO-OP takes a comprehensive approach to academic readiness, support, and enrichment. For example, a key component of the CO-OP is Health Occupations Pathways in Excellence (HOPE) Week. An intensive week of onboarding and a critical foundation for success, all CO-OP students and staff must attend HOPE Week before each semester begins. Students have exposure to college laboratory settings and sample patient scenarios. Students review mathematics principles and begin to exercise an academic growth mindset before the semester begins. Prominent AI speakers address students during HOPE Week, providing inspiration and connection with role models. HOPE Week also begins training with topics including wellness, educational persistence, cultural confidence, historical trauma, communication, and conflict resolution.

While HOPE Week is a bridge to the start of each semester, other academic supports are ongoing. For example, CO-OP students benefit from expert advising and tailored mentoring throughout the year with their academic nurse mentor. While most nursing students have access to professional advising staff, CO-OP nursing students work with CON faculty who are assigned workload for fulfilling the mentorship role. Academic nurse mentors start their CO-OP students out on mandatory weekly check-ins (30 minutes) and mandatory tutoring (minimum 2 hours). Students may graduate from these services once their academic nurse mentors approve; however, students typically enjoy the structure and do not opt out. Another example comes from developmental advising practices. For example, a student with poor mathematics skills may start with a foundational mathematics course offered through our 2-year partner institution, Gallatin College, before matriculating into the nursing prerequisite mathematics course. Similarly, the CO-OP has innovated around offering nursing courses during the 6-week interim “Snowmester” and summer to distribute the academic requirements throughout the year, creating a less burdensome credit load during any given semester.

Social Connection
NA centers and student groups have been identified as determinants of AI/AN students’ success in higher education in several studies.\textsuperscript{15-18,22} Access to social activities on campus supportive of cultural identity improves retention rates of AI/AN students.\textsuperscript{16-21,23} Cultural connections help students adapt to the academic environment and promote engagement and institutional commitment. The CON MSU also strategically gathers CO-OP AI/AN alumni to build students’ professional networks early and over time. Relationships with the director, academic nurse mentors, advisor, and program coordinator offer needed emotional supports, academic grounding, and disciplinary foundation.

The CO-OP provides developmentally focused programs throughout the academic year. Programs may include in-depth experiential workshops on topics such as Indigenous wellness and handling racism in the clinical setting with experts from the AI/AN community. During the semester, weekly activities reinforce the social connections students make with each other and with faculty.
and staff. Open-study hours provide time with academic nurse mentors and tutors. These opportunities are offered weekly with light snacks and studying, and socializing occurs between students across levels. Optional attendance at important cultural events, speakers, films, and sporting events is another opportunity to strengthen student engagement with the university and each other.

Staffing the 4-pillar model depends on consistent personnel with delineated roles and responsibilities. Over time, the most suitable time and effort for personnel hired is a 3.0 full-time equivalent (FTE) model. Ideally, that includes a director (0.3 FTE), program manager (1.0 FTE), recruitment/retention officer (0.5 FTE), academic advisor (0.1 FTE), and a lead academic nurse mentor (0.5 FTE). The director and academic nurse mentors are faculty members. The lead academic nurse mentor supervises academic nurse mentors on all 5 geographically distributed campuses for a combined effort of 0.75 FTE. The focused and complementary roles of each team member in the CO-OP operation are essential to achieving the short- and long-term goals of the CO-OP.

Results
Total program enrollment from 1998 to 2021 was 343 students (n = 30; 8.7% male), with 55 (16.0%) currently enrolled and making progress toward degree completion. The May 2021 graduation ceremony was used as the cutoff date for this article and marked the conferment of 121 degrees for AI/AN students since the program’s inception in August 1998. The distribution of degrees included 110 bachelor’s (104 traditional, 6 accelerated) and 11 graduate degrees (5 master’s, 6 doctor of nursing practice). The state licensure rate (n = 99/110; 90.8%) reflects active and unencumbered RN licenses. The pass rate for NP certification is 100%.

The 343 students admitted to the CO-OP represent 47 different tribal affiliations (see Supplemental Digital Content, Table, available at: http://links.lww.com/NE/B86). Students from the 8 federally recognized Tribal Nations of Montana represent most of our students. The overall student retention rate is 50.1% (172/343). This rate may be an underestimate as many students leave the university only to resume their studies later. Alternatively, it may be an overestimate as it includes currently enrolled students with unknown outcomes. The program-specific retention rates are traditional nursing (n = 104/138; 75.8%), accelerated undergraduate (n = 13/14; 92.85%), and graduate nursing (n = 18/22; 81.81%). Of the 38 students who did not complete their bachelor of science in nursing degree, 29 completed other degrees (76.32%) within the university system (Table).

All CO-OP students are either enrolled tribal members or direct descendants. CO-OP students who are enrolled members of their tribes can apply for the IHS Scholarship. Half of the students are enrolled members (n = 97/183; 53.2%), and the others are direct descendants. Almost half of the eligible CO-OP students elected to receive the IHS Scholarship (n = 88/183; 48.09%) and completed a 2-year service obligation by living and working in AI/AN communities after graduation.

We explored several hypotheses regarding academic predictors of success. All students admitted into nursing have a minimum grade point average (GPA) of 3.0. Cumulative GPA at graduation ranges from 2.12 to 4.00 (M = 3.16, SD = 0.39). Also, Montana high school students take the American College Testing (ACT) test in their junior year, which explains the high rate of reported scores, although standardized test scores are not required for admission (n = 153; M = 19.10, SD = 3.74; range, 12-31). Composite ACT score was not a significant predictor of program completion.

The Table reports results exploring academic predictors of success in completing an undergraduate nursing degree. In an independent-samples t test, there was a significant difference in completion of the traditional baccalaureate nursing program for students (n = 104) who completed more of their 42 prerequisite credits at MSU (M = 19.04, SD = 17.06) compared with students (n = 36) who completed more of these credits (M = 6.82, SD = 11.78) at 2-year or 4-year transfer institutions within the Montana University System (range, 0-42 credits). This finding suggests that at least 1 semester of prenursing is advisable to acclimate to the university with the caveat that 31 students who transferred directly from a 2-year institution completed no prerequisite courses at the 4-year institution and completed their nursing degree. A point of discussion is the many CO-OP prenursing students who changed majors and

| Table. Independent-Samples t Tests Comparing BSN Graduates With Nongraduates |
|-----------------------------------------------|-----------------------------------------------|
| Completed BSN | Did Not Complete BSN |   |   |   |   |   |
| n   | M (SD) | n   | M (SD) | F | P | t (df) | 95% CI |
|-----------------------------------------------|-----------------------------------------------|
| Fraction of prerequisite credits completed at parent campus | 104 | 19.04 (17.06) | 34 | 6.82 (11.78) | 32.8 | <.001 | 3.88 (136) | 5.99 to 18.44 |
| Composite ACT score | 34 | 20.26 (4.77) | 11 | 18.36 (4.43) | 0.77 | .386 | 1.17 (43) | −1.38 to 5.18 |
| Student age | 103 | 26.37 (7.60) | 38 | 30.96 (10.30) | 9.15 | .003 | −2.88 (139) | −8.27 to −0.923 |

Abbreviations: ACT, American College Testing; BSN, bachelor of science in nursing.
were awarded associate, undergraduate, and graduate degrees (n = 30; 21.9%) in other disciplines (eg, history, community health, pre-veterinary). It is a different matter when students fail to progress (n = 38) after accepting placement in upper-division nursing. Results of a t-test analysis demonstrated that composite ACT score was not a helpful predictor of success with the caveat that the analysis was limited to less than half of the sample for whom composite ACT scores were available. A lami-
table statistic is that 6 former CO-OP students have died (1.74%) since the program began—a rate of loss nearly 4 times the national rate for all AI/AN people aged 25 to 44 years. A second independent-samples t-test result demonstrated that completing more of the prerequisite credits at the parent institution significantly predicted program completion, and a third t-test result showed that younger age at entry into the CO-OP significantly predicted program completion.

Implications for Policy and Practice
The most salient finding of the 20-year retrospective analysis of the CO-OP is this long-standing program’s impact on workforce diversity in Indian country, in that 86% of the RN graduates of the CO-OP work in and around reservation communities. Ongoing communications and contact with CO-OP alumni have helped us identify and quantify many positive outcomes, including a high rate of employment in their local communities, the return of many students to graduate school either at MSU or other institutions, promotion to roles in nursing leadership, and a high likelihood to serve as a clinical preceptor.

In consideration of these findings, we have redoubled our efforts to focus on recruiting students to the univer-
sity to optimize their access to program supports and reduce the gap in years between high school and college. It is important to note that 31 RN CO-OP alumni transferred directly into the nursing major at the parent institution from their tribal college. Outright preference at admission for students who come to campus for prenursing coursework has potentially harmful financial and lifestyle implications for prospective transfer students who may bring important aspects of diversity to the nursing classroom if admitted. Instead, we recom-
mend that admission committees consider this metric alongside other experiences, attributes, and academic performance to reach admission decision.

Innovations around holistic admissions and policies for student success are essential to the diversity goals the CO-OP plans to achieve in the next 20 years. For example, the CON recently adopted a policy that a student automatically has a second attempt after failing a course. Previously, a course failure early in the nursing curriculum would result in program failure and the requirement to reapply for nursing admission. With this policy change, students can now repeat a course and resume their program of study in the following semester. To accommodate this student-centered approach, faculty now teach flexible cohort sizes and provide instruction to clinical groups ranging from 8 to 10 students as needs dictate.

The second example of innovation is allowing stu-
dents in the accelerated program to transition into the traditional program if the pace of the accelerated pro-
gram is unmanageable. A third example is flexibility in cross-enrollment between the accelerated and tradition-
al programs when circumstances align. If a student needs to repeat a course, they can take that course in either program to limit their time out of school and hasten their time to degree completion. With refine-
ments to the holistic admission process and continued innovations in the delivery of the nursing curriculum, nursing programs can address high rates of attrition by creating flexible admissions policies, allowing cross-
enrollment, encouraging flexibility in student cohort sizes, and tailoring alternative programs of study for students who need to take fewer credits per semester to be successful.

While available research provides evidence that the literature on AI/AN students is expanding, it is also clear that we need more empirical research that examines the structures, policies, and practices and how these influence AI/AN students’ access and success.18-21,23-25 A growing body of literature suggests workforce diversification is critical to improving health care in the United States in 2 ways.26,25 First, increasing the number of AI/ AN nurses may help address provider shortages in rural and remote areas and is a recommended strategy for implementing high-quality primary care.4 Second, the presence of an AI/AN workforce is critical in addressing both chronic health disparities and community cri-
es such as the COVID-19 pandemic. Increasing racial concordance in patient-clinical encounters at all health care system levels shows promise in addressing health disparities.27 The CO-OP and the CON look forward to another 20 years working with strategic partners to con-
tinue removing the impediments to student success and academic achievement toward a goal of health equity and high-quality care in every community.

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TEACHING TIP

Soundtrack to My Symptoms

In this activity, students are prompted to describe the key nursing care components of the conditions they are learning about in class through connections to music. Each student is assigned one condition and finds songs to describe 3 of 5 topics: assessment, interventions, patient teaching, safety, and nursing considerations. The connection between nursing concepts and lyrics does not have to be exact. Students are encouraged to take creative license and show the group how even seemingly loose connections can illustrate the concepts. Students are encouraged to use songs they already know, concepts and lyrics does not have to be exact. Students are encouraged to take creative license and show the group how everlong by the Foo Fighters might be selected to describe teaching a patient to fully exhale before using an inhaler treatment. This activity helps students create memory links to nursing knowledge and some old favorite songs or new finds. The instructor (or an ambitious student!) may volunteer to make a playlist of the songs on YouTube or Spotify so that class members may listen to the picks as they study the unit topics.

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