



Barriers and Opportunities for Promoting Health Professions Careers Among African Americans, Latinxs, and Native Americans in Nebraska

Research Team



Back Row Left to Right: Paul Estabrooks, PhD, Harold M. Maurer Distinguished Chair, Professor, Department of Health Promotion; Armando De Alba Rosales, MD, MPH; Patrik Johansson, MD, MPH (Elson S. Floyd College of Medicine, Washington State University); Matt Anderson; and Echohawk Lefthand, MPH.

Front Row Left to Right: Sonja Tutsch, MPH, BSED; Tatiana Tchouankam, MPH; Melissa Leon, MPH; Regina Idoate, PhD; Keyonna King, DrPH, MA.
Not pictured: Aislinn Rookwood, MPH; Daniel J. Schober, PhD, MPH (DePaul University); Ron Shope, PhD; Elizabeth Lyden, MS.

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CONTACT INFORMATION

Paul A. Estabrooks, PhD
984365 Nebraska Medical Center
Omaha, NE 68198-4365

402-559-4325 | paul.estabrooks@unmc.edu

DEDICATION

We dedicate this report to the trailblazing African American, Latinx, and Native American health professionals on whose shoulders we stand. Their efforts and sacrifices allowed us to do this critical work to promote the presence of underrepresented minorities in health professions in Nebraska in 2021 and beyond.

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Introduction

African Americans, Latinxs, and Native Americans are underrepresented in the Nebraska health professions workforce and in the student faculty bodies at the University of Nebraska Medical Center (UNMC). In Nebraska and across our nation, these populations experience health disparities in comparison to non-Hispanic Whites (Whites). According to the National Academies of Sciences, Engineering, and Medicine: Division of Health and Medicine (formerly known as the Institute of Medicine), increasing the proportion of underrepresented minority health professionals can improve the health disparities experienced by these populations.¹

The purpose of our study was to:

Examine reasons that help explain the lack of underrepresented minority health professionals in Nebraska.

The primary research question was:

How can leaders in the education system work towards improving the representation of underrepresented minorities in health professions programs in Nebraska?

WHO ARE UNDERREPRESENTED MINORITIES (URMs)?

The traditional definition of URMs typically focuses on U.S.-born Americans of African descent, Latinxs raised within the continental U.S., Native Americans, Native Hawaiians, and other Pacific Islander Americans.² For generations, URM populations have experienced legacies of oppression and discrimination. Historically, they have been barred from access to and/or full participation in higher education. These factors contribute

to their designation as underrepresented groups.³ URM groups have been identified by the U.S. Department of Education,⁴ the National Science Foundation,⁵ and the National Institutes of Health⁶ as populations that continue to have limited participation at the graduate and faculty levels in higher education. The original list of URMs usually reflects those persons born in the U.S. that suffered bias owing to skin color or ethnicity through their life course. The bias occurred early enough in their upbringing that it influenced their self-perceptions and external biases from others, whether institutional or not.¹

UNMC defines URMs as the following populations:

- Black, not Hispanic
- Hispanic
- American Indian/Alaska Native
- Native Hawaiian/Pacific Islander
- Two or more races⁷

Our study focused on African Americans, Latinxs, and Native Americans, as our study design required a larger number of participants than we could identify among Native Hawaiian/Pacific Islander populations in Nebraska.

URMs in Nebraska and Health Disparities

In Nebraska, African Americans, Latinxs, and Native Americans experience health disparities in comparison to Whites. For example:

- African Americans are 9-times more likely to have HIV/AIDS in comparison to Whites.
- The infant mortality rate among African Americans is 2.4-times that of White Nebraskans.
- Latinxs are 1.5-times more likely to be obese and 1.4-times more likely to die from diabetes in comparison to Whites.
- Native Americans are 4.4-times more likely to die from diabetes in comparison to Whites.⁸

Six zip codes in rural Nebraska located on or adjacent to Native American reservations in the northeast part of the state rank in the top seven for lowest life expectancy. The zip code with the lowest life expectancy is in Douglas County.⁹ The life expectancy in this zip code in northeast Omaha is 71.3 years.¹⁰ In this zip code, 70.3% of the residents are Black.¹¹ In contrast, the longest life expectancy is 90.4 years amongst residents living in a zip code where the population is 89.6% White.^{8,10,12}

According to the Centers for Disease Control and Prevention, data from May 2020 suggest that racial and ethnic minority groups experience health disparities manifested as a disproportionate burden and death from COVID-19 in comparison to Whites.¹³

Figure 1: Nebraska Life Expectancy Mapping by Zip Code

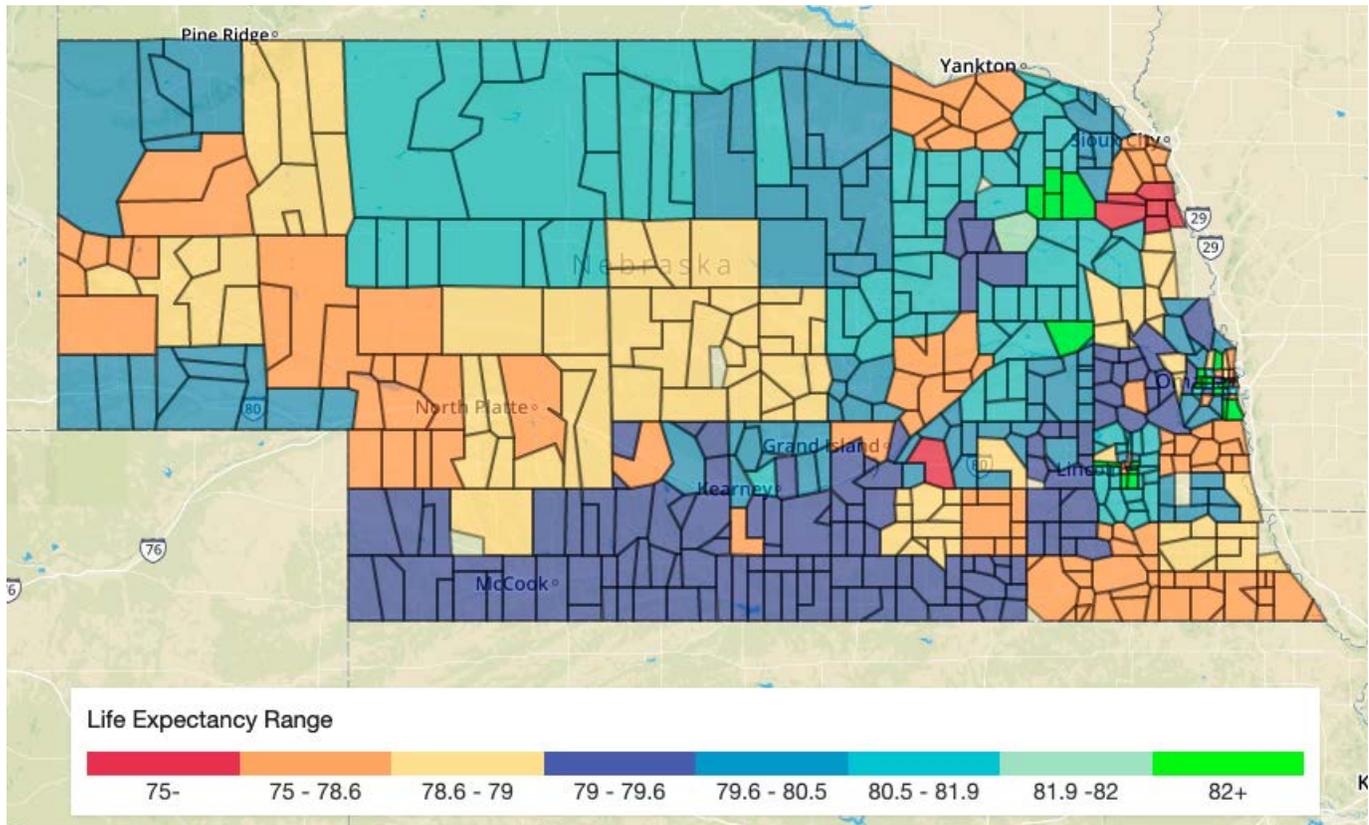
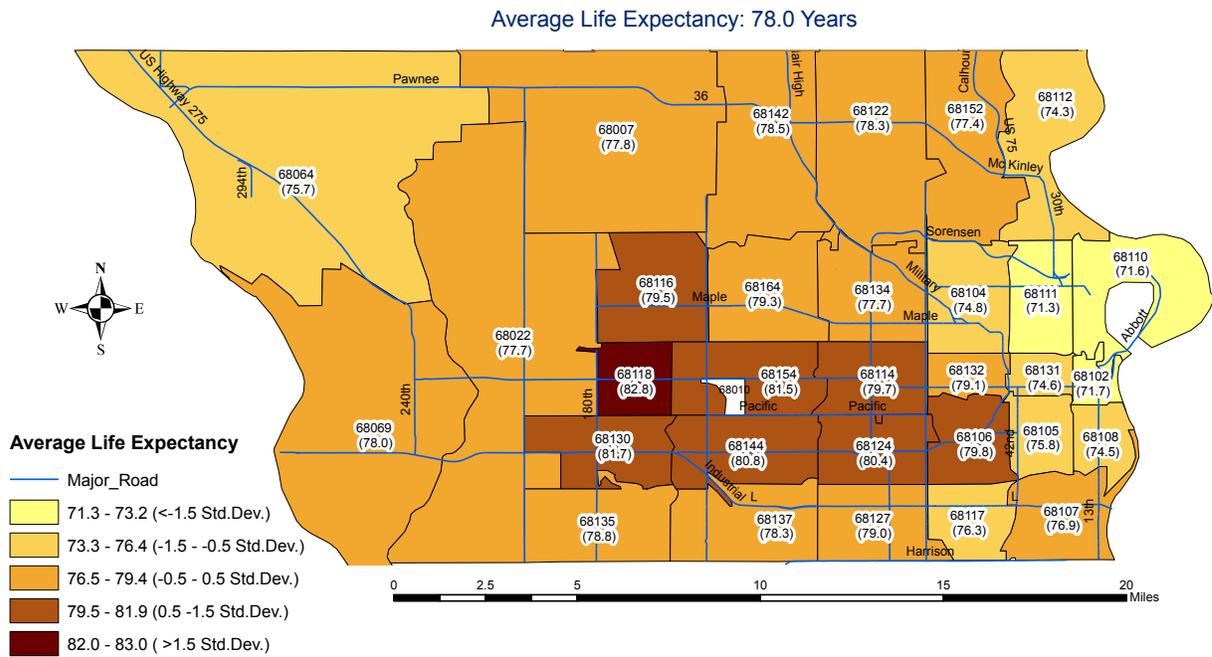


Figure 2: Average Douglas County Life Expectancy Mapping Zip Code (2012 – 2016)



Zip Code 68010 (Boys Town) was excluded due to small numbers
Reference Population: 2010 Census

Douglas County Health Department
3/2/2018

The Role of URM Health Professionals in Addressing Health Disparities

The National Academies of Sciences, Engineering, and Medicine: Division of Health and Medicine calls for an increase in the proportion of U.S. URMs in the health professions pipeline. This will help to address health professions' shortages in medically underserved and minority communities, and address health disparities.¹ The organization cites the following reasons for this recommendation:

- Racial and ethnic minority health professionals are more likely than their non-minority colleagues to serve in minority and medically underserved communities.¹⁴
- Racial concordance of patient and health professional is associated with greater patient participation in care processes, higher patient satisfaction, and greater adherence to treatment.¹⁵

Other reasons cited for the need to increase the proportion of URMs to address health disparities include the following:

- A facilitator to health research participation of URMs includes having research staff representative of participants' racial/ethnic group.¹⁶
- Racial and ethnic diversity among health professions students and faculty can help ensure that students will develop the cultural competencies necessary for treating patients in an increasingly diverse nation.¹⁷
- Healthcare professionals from minority and underserved communities may be better poised to tailor preventive health and primary care programs and services to minority populations, thereby reducing associated costs.¹

University of Nebraska Medical Center's Diversity Goals 2011 – 2021

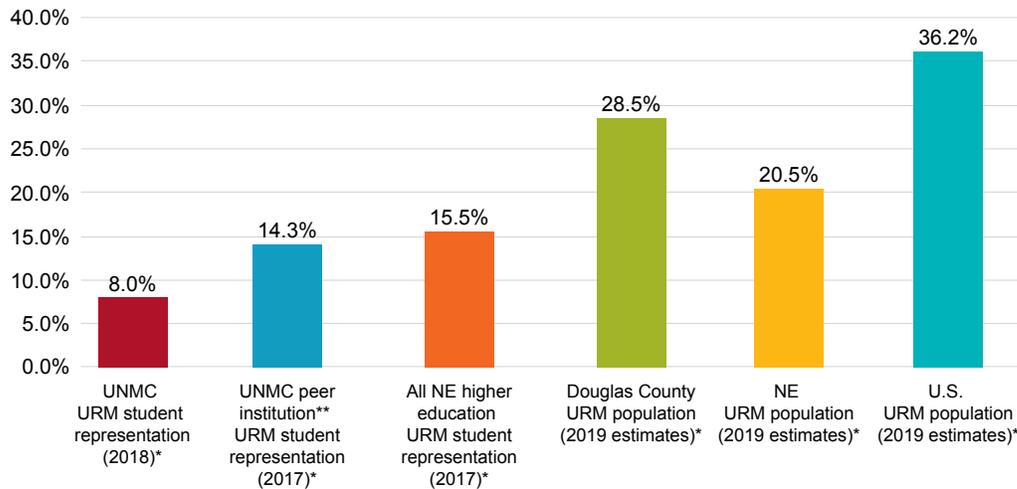
UNMC's 2011 – 2014 strategic plan included one goal to address diversity: Create a culturally competent organization. This goal was further defined as the intention to "Improve recruitment and retention of underrepresented faculty, staff, and students, and document successful methods."¹⁸

The UNMC 2020 – 2021 UNePlan Goal and Strategy Review's statement on "Diversity, Equity, and Inclusivity" does not reference underrepresented populations and reads as follows, "Increase retention, recruitment, engagement, and mentorship of all faculty, students, and staff to enhance the diversity and inclusivity across all UNMC and Nebraska Medicine programs and sites."¹⁹

Table 1: Nebraska Population Estimates by Race and Hispanic Origin, July 1, 2019, U.S. Census Bureau

Race and Hispanic Origin	% of Nebraska's Population
American Indian and Alaska Native	1.5%
Black/African American	5.2%
Native Hawaiian and Other Pacific Islander, alone	0.1%
Two or More Races	2.3%
Hispanic/Latinx	11.4%
Total URM (UNMC URM definition ⁷)	20.5%
Asian	2.7%
White alone, Not Hispanic/Latinx	78.2%

Figure 3: Representations of URM in the University of Nebraska Medical Center Student Body



Sources:

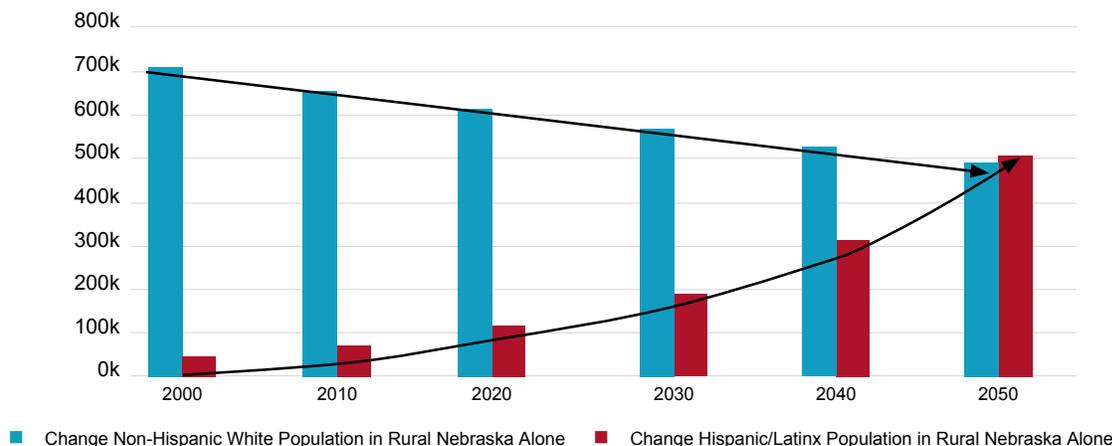
UNMC Planning Information and Quality Indicators – May 2019. Retrieved 8/20/20. <https://www.unmc.edu/aboutus/strategicplanning/piqi/2019piqi.pdf>

U.S. Census Bureau. QuickFacts United States. July 1, 2019. Retrieved 8/20/2020. <https://www.census.gov/quickfacts/fact/table/US/PE120218>

*UNMC defines underrepresented minority according to the UNMC Planning Information and Quality Indicators as: Native Hawaiian and Pacific Islander, Black, Hispanic, Native American, and Two or More Races.

**UNMC peer institutions per LB 389 include: Univ. of Colorado Health Sciences Center, Univ. of Illinois-Chicago, Univ. of Iowa, Univ. of Kansas Medical Center, Univ. of Kentucky, Univ. of Minnesota-Twin Cities, Ohio State Univ., Univ. of Oklahoma Health Sciences Center, Univ. of Tennessee-Memphis.

Figure 4: Rural Nebraska Projected Population Change 2000 – 2050 Non-Hispanic White and Hispanic/Latinx



LATINX REPRESENTATION AMONG RURAL NEBRASKA PRIMARY CARE PROVIDERS

Using the UNMC guaranteed admissions programs' definition for rural, UNMC Health Professions Tracking data indicate that in 2018:

- Only 1.6% (15/970) of rural Nebraska primary care providers (MD, DO, NP, PA) identified themselves as Latinx.

UNDERREPRESENTATION OF AFRICAN AMERICANS AND NATIVE AMERICANS IN NEBRASKA'S PRIMARY CARE WORKFORCE

The UNMC Health Professions Tracking Service reports that African Americans and Native Americans are also underrepresented in the Nebraska health professions workforce, representing 5.1% and 1.5%, respectively, of the state's population, but only 1.3% and 0.3% of the primary care workforce (Marlene Deras, Manager, Health Professions Tracking Service, University of Nebraska Medical Center, email communication, March 2019).

REPRESENTATION OF URMS IN NEBRASKA GUARANTEED ADMISSIONS PROGRAMS

In light of the racial and ethnic health disparities present in Nebraska, our review of health professions education programs focused on those that required Nebraska residency and which were designed to increase the number of health care providers practicing in rural and urban medically underserved and health professions shortage areas. The UNMC guaranteed admissions programs met these criteria.

Since 1992 there have been three health professions guaranteed admissions programs focusing on URM students at UNMC in partnership with undergraduate institutions in the Nebraska University system: 1) the Multicultural Vantage Program (MVP, 1992-end date not identified),²⁰ 2) the Nebraska University Preadmission to Health Science (NU PATHS, 2001-2011/'12),^{21,22} and 3) the Urban Health Opportunities Program (UHOP, 2016-present).²³ Outcome data with regard to the number of alumni by race, ethnicity, or practice location have not been systematically collected for the MVP or NU-PATHS programs (Channing Bunch, Director of Recruitment and Student Engagement, University of Nebraska Medical Center, verbal communication, Sept. 2018). The UHOP will theoretically not produce any alumni until 2024. UNMC rural guaranteed admission programs have been in continuous operation since 1991 and have grown from the original partnership between two UNMC colleges (Medicine and Dentistry) and Chadron State College to encompass partnerships between four rural undergraduate institutions and all six UNMC colleges to now include ten disciplines. These programs include the Rural Health Opportunities Program (RHOP), the Kearney Health Opportunities Program (KHOP), and the Public Health Early Admission Student Track (PHEAST).^{24,25,26}

Among 600 alumni of rural guaranteed admissions programs:

- 9 identified their ethnicity as Latinx (1.5%)
- 552 identified their race
 - » 98.6% identified their race as White
 - » 1.4% identified their race as either Native American, 2+ Races, Asian, or Other
 - » 0.0% identified as Black/African American

In order to preserve the anonymity of participants for racial and ethnic groups with less than five alumni, we state "<5" rather than the actual number of alumni in the table. There are limitations with presenting data that only consider the number of health professions graduates. This approach does not capture non-graduating students who matriculated into a health professions program.

Table 2: Outcomes – Number of UNMC Alumni by Race and Ethnicity in Guaranteed Health Professions Admissions Programs that have Focused on Rural and Underrepresented Students*

Race	RHOP '91-2018	KHOP '10-'18	PHEAST '11-'18	MVP '92-	NU-Paths '01-'12	UHOP '16-present**
Black/African American	0	0	0			
AI/AN	<5	0	0			
NH/PI	0	0	0			
2+ Races	<5	0	0			
Asian	<5	0	0			
White	521	21	<5			
Total number who identified their race		552				
Unknown/No response		48				
Total sample		600				
Total Hispanic ethnicity		9				

Table 3: Disciplines Presently Represented in Guaranteed Admissions Programs Serving Rural and Underrepresented Urban Students

Discipline	RHOP	KHOP	PHEAST	UHOP
Dental Hygiene	X	X		
Dentistry	X	X		
Medical Lab Science	X	X		
Medicine	X	X		X
Nursing	X	X		
Pharmacy	X	X		
Physical Therapy	X	X		
Physician Assistant	X	X		
Public Health			X	
Radiography	X	X		

Health Professions Tracking Service, University of Nebraska Medical Center, email communication, Sept. 2018.
**UHOP will not produce any alumni until 2024.

URM Faculty

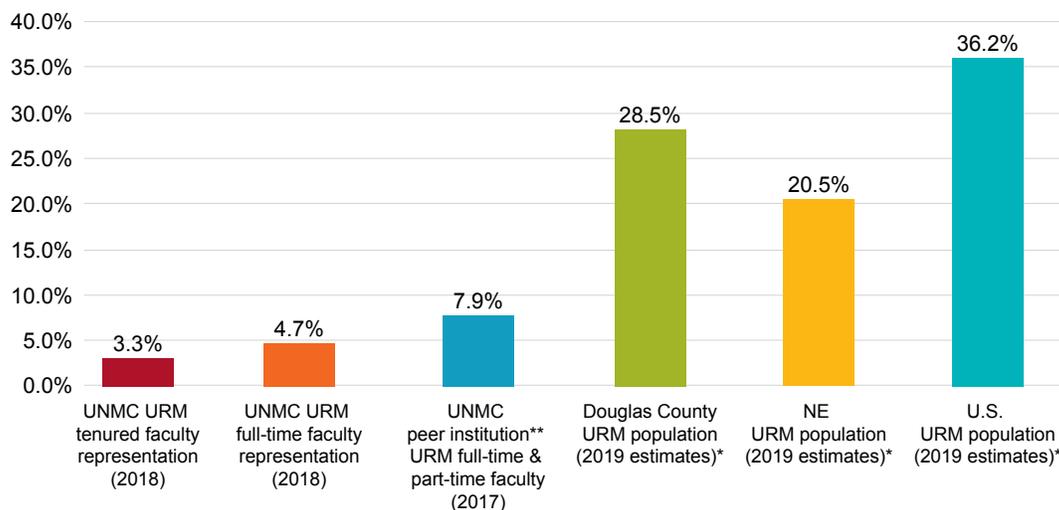
HOW CAN HAVING A DIVERSE FACULTY INFLUENCE STUDENT RECRUITMENT?

The recruitment and maintenance of diverse faculty represents an essential component in developing diversity throughout an institution. A diverse faculty can facilitate the recruitment and retention of URM students. In addition, a diverse faculty plays a key role in the students' education, training, and mentoring, and can promote an environment conducive to development and advancement. One of the most effective methods for retaining URM faculty is the implementation of mentoring and support systems.^{27,28}

THE NEBRASKA TOBACCO SETTLEMENT BIOMEDICAL RESEARCH FUND AND URM FACULTY

In 2001, Nebraska Legislative Bill 692 created the Nebraska Tobacco Settlement Biomedical Research Fund.²⁹ UNMC has been a recipient of these funds since this time. During 2017 – 18, UNMC received \$8,093,534 in Nebraska Tobacco Settlement Funds of which 27.8% (\$2,246,678) of the total award focused on recruiting URM faculty, research focused on reducing healthcare disparities, and mentorship and development of trainees and faculty from URM or other disadvantaged backgrounds.³⁰ UNMC also provides the Faculty Diversity Fund, which represents a tangible commitment to achieving diversity goals and is targeted toward the recruitment and retention of underrepresented faculty in all academic units on UNMC's campus.³¹

Figure 5: Representation of URM Faculty at the University of Nebraska Medical Center³²



Sources:

Office of Institutional Research, University of Nebraska Medical Center Fact Book, Faculty by Tenure, Ethnicity, and Gender: 2016. Retrieved from: https://www.unmc.edu/academicaffairs/institutional/research/fact-book/UNMC_FactBook.pdf

UNMC Planning Information and Quality Indicators – May 2019. Retrieved 8/20/20. <https://www.unmc.edu/aboutus/strategicplanning/piqi/2019piqi.pdf>

United States Census Bureau. QuickFacts United States. July 1, 2019, Retrieved 8/20/2020. <https://www.census.gov/quickfacts/fact/table/US/PE120218>

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Table 4: Number of Tenured Faculty at UNMC (All Colleges Combined) by Race Ethnicity (2018)*

Race Ethnicity	UNMC Tenured Faculty (2018)	UNMC Faculty % Tenured by Race/Ethnicity (2018)	Douglas County % of the Pop. by Race/Ethnicity (2019 U.S. Census)	Nebraska % of the Pop. by Race/Ethnicity (2019 U.S. Census)
Black/African American	<5		11.5%	5.2%
American Indian/ Alaska Native	0	0	1.2%	1.5%
Hispanic/Latinx	<5		12.9%	11.4%
Native Hawaiian/ Pacific Islander	<5		0.1%	0.1%
Two or More Races	0	0	2.8%	2.3%
URM Total	8	3.3%	28.5%	20.5%
Asian	41	16.7%	4.3%	2.7%
White	196	80%	68.8%	78.2%
Total	245			

* Office of Institutional Research, University of Nebraska Medical Center Fact Book, Faculty by Tenure, Ethnicity, and Gender: 2018. Retrieved from: https://www.unmc.edu/academicaffairs/institutional/research/fact-book/UNMC_FactBook.pdf

NUMBER OF URM FACULTY WHO HAVE RECEIVED TENURE WHILE AT THE UNIVERSITY OF NEBRASKA MEDICAL CENTER SINCE 1980

UNMC has six colleges: Allied Health Professions, Dentistry, Medicine, Nursing, Pharmacy, and Public Health. Between 1980 and 2019, 434 faculty received tenure while at UNMC. Of these 434 faculty members, 8 (1.8%) were URMs (Linda Merriman, Coordinator, Academic Services, University of Nebraska Medical Center, email communication, Oct. 2018 and June 2019).

- African American/Black: <5
- Native American: 0
- Native Hawaiian/Other Pacific Islander: 0
- Two or more races: 0
- Latinx: 5

NUMBER OF URM FACULTY WITH TENURE AT THE UNIVERSITY OF NEBRASKA MEDICAL CENTER IN 2018³²

In 2018, there were 8 (3.3%) tenured URM faculty members out of a total of 245 tenured faculty members at UNMC (See Table 4). In order to preserve the anonymity of participants for racial and ethnic groups with less than 5 participants we state "<5" rather than the actual number of participants in the table. The URM total in Table 4 (N=8) includes the aggregate of the total number of URMs without identifying specific racial and ethnic populations with less than 5 individuals.

- Black/African American: <5*
- Native American: 0

- Native Hawaiian/Other Pacific Islander: <5
- Two or more races: 0
- Latinx: <5

URM FACULTY RECRUITMENT AND RETENTION

***NOTE:** The available tenured faculty data do not distinguish between U.S.-origin Blacks and immigrant-origin Blacks. In education and health-related research, U.S.-origin Blacks and immigrant-origin Blacks are often considered distinct populations due to differences in migration histories, culture, and socioeconomic status, which are important determinants of education and health.^{33,34,35} Therefore, studies should disaggregate data from African Americans, African Caribbeans, and African immigrants even though they may share the "African designation."³⁵

The UNMC Faculty Recruitment and Retention Committee is a standing committee of the UNMC Faculty Senate. The primary charge of this committee is to monitor and evaluate faculty recruitment and retention and report findings to the Senate and UNMC Chancellor each year. The *2018 UNMC Faculty Recruitment and Retention Committee Report* does not report recruitment or retention data by race or ethnicity.³⁶

Methods

The purpose of our study was to:

Examine and help explain the lack of underrepresented minority health professionals in Nebraska.

The primary research question was:

How can leaders in the education system work towards improving the representation of underrepresented minorities in health professions programs in Nebraska?

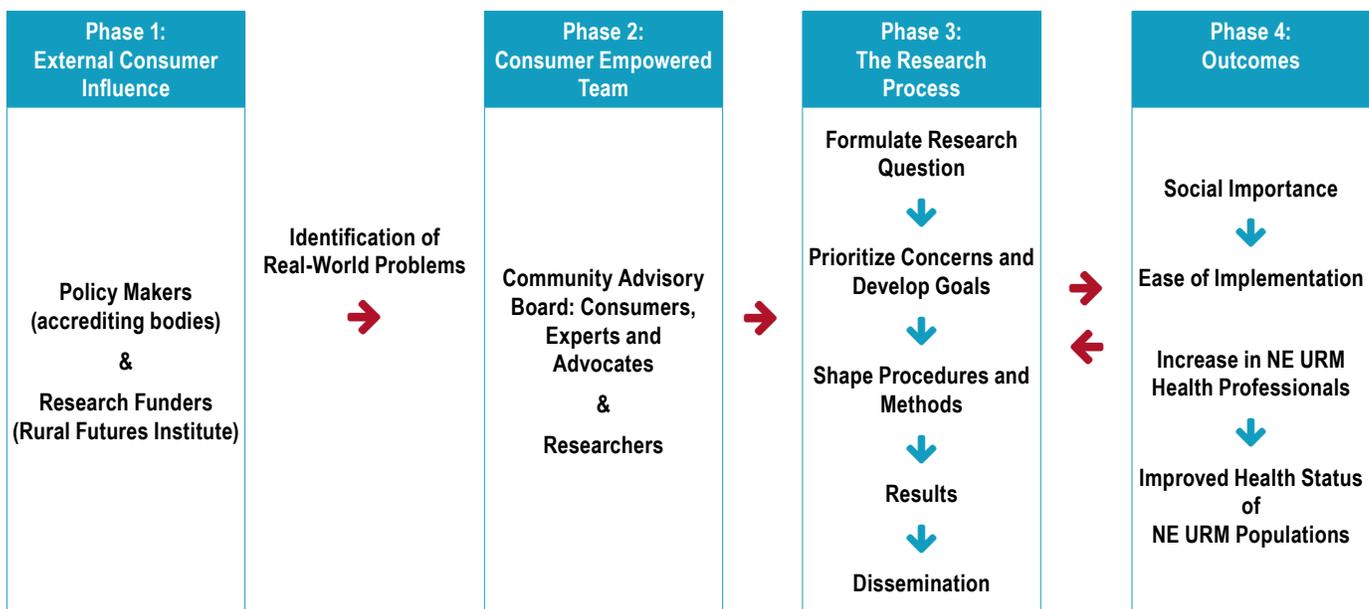
This qualitative study consisted of focus groups with African American, Latinx, and Native American high school, college, and health professions students enrolled in academic institutions (urban and rural) in the Midwest, in addition to one focus group with African American health professionals in the Midwest. Six academic institutions were a part of this study. Because the number of participants was small, we did not identify specific institutions where the research took place in order to protect anonymity of participants. We chose focus groups

as our method of knowledge generation, as participants with shared experiences or vested interest can provide in-depth perspectives on social norms, beliefs, values, and expectations.³⁷ Inclusion criteria were self-identified African-American, Latinx, and Native American individuals interested in health professions. We used the Office of Management and Budget's standards on race and ethnicity as a foundation for defining the three populations:³⁸

- Black or African American: A person having origins in any of the Black racial groups of Africa, with a focus on U.S.-born individuals.
- Native American: A person having origins in any of the original peoples of North America, affiliated with a U.S. federally recognized, state recognized, or self-recognized Tribe in which they may or may not be enrolled.
- Latinx: A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race.

We used a community-based participatory research (CBPR) approach with the help of a community advisory board in this study. CBPR seeks collaboration through equitable partnerships between community members, academic researchers, and practitioners in all phases

Figure 6:



Adapted from participatory action research process: White, GW, Nary, DE, & Froelich, AK (2001). Consumers as collaborators in research and action. *Journal of Prevention & Intervention in the Community*, 21(2), 15-34.

Schober, DJ, Sella, AC, Fernandez, C, Ferrel, C, & Yaroch, A. (2016). Participatory action research to develop nutrition education videos for child care providers: The omaha nutrition. *Pedagogy in Health Promotion*, 2(4), 244-250. doi:<https://doi.org/10.1177/2373379915627669>

of the work. Due to the engagement of local knowledge and expertise through community representation, CBPR benefits are viewed as including improved quality, validity, and relevance of the research to all parties.³⁹ Core principles of CBPR include promoting co-capacity building and co-learning between researchers and community, to ultimately foster action-oriented research and ensuing social change that address community priorities.⁴²

Community advisory boards (CAB) represent a well-recognized organizational structure for formalizing academic–community partnerships.⁴⁰ CAB members were identified based on their expertise in promoting health professions careers among URM. Based on the data presented in this report, CAB members along with members of the research team provided recommendations for promoting health professions careers described on pages 19-22 in this report.⁴¹

Based on a literature review, we identified barriers and challenges commonly experienced among URM youth in their pursuit of a career in the health professions. In the focus groups we asked participants to rank the five

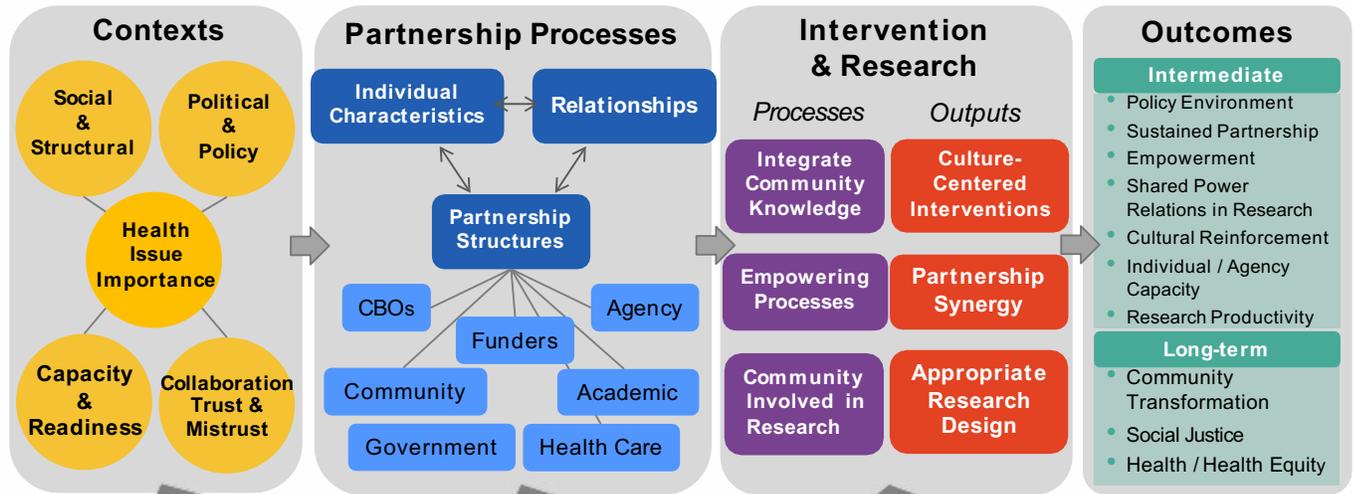
greatest barriers to URM pursuing health professions careers among the following listed:

- I have a difficult time connecting with someone who can help me enter a health profession (if you are in high school, this may be someone like a guidance counselor).
- I don't feel academically prepared to be in a health profession.
- I don't feel I am strong enough in math and science to be in a health profession.
- My grades are not good enough to be in a health profession.
- I do not feel like I belong with others who are seeking a health professions career.
- I face discrimination in my school which makes it difficult to pursue health professions education.
- I feel there are better jobs/careers out there.
- I don't think I could afford a health professions education.

Figure 7:

CBPR Conceptual Model

Adapted from Wallerstein et al, 2008 & Wallerstein and Duran, 2018, <https://cpr.unm.edu/research-projects/cbpr-project/cbpr-model.html>



Visual from amoshealth.org 2017

CONTEXTS	PARTNERSHIP PROCESS		INTERVENTION & RESEARCH	OUTCOMES
<ul style="list-style-type: none"> • Social-structural: Social-Economic Status, Place, History, Environment, Community Safety, Institutional Racism, Culture, Role of Education and Research Institutions • Political & Policy: National/Local Governance/Stewardship Approvals of Research; Policy & funding Trends • Health Issue: Perceived Severity by Partners • Collaboration: Historic Trust/Mistrust between Partners • Capacity: Community History of Organizing/Academic Capacity/ Partnership Capacity 	<p>Partnership Structures:</p> <ul style="list-style-type: none"> • Diversity: who is involved • Complexity • Formal Agreements • Control of Resources • % Dollars to Community • CBPR Principles • Partnership Values • Bridging Social Capital • Time in Partnership <p>Individual Characteristics:</p> <ul style="list-style-type: none"> • Motivation to Participate • Cultural Identities/ Humility • Personal Beliefs/Values • Spirituality • Reputation of P.I. 	<p>Relationships:</p> <ul style="list-style-type: none"> • Safety/Respect/Trust • Influence/Voice • Flexibility • Dialogue and Listening/ Mutual Learning • Conflict Management • Leadership • Self & Collective Reflection/Reflexivity • Resource Management • Participatory Decision-Making • Task Roles Recognized <p>Commitment to Collective Empowerment</p>	<ul style="list-style-type: none"> • Processes that honor community and cultural knowledge & voice, fit local settings, and use both academic & community language lead to Culture-Centered Interventions • Empowering Co-Learning Processes lead to Partnership Synergy • Community Members Involved in Research Activities leads to Research/Evaluation Design that Reflects Community Priorities • Bidirectional Translation, Implementation, Dissemination 	<ul style="list-style-type: none"> • Intermediate System & Capacity Outcomes • Policy Environment: University and Community Changes • Sustainable Partnerships and Projects • Empowerment – Multi-Level • Shared Power Relations in Research/Knowledge Democracy • Cultural Reinforcement/ Revitalization • Growth in Individual Partner & Agency Capacities • Research Productivity: Research Outcomes, Papers, Grant Applications & Awards • Long Term Outcomes: Social Justice • Community/Social Transformation: Policies & Conditions • Improved Health/Health Equity

- My parents are unaware of the requirements for pursuing a health professions career.
- My parents are not supportive of me pursuing health professions education.
- I feel that I have to start working to financially support my family instead of spending more years in school.
- There is a lack of exposure to opportunities in health professions careers.
- I have other reasons that are not listed.

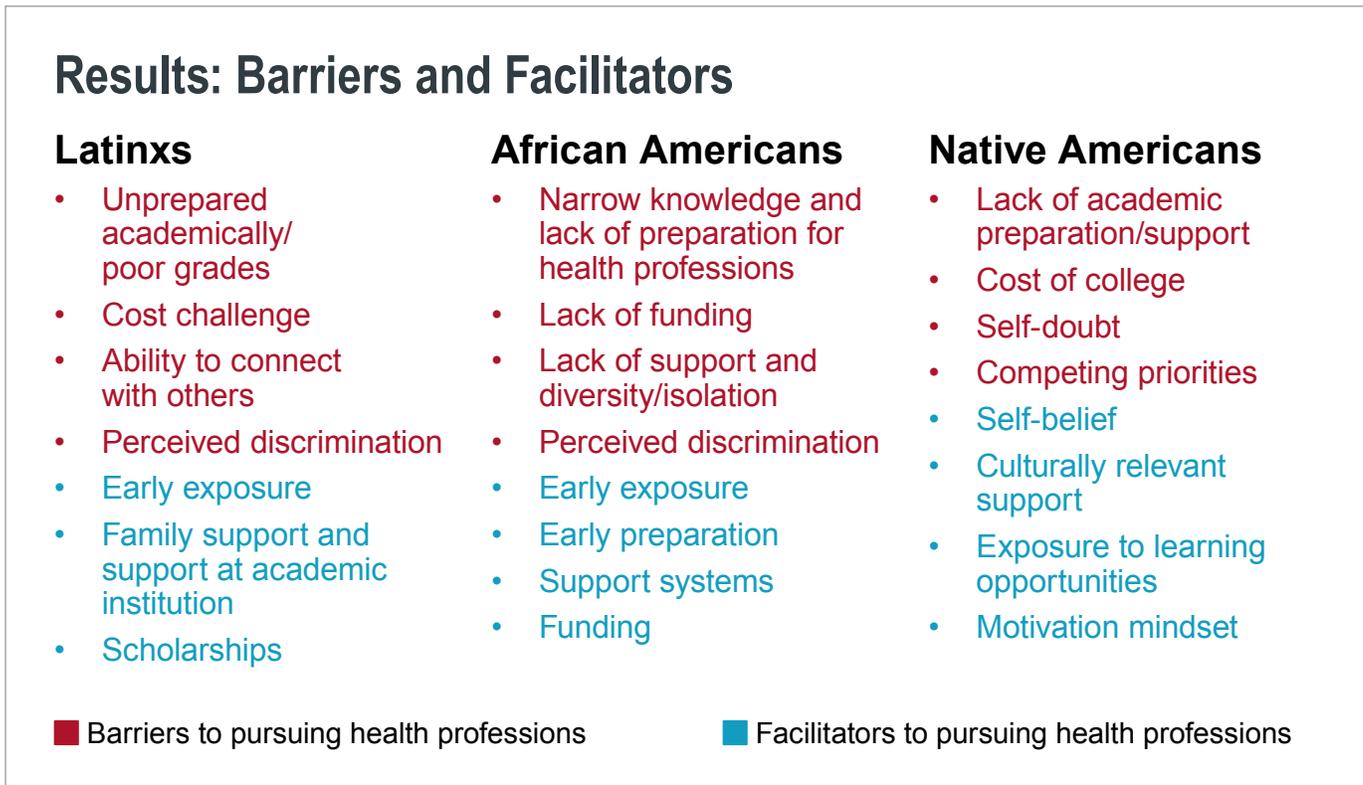
We created individual poster displays with each of the identified barriers printed on the posters. We hung these posters in the focus group meeting room and provided each participant with five sticky dots, and asked them to place one or two dots onto the barriers that personally resonated with them and their lived experience. Following this activity, study participants were invited to explain the reason for the barriers or challenges most recognized by the group (i.e., had the most dots), and what they had done to overcome these challenges. All focus group transcriptions were transcribed verbatim and analyzed by a team of co-investigators.

Two separate teams of two coders analyzed focus group transcripts using qualitative data analysis software, NVivo 11 and ATLAS.ti, in addition to hand coding, to identify the key themes that emerged among African American, Latinx, and Native American participants.

PARTICIPANTS

- There were 68 African Americans, Latinxs, and Native Americans who participated in the 9 focus groups.
- There were 27 Latinx focus group participants, aged 14 to 29 years old, among whom 9 identified themselves as men and 18 identified themselves as women.
- There were 22 African American focus group participants, aged 16 to 60 years old, among whom 6 identified themselves as men and 16 identified themselves as women.
- There were 19 Native American focus group participants aged 16 to 41 years old, among whom 6 identified themselves as men and 16 identified themselves as women.

Figure 8:



African American Voices

“ Many of the youth I encounter and I work with, I would say, one, has probably never been inside of a hospital unless it was life-threatening, or going to go see a doctor. They never were interested in it; it was always, you had to go for some reason. Many of them probably couldn't tell you what many people do in the hospital, because they're just not exposed to it. ”

“ Most African-Americans that graduate, they're like, "I'm done, I'm going straight into business, I'm going straight into making money," because, in our community, it's poverty. And poverty, the only thing that people can look at for poverty is money. They don't see the connection between continuing education and making money, and it's just all about exposing them at a younger age. ”

“ Starting working at 14 and having to take care of basically yourself, and then when I met my wife and had my son, I've got to work full-time and support everybody. ”

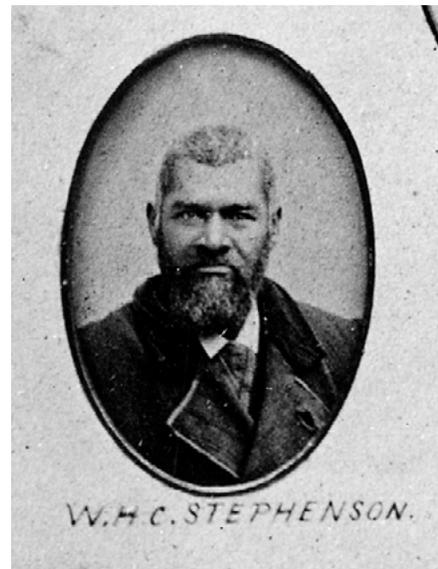
“ I don't think I could afford a health professional education, I put number one because when you're in high school, they don't really cover that. They don't really tell you who do you talk to, to make sure that it's gonna be covered. They just say, oh, do the FAFSA, it's gonna tell you what you can get but they don't tell you like how to get it, how do you know for sure it's gonna be covered, all that. ”

“ I felt like I had to start working to support my family financially. So I worked all throughout undergrad. ”

“ That's that lack of intergenerational wealth in multiple areas, not just financially, that we are being penalized again and again and again. ”

“ The two main [barriers] I see; academic preparation and exposure. ”

“ And I felt like a lot of non-minority students got more exposure. They were allowed to explore a little bit more than we were because, like she said, we had to work. ”



Dr. W.H.C. Stephenson, was a member of the Nebraska School of Medicine Preparatory, Class of 1880-1881. He was born an enslaved person in Washington, D.C. around 1825. Photo courtesy of the McGoogan Health Sciences Library Special Collections and Archives.

“ I think a lot of African-American students are not well-prepared by their high schools. ”

“ I don't feel academically prepared. I say that because I just feel like the material in high school doesn't prepare you at all for like college material. I just feel like the material was so different. Like when they first told me I had to write like an eight-page paper, I was like what? ”

“ My grades, that was a problem this year. But I guess I had NCPA to help me like want to actually keep my grades up, because I don't want to pay that much for college, so NCPA is a big help. ”

“ Diversity at [institution] is a bucket of white paint. How thin can they get it? ...You just can't see us anymore [African Americans]. You keep stirring, and it's like, where did they go? ”

“ If you want diversity, go to North Omaha. I mean, I think they [institution] are aware of it, but I think for their mindset and maybe to ease the issue of diversity, it's like let's bring international students in and that'll cover us. ”

“ It doesn't feel like it's a very structured, deliberate type of support. It feels like it's passive, passive meaning that you're relying on the student to just go there on their own, without any real guidance to figure out which career might be for them. ”

“ When it comes to diversity, [institution] focuses on international folks and rural Whites, which makes sense given that those constituencies are represented in the hierarchy, generate revenue, and have political clout. This leaves out minorities from the U.S. who ironically were the groups that fought for representation in higher education during the civil rights movement and whose labors provided the foundation for diversity initiatives at universities. ”

“ There's a lot more we have to do institutionally to ensure that this is a welcoming environment that actually values domestic diversity. ”

“ Still, if you look at their publications and their promotional materials, there's not that representation of people of color [at institution] period. ”

“ Hire black teachers. Hire black doctors. Hire black teachers. Hire black doctors... I don't know in what world a lot of people seem to live in. ”

“ I have Mr. [as a high school counselor] And he really pushes us. He's African American, so I feel more comfortable... ”

“ One of the greatest barriers at [institution] is the lack of representation of African Americans in leadership positions and when I refer to African Americans I refer to U.S.-born blacks who are descendants of slaves who represent the vast majority of African Americans. ”

“ Who wants to come to an institution where there is no chance to succeed, especially if the perception is that there already is a revolving door of African American faculty coming and going? ”

“ Faculty was fine to me. It was my peers, fellow classmates that were really trying to intentionally either exclude you from groups that they had. ”

“ Just clear racism, really folks who just don't want you to be where you're at. But if it doesn't kill you, it makes you stronger. This continued until the day I took my final board exams. ”

“ But one of the things is the burden to do all that [mentoring of African American students] seems to rest solely on the minority faculty, one. Number two, because it is time-intensive. And then it doesn't mean necessarily that the student that you spent hours working on will not change their mind about their career. So you have to be open to the fact that they may end up choosing a completely different path. And because there are so few of you and you're able to mentor so few people, you feel like the progress is just excruciatingly slow. ”

“ They talked about the Presidential elections and then you're like the only black kid in there and you're like, I'm trying to fight the battle by myself here, and it makes you not want to be in the environment... It's in most of my honors classes, like AP classes. ”

“ Yeah, I just wanted to make a comment about the importance of finding your people because this can be a very isolating experience, regardless of the level that you are at. There are times when you will not feel like you belong, and so that can be very detrimental to not only your personal health but, like, your mental health and can be a huge deterrent, and so it's really, really important to find ways to not allow yourself to be isolated, you know, whenever you're going through, and so I just wanted to reiterate the importance of finding your people wherever they are. ”

“ And you're afraid sometimes that they will say that, 'I wasn't good enough to be here. I'm not supposed to be struggling in this program.' And so you're afraid to speak up. I think just giving students and faculty permission to say that, 'I need help,' whether it's publicly or privately, but just having people find out who is there for you. And that's kind of hard to find, too. ”

“ When I approached the counselor basically about my career interests, I was directed to take the vocational route versus the college route. ”

Latinx Voices

“ At 16, I was working full-time and going to school. Were there extra-curricular activities that would have benefitted me more than working at a fast food place? Of course, but there’s a great importance to helping the family than it was go do this afterschool thing. In terms of the cost, what’s not included in that is the cost of just living. As if medical school is not expensive enough and then you throw in, like, I’m trying to not be homeless. ”

“ They give you homework, but they don’t explain anything, they might not explain all of it, so you’re not academically prepared. ”

“ To be honest, I never had that mentor. I never had that somebody. In the health field we really don’t see any Hispanics. ”

“ I went to college eventually. There were just a handful of Latinos. I had no guidance. And I was like, well, you know I’m here but I’m lost. ”

“ It’s just so competitive anyway, for the academically prepared, if you feel like you’re not smart enough to begin with, you’re not going to try and compete. ”

“ Hispanic families I’ve seen, they push them to graduate high school and go straight to a job, that sometimes interferes with trying to study, stay in college, and trying to have good grades, because it’s more important to have food on the table than be in school. ”

“ Most of our parents work at [an area meatpacking/processing plant]. That’s why we live here pretty much. Some of them don’t earn as much as others do. ”

“ I had guidance counselors that really cared for me in the beginning, then I transferred schools and I didn’t feel that connection anymore, my guidance counselor wasn’t very informed, and she wasn’t really communicating well with the students. ”

“ It’s hard to find that guidance, that mentor, because there aren’t a lot of, especially Hispanic mentors out there. In the health field there isn’t that many. ”



Dr. Hugo L. Lucic, Graduate of the College of Medicine, Class of 1926. He was the first Latinx person to graduate from UNMC. He was from Valparaiso, Chile. Photo courtesy of the McGoogan Health Sciences Library Special Collections and Archives.

“ They send us letters home to donate money or things like that. They don’t include the Hispanic families. White parents, they are included more. Knowing what we should do to get into college, Hispanic families don’t really know. They should include all the parents in the school. ”

“ I felt lost. People who are born here have a lot of connections. I know a cousin who knows this, or a family friend does this. You are isolated from that common knowledge inside the American community. I learned how to go to medical school basically just through reading stuff in the internet. ”

“ I told her that I was interested in the health professions, she was like, well, I don’t know if you’re going to be able to, you know, meet the requirements to pursue a career in a health profession. ”

“ In biology class, the teacher would always talk to the other girl about how she was going to be a nurse and hey, you know, make sure you study for this part because you’re going to need to know that later on in the future. And I would sit there [thinking], well, I want to be a nurse too. It was very hard. ”

“ Not knowing anything to begin with, not being knowledgeable, you feel set back from people who have parents who have guided them through that, already coming in knowing, it’s kind of an advantage already. ”

“ I’m from [XX country] and my grandma, she has, like a third grade education. She doesn’t speak English or anything, so when I was in high school, I was still learning English, and I felt that my counselors, they didn’t really expect me to go to college. And, you know on top of that, I didn’t know if I wanted to go to college, none of my friends had gone to college and I didn’t have anybody. I was the first one in my family to graduate from high school. ”

“ It’s always a very personal thing, how do I know that I’m here because of my merits, you know there’s not that many of us here, I struggle with that, probably every day honestly. There’s no way to know I guess besides doing your best, I feel like that discriminatory piece is always there. If I succeed then it’s like surprising, but if don’t then it’s like, well, you know of course, cause they just let you in. ”

“ I was in college for like six years because at first I took a whole bunch of classes that were not required to go to be a doctor, I didn’t know what the premed track [is]. ”

“ She introduced me to this world of other people working in health, so I slowly made those connections. It was really kind of just dumb luck. Meeting that one person that opened this other world to me. ”

“ All my friends, all my Hispanic friends, they weren’t into medicine. I was the only one doing that. It was really hard for me. ”

“ Specifically for myself, there’s that first generation pressure. My father didn’t go to school at all. He’s illiterate. My mother had a fourth grade education. So there’s that added pressure to go be something and not just something great, you know. Like, reach a super high level, which is great, but sometimes it’s like the weight is all on your shoulders, to do..., in my family anyway, no one’s ever done it, as if, like, classes aren’t hard enough, you know. ”

“ I can really tell that we all know how to persevere, we have all develop[ed] tough skin. I feel like it’s something that you need to have when you’re going through college. Sometimes students or faculty might not believe in you. I’ve been able to ignore that, I know my own abilities. Just looking around campus, I feel like sometimes there is a little bit of discrimination. ”

“ I think every parent wants their child to be successful and they want them to live a better life than they do, so they’ll try hard to help their child achieve their goal. ”

“ I’ve been fortunate enough for my parents to provide for me and encourage me to be something that they couldn’t be. ”

“ They took that first step, I’m here, I have more opportunities than I could have if I would have been born and raised in XX country. ”

“ I don’t really think there’s a whole lot of representation of Latinos in faculty. I think representation is extremely important. ”

Native American Voices

- “ I am the only Native American in that department. So, yeah, that’s kind of part of it, too. I kind of get looked down on. ”
- “ I guess they looked at me like I was Hispanic. And they said a lot of racial stuff. ”
- “ People actually would fight me because I was brown but I wasn’t Mexican. And I would get kicked out of school all the time. ”
- “ I was called a Pocahontas bitch. ”
- “ I don’t even know what I was called...because they be going off, and then the next thing you know, I’m getting kicked out of school. ”
- “ There’s some people out there, grandparents or aunts or uncles, but they also have their own lives they have to live, and pay for other things. So, it’s you’re just really on your own. ”
- “ No one behind you trying to give you encouragement. ”
- “ Lack of support, like from your family. Like they don’t really think it’s important. As long as you’re working, got a job, some people _____ like want you to get an education. Like, it’s not really important. I mean, they’ll be proud of you if you do it, but they’re just more like just happy if you got a job and you’re supporting yourself. ”
- “ I would still like to go, but I don’t know. It’s like picking, picking your family up and moving. Because that’s a four-hour trip. That’s pretty far. ”
- “ I don’t know if there’s transportation for students to come here. ”
- “ It’s hard enough to pay for classes, then loans on top of that, it’s just too much. ”



Dr. Susan La Flesche Picotte (Umo’hoⁿ, Omaha Tribe of Nebraska), Graduate of the Woman’s Medical College of Pennsylvania, Class of 1889. She was the first Native American to earn a medical degree in the United States. She practiced in Bancroft and Walthill, Nebraska, where she saw both Native American and non-Native American patients. Photo courtesy of the National Anthropological Archives, Smithsonian Institution, Negative 54752.

- “ A lot of Natives that I’ve encountered are like shy and they don’t know how to speak up and... It’s not always easy to go up to a professor and say I don’t really understand this, like this is something I think that we sometimes struggle with. ”
- “ It’s kinda weird like when you go out and you’re the only Native in class. ”
- “ The lack of confidence. I didn’t finish high school because of my social anxiety. ”
- “ Everybody always says you have to have good grades to go to college, you need this to go to college, and I don’t think my grades are up there for college. I doubt myself a lot about it. ”
- “ When I first started was just entry-level, uh, receptionist. Then I was given the opportunity to see if I went to shadow the dental assistant there, and I, I, I, um, kind of felt discouraged because I was like, oh no, I just got my GED, like I can’t, like, I’m not, I’m not smart enough to do this. Like, I don’t know what I’m supposed to be doing. ”

“ I guess I’m always so, like, um, I have to have somebody telling me, you know, I’m okay. You’re, you’re doing it right. You’re alright. You’re doing it the right way. I have to constantly have that, otherwise, I’ll just stop. And so, yeah, they always tell me I always have to have a little more confidence in myself. ”

“ In “high school, even after, if I didn’t have the confidence, I mean, I’m not gonna deal with it. Why, why put myself through for whatever I was, you know, um, wherever it was, you know, it just felt easier not to deal with it just to move to something – just to find something easier then later on. ”

“ It’s a really big thing, believing in yourself. If you don’t believe in yourself, you’re not gonna really feel like you could do it. ”

“ I’ve never seen anyone go into the health field. I’ve only seen them when they’re already there, like, my dad, my grandpa, and both my grandmas. So they’re like older than me. So – I mean, I’ve seen them get there, just when they were already there. So I don’t know. ”

“ I think there actually is one doctor that is from, you know, this community, but she lives in Germany.” That’s the only person I know that was taking the health field. ”

“ I wouldn’t think I was going to anything healthcare, but now I’m working for this chiropractor. He’s just amazing and just puts me, like, makes me feel so much smarter than I ever did at any other job and he’s like, you know, you pick on really quickly and he’s like I can see you in the healthcare field. Like wherever you put your mind to, it’s like definitely see you succeeding, so now I’m like I don’t know. Now, I don’t know. This opens up more doors. ”

“ Our nurse that teaches our class is so sweet, so nice... She waits a lot. Sometimes people don’t wanna talk, you know, you kinda get that. She’ll just wait. She’ll just be like until someone says something...and I feel like she’s been doing it for I don’t know how many years, and so she just – and she knows that we run late – and so at first she started our class on time and then gradually waited until we were all there and then she starts class. You don’t always get that in any of the other classes. I think she really does take that understanding. ”

“ More interaction, less than just writing something down, take more time to explain, even if other kids get it right away, some don’t, and take the time to help those kids that do not. ”

“ I know my parents always told me I can do this; I can do that, and they had a lot of confidence in me. ”



Conclusions

Our study investigated the underrepresentation of, barriers to, and opportunities for African Americans, Latinxs, and Native Americans to pursue health professions programs in Nebraska. In our focus groups, which included URM high school to health professions students, and health care professionals, we found the following barriers and facilitators:

Barriers:

- Lack of academic preparation
- Need for further financial support for education
- Lack of support, ability to connect with others, and diversity
- Self-doubt
- Perceived discrimination

Facilitators:

- Early exposure to health professions careers
- Academic preparation
- Family support and culturally relevant support at academic institutions
- Scholarships and other sources of funding
- Motivation mindset and self-belief

Additional barriers in Nebraska include a lack of available outcomes data from health professions programs targeting URMs and recruitment and retention efforts of URM faculty.

URM REPRESENTATION IN GUARANTEED ADMISSIONS PROGRAMS

Among URMs, Latinxs are particularly underrepresented in rural guaranteed admissions programs. These programs in Nebraska have been tracked since 1991. Among the 552 alumni who identified their race, 98.6% identified their race as White, 1.4% reported their race as Native American, two or more races, Asian, or other, while 0% identified themselves as African American or Black. Among a total of 600 alumni, 9 (1.9%) identified their ethnicity as Latinx. Based on demographic projections, Latinx populations may represent 51.2% of rural Nebraska's population in 2049, but only represent 1.5% of the guaranteed admissions program alumni.

Outcome data from two out of three guaranteed admission programs targeting underrepresented students (1992 – 2012) were not tracked in a systematic fashion.

Ten disciplines are offered in guaranteed admissions programs targeting rural students, while only one discipline is offered in the guaranteed admissions program targeting racial and ethnic populations that are underrepresented in the medical profession relative to their numbers in the general population.

- There exists a need to track all guaranteed admissions programs. In addition, there is a need to train architects and implementers of such programs from high school to graduate school about equitable and inclusive programming, and in cultural humility, sensitivity, and competency.

URM FACULTY

At UNMC, URM faculty are underrepresented, particularly among tenured faculty, and are not reflective of the demographics of Nebraska or Douglas County where the institution's main campus is located. In 2018, URM faculty comprised only 3.3% of UNMC's tenured faculty, while in 2019, URM faculty represented 20.5% and 28.5% of Nebraska's and Douglas County's populations, respectively. *The 2018 UNMC Faculty Recruitment and Retention Committee Report* does not report recruitment or retention data by race or ethnicity.³⁶

- There exists a need to evaluate existing URM faculty recruitment and retention initiatives and to recruit UNMC URM faculty, especially senior faculty.
- There exists a need for reporting recruitment, retention, and advancement of faculty by race and ethnicity.
- There exists a need for increased representation of URM teachers, counselors, staff, faculty, and particularly senior administrators in academic settings, from high school to graduate school.

INSTITUTIONAL CLIMATE

Focus group data suggest that perceived discrimination, isolation, and lack of diversity represent barriers for URM students to pursue health professions careers. To improve campus climate, leadership at high schools to academic medical centers should vigorously affirm the value of diversity and demonstrate this commitment with action in order to improve the institutional climate.

The literature underscores the importance of institutional commitment to diversity, driven by leadership, with an explicit commitment to workforce and student diversity to achieve success in recruiting, retaining, and advancing URM students and faculty.^{26,42,43}



Ms. Octa Keen (Umo^{ho}ⁿ, Omaha Tribe of Nebraska), MSN, RN. When she graduated with her MSN from the UNMC College of Nursing in 1986, she became the first Native American to receive an MSN in the state of Nebraska. Ms. Keen established and directed the Diabetes Clinic in the Carl T. Curtis Health Education Center, an outpatient facility that served the Umo^{ho}ⁿ on the reservation in Macy, Nebraska. At UNMC, she administered the Health Professions Partnership Initiative at UNMC, which focused on increasing the number of Nebraska Native Americans in the health care professions. Now retired, Ms. Keen continues to be a representative for her Tribe, actively working to preserve the Umo^{ho}ⁿ language and culture. Photo courtesy of Octa Keen, from the McGoogan Health Sciences Library Special Collections and Archives.



Dr. Matthew O. Ricketts, Graduate of the Omaha Medical College, Class of 1884. He was the first Black person to receive an MD in Nebraska. In addition, Dr. Ricketts was the first Black person to serve in the Nebraska House of Representatives, c. 1893. He was born to enslaved parents in Henry County, Kentucky in 1858. Photo courtesy of History Nebraska.



Bobbie Lessley (Osage Nation), YES! Cancer Research Intern.

Recommendations

LEADERSHIP INTENTIONALITY/POSITIVE STEPS

- Commit to do intentional system-level work that promotes URM recruitment, retention, and advancement in health professions.
- Commit to evaluating and monitoring initiatives with the intent of recruiting, retaining, and advancing URM in the health professions.
- Communicate and demonstrate the value of diversity and inclusion as it relates to URM and encourage the recruitment of senior URM administrators and faculty.
- Explicitly include URM in strategic plans and in diversity, equity, and inclusion plans.
- Uphold Tribal Sovereignty while generating meaningful relationships with Tribal Nations and Tribal colleges and universities.
- Recognize and publicly acknowledge that academic institutions reside on original homelands of Indigenous peoples. Academic institutions work in consultation with local Tribes to determine what statement, if any, and actions can best acknowledge Tribal connections to this land that was occupied long before the academic institutions and the state of Nebraska existed.
- In strategic plans, provide concrete metrics and quantitative outcomes for recruitment and retention goals of URM students, faculty, and staff and provide timelines for activities related to recruitment and retention.
- In July 2020, UNMC and the University of Nebraska at Omaha (UNO) appointed Sheritta Strong, MD, as Assistant Vice Chancellor for Inclusion; and Cecil Hicks, Jr, MBA, SPHR, as Associate Vice Chancellor

for Diversity, Equity, Access, and Inclusion. Since 2020, the UNMC College of Medicine has established an Office of Diversity, Equity, and Inclusion. To staff this office the college hired the following individuals: Shirley Delair, MD, MPH, Associate Dean of Diversity Equity and Inclusion; Nada Fadul, MD, Assistant Dean of Diversity, Equity, and Inclusion Education Programs; Armando De Alba Rosales, MD, MPH, Assistant Dean of Diversity, Equity and Inclusion Student Programs; and Liliana Bronner, MHA, MBA, Director of Medical Pathway Programs, Office of Diversity, Equity, and Inclusion.

ADDRESS LACK OF ACADEMIC PREPARATION AMONG URM STUDENTS THROUGH THE DEVELOPMENT OF NEW PROGRAMMING TAILORED TO SPECIFIC COMMUNITIES

- Strengthen curricula at high school and undergraduate institutions, including consideration for the use of e-learning modules in high schools.
- Transform UNO/University of Nebraska at Kearney (UNK)/UNMC from 'URM enrolling' institutions to 'URM serving' institutions by identifying what supports and resources students need to be successful.
- Consider administering skills assessments to incoming undergraduate students to identify areas in the sciences where they may need support (e.g., New Mexico State University, a Hispanic-serving institution; and Northern New Mexico College, a Hispanic and Native American-serving comprehensive institution).
- Conduct pre-enrollment health professions workshops at UNMC with students and URM families modeled after the initiatives at UNK and UNO.

IDENTIFY FINANCIAL SUPPORT FOR HEALTH PROFESSIONS EDUCATION

- Create more scholarships for health professions students.

CREATE MORE INCLUSIVE CLIMATES AT ACADEMIC INSTITUTIONS

- Create spaces and opportunities for URM students, staff, and faculty to connect with each other at high school, undergraduate, and graduate school levels in ways that will advance educational and professional careers and interests, in addition to social support.
 - » Establish an Office of Multicultural Affairs at UNMC that will provide academic support and foster students' sense of belonging and importance in campus community.
 - » Recognize the unique needs of different URM populations, including Deferred Action for Childhood Arrivals students, and recognize that international and domestic URMs are distinct populations with unique needs.
- Ensure that working groups charged with diversity initiatives and videos promoting diversity have diverse representation, including URM representation from their inception.
- Compel leadership of academic institutions to communicate that diversity is valued and show concrete examples of how diversity is valued with regard to representation of URMs.
- Compel strategic, diversity, equity, and inclusion plans at academic institutions with a focus on the education and training of health professionals to adopt language regarding the recruitment, retention, and advancement of URM populations.
- Cultivate a culture and ethics of care in supporting URMs by engaging with URM students, staff, and faculty in a way that is supportive but not paternalistic (e.g., do not only automatically assign mentors to minority students upon arrival on campus).
- Recognize and publicly acknowledge that academic institutions reside on original homelands of Indigenous peoples. Academic institutions work in consultation with local Tribes to determine what statement, if any, and actions can best acknowledge Tribal connections to this land that was occupied long before the academic institutions and the state of Nebraska existed.
- Incorporate Indigenous knowledge into curricula to promote the success of Native American students (e.g., University of North Dakota).
- Ensure availability of mental health programs and other forms of counseling for URM students and faculty, due to the isolation in course work and other forms of social isolation.

- Provide bias training for search committee members and senior administrative academic positions (e.g., Cornell University).
- Require tenure track faculty and senior leadership applicants to submit a personal diversity and inclusion statement (e.g., Cornell University).
- Promote the presence of student organizations beyond online advertisements to address isolation.
- Create resources and channels of communication in Spanish geared towards parents of current Latinx students.

EVALUATE PAST AND PRESENT URM HEALTH PROFESSIONS INITIATIVES

- Clarify the historical record of and evaluate outcomes of past and present efforts to diversify the health professions workforce in Nebraska with URMs using the format of the *University of Nebraska Medical Center Rural Health in 2030: The Taskforce on Rural Health – 2030* and the *UNMC Rural Health 2030 Rural Action Plan*.^{44,46}
 - » Examine and document the historic presence at and contributions by URMs to academic institutions.
 - » Examine the historic relationship of Nebraska academic institutions with Nebraska URM communities.
 - » UNMC leadership to convene stakeholders to develop an urban action plan with a focus on URMs.
- Consult with peer institutions and other institutions/ organizations that are successful in collecting tracking, recruiting, retaining, graduating, and promoting URM students, staff, and faculty about successful methods (e.g., University of Chicago, IL; University of Connecticut).

ENHANCE URM REPRESENTATION IN GUARANTEED ADMISSIONS PROGRAMS

Compel UNMC leadership to appoint one person (director of guaranteed admissions programs) to whom rural and underrepresented/urban student-serving guaranteed admissions programs report, and who ensures that:

- All programs are tracked and have equitable resources, equal oversight, and attention paid to them.
- Working groups on guaranteed admission programs have diverse representation from their inception, including representation of URMs.
- Underrepresented student-serving guaranteed admissions programs are part of revitalization efforts undertaken for rural student-serving guaranteed admissions program in the UNMC Rural Health 2030: 2018-2019 Action Plan Goal B.⁴⁵

- UNMC Office of Faculty Development (with dedicated resources) provide on-going training and education to associate deans of academic affairs and other architects and implementers of guaranteed admission and other pathway programs on inclusive and equitable educational programming.
- Student affairs offices at each college regularly report URM demographics in reports and presentations/ meetings.
- Student tracking data are reviewed retrospectively to learn more about URM-serving guaranteed admission programs and areas in rural Nebraska where students are recruited from.
- Consultation with UNMC Public Relations is undertaken to communicate to internal and external stakeholders the importance of UNMC's role in promoting equitable educational opportunities for rural and urban residents in Nebraska.
- Consultation with the UNMC Office of Community Engagement is undertaken to promote inclusivity and diversity within and among guaranteed admissions programs.
- Architects and implementers of guaranteed admission programs are convened on a regular basis to assess progress on the aforementioned items.
- Address the lack of preparation through intensive training opportunities for students (supplemental instruction, academic enrichment programs, transition programs such as summer bridge programs, and post-bac programs).
- Raise awareness of existing guaranteed admissions programs and connect recruitment, admissions, and matriculation as a path to college and health professions careers for URM students.
- Implement mentoring programs from high school to health professions school and beyond.
- Raise awareness of, expose, and introduce URM students/parents to biomedical science careers/ pathway/guaranteed admission programs at early ages, while tailoring outreach and programming to specific communities.
- Implement social supports at high school undergraduate, and health professions school-levels, including the creation of inclusive spaces.
- Continue "Parent First Look Day" at UNMC.
- Raise awareness of and encourage URM undergraduate students to apply to paid summer research opportunities.
- Expand health professions pathway program activities for middle school-aged children (e.g. full day, semester, or year-long), such as the Center for Reducing Health Disparities' collaboration with the College of Allied Health.

INCREASE COLLABORATION BETWEEN DIFFERENT PARTNERS IN THE HEALTH PROFESSIONS PIPELINE TO PROMOTE URM IN HEALTH PROFESSIONS

- Engage retired high school teachers in the tri-city area (Grand Island, Hastings, and Kearney) to collaborate with high schools to raise awareness of health professions programming and identify prospective students and promote health professions careers.
- Seek collaboration between Omaha Public Schools, community colleges (including Metropolitan Community College), UNO and other Nebraska University campuses, and UNMC to raise awareness of health professions programming and identify prospective students and promote health professions careers.

CONTINUE/STRENGTHEN EXISTING HEALTH PROFESSIONS PATHWAY INTERVENTIONS

Strengthen and implement comprehensive interventions that span the health professions education pipeline. This includes interventions that engage parents/guardians using culturally and linguistically appropriate strategies to promote health professions careers at high school, undergraduate, and graduate health professions school levels. In line with literature, academic institutions should:

44,45,46,47

- Engage in targeted recruitment and holistic admissions policies.

ADDRESS LACK OF REPRESENTATION OF SENIOR URM ADMINISTRATORS/FACULTY

- Conduct a study to examine barriers and facilitators for recruiting, retaining, and advancing URM health professions faculty at academic institutions in Nebraska.
- Evaluate outcomes of initiatives promoting URM faculty representation at academic institutions in Nebraska (e.g., Nebraska Tobacco Settlement Biomedical Research Fund).
- Recruit a more diverse workforce, including cluster recruitment of senior URM health science and health professions faculty at Nebraska academic institutions.
- Leadership of academic institutions should encourage department chairs and senior administrators to identify URM candidates in applicant pools and leave job postings open until a diverse pool of applicants have applied for a position.
- Provide monetary rewards for time spent advising diverse students or serving on committees in need of diverse representation (e.g., Cornell University).
- Provide travel funds for mentoring and networking and for junior faculty meeting groups.



Second annual Latino Graduate Recognition Celebration, University of Nebraska at Omaha. Courtesy of Dr. Armando De Alba.

- Leadership of academic institutions should hold department chairs responsible for faculty diversity, require an annual report with explanations of why goals were or were not achieved, and reward departments with successful track records in recruiting, retaining, and advancing URM faculty.

UPHOLD TRIBAL SOVEREIGNTY

- Academic institutions should uphold Tribal Sovereignty in their engagement with Tribal Nations and Tribal colleges and universities in promoting a Native American health professions workforce.

ESTABLISH AN EXTERNAL ADVISORY COMMITTEE

- Establish an external advisory committee that on a regular basis reviews diversity outcomes based on agreed-upon metrics (including outcomes of guaranteed admissions program, and faculty recruitment and retention efforts) with a focus on URM representation.
- Representation should include but not be limited to urban and rural organizations and Nebraska Tribal entities.

Acknowledgements

COMMUNITY ADVISORY BOARD

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Stephanie Cook Clark, MS, Associate, NAI NP Dodge

Brandon Drozd, Program Coordinator, Central Nebraska Area Health Education Center

Laura Flores, MD/PhD candidate, University of Nebraska Medical Center, College of Medicine

Tulani Grundy-Meadows, JD, Human Relations and Political Science Instructor, Metropolitan Community College

Roméo Guerra, Executive Director, El Centro de las Americas

Juan C. Guzman, Director, Office of Multicultural Affairs, University of Nebraska at Kearney

Stephen Jackson, MPH, Supervisor, Health Promotion Section, Douglas County Health Department; Past President, Omaha Branch of the NAACP

LaKaija Johnson, MPH, MPS, Graduate Research Assistant, PhD Candidate, Department of Health Promotion, University of Nebraska Medical Center, College of Public Health

UNIVERSITY OF NEBRASKA MEDICAL CENTER

Nicole Carritt, MPH, Deputy Director and Program Manager Nebraska Area Health Education Center (AHEC) Program, Director, UNMC Rural Health Initiatives

FUNDERS

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Echohawk Lefthand, MPH, Director, Native Indian Centered Education Program, Omaha Public Schools

Melissa A Leon, MPH, Health Data Analyst, Center for Advanced Surgical Technology, Department of Surgery, University of Nebraska Medical Center, College of Medicine

Karen Kropp, Retired Health Science Educator, Grand Island Senior High

Maria Marquez De Lopez, Recruiting Coordinator, Grand Island Campus, Central Community College

Yolanda Nuncio, Advisor to Peter Kiewit Scholars, University of Nebraska Kearney; former Commissioner with the Latino American Commission of Nebraska

Judith Sanford-Harris, PhD, former Director, K-12 Programs and Educational Outreach, Harvard Medical School Office for Diversity and Community Partnerships; Founding Trustee, Wôpanâak (Wampanoag) Language Immersion School

Marque Snow, former President, Board of Education, Omaha Public Schools; Senior Advisor to the Holland Children's Movement

Paul Estabrooks, PhD, Harold M. Maurer Distinguished Chair, Professor, Department of Health Promotion

References

- 1 Institute of Medicine. 2003. Unequal Treatment. Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care. Washington, DC: The National Academies Press. <https://dpo.org/10.17226/10260>.
- 2 Merchant JL, Omary MB. Underrepresentation of underrepresented minorities in academic medicine: The need to enhance the pipeline and the pipe. *Gastroenterology*. 2010; 138(1):19-26.e1-3.
- 3 Brown University. Pathways to diversity and inclusion: an action plan for Brown University. <https://brown.edu/web/documents/diversity/actionplan/diap-full.pdf>. Updated 2016. Accessed 5/21, 2019
- 4 U.S. Department of Education. Minority science and engineering improvement program. <https://www2.ed.gov/programs/duesmsi/faq.html>. Accessed 5/21, 2019.
- 5 National Science Foundation. Women, minorities, and persons with disabilities in science and engineering. <https://ncses.nsf.gov/pubs/nsf19304/>. Updated 2019. Accessed 5/21, 2019.
- 6 National Institutes of Health, U.S. Department of Health and Human Services. Revised: Notice of NIH's interest in diversity. <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-129.html>. Updated 2018. Accessed 2/25/18.
- 7 University of Nebraska Medical Center. *University of Nebraska Medical Center Planning Information and Quality Indicators*. <https://www.unmc.edu/aboutus/strategicplanning/piqi/2018piqi.pdf>. Updated 2018. Accessed 2/25, 2019.
- 8 Nebraska Department of Health and Human Services, Socioeconomic and Health Disparities Report Card. <http://dhhs.ne.gov/Reports/HDHE%20Socioeconomic%20and%20Health%20Disparities%20Report%20Card%20-%202015.pdf>. Accessed 2/5/21.
- 9 University of Nebraska Medical Center, College of Public Health, Center of Reducing Health Disparities. Nebraska life expectancy mapping by zip code. <https://publichealth.unmc.edu/lec/map.html>. Updated 2019. Accessed 6/19/201, 2019.
- 10 Douglas County Health Department. Average life expectancy by zip code - Douglas county, NE 2012-2016. 2018.
- 11 ZipWho.Com. Basic ZIP code search. <https://zipwho.com/>. Accessed 6/19/19, 2019.
- 12 Johansson P. 6/19/19 e-mail communication with Dejun Su, PhD, director of center for reducing health disparities, University of Nebraska Medical Center, College of Public Health. 2019.
- 13 Centers for Disease Control and Prevention. COVID-19 in Racial and Ethnic Minority Groups. <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/racial-ethnic-minorities.html>. Updated 2020. Accessed 6/23/20.
- 14 Komaromy M, Grumbach K, Drake M, Vranizan K, Lurie N, Keane D, Bindman AB. The role of Black and Hispanic physicians in providing health care for underserved population. *N.Engl.J.Med*. 1996; 334:1305-1310.
- 15 Cooper-Patrick L, Gallo JJ, Gonzalez JJ, Vu HT, Powe NR, Nelson C, Ford DR. Race, gender, and partnership in the patient-physician relationship. *JAMA*. 1999; 282(6):583-589.
- 16 George S, Duran N, Norris K. A systematic review of barriers and facilitators to minority research participation among African Americans, Latinos, Asian Americans, and Pacific Islanders. *Am J Public Health*. 2014; 104(2):e16-31
- 17 Cohen JJ, Gabriel BA, Terrell C. The case for diversity in the health care workforce. *Health Aff.* (Millwood) 2002;21:90-102.
- 18 University of Nebraska Medical Center. UNMC strategic plan, 2011-2014. http://www.unmc.edu/wwwdocs/final_strategicplan_06-11.pdf. Updated 2014. Accessed 6/17, 2019.
- 19 University of Nebraska Medical Center. UNMC 2020-21 UNePlan Goal and Strategy Review. <https://www.unmc.edu/aboutus/strategicplanning/strategic-plan.pdf>. Updated July 1, 2020. Accessed, July 30, 2020.
- 20 Bradley OW. The multicultural vantage program: A model for increasing minority enrollment in the medical and allied Health Fields. *Different Perspectives on Majority Rule*. 1997; 1997(41): <https://digitalcommons.unl.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1040&context=pocpwi2>. Accessed 2/5/21.
- 21 University of Nebraska at Kearney. NU-PATHS: Preadmission to the health sciences. <http://unknews.unk.edu/2003/10/23/nu-paths-pre-admission-to-the-health-sciences/>. Updated 2003. Accessed 6/17, 2019.
- 22 University of Nebraska-Lincoln. NU-PATHS. http://www.unl.edu/ous/student_programs/nupaths.shtml. Accessed 5/23, 2011.
- 23 University of Nebraska at Omaha. Urban Health Opportunities Program (UHOP). <https://www.unomaha.edu/college-of-arts-and-sciences/health-careers-resource-center/premed/uhop.php>. Updated 2019. Accessed 6/17, 2019.
- 24 University of Nebraska Medical Center, Office of Student Services. Rural Health Opportunities Program (RHOP). <https://www.unmc.edu/student-services/rse/enrichment/rural-health-enrichment-programs/rhop/>. Accessed 06/03, 2018.
- 25 University of Nebraska at Kearney. Kearney Health Opportunities Program (KHOP). http://www.unk.edu/academics/health_sciences/scholarshipprograms.php. Accessed 6/17, 2019.
- 26 University of Nebraska Medical Center, College of Public Health, Rural Health Education Network (RHEN). Public Health Early Admissions Student Track (PHEAST). <https://www.unmc.edu/publichealth/rhen/pipeline/index.html>. Accessed 6/3, 2018.
- 27 Vick AD, Baugh A, Lambert J, et al. Levers of change: A review of contemporary interventions to enhance diversity in medical schools in the U.S.A. *Adv Med Educ Pract*. 2018; 9:53-61.
- 28 Zambrana RE, Ray R, Espino MM, Castro C, Cohen BD, Eliason J. "Don't leave us behind" the importance of mentoring for underrepresented minority faculty. *American Education Research Journal*. 2015; 52(3):40-72
- 29 Byars 3, Cunningham 1, Engel 1, et al. AN ACT relating to health care funding; to amend sections 71-1626 and 71-1627, reissue revised statutes of Nebraska, and sections 68-1526, 71-6050,71-7605, 71-7606, 71-7607 to 71-7609, 71-7611, and 71-7614, revised statutes supplement, 2000; to change provisions relating to local public health departments, the Nebraska lifespan respite services program, and the Nebraska health care funding act; to change and eliminate provisions relating to use of funds, grants, loan guarantees, and reports; to harmonize provisions; to provide a duty for the revisor of statutes; to repeal the original sections; to outright repeal sections 71-7606.01 and 71-7613, revised statutes supplement, 2000; and to declare an emergency. Be it enacted by the people of the state of Nebraska. 2001: <https://>

- nebraskalegislature.gov/FloorDocs/97/PDF/Slip/LB692.pdf.
- 30 University of Nebraska Medical Center, University of Nebraska-Lincoln, Creighton University, Boys Town National Research Hospital. Nebraska tobacco settlement biomedical research development fund fiscal year 2017-2018 progress report. https://nebraskalegislature.gov/FloorDocs/105/PDF/Agencies/University_of_Nebraska_Medical_Center/451_20181221-110212.pdf. Updated 2018. Accessed 6/12, 2019.
 - 31 University of Nebraska Medical Center, College of Public Health. University of Nebraska Medical Center College of Public Health Final Self-study. <https://www.unmc.edu/publichealth/about/e-resources/UNMC%20COPH%20Final%20Self-Study%202016.pdf>. Updated 2016. Accessed 6/2/18, 2018.
 - 32 Office of Institutional Research, University of Nebraska Medical Center. University of Nebraska Medical Center Factbook: 2018 faculty by tenure, ethnicity, and gender. https://www.unmc.edu/academicaffairs/institutional/research/fact-book/UNMC_FactBook.pdf. Updated 2019. Accessed 6/13, 2019.
 - 33 Pew Research Center. (2015). A Rising Share of the U.S. Black Population is Foreign Born. Chapter 1: Statistical Portrait of the U.S. Black Immigrant Population. <https://www.pewsocialtrends.org/2015/04/09/chapter-1-statistical-portrait-of-the-u-s-black-immigrant-population/>.
 - 34 Tauriac JJ, Liem, JH. Exploring the divergent outcomes of U.S.-origin Black undergraduates. *Journal of Diversity in Higher Education*. 2012;5. (4):10. doi: 10.1037/a0030181
 - 35 Commodore-Mensah Y, Himmelfarb CD, Agyemang C, Sumner A E. (2015). Cardiometabolic Health in African Immigrants to the United States: A Call to Re-examine Research on African-decent Populations. *Ethnicity & Disease*, 25(3), 373-380. doi:10.18865/ed.25.3.373 [doi]
 - 36 University of Nebraska Medical Center Faculty Recruitment and Retention Committee. 2018 UNMC faculty recruitment and retention committee report. <https://info.unmc.edu/blog/facultysenate/files/2018/03/FS-April-2018-Attachment-A.pdf>. Updated 2018. Accessed 3/26, 2019.
 - 37 Ulin P, Robinson E, Tolley E. *Qualitative methods in public health: A field guide for applied research*. Jossey-Bass; 2004.
 - 38 United States Census Bureau. About race. <https://www.census.gov/topics/population/race/about.html>. Updated 2019. Accessed 6/19, 2019.
 - 39 Israel BA, Schulz AJ, Parker EA, Becker AB. Review of community-based research: Assessing partnership approaches to improve public health. *Annu Rev Public Health*. 1998; 19:173-202.
 - 40 Newman SD, Andrews JO, Magwood GS, Jenkins C, Cox MJ, Williamson DC. Community advisory boards in community-based participatory research: A synthesis of best processes. *Prev Chronic Dis*. 2011; 8(3):A70.
 - 41 Cramer ME, Lazowitz S, Shaffer K, Palm D, Ford AL. Community advisory board members' perspectives regarding opportunities and challenges of research collaboration. *West J Nurs Res*. 2018; 40(7):1032-1048.
 - 42 Brunson WD, Jackson DL, Sinkford JC, Valachovic RW. Components of effective outreach and recruitment programs for underrepresented minority and low-income dental students. *J Dent Educ*. 2010; 74(10 Suppl):S74-86.
 - 43 Sullivan L. Missing persons in the health professions, a report on the Sullivan Commission of diversity in the healthcare workforce. 2004.
 - 44 University of Nebraska Medical Center. Rural health in 2030: The role of the University of Nebraska Medical Center (UNMC) - the taskforce on rural health 2030 University of Nebraska Medical Center. 2017.
 - 45 University of Nebraska Medical Center. UNMC Rural Health 2030 2018-2019 action plan. <https://www.unmc.edu/documents/2030actionplan.pdf>. Updated 2019. Accessed 2/25, 2019.
 - 46 Rodriguez C, Kirshstein R, Amos LB, Jones W, Espinosa L, Watnick D. Broadening participation in STEM: A call to action. https://www.air.org/sites/default/files/downloads/report/Broadening_Participation_in_STEM_Feb_14_2013_0.pdf. Accessed 9/11, 2018.
 - 47 Snyder CR, Frogner BK, Skillman SM. Facilitating racial and ethnic diversity in the health workforce. *J Allied Health*. 2018; 47(1):58-65.

