



## Original Articles

# Increasing healthcare workforce diversity: Urban universities as catalysts for change<sup>☆</sup>



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## ABSTRACT

Increasing the diversity of the healthcare workforce is often cited as a strategy for reducing racial and ethnic health disparities. Colleges and universities are uniquely positioned to influence workforce diversity through their recruitment, admissions, and student support practices, and by partnering with community groups to improve the pipeline of underrepresented racial/ethnic (URE) students pursuing health careers and influence workforce diversity practices in healthcare institutions. In this article, the authors describe a multifaceted initiative implemented by the Academic Health Center (AHC) at the University of Cincinnati (UC) that sought to address each of these areas. The initiative was led by the dean of the College of Nursing and a professor from the College of Medicine, who served as co-principal investigators. Within the university, UC identified improving health disparities and workforce diversity as central to its mission, adopted holistic admissions practices, used social media to strengthen outreach to URE students, and created a diversity dashboard to monitor diversity efforts. Additionally, UC partnered with community groups to expand pipeline programs for URE students and worked with a community advisory board to engage the region's health systems in evaluating their workforce diversity efforts. Within the College of Nursing, the initiative resulted in increased applications from students at pipeline schools, a larger number of URE student admissions, and increased faculty diversity.

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## Introduction

Despite ongoing efforts to improve healthcare workforce diversity, underrepresented racial/ethnic (URE) populations continue to be underrepresented in the health professions (American Association of Colleges of Nursing (AACN), 2015; Association of American Medical Colleges (AAMC), 2014). The problem is particularly acute for African American/black and Hispanic/Latino minority groups, which represent 30.9% of the U.S. population (United States Census Bureau, 2015), but only 9% of registered nurses (American Association of Colleges of Nursing (AACN), 2015) and 8.5% of physicians (Association of American Medical Colleges (AAMC), 2014). Though the figures are slightly better in academia, with African Americans/blacks and Hispanics/Latinos accounting for 20.3% of undergraduate nursing students in 2015 (American Association of Colleges of Nursing (AACN), 2015) and 13.3% of medical students in 2015 (American Association of Colleges of Nursing (AACN), 2015), there is still considerable room for improvement.

Improving the diversity of the healthcare workforce is important from an inclusion and social justice perspective and as a strategy for reducing health disparities (Sullivan Commission on Diversity in the Healthcare Workforce, 2004; Department of Health and Human Services (DHHS), 2011; Williams, Walker, & Egede, 2016; Jackson & Gracia, 2014). The emphasis on diversity's role in reducing health disparities is based on research suggesting that health professionals from URE groups are more likely to care for URE patients and serve in impoverished areas and thus improve access for disadvantaged populations (Health Resources and Services Administration (HRSA), 2006; Association of American Medical Colleges (AAMC), 2014), and research linking racial and linguistic concordance among patients and providers to improvements in quality of care (Institute of Medicine, 2003; Health Resources and Services Administration (HRSA), 2006; Alegria et al., 2013; Traylor, Schmittiel, Uratsu, Mangione, & Subramanian, 2010; Cooper et al., 2003).

Although there is widespread agreement within the health professions about the need to improve healthcare workforce diversity (American Association of Colleges of Nursing (AACN), 2015; Association of American Medical Colleges, 2015), achieving this goal is fraught with challenge and requires sustained effort by academia, communities, healthcare institutions, and government and legislative groups (Sullivan Commission on Diversity in the Healthcare Workforce, 2004). Health professions schools, which serve as gateways to the health

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professions, play an especially important role but also face a unique set of challenges. The challenges include stimulating interest in the health professions among URE high school students, addressing the paucity of diverse faculty in health professions schools, and changing academic cultures to value and support diversity and inclusive excellence, admissions policies, and other practices that thwart rather than promote diversity efforts (National Advisory Council on Nurse Education and Practice (NACNEP), 2013; Sullivan Commission on Diversity in the Healthcare Workforce, 2004).

In this article, we describe a multifaceted initiative to improve student and healthcare workforce diversity that was implemented by the Academic Health Center (AHC) at the University of Cincinnati (UC). Led by the dean of the UC College of Nursing and a professor in the College of Medicine, who served as co-principal investigators (PIs), the initiative engaged leaders from UC, the community, and local healthcare systems in improving the diversity of health professions students at UC and healthcare workforce diversity in the Cincinnati region.

## Background

In 2012, the Coalition of Urban Serving Universities (USU) and the Association of American Medical Colleges partnered with the National Institute on Minority Health and Health Disparities to introduce the Urban Universities (UU) for HEALTH (Health Equity Alignment through Leadership and Transformation of the Health Workforce) learning collaborative. UU HEALTH was grounded on the premise that universities and academic health centers serve as “anchors” for urban communities and as regional educational centers for the health professions and are positioned to drive improvements in local health outcomes. The initiative’s goal was to identify and disseminate knowledge, tools, and metrics that would aid universities and their academic medical centers in enhancing healthcare workforce diversity. USU selected five urban-serving universities that had demonstrated a commitment to improving health and reducing disparities through workforce development for participation in UU HEALTH. In addition to UC, they included Northeast Ohio Medical University–Cleveland State University (NEOMED–CSU), the State University of New York (SUNY) Downstate, the University of Missouri at Kansas City (UMKC), and the University of New Mexico (UNM).

UC is a public research university located in Cincinnati, Ohio. The university has an enrollment of approximately 44,000 students, including 27% who are first-generation college students (University of Cincinnati, 2015). Among UC’s 14 colleges, four make up the AHC: the College of Allied Health Sciences, College of Medicine, College of Nursing, and College of Pharmacy. Each AHC college has its own dean and maintains affiliate relationships with multiple regional health systems that provide teaching, patient care, and research opportunities.

Cincinnati is Ohio’s third most populous city with a population of approximately 300,000 persons (United States Census Bureau, 2015) and is the seat of Hamilton County. Among the city’s residents, 49% are white, 45% are African American/black, and 3% are Hispanic/Latino. Many Cincinnatians struggle with poverty. In 2010–2014, the city’s median household income was \$34,002 (United States Census Bureau, 2015), compared to \$53,657 nationally (DeNavas-Walt & Proctor, 2015). Additionally, 30.9% of Cincinnatians (United States Census Bureau, 2015) and 44.3% of Cincinnati children (Sparling, 2015) lived at the poverty level, compared to 14.8% of the US population and 21.1% of US children (DeNavas-Walt & Proctor, 2015). Data regarding the community’s health reveal marked disparities along racial lines. For example, in 2001–2009, the average life expectancy for Cincinnati’s white residents was 76.5 years compared to 68.3 years for black residents (Urban League of Greater Southwestern Ohio, 2015), and 83.3–87.8 years in some affluent and largely white neighborhoods compared to 66.5–69.8 years in some low-income and predominantly black or urban Appalachian neighborhoods (City of Cincinnati, n.d.; Curnutte, 2013). Similarly, in 2013, the infant mortality rate for white children was 6.1 per 1000 live births in Cincinnati and 5.5 per 1000 in Hamilton County, while for black children

it was 12.6 per 1000 live births in Cincinnati and 18.4 per 1000 in Hamilton County (Urban League of Greater Southwestern Ohio, 2015).

Consistent with the UU HEALTH premise that urban universities are community anchors, UC is the largest employer in the Greater Cincinnati region and approximately 36% of UC students (University of Cincinnati, 2015) are from Hamilton County. Before joining the UU HEALTH learning collaborative, UC implemented several initiatives aimed at enhancing AHC student diversity and improving local health outcomes. These included developing a health careers pipeline program for URE students in Cincinnati public high schools, and helping to found the Strive Partnership (Strive, 2017), in which community groups collaborate to improve educational programs in Cincinnati’s urban core. Additionally, the AHC colleges sought to expand cultural awareness and competence among AHC students through course content and by exposing students to practice opportunities with vulnerable and diverse populations. In applying for the UU HEALTH initiative, UC’s original intent was to develop a data collection and analysis system that would allow AHC leaders to better track these efforts and evaluate their impact on students’ career decisions. However, soon after joining the learning collaborative, UC expanded its focus to address a spectrum of factors that drive workforce diversity, including: (1) practices within the university, (2) outreach and college and career preparedness among high school students, and (3) community and health system engagement. Strategies used in each area are summarized in Table 1 and described below.

## Getting started

The UU HEALTH initiative was implemented over three-and-a-half years, from January 2013 to June 2016. The initiative was led by the co-PIs with the support of a dedicated project director. The project team started by compiling background data about community and AHC student demographics. As noted in Table 2, the area of greatest difference was in the percentage of African Americans/blacks, who represented 25.7% of Hamilton County residents and only 8.0% of AHC students. The project team also sought to develop a comprehensive profile of the local healthcare workforce using data that local health systems report annually to fulfill Equal Employment Opportunity Commission (EEOC) requirements (United States Equal Employment Opportunity Commission, n.d.), and which they share with a regional health system trade association and improvement collaborative called The Health Collaborative (THC) for aggregation and analysis (The Health Collaborative, 2016). In examining the data fields collected by THC on behalf of their health system members, the team discovered the data fields did not include key positions, including healthcare providers (physicians, advanced practice nurses, nurses, and physician assistants), executives, and senior and mid-level leaders.

Additionally, in what proved to be a critical first step, the project team invited the UC president, executive vice president, provost, chief diversity officer, chief information officer, and AHC deans to participate on an Executive Council charged with overseeing the initiative. The team anticipated that in addition to providing guidance on the initiative’s focus, scope, and methods, the Council would serve as an important vehicle for effecting change and improving the climate for diversity within the university and AHC. In addition, faculty were engaged throughout the entire process as part of the governance in each AHC College, as members of admission committees, and in approval of the AHC enrollment targets for students.

## Practices within the university

During the early stages of the initiative, the project team’s primary focus was on strengthening AHC policies and practices related to student diversity. The involvement of the Executive Council proved critical to this work, as it required achieving a unity of vision and purpose across the AHC colleges and aligning AHC goals and practices with those of the university. The work also benefited from an ongoing, university-wide effort

**Table 1**  
UU health strategies to improve student and healthcare workforce diversity

| Component   | Strategies  |
|---|---|
| University Practices  | <ul style="list-style-type: none"> <li>• Created Executive Council to engage university and AHC leaders in UU HEALTH planning and implementation</li> <li>• Added mission-based health care to UC 2019 goals and principles and defined URM enrollment goals for AHC colleges</li> <li>• Incorporated holistic review into three of the AHC admissions processes</li> <li>• Created diversity dashboard to monitor effectiveness of diversity practices</li> </ul>                      |
| Outreach and college and career preparedness among high school students | <ul style="list-style-type: none"> <li>• Conducted focus groups of AHC's URE students to obtain feedback on recruitment/retention practices</li> <li>• Developed social media campaign targeting URE high school students</li> <li>• Collaborated with secondary schools and community partners to expand and strengthen pipeline programs</li> </ul>   |
| Community and health system engagement                                  | <ul style="list-style-type: none"> <li>• Created Community Advisory Board to guide outreach to healthcare systems</li> <li>• Developed a template for expanded health workforce data collection that was adopted by the healthcare systems</li> <li>• Collaborated with healthcare systems to develop strategies for sharing and expanding diversity practices and collaborating with academic and community groups increase student diversity and reduce health disparities</li> </ul> |

(referred to as UC 2019) to articulate UC's goals and future agenda in anticipation of its 200th anniversary in 2019. With support from the Executive Council, the project team successfully lobbied for expanding the UC 2019 guiding principles to include "mission-based health care," which emphasized UC's commitment to healthcare research, innovation, and discovery, and ensuring regional access to high quality care. The UC 2019 goals were also expanded to include developing a diverse and culturally competent healthcare workforce. Improving health disparities and workforce diversity were thus on record as central to the university's mission.

The mission-based principles and goals provided a framework for the project team's next steps, which included working with the Executive Council to examine admissions practices used by AHC colleges and the university. As background, the team shared the data it had compiled describing student and community demographics (Table 2). After noting the disparity in the percent of African Americans/blacks living in Hamilton County (United States Census, 2010), and the percent attending an AHC college, the Executive Council established an AHC enrollment target for African Americans/blacks for 2019 of 12%, a 4% increase. The project team also engaged the Executive Council in discussions about holistic review, an admissions practice that involves considering life experiences and personal qualities, along with more traditional measures of academic achievement, when making a determination whether to accept a student (Association of American Medical Colleges (AAMC), n.d.-a, n.d.-b, n.d.-c). The dean of the College of Nursing and other nursing faculty were proponents of holistic review (Glazer, Clark, & Bankston, 2015), and the College of Medicine had already begun using it in its admissions review process. The Executive Council endorsed the use of holistic review, and the College of Nursing and College of Pharmacy joined the College of Medicine in using holistic review beginning with the 2015/2016 academic year.

With work to align admissions practices underway, the project team began working on a parallel track to create a diversity dashboard that would allow AHC deans and other users to monitor and evaluate AHC's diversity efforts. This component of the initiative was led by a Data Workgroup composed of staff from the AHC colleges, the Institutional Research department, and other UC departments responsible for supporting information technology, research, diversity, and alumni activities. The Data Workgroup began by inventorying potential source material, such as data in UC's student information system and alumni

database, and information about AHC's participation in pipeline programs and courses that addressed cultural competence. The Workgroup also interviewed AHC deans and other potential data users to identify metrics useful for evaluation purposes. In developing the dashboard the Workgroup encountered multiple challenges, including data gaps and difficulties integrating data from different platforms. The Workgroup overcame many of these challenges and a first iteration of the dashboard went live in June 2016. Dashboard metrics currently available describe trends in student demographics including first generation status, unmet financial need, URE enrollment and retention rates, graduation rates, linguistic diversity, and faculty diversity. Additional metrics such as where students work after graduation, are being added as data becomes available (which are very difficult to retrieve).

### College and career preparedness and decision making among high school students

A second area of focus for the UU HEALTH project team involved increasing the number of talented URE students from the Cincinnati region who seek admission to AHC colleges. As background for this work, the team partnered with a trained facilitator to conduct focus groups with a sample of AHC's URE students, with the goal of identifying factors that lead students to attend and remain at UC. Factors that led students to attend and reasons for attrition include UC's geographic location and dynamic campus environment, affordability and financial aid, the availability and quality of affiliated hospitals and other learning resources, and the encouragement and support of UC faculty, students, and alumni. Evaluation of student perceptions of their educational experience will continue at each AHC college and the university on a yearly basis.

One of the strategies for attracting more URE students involved strengthening and expanding AHC's involvement in pipeline programs. Pipeline programs have been shown to be effective in enhancing academic performance in URE and disadvantaged students, and increasing the likelihood that students enroll in a health professions school (Department of Health and Human Services (DHHS), 2009). The project team worked to strengthen an existing pipeline program by helping to identify AHC graduate students and research professionals to serve as mentors for high school seniors. Additionally, the team partnered with Americorps volunteers to implement Health Professions Affinity Clubs (HPACs) in 10 area high schools. HPACs are based on a model created by NEOMED-CSU (Northeast Ohio Medical University, n.d.). Through the HPACs, volunteer health career "coaches" seek to stimulate interest in the health professions by introducing students to health career opportunities and engaging them in addressing local health disparities using community assets. Although no additional student support services were added by the AHC Colleges, student services were supported by leveraging existing grant supported services such as mentoring, housing, and a full-time project coordinator.

A second outreach strategy focused on the development of a social media campaign focused on URE high school students in the Cincinnati area. The campaign includes a webpage and video (University of

**Table 2**  
Demographics of Hamilton County (United States Census, 2010) compared to demographics of students at UC and AHC (2012)

|                          | Black/African American |     | White   |     | Latino/Hispanic |    |
|--------------------------|------------------------|-----|---------|-----|-----------------|----|
|                          | Number                 | %   | Number  | %   | Number          | %  |
| Hamilton County          | 205,952                | 26% | 552,330 | 69% | 20,607          | 3% |
| University of Cincinnati | 3490                   | 8%  | 30,788  | 73% | 984             | 2% |
| Academic Health Center   | 566                    | 8%  | 5395    | 76% | 205             | 3% |

Cincinnati, 2014a, 2014b [AHC Pathways]) that features URE students discussing their decision to attend an AHC college, and a Buzzfeed quiz that assesses an individual's career goals and identifies relevant health professions programs at UC. The webpage was posted on the AHC websites and websites of community partners beginning in 2014. Traffic was initially light but slowly increased with promotion by AHC and community groups and peaked in January 2016 with 1404 views.

Another outreach effort involved expanding the use of “diversity days,” a strategy already in use by the College of Medicine. Through diversity days, the College of Medicine invites URE students to take a second look at the school and meet with diverse faculty and students. In the focus groups, medical students observed that the days contributed to a more welcoming environment for students of color. In light of this feedback, the College of Medicine introduced diversity days for medical students exploring residency opportunities. Additionally, the College of Nursing built on the concept and began offering a special reception for admitted students of color in Spring 2016 that offered students an opportunity to meet with faculty, students, and alumni and learn about programs and services designed to aid their success.

### Community leadership and engagement of local healthcare systems

The third prong of the UU HEALTH initiative focused on aligning community and health system leaders around a vision to achieve health equity and address health disparities through workforce development. To champion this aspect of the initiative, the project team created a Community Advisory Board (CAB) that consisted of 35 community members representing organizations involved in health equity, education, advocacy, and philanthropy. The health system perspective was represented by THC and UC Health, with representatives from a second health system joining CAB later in the initiative. A state senator and minority leader for Ohio's 130th General Assembly served as the CAB's honorary co-chair. The CAB also benefited from the involvement of the UC president, who shared the group's passion for addressing health disparities and its desire to engage health system leaders.

During its initial meetings, the CAB examined data regarding health disparities in the Greater Cincinnati area, and data on healthcare workforce diversity both locally and nationally. Upon learning about the gaps in the workforce diversity data collected by THC on behalf of their member healthcare systems, the CAB created a Data Transparency Task Force that partnered with THC to further examine the issue. Working together, the two groups proposed expanding the collection of workforce data to include health care providers, executives, managers, and directors and drafted a data collection template to support the proposal. THC presented the proposal to its health system members in 2015. The health systems endorsed the proposal and began using the expanded template later that year. Additionally, the health systems asked THC to solicit wider community input to support an expanded commitment to workforce diversity beyond data collection and analysis.

In response to the health systems' request, the THC created a Healthcare Workforce Diversity Workgroup that was led by THC and included representatives from CAB, healthcare systems, academia, and other groups committed to the health of the community. The Workgroup outlined a series of strategies for engaging stakeholders in addressing healthcare workforce diversity and health disparities. The strategies included creating a forum for sharing best practices in support of workforce diversity; forging multi-stakeholder partnerships to nurture, attract, and retain diverse talent; and building on ongoing efforts to target and address specific health disparities. The strategies were approved by health systems on THC's Health Council Steering Committee in March 2016.

### Results

The majority of programs and changes introduced through the UU HEALTH initiative were implemented in 2015 and 2016. As a result, the

initiative's impact is still being realized. Current demographics from the four AHC Colleges included (see Table 3) showing the percentage of AHC students that are African American remains at 8% but white students in the AHC have decreased from 76% in 2012 to 70% in 2017. Also, categories of race/ethnicity unknown and two or more races has increased suggesting the groundwork for increasing student diversity has been laid and that real gains have been achieved. Preliminary Fall 2016 cohort retention rates to Fall 2017 for first-time full-time baccalaureate degree-seeking undergraduate students remain high with College of Medicine at 99% and College of Nursing at 93% (University of Cincinnati, 2017). In addition, within the College of Nursing (see Table 4), students of underrepresented race (i.e., non-white students) made up only 5% of confirmed admissions in 2014. After the College of Nursing adopted a holistic admissions process in Spring 2015, the percentage of confirmed admissions that were underrepresented students rose to 8% in Fall 2015, and to 15% in Fall 2016. The percentage of first generation students and financial need students also increased, from 12% and 6% respectively in 2014, to 29% and 39% respectively in 2016. Within the College of Nursing, the percentage of full-time URE faculty also increased, from 16.7% in 2014, to 26.3% in 2016. In addition to routine ways of recruiting faculty like advertisements in professional journals, efforts included targeting specific individuals, attending ethnic nursing association meetings, and recruiting from PhD programs with large numbers of racially and ethnically diverse nurses.

Efforts to expand the health careers pipeline programs have also begun to yield results. In 2015, high schools participating in pipeline programs accounted for 24 applicants to the College of Nursing; in 2016, they accounted for 63 applicants. Building on this track record, the College of Nursing has secured a \$2.3 million grant from the Office of Minority Health in the Department of Health and Human Services to support expanded, year-round pipeline programming for URE and disadvantaged high school students. Also in the community, health systems continue to use the expanded data collection template developed in partnership with THC to understand workforce diversity within their institutions. The expanded dataset provides the healthcare systems with a starting point for identifying and sharing best practices for improving workforce diversity.

As the UU HEALTH grant period drew to a close, the UC president noted the gains that were achieved through the initiative and the benefits to the university and community, and pledged to support the initiative for an additional three years using university funds. In taking this action, the president underscored mission-based health care as a guiding principle for the university, and UC's commitment to improving the health of the Cincinnati region.

### Discussion

Through the UU HEALTH initiative, UC laid the groundwork for increasing student diversity at AHC and healthcare workforce diversity in Greater Cincinnati, and thus strengthened the region's capability for reducing racial and ethnic health disparities. Within the university, the initiative set in motion a process through which AHC and university leaders are continuing to strengthen programs and practices that encourage and support URE students in pursuing a health professions career. Similarly, by engaging community leaders, the initiative tapped into the Cincinnati region's growing concern about health disparities and created a sense of urgency, accountability, and momentum toward enhancing workforce diversity in the region's healthcare systems. In this way, the UU HEALTH initiative served as both a catalyst and vehicle for effecting needed change.

Throughout the UU HEALTH initiative, we encountered challenges and learned important lessons that may be useful to other universities seeking to increase healthcare workforce diversity. A key challenge involved securing the buy-in and support of university and AHC leaders. The Executive Council proved invaluable in this regard. The Council provided a safe forum for university leaders to evaluate the AHC climate for

**Table 3**  
Demographics of students at the AHC (2017)

|   | Allied Health Sciences | Medicine    | Nursing      | Pharmacy    |
|---|------------------------|-------------|--------------|-------------|
| American Indian or Alaska native          | 9 (0.3%)               | 0 (0%)      | 6 (0.2%)     | 0 (0%)      |
| Asian                                     | 126 (4.1%)             | 219 (15.9%) | 91 (3.4%)    | 36 (7.2%)   |
| Black or African American                 | 252 (8.3%)             | 72 (5.2%)   | 219 (8.1%)   | 46 (9.2%)   |
| Hispanic/Latino                           | 142 (4.7%)             | 89 (6.5%)   | 143 (5.3%)   | 15 (3.0%)   |
| Native Hawaiian or other Pacific islander | 3 (0.1%)               | 2 (0.1%)    | 4 (0.1%)     | 0 (0%)      |
| Non U.S. citizen                          | 45 (1.5%)              | 106 (7.7%)  | 16 (0.6%)    | 40 (8.0%)   |
| Race/Ethnicity unknown                    | 115 (3.8%)             | 89 (6.5%)   | 144 (5.3%)   | 23 (4.6%)   |
| Two or more races                         | 98 (3.2%)              | 31 (2.3%)   | 76 (2.8%)    | 11 (2.2%)   |
| White                                     | 2262 (74.1%)           | 768 (55.8%) | 2012 (74.2%) | 328 (65.7%) |
| College total                             | 3052 (100%)            | 1376 (100%) | 2711 (100%)  | 499 (100%)  |

diversity, and to engage in the give-and-take that is required to reach agreement about needed change. Ultimately, the Council's work to establish mission-based healthcare as a guiding principle for UC's future laid the foundation for program and policy changes affecting URE student recruitment and admissions practices across the university. Our work to align and leverage the goals and interests of diverse community groups and leaders proved equally challenging. Our longstanding partnerships within the public education sector greatly facilitated our work to expand our pipeline programs; similarly, our efforts to influence the health care systems were facilitated by the CAB. Like the Executive Council, the CAB offered community leaders a forum for examining the current state of health disparities and workforce diversity, identifying areas where their interests converged, and developing a shared sense of mission and a strategy for moving forward. Partnering with an existing group (THC) assured the CAB's efforts to spur action among the region's healthcare systems would continue after the UU HEALTH initiative came to an end.

In combination, our work with the Executive Council, public schools, and the CAB highlighted the power, and indeed the necessity, of partnering with others to address problems as complex as workforce diversity and health disparities. The work in each area also provides an example of how academic nurse leaders can meet the challenge put forward in the Future of Nursing (Institute of Medicine, 2010) report to "...partner with health care organizations, leaders from primary and secondary school systems, and other community organizations to recruit and advance diverse nursing students" (p. 281). The UU HEALTH initiative provided the dean of the College of Nursing and the co-PI from the College of Medicine with a platform for engaging fellow deans and university leaders in critically examining UC's climate for diversity and for championing new practices in support of diversity within the university, community, and healthcare systems.

Among the other challenges we encountered were technical issues that complicated the development of the diversity dashboard that we are addressing with support from Institutional Research. For example, a still-unresolved problem involves identifying data sources and definitions for metrics such as "first-generation college student," which are interpreted differently for undergraduate and graduate students. We are also working to understand how the dashboard is best used by leaders and assure access to individuals involved in recruitment and retention activities. Our foray into social media was similarly challenging and introduced us to the difficulties of staying ahead of the technology curve in a rapidly changing area, and of rising above the cacophony of applications directed at the teen audience. Our experiences with student

outreach also helped us appreciate the limitations of a "one size fits all" approach, and of the need to customize outreach efforts for graduate and undergraduate programs, which target different student populations.

From an overall perspective, a key challenge involved managing change and sustaining the interest of multiple groups over a four-year period. We found that staging our interventions so that we established a track record of accomplishments was helpful, as this established our credibility and provided a foundation for other committees and workgroups to build upon. Even more important was the involvement and support of the university president. Through his participation in multiple facets of the UU HEALTH initiative, the president raised the profile of health disparities and workforce diversity as critical issues, and garnered support from leaders in the university, community, and regional health systems. Also valuable was having a dedicated project manager who had high-level communication and project planning skills and was adept at working across varying settings, and being part of a learning collaborative that allowed us to learn from other institutions and challenged us to pursue strategies that we otherwise might not have considered.

The UU HEALTH initiative at UC has several limitations that may impact its generalizability. First, the initiative's full impact on improving student diversity in AHC colleges and workforce diversity in the Cincinnati region will only be known over the longer term. We plan to continue evaluating outcomes on a yearly basis as part of the routine evaluations that occur at the AHC colleges and university. Additionally, our use of multiple, simultaneous efforts makes it difficult to assess the value and effectiveness of individual components, and a number of our strategies relied on community programs and partnerships unique to the Cincinnati area. Future process evaluation about which strategies in student outreach were most effective would be helpful. However, even with these limitations, we believe UC's UU HEALTH initiative illustrates the value of using a multifaceted, interprofessional approach to improving healthcare workforce diversity, and highlights the role that urban universities can and must play in addressing health disparities.

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**Table 4**  
Admissions to the College of Nursing: Number (Percent) of Confirmed students identified as underrepresented race, first generation, and financial need

|                       | 2014<br>Confirmed students = 166 | 2015<br>Confirmed students = 141 | 2016<br>Confirmed students = 158 |
|-----------------------|----------------------------------|----------------------------------|----------------------------------|
| Underrepresented race | 9 (5%)                           | 11 (8%)                          | 23 (15%)                         |
| First generation      | 20 (12%)                         | 31 (22%)                         | 46 (29%)                         |
| Financial need        | 10 (6%)                          | 12 (8%)                          | 62 (39%)                         |

## Other disclosures

None.

## Ethical approval

Not applicable.

## Disclaimer

None.

## Previous presentations

None.

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