

A Nursing Workforce Diversity Project: Strategies for Recruitment, Retention, Graduation, and NCLEX-RN Success

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Abstract

AIM The purpose of this article is to describe a collaborative project designed to recruit and retain students from underrepresented minorities and disadvantaged backgrounds into nursing education.

BACKGROUND Ethnic minorities remain underrepresented in the nursing workforce in comparison to the general population. The numbers of minorities enrolled in nursing education programs are insufficient to meet the health care workforce diversity needs of the future.

METHOD High school students were provided with a preprofessional education program to prepare them for admission into a nursing program. Retention strategies were implemented for newly admitted and enrolled nursing education students.

RESULTS Twenty-one high school students enrolled in a nursing education program. The students enrolled in the nursing education program graduated and passed the licensure examination.

CONCLUSION Early recruitment and multiprong retention programs can be successful in diversifying the registered nurse workforce.

KEY WORDS Diversity – Nursing Education – Student Retention – Recruitment – Academic – Community Partnership

The registered nurse workforce represents the single largest group of health care providers employed in the United States (US Department of Health and Human Services [DHHS],

2010). Of the nearly 3 million RNs residing in the United States, approximately 16.8 percent have been identified as belonging to racial and/or ethnic minority groups. The 16.8 percent constitutes a significant increase when compared to the 7.2 percent identified in 1980, yet Hispanic, black, and American Indians/Alaska natives remain underrepresented in the RN population (DHHS, 2010).

The retention of students after entry into the nursing program is critical to the development of a diverse workforce. In addition to designing the health career club, the grant funds provided the resources to establish retention programs, services, and scholarships for newly admitted or continuing nursing students in the target population.

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In 2000, the National Advisory Council on Nurse Education and Practice issued *A National Agenda for Nursing Workforce Racial/Ethnic Diversity* as a call to action to address the underrepresentation of racial and ethnic minorities in the RN workforce (DHHS, 2000). Nearly two decades later, the call to action has not been realized; ethnic minorities remain vastly underrepresented in the nursing workforce relative to their numbers in the general population. Moreover, the numbers of minorities enrolled in nursing education programs are insufficient to meet the health care workforce diversity needs of the future (Phillips & Malone, 2014).

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ized; ethnic minorities remain vastly underrepresented in the nursing workforce relative to their numbers in the general population. Moreover, the numbers of minorities enrolled in nursing education programs are insufficient to meet the health care workforce diversity needs of the future (Phillips & Malone, 2014).

This article describes two strategies used to produce a more diverse RN workforce by increasing recruitment and retention efforts and supporting students entering nursing programs through successful matriculation and graduation. The recruitment program exposed 392 high school students to careers in nursing, with a subsequent enrollment of 21 students into nursing education programs. The retention program engaged 185 students enrolled in the traditional baccalaureate nursing (BSN) program to increase matriculation and successful completion of the National Council Licensure Examination for Registered Nurses (NCLEX-RN®).

NURSING WORKFORCE DIVERSITY FUNDING

In 2009, the Department of Health and Human Services Health Resources and Services Administration (HRSA) announced Nursing Workforce Diversity (NWD) funding to increase opportunities for

individuals from disadvantaged backgrounds (economic, social, educational, and environmental) and/or racial and ethnic minorities to enter into the nursing profession. Upon receipt of a three-year HRSA NWD grant, the Saint Louis University School of Nursing (SON), a private Jesuit (Catholic) University, set out to increase the number of underrepresented minorities and/or students from disadvantaged backgrounds who enrolled, matriculated, and graduated from the BSN program. To accomplish this goal, the school developed a two-pronged approach: 1) establish a preprofessional educational program that would prepare students for a career in nursing and recruit students into the SON; and 2) develop retention strategies that would culminate in graduation and licensure examination success for admitted and/or enrolled students from the target population.

Consistent with the intent of the grant, the target population fit into one of the following categories:

- Individuals who were members of a population that is underrepresented in the RN population (HRSA, 2014).
- Individuals who were economically disadvantaged and lacked the financial or material resources for school as determined by annual income below the federal low-income threshold (Braveman, 2014).
- Individuals who, due to the combined effects of economic status, race and ethnicity, gender, and disability, were considered at a social disadvantage in society (Braveman, 2014).
- Individuals were considered educationally disadvantaged if they came from an environment that hindered their ability to obtain the necessary knowledge, skills, and abilities for success in college, including individuals with low standardized test scores, first-generation college students, students from school districts where fewer than 50 percent of students were college bound, persons for whom English was not the primary language, and persons with health challenges that limited participation in educational experiences (DHHS, HRSA, 2013).
- Individuals who lived in communities considered environmentally disadvantaged, with concentrations of poverty, crime, and limited access to green space such as parks, recreation, grocery stores, and other health-promoting conditions (Braveman, 2014).

The university's school of medicine (SOM) operated a HRSA Area Health Education Center (AHEC) program. The medical school's AHEC was designed to recruit students from minority and/or disadvantaged backgrounds into health careers, train them in rural and urban medically underserved communities, and prepare them for careers as primary care physicians. With the NWD grant funding, the SON was able to partner with the AHEC to develop a preprofessional educational program for high school students, targeting nursing as a career choice. The program focused on skills in three specific areas: academic skills, transferable life skills, and career-related skills. Students in the health career club (HCC) were required to be academically prepared for successful recruitment into a nursing education program.

RECRUITMENT AND RETENTION

Five urban high schools were identified for the preprofessional educational program, established as an HCC. These high schools were selected because they had a significantly high racial and ethnically diverse student population, were located in social and/or environmentally disadvantaged neighborhoods, and served as feeder schools to the university. Although they had high college matriculation

rates, these schools, as private schools, had no requirement to introduce health careers within the curriculum. The NWD grant provided the human and fiscal resources to establish an early connection with high school students and introduce them to careers in nursing through an HCC.

Once a student is successfully admitted into a nursing program, the next step is to provide the resources and support for retention and graduation. While many authors have pointed to success in the recruitment of minorities and students from disadvantaged backgrounds, retention of newly recruited students can be another issue (Dapremont, 2011; Gardner, 2005; Love, 2010). Challenges often encountered in the recruitment of students from underrepresented minority or disadvantaged backgrounds include discrimination, financial barriers, problems connected to academic and social adjustment, low academic achievement in high school, and lack of academic preparedness for college-level course work (Bellefleur, Bennett-Murray, Gulino, Liebert, & Mirabito, 2009; Childs, Jones, Nugent, & Cook, 2004; Igbo et al., 2011).

Dapremont (2013) and Gardner (2005) found that expanded student support services (e.g., study skills, test-taking strategies, individual meetings, mentoring and coaching, minority student support groups, and free academic tutoring services) were helpful in decreasing attrition. The retention of students after entry into the nursing program is critical to the development of a diverse workforce. In addition to designing the HCC, the grant funds provided the resources to establish retention programs, services, and scholarships for newly admitted or continuing nursing students in the target population.

The SON was aware that a three-year funding cycle would not allow for seeing newly recruited students through to graduation at a four-year institution. Instead, the plan was to leverage the NWD funding to establish programs and strategies that were sustainable beyond the funding period and would ultimately help other students. This article describes the newly established strategies for the recruitment of prospective nursing students as well as retention strategies designed for students already enrolled in the SON's nursing education program. All the strategies described were made possible through the HRSA NWD grant. This project was approved by the university's Social, Behavioral, and Education Research Institutional Review Board.

HEALTH CAREER CLUB FOR PREPROFESSIONAL EDUCATION

At each of the five schools, a faculty adviser was selected to assist with the formation and activities of the HCC. The faculty adviser served as the liaison between high school personnel and the AHEC education coordinator, who was hired to work with the associate superintendent for secondary school administration of the Archdiocese of the city.

The HCC advisers and other high school faculty and counselors were oriented to the NWD and the HCC and invited to annual in-service training sessions held at the SON. Within the three-year period of the grant, it was anticipated that a strong and lasting working relationship would be established between the faculties at the five HCC schools and SON faculty.

The AHEC education coordinator worked directly with students who joined the HCCs. Clubs met twice per month at the selected schools during study hour sessions or after school to introduce nursing careers to high school students in the target population. Initially, the announcement of the HCC was shared with all students.

Students who demonstrated high levels of interest in nursing were then provided with specific academic enrichment, life skills, and career skills programs.

Parental permission was required for students to participate in the HCC since some of the activities were planned for after school hours. In order to focus on academic skills and appropriate student development plans, students completed individualized academic and career plans (IACPs), which helped provide them with goal-directed steps.

The HCCs utilized a combination of web-based modules, didactic presentations, and experiential learning to explore health careers and inform students of the academic preparation required for nursing and other health careers. Health profession/nursing students were periodically scheduled to interact with the HCC students as part of the program and share firsthand experiences of what it was like to be college students in a health profession or nursing. Two products purchased for the program were the Health Center 21 Life Skills curriculum (Applied Educational Systems [AES], 2014) and the *7 Habits for Highly Effective Teens* book (Covey, 2014) and program (available at <http://store.franklincovey.com/introduction-to-the-7-habits-of-highly-effective-teens-workshop-full-day-webinar>).

The Health Center 21 consists of online modules based on national standards for preparing students for careers in health care. The program supports the practice of goal setting and time management and the development of self-confidence and self-efficacy through problem-solving and analytical skills designed to assist students in future test-taking settings (AES, 2014). The curriculum provided students with experiential learning activities in nutrition, pathologies, and anatomy. The modules also helped students earn CPR certification. Students completed the assigned Health Center 21 modules as follows: Legal and Ethical Responsibilities in Health Care, Medical Terminology, Health Communications, Anatomy and Physiology, Medical Mathematics, Wellness and Nutrition, Understanding Client Status, CPR Methods, Emergency Care, Health Professions Personal Qualities, and Health Care Careers.

The *7 Habits for Highly Effective Teens* program is designed to educate students about multiple life skills. Components of the 7 Habits program were built into the IACP process so students could practice the skills and apply them in different HCC activities throughout the year.

The university's Adventures in Medicine and Science (AIMS) anatomy lab was used to provide hands-on dissection experiences and other human anatomy workshops with cadavers. Students were exposed to the nursing clinical simulation lab for hands-on CPR training and first aid and practiced basic skills such as assessing vital signs.

The experiential learning activities introduced students to the various nursing roles and provided students opportunities to shadow staff nurses. The students attended a five-day summer camp experience at the SON that focused on academic enrichment to prepare for college readiness and a nursing career.

A high score on the ACT is required for admission into a nursing program. The ACT composite score, along with high school grade point average (GPA), can be predictive of achieving academic success and degree completion (ACT, 2015). Thus, performing well on standardized tests is essential for students who desire to enroll in and graduate from a nursing education program. To ensure that HCC participants were prepared for the ACT, funding was provided for enrollment in the Kaplan Review ACT Prep course (an eight-week, 30-hour course) to supplement in-school and program activities and support the needs identified for students through the

IACP. Emphasis was placed on helping students develop the appropriate analytic test-taking skills that have been shown to improve ACT scores.

RETENTION STRATEGIES

The SON developed new and expanded retention services for the target population. Students from the target population were identified proactively upon entry into the SON and were helped to engage in mentoring and peer counseling before they experienced academic difficulty. Students were also provided with links to university resources and were referred to services, when appropriate, to improve and enrich their academic performance. Students took part in programs designed to foster increased connectedness within the university and the medical and nursing communities.

Personnel

Prior to obtaining the NWD, no individuals at the SON had been assigned to retention. The grant funds allowed the SON to hire a full-time retention specialist to work exclusively with students in the target population and establish proactive retention strategies. Minimum qualifications for the position were a bachelor's degree (master's preferred), supplemented with two years' experience working in an academic setting with at-risk students. Major responsibilities of the retention specialist included:

- Working with faculty, staff, and students to identify retention risk factors.
- Developing an assessment protocol to identify at-risk students.
- Developing an individual retention plan for each identified at-risk student focusing on self-advocacy, time management, setting priorities, understanding learning styles, and study skills.
- Referring students to appropriate university support services (Student Success Center, Disability Services, Student Counseling, Student Financial Aid, and ESL Services).

The retention specialist held weekly meetings with students who had marginal GPAs (near or < 2.5 on a 4.0 scale) and then determined the critical points within the semester that meetings should occur to discuss the students' academic progress. The retention specialist developed a tracking system to monitor the SON's overall student retention rate and retention rates by race, ethnicity, gender, and if students were first-generation college students. Students who were on academic probation who were previously dismissed but reinstated into the program and/or students who demonstrated high-risk academic behaviors were closely monitored. The database allowed for tracking each student's use of the following services: tutoring, adviser meetings, student counseling, and/or disability services.

The retention specialist worked closely with key university personnel, such as the advisers in the Student Success Center, to direct students to the appropriate resources as needed. The Student Success Center provides multiple services as follows:

- *Academic skills* Tutoring, time management, exam preparation (essay, multiple-choice, true/false), note-taking skills, reading comprehension and retention, and support in forming a study group.
- *Writing skills* Meeting with a writing consultant and using various writing guides (required styles, breaking down large projects).

- *Tips on meeting with your professor* Counseling and advising for planning an in-person meeting and/or contacting a professor by email.

The university had an established system whereby each student was assigned an academic adviser and SON faculty mentor who could offer academic advice, support, encouragement, and link the student to academic and community resources when the need was identified. (See Table 1.) Working as a team, the faculty mentor, academic adviser, and retention specialist served as a bridge for students, each providing patience, presence, and encouragement and creating a safe place for students to get assistance (Amaro, Abriam-Yago, & Yoder, 2006).

Open Meetings

In addition to providing academic support for students in the target population, the retention specialist held monthly “open” meetings after classes where snacks and beverages were provided. The purpose of these meetings was to provide opportunities for students to socialize, discuss their feelings about stress, connectedness, isolation, self-efficacy, and other perceptions thought to be barriers to academic success. Participants shared that the open forums enabled them to develop a sense of community among peers and share experiences, including successes, failures, and lessons learned, and get feedback from the retention specialist on ways to address perceived barriers. The following themes were consistently identified at the open meetings:

- Challenges balancing school, life, and work
- Conflicts between family responsibilities and the need to work or study

- The need for time management skills because of financial difficulties and the need to work in addition to full-time study
- The need for tutoring services
- Opportunities for group study so that students could learn from each other
- Feelings of not fitting in because of not being part of the majority race.

Role Modeling and Mentorship

Role modeling and mentorship activities have been identified as effective facilitators of academic success for minority students (Amaro et al., 2006). Providing successful ethnic role models has been found to be valuable for minority student success (Yoder, 2001), with mentors serving as role models for the acquisition of professional behaviors (Payton, Howe, Timmons, & Richardson, 2013).

With the NWD grant, new programs for mentoring and role modeling were proactively introduced. An informal, peer-to-peer mentoring group that paired incoming freshmen with older, more experienced nursing students was established to increase social connectedness, academic success, and overall retention. Dapremont (2011) found that most students viewed peers as a necessary support and expressed the need to identify with other students of similar backgrounds early in the nursing program.

Faculty mentoring has been shown to increase student motivation, foster independence, stimulate critical thinking, and enhance one’s commitment to learning (Crooks, 2013; Payton et al., 2013). Mentorship has also been noted to provide support for academic success and has a particularly supportive effect in promoting the retention of African American students (Escallier & Fullerton, 2009).

The grant included support for attendance at conferences to expose students to successful role models and support opportunities

Table 1: Faculty Mentor and Academic Advisers Definitions

Faculty Mentor	Academic Adviser
<ul style="list-style-type: none"> • Faculty mentors are full-time members of the university’s teaching faculty. Their primary responsibilities include teaching and research in an academic department. In this role, they: 	<p>Academic advisers are full-time staff members at the university whose primary job is advising students. In this role, they:</p>
<ul style="list-style-type: none"> • discuss students’ personal educational and career goals; 	<ul style="list-style-type: none"> • aid students in developmental transitions (especially from high school to college);
<ul style="list-style-type: none"> • discuss academic courses of study, experiences, and resources as they relate to the Jesuit model of education, help students foster relationships with faculty and staff in their college/school communities, and 	<ul style="list-style-type: none"> • assist students in creating their curriculum plans, including review of academic performance;
<ul style="list-style-type: none"> • discuss academic performance as it relates to post-baccalaureate pursuits (i.e., opportunities for career, professional school, graduate school). 	<ul style="list-style-type: none"> • clarify the program/curriculum requirements particularly as they relate to the Jesuit model of education;
	<ul style="list-style-type: none"> • introduce students to resources for academic and career success, and
	<ul style="list-style-type: none"> • clarify purpose and roles.

Note. These definitions are adapted from the Saint Louis University (2015) Integrated Advising and Mentoring System.

for faculty mentoring; prior to the NWD, funds for supporting students' attendance at conferences were not available. Conference attendance included the Endowed Lecture Series, which honored the first African American SOM department chair at the university, the National Black Nurses Association Conference, the state National Student Nurses' Association conference, and the state Minority Nurse Conference, which highlighted national contributions of minority nurse leaders and scholars.

Scholarship Support

The NWD grant enabled the SON to provide scholarship support for students in the target population if the student had successfully completed the first two years of study and was enrolled in the junior or senior year of the nursing education program. Scholarship eligibility and selection criteria were based on the NWD grant guidelines. A matrix of students who met the eligibility criteria (financial need, underrepresented minority in nursing and/or disadvantaged, and the minimum GPA for program progression) was developed, along with a process for the review of applicants. The scholarship committee reviewed the applications, candidates were identified, and \$5,000 scholarship stipends were awarded to help offset educational debts and relieve financial burdens.

The upper division scholarship support was intended to decrease the need for students to work while engaged in complex course work and clinical practice. The SON was able to leverage other scholarship monies from private foundations to provide additional support for students based on need. Scholarships administered during the program totaled \$100,000.

Standardized Testing

The SON provided standardized practice tests and books on test-taking strategies to enhance matriculation through the program and increase the likelihood of success on the licensure exam. Students were advised to take several practice tests on a weekly basis with the goal of achieving a predetermined score. Students who did not achieve the desired score would go through remediation activities until the desired score was achieved.

The retention specialist created a database to allow analysis of standardized exam and course grade results. The following information was included within the database: name, gender, ethnicity, first-generation status, standardized specialty exam scores, standardized comprehensive exam predictor scores, and letter grades for the following courses: Pathophysiology, Pharmacology, Anatomy, Physiology, Adult/Older Adult Theory, Maternal/Child Health Theory. This database allowed for the tracking and monitoring of students so that at-risk students could be identified early and remediation activities implemented.

Course faculty, faculty mentors, academic advisers, and the retention specialist met with the students in the target population a minimum of twice per semester, individually and collectively. Most students required more frequent meetings based on academic progress and/or need for remediation activities or other university services. Each student in the target population received a stipend for enrollment in a standardized NCLEX-RN preparatory course immediately following graduation.

PROJECT OUTCOMES

The HRSA NWD grant was a three-year project funded from 2010 through 2013. Following are highlights and a summary of the project's success.

Over the three project years, 392 minority and/or disadvantaged students attended the HCCs. Of these students, 310 (79 percent) expressed intent to pursue a health-related or nursing career. At the end of the project, 45 students had enrolled in a health career major in college and 21 students had been admitted to a nursing program. However, of these 21 students, not all were able to matriculate to the NWD-funded SON program due to tuition costs; several enrolled in a public university or community college nursing program that was less costly. Socioeconomic status influences program choice (Baker, 2010).

Prior to the NWD grant, there was no formal tracking system in place to identify and track students from the target population. The tracking system established by the grant enabled the early identification of underrepresented students and led to an increase in academic and social support for students in the target population.

One-on-one meetings between freshman students from the target population and the retention specialist increased each year, from 69 students the first year, to 181 the second year, to 303 the third year.

The cumulative GPA of freshmen in the target population increased each semester after the retention specialist was in place. The baseline freshmen cumulative GPA prior to the retention specialist services was 2.82; after one full year of services, the cumulative GPA was 2.92; and at year 3, it was 3.02.

Retention rates for the target population increased from 84.6 percent to 93.4 percent after the retention specialist was hired. At baseline, 9 percent of the overall target population (21 students) either left the university, changed majors, or were dismissed from the nursing program. This number decreased to 6 percent (13 students) with the addition of retention services. Eight of the 13 students remained enrolled at the university and were counseled into a different major.

The dean of the SON was able to obtain the funding needed to make the retention specialist position a line item in the school's operating budget. This action ensured the position would remain beyond the grant-funding period and become a permanent part of operating expenditures.

Within the three-year grant period, 185 nursing education students were involved in the retention program: 72 in Project Year 1 (PY 1), 54 in PY 2, and 59 in PY 3. In PY 1, 68 of 72 students from the target population completed the nursing education program (94 percent); 76 percent (52 of 68) passed the licensure exam on the first attempt and 19 percent (13 of 68) passed on a subsequent attempt; 2 percent (2 of 68) did not pass the exam. In PY2, 48 of 54 students from the target population completed the nursing education program (89 percent); 81 percent passed the licensure exam on the first attempt and 13 percent passed on a subsequent attempt; 2 percent (1 of 48) did not pass the exam. In PY3, 45 of 59 students from the target population completed the nursing education program (76 percent); 80 percent passed the licensure exam on the first attempt and 11 percent passed on a subsequent attempt. Two students in PY3 did not pass the exam; there is no licensure exam information on three students, and three others did not take the exam.

It is noteworthy that more stringent progression requirements were implemented for the entire nursing program during the three-year project period; students had to pass all exams with a grade of 77 percent or higher prior to grades from papers or projects being added to the final grade. This action may account for the decrease

in graduation rates of the target population over the three-year project period, although a clear association was not established.

DISCUSSION AND LESSONS LEARNED

The HCCs proved more challenging than anticipated due to opening the clubs to freshman through senior year high school students. The ability to follow the freshmen who participated in the HCC was limited by the three-year project period. None of the students were able to realize the full benefit of the preparation and retention strategies.

Ideally, these strategies should begin in the freshman year of high school and continue through college graduation followed by sitting for the licensure exam. A future consideration could be to limit the HCC participation to junior and senior year high school students, which would provide pre-entry preparation and follow-up through college enrollment. However, this approach would disadvantage the freshman and sophomore students' ability to attain the pre-entry preparation at the onset of enrollment in high school.

Many of the high school freshmen and sophomores who participated in the HCC had either not graduated high school or were just attending commencement by the time the funding period ended, so college matriculation data were not available. However, the skills and exposure to the HCC remained strong at the end of the funding period. Applications were submitted for continued HRSA NWD funds, but these applications were not successful. Fortunately, a limited component of the HCC will be sustained through the AHEC, which will continue to track students enrolled in the HCCs, including students in the program at the SOM.

As a result of the HRSA NWD grant, the SON was able to establish a proactive sustainable retention program for students from underrepresented or disadvantaged backgrounds, design mentorship opportunities, develop a tracking system for the early identification of and intervention for at-risk students, and implement sustainable strategies to help bolster the first-time pass rates of students who were at risk for NCLEX-RN failure. The project, as described in this article, can be replicated by other colleges and universities through partnerships with universities that sponsor AHEC programs or community-based organizations and local high schools that offer similar services. These efforts show promise of advancing diversity in nursing education and confirmed the work of Dapremont (2013), who found that factors critical to the successful retention of underrepresented students or students from disadvantaged backgrounds included the ability to collaborate with community partners to provide academic and financial support, mentorship, and the provision of peer and social support.

The benefits associated with a diverse health care workforce include improved quality of care, enhanced cultural competence, expanded access to services for minority patients and underserved communities, improved health and health care research, and other societal benefits (LaVeist & Pierre, 2014). Students from underrepresented and disadvantaged backgrounds tend to serve populations with similar backgrounds, and these populations have been found to receive better interpersonal care from health care providers of the same ethnicity and/or background (Gilliss, Powell, & Carter, 2010; Dapremont, 2013). Most important is that the RN workforce should better reflect the increasingly diverse population. One avenue to accomplish the goal of increasing the number of underrepresented and disadvantaged groups in the nursing workforce is to develop better recruitment, retention, and graduation strategies in nursing education programs.

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