A Community College Model to Support Nursing Workforce Diversity

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ABSTRACT

Community College of Allegheny County (CCAC), Allegheny Campus, is situated on the North Side of Pittsburgh. The neighborhood is 60% African American. At the time of the Health Resources and Services Administration (HRSA) application, approximately one third of the students admitted to the program were African American, less than one third of whom successfully completed it. With the aid of HRSA funding, CCAC developed a model that significantly improved the success rate of disadvantaged students. Through the formation of a viable cohort, the nursing faculty nurtured success among the most at-risk students. The cohort was supported by a social worker, case managers who were nursing faculty, and tutors. Students formed study groups, actively participated in community activities, and developed leadership skills through participation in the Student Nurse Association of Pennsylvania. This article provides the rationale for the Registered Nurse (RN) Achievement Model, describes the components of RN Achievement, and discusses the outcomes of the initiative. J Nurs Educ. 2015;54(2):65-71.

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ommunity college students represent nearly half of all undergraduate students in the United States. These students differ in many respects from those entering baccalaureate colleges. Data from the American Association of Community Colleges (AACC, 2013) describes community college students on the basis of the following characteristics: more than 60% of community college students place into developmental math and English courses, indicating their lack of preparedness for the rigor of college coursework; the majority (60%) of community college students are of nontraditional college age, with an average age of 28 years; 40% of community college students are the first generation in their families to attend college; approximately 17% are single parents; more than 12% of all community college students have disabilities; and most students work full or part time while attending college. The unique challenges of community college students establish the need for a unique program to support the goals of those individuals seeking careers in nursing (AACC, 2013).

Through the support of two consecutive grant awards from the Health Resources and Services Administration (HRSA) Nursing Workforce Diversity, the Community College of Allegheny County (CCAC) developed a viable model for educating and supporting underrepresented students (Note: In this article, the terms students with disadvantages, students at risk, underrepresented, minority, and diverse are used interchangeably.) who are pursuing nursing careers. CCAC’s model focuses on the HRSA’s three outcomes: recruitment, retention, and graduation. Key components of the model are: (a) a high school recruitment program; (b) a comprehensive college-level, pre-entry year of preparation; (c) a cohort model of inclusion; (d) tutoring; (e) case management; (f) academic support; (g) social and human services support; (h) public health outreach; (i) targeted National Council Licensure Examination (NCLEX®) preparation; and (j) a transition program from RN-to-baccalaureate (BSN) and master’s of nursing (MSN) programs. This article provides the rationale for the Registered Nurse (RN) Achievement Model, describes the components of RN Achievement, and discusses the subsequent outcomes of the initiative.

LITERATURE REVIEW

Nursing Shortage

A shortage of RNs reached a critical level in the United States one decade ago. In response to this nursing shortage, undergraduate nursing programs struggled to increase their
enrollments. Community colleges, in particular, expanded enrollments in their nursing programs by sizable numbers in an effort to increase graduation rates among nursing students. Compounding the shortage of RNs is a lack of diversity in the nursing field. The Institute of Medicine (IOM) examined the relationship between the diversity of health care workers and the quality of patient outcomes for diverse populations in its landmark study, Unequal Treatment (2002). In that study, the IOM documented ongoing health disparities among diverse groups whose quality of health care is inadequate and related the higher rates of illness and disease and increased numbers of premature deaths among minority populations to the shortage of underrepresented health care providers (IOM, 2002). This reality has been identified as a critical issue by governmental agencies, private foundations, and public sector organizations (BlueCross BlueShield, 2013; Bureau of Health Professions, 2004, 2009; Robert Wood Johnson Foundation, 2013). The need for diversity among health care providers has been a recognized issue for the past two decades or longer. For example, Healthy People 2010 proposed “improved access to high quality healthcare” (U.S. Department of Health and Human Services, 2000, p. 562) and an “increase in the proportion of all degrees awarded to underrepresented racial and minority groups” (U.S. Department of Health and Human Services, 2000, p. 542). More recently, Healthy People 2020 argued for the need for diversity among health care providers to improve patient outcomes (U.S. Department of Health and Human Services, 2013). Evidence exists that the nursing workforce is slowly and gradually becoming more diverse. The HRSA reported that the percentage of diversity among nurses increased from 4% to 8% between 2004 and 2008 (Bureau of Health Professions, 2009). However, despite this increase, the 12.3% of the nation’s RNs representing racial or ethnic minorities does not approach the diversity of the nation, which is currently more than 25% and is growing. The IOM reported that the growing diversity of the nation is a result of increased immigration, increased globalization, and the growth of minority groups that are rapidly approaching majority (IOM, 2002).

Barriers Faced by Students of Diverse Backgrounds

As underrepresented students of diverse ethnic and racial backgrounds pursue nursing careers, they face challenges unique to their situations. As identified in the literature, these barriers include the lack of financial support, requiring students to work long hours while attending school; the lack of emotional and moral support, leading to feelings of isolation and loneliness; and the lack of adequate academic preparation or guidance (Etowa, Foster, Vukic, Wittstock, & Youden, 2005). In addition, many reports note that the lack of sophistication among this group of students in the use of computer programs, such as Microsoft® Outlook and Microsoft® Access, together with the lack of availability of computers in their homes, creates additional barriers to completing research and assignments. Students also cite a lack of cultural competence among majority peers as a barrier to success (Loftin, Newman, Dumas, Gilden, & Bond, 2012). Because of the underrepresentation of minorities in the nursing profession, an insufficient number of established role models is also identified as a barrier for underrepresented nursing students (Manney & Fonza-Thomason, 2010). Further, student perceptions concerning the views of faculty and student peers about their responsibilities and academic performance related to race and the absence of a welcoming environment are also identified as barriers (Barbee & Gibson, 2001; Evans & Greenberg, 2006).

Recruitment of Students of Diverse Backgrounds

In recruiting students of diverse backgrounds into the nursing profession, different strategies have been used that may be models for best recruitment practices. The literature identified several of those targeted strategies. Swinney and Dobal (2008) reported on the embracing the change (ETC) model for recruiting diverse students through a network, beginning at the community level, with the creation of nursing clubs in minority neighborhoods. This program provides support for the target population in the form of tutoring and training of certified nursing assistants and advertising to minority students concerning the availability of financial aid in the form of scholarships, paid internships, and stipends. Lehman College of the Bronx was able to increase the proportion of Hispanic nursing students from 8% to 26% in the first 3 years of their recruitment project by offering individualized support for Hispanic students recruited from local high schools (Georges, 2012). Recruitment strategies included parental involvement, together with tutoring, mentoring, and coaching services. Washington’s ALCANCE (the Spanish translation of reach) program actively recruited students in middle school to establish a pathway to nursing (Evans, 2007). Target populations were American Indian and Hispanic students, using an ambitious marketing campaign in Spanish and tribal newspapers and radio programs. Manney and Fonza-Thomason (2010) cited the importance of mentoring and shadowing opportunities in developing recruitment strategies. Coppin State Academy, in partnership with the Baltimore City Public School system, created a year-long academy to prepare diverse students for entrance into a baccalaureate nursing program (Gordon & Copes, 2010). Furthermore, some studies cite the importance of focusing on minority students in recruiting for nursing programs (Campbell-Heider, Sackett, & Whistler, 2008; Ume-Nwagbo, 2008; Lopez-Bushnell, Gardner, Sanchez, & Miller, 2010). A growing body of research demonstrates that racial and ethnic disparities in health care constitute a national crisis, and nurses who can speak the language and understand the culture, values, and beliefs of their patients may provide better, culturally congruent care to clients from diverse backgrounds and communities that are underserved (Lopez-Bushnell et al., 2010; Ume-Nwagbo, 2008).

Retention Strategies

Beyond the recruitment of underrepresented individuals into nursing programs, retention is a critical issue among this group of students. Many different approaches have been used to improve the retention rate of nursing students who face disadvantages. Escallier and Fullerton (2009) highlighted the importance and benefit of the mentorship process, including increased student motivation, fostering of independence, and commitment to learning, as well as the socialization of stu-
dents to nursing as a profession. Wilson, Sanner, and McAllister (2010) reported that a combination of services, such as mentoring and advising, helped to retain students who may have been underprepared for rigorous nursing programs. Mentoring programs, particularly faculty mentoring, have been successful in enhancing student relationships and perceptions of nursing as a profession (Georges, 2012; Wilson, 2010). Programs providing study skills, test-taking skills, communication, and critical thinking programs, along with comprehensive academic support systems have contributed to student retention (Evans & Greenberg, 2006; Gordon & Copes, 2010; Igbo et al., 2011). A key factor in supporting student retention among students with disadvantages is financial support, which includes funds for transportation, books, and child care (Georges, 2012; Manney & Fonza-Thomason, 2010). Another essential component to student retention is cultural competence training, which benefits students in discerning their personal comfort level and in treating patients who are culturally, racially, or ethnically different from themselves (Escallier & Fullerton, 2009; Wilson, Sanner, & McAllister, 2010).

DEVELOPMENT OF THE RN ACHIEVEMENT MODEL

CCAC is the largest provider of educational services in Pennsylvania, with an annual enrollment of 33,000 credit students and 31,000 noncredit students. With nursing programs offered at five campuses, CCAC has been recognized as graduating the greatest number of nursing students in the nation among 2-year colleges. During the 2007-2008 academic year, among the 300 nursing students at CCAC’s Allegheny Campus, 189 students were disadvantaged economically, educationally, or by race or ethnicity. Among minority students who were accepted into the nursing program, there was a 54% attrition rate during the first year of enrollment in the program. Of those students who graduated from the program, only 65% passed the National Council Licensure Examination (NCLEX) on the first attempt, compared with 74% of nonminority students. On the basis of these statistics, the nursing department chair and faculty identified the need to improve the retention rate among this group of students through its RN Achievement model and to increase access to the nursing program for students of diverse backgrounds who faced two significant barriers: entrance into the program and risk of failure while in the program. In 2008, CCAC applied for and was awarded its first HRSA Nursing Workforce Diversity grant to address these two barriers in its nursing program specifically at the Allegheny Campus, an urban campus with the greatest number of diverse students. In 2011, CCAC received a second HRSA grant to continue to improve the model. Five years after the first HRSA grant was awarded, students in the RN Achievement model who face economic, education, racial, or ethnic disadvantages are graduating at a rate of over 85%, and 100% of these most recent graduates passed the NCLEX on the first attempt.

COMPONENTS AND OUTCOMES

The following is a discussion of how the RN Achievement model has evolved since its inception in 2008 through June 2013. The model is displayed in Figure 1. The anticipated length of the program is 3 years.

RECRUITMENT

In efforts to recruit students to the RN Achievement model, the team was composed of the RN Achievement project coordinator, a social worker, and case managers engaged in the marketing campaign. At the student level, information was mailed to students who were identified as prenursing. Students applying to the program were required to write a letter of application and include a brief essay indicating why they wanted to pursue a career in nursing. The recruitment endeavor also included instructors of prerequisite courses targeted to students preparing to enter the nursing program (e.g., anatomy, physiology, chemistry, microbiology). These instructors were notified of information meetings about RN Achievement and were asked to relay RN Achievement information to their students. RN Achievement also includes a high school recruitment component, in cooperation with the Pittsburgh Public Schools, that provides information about nursing career pathways to students in the school district. These and other recruitment strategies improved the recruitment of diverse and disadvantaged students into the CCAC nursing program from 27% in 2008 to 33% in 2013.
NURSING WORKFORCE DIVERSITY

RETENTION

Pre-Year Cohort
The RN Achievement model provides for a new pre-year, two-semester experience designed to allow students to prepare for entrance into the nursing program through an orientation-based curricular experience. (The pre-year is modeled in Figure 2). The first-semester pre-year course focuses on study skills, the formation of study groups, and critical thinking skills to promote success in college. Student support services provided by the college were also addressed (e.g., library, the tutoring center, the PLATO (Programmed Logic for Automatic Teaching Operations) computer-assisted instruction system, advising). The first-semester pre-year class was planned around assigned readings, small group discussions, and writing. The second-semester course focused on leadership. Discussions and assignments related to diversity and the social determinants of health were provided. As part of the program, students were assigned a paper in which they were to analyze the communities where they live in terms of resources and problem areas. Over the 5-year period between 2008 and 2013, 118 students participated in the pre-year cohort of the RN Achievement model.

During the summer between the conclusion of the pre-year program and entrance into the nursing program, RN Achievement model students were provided with a unique exposure to the health care environment by training to become certified nurse assistants (CNAs). In the state of Pennsylvania, individuals who work with residents of long-term care facilities are required to be CNAs. The goal of developing the CNA course for the prenursing cohort was to provide students with an early opportunity to administer hands-on care to dependent adults in this setting and to have a viable means of employment while they were in the program. In the summer between the pre-year and the first year of the nursing program, the cohort met for class and clinical rotation every day for 4 weeks of intense instruction under the direction of a certified nurse trainer (T.R.) who was also the nursing tutor. Under her leadership, the students in the CNA course developed a reliance on each other and formed strong relationships that were sustained throughout the program. Through this summer learning experience, the students acquired an understanding of the nature of nursing as a caring profession and earned a marketable credential and a future source of income while in the nursing program.

Nursing Students
Integral to the RN Achievement model is the concept of the cohort—a small community of students that supports and accommodates individual student needs. The mutual support of a cohort unites students in a way that can be understood only by veterans who have experienced clinical nursing. In a hospital setting, nursing students experience the anxiety of functioning in a highly stressful environment, requiring them not only to learn but to provide a service to extremely vulnerable individuals. Commenting on the cohort model, one student remarked during a focus group interview, “We’re all each other’s resources. We’re friends and family.”

With the support of the RN Achievement team, the cohort had access to useful information such as advising, financial aid, college services, and guidance in navigating an institution of higher learning. Other key members of the RN Achievement program staff (case managers, social worker, tutors) served as strong role models and provided an individualized approach to solving problems, such as those that are personal, academic, or financial in nature. The acculturation component of the RN Achievement model instilled confidence in members of the cohort and provided guidance as they worked toward successful completion of the nursing program in achieving their ultimate role as nursing professionals.

The Table provides a breakdown of the descriptive characteristics of the total population of students participating in RN Achievement during the 5-year period. Of the 308 students who participated in RN Achievement in the first 5 years of the model, 44% were African American (one of the populations targeted related to diversity), compared with the composition of the general nursing program at CCAC, Allegheny Campus, which is currently 21%.

Services to Support Retention
Case Managers (Mentoring). In an effort to promote academic success and decrease the attrition rate of students in the

Figure 2. RN Achievement Pre-Year model and course listing. Note. CNA = certified nurse assistant.
nursing program, nursing faculty assume the role of case managers and serve as mentors to students. The role of the case manager is to closely follow student progress and to meet with the student on a regular basis. Some students who become at risk academically are reluctant to seek help, but through the mentoring of their case manager they are directed to sources of needed assistance, whether it is from the social worker, the tutor, or the clinical instructor.

Social Worker. Studies have concluded that nursing students experience a high level of stress (Jimenez, Navia-Osorio, & Diaz, 2010; Pulido-Martos, Augusto-Landa, & Lopez-Zafra, 2011). In addition, “Clinical practice has been identified as one of the most anxiety producing components in nursing programs.” (AHNA, 2013, para. 2). Acknowledging the stressors that nursing students face related to class preparation, examinations, and grades, as well as social factors, and in an effort to help reduce the stress level, the RN Achievement model provides the services of a social worker to students. Beyond the stressors related to academics, students face many other social issues related to housing, child care, domestic violence, and finances. The social worker has been effective in providing a safe haven where students can “just talk” to a professional who can offer support and encouragement.

Cohort Classes. Included in the curriculum were special RN Achievement cohort courses, coded “NSG,” that were classified as electives and were planned to accompany the regular nursing courses. Taught by case managers together with an RN Achievement tutor, these courses promoted guided study groups and engaged students in simulation learning activities and unfolding case studies. These courses also incorporated gaming as a teaching strategy in the classroom.

Tutoring. In supporting student academic success and promoting a learning community, the RN Achievement model encourages active communication among instructors, the case manager, and an RN Achievement tutor. Licensed nurses serve in the capacity of RN Achievement nursing tutors and attend classes with students. This arrangement provides tutors with the opportunity to learn about an instructor’s course requirements and student expectations first-hand. Beyond the classroom, students are encouraged to schedule regular appointments with RN Achievement tutors to work individually or in small groups.

Financial Support. Students in the prenursing program receive stipends provided through the HRSA grant to support living expenses while they attend CCAC. After being enrolled in the nursing program, students receive a small scholarship to cover additional educational expenses. Many students also received financial aid through the regular college program.

Transition to BSN Degree and Future Education. As students begin their studies in the RN Achievement model in pursuit of their Associate’s Degree in Nursing (ADN), they learn that it is the first step on their career path to the nursing profession. Students receive guidance in course selection to ensure that the credits will be transferable to a baccalaureate nursing program. In addition, recruiters from 4-year colleges in the area are invited to give presentations in these classes. The recruiters address the importance of earning a BSN degree and present the requirements for the program they represent. These class presentations evolved into a BSN Fair, where all the local BSN and MSN programs came to recruit students. This is an opportunity to involve the entire nursing student body, spotlight the imperative of furthering one’s education, and build momentum toward acquiring the BSN and MSN degrees.

Also, students are advised of appropriate courses in which they can enroll at CCAC that can be applied toward the BSN. Students are encouraged early in the RN Achievement program to consider selection of a transfer college so that any additional courses taken to fulfill their commitment as a full-time student or during the summer can count toward their BSN degree.

Community Service. As a means of validating the professional role of nursing in the community, the program coordinator actively pursues involvement with volunteer agencies that provide services in the community. This experience provides

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Pre-Year (n = 118)</th>
<th>Nursing 1 (n = 89)</th>
<th>Nursing 2 (n = 101)</th>
<th>Overall (N = 308)</th>
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<td>29</td>
<td>30</td>
<td>29</td>
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<td>Gender</td>
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<tr>
<td>Male</td>
<td>19 (16%)</td>
<td>17 (19%)</td>
<td>32 (32%)</td>
<td>68 (22%)</td>
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<tr>
<td>Female</td>
<td>99 (84%)</td>
<td>72 (81%)</td>
<td>69 (68%)</td>
<td>240 (78%)</td>
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<td>Race/ethnicity</td>
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<tr>
<td>Caucasian</td>
<td>37 (31%)</td>
<td>40 (45%)</td>
<td>58 (57%)</td>
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<td>36 (40%)</td>
<td>28 (28%)</td>
<td>135 (44%)</td>
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<tr>
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<td>3 (3%)</td>
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<tr>
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<td>3 (1%)</td>
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<tr>
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<td>3 (3%)</td>
<td>2 (2%)</td>
<td>10 (3%)</td>
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<tr>
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<td>–</td>
<td>1 (1%)</td>
<td>4 (1%)</td>
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</table>
students with the opportunity to utilize the skills learned in the classroom. Through this initiative, RN Achievement students have participated in a variety of service activities, including teaching health to school-age children as part of Pumpkinfest, sponsored by a local hospital. Other students assisted a community health center that provided care to local residents who had limited access to care by administering flu shots and taking blood pressures. These projects evolved into large-scale community service activities, entirely planned and coordinated by the students, culminating in a Picnic in the Park for homeless residents of the community, who were offered a meal, health screening, clothing, and other support services.

RESULTS

NCLEX Success

The RN Achievement model provided NCLEX preparation classes after course completion and before graduation for its students. Assessment Technologies Institute’s (ATI™) NCLEX online practice offered benchmark testing and individualized study plans in advance of the test and subsequently offered a 3-day, face-to-face NCLEX review as part of the service. Most students took advantage of this opportunity and passed the examination on their initial attempt. The overall pass rate is 87.5%. In the fall of 2012, the pass rate was 100%. This is 17.2% higher than the overall pass rate for nursing students. (Note: In 2012, the total nursing student pass rate at CCAC was 82.8%.)

Postgraduate Follow Up

After successfully completing the RN Achievement model, graduates are securing employment in nursing. A majority of students are working in the medical–surgical, intensive care, and emergency care settings. Results from a follow-up survey conducted in spring 2013 indicate that 82% of RN Achievement graduates are employed, and 78% of those employed are working full time. Students who were not working full time indicated that they were attending school, did not have a work visa, or had applied for employment and were waiting to learn about a hiring decision.

DISCUSSION AND CONCLUSION

As in many initiatives that are created through grant funds, sustainability in terms of capacity building and financial support is often a challenge. It is expected that some components related to capacity building will continue. For example, recruitment of disadvantaged high school students attending Pittsburgh Public Schools is ongoing. It was learned from the initial implementation of the high school component that a significant barrier to recruitment is a general lack of understanding about the nursing profession. High school students, and often school counselors, fail to recognize nursing as a science-based profession requiring academic rigor. The nursing faculty at CCAC continue to enhance the path to health care careers by partnering with the Pittsburgh City Schools. At the conclusion of the grant, a cooperative plan for sustainability will incorporate CNA training into the high school curriculum, prepare 11th- and 12th-grade students for college placement tests by working on math and reading skills, and provide early, clear information about the college programs for health-related careers to both high school students and their parents.

To achieve a higher retention rate among diverse and disadvantaged nursing students, different strategies were implemented. Students acknowledged and attributed their academic success to the multiple RN Achievement supports they received. Students overwhelmingly cited the social worker as an important component of their success. The social worker helped students by providing support in coping with problems both within the college and in their personal lives. Tutoring was another strategy critical to student success. Through a system of trial-and-error, tutoring evolved into a process that carefully connected tutoring to the curriculum by having the tutors attend class, engage with faculty, and meet with students both individually and in groups. Mentoring also became an important initiative that evolved as a result of working closely with the cohort groups. The faculty engaged in offering workshops on nursing issues, to an audience including RN Achievement students, class officers, faculty who are CCAC alumni, and recent RN Achievement graduates. From these constituents, a support network has been formed to assist new graduates in making decisions about BSN programs and professional development. Although financial support was critical to student retention, most students qualified for financial aid and considered the stipends and tuition reimbursement as helpful but not essential to their progression.

As a result of the retention strategies that were implemented, the retention rate for students continuing with the RN Achievement model or graduating is 84.5% over the 5-year grant period. This is higher than the 70.8% retention rate for other nursing students at CCAC, according to the most recent data from the 2010-2011 academic year. Beyond the RN Achievement program, more than half of the students planned to continue their education, with more than 25% enrolling in a 4-year college.

Finally, the supports provided by the social worker and tutors reached other students who were not directly part of RN Achievement. Cost and outcome data are currently being analyzed to measure the impact of services provided through RN Achievement for students who are not enrolled in the program. The results will be used to measure the overall return on investment to the college and to the community by continuing to financially support this type of community college model.

Through the support of the RN Achievement model, the percentage of minority students who successfully completed the nursing program improved from 30% to more than 85% over the 5-year period. Further evidence of a positive outcome of the RN Achievement model is highlighted by the high number of graduates securing employment. The most recent graduation class reported 82% employment after graduation, whereas some graduates immediately continued into BSN programs. The endeavor to address a shortage of individuals pursuing a nursing career but who are diverse or economically or educationally disadvantaged, resulted in an effective model that involves student recruitment, retention, and graduation. In recognizing the barriers this group of students face, the RN Achievement model implemented strategies to help students overcome them.
REFERENCES


