

Advancing HIV Nursing Practice: The Doctor of Nursing Practice HIV Specialty at Rutgers, the State University of New Jersey



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The move to integrate HIV treatment and care into primary care is a major obstacle for the current U.S. health care workforce. Many HIV specialty providers will soon retire, while few primary care clinicians have been adequately trained in the diagnosis, care, and treatment of people living with HIV. The Health Resources and Services Administration (HRSA) has supported the development of a Doctor of Nursing Practice (DNP) program with an HIV specialty at Rutgers, the State University of New Jersey, to assure successful transition to an HIV primary care workforce. The Rutgers School of Nursing has been at the forefront of the DNP education movement and is among the first to develop an HIV-focused DNP program. Thirty-seven students have enrolled in the 3-year program, and two have graduated from the first cohort. Here we discuss the planning, implementation, successes, and recommendations of the new program.

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Since HIV was first described in the literature, it has posed unique opportunities to the nursing profession, and nurses have been able to adapt their practices in order to meet the needs of this disease. As research

related to prevention, care, and treatment has evolved over time, keeping clinicians' knowledge and skills current has been supported through the U.S. Government's Health Resources and Services Administration (HRSA) HIV/AIDS Bureau and through the AIDS Education and Training Centers (AETCs). The AETCs have supported clinicians who work on the front lines through a variety of education programming. An informed primary care workforce is important in the current context of HIV prevention, care, and treatment where patients are living longer and HIV is a chronic disease.

Nurses have been on the forefront of care for people living with HIV. Many nurses have been providing HIV care for most of their careers. The "graying" of the profession overall is acutely seen in the field of HIV, where many nurses are now looking to retire. This, coupled with the changing landscape of HIV care and treatment, has become a complex, multifactorial issue. To

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face these challenges, the HRSA has expanded the AETC grant program to provide programmatic support for universities to address this need through expanded nurse practitioner programs. Rutgers, the State University of New Jersey (Rutgers), is one of four nursing institutions to be awarded the initial grant in 2013. The Rutgers program is framed in the context of a Doctor of Nursing Practice (DNP) preparation.

The DNP has been recommended as an entry to practice for advance practice nurses (APNs) by the [American Association of Colleges of Nursing \(2004\)](#). The essentials of the DNP ([American Association of Colleges of Nursing, 2006](#)) have provided a framework for education programs that will prepare nurses to be leaders in health care reform. Rutgers School of Nursing has been at the forefront of the DNP movement by challenging all advance practice programs to grant the DNP degree as an entry to practice. With support of this federal grant, Rutgers has instituted a DNP program that will help to insure a workforce of advance practice primary care HIV nurse practitioners (HAPNs) prepared to respond to the demand of more qualified clinicians to care for people at risk for and living with HIV.

The Centers for Disease Control and Prevention and the HRSA both consider HIV to be a primary care disease. HAPNs have been at the forefront of the care and treatment of individuals infected with and affected by HIV since it was first identified in 1981. [Wilson and colleagues \(2005\)](#) demonstrated that the quality of nurse practitioner HIV care was equal to that of their physician colleagues. However, many nurse practitioners are preparing to retire or are moving away from the demands of day-to-day clinical practice ([Nichols, Davis, & Richardson, 2010](#)). It is time that the next generation of HAPNs is prepared to step forward to fill the void that will occur. We will review the process that was used to train the first cohort of HAPN students in the Rutgers School of Nursing HIV Care Specialization Program.

Background

Rutgers is the eighth oldest institution of higher learning in the United States. It is one of only nine colonial colleges established before the American Revolution and has a rich history. Currently, Rutgers

is comprised of four campuses across New Jersey, two of which are located in Newark (Rutgers Biomedical Health Sciences and Rutgers University–Newark). Rutgers is attended by a diverse student body, with more than 66,000 students from all 50 states and more than 115 countries, of whom more than 50% identify as non-White, each year (<http://www.rutgers.edu/about/facts-figures>).

As one of the nation's largest, most comprehensive academic nursing programs, Rutgers School of Nursing is dedicated to the pursuit of excellence in education, research, evidence-based health care delivery, and the promotion of community health. The school has more than 1,800 undergraduate and graduate students at four campus locations throughout the state of New Jersey.

The school's centers and institutes are focal points for research, technical assistance, capacity building, and evidence-based practice aimed at improving the health and well-being of diverse populations at state, national, and international levels. The school's nurse-managed health programs in New Jersey include interprofessional community health centers, an ambulatory center for HIV care, a mobile health care program, and a statewide program providing health care case management for children in foster care.

The School of Nursing is one of eight schools at Rutgers Biomedical and Health Sciences, which collectively comprise New Jersey's largest and most influential constellation of academic institutions devoted to nursing, medicine, dentistry, advanced health-related sciences, pharmacy, public health, and the full spectrum of allied health careers. Rutgers Biomedical and Health Sciences is one of four academic centers at Rutgers.

New Jersey, and specifically, the city of Newark, has been since the early 1980s, and continues to be, a high-HIV-prevalence area with a continued increase in new infections each year. Newark is an ideal site, with many clinical programs, to train a diverse population of next-generation APNs to provide state-of-the-science HIV primary care.

Program

The DNP curriculum ([Figure 1](#)) is a comprehensive plan of study that not only supports learning



Effective September 1, 2015

Post-Bacc DNP Curriculum Sequence		Family Primary Care Nurse Practitioner		FULL-TIME PLAN OF STUDY – FALL START			Year	
		Fall Year 1		Cr	Spring Year 1		Cr	Total
		NURS 5104	Advanced Pathophysiology	3	NURS 5105	Advanced Clinical Pharmacology	3	
		NURS 6010	Clinical Scholarship	2	NURS 6020	Management and Analysis of Health Data for the Doctor of Nursing Practice	3	
		NURS 6060	Clinical Inquiry for Evidence-Based Practice	3	NURS 6980	Epidemiology and Population Health	3	
		NURS 6930	Info. Technology for Evidence-Based Practice	3	HVAD 5020	Social Determinants of Health and the Impact on HIV Care	3	
				Total Semester Credits	11	Total Semester Credits	12	23
Summer Year 1		Cr	Fall Year 2		Cr	Spring Year 2		Cr
HVAD 5000	Diagnosis, Care and Treatment for Primary Care Providers	3	AGPC 6600	Adult-Gerontology Primary Care Theory I	3	AGPC 6620	Adult-Gerontology Primary Care Theory 2	3
ADHA 5107	Advanced Health Assessment	3	AGPC 6610	Adult-Gerontology Primary Care Practicum I	3	AGPC 6630	Adult-Gero. Primary Care Practicum 2	3
			NURS 6780	Healthcare Economics & Business Practices for APNs	3	NURS 6030	DNP Project Planning & Proposal Development	3
			NURS 6940	Evidence Translation & Implementation Science	3			
Total Semester Credits		9	Total Semester Credits		12	Total Semester Credits		9
Summer Year 2		Cr	Fall Year 3		Cr	Spring Year 3		Cr
			AGPC 6640	Adult-Gerontology Primary Care Theory 3	3	AGPC 6660	Adult-Gerontology Primary Care Theory 4	3
			AGPC 6650	Adult-Gerontology Primary Care Practicum 3	3	AGPC 6670	Adult-Gero. Primary Care Practicum 4	3
			NURS 6982	DNP Project Implementation	3	NURS 6880	Leadership for the Doctor of Nursing Practice	3
Total Semester Credits		9	Total Semester Credits		9	Total Semester Credits		9
Total Clinical Hours = 1040 (NP Specialty: 540 Hours (min.) + DNP Practicum 500 Hours)				Total Program Credits				74

Figure 1. Sample plan of the study. Note. DNP = Doctor of Nursing Practice.

but also provides experiences for students to apply knowledge. Core courses help prepare students for advanced practice, including advanced health assessment, pathophysiology, and pharmacology. Required courses, including Social Determinants of Health, Epidemiology, Informatics, and Research, all support the demands for practice transformation. There are clinical courses for the respective DNP tracks and, woven within those tracks, is the HIV Care Specialization program. The HIV program builds on the curricula for primary care providers that include adult-gerontology, family, psychiatric/mental health, and pediatric nurse practitioners. The students are required to take three HIV-specific courses for the HIV Care Specialization certification, for a total of 9 credit hours. One is Social Determinants of Health in Relation to HIV disease (3 credits), which is HIV focused and can be taken instead of a more generic social determinants course. We have found that

many students who have not elected the HIV specialization enroll in this course, which encourages them to enroll in the specialty courses. A course on the historical and policy-related aspects of HIV (3 credits) fulfills the elective requirement, and one course, Diagnosis and Management, also three credits, is taken prior to entry into clinical practice courses.

Clinical practice sites are matched to each student's learning needs. A minimum of 1,000 clinical hours are required for a DNP, 500 hours to satisfy the DNP requirements that include DNP projects, and a minimum of 500 hours for advanced practice specializations. Of the hours that are focused on preparation for certification in their specialization, 50% must focus on HIV primary care settings and the other 50% are in nonspecific primary care settings. This insures that the student has a well-rounded clinical focus that will prepare her/him well for any clinical setting.

Completion of a DNP requires a final project with a focused spectrum on HIV. These projects can include program development, policy development, or quality improvement initiatives. Students can work in groups with other students if the project is worthy of a group effort. One example of a successful project happened when an HIV Care Specialty student worked with two other students to initiate a Seeking Safety Program at a local HIV primary care clinic. In addition to the student in the HIV Specialty program, the team was rounded out with a post-Masters DNP student and another student fulfilling requirements for a psychiatric/mental health DNP. The project provided training for providers at a clinic to incorporate aspects of the Seeking Safety Program that was aimed at preventing interpersonal violence in the clinical practice setting and laid the groundwork to build on the project with the next group of students who were assigned to the practice site. Thus, the HIV Care Specialization Program enhanced the clinic services and supported the health care program.

The Process

Nurse educators have a duty to prepare students to practice to the fullest extent of their licensure. However, curriculum decisions, while faculty led, are often influenced by accreditation and certification demands. Many topics need to be covered and HIV content is often delegated to a very small part of the program. In high-incidence regions, coursework needs to reflect the population that the students serve. In an area such as Newark in Essex County with an HIV prevalence rate of 1,244 per 100,000 ([New Jersey Health Statistics, 2013](#)), it would be reasonable to expect a fair amount of content related to HIV. The AETC funding opportunity gave Rutgers School of Nursing an opportunity to review its curriculum and courses for HIV-related content. Unfortunately, in doing so, it was found that HIV content was lacking or outdated. For example, information about HIV medications was outdated in a pharmacology course. We also found that HIV was rarely mentioned in other courses. Conversely, it was found that many nursing students were placed in primary care sites, which provided HIV care, and that much

of the learning they needed was independent of their classroom work. The review also showed, coincidentally, that new faculty who were joining Rutgers through regular recruitment efforts happened to be HIV expert clinicians and, therefore, we found that HIV-related content was being woven into the coursework on an informal basis but not consistently across all course curricula.

Through an extensive literature search and informal interviews with other nursing programs, it was discovered that the lack of systematic HIV-related education at Rutgers was not unique. This was further echoed in the finding that formal curricula, such as the Association of Nurses in AIDS Care ([ANAC, 2009](#)) *Core Curriculum* had not been updated since 2009. A core competency document for international nursing care was published in 2011 ([Relf et al., 2011](#)), but no work was found regarding a curriculum built on those competencies.

A team of internal School of Nursing HIV experts was pulled together and three courses specific to HIV were developed to make up the core content of the HIV Care Specialization Program. The courses were then evaluated by HIV certified nurses through ANAC, the nursing organization focused on HIV nursing. Content experts at HRSA also reviewed the syllabus and curriculum. Formal faculty review and approval was attained. In a partnership with the local AETC, close to 20 HIV clinical sites were secured. This was done by staff, who were able to identify quality preceptors. Sites other than primary care sites included a needle exchange program and a community-based organization focused on gender and sexual minority Black and Latino young adults. Recruitment for students was conducted through national and state professional meetings as well as state nursing publications and the ANAC Web site.

Commonly, Rutgers students are the first in their families to attain a bachelor's degree, and often need to work full time to support their families, especially if they have a desire to return to graduate school. More than 80% of Rutgers University students receive financial aid. Because financial aid is a barrier for most Rutgers students, funding for scholarships for the APN HIV Care Specialty students was another priority in setting up the program. Support from HRSA-supported nurse faculty loan programs

and another workforce development grant was obtained. HIV program students were given priority access to these funds, and in the 2014-2015 academic year, 15 students were able to enroll for full-time study because of these funding mechanisms.

Students elect the HIV specialization either upon initial application to the DNP program or during the second year of the program of study. We have found that students enrolled in the program were the best recruiters for the program. Also, as the general DNP curriculum involved taking an elective, some students took one of the three HIV courses as an elective and were excited by the course and the course faculty; some of those enrolled in the program.

Evaluation is a strong component of the program. The team, comprised of the program principal investigator, program director, program coordinator, and another faculty HIV expert, come together to review student progress, course evaluations, and clinical sites each semester and on an annual basis. At the completion of our first cohort year, a focus group of current and graduating students was held. The first annual evaluation occurred in conjunction with a HRSA technical assistance program review. HRSA reviewer recommendations were incorporated to refine the program, along with student focus-group-generated recommendations.

So far, 37 students have enrolled in the program. The median age of student enrollment is 24 years, with 41% White, 41% Black, 5% Asian, and 9% mixed race (Asian and White or Asian and Black). These include APN students from each of the following tracks: Family ($n = 19$), Psychiatric/Mental Health ($n = 6$), Adult-Geriatric ($n = 7$), Pediatric ($n = 2$), Women's Health ($n = 2$), and Post-Masters DNP ($n = 1$). Two students graduated in May 2015 and four are expected to graduate in May 2016. Because this is a 3-year full-time DNP program, the largest cohort to date will graduate in May 2017.

Conclusion

Nursing education programs need to be designed to meet the changing landscape of health care. The DNP program was designed to prepare the nursing workforce with the knowledge and skills needed to

insure high-quality care that is responsive to the demands.

The treatment of HIV disease, with improving therapeutics, has allowed people with HIV to live longer. The longer people live with HIV, the more often chronic diseases of aging, such as hypertension and diabetes, will occur in patients seeking care in primary care settings. While there will always be a need for specialists in HIV, primary care providers need to be skilled in providing services needed by people living with HIV. Nurse practitioner education needs to be reflective of this need. Concurrently, the "graying" of HIV nurses is evident; the average age of members of the ANAC is 48 years (K. Carbaugh, personal communication, July 23, 2015). Academic leaders are adept at designing education programs to meet the changing health care landscape. The DNP HIV specialization, we believe, will provide a cadre of providers who will be leaders in HIV care and treatment.

HIV academic programs have been supported in the past by HRSA and other government agencies. Many of the programs have been closed because of lack of student demand or interest or because faculty have moved on to other areas of interest. Despite multiple evidence-based interventions available to prevent HIV infections, new HIV infections continue to occur every day in the United States and globally. Nurses need to be skilled to meet the demand along with the unique needs of each patient. It is hoped that by engaging nursing students in relevant courses and clinical practica, providing the academic support students need, and insuring that academic nursing programs incorporate state-of-the-science HIV content throughout their programs, a quality HIV workforce will be sustained.

Disclosures

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