

PAs: From Training to Practice

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In 2014, Johnson & Wales University (JWU) enrolled its inaugural class of Physician Assistant (PA) students, making it the first Physician Assistant Program in the state of Rhode Island (RI). The program is now enrolling its fifth class under the direction of George Bottomley, DVM, PA-C. Since its inception, this Master's degree program led and taught by certified PAs and local physicians, has addressed a shortage of health care practitioners in RI.

The program's didactic phase begins in the summer, where four courses run simultaneously. Courses in anatomy, patient care, foundations of medicine and professional health and policy launch the students' education. In the first week, students are introduced to the 24-hour access cadaver lab, assigned cadavers and are provided with dissection protocols. They then begin a year-long journey with them. Students are guided through detailed sequential dissections to identify clinically relevant gross, regional and surface anatomy by our Anatomist, Patricia Brady, who holds a PhD in biomedical sciences. Anatomy sequencing is coordinated with patient care courses. This harmonized learning aids students in integrating information between courses and in the practical application of anatomical knowledge for understanding of physical examination findings.

The cadaver lab is woven into the curriculum as an additional tool to supplement the understanding of medicine. For example, within the cardiology module, students return to the lab to identify cardiac pathology. As Faculty Assistant Professor Victoria Miller, MSPAS, PA-C, observed, "In the summer, the students begin the course with the eyes of an anatomist and return to the lab with the eyes of a pathologist." Second-year students devote time in the lab to practicing procedural skills before entering the clinical year.

At the culmination of the academic year, students hold a closure ceremony where they gather with faculty to express their thanks for the year-long relationship and lasting gift of medical knowledge gained from their cadavers and the education the experience imparts. This event highlights the JWU Program mission of developing humanistic, respectful and empathetic PAs who will carry these values forward with them in their future careers.

The remainder of the students' didactic education is designed for synergistic learning by presenting course material in a module specific format. The fall and spring semesters run for 16 weeks and each semester contains module

information delivered over 1 to 4 weeks' time. The length of each module varies based on the National Commission on the Certification of Physician Assistants (NCCPA) content blueprint organ areas to ensure adequate coverage of material by the completion of the didactic year to best prepare students for both clinical rotations and the Physician Assistant National Certifying Examination (PANCE). Modules consist of Dermatology, HEENT, Hematology, Cardiology, Pulmonology, Musculoskeletal, Renal, Urology, Neurology, Endocrinology, Infectious Diseases, Gynecology, Obstetrics, Gastroenterology, Surgery, Pediatrics, Geriatrics and Emergency Medicine. Each module contains clinical medicine lectures along with associated diagnostic skills, patient care, pharmacology lectures and problem-based learning cases, where students apply what they have learned in the module to clinical scenarios. This method of delivering medical education, allows students to learn, synthesize, and apply their knowledge in real time.

To better emphasize lifestyle changes as a way to manage disease, Assistant Professor Mallory Sullivan, MSPAS, PA-C, coordinates the highly regarded "Food as Medicine" course. Students collaborate with PA faculty and JWU chefs in the industrial kitchens where they learn how to use food as medicine. This trailblazing course links clinical medicine with patient care and nutrition. Students work to design and implement meal plans for a specified set of health conditions. They learn how proper nutrition can prevent illness as well as how to tailor nutritional education delivered to patients based on health problems, dietary restrictions and cultural needs. "Food as medicine" is designed to arm the PA with the tools to empower patients with the knowledge necessary to maintain their own nutritional wellness and this course achieves that objective.

PA education at JWU aims to develop generalist health care practitioners capable of working in dynamic, team-based environments. By introducing team-based care early in education with interprofessional events, students have opportunities to collaborate with other health care professionals to augment their understanding of the role of other professions in health care delivery. The students also learn leadership skills, communication skills, and strategies to create patient-centered clinical care plans. JWU PA students work alongside Respiratory Therapy, Occupational Therapy, Physical Therapy and Nursing students in patient encounters

with community volunteer patients and simulation lab exercises. Assistant Professor Rebecca Simon, MS, who holds a master's degree in Occupational Therapy, coordinates interprofessional events. These experiences optimize the understanding of each specialty's role in patient care and facilitates collaboration between all parties for benefit of comprehensive and fluid patient care.

The second year of the JWU PA program curriculum is managed by Assistant Professor Kelli Kruzel, MSPAS, PA-C, who works diligently to place students in nine, five-week clinical rotations that provide the students an opportunity to practice skills they have learned. Core rotations in family medicine, internal medicine, pediatric medicine, women's health, behavioral and mental health, surgery, emergency medicine and two elective rotations, afford students a well-rounded clinical experience that prepares them for entry-level clinical work.

Physician assistants are educated in the medical model and typically begin their clinical careers upon graduation. PAs work in association with a supervising physician. The relationship between PA and supervising physician is one of joint practice. PAs can examine, diagnose and treat patients independently provided that the care delivered falls within the scope of practice of both PA and supervising physician. The role of the supervising physician is to provide professional guidance and support to the PA on medical care plans on a case-by-case basis. This relationship requires mutual respect and trust and places the patient at the center of medical care. Each state has its own regulations regarding the level of supervision a PA requires to practice medicine. The Rhode Island Department of Health Rules and Regulations for the Licensure of Physician Assistants states, "The constant physical presence of the supervising physician or physician designee is not required. It is the responsibility of the supervising physician and physician assistant to assure an appropriate level of supervision depending on the services being rendered."¹ RI state law further states, "The supervising physician or physician designee must be available for easy communication and referral at all times."² Each pairing of supervising physician and PA should have a written supervisory agreement clearly outlining this agreement. There is flexibility in the supervisory relationship based on the experience of both supervising physician and PA and office or hospital medical staff laws.

What makes the PA profession unique is the ability of practicing PAs to transition from one field of medicine to another when the desire to make a change presents itself. While this can be challenging and requires additional self-paced and employer required learning, it is entirely possible for the generalist-trained PA. PAs train and receive their board certification in general medicine, rather than in the care of a defined patient population, which provides a broad and solid foundation of medicine applicable to the care of patients in different clinical settings. Additionally,

post-graduate training programs exist and serve the purpose of providing in-depth training to new graduates or PAs switching fields. This feature alone makes the profession appealing to many. For some, it is also an exciting and rewarding aspect of the profession for the practicing PA to incorporate areas of interest into their active clinical careers or follow a non-clinical trajectory. For example, physician assistants may maintain their full-time patient care work and decide to become involved in research. They may elect to be part of a research team and incorporate their knowledge into study design and implementation, data analysis or become a contributing author to a published article.

PAs often participate in departmental projects and hospital-wide polices as key stakeholders given their presence and function in multidisciplinary care teams. Insight into patient care and hospital inner workings also presents opportunities for PAs to advance to positions within hospital administration. This presents a new and challenging area of practice for PAs with a passion to improve hospital delivered patient care and PA responsibilities. For example, Denni Woodmansee, PA-C, acting Director of Physician Assistant Services for the U.S. Department of Veterans Affairs, has been effective in creating policies to be more inclusive of PAs and to appropriately widen the scope of PA practice within the Veteran's Administration.

Physician assistants may become involved with one of the four major national PA organizations: the American Academy of Physician Assistants (AAPA), the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA), the National Commission on the Certification of Physician Assistants (NCCPA) or the Physician Assistant Education Association (PAEA). The AAPA advocates for the PA profession on a local and national level. NCCPA is the only certifying body for physician assistants. PAs involved with NCCPA assist with ensuring that physician assistants meet professional standards and these core values and knowledge set are adequately assessed for in the NCCPA certifying examination. The work of the ARC-PA is geared towards reviewing current and new physician assistant programs to make certain they are meeting or exceeding previously identified professional, academic and clinical standards for newly graduating physician assistants.

The highly respected U.S. Public Health Service (USPHS) also enlists PAs as Commissioned Corps Officers and assigns them to areas of greatest need.³ In turn, they serve needy populations within the United States, while becoming part of a medical deployment team to offer medical care of persons affected by natural disaster or illness outbreak. Rear Admiral Michael Milner, one of the highest-ranking PAs in the USPHS, highlights the extensive ways in which PAs can contribute to medicine and public health. Rear Admiral Milner's career included managing public health programs in Rhode Island and five additional states, working for the Department of Homeland Security, becoming

Chief Professional Officer for the Health Services Office and acting as Chief PA consultant to the Director of the Indian Health Service (IHS).⁴

PAs work in a multitude of environments. This flexibility extends to work outside of the United States. Due to the predicted physician shortage and challenges with providing accessible and affordable health care, the need for advanced care providers on the global scale has been recognized. The model of education provided to PAs in the US serves as a benchmark for other countries to establish similar programs in their home locales to give rise to semi-autonomous clinical workers with the potential to address current health care delivery obstacles.⁵ Recently, the United Kingdom began the National Physician Associate Exchange Program, employing U.S.-certified Physician Assistants in the United Kingdom in an effort to expand the role of Physician Associates working with the National Health System in England.⁶ Canada, Australia, New Zealand, Northern Ireland, Scotland, the Netherlands, Germany, Ghana, Afghanistan, Liberia, Israel, Saudi-Arabia, India and Taiwan have already begun training and graduating physician assistants/physician associates. This list does not include those countries that have established their own version of an advanced practice provider that is not necessarily given the title of physician assistant or physician associate.⁷ The increasing presence of PAs around the globe has opened the door for international clinical work within those countries that welcome certified US physician assistants to be part of the clinical team.

The areas of interest and career paths discussed here are not completely representative of the pathways available to PAs; however, they represent a small portion of the wide variety of possibilities that exist for PAs today. With the projected growth of the PA profession comes an expanding pool of clinical and non-clinical jobs that will allow PAs to offer expertise, education and guidance as valued members of health care teams in the United States and abroad.

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