American Journal of Pharmaceutical Education 2019; 83 (10) Article 7655.

AACP REPORT

Reexamining the Academic Partnerships with Federal Pharmacy: 2018-19 Argus Commission Report

Peggy Piascik,[a] Cynthia J. Boyle,[b] Patricia Chase,[c] Joseph T. DiPiro,[d] Steven T. Scott,[e] Lucinda L. Maine[f]

[a] University of Kentucky College of Pharmacy, Lexington, Kentucky, *Chair*
[b] University of Maryland School of Pharmacy, Baltimore, Maryland
[c] Oregon State University/Oregon Health Sciences University College of Pharmacy, Portland, Oregon
[d] Virginia Commonwealth University School of Pharmacy, Richmond, Virginia
[e] Purdue University College of Pharmacy, West Lafayette, Indiana
[f] American Association of Colleges of Pharmacy, Arlington, Virginia, *Staff Liaison*

EXECUTIVE SUMMARY. The Argus Commission examined the history and current status of progressive pharmacy patient care services across several federal branches of government, including the Veterans Administration, Department of Defense, and the U.S. Public Health Service where officers and civilian pharmacists practice in the Indian Health Service, Bureau of Prisons, Area Health Education Centers and other locations. The engagement of pharmacy faculty, students and residents in these practices was assessed. Colleges and schools of pharmacy advocate for the expansion of the capacity for placement of learners in these progressive practices. AACP is encouraged to establish on going collaborations with federal pharmacy leaders to create new opportunities for partnerships that advance patient care, especially for special populations served in these federal programs.

KEY TERMS: Clinical pharmacy specialist, federal pharmacy, experiential education, residency training

INTRODUCTION AND COMMITTEE CHARGES

The Argus Commission is comprised of the five most recent AACP presidents and is typically charged to study a "horizon topic" believed to be germane to the future of pharmacy education, research and/or practice. President Allen charged the Commission to:

> Examine the practice leadership offered by federal pharmacists in Department of Veterans Affairs, Department of Defense, and the U.S. Public Health Service, which includes the Indian Health Service, Bureau of Prisons and Area Health Education Centers (AHEC) and identify how AACP might expand academic partnerships with our federal partners.[1]

Each member of the Commission accepted responsibility to examine the history of practice development for pharmacists working in these agencies of government as well as their current priorities for pharmacist utilization. In several cases their background work included phone interviews with leaders from these sectors. To the extent the information was available, the analysis included information about the status of past and current partnerships between the government agencies and colleges and schools of pharmacy. Each member submitted a succinct summary of their findings as background material for the full commission discussion. That material forms the basis of much of this report.

The Argus Commission met in person meeting October 9 and 10 in Washington, DC. As has been the case with previous Argus Commission work, several guests from outside academic pharmacy were invited to engage with the Argus Commission in these discussions. As noted in the acknowledgement, two representatives from the Veterans Administration and a former chief professional officer for pharmacy from the U.S. Public Health Service met with the Commission on October 9th to provide input into the discussion and final report.

As background, a seminal report to the U.S. Surgeon General was released in 2011. "Improving Patient and Health System Outcomes through Advanced Pharmacy Practice"[2] was co-authored by RADM Scott Giberson, CDR Sherri Yoder, and CDR Michael Lee along with contributors from across the spectrum of federal pharmacy practices. According to the authors, the report "provides rationale and compelling discussion to support health reform through pharmacists delivering expanded patient care services. In collaboration with other providers, this is an existing, accepted, and additional model of improved health care delivery that meets growing health care demands in the United States."

The report remains as current and applicable to health care systems in 2019 as it was on its release. It

compiles substantial evidence of the value of integrating pharmacists' medication management services across the spectrum of public and private delivery systems and frames this evidence in four focus points around which the report is organized. They merit repeating in the introduction to the Argus report.

> Focus 1: Pharmacists Integrated as Health Care Providers
> Pharmacists are already integrated into primary care as health care providers but notes that "pharmacists may be the only health professionals who manage disease who are not recognized in national health policy as health care providers or practitioners."
>
> Focus 2 & 3: Recognition and Health Care Providers/ Compensation Mechanisms
> To sustain these services pharmacists must be recognized by statute via legislation and policy and compensation policies and practices must align with the value and intensity of services provided.
>
> Focus 4: Evidence-based Alignment with Health Reform
> The report collates the numerous articles, systematic reviews and meta-analyses on the positive patient and health system outcomes available to provide evidence of fully utilizing pharmacists' expertise.

In short, the 2011 paper explains with evidence that pharmacists are, in fact, key contributors to the Quadruple Aim for health care improvement.[3] The 2019 Argus Commission report will build upon this work with a brief historical account of the services offered by pharmacists across relevant federal agencies, as well as a contemporary view of how practice is currently delivered to beneficiaries in these systems. In addition, a snapshot of the current engagement of colleges and schools of pharmacy, and especially the Experiential Education segment of the academy, will document the extent to which AACP member institutions are availing themselves of these practice environments in introductory and advanced pharmacy practice experiences. Finally, the Commission will make recommendations on opportunities to strengthen the collaboration between federal pharmacy services, the colleges and schools, and AACP.

BRIEF HISTORY OF CLINICAL PHARMACY DEVELOPMENT IN FEDERAL PROGRAMS

The contemporary movement for clinical pharmacy services can be traced to the 1960's and is well chronicled by Elenbaas and Worthen in Clinical Pharmacy in the United States: Transformation of a Profession.[4] Some of the earliest and most progressive innovations in keeping with this movement can be found in the practices of federal pharmacists, especially in the Veterans Administration (VA) and the U.S. Public Health Service (USPHS). Area Health Education Centers (AHEC) also have progressive records of team-based care services where pharmacists have played integral roles. The first engagement of pharmacists in federal service was in 1775 in the U.S. Continental Army. The roles and responsibilities of pharmacists in military and federal service have evolved in many ways over the past several centuries. [5] Today, pharmacists in the federal sector work collaboratively in seeking opportunities for improving the scope and level of care provided across the collective federal health care environment.

Department of Veterans Affairs

The federal government has provided care to veterans since early in the 1800s. President Hoover created the Veterans Administration in 1930. In 1945, Major General Paul Hawley was appointed as director of VA medicine. General Hawley was responsible for establishing partnerships with academic medicine and promoting residencies and teaching fellowships at VA hospitals around the country. The VA became a Cabinet-level department in 1988 and the Veterans Health Administration (VHA) was charged with the responsibility for delivering quality care to veterans.

The VHA introduced clinical pharmacy coordinators into their health care facilities in the late 1960s. Colleges and schools of pharmacy across the country recognized these advances in practice and integrated some of the earliest clinical pharmacy faculty members into this practice environment. The VA became integral to both B.S. externship placements and, as Doctor of Pharmacy degree programs emerged around the country in the 1970s and '80s, advanced clinical rotations (now referred to as Advanced Pharmacy Practice Experiences).[4] VA facilities were individually utilizing clinical pharmacists in advance practice rolls as individual states were defining collaborative practice acts.

By 1985, VA nationally defined clinical pharmacy practice in policy to reflect the growing practice of pharmacist providers at VA health care. The VA pharmacist scope of practice was established and defined the pharmacist's authority in these key areas of practice: ability to prescribe medication, order laboratory and other tests, perform patient assessments of the patient's disease and medication effectiveness using physical, subjective and objective measurements, identifying adverse drug reactions and referring patients to collaborating physicians.

Federal supremacy allowed VA to outline a single policy that included clinical nurse specialists, nurse practitioners, physician assistants, and clinical pharmacy specialists (CPS).

The movement to clinical pharmacy practice in the VA was advanced by several strategic changes including growth in post-graduate pharmacy residency programs, advancement of team-based care models that integrated the CPS, along with changes in pharmacy training programs with deployment of the PharmD degree as the entry level degree. The implementation of consolidated mail outpatient pharmacies (CMOPs) in the late 1990's at seven highly automated facilities across the United States also contributed to liberating clinical pharmacy time to expand clinical practices. These changes opened the opportunity for VA clinical pharmacists to qualify for advanced practice roles as VA Clinical Pharmacy Specialist (CPS). Clinical pharmacy services, especially in ambulatory care environments, were delivered to veterans at their local VA facilities where pharmacists collaborated with physicians and other providers on initiating and managing patients' drug therapy. Pharmacists had full access to their patients' electronic medical records.

U.S. Public Health Service (USPHS)/Indian Health Service (IHS)

For more than 200 years, men and women have served on the front lines of our nation's public health in what is today called the U.S. Public Health Service Commissioned Corps. The Commissioned Corps traces its beginnings back to the U.S. Marine Hospital Service protecting against the spread of disease from sailors returning from foreign ports and maintaining the health of immigrants entering the country. Currently, Commissioned Corps officers are involved in health care delivery to underserved and vulnerable populations, disease control and prevention, biomedical research, food and drug regulation, mental health and drug abuse services, and response efforts for natural and man-made disasters as an essential component of the largest public health program in the world.[6]

Commissioned Corps as well as civilian pharmacists work across many offices and agencies of the Department of Health and Human Services, including advanced clinical and administrative roles. The Indian Health Service (IHS) has been one agency where pharmacists have advanced patient care services for decades. The IHS is responsible for providing federal health services to American Indians and Alaska Natives. The provision of health services to members of federally-recognized Tribes grew out of the special government-to-government relationship between the federal government and Indian Tribes. This relationship, established in 1787, is based on Article I, Section 8 of the Constitution, and has been given form and substance by numerous treaties, laws, Supreme Court decisions, and Executive Orders. The IHS is the principal federal health care provider and health advocate for American Indian people, and its goal is to raise their health status to the highest possible level. The IHS provides a comprehensive health service delivery system for American Indians and Alaska Natives.[7]

Albert Ripley at the Indian Hospital in Crow Agency, Montana, began filling outpatient prescriptions from the patient's medical record in 1962. This practice, which spread throughout the IHS, led to the incorporation of private patient consultation offices in Indian Health facilities for pharmacists' assessment and counseling services.[4] From the 1960s to the present day, the IHS pharmacists practice in a true pharmaceutical care environment where they fully apply their clinical knowledge and skills. IHS has pioneered many progressive and innovative practices over the past fifty years. IHS pharmacists have helped established current standards of pharmacy practice by accessing the patient's entire health record, including laboratory results, immunization status, and past medical history to assess the appropriateness of drug therapy and to manage therapy and disease.

Department of Defense (DOD)

The high standards of pharmacy practice and pharmaceutical care in the Department of Defense can be traced to the U.S. Army and specifically to 1775 during the Revolutionary War when Andrew Craigie was appointed as the first Apothecary General.[8] According to historians, on April 30, 1775 Craigie was appointed by the Congress of Massachusetts as "storekeeper" to take care of medical stores and to deliver them as ordered.[9] In June of 1775, Craigie was noted to have treated the wounded at the Battle of Bunker Hill. This was the beginning of pharmacy practice in the DOD, which for more than 230 years have not only been sustained, but continually transformed and improved.

The Joint Commission on the Status of Pharmacists in the Government Service sought military recognition of pharmacy between 1937-1943 led by Harvey Evert Kendig, a Remington Medalist and past AACP President. In 1943, the Pharmacy Corps was created within the Medical Department of the U.S. Army ending a half-century of work to achieve professional recognition for pharmacists. Approximately, 14,000 pharmacists or pharmacy students served during World War II in all positions in all branches. Only 16% were commissioned in an officer capacity, not necessarily as pharmacy officers.[9] The Pharmacy Corps was replaced with the Medical Service Corps (MS Corps) in 1947. Pharmacists proved to

be able leaders in the MS Corps. The first chief of the corps, Col. Othmar F. Goriups, was a pharmacist.

The provision of quality, safe and cost-effective care and services to Soldiers, Sailors, Airmen, Marines and Coast Guardsmen and their family members and military retirees in the military health care system is complex. However, the practice of pharmacy in DoD is integrated throughout the health care continuum and pharmacy services are considered essential components of the comprehensive health care that is delivered. The paramount focus of military pharmacists and all health care providers in DoD is to provide excellent care to this deserving population of patients.

Area Health Education Centers (AHEC)

The Area Health Education Centers program was started in 1972 "to improve the supply, distribution, retention and quality of primary care and other health practitioners in medically underserved areas." There are 235 AHEC Centers, 56 programs in 43 states and the District of Columbia. Regional AHECs focus on the following areas: health careers recruitment and preparation, health professions training, health professionals career development, and community specific health needs. It is challenging to summarize the evolution of pharmacy services nationally because there is not a single AHEC model of education or patient care. In most states the administrative coordinating center resides within a university health science center. The AHEC Program is administered by the Division of Diversity and Interdisciplinary Education, Bureau of Health Professions (Title VII), in the Health Resources and Services Administration (HRSA). Funding is provided through HRSA, state support (varied by state) and public and private agency grant support. According to the National AHEC Organization web site, there are approximately 120 medical schools and 600 nursing and allied health schools working collaboratively with AHECs to improve health for underserved and under-represented populations.[10]

AACP reached out to several individuals whose careers included, and in most cases started, in AHECs. Ed Webb, PharmD, was hired as the first fulltime AHEC clinical pharmacist in the North Carolina AHEC.[11] The North Carolina program was managed in a coordinating center within the University of North Carolina - Chapel Hill Medical School. Recognizing that a very high percentage of the graduating medical students were staying in the three counties in the Triangle area, the NC AHEC created a program that covered nine regions of the state. In describing the AHEC program from the outset, Dr. Webb affirmed that there was great diversity in the scope and approach to each AHEC around the country. Even within the NC AHEC itself there were different types of providers based on the unique needs for services in each region. Family Medicine was the focus of the AHEC in Asheville where Dr. Webb entered practice. He worked to help establish a residency program in Family Medicine along with Richard Walton, MD, a well-known residency program leader. These were early seeds of interprofessional practice and education that continue to bear fruit in the current practice of pharmacy.

It took five years for the NC AHEC to place at least one full-time clinical pharmacy faculty member in each location. Their responsibilities included teaching, clinical service delivery, research, and outreach in an interprofessional context. In addition, they provided continuing professional education across the state.

INVOLVEMENT OF FEDERAL PROGRAMS WITH PHARMACY EDUCATION

Pharmacists in federal health care roles are extensively involved in pharmacy education, including both pharmacists and pharmacy technicians. The federal sector offers many ASHP-accredited PGY1 and PGY2 residencies. As noted in the introductory material, critically important relationships between academic pharmacy and collaborating federal pharmacy programs helped to ground the earliest development and expansion of clinical pharmacy education and practice for AACP member institutions. Often the colleges and schools of pharmacy would provide financial support for faculty members whose practice sites were VA health care facilities and AHEC programs. Seeding these practices not only provided clinical learning opportunities for both B.S. and Pharm.D. students, but it also provided "proof of concept" practice models that later became the impetus for the continued growth of clinical pharmacy across the federal services as well as the private sectors.[12]

A paper by Hall and colleagues published in 2009 in the *American Journal of Pharmaceutical Education* demonstrates that collaboration between VA facilities and colleges and schools continues to evolve and in many cases flourish.[13] As Texas Tech University Health Sciences Center School of Pharmacy expanded its presence in the Dallas/Fort Worth area, the VA North Texas Health Care System was an obvious partner. Provisions were made for classroom and other physical space to accommodate P3 and P4 learners. The VA augments its clinical pharmacy specialist staff by purchasing faculty professional services from the School and also allowed for expansion of residency training opportunities.

There is no central repository of information on the current number of pharmacy practice faculty whose practice platform is within a federal hospital or clinic. During a planned conversation with approximately 30

deans from colleges and schools of pharmacy held during the National Association of Chain Drug Stores annual meeting in April 2019, participants were asked to characterize their current levels of activity for both faculty and students across the spectrum of federal patient care entities. Executive Vice President Maine provided an overview of the current Argus charges and noted the desire to accurately reflect the current realities in this report. It became clear that the diversity of management models across the agencies, but especially across the VA, makes it somewhat difficult to establish a focused strategy to optimize the collaboration between a given university and a VA hospital/clinic environment. To a large extent this is dependent on local leadership who operate with different interpretations of policies as well as regionally influenced decisions. The demand for VA student rotations is higher than the current capacity of federal health care settings, especially for VA. Innovative strategies need to be considered to maximize the experiential needs of students. Expanding the number of federal pharmacist residency programs and allocation of residency positions is one strategy to improve the capability to offer more student rotations. Federal pharmacy practitioners are able to practice in any state with their license as the federal facilities have assumed the quality and professional responsibility and oversight for collaborative practice.

To gain a more contemporary picture of the level of engagement of federal programs as experiential learning sites, the Argus Commission initiated a request through the Experiential Education Section to capture information from a subset of current institutional members regarding the volume of student placements in federal facilities over the last several years. A single request was posted to this Connect Community and 41 institutions responded to this call. The request included the number of individual rotations for up to 5 years with the VA, IHS, AHEC programs, National Institutes of Health, Bureau of Prisons, Department of Defense/Coast Guard and "other agencies."

In addition to the number of Advanced Pharmacy Practice rotations at various federal organizations/facilities, the respondents were asked for the number of preceptors they worked with at each agency and if they also had Introductory Pharmacy Practice Experiences at these sites. A subjective assessment of whether the availability of rotations placements was staying about the same over time, rising or declining was also requested. The 41 programs represented a diverse set of institutions, including new and established programs, public and private institutions, academic health centers and programs on non-AHC campuses, and a reasonable geographic distribution. Table 1 provides a summary of the responses.

Clearly, the strongest affiliation between responding schools and one of the federal programs is with the VA, with the numbers of rotation placements ranging from single digits to 542. In most cases the number of years reported equaled 5 for a range of annual placements varying from 0 to 136 with an average of 38 rotations. All but 7 of the schools had some rotations at Indian Health Service locations with the number of placements ranging from 2 to 96 for those utilizing these settings. Only 5 schools appeared to maintain affiliations with their Area Health Education Centers and 9 schools reported placing students at the NIH. A higher number of programs had multiple rotations with the Bureau of Prisons and DOD/Coast Guard. Twenty-seven of the 41 respondents indicated that they also placed students in IPPE rotations at federal sites.

While the data represents just a snapshot of the affiliation status of AACP member institutions with various clinical programs at federal facilities, they clearly remain an important component of meeting the need for clinical learning environments where pharmacists are serving in advanced patient care roles. As noted in Table 1, the response to the query regarding the stability of rotations yielded 25 responses of remaining stable, 9 indicating decreasing capacity and just 6 noting an increase in rotation site availability. AACP should initiate focused discussions with leaders across the federal arena to identify issues that could lead to an expansion of this capacity as well as challenges and impediments that might be causing the decreasing capacity noted.

Exposing learners to these career opportunities should help to broaden their horizons regarding residency and fellowship opportunities, future options for specialty practice as well as management and leadership roles. In addition, serving the unique patient populations often seen in these settings and diverse levels of health literacy enriches their appreciation of social determinants of health (SDOH), service to underserved populations and other important professionalization concepts. During the April conversation with deans it was noted that there continue to be paid internship opportunities for pharmacy students with the federal programs, including the COSTEP Program[14] and VALOR.[15] According to the description of the JRCOSTEP program level of participation in the last cycle, 23 PharmD students participated as interns, the highest number compared with other disciples.

The VA Learning Opportunities Residency (VALOR) Program is a student internship program designed to attract academically successful students in Doctor of Pharmacy programs to ultimately work at VA as clinical pharmacists after graduation. This program gives outstanding students the opportunity to develop competencies in clinical

pharmacy at an approved VA health care facility. Opportunities for learning include didactic experiences and competency-based clinical practice with a qualified pharmacy preceptor. Students may be appointed on a full– or part-time basis during the summer months and may continue during their final academic year on a part-time basis. The aggregate hours that a student may be funded while in the program is 800 hours. A total of 64 VA locations served as hosts for VALOR interns in 2019.

The deans articulated the impression that the historical priority of exposing PharmD students to internship and other career opportunities across the federal sector seems to have waned in recent years. Many recalled having alumni working in the USPHS and other federal services come annually to present the exciting opportunities offered to students and graduates. It was the belief of those engaged in this conversation that such visits happen much less frequently today. The Argus Commission submitted two proposed policy statements for consideration by the 2019 House of Delegates. One addresses the desired expansion of experiential learning opportunities across the federal sector and the second encourages more exposure of federal career opportunities for current and future learners.

PHARMACY PRACTICE IN FEDERAL PROGRAMS TODAY

The introductory section of this report provided information related to the early development of clinical pharmacy practice across the federal sector. The evolution of practice advanced given the synergy between the vision of directors of pharmacy for enhanced patient care and the emerging role of clinical pharmacists as faculty members at colleges and schools of pharmacy. The public sector seemed more eager than other health care environments to experiment and take risks with new roles for pharmacists. From coast to coast and outside the continental United States, federal pharmacists continue to practice in progressive patient care roles, including with independent prescriptive authority and in primary care roles in some cases.[2]

Department of Veterans Affairs

The query to the AACP Experiential Education Section provides evidence that among the federal agencies, the VA continues to offer the greatest capacity for clinical learning at the IPPE, APPE and residency program levels. The Argus Commission reached out to pharmacy leaders in the VA, both in the headquarters office where several national pharmacy consultants work and in the field. It was noted in the introduction that two central office pharmacy leaders. Virginia Torrise, PharmD, and Lori Golterman, PharmD, participated in the face-to-face Argus Commission meeting and provided extremely valuable historical and current information for this report. In addition, Anthony Morreale, PharmD, MBA, BCPS, FASHP, Associate Chief Consultant for Clinical Pharmacy Services and Healthcare Services Research, provided rich information regarding the continued advancement of pharmacists' practice across the VA Health System.[16] A brief summary of the information he provided about the Clinical Pharmacy Practice Office, a group of 11 professionals at the present time, enriches this report. As there are several manuscripts with comprehensive descriptions of these practice advancements and their impact under development, only a high-level summary is provided in the 2018-19 Argus report.

The VA Pharmacy Residency Programs is the largest post-doctorate training program in the country and offers the trainee direct patient care learning. VA trains pharmacy students early in the learning process and often these students apply for VA residencies. These students turned residents often become VA clinical pharmacists and become integral in the advancement of clinical pharmacy practice and integral in health care teams. VA trains over 600 residents annually and offers over 236 programs consisting of post-graduate year 1 residencies (141) and post-graduate year 2 residencies (95). Advanced post-graduate year 2 residencies include such specialty areas as: Pharmacy Administration, Infectious Disease, Oncology, Internal Medicine, Ambulatory Care, Mental Health and other key specialties. Although Ambulatory Care is the most preferred specialty training, VA has become the largest trainer of Mental Health specialty in the country, training over 65 Mental Health residents annually and growing.[17]

As of the fall of 2018, the Veterans Health Administration (VHA) employed approximately 9,000 clinical pharmacists. The VA uses a sophisticated system of credentialing and privileging for many clinicians, including clinical pharmacy specialists. Over 4,000 pharmacists, or approximately 46% of the total, have a Scope of Practice which defines their roles as clinical pharmacy specialists and advanced practice providers. Eighty-one percent of the CPS cadre have completed a residency and/or board certification. This number of advanced practitioners has grown since 2012, from just over 2,000 to over 4,000, close to a 100% increase. In the same time, the total population of VA pharmacists grew just 33%.

The roles of the CPS providers include independent prescriptive authority, a global scope of practice to manage multiple disease states and population management. They use multi-modal approaches to patient

interaction, including face to face, telehealth, phone, video and secure messaging. Pharmacists who have not secured a scope of practice and advanced credentialing conduct a variety of patient care services including medication reconciliation, identification of high-risk patients and other services.

VA pharmacists have optimized the documentation of the services they provide and the assessment of the impact of those services on patients, populations and other providers. In the case of providers, assessing the amount of physician time that is and can be freed with CPS patient management has shown dramatic results. Pharmacist prescribing expanded markedly between 2015 and 2018, especially in targeted populations, including: anticoagulation, diabetes, hypertension, mental health, and blood formation products. Current expansion priorities include increasing access to care for rural veterans, hepatitis C patients, mental health and pain management, and antimicrobial stewardship.

Department of Defense

Pharmacists in the Army continue to be members of the Medical Service Corps and are considered patient care providers. Similarities exist within the Navy and Air Force and all pharmacists in the DoD and Coast Guard work closely together and in certain organizations work side by side in collaborative practices, although they may wear different uniforms.[18]

Pharmacists who practice in DoD health care facilities today are integrated as direct patient care providers with a clinical focus. Pharmacists are practicing oncology and nuclear pharmacy and managing clinics for beneficiaries with diabetes, anticoagulation therapy and disease management. They also offer a range of medication management services, including pain and opioid therapy management. These pharmacists are also heavily involved with wounded warriors and service members returning from combat who may have had a traumatic injury or are suffering from PTSD. They frequently have a plethora of medications prescribed and pharmacists actively engage as their drug expert to ensure safe and clinically appropriate medication therapy.

Public Health Service (Bureau of Prisons, IHS, AHEC)

A manuscript published in the *Journal of the American Pharmacists Association* in 2016 offers a current picture of practice in the Federal Bureau of Prisons (BOP).[19] More than 170,000 inmates at 122 Federal institutions receive health care through this service. The article notes that as of September 2015 approximately half of eligible BOP pharmacists at 37 institutions offer patient care services via an approved collaborative practice agreement. With support from the BOP Medical Director via a memorandum to BOP Clinical Directors, Health Services Administrators, and Chief Pharmacists, the delivery of clinical pharmacy services across the BOP continues to expand. Services now extend to many of the same patient populations as noted in the VA clinical pharmacy services description.

Bingham and Mallette[19] examined care coordinated by pharmacist clinicians working to prevent and delay the onset or progression of diabetes-related complications. More than 13,000 inmates have been diagnosed with diabetes. Data from just five facilities were reported in this article and the baseline A1C for patients receiving services was 10.6%. Clinical pharmacist patient management resulted in an average decrease in A1C of 2.3%.

The authors note several lessons worthy of sharing from the evolution of patient care services in the BOP:

1. Collecting and analyzing standardized data is essential to program validation.
2. Involve effectively trained and engaged pharmacists willing to build trust with primary care providers.
3. Establish program affirmation from Central Office executive staff to support physician buy-in.
4. Encourage pharmacists to start slow initially and take on what fits their schedule.
5. Clinical pharmacists do not replace but support primary care providers in helping patients reach outcomes goals. Emphasize the team model.
6. Change takes time. Must be in for the long haul.

Indian Health Service (IHS) pharmacists practice in a true pharmaceutical care environment where they fully apply their clinical knowledge and skills. The IHS Pharmacy website notes the characteristics of the practice environment for students, residents and clinicians, including pharmacy managed clinics, opportunities for use of clinical skills, including physical assessment skills, interdisciplinary collaboration, quality relationships with patients and providers, opportunities to positively influence patient care, use of technology (eg, electronic health records, dispensing automation) to provide quality pharmaceutical care, and diverse practice settings.[20] The National Clinical Pharmacist Specialist (NCPS) was established in 1996 to provide a mechanism to assure that these clinicians in federal pharmacy practices display a uniform level of competency.

As noted in the summary of findings from the experiential education query, only a few of the responding colleges and schools of pharmacy identified placements in AHEC programs. In discussing the nature of the program

with faculty at the University of Colorado Skaggs College of Pharmacy which reported over 1,000 placements in the 5-year timeframe, what became clear is that the AHEC relationship has changed over the years. Currently, the Colorado AHEC facilitates the placement of P-4 students on APPE rotations by identifying housing opportunities for learners across the state for required rural rotations. The preceptors are community and institutional pharmacists working outside of the AHEC system. The National AHEC Organization sponsors the AHEC Scholars program for health professions students interested in supplementing their education by gaining additional knowledge and experience in rural and/or underserved urban settings.[21] This is a longitudinal program with interdisciplinary curricula to implement a defined set of clinical, didactic, and community-based activities. All experiential or clinical training will be conducted in rural and/or underserved urban settings.

Program duration is two years and each year includes 40 hours community-based, experiential, or clinical training in a rural and/or underserved area and 40 hours didactic education in core areas for a total of 160 hours.

Core Topic Areas

- Interprofessional Education
- Behavioural Health Integration
- Social Determinants of Health
- Cultural Competency
- Practice Transformation
- Current and Emerging Health Issues

Students should have a current interest in rural or underserved health care and be currently enrolled in a health professions degree or certificate program and be two years from program or degree completion. This includes but is not limited to students in medical, dental, pharmacy, nurse practitioner, nursing, physician assistant, social work, physical therapy, occupational therapy, and public/population health programs.

Given the goals and interprofessional focus of the program, AACP encourages colleges and schools of pharmacy to explore opportunities to engage in the AHEC Scholars program.

LEADERSHIP DEVELOPMENT IN FEDERAL PROGRAMS

AACP President Allen identified leadership development as a cross-cutting theme for the 2018-19 standing committees. Across the federal sector, leadership development has consistently been a high priority and numerous current programs are employed to advance management and leadership expertise, including in the pharmacy programs. Federal pharmacists can avail themselves of programs designed and delivered within their agency, access a variety of external programs for advanced college credit and non-credit models, and take advantage of more informal networking and mentoring activities.

Specifically, pharmacists in the federal sector (especially the DoD) are expected to continue their civilian education and training and therefore are afforded the opportunity to be selected for Long Term Health Education and Training (LTHET) programs at civilian academic institutions. This includes advanced degrees in public health, business, informatics and other areas. Additional PhD opportunities exist in pharmacoeconomics, pharmacoepidemiology and other disciplines. The Military also offers fellowship training with organizations including by not limited to national associations, safety organizations, the Joint Commission and corporations.[18]

Several pharmacy associations offer programming jointly developed by federal pharmacy leaders on their national meeting platforms. The Joint Federal Pharmacy Seminar (JFPS) is the largest annual event for federal pharmacy. Uniformed and civil-service pharmacists and pharmacy technicians are invited to participate in this education and training-filled event. The American Pharmacists Association, working with federal pharmacy advisors, coordinates the education and meeting activities and serves as the Accreditation Council for Pharmacy Education (ACPE) provider.[22]

Within the USPHS unique networking programs offer officers leadership and growth opportunities. The Pharmacy Professional Advisory Committee (PharmPAC) is organized to stimulate collaboration across the pharmacy sector for commissioned officers working across multiple agencies.[23] Among the programs coordinated by the PharmPAC is a liaison assignment held by a rotating set of officers who work to be in on-going relationships with national pharmacy associations. AACP has a PharmPAC liaison. While serving as the Chief Professional Officer for Pharmacy, Rear Admiral Pamela Schweitzer, PharmD, established a networking program to promote leadership specifically for women in the Commissioned Corps.[23] The program affords the officers opportunities to learn from and with leaders from inside and outside of government. USPHS pharmacists are encouraged to be engaged with state and local pharmacist associations and several have become actively engaged in leadership positions within these organizations.

CONCLUSION

The Argus charges did not allow for an exhaustive description of all the learning and career opportunities across the federal government. It is nonetheless obvious from this review that the health programs within the Departments of Defense, Health and Human Services, and Veterans Health Affairs offer many opportunities for

colleges and schools of pharmacy to observe and learn from best practices for pharmacy services. Additional opportunities to partner with our federal colleagues can provide high quality learning environments for students, and potential collaboration on grants and contracts to support our research programs. These departments provide many employment opportunities for our graduates. All pharmacy colleges and schools of pharmacy should have sufficient incentive to become thoroughly knowledgeable about federal programs related to pharmacy practice, education, and research. Ideally, pharmacy educators would be informed about the history of federal programs related to pharmacy and about the future directions of the programs, including departmental and agency priorities.

Colleges and schools of pharmacy should take full advantage of opportunities provided by federal health programs related to pharmacy. Most VA, DoD, and USPHS health facilities are willing partners to provide high quality student practice experiences. We can learn much from the best practices in federal health programs. In addition, most federal agencies have leadership and professional development programs that can serve as models. Partnerships with federal agencies can enhance faculty member competitiveness for grants and contracts to support research and practice missions of our institutions. Also, we should consider federal pharmacists, pharmacy technicians, and other federal employees as potential recruits for our Doctor of Pharmacy programs, graduate programs, and faculty and staff positions.

Not all federal health programs are open to academic partnership or providing resources to colleges and schools of pharmacy. Some are limited to support medical, dental and/or nursing practice or education. Schools and colleges of pharmacy, along with the Association, should advocate for federal health programs that are not open to pharmacy schools to expand eligibility to other disciplines. In some cases (such as AHEC programs) this requires state-level action to influence how federal funds are used at the state level. Ideally, new programs initiated by federal agencies will consider the multi-disciplinary nature of health education, service, and research when determining eligibility criteria.

RELEVANT CURRENT POLICY

The following policy statements are relevant to this report:

AACP encourages the development of strategic partnerships to accelerate access to value-based experiential education, especially within emerging health care settings. (Source: Professional Affairs Committee, 2015)

AACP supports member schools and colleges in their efforts to invest in the expansion of postgraduate education and training programs that prepare pharmacists to be effective members of patient-centered health care teams. (Source: Professional Affairs Committee, 2011)

Students, faculty and practitioner educators should work to achieve cultural competence and to deliver culturally competent care as part of their efforts to eliminate disparities and inequalities that exist in the health care delivery system. (Source: Argus Commission, 2005)

POLICY STATEMENTS AND RECOMMENDATIONS

The Argus Commission offers the following policy statements for consideration by the 2019 House of Delegates:

Policy Statement #1: (Source: 2018-19 Argus Commission)

AACP advocates for expansion of experiential learning opportunities, including IPPEs, APPEs and residencies, in clinical and research environments operated by all federal agencies.

Policy Statement #2: (Source: 2018-19 Argus Commission)

AACP encourages expansion of curricular and co-curricular content that informs student pharmacists of career opportunities in clinical, research and administrative positions in all relevant federal agencies.

On July 17, 2019, the delegates adopted the following amended statements:

Policy Statement #1: (Source: 2018-19 Argus Commission)

AACP advocates for expansion of experiential learning opportunities, including IPPEs, APPEs and post-graduate training, in clinical and research environments operated by all relevant federal agencies.

Policy Statement #2: (Source: 2018-19 Argus Commission)

AACP encourages expansion of curricular and co-curricular content that informs student pharmacists of career opportunities in clinical, research and administrative positions in all relevant federal programs.

The Argus Commission offers the following recommendations and suggestions for consideration by the AACP Board of Directors and AACP members.

Recommendation 1: AACP should work with various segments of federal pharmacy to learn best practices in leadership development within federal pharmacy that may be incorporated into leadership training for academic leaders in colleges and schools and for leadership training of pharmacy students.

Recommendation 2: AACP should establish a Federal Pharmacy Advisory Council to meet periodically with AACP leaders to brief AACP on key issues facing

federal pharmacy, to assure that curricula remain aligned with the needs in this sector, and to discuss opportunities where AACP could support or assist.

Recommendation 3: AACP should highlight advanced pharmacy practice within federal pharmacy at AACP annual and other meetings.

Recommendation 4: AACP should maximize participation and interaction with federal pharmacists who are active in pharmacy education at AACP and other national meetings.

Recommendation 5: AACP should collaborate with other national pharmacy organizations and federal partners to expand funding for new pharmacy residency positions.

Suggestion 1: Schools and colleges should collaborate with federal pharmacy to assist in residency program expansion that will result in additional opportunities for training clinical pharmacy specialists.

Suggestion 2: Schools and colleges of pharmacy should assist federal pharmacy in publicizing benefits of employment within federal pharmacy, including tuition assistance, internships and loan repayment programs that may ease the financial burden of pharmacy students and new graduates.

ACKNOWLEDGMENTS

The work of the 2018-19 Argus Commission benefited from the contributions of several individuals. RADM Richard Bertin, PhD, (USPHS, Retired), former Chief Professional Officer for Pharmacy, Lori Golterman, PharmD, National Director of Residency Programs and Education, Pharmacy Benefits Management Services, Department of Veteran Affairs, and Virginia Torrise, PharmD, Deputy Chief Consultant - PBM Professional Practice, participated in the October 9th meeting of the Commission and contributed to the report in a variety of ways. Members of the Argus Commission also consulted with the following individuals in completing this report: CDR Eleni Anagnostiadis, Director of the Professional Affairs and Stakeholder Engagement Staff (PASE) in the FDA Office of the Center for Drug Evaluation and Research, COL W. Mike Heath, BSPharm, MBA, FAPhA, U.S. Army Retired, former Chief Pharmacist, U.S. Army; Anthony Morreale, PharmD, MBA, BCPS, FASHP, Associate Chief Consultant for Clinical Pharmacy Services and Policy; RADM Pamela Schweitzer, PharmD, USPHS Retired and former Chief Professional Officer for Pharmacy; C. Edwin Webb, PharmD, MPH, Senior Policy Advisor for the American College of Clinical Pharmacy.

REFERENCES

1. Allen DD. Address of the president-elect at the 2018 AACP annual meeting. *Am J Pharm Ed*. 2018;82(6):Article 7283.
2. Giberson S, Yoder S, Lee MP. "Improving Patient and Health System Outcomes through Advance Pharmacy Practice." A Report to the U.S. Surgeon General. Office of the Chief Pharmacist. U.S. Public Health Service. December 2011. https://www.accp.com/docs/positions/misc/improving_patient_and_health_system_outcomes.pdf. Accessed December 20, 2018.
3. McGinnis TJ. Managing pharmacy benefit to achieve the quadruple aim. U.S. Medicine: January 22, 2011. http://www.usmedicine.com/agencies/department-of-defense-dod/managing-pharmacy-benefit-to-achieve-the-quadruple-aim/
4. Elenbaas RM, Worthen DB. Clinical Pharmacy in the United States: Transformation of a Profession. Lenexa, KS: American College of Clinical Pharmacy; 2009.
5. Worthen DB. "In honor of those who served: the history of APhA and federal pharmacy." *JAPhA*. 2019;59:162-164.
6. Commissioned Corp of the U.S. Public Health Service: History https://usphs.gov/aboutus/agencies/ Accessed February 1, 2019.
7. Indian Health Service. https://www.ihs.gov/. Accessed May 11, 2019.
8. The Army Pharmacy Study. Ingenesis, Inc. November 2010.
9. Worthen, DB. *Heroes of Pharmacy: Professional Leadership in Times of Change, 2nd ed*. Washington, DC: American Pharmacists Association; 2012.
10. National AHEC Organization. https://www.nationalahec.org/ Accessed May 11, 2019.
11. Personal communication between Argus staff liaison Maine and C. Edwin Webb, PharmD. April 30, 2019.
12. Personal communication between Argus staff liaison Maine and Timothy N. Burelle, PharmD. April 10, 2019.
13. Hall RG, Foslein-Nash C, Singh DK, et al. A formalized teaching, practice, and research partnership with the Veterans Affairs North Texas Health Care System: a model for advancing academic partnerships. *Am J Pharm Educ.* 2009;73(8): Article 141.
14. Junior Commissioned Officer Student Training and Extern Program (JRCOSTEP) Overview. https://usphs.gov/student/jrcostep.aspx. Accessed April 29, 2019.
15. VA Learning Opportunities Residency (VALOR) Program Description. https://www.pbm.va.gov/PBM/education/valor/GeneralInfo_VALOR_ProgramOverview_2019.pdf Accessed April 29, 2019.
16. Personal communication between Argus Commission member Patricia Chase and Anthony Morreale. February 2019.
17. Overview of the National [VA] Pharmacy Residency Programs. https://www.pbm.va.gov/PBM/education/residency/generalinfo/Overview_of_the_National_Pharmacy_Residency_Programs.pdf. Accessed May 9, 2019.
18. Personal communication between Argus Chair Peggy Piascik and Col. Michael Heath, U.S. Army (ret).
19. Bingham JT, Mallette JJ. Federal Bureau of Prison clinical pharmacy program improves patient A1C. *Journal of the American Pharmacists Association* 2016:56;173-177. https://www.ihs.gov/pharmacy/resident/
20. Indian Health Service Pharmacy Residency Program. https://www.ihs.gov/pharmacy/resident/. Accessed May 11, 2019.
21. AHEC Scholars and Core Topics. http://ahecscholars.nationalahec.org/. Accessed May 11, 2019.
22. Federal Pharmacy: Sharing the vision in pharmacy JFPS 2019. https://jfpsmeeting.pharmacist.com/node/10962?is_sso_called=1. Accessed May 11, 2019.
23. Personal communication between Argus staff liaison Maine and CDR Eleni Anagnostiadis (USPHS). April 2019.