

AACP REPORT

Advancing Our Pharmacy Reformation - Accelerating Education and Practice Transformation: Report of the 2019-2020 Argus Commission

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EXECUTIVE SUMMARY The Argus Commission examined changes that should be considered by colleges and schools of pharmacy to meet the bold aim of better integrating pharmacists' and physicians' practices articulated by President Sorensen. The Commission assessed the readiness of pharmacy educators to contribute to the acceleration of practice transformation. The primary focus of the report is on how the doctor of pharmacy curriculum and post-graduate training might be modified and better aligned to ensure that graduates complete their education ready to engage in roles partnered with primary care clinicians. The aim is to achieve comprehensive medication management and other pharmacist patient care services as standards of care. The Argus Commission provides preliminary recommendations for new or more intensified priorities by the 2020-21 AACP Strategic Planning Committee as they update the AACP plan. This includes the recommendation that AACP should create the Center for Academic Innovation and Practice Transformation, a hub to coordinate many current and emerging activities relevant to accelerating change in pharmacy education and practice.

Keywords: education transformation, early career awareness, personalized education, experiential education, post-graduate training, well-being and resilience

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. As part of the examination of how academic pharmacy and AACP could achieve the bold aim articulated by President Sorensen in July 2019, the Argus Commission charge for 2019-20 was:

Conduct a critical analysis of the state of engagement across academic pharmacy institutions with respect to catalyzing practice transformation and preparing graduates to lead these efforts. Based on this critical analysis:

1. Describe what academic pharmacy must do to position pharmacists as a solution to the suboptimal use of medications in our health care system.
2. Outline fundamental ways in which the training pathway for pharmacists (from entrance to pharmacy school through the completion of post-graduate training and over the course of one's career) should evolve to best prepare graduates to lead

practice transformation and assume new roles in the health care system.

3. With respect to the role of academic institutions in transforming pharmacy practice, outline a set of recommendations that can guide initial discussions associated with developing the next AACP strategic plan.

INTRODUCTION

President Todd Sorensen's bold aim as stated in his incoming presidential address sounds relatively simple: that by 2025, 50% of primary care physicians in the U.S. will have a formal relationship with a pharmacist.¹ He characterized this as fundamental to activating Strategic Priority 3.4 in the current AACP strategic plan which focuses on "practice advancement and transformation," and specifically on interprofessional practice and the role of AACP and its members in advancing these partnerships.

The bold aim statement begs the question of "why?" Don't most physicians already have relationships with pharmacists? After all, physicians remain the most

productive initiators of prescribed medications for patients. State laws and pharmacy practice regulations in virtually all states and territories now enable expanded practice authority for pharmacists to initiate or modify therapy, often in the form of collaborative practice agreements with one or multiple prescribers.

Why aren't these well-prepared clinicians able to use their education and skills to the fullest to address medication problems in the US health care system? Certainly, there is evidence that some pharmacists are playing significant roles in team-based care that improves patient outcomes and minimizes harm but too many are not yet able to expand patient care services in many practice settings.

An implementation science project conducted by co-investigators from the University of North Carolina Eshelman School of Pharmacy and the University of Minnesota College of Pharmacy with funding from the American College of Clinical Pharmacists sought to examine the transformation of physician office practice with the systematic delivery of comprehensive medication management by pharmacists working in these practices. One publication describing this work grounds all types of practice transformation efforts in a set of steps or processes designed to yield sustainable transformation.² The 2019-20 Research and Graduate Affairs Committee was specifically charged to advance the appreciation and practice of implementation science as a fundamental component of practice transformation.

With this introduction as the backdrop for the remaining work of the Argus Commission, the next section of this report will identify areas of focused analysis related to contemporary doctor of pharmacy education with recommendations for how the academy might consider modifications in both didactic and experiential learning. The Commission believes that these changes hold promise to increase the readiness for graduates to enter practice more focused on how they can engage with physicians and other prescribers to improve medication safety and enhance patient outcomes. That said, the Argus Commission believes that there must also be more purposeful alignment between the initial Pharm D education, post-graduate residency and fellowship training and lifelong learning in practice. This should enable new education and career pathways to evolve that prepare pharmacists to lead practice transformation and assume new roles.

Key Issues in Contemporary Pharmacy Education

The key areas of focus include recruitment and admissions, early career guidance, the balance between curricular content and application, experiential learning, the articulation between PharmD education and post-

graduate learning, and student/faculty/practitioner well-being and resilience.

Are we attracting enough of the right people to our programs (change leaders, innovators)?

The lifeblood of every pharmacy college and school is a high-quality applicant pool that impacts whether we are attracting enough of the right people into our programs. Whether we are succeeding in attracting enough of the right people will only be known many years from now when our current students advance into the profession and have had time to impact it. However, an evaluation of several issues provides valuable insights for determining whether our admissions programs are on target, including achieving a diverse student population/workforce, enriching the applicant pool for pharmacy programs, varied levels of preparedness of potential and admitted students, perceptions or misperceptions of pharmacy careers and the need for re-branding, and recognition of faculty service. The report of the 2018-19 AACP Student Affairs Committee provides a thorough treatment of relevant issues regarding developing leaders in our student bodies.³

Enhancing diversity in our applicant pool and our student body is a priority across all the health professions. This will ensure that the practitioners of the future mirror the diversity of the populations served. This is also a key point to ensuring that there is interest in pharmacy careers among high school and undergraduate student populations to maintain a robust and competitive applicant pool, an aim that has become a significant challenge in pharmacy education in the last several years. It is critical that AACP and other organizations maintain proactive outreach to prospective students, such as the Pharmacy Is Right for Me⁴ campaign aligned with AACP Strategic Priority #1. This program and others shine light on the many career pathways available to pharmacy graduates. Finally, pharmacy faculty play key roles in recruitment and development of the student body. From advising, to working with students in need of remediation, advising student organizations, and modeling leadership and service, these activities deserve recognition and encouragement as they can contribute to the development of leaders and innovators for the profession.

In evaluating these issues, it is clear there are opportunities for improvement in our current programs. Although only time will tell whether we are recruiting the right people, what we can control today is addressing these identified shortcomings. This will help ensure that change leaders and innovators are being attracted to and developed in our programs to positively impact the future of our profession.

Schools must aggressively develop a variety of programs to offer applicants and students unique insights into future career opportunities. When presented to applicants, they will establish clearer expectations for their careers as the landscape for change across health care continues to evolve.

How does early career guidance contribute to the ability to prepare clinicians?

It is imperative that schools of pharmacy prepare their students for the new careers that are being developed in the next ten years. With respect to President Sorensen's bold aim, pharmacy educators will need to prepare a significant number of graduates who are either practice ready for ambulatory care positions upon graduation or, ideally, with a PGY1 year of ambulatory care residency training or other postgraduate options. This will ensure that if we are able to create significant demand for these practitioners there will be sufficient numbers of pharmacists to assume these positions. If students are to personalize their PharmD education to achieve this goal they need access to excellent early career guidance that is inconsistently available today, so they have the time and flexibility to customize their didactic/elective/experiential education curriculum.

There are several possible approaches and important resources to support enhanced career guidance for pre-pharmacy students as well as currently matriculated students. This includes recruitment activities as emphasized in the previous section, P1 year early career introduction strategies and curricular flexibility with tracks for various settings and specialty practice exposure.⁵ The required interview is an excellent time to identify how enlightened candidates are to the profession.

The Argus Commission believes that all colleges and schools of pharmacy should routinely monitor the changes in health care and the emerging opportunities for both faculty and students. AACP can assist members with this priority, including facilitating sharing across programs. Colleges and schools need to consider what other courses/programs could the schools offer across the curriculum to prepare students for advanced practice opportunities. Popular programs include co-curricular assignments, portfolios, student organization activities to promote career advancements and opportunities to shadow practitioners in diverse roles and settings.⁶ A search for articles that used the term "early career guidance" yielded 278 articles. Examples include specialty tracks embedded in the curriculum (eg, residency track, entrepreneurship), electives (eg, academia), dual degree programs (eg, PharmD/MBA or MPH) and specialty APPEs (eg, sports medicine or veterinary pharmacy).

There are other professional programs to assist schools in providing career orientation and awareness. Most colleges and schools utilize the APhA Career Pathway Evaluation Program,⁷ typically early in the PharmD curriculum. The two national public awareness campaigns coordinated by AACP include profiles of diverse careers, including those associated with board certification through the Board of Pharmacy Specialties. Several national associations offer training programs which provide a certificate that students can note on their resumes and/or CVs. The Argus Commission studied the emerging program for students and practicing pharmacists created by APhA to enable lifelong learning and career progression and believes that APhA Advance will be another important tool to help learners develop career plans early in their educational program.⁸

All these programs and resources support the work of colleges and schools to identify existing and emerging career opportunities and modify curricula and co-curricular offerings to prepare graduates to be competitive upon graduation and across their careers in the rapidly changing work of pharmacy and health care.

What is the right balance between content knowledge and application?

As the practice of pharmacy has become more specialized, especially in the institutional setting, and more graduates are pursuing post-graduate residencies, pharmacy education needs to explore whether a one size fits all approach to the curriculum is the best approach for all students. Do students who are preparing for a career primarily providing comprehensive medication management (CMM) services for patients in ambulatory care settings and community pharmacies need the same degree of content in all areas as does a student who plans to specialize and pursue two years of post-graduate training in areas such as oncology, critical care, or psychiatry? Should the curriculum provide two levels of content coverage with more general topics covered in depth for all students along with less intense coverage of content from specialty areas? Students headed for careers in specialty areas could then enroll in elective courses that cover content of these topics in greater detail. Students headed for careers in ambulatory care practice would then have the opportunity to take courses where the application of content and the implementation of CMM services could be addressed and assessed in greater detail.⁹

The question about the value and purpose of the APPE component of the curriculum must be considered. Are there curricular content elements and skills that are best introduced and assessed in the experiential portion of the curriculum and should greater emphasis be placed on

teaching and assessing the application of content in the didactic portion of the curriculum? Schools of medicine are currently grappling with the focus on competency-based education and if the transition from medical school to residency could be accelerated. Greater value might be achieved during the fourth year of medical school. The same argument could be made for pharmacy education. Accelerated medical programs have been developed in pediatrics and family medicine. Pharmacy students headed for a career providing CMM services to patients in ambulatory care settings might be better served during their final year concentrating on quality ambulatory care APPEs in multiple sites learning from a variety of established preceptors. These learning experiences could focus not only on the application of knowledge but also on how to implement these types of value driven pharmacy services in locations where they do not yet exist. For this to happen, ACPE would have to modify the requirements for APPEs and, in general, increase flexibility in the accreditation process.¹⁰⁻¹²

Completion of a competency-based didactic curriculum focusing on the application and implementation of CMM services provides opportunities for enhanced instruction. Experienced APPE preceptors would assess students' ability to apply their knowledge and acquire implementation skills and abilities. Students completing enhanced ambulatory care courses with extended ambulatory care APPE experiences might be able to enter PGY-1 residencies at an advanced level and perhaps be ready to enter practice with the knowledge and skills necessary to implement and expand CMM services to more patients and providers. Likewise, students with a desire and ability to customize their didactic and APPE experiences will be better prepared for their post-graduate employment, residency, or fellowship education and training.^{12,13}

The option of an accelerated transition to practice or residency predicated on a competency-based curriculum, with the centerpiece being a more customized fourth year, could provide numerous benefits and a rethinking of how we have taught and delivered content for so long. Any dramatic changes must be carried out using sound educational strategies utilizing the appropriate levels of assessment tied to scholarship. This future practitioner, prepared to deliver, implement, and expand CMM delivery in primary care, will enhance patient outcomes. We must reexamine how content and its practice application are taught and assessed in our schools and colleges.¹⁴

How might changes in experiential education address the “bold aim”?

As experiential learning evolved, the early 2000s were especially challenging because the entry-level

PharmD meant many more APPEs were needed for a wider variety of required and elective practice settings. The implementation of Introductory Pharmacy Practice Experiences (IPPE) put additional pressure on experiential capacity. As the number of pharmacy colleges and schools and satellite campuses increased, experiential programs were stretched to their limits to satisfy the ACPE basic requirements for all students and competition for sites increased. A preceptor resignation or student rotation failure might result in double-booking a rotation experience to satisfy requirements. Also, the gradual increase in pharmacy residencies created capacity challenges when some experienced preceptors preferentially aligned with residency programs and limited the total number of learners.

With the variation among colleges and schools in the years of PharmD program length (eg, 3 calendar years vs 4 academic years), local facilities/resources, and practice partners, the concept of practice transformation seems an enormous challenge. Is it time for experiential education formats, assumptions, and rules established for the entry-level PharmD to be re-examined, re-considered, or reformed?

Experiential Education Survey and Responses

The 2018-2019 Professional Affairs Committee report provided examples of support for preceptors to advance practice transformation.¹⁵ The 2019-20 Argus Commission surveyed experiential directors/leaders for guidance and direction for potential administrative efficiencies such as clinical tracks to advance the bold aim for medication management services in primary care.¹⁶ Experiential Education Section leaders provided input into the survey questions.

The 55 respondents served as a virtual focus group for the broad findings.

- Total APPEs (in weeks) ranged from 36 to 66.
- Approximately 40% reported that they had implemented concentrations (or tracks or blocks) for APPEs.
- Of the 22 respondents with tracks, 40% offered ambulatory care tracks, 50% offered acute care tracks, 23% provided managed care tracks, and 73% offered others. (Multiple selections were allowed on the survey.)
- Regarding medication management services at ambulatory care sites, 36% reported that 100% of the sites met the definition, with the remainder between 99% and 25%.

The pharmacy experiential education community, including experiential program directors, preceptors, school administrators, practice site personnel, employers, patients, and public health community groups, have

shared interests in simplification and streamlining of experiential education to maximize student experiences and minimize administrative burdens. One director stated simply, “overloaded and not much time to be truly strategic.” Reduced student enrollments at some institutions have resulted in fewer faculty to support and precept experiential rotations. Practice sites are increasingly stipulating limits to their experiential involvement in terms of numbers of students, selected partner schools, types of rotations, and expectations for resources.

The pharmacy experiential education stakeholders should be activated for a stakeholders’ conference for recommendations to expedite the adoption of the primary care goal. These questions from experiential program directors and Argus Commission members should be considered.

- Rather than requiring certain types of rotations, how could competencies be tracked and accomplished across all APPE rotations? Would students become more proficient and competent?
- What could be learned from three-year PharmD programs which complete didactic courses in two years?
- We have long produced generalist pharmacists with one degree, but some schools offer students a declared pathway (much like minors in undergraduate programs). Could pathways promote focused competence for in-demand areas, especially for students not planning on residency training?
- How can schools/colleges assure all rotations are rigorous? Is performance (achievement of outcomes) being properly assessed?
- Should ALL students be prepared for health care teams in primary care or should there be ‘letters of intent’ at the academic midpoint for those interested?

With the experiential component of the pharmacy curriculum in mind, the Argus Commission supports the use of implementation science with stakeholder buy-in, similar to that described by Livet and colleagues,² to coordinate and accelerate comprehensive medication management proficiency for pharmacy students.

Residencies and alternative models of preparation to meet the bold aim

Achievement of practice transformation goals may require rethinking and redesigning both the PharmD curriculum and residency experience. The curricula of doctor of pharmacy programs as well as the content of residency programs have advanced incrementally over the past 20 years without sufficient coordination between the two. Residency planning and standard setting occurs

in a manner disengaged from PharmD degree curriculum planning and standard setting. Engle and colleagues recently demonstrated that competencies of clinical pharmacists, residency programs and PharmD degree programs require consistent terminology and better alignment.¹⁷

This has led to questions about the efficiency of both programs, including:

- Can PharmD didactic and experiential curriculum as currently administered adequately prepare graduates to assume progressive, entry-level, patient-oriented pharmacist practice roles?
- Can the experiential component of PharmD degree programs be enhanced to provide training on the level now provided by PGY1 residency programs?
- What can be done within PharmD curricula that might reduce the necessary duration of a residency?
- In light of the need for primary care practitioners and the extensive debt load that pharmacy graduates acquire, can the time and cost of education and training be reduced by better coordination between degree and residency programs?

To achieve comprehensive practice transformation thought and action should be directed to better coordinating PharmD degree and residency training, including:

- Better coordination between PharmD programs and residencies to achieve the greatest learning value from each. Parties involved in PharmD education and residency training should consider holding a “Summit Conference” to address inter-program coordination.
- Expansion of residency positions to accommodate all graduates who desire to have that experience and provide adequate numbers of practitioners ready to assume progressive practice roles.
- Enhancement of both PharmD education and residency training in domains that are likely to be more highly valued in the future, including wellness and population health, coordinated team care, data science, personalized medicine, patient safety, and supply chain management.
- Identification of training pathways other than residency which could lead to attractive, progressive careers for pharmacy graduates.

Addressing the Well-being and Resilience of Students, Faculty and Practitioners

Even prior to the COVID-19 pandemic, the Argus Commission acknowledged that this is a time of significant change in both education and practice. Strategic Priority 3 in the current AACP strategic plan even calls for the acceleration of change in both practice and education.

It is important to ask what is currently being done to assist our learners and their teachers, including preceptors, in addressing the stress that accompanies pervasive change. Further, what more needs to be done to assure the well-being of all those in the pharmacy profession. Each of these groups merit more intense scrutiny as we progress from the acute response to the pandemic and consider needs in the intermediate and longer terms.

In July 2019, APhA, in collaboration with AACP, ACPE, NABP and National Alliance of State Pharmacy Associations, convened the *Enhancing Well-Being and Resilience Among the Pharmacist Workforce: A National Consensus Conference*.¹⁸ Diverse stakeholders within the profession—representing pharmacists and employers from across practice settings, schools and colleges of pharmacy, and professional organizations—came together and engaged in a thoughtful and intentional process to discuss issues and concerns associated with well-being, moral distress, work overload, and burnout. The goal of the conference was the development and approval of meaningful and actionable recommendations that can be effectively implemented broadly to address this important issue.

Both AACP and APhA have subsequently analyzed the 50 conference recommendations to identify those that are most germane to and demanding action by the Association and our members. Through programming, research and communications, AACP and our members are dedicated to helping the profession navigate this period of profound change with appropriate strategies that work to decrease stress and burnout and increase well-being and resilience.

DISCUSSION – IMPLICATIONS FOR THE 2021 AACP STRATEGIC PLAN

Each of the six standing committees, including the Argus Commission, was charged with one aspect of operationalizing President Sorensen's bold aim into plans for action. In the case of Argus, the Commission's work included the request to provide input into the forthcoming AACP strategic plan for 2021 and the years that follow.

The Commission sought evidence of how colleges and schools of pharmacy might be engaged in practice transformation, broadly defined. There is substantial evidence of contributions the academy has made to progressive and innovative pharmacy practice models over several decades. Pharmacy faculty members have stimulated creation of advanced clinical roles in institutional settings, with growing attention to ambulatory care services often associated with chronic disease management. The current engagement of almost 100 AACP member institutions and their faculty in the Academic CPESN

Transformation Collaborative is further indication of academic pharmacy's commitment to and engagement in practice and education transformation.

Curriculum committees across the academy struggle to make curricular change that keeps pace with the rapid expansion of content as research provides new therapeutic agents and new areas of foundational science (eg, pharmacogenomics). Hence, the Argus Commission encourages a dialogue among our members related to models that allow a learner to identify a pathway early in the educational process and the flexibility to customize some portion of the didactic and experiential curriculum. The goal is to prepare individuals who are truly "practice ready" as emphasized in the current accreditation standards. The need for practice readiness upon graduation has also been one of many lessons associated with the COVID-19 pandemic. The current Argus Commission encourages AACP to carefully analyze such lessons in an effort to lead the academy in future crises that are sure to arise.

The Argus Commission also recognized that there is not adequate alignment between the evolution of curricula and the current post-graduate training models. Our recommendations include a call for a national summit to engage all the stakeholders in a timely and important conversation about how to work toward an enhanced education continuum for different career pathways.

The Argus Commission began the process of providing input into AACP's next strategic plan by examining the results of an institutional membership survey administered by iBossWell, the consulting firm engaged for the planning process. Fielded in late 2019, the survey was completed by more than 100 deans. Results from a second survey that was sent in early 2020 to all current individual members except for the deans were not available while the Commission completed this part of their charges due to the disruption of the pandemic. The 2020-21 AACP Strategic Planning Committee will have data from both surveys as they begin their work later in 2020. A separate report with planning recommendations will be provided by the Argus Commission to the planning committee.

In closing, an article entitled "A Historical Discourse Analysis of Pharmacist Identity in Pharmacy Education" reviews themes in the profession of pharmacy through the pharmacy education literature.¹⁹ Predominant discourses are "apothecary," "dispenser," "merchandiser," "expert advisor," and "health care provider." These roles do not expire when the next role appears. The authors posit that attempts to transform the pharmacy profession may "illustrate the profession's robust adaptability and resilience in an every-changing health care environment."

However, “it is unclear if our educational institutions have been unsuccessful in socializing students to the health care provider identity or if our practice settings undo this identity, or a combination of both.” This is an important dilemma for addressing the bold aim in primary care.

Policy Statements, Recommendations and Suggestions

The Argus Commission reviewed the 1980-2019 compendium of current AACP policy to identify those most relevant to their current charges. Several dozen policy statements were identified, including two of AACP’s older statements that bear repetition.

AACP should encourage member institutions, in concert with practitioners, to expand clinical pharmacy in the community so that clerkships in community settings will be more meaningful to students, and even inspirational, so that such practices will be emulated when they enter the profession. (Source: Policy Development Committee, 1982)

AACP supports the teaching and clinical application of core competencies in primary care health services delivery which are community-based and fully interprofessional. (Source: Argus Commission, 2010, as revision to policy proposed by the Professional Affairs Committee, 1994)

Proposed Policy Statement (submitted to the Bylaws and Policy Development Committee)

The 2019-20 Argus Commission proposes one new policy statement:

AACP encourages the design and delivery of curricular models that facilitate students’ identification of early career preferences and the personalization of electives in the didactic and experiential components of the PharmD program as well as post-graduate training and practice. (Source: Argus Commission 2019-20)

Recommendations

Recommendation 1: Establishment of the Center for Academic Innovation and Practice Transformation

AACP should establish and resource the Center for Academic Innovation and Practice Transformation as a new organizational unit that will drive the Association’s work to accelerate education and practice transformation.

Recommendation 2: Convening a Stakeholder Summit to Align PharmD and Residency Training

AACP should lead the planning and execution of a summit with all relevant stakeholders to examine inter-program coordination to enhance the efficiency of both PharmD and residency training programs.

Recommendation 3: Critical Examination of the COVID-19 Pandemic Impact on Academic Pharmacy

The 2020-21 Argus Commission (or some other body) should be charged with a critical analysis of the impact of the COVID-19 pandemic on academic pharmacy, including short, intermediate and long-term impacts, and identify proactive strategies to mitigate negative impacts and increase readiness for a future crisis.

Recommendation 4:

The 2020-21 Bylaws and Policy Development Committee should be charged with responsibility for critically examining the 1980-2020 AACP Compendium of Policies to identify those policies that should be archived or repealed. Further, the BPDC should identify an updated format to make the compendium more searchable and user-friendly.

Suggestions

Suggestion 1: Increasing Member Engagement

AACP encourages pharmacy colleges and schools to engage with practice leaders in ambulatory and community pharmacy practice plus primary care providers in the medical communities to facilitate the incorporation of implementation strategies for delivery of comprehensive medication management and other patient care services into curricula, including experiential education.

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