American Journal of Pharmaceutical Education **2012; 76 (6) Article S6.**

AACP REPORTS

Report of the 2011-2012 Standing Committee on Advocacy: The Relevance of Excellent Research: Strategies for Impacting Public Policy

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INTRODUCTION

According to the Bylaws of the American Association of Colleges of Pharmacy (AACP), the Advocacy Committee:

> *"will advise the Board of Directors on the formation of positions on matters of public policy and on strategies to advance those positions to the public and private sectors on behalf of academic pharmacy."*

COMMITTEE CHARGE

President Brian Crabtree charged the 2011-2012 Advocacy Committee to:

1. Examine what AACP should do to balance the advocacy portfolio with respect to education and science scholarship.
2. Recommend strategies for demonstrating the value of education and science scholarship to address the mission of the Academy in communities served by member institutions.
3. Recommend specific approaches and advocacy strategies for consideration by AACP and member institutions for implementing interprofessional education.

The Committee met in-person in October in Arlington, VA to discuss the charge and determine the approach to meeting the charge. This face-to-face meeting allowed for a very wide ranging discussion that brought into clear focus:

1. the imbalance/disconnect in the number of AACP policy statements relevant to science (biomedical and translational) research compared to those relevant to education research. AACP has many more policy statements relevant to science scholarship than it does policy statements relevant to education scholarship.
2. that AACP organizational activity related to educational research in terms of programmatic and student assessment, student progress, publication of educational research in AJPE, is extensive and yet there is little organizational policy supporting this activity.
3. Possible answers to questions such as: Who is interested in the quality of our education? Who cares about the good education processes we engage in? What is the value to the public of the way we educate and the outcomes of our education? How long does "we are teaching you for the future" remain relevant?
4. The fact that many communities and stakeholders do not fully understand or appreciate the importance of either science or education scholarship and their contributions to individual and public health.
5. AACP members engagement in science and education scholarship is worthy of recognition of its social impact.
6. The importance of moving from identifying barriers to effective interprofessional education toward overcoming and eliminating these barriers.

Continuing reflection by the committee resulted in an approach that would increase the public's appreciation of the benefits of pharmacy education to health. Public appreciation would be increased by rearticulating the connection between both education and science scholarship as the foundations for continuous quality improvement of pharmacy education. An organizational policy agenda, broad in its application to our Academy, and focused in its application to public policy, was developed. This policy agenda is framed within the teaching, research and service expectations of pharmacy faculty. It establishes the importance of:

1. teaching as the primary contribution of the Academy to the public's health through the education of a pharmacist competent to work

collaboratively and interprofessionally with patients, caregivers and other health professionals;
2. the creation, integration and application of education and science scholarship as essential contributors to the continuous improvement of pharmacy education; and
3. the importance of the educational and science scholarship and interprofessional education as a key opportunity for addressing the public policy question of how best to reorganize our healthcare system.

BACKGROUND

The benefit of academic pharmacy to the health of our nation and the world is a direct result of the teaching, research and service of its faculty. These three components, reflecting the mission of higher education, are relevant and important to improving individual and population health, improving health care processes and delivery, and preventing further escalation of associated costs.

Teaching is the Foundation of the Academy's Commitment to the Public

The primary purpose of pharmacy education is to improve the public health through the education of a health professional, the pharmacist, competent to meet or exceed the public expectations of the pharmacist as expressed in state practice acts. Pharmacy education meets that competency expectation through a progressive series of educational experiences guided by educational outcomes, accreditation standards and individual institution priorities. The mission of AACP is to improve the quality of pharmacy education so that our public contract is met. As stated by AACP policy passed by the House of Delegates and proposed by the Academic Affairs Committee in 2007 "The mission of pharmacy education is to prepare graduates who provide patient-centered care that ensures optimal medication therapy outcomes and provides a foundation for specialization in specific areas of pharmacy practice; participation in the education of patients, other healthcare providers, and future pharmacists; conduct of research and other scholarly activity; and provision of service and leadership to the community."

The continual assessment and use of that assessment for the improvement of individual faculty, courses, programs and entire curricula is essential. Support for these activities is stated in the AACP policy "AACP supports and encourages the implementation of on-going program assessment processes at member institutions for the purpose of enhancing the quality of educational programs and student services approved by our House of Delegates in 2004. This assessment process also addresses a significant public policy discussion regarding the value of higher education in light of continually increasing tuition and education costs. Scholarly teaching and the study of effective education approaches are both important contributions of our faculty to the assurance of public health.

Proposed Policy Statement

AACP endorses the scholarship of evidence-based education which includes but is not limited to assessment of teaching and student learning and the integration and application of patient and professional advocacy.

Academic pharmacy improves the public health through its continued and persistent commitment to research and service of its faculty.

Academic pharmacy further improves the public health through education and science research and the dissemination of both education and science knowledge in the service activities of its faculty and the integration of new education and science scholarship back into the professional curriculum. While biomedical and science scholarship frequently receive greater attention for their contributions to the public, the tacit benefits of education scholarship are not without merit since as stated above it ensure that the education of the pharmacist is relevant to the expectations of the public and continually improves and evolves to meet that expectation. Meeting the public expectation of higher education is increasingly important. Federal legislation, most frequently through the reauthorization of the Higher Education Act, is influenced by public opinion and expectations of higher education. The National Advisory Committee on Institutional Quality and Integrity (NACIQI), the federal advisory body authorized in the HEA to advise the Secretary of the Department of Education, in a draft document released on January 17, 2012 stated "we recognize that this is a time of considerable focus on quality in higher education, with emerging areas of serious concern about value, standards, outcomes, cost, transparency, and accountability."[1] AACP policy statements passed by its House of Delegates that support these important activities of the mission of higher education are numerous with at least 17 research related policy statements.[2] A preponderance of policy statements relevant to science scholarship should not minimize the importance of education scholarship since the latter forms the foundation of the Academy's commitment to the public and is essential for addressing the public expectations of higher education. All three elements: teaching, research, and service contribute to protecting

and improving public health. Public health is best protected when there is individual faculty participation, contribution and dissemination of all three elements.

Education scholarship gains a heightened importance if it is agreed that teaching and therefore education is the foundation of the Academy's commitment to the public. The assimilation of evidence-based teaching approaches into the contemporary pharmacy professional curriculum ensures that teaching provides the appropriate competency development of the pharmacist. Attention to continuous quality improvement of the educational experience is a public good in its assurance of professional competency attainment and also serves another important public good. Current public policy discussions regarding the value of education can be addressed only through the demonstration of a commitment to continuous quality improvement of the educational experience. Academic pharmacy, through the development of programs, products and services under the auspices of the American Association of Colleges of Pharmacy, can effectively demonstrate its commitment to improving the quality of a student's educational experience, which can be gained at a cost that does not exceed the individual student's contribution to the public.

The *American Journal of Pharmaceutical Education* (AJPE) is the premier journal of pharmacy education. The purpose of AJPE "is to document and advance pharmaceutical education in the United States and internationally."[3] In a 2005 special report published in AJPE stated, "While there have been over 9,000 publications on assessment in higher education, only slightly more than 100 address pharmacy education, and approximately half of these were published in the Journal."[4] This information is presented as a way to demonstrate the commitment of our Academy to continuous improvement of pharmacy education, the importance of disseminating education scholarship and the grounding of pharmacy education in broader higher education theory.

Proposed Policy Statement

AACP endorses evidence-based education, continuous quality improvement, rigorous accreditation standards and assessment.

Improving Healthcare: Making Patient-Centered, Team-Based Care a Reality Through Education

The citizens of the United States contribute over $2.6 trillion annually to a healthcare system that provides marginal benefit in terms of improved health outcomes compared to other industrialized nations.[5,6] Our healthcare system sustains some of the most dramatic health disparities in terms of access and service delivery when compared to similar nations. The lack of social justice evident in our healthcare system is seen across age groups, ethnicity, socio-economic status, education, and health status. Like any institution in need of change how that change should manifest itself has been debated for decades. Contemporary business improvement concepts, focusing on inputs, outputs and process, provide a framework for improving our healthcare system. Consensus brought to the fore a quality improvement approach that would improve health (output), improve healthcare (process) and control costs (input).

The Institute of Medicine (IOM) in its quality chasm series coalesced those decades of debate. In its 2003 report, "Health Professions Education: A Bridge to Quality," the IOM addressed an important input requirement by recommending that all health professionals receive an education that allows the attainment of competence to deliver care in a patient-centered, team-based manner that was supported by informatics and to engage in quality improvement.[7] Academic pharmacy supports this competency development strategy and articulates that support in the following policy statement passed by the House of Delegates in 2007: "AACP endorses the competencies of the Institute of Medicine for health professions education and advocates that all colleges and schools of pharmacy provide faculty and students meaningful opportunities to engage in interprofessional education, practice and research to better meet health needs of society."

Academic pharmacy demonstrates its support for its own policy statement through individual member institution and inter-organizational activities that may be supported by federal programs aligned with the IOM recommendations. The federal programs include the health professions education programs authorized by Title VII of the Public Health Service Act. The demonstration of support for efforts to improve the delivery of healthcare through patient-centered, team-based, informatics-supported approaches requires attention to teaching, research and service. AACP, most recently through The Interprofessional Education Collaborative (IPEC), an inter-organizational activity aligned with five other health professions education organizations, exhibits the interest of its membership in interprofessional education. IPEC has developed and published a document that lists the core interprofessional competencies for collaborative practice.[8]

Our member institutions, supported by the standards of the Accreditation Council for Pharmacy Education, work to ensure our students receive evidence-based, interprofessional and culturally competent learning experiences.[9] Our faculty engage in activity that advances the concepts of team-based care through the use of a scholarly

approach to interprofessional education and the development of successful practices grounded in evidence-based higher education theory.[10,11] Committee members provided examples from their own institutions as examples that demonstrate the Academy's commitment to continually improving the quality of pharmacy education. For example, Western University of Health Sciences (Western U) instituted an interprofessional education (IPE) curriculum that includes 9 colleges within the University, including the College of Pharmacy. The program outcomes are that the Western U graduate will demonstrate an understanding of other health professionals and provide and promote a team-based approach to patient care and health care management.

Western U's IPE curriculum is delivered as a three phase approach that encompasses entry-level and more advanced healthcare professions students who are engaging in the clinical phase of their respective curricula. Phase I is a case-based course where students from all programs participate in an interprofessional groups. Competencies for this course include communication and collaboration; formation of an interprofessional team; roles and responsibilities of the professions; application of quality of life and a culture of safety; integration of the mission and vision of the One Health Initiative;[12] and the ethical and legal environment of healthcare. The second phase is designed to help instill further teamwork principles especially in the asynchronous healthcare environment. The third phase is clinical where the students are now expected to apply the principles from phase I and II to enhance their clinical practice skills. Throughout all phases of the curriculum students are provided with an evidence-based teaching platform that includes material from TeamSTEPPS®, an evidence-based approach to teamwork in healthcare that is designed to enhance performance and promote patient safety.[13]

Initial findings from the program include strong positive attitudes toward interprofessional collaboration as measured by surveys of students and faculty; a variety of positive course experiences as measured by student surveys and blogs; and higher ratings of teamwork behavior among students with IPE training vs. those without, as measured during a standardized patient encounter exercise.

The University of Mississippi School of Pharmacy is engaged in interprofessional education (IPE) activities on both the Oxford and Jackson (Medical Center) campuses. On the Oxford campus, Department of Pharmacy Practice faculty currently provide lectures for the School of Nursing on topics related to diabetes, and other disciplines (nutrition) participate in our second professional year Skills Laboratory. The School of Nursing (Oxford) provides simulation lab activities for students and we are currently exploring opportunities for nursing and pharmacy student interactions in this environment. Discussions are underway with the School of Applied Sciences (Oxford) to determine a third discipline for participation in IPE activities on that campus.

On the Medical Center campus, there are newly formed institutional IPE committees on which School of Pharmacy faculty/students are active participants. Faculty from the different Schools are collaborating to identify IPE resources and funding opportunities. Department of Pharmacy Practice faculty on the Medical Center campus currently administer an interprofessional two-credit hour Public Health/Preventive Medicine course with the School of Medicine. The design of this course allows for interaction among students in a team based learning format. Long-term plans for this course will incorporate the other health related Schools on campus (Nursing, Dental, health-related professions). School of Pharmacy faculty have also developed a course to be offered in the third professional year in collaboration with the Schools of Medicine and Nursing. If approved, this proposed course is structured to facilitate IPE opportunities and activities will include standardized patient cases and simulation. Introductory and Advanced Pharmacy Practice Experience activities throughout the curriculum are designed to further foster interprofessionalism across inpatient and outpatient practice settings.

The Northeast Ohio Medical University College of Pharmacy has a very innovative interprofessional health care education and research program; pharmacy and medicine students learning together. The pharmacy and medicine curricula integrates the 15 disease states as core competency areas identified by the Institute of Medicine (IOM) for all health care practitioners, as well as topics that impact the health of Northeast Ohioans. The curricula provides opportunities to develop and practice skills as part of a team environment in multiple training and clinical settings. The pharmacy course sequence is based on curriculum year themes in which knowledge, skills and experience build upon previous courses.

Year one focuses on *dosage forms* and gives students an understanding of and the ability to: 1) select appropriate dosage forms for a given situation, 2) research the availability of dosage forms, and 3) compound individualized dosage forms. Year two turns to *medication use systems* and gives insight into pharmacy management and personnel, dispensing medications safely and recognizing the basic science related concepts that govern selecting the correct dosage regimen and formulation for the patient. Year three focuses on *patient safety* and provides understanding of existing federal laws and their

application in the practice setting. This year also focuses on the ability to design the optimal therapeutic regimen for a disease or situation and to monitor and report less than optimal outcomes (adverse events, medication errors, noncompliance, etc.) based on evidence-based medicine. The third year pharmacy students interact with second year medical students in some coursework illustrating that matching professional years isn't required and offers opportunity for additional interprofessional overlap when appropriate topics can be timed together. Year four turns to *patient-centered care* and offers direct patient care learning regarding decision-making and outcomes of therapeutic management. Overall, there is an optimal blend of coursework and experiential learning that enables the students to learn, practice and be assessed in a coordinated and timely fashion with focus on teamwork and interprofessionalism. The course content is designed with the intent of revisiting diseases and medications each year, but with increasingly more complex content in order to promote critical thinking.

Integration of the two curricula is extensive and includes seven didactic courses offered to learning with one another. In the first two professional years the students learn and work together during active learning in these didactic offerings. The two college's longitudinal experiential learning sequences include numerous interprofessional-learning activities throughout the program. All of these activities focus on core competencies for interprofessional teamwork at varying degrees. Taken in sum, the overlap is significant between the two colleges and works on an endpoint of better team-oriented outcomes as well as a deep understanding of the importance of these approaches to maximize interprofessionalism.

The work of our faculty strengthens our nation's ability to address individual and population health problems through basic and translational research to improve the quality of care delivery. Faculty engagement in health services research improves the way in which care is provided and identifies successful practice patterns that include fair and equitable payment to team-based practitioners. While the primary aim of this research is to improve the public's health, the results and recommendations support scholarly teaching and the translation of new knowledge that informs the work of other researchers, scientists and practitioners. Combining the scholarly work of faculty focused on health services research allows academic institutions to bring the value of this area of research to a broader audience.

The University of Southern California School of Pharmacy (USC) recently established the Leonard Schaeffer Center for Health Economics and Policy in a unique partnership with the USC Price School of Policy. This Center, which serves as a combination research center, "think tank", and policy institute, combined the strengths of the pharmacoeconomic and health services research faculty in the School of Pharmacy, the health economist and health policy faculty from the Price School of Policy, and four additional health services and health economists recruited from the Rand Corporation to create a uniquely positioned Center to conduct research, study, analyze, and recommend and advocate for policy changes and serve as an active "think tank" to develop new approaches to delivering health. As an example of what can be accomplished in a collaborative environment, the Schaeffer Center faculty were awarded over $25 million in new NIH grants in the first year of operation.

Other schools including the University of Washington, the University of North Carolina at Chapel Hill, the University of Minnesota, the University of Maryland, Purdue University, The University of Iowa, the University of Wisconsin-Madison, and the University of Florida have well-established doctoral and master's programs aimed at increasing the number of pharmaceutical health services researchers. The international value of health services research in general and pharmaceutical outcomes research in particular led to the establishment of The International Society for Pharmacoeconomics and Outcomes Research (ISPOR), by pharmacy faculty, Dr. Joel Hay and others.

Health service research includes clinically-driven programs that focus on the outcomes of pharmacist interventions in real-world practice. Now referred to as patient-centered outcomes research, this type of health services research strives to improve the quality of care the outcomes and recommendations of which improve the professional curriculum, increase the public expectation of the pharmacist and provide payers with information to move toward pay for performance based on science. The University of Southern California and the University of Minnesota have taken a leading role in the development and implementation of a patient safety initiative administered through the Health Resources and Services Administration (HRSA) Office of Pharmacy Affairs. Initiated through a demonstration project that partnered colleges and schools of pharmacy with community health centers, the Patient Safety and Clinical Pharmacy Services Collaborative (the Collaborative) continues to improve the quality of healthcare services provided to underserved populations in our nation's safety-net clinics and hospitals. The ability of the Collaborative to use the concept of rapid-cycle quality improvement and expert faculty consultation to improve patient outcomes was identified as a reason the Centers for Medicare and Medicaid have asked Collaborative partners to work with the Quality

Improvement Organizations in their state to improve the quality of care for Medicare beneficiaries. The success of these programs has been demonstrated with peer reviewed published research and a number of clinical tools have been developed for integration into the clinic settings.[14]

Researchers have incorporated and published their experiences and outcomes of interprofessional experiences in underserved settings. Some good examples include student-run clinics from the University of California, San Francisco, where interprofessional student teams care for hepatitis B patients.[15] The University of Florida provides an Interdisciplinary Family Health course that emphasizes community-based learning experiences. Underserved settings may provide a good environment for interprofessional education, with the HRSA collaborative serving as one model.[16]

Proposed Suggestion

AACP member schools and individual faculty are strongly encouraged to partner with local Federally qualified safety net clinics and participate in the PSCPS Collaborative to demonstrate further the value of clinical pharmacy services, to expand the influence of clinical pharmacy and to serve their local communities in underserved settings.

Proposed Recommendation

AACP will develop an institute focused on [strategies for identifying opportunities and reducing barriers to] interprofessional education in which interprofessional teams shall attend.

Proposed Suggestion

AACP members are strongly encouraged to proactively seek interprofessional education opportunities as recommended by the Interprofessional Education Collaborative (IPEC) in their May report with campus and community-based partners.

The Value of Education and Science Scholarship to Communities

The United States healthcare system is influenced and regulated by a number of federal agencies. These include the Centers for Medicare and Medicaid Services, National Institutes of Health, Centers for Disease Control and Prevention, Food and Drug Administration, Health Resources and Services Administration and the Agency for Healthcare Research and Quality. These organizations increasingly are focused on the implementation of the provisions of the Patient Protection and Affordable Care Act (PPACA).[17] The intent of PPACA is to create a high quality healthcare system that won't bankrupt our nation and that will provide improved health outcomes for our citizens. Improving health, improving healthcare and reducing costs provide the underlying quality improvement strategies for this landmark legislation. And yet, these strategies have been developing within the health policy arena for decades and would have maintained their relevance and traction even without PPACA. Uniformly, the cost of care and the value we as a society gain from that cost remain the important drivers for seeking a reorganized approach to health care delivery and a renewed commitment to keeping individuals healthy and reducing the impact of preventable illness.

The expression of these strategies is not sufficient for reorganizing the delivery of healthcare. Implementing these strategies is currently being accomplished by grant support from a variety of federal agencies responsible for acting on the intent of Congress as expressed in PPACA. While the requests for proposals invariably request applicants to forward their most innovative approaches to addressing the stated proposal goals, it is the traditional methods of grant review and advisory committee recommendations that will put proposals into action and continue refinement of research questions to address this pressing public need.[18] Our faculty are the content experts for a wide-range of education and science knowledge that is essential to the improvement of our healthcare system. Faculty at AACP member institutions must increase their participation on these grant review boards and advisory committees. To further future health policy recommendations faculty must also seek greater participation in the array of federal fellowship opportunities that exist within agencies such as the Food and Drug Administration, Centers for Disease Control and Prevention and the National Institutes of Health toward the end of sharing their science knowledge to influence public policy development and implementation and increase their knowledge of what that public policy is and how it should be integrated into the professional curriculum.

To heighten the impact of pharmacy faculty expertise on the development of public policy, the IOM within the year, is expected to establish a Pharmacy Fellow to its distinguished Fellows Program. The IOM interest combines the organizations recognition of the contributions of many academic pharmacy faculty and leaders that are among its membership with the contributions of faculty engaged in a wide-array of programs supportive of federal agencies. Pharmacy faculty make up a large portion of the faculty for the HRSA Collaborative. The many advisory committees of both the National Institutes of Health and the Food and Drug Administration benefit from the inclusion of pharmacy faculty. Grant-awarding federal

agencies also seek pharmacy faculty as members of their grant review committees based on their knowledge and skills.

Fortified with the teaching, research and service expertise of our faculty, our graduates are our primary input into a reorganized healthcare system. Increasingly the knowledge, skills and abilities of our graduates are recognized as essential for addressing the triple aim of a reorganized health system. Former Surgeon General C. Everett Koop is attributed with the quote, "Drugs don't work if patients don't take them." The growing recognition of the negative impact on health and economic outcomes associated with poor adherence to medication regimens is just one of the opportunities for integrating pharmacists into healthcare teams. The National Consumer League's public campaign, *Script Your Future,* is driving patients, providers and care-givers to the pharmacist for structured approaches for improving patient adherence.[19]

The Patient Centered Primary Care Collaborative (PCPCC), a national collective of organizations created for the development of tools and resources associated with the creation of primary care medical homes (PCMH), recognizes the importance managing medications.[20] Comprehensive medication management, which includes the assessment of a patient's ability to remain adherent, supports the integration of the pharmacist into the primary care team. The medication management resource developed by the PCPCC states, "The current academic preparation of pharmacists qualifies them to deliver medication management services. All practicing pharmacists are capable of providing this service, although additional training may be required to meet the standards described in this document. Many pharmacists now provide this service and are being paid by federal and state governments and private insurers. This service can no longer be considered a new service. The service is scalable and can be delivered in a PCMH when appropriate financial support exists in the organizational structure."

The PPACA provides additional opportunities for the integration of the pharmacist across the healthcare continuum. Provisions within the legislation include the pharmacist in community-based healthcare teams, improving care coordination and increasing medication reconciliation access to patients moving between types of care, and improving interprofessional health professions education in federally supported area health education centers and geriatric education centers. To get us to a more effective, efficient health system, the PPACA authorized the creation of the Center for Innovation within the Centers for Medicare and Medicaid Services. The Center for Innovation has already released several requests for innovative practices that align with and will benefit from the relationships and systems our faculty have been instrumental in establishing across the United States.

Like the evaluation and assessment of our programs and curricula the evaluation and assessment of healthcare delivery systems is an opportunity for faculty scholarship. Broadening the implementation of these innovative approaches and their evaluation provide continued engagement for faculty and ultimately integration of our graduates. The PPACA reflects the interest of health and public policy analysts and advocates for a more rigorous approach to determining the effectiveness of services. The Patient Centered Outcomes Research Institute (PCORI) is a direct expression of that effectiveness interest. Aligned with the comparative effectiveness work of the Agency for Healthcare Research and Quality, PCORI, through the creation of a national research agenda, establishes effective healthcare service delivery as a national priority. That priority can and should be influenced by pharmacy faculty. That influence is appropriate in light of AACP policy that states "AACP and colleges/schools of pharmacy should promote pathways of faculty development that enable pharmacy faculty members, including non-tenure track faculty, to lead and/or participate in practice-based, translational research which was approved by the AACP House of Delegates in 2008. Whether health services research is undertaken in a comparative format, or utilizes some other methodology, pharmacy faculty can and do contribute to the refinement of current services and the development of more effective future services.

Improving Health

Improving the delivery of services is not the only opportunity for our graduates and faculty. As discussed earlier, our nation's health outcomes do not positively reflect the benefit of the trillions of dollars spent annually. For decades, maybe centuries, the public policy of our nation has failed to address population health through sustained federal investment in disease prevention and health promotion. Committing to a society of healthy individuals provided evidence-based clinical and population interventions has proven difficult. The escalating cost of care and the poor outcomes in terms of improved health associated with those costs is driving a change in health policy. That change is seen in many provisions of the PPACA that mandate funding for the Prevention and Public Health Fund and authorized grant funding for programs such as the Community Prevention Grants program at the Centers for Disease Control and Prevention (CDC). The health professions education community plays a significant role in moving this public policy agenda through the Healthy People Curriculum Task Force,

an organization administered through the Association of Prevention Teaching and Research. This group has created an interprofessional clinical prevention and population health curriculum and provided data for Healthy People 2010 and 2020 objectives related to public health education across the education spectrum.[20]

AACP member institutions are long-standing supporters for the integration of public health into the pharmacy professional curriculum. In 1994, the House of Delegates passed a policy that states, "AACP supports the development and implementation of curricular components and associated instructional strategies which assure a common set of core competencies and knowledge concerning population-based epidemiology, the determinants of health, effective programs in health promotion and disease prevention, and primary health care services delivery for all health professionals." Approaches for curricular content development and implementation were part of a successful practices call through the Association of Prevention Teaching and Research in 2010. Six pharmacy faculty successfully submitted case studies of their clinical prevention and population health work which are posted on the AACP website.[22]

Proposed Policy Statement

AACP will support member colleges and schools in their efforts to develop and maintain strong, mutually beneficial community-campus partnerships that demonstrate and recognize the value of education and science scholarship and innovative practice models that improve the quality of individual and community health outcomes.

Addressing the Cost of Care

Direct impact reducing the cost of care can be accomplished through the development and evaluation of innovative approaches to care that focus on value and outcomes. Health professionals can be most effective in reducing the health costs of individual patients when service provision is undertaken through a lens of patient-centeredness which includes the reduction of health disparities, increasing access to evidence-based care, and the provision of care that is culturally competent. This individual patient approach to care is supported by AACP policy passed by the House of Delegates in 2008 which states "Colleges/schools of pharmacy should work to advance learners' human cognition, ethical developments, and behavior. Meaningful strategies include teaching and assessing ethics, cultural competency, intra- and interprofessional teamwork and community engagement with underserved populations."

It is important to bring attention to this statement's expectation of teaching and assessment as important elements for evaluating the competence of future pharmacists to provide this level of cost-conscious care. The strength of that competence and ability to influence an unwieldy health system requires a similar strength in education scholarship to maximize didactic and experiential experiences. Overall, healthcare costs can be impacted by focusing on wellness and disease prevention and further erosion of health status for the chronically ill. We know that improving the management of medications associated with the care of the chronically ill does have a positive impact on overall health costs.[23] What the most effective approach to medication management is to gain this reduction is an essential research question for pharmacy faculty and other health service researchers. This research can then inform the professional curricula of all health professions institutions so that patient-centered, team-based care becomes a measurable reality.

Likewise, the recognition that the value we derive from our current health expenditures provides some challenges in the context of improved health outcomes and specifically public health measures such as life expectancy, infant mortality and rates of chronic illness, has supported wellness and disease prevention as a framework for a reorganized health system. While the importance of wellness and disease prevention is recognized, to whom these interventions are provided can have substantial impact on whether the conclusion can be drawn that prevention does lead to overall savings.[24] Like the delivery of acute medical care, preventive services suffer from a similar lack of evidence for their efficacy that is just now being addressed and catalogued. That is why the PPACA, in an effort to address this issue, requires the U.S. Preventive Health Services Task Force to play a role in establishing the evidence-base for the clinical prevention and population health interventions.

Health professional understanding of the social, as well as the physical and mental determinants of health can significantly impact the cost of care. One way that academic pharmacy brings a level of cost-consciousness to student pharmacists is through their engagement with underserved populations. This engagement frequently includes experiences within the professional curriculum including introductory professional practice experiences (IPPE) or advanced professional practice experiences (APPE). It also occurs through student-led projects, such as those supported by the American Pharmacists Association Academy of Student Pharmacists or with other student organizations. The benefits to the students and their communities are recognized through the AACP Student Community Engaged Service Awards. The cost-sensitivity impact on students of these activities have been demonstrated through peer-reviewed publications, showing

increased cultural competence in providing care to these populations as well as beneficial effects to the community in which the patients live.[25-27]

Long-term cost savings are anticipated from the use of technology platforms to exchange healthcare information. The federal government continues to make a significant investment into the development and implementation of electronic health records and most importantly, their meaningful use.[27] Increasing the health information technology (HIT) capacity of entire communities and regions of the United States is being addressed through the Beacon Communities program. Several AACP member institutions are actively engaged in these community-based HIT integration activities. As important as development and integration of these potential cost-saving programs are, of greater importance is the understanding and capacity of health professionals to access and effectively utilize the large amounts of patient-level data that are made available through HIT.

AACP member institutions are committed to improving the communication skills of our graduates. A policy statement approved by the AACP House of Delegates in 2008 states that, "AACP and colleges and schools of pharmacy should assure that students, faculty and alumni have sophisticated and continuous preparation in the design and use of health information technology (HIT) and systems and are prepared to apply HIT evidence-based decision-making at the point of patient care. Yet, this policy statement is not overt in its expectation that students, faculty and alumni are able to effectively and efficiently make better decisions based on the evidence-based presented through HIT. In fact, the amount of information may result in the opposite. A recent HIT study found that physicians confronted with information in an electronic health record are more likely, not less, to re-order x-rays even though the record indicates that x-rays have already been ordered and the results available.[28] This clearly indicates that the cost-saving benefits of HIT will not be realized until health professions students are educated and competent to analyze the wealth and maybe overload of information made available through HIT. To date, the consideration of health professions education as an important component for HIT cost-benefit realization has not been a significant aspect of public policy development.[30]

Addressing the Charge Through the Creation of a Public Policy Framework

To better articulate the importance of:

1. rebalancing the science and education scholarship portfolios;
2. sharing with the public the importance and relevance of the contributions of academic pharmacy; and
3. getting beyond the real and perceived barriers to strong interprofessional education opportunities. . .

. . .we provide a policy framework to guide the ongoing work of our Academy to protect the public health through the education of the pharmacist, meet the needs of an ever-changing society through the research of our faculty, and engage with our communities and partners to translate new knowledge into service interventions that increase the quality of life for individuals here in the United States and around the world.

AACP Policy Agenda

The mission of pharmacy education is to prepare graduates who provide patient-centered care that ensures optimal medication therapy outcomes and provides a foundation for specialization in specific areas of pharmacy practice; participation in the education of patients, other healthcare providers, and future pharmacists; conduct of research and other scholarly activity; and provision of service and leadership to the community. (*Source: Academic Affairs Committee, 2007)* This mission is critical for the protection of the public health and the assurance that pharmacist graduates are competent to meet state regulatory requirements as stated in individual state practice acts.

Discover, Learn, Care. . .Improve Health. As the tagline of the American Association of Colleges of Pharmacy states, our members meet the mission of pharmacy education through the mission of higher education teaching, research, service, which are all focused toward the end of improving health. Improving health by focusing on individual and population health is one of the three elements of the "triple aim" of a reorganized healthcare system.[31] The other two elements are improving healthcare to improve the patient experience and controlling costs through cost-avoidance strategies.

Academic pharmacy and all of health professions education, does and should contribute to improvements in individual and population health. As an organization, AACP will influence public policy so our members are able to:

Improve Health

As a nation we spend more per capita than any country in the world and have health outcomes for some public health indicators that are worse than some of the world's least developed nations. The cost of chronic illness is bankrupting Medicare, creating an overwhelming onus

on primary care providers and negatively impacting families, communities and business in lost productivity, lost days in schools and poor care coordination. Academic pharmacy will work to improve the health of individuals and populations so that our nation's leading health indicators reflect a healthy, productive population through:

Teaching. Engage in evidence-based learning strategies that integrate the concepts of clinical prevention and population health into the professional curriculum.

Strengthen the competence of pharmacy students to provide evidence-based clinical prevention and population interventions as members of a healthcare team.

Research. Engage in scholarly activity that improves the evidence-base of clinical prevention and population health interventions.

Service. Provide clinical prevention and population health interventions that are evidence-based and support the whole patient and not just an individual with the absence or presence of disease.

AACP Policy. AACP supports the development and implementation of curricular components and associated instructional strategies which assure a common set of core competencies and knowledge concerning population-based epidemiology, the determinants of health, effective programs in health promotion and disease prevention, and primary health care services delivery for all health professionals. *(Source: Professional Affairs Committee, 1994)*

Improve Healthcare

Recognizing that we receive poor value in terms of health outcomes and quality compared to many other nations, the quality chasm has been the subject of numerous reports published by the Institute of Medicine. The "quality series" of the Institute of Medicine, way back in 2003, recommended that we educate healthcare professionals competent to deliver patient-centered, team-based care, supported by informatics, in order to improve the quality of care patients receive. Academic pharmacy will work to close the quality chasm and support innovative approaches to health systems reorganization through:

Teaching. Engage in evidence-based learning strategies that provide students with the necessary skills and knowledge to provide patient-centered, team-based care, supported by effective and meaningful use of informatics and committed to quality improvement (IOM 2003).

Advance the quality of health professions education including interprofessional and culturally competent approaches by enhancing curricula and courses to reflect the current state and continual changes in healthcare through regular assessment.

Research. Advance the concepts of team-based care through use of a scholarly approach to interprofessional education and the development of successful practices grounded in evidence-based higher education theory.

Continue to develop, refine, implement and disseminate successful practices focused on student achievement and progress and competencies associated with educational outcomes and accreditation standards.

Strengthen our nation's ability to address individual and population health problems by engaging in basic research to cure disease, translational research to improve the quality of care delivery, and health services research to improve the way in which care is provided and determine successful practice patterns that include fair and equitable payment to team-based practitioners.

Service. Participate in federal, state and local efforts aimed at improving healthcare delivery systems including those forthcoming from the CMS Center for Innovation, HHS Office of the National Coordinator (HIT) and HRSA Patient Safety and Clinical Pharmacy Services Collaborative.

AACP Policy. Colleges/schools of pharmacy should work to advance learners' human cognition, ethical developments, and behavior. Meaningful strategies include teaching and assessing ethics, cultural competency, intra- and inter- professional teamwork and community engagement with underserved populations. (*Source: Board of Directors based on Argus Commission, 2008)*

AACP and colleges and schools of pharmacy should assure that students, faculty and alumni have sophisticated and continuous preparation in the design and use of health information technology (HIT) and systems and are prepared to apply HIT in evidence-based decision-making at the point of patient care. (*Source: Board of Directors based on Argus Commission, 2008)*

AACP supports and encourages the implementation of on-going program assessment processes at member institutions for the purpose of enhancing the quality of educational programs and student services. *(Source: Academic Affairs Committee, 2004)*

AACP supports interdisciplinary and interprofessional education for health professions education. *(Source: Professional Affairs Committee, 2002)*

Control Costs

Patient, providers and payers must all work together to ensure that the healthcare services that are provided reflect an appropriate balance of scientific-evidence and recognition of patient-centeredness so that unnecessary costs are avoided and health outcomes are maximized. Academic pharmacy will engage in actions that will increase the value of healthcare through:

Teaching. Engage in evidence-based learning strategies that prepare pharmacy students to be aware of the: cost impact of their actions; evidence-based guidelines to align health outcomes with cost; opportunities to improve the quality of care through quality performance measures; advocate for practice changes that can reduce the cost of care without decreasing care quality; utilization of information systems; and processes that support cost avoidance such as adverse event reporting.

Research. Engage in scholarly activity that seeks to improve the capacity of health information technology to effectively and efficiently input quality performance measures that can lead to cost avoidance or cost reductions.

Engage in scholarly activity that evaluates the real and expected impact of health and economic outcomes associated with quality performance measures.

Engage in scholarly activity that contributes to and evaluates the evidence used to develop practice guidelines.

Service. Prepare faculty and preceptors to present as role models the utilization of quality improvement and cost avoidance strategies in which they endeavor to inculcate within pharmacy students.

AACP Policy. Research that explores the social, economic, organizational and clinical factors that influence the outcomes of drug therapy in prevention or treatment of disease should be central to the mission of all colleges/schools of pharmacy. *(Source: Educating Clinical Scientists Task Force, 2008)*

CONCLUSION

Looking back on the charges given to this committee by President Crabtree it appears that AACP as an organization and its individual members and institutions highly regard education scholarship. That regard is readily expressed in the programs, products and services developed in an effort to continually improve the quality of pharmacy education. The implied importance of quality should be more explicitly expressed in at least a policy statement reflecting the Academy's commitment to the important public policy issue of quality in higher education. In this way, the actions are balanced with the thoughts of the Academy. Improving the quality of pharmacy education requires a new commitment to education scholarship at a level that eliminates the comparison of teaching-intensive and research-intensive institution from the vocabulary of pharmacy faculty. There are still way too many unanswered questions regarding how to improve the quality of education for any faculty member to not engage in some form of new knowledge creation in regard to education.

The many policy statements in support of science scholarship must be balanced in a similar manner. Our programs, products and services related to the improvement of science scholarship must align with our policy statements. The entire Academy must engage in science scholarship at a level that begins to balance our actions with our statements. As is true for education scholarship, science scholarship, particularly health services research, should be a scholarly activity of every clinical faculty member. The public policy benefit of this type of research is limitless and does not require extensive research laboratory support. The third aspect of the mission of higher education, service, benefits from this attention to both education and science scholarship. The intervention of our faculty and students into the issues communities define as important and worthy of partnership require an academic commitment to scholarly service. In this way the community perception of true engagement can be met and maintained.

The public expectation that the graduating pharmacist is competent to protect their personal and population well-being is sustained through the continuous improvement of that graduate's educational experience. The economic value of a school of pharmacy to a community can and has been described.[32] Yet, it is the value to improved healthcare quality, improved health and containment of health costs that best demonstrate the value of a school of pharmacy to a community. The members of this committee believe that describing the value as stated above should be a goal of every college and school of pharmacy in the nation. Continuously improving the quality of pharmacy education through the creation of new knowledge and the integration of that new knowledge back into the professional curriculum sustains the trust the public places in the pharmacist.[33] Translating new knowledge into the practice settings of the many community-service activities of our students and faculty continually improves the public perception of the Academy and the profession. The ability of pharmacy education to help communities meet their identified challenges is the best demonstration of the Academies value to that community.

Improving the quality of education cannot be a solitary pursuit. Public policy and community challenges cannot be addressed by a single individual or profession. The capacity of any individual is limited and the expectations of communicating new knowledge to advance patient and population health appears limitless. Therefore, academic pharmacy must maintain its commitment to collaboration and interprofessional education and research. Again, while the economic argument brings value to the expression of this commitment, it is the improved

healthcare, improved health and the containment of health costs that prove the real value to individual patients and communities. Shared accountabilities and shared resources can strengthen the public perception of academic pharmacy as a trusted community partner to develop and evaluate both policy and clinical interventions that meet community needs today and tomorrow.

AACP and its member institutions and faculty are actively engaged in improving the quality of pharmacy education. We are already engaged in the strategies that make academic pharmacy a trusted and valued community partner. We are already engaged in the strategies that will make interprofessional education the best way of improving healthcare, improving health and containing costs. The examples in this report and the many others not included provide ample demonstration of the Academies undertaking of strategic partnerships to maintain the public trust and create and translate new knowledge into the partnerships that depend on that trust. Therefore, using the mission of higher education as refined in the AACP tagline, Discover, Learn, Care. . .Improve Health, AACP and its member institutions and faculty can continually improve public policy not just today, but long into the future.

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