

Call to Action: Expansion of Pharmacy Primary Care Services in a Reformed Health System

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INTRODUCTION

The AACP Argus Commission is comprised of the five immediate past AACP presidents and is annually charged by the AACP President to examine one or more strategic questions related to pharmacy education often in the context of environmental scanning. Depending upon the specific charge, the President may appoint additional individuals to the Commission.

The 2009-10 Argus Commission was charged to examine the topic of the pharmacist's contribution to primary healthcare delivery in the context of national healthcare reform and identify the resources of the Academy and the profession needed to engage in the national conversation. The charge further requested the Argus Commission to scan the environment to determine the opportunities for expansion of primary healthcare capacity to include pharmacists' unique contributions to quality, cost, and access as medication use specialists on the team.

President Baldwin invited representatives from education associations of various disciplines recognized as primary healthcare providers to meet with the Argus Commission. This included the following individuals: Sandra Carlin Andrieu, Ph.D., President-elect of the American Dental Education Association and ADEA Executive Director Richard W. Valachovic, D.M.D., M.P.H.; Carol A. Aschenbrenner, M.D., Executive Vice President, Association of American Medical Colleges; Timi Agar Barwick, Executive Director, Physician Assistant Education Association and Dana Sayre-Stanhope, Ed.D., PA-C, Physicians Assistants Program Director, Emory University School of Medicine; Jean E. Johnson, Ph.D. (representing American Association of Colleges of Nursing), Senior Associate Dean for Health Sciences Programs, School of Medicine and Health Sciences, The George Washington University; and Harrison Spencer, M.D., M.P.H., President and CEO, Association of Schools of Public Health, Stephen Shannon, D.O., M.P.H., President and CEO, Association of American Colleges of Osteopathic Medicine provided input for the meeting but was unable to attend.

The Argus Commission drew upon the issue brief prepared by Manolakis and Skelton and a copy of the paper was also distributed for review by the invited guests prior to the meeting. Argus Commission members recommend that all individuals who have interest in the pharmacist's role in primary care should review this document.¹ Participants discussed a variety of issues related to meeting the demand for primary care services, reasons why those traditionally prepared for primary care roles were moving toward more specialized patient care services (e.g., emergency medicine, surgery), and the problems of compensation for primary care services and the challenging lifestyle issues faced by these providers. All participants agreed that medication use factors were an important element of quality primary care, including patient education, monitoring and safety considerations. The conversation also included discussion of communications/health information technology, collaboration, scope of practice/regulatory issues, and accountability/legal considerations.

The conversation turned quickly to the imperative of equipping current and future clinicians to function as members of interprofessional teams. All of the disciplines represented at the meeting embraced interprofessional education (IPE) and practice, and specifically recognized the importance of IPE in addressing deficiencies in the chronic care patient management model.

A REFORMING HEALTHCARE SYSTEM?

At the time the Argus Commission met, reform legislation had passed the U.S. House of Representatives and was pending in the Senate. Since January 2010, the dynamics that made passage of health insurance reform a strong possibility in late 2009 have changed substantially, however, in late March the House passed the Senate health insurance reform bill and the President signed it into law on March 23rd. While there are miles of regulations to be written and other legal challenges to navigate, without a doubt the actions of the 111th Congress to pass health legislation will increase access to health insurance coverage for millions of Americans.

The pressure to ensure access to quality primary care services at an affordable cost will mount as a result of this legislation. Many studies and articles have articulated that current and future shortages of those classically recognized as primary care providers, notably allopathic and osteopathic physicians, will derail access provisions in healthcare reform efforts as demand for primary care services soars. Certainly, nurse practitioners and physicians assistants are increasingly recognized as qualified practitioners to fill some of the gap between demand for primary care and the supply of such services. In January 2010, the Josiah Macy, Jr. Foundation convened a conference to examine the complex issues concerning who will provide primary care and how they will be trained.² As was true for the conversation the Argus Commission enjoyed with representatives of other health professions education associations, those participating in the Macy Foundation conference quickly concluded that all health professions students must be prepared to provide care as members of teams and that all students should have meaningful exposure to team-based primary care service delivery as part of their degree program and post-graduate training.

The Argus Commission also became aware of the writings of Christensen, Grossman, and Hwang, authors of The Innovator's Prescription: A Disruptive Solution for Health Care.³ The authors apply concepts to healthcare that have worked to bring transformation to many other industries with the goal of making healthcare affordable and conveniently accessible to most people. Disruptions have three enablers, according to the authors: a simplifying technology, a business model innovation, and a disruptive value network. They cite the ability to apply diagnostic technology to both acute and chronic health conditions in innovative businesses (e.g., retail clinics and workplaces) by other healthcare providers as core to the disruptive solution in our healthcare delivery models. While not cited, certainly the chronic disease management model that initially developed in Asheville, NC has many of the qualities of disruptive innovation described in Christensen's work. The Asheville model was initiated because one self-insured employer sought relief from out-of-control healthcare costs and the initial model has both been expanded in Asheville and replicated nationally.

As the Argus Commission analyzed the potential implications for pharmacy in a reformed health system, several observations were made, including: 1) pharmacy can ill afford to stand outside efforts for reform and not contribute value to improving access, quality and cost of healthcare; 2) better coverage of the American public will markedly increase demand for primary care and also for prescription medications and their proactive management; 3) team-based patient care must become the standard of practice and be supported by regulation and payment reforms; 4)

pharmacists must be included in the architecture of health information technology and have read/write access to patients' electronic health records; 5) models of pharmacy service delivery should expand to improve access to the primary care services best offered by pharmacists.

CALL TO ACTION BY THE ACADEMY

The Argus Commission identified areas within the mission of pharmacy education that must be critically examined as well as targets for AACP program development and advocacy that would advance pharmacy's position in the primary care service arena. These included:

- Curricular Topics
- Aggressive Practice Model Development
- A Research Agenda
- Advocacy and Leadership Efforts
- Collaborations

Curricular Topics

The Argus Commission identified several curricular areas relevant to pharmacists' preparation as part of primary care service delivery. Each has been the focus of curricular analysis or a previous AACP committee report, including: physical assessment⁴, diagnosis and triage skills^{5,6}, interprofessional education and team-based care^{7,8}, wellness⁴, patient behavior modification⁹, identity formation/professionalism¹⁰, health informatics¹¹, personalized medicine¹⁰, the science of safety¹², and leadership/change agency¹³. They also noted that components of essential education should be provided in didactic courses, laboratories and simulations, and in clinical or experiential education and in all cases should be competency driven.

It is obvious that essential competencies for the provision of primary care services are embedded in the Pharm.D. curriculum to some degree across many schools. Relevant competencies are included in the 2004 AACP CAPE competency framework, current accreditation standards from the Accreditation Council for Pharmacy Education (ACPE) and the blueprint released in early 2010 for the national licensure examination. Questions remain regarding the depth of coverage of germane knowledge, skills and abilities within the core PharmD.. curriculum and what might constitute an adequate preparation for some or all pharmacy graduates to assume primary care service roles. Postgraduate training in ambulatory and primary care certainly advances pharmacists' abilities and provides a credential affirming completion of additional training. Mentored professional experience in a supportive patient-care service environment also serves to mature pharmacists' primary care competencies.

It was clear from the discussions with and input from the other health professions educators that there is a lack of appreciation or clarity of coverage of these competencies in the Pharm.D. curricula and postgraduate training programs. Specific concerns about patient assessment skills and diagnostic abilities were articulated.

Recommendation 1:

AACP should communicate with other health professions educators regarding the inclusion of relevant primary care competencies in the curricula of colleges and schools of pharmacy, accreditation standards and the national licensure examination.

Recommendation 2:

AACP should convene a group of stakeholder representatives to achieve clarity and consensus on the core competencies for pharmacist-delivered primary care services and an analysis of their depth of coverage in PharmD programs.

Recommendation 3:

AACP and its partners in health professions education associations should jointly offer an academic institute on interprofessional education attended by teams of faculty from different disciplines.

Practice Model Development

The Argus Commission recognized that a variety of primary care practice models have been developed and sustained, in many cases with the leadership of faculty and funding from colleges and schools of pharmacy. Academic health centers (AHC) have been a primary platform for practice model development and this has extended beyond acute care in these settings. AAMC President Darrell Kirch has articulated a new vision for AHCs in a reformed healthcare setting using the term “health innovation zone”¹⁴ (HIZ). “The goal of the HIZ,” according to Kirch, “is to demonstrate that coordination of the full spectrum of care for a defined geographic population under multiple payment systems would improve quality while controlling costs.” While not explicitly addressed in the *JAMA* commentary, in personal communications with AACP Dr. Kirch has been clear that the HIZ model only works with a strong commitment to interprofessional teamwork involving, among others, pharmacists.

Commission members felt strongly that additional primary care practices across the full spectrum of practice settings should be developed as a priority of the Academy and profession. Several opportunities seem ripe with potential for future aggressive primary care practice model development. This includes building upon the momentum of the last several years in expanding community pharmacy and other primary care residency programs; seeking a national relationship between AACP and the Veterans Administration (VA) for faculty positions, advanced practice experiential rotations and residency positions with emphasis on primary care; the further development of practices for pharmacy faculty in family practice and other relevant medical practices, and dissemination of the accumulating evidence that these physician/pharmacist collaborative practices improve patient outcomes and work financially; and, development of partnerships between AACP and committed practice partners for practice expansion, faculty development and teaching in primary care. In addition to family medicine clinics and the VA, organizations such as Kerr Drug, Kroger, Supervalu/Albertsons, Ukrops, Walgreens, and others were noted as potential partners.

The 2009-2010 AACP Professional Affairs Committee chaired by Seena Haines rigorously reviewed the literature for publications describing pharmacists’ primary care practices. They also issued a call for successful practices which yielded over 20 responses from colleges and schools of pharmacy. This report¹⁵ is a valuable resource to the schools and practice partners and should stimulate aggressive practice model, faculty/preceptor and residency program development over these next several critically important years of primary care role expansion in pharmacy and healthcare.

Recommendation 4:

AACP should initiate strategic partnership discussions with those regional and national organizations with strong primary care pharmacy practices and seek to expand opportunities for member institutions to engage with these organizations for practice opportunities for faculty members, preceptors, professional students, and residents.

Recommendation 5:

AACP should lead efforts to demonstrate the value of pharmacist involvement in patient-centered primary care medical homes as well as in health innovation zones developed as a component of health system reform.

Suggestion 1:

Colleges and schools of pharmacy should consider reallocating resources to strategically expand primary care practice and teaching capacity at their institutions.

Suggestion 2:

Colleges and schools of pharmacy should consider consortial approaches to expand primary care practice models on a regional basis.

Fully Utilizing Our Research and Building on the Agenda

The Argus Commission recognized that there is a growing body of literature demonstrating the positive impact of pharmacists serving in primary care practice roles, which address medication management and related patient care issues. Increasingly, this research is being published in respected medical journals whereas historically such work more typically appeared only in pharmacy-related publications. Two recent examples of such research include the reports of Carter and Smith. Barry Carter and his collaborators demonstrated in a randomized control trial that a physician/pharmacist collaborative intervention achieved significantly better mean blood pressure control rates compared to a control group¹⁶. An article by Smith, Bates et al was included in a special themed issue on re-inventing primary care in *Health Affairs* and supports the inclusion of pharmacists in patient-centered health homes.¹⁷ This evidence supports the profession's efforts to build new business models, communicate with public and private payers and advance the policy agenda.

In response to a request from a Hill staff person during the early debate on healthcare reform, AACP advocacy staff issued a call to identify faculty working in primary care practices and clinics. Respondents were asked to share citations from literature published with evidence of the impact of the services offered. This repository of evidence is accessible via the AACP Web site.¹⁸ The Argus Commission believes that such evidence has not yet been fully deployed in the profession's advocacy efforts. Evidence-based policy development in both the public and private sectors is essential to changing the perspectives of physicians and other healthcare professionals, policymakers and, ultimately, the American public that pharmacists have much to contribute to quality patient care beyond management of a safe, accurate, and efficient drug distribution system.

Faculty should be further developed and supported in the conduct of more of this type of research, especially in the era of expanded funding of comparative effectiveness research. Those interested in an analysis of how the Academy is positioned to contribute to such translational research should reference the second task force on preparing clinical scientists for translational research chaired by Barry Carter in 2007-08.¹⁹ It is important to pair clinical faculty with scientists who are skilled in measuring outcomes in order to ensure sound evaluation of clinically relevant questions.

With funding expanding in the competitive effectiveness research and patient safety portfolios, the time is ideal for pharmacy faculty to seek support for conducting practice model demonstrations on topics including but not limited to:

- Comparative effectiveness research on patient outcomes from care provided in various settings (e.g., retail clinics and integration of pharmacists into such clinics)
- Care coordination, team-building, and transition of care issues
- Interventions that improve patient safety and medication use outcomes
- Building and management of novel primary care practice models and economics analysis of return on investment from new models of care
- Health informatics and the value of pharmacist-generated information for the team
- Key questions on diagnoses best suited to pharmacists' involvement in primary care service delivery

Recommendation 6:

AACP should continuously incorporate the most recent and best evidence of pharmacists' contributions to more effective and affordable care in its advocacy work in both the public and private sectors and seek additional resources for comparative effectiveness, patient safety, and related fields relevant to team-delivered primary care.

Recommendation 7:

AACP and member institutions should place a high priority on development of training programs to expand the number of graduate students and faculty who are prepared to seek competitive funding and conduct comparative effectiveness research.

Advocacy and Leadership

The Argus Commission sees a greater role for AACP and member faculty in advocacy aimed at expanding practice opportunities in primary care for pharmacists. Important examples of practice expansion include the authority to immunize in all states and territories, as well as the nearly universal collaborative practice authority at the state level. Reform must be driven to the state and local levels of advocacy, however, recognizing that such authority (immunization and collaborative practice) is not uniform across each jurisdiction.

One opportunity that was included in federal health reform legislation is the establishment of a Center for Medicare and Medicaid Innovation (CMI), which is intended to facilitate beneficial delivery-system changes.²⁰ The CMI “would be charged with testing innovative payment and service-delivery models designed to reduce Medicare and Medicaid expenditures while preserving or enhancing the quality of care.” Related closely to the previous recommendations on strengthening our practice models and practice-relevant research capability, academic pharmacy must be ready to submit competitive proposals to the CMI. Pharmacists' contribution to team-delivered primary care services is one essential focus for such a proposal.

There has been significant attention to developing leadership and advocacy in our student pharmacists over the past several years, including the 2008-09 AACP Argus Commission report.¹³ Two other recent publications by Boyle, Beardsley and Hayes,²¹ and Traynor, Janke and Sorensen²² emphasize curricular approaches to developing leadership and advocacy skills in students, residents, and practitioners.

A number of barriers persist in effectively engaging faculty and students in advocacy on behalf of the profession and they are not all well understood. Issues such as personality (introversion), time, experience and confidence interfere with activating advocacy and outreach, not just to legislators but to colleague health professionals as well. Helping students and faculty appreciate that the stories they are able to tell non-pharmacy audiences about the impact of the care they currently provide or will offer upon graduation is grassroots advocacy. Since state legislators, U.S. Congress members, or congressional staff may have not experienced the level of care that pharmacy graduates are now equipped to provide, it can be very helpful to invite them to visit an advanced practice site so they can observe the role of the pharmacist in providing primary care. Committees of the Council of Faculties and Section of Teachers of Pharmacy Practice, as well as a group of Academic Leadership Fellows worked to examine faculty engagement in advocacy during 2009-10. Their reports will provide additional guidance and recommendations for advancing the development of advocacy skills in students, faculty and others.

Expanding Strategic Collaborations

As the practice of pharmacy has slowly evolved into new roles delivering patient-centered care and a diverse array of medication therapy management (MTM) services, its leaders have appreciated that collaboration is essential to forward progress. Collaboration across the profession has taken many forms, beginning with the formation of the Joint Commission of Pharmacy Practitioners over 30 years ago. The eleven organizations around the JCPP table, including AACP, find many opportunities to forge alliances to advocate at state and national levels for broadened understanding of pharmacists' capabilities. A strong health reform alliance was essential to communicating to the five committees of jurisdiction pharmacy's list of priorities for medication use in a reformed health system.

The most recent alliance currently in early formation focuses on health information technology and intends to accelerate the development of standards for pharmacists' access to and ability to contribute to patient health records of all kinds. AACP will participate as a full stakeholder in the Pharmacy e-Health Information Technology Collaborative.

Equally important are collaborations across the health professions. The Argus Commission emphasized the importance of continuing the collaboration with those disciplines who participated in the Commission's meeting. A joint expert panel has been appointed to develop competencies for interprofessional collaborative practice with representatives from allopathic and osteopathic medicine, dentistry, nursing, public health, and pharmacy. Drs. Susan M. Meyer and Daniel C. Robinson represent AACP on this expert panel. It is anticipated that a draft set of essential competencies will be disseminated later in 2010. This panel will also begin identifying models where interprofessional collaborative practice is working and collect resources for use by faculty in accelerating their own IPE work on campus. It is essential that the disciplines work together to make interprofessional education and team practice a reality in a wide range of settings. In addition, we must be working together to ensure that reimbursement systems and other policies support team practice.

Other collaborations and opportunities identified as timely and important by the Argus Commission included:

- State boards of pharmacy and state associations to advance in a uniform manner the advanced practice roles for pharmacists and eliminate barriers to delivery of primary care services

- State and local health information technology coalitions to assure that pharmacists have read/write access to electronic patient records and can provide leadership on the effective use of protected patient information
- Public and private sector leaders to increase their appreciation of new practice models and their benefits, and to promote practice development in or by:
 - State agencies, including Medicaid, public employees, and retirees
 - University-wide care delivery programs for MTM services and disease management
 - Outreach to local employers and insurers
- Consumer-oriented coalitions to build allies and expand appreciation of pharmacists' roles

Recommendation 8:

AACP should engage the National Association of Boards of Pharmacy and other stakeholders on the development of a plan to achieve uniform national regulation for pharmacists' patient care practice.

CONCLUSION

The Argus Commission found substantial evidence to support the continued expansion of pharmacy practice models which allow pharmacists to help meet the primary care needs of patients. This is especially true in those areas where effective medication management is an essential component of the care model. Naturally, such services are often delivered in interprofessional care models. These serve as stellar platforms for experiential education and for research.

While the Commission found much evidence that essential competencies for primary care are embedded in the Pharm.D. curriculum, a more systematic assessment of the adequacy of current coverage is recommended. This, coupled with the identification and expansion of several postgraduate training pathways to expand primary care competencies, would allow the Academy to guide interested students and pharmacists in their preparation to assume such roles. However, primary care is not just for those with postgraduate training. The Asheville project demonstrated clearly that pharmacists with B.S. education can develop primary care practices and meet the public's need in multiple categories of disease. Certification courses and exams, including those offered in some states and under development by the Board of Pharmacy Specialties (e.g. BPS Ambulatory Care Pharmacy Specialty), may be useful to determine which pharmacists, regardless of degree, have acquired the competencies to participate in primary care. Such recognition will advance the collaboration with other primary care provider communities as well.

The Argus Commission issues a "call to action" for AACP, member schools and partners across the profession. We must use our growing body of evidence that pharmacists can expand access and improve the quality of health services by practicing in these primary care roles. We must build effective coalitions at local, state, and national levels, and seek allies from outside of pharmacy to help us advance such that patient-centered, team-delivered care becomes the standard of practice in a reformed healthcare system, supported by appropriate regulatory frameworks and payment systems, and appreciated for its value by consumers and other stakeholders.

PROPOSED POLICY RELATED TO PRIMARY CARE

The AACP House of Delegates adopted policy on pharmacy and primary care in 1994, which was proposed by the Professional Affairs Committee chaired by Dr. Metta Lou Henderson. The 2009-2010 Argus Commission examined those statements for their currency and proposes several simple wording changes to three existing policies as set forth below. These policy statements have been forwarded to the Bylaws and Policy Development Committee and are included in the preliminary report of that committee.

Proposed Changes in Primary Care Policy Statements

AACP supports the teaching and clinical application of core competencies in primary care health services delivery that are community-based and fully ~~interdisciplinary~~ interprofessional.

AACP believes that pharmacy faculty have a responsibility to use their experience to examine and document the effectiveness of pharmacist-provided ~~pharmaceutical care~~ medication therapy management as an essential element of primary care.

AACP supports the position that ~~pharmaceutical care~~ medication therapy management is pharmacy's most essential and integral contribution to the provision of primary care.

Additional Statements of Policy with No Proposed Changes

AACP encourages its member colleges and schools to develop or enhance relationships with other primary care professions and educational institutions in the areas of practice, professional education, research, and information sharing.

AACP supports the elimination of legal, structural, social, and economic barriers to the delivery of primary care health services that prevent competent health professionals from providing necessary healthcare services.

REFERENCES

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- ¹ Manolakis, PG and Skelton, JB. Pharmacists' Contributions to Primary Care in the U.S. – Collaborating to address Unmet Patient Care Needs. American Association of Colleges of Pharmacy, July 2009.
 - ² Cronenwett L and Dzau VJ. Who Will Provide Primary Care and How will They Be Trained?, report of a conference convened by the Josiah Macy, Jr. Foundation, accessed April 28, 2010 from www.macyfoundation.org.
 - ³ Christensen CM, Grossman JH and Hwang J. The Innovator's Prescription: A Disruptive Solution for Health Care, McGraw Hill, New York, NY, 2009.
 - ⁴ Spray JW, Parnapy SA. Teaching Patient Assessment Skills to Doctor of Pharmacy Students: The TOPAS Study. *Am J Pharm Educ* 2007; 71 (4) Article 64.
 - ⁵ Culbertson VL et al. A Conceptual Framework for Defining Pharmaceutical Diagnosis. *Am J Pharm Educ* 1997; 61, 12-18.
 - ⁶ Zierler-Brown SL et al. Status and Recommendations for Self-Care Instruction in US Colleges and Schools of Pharmacy, 2006. *Am J Pharm Educ* 2006; 70 (6) Article 139.
 - ⁷ Meyer SM. The Imperative for Interprofessional Education. *Am J Pharm Educ* 2009; 73 (4) Article 58.
 - ⁸ Kroboth P et al. Getting to Solutions in Interprofessional Education: Report of the 2006-2007 Professional Affairs Committee. *Am J Pharm Educ* 2007; 71 (6) Article S19.
 - ⁹ Villaume W et al. Learning Motivational Interviewing: Scripting a Virtual Patient. *Am J Pharm Educ* 2006; 70 (2) Article 33.
 - ¹⁰ Brown D and Ferrill MJ. The Taxonomy of Professionalism: Reframing the Academic Pursuit of Professional Development. *Am J Pharm Educ* 2009; 73 (4) Article 68.
 - ¹¹ Wells BG et al. Report of the 2007-2008 Argus Commission: What Future Awaits Beyond Pharmaceutical Care? *Am J Pharm Educ* 2008; 72 (Supp) Article S8.
 - ¹² Kehrer JP et al. Report of the 2008-09 Advocacy Committee. *Am J Pharm Educ* 2009; 73 (8) Article S8.
 - ¹³ Kerr RK et al. Building a Sustainable System of Leadership Development for Pharmacy: Report of the 2008-09 Argus Commission. *Am J Pharm Educ* 2009; 73 (Supp) Article S5.
 - ¹⁴ Kirch, DG. The Health Innovation Zone: A Platform for True Reform. *JAMA* 303;9:874, March 3, 2010

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- ¹⁵ Haines S et al. Report of the 2009-2010 AACP Professional Affairs Committee. [insert web link when available]
- ¹⁶ Carter BL et al. Physician and Pharmacist Collaboration to Improve Blood Pressure Control. *Arch Intern Med* 169(21); November 23, 2009: 1996-2002.
- ¹⁷ Smith M, Bates D, et al. Why Pharmacists Belong In the Medical Home. *Health Affairs* 29 (5) 2010
- ¹⁸ Pharmacists in Primary Care Practices and Clinics. An advocacy compilation of citable literature; <http://aacp.org/issuesandadvocacy/policy/Statements/Documents/Pharmacists%20in%20PCP%20and%20clinics.pdf>; accessed March 23, 2010.
- ¹⁹ Carter BL et al. Report of the Educating Clinical Scientists Task Force II. *Am J Pharm Educ* 2008; 72 (Supp) Article S10.
- ²⁰ Mechanic R and Altman S. Medicare's Opportunity to Encourage Innovation in Health Care Delivery. *N Engl J Med* 2010; 3629: 772.
- ²¹ Boyle CJ, Beardsley RS and Hayes MS. Effective Leadership and Advocacy: Amplifying Professional Citizenship. *Am J Pharm Educ* 2004; 68(3) Article 63.
- ²² Traynor AP, Janke KK, and Sorensen TD Using Personal Strengths with Intention in Pharmacy: Implications for Pharmacists, Managers and Leaders. *Ann Pharmacother*: 2010; 44, published online 26 Jan 2010.