SPECIAL ARTICLES

Today's Mandate for Pharmacy Deans: Anticipating Change

Jordan L. Cohen, PhD

College of Pharmacy, The University of Iowa

I skate to where the puck is going to be, not to where it has been.

-Wayne Gretzky, Edmonton Oilers, Mid-1980s

In the early 1990s, the American Association of Colleges of Pharmacy (AACP), under the joint auspices of the Councils of Faculties and Deans, published an extensive series of excellent invited manuscripts known as *Academic Management System*.¹ This publication served many deans, department heads, and others as a blueprint to help guide the structure and operations of schools and colleges of pharmacy through much of the past 2 decades. Highly experienced pharmacy administrators and faculty members authored key chapters on management; planning; human, fiscal and capital resources; operations; and academic affairs; and all of the chapters were reviewed by experienced colleagues and included helpful case studies. Although much has changed in the academy in the nearly 20 years since this series appeared, many if not most of the basic principles and practices discussed in these chapters remain relevant today. I had the privilege of authoring the chapter on leadership as the newly appointed at the University of Kentucky. After recently rereading and reflecting on the dramatic changes in the health care and academic environments prompted me to reflect on the challenges and opportunities facing leaders of schools and colleges of pharmacy today.

In an overarching sense, the role of the dean in higher education has not changed much over the years. Those role(s) are (1) to work with faculty and other stakeholders to establish the vision and direction of the program; (2) to recruit and retain the best possible faculty and staff; (3) to accumulate the necessary resources to accomplish the major goals; and (4) to mentor younger colleagues while facilitating organizational renewal and succession planning. Yet when one looks at the challenges and rapidly changing circumstances that face universities today, every element of those 4 basic responsibilities seems to take on a different level of import and urgency than it had even

a few short years ago.² What is even more obvious is that this rapid pace of change, together with globalization and other economic pressures, will continue to make deanships more challenging and may lead to decreasing tenures for deans—as is already the case for university department chairs, presidents, and provosts, as well as leaders of major business and nonprofit organizations. While the data are soft, the tenure of medical school deans has steadily decreased from 1940 to 1992.³ The average tenure for deans dropped from 6.7 years in the 1940-1959 time period, to 5.8 years in 1960-1979, and to 3.5 years in the 1980s and early 1990s.³ This has increased to between 5 and 6 years on average today.

I surveyed all schools and colleges of pharmacy established before 1985 and found similar results for pharmacy deans (Table 1). This trend has been observed in senior academic administrative positions and raises concerns about continuity and succession planning, as well as having implications for the background and training leaders will require so that they can adapt and successfully operate in a much more demanding and fast-paced environment. These factors, combined with the rapidly expanding number of schools, portends the need to identify and nurture many more individuals willing and able to assume deanships in the years ahead.

The Pharmacy Deanship in the 1980s and Early 1990s

At the risk of overly generalizing, universities were much more predictable and stable institutions in the 1990s than they are today. Applications from prospective students and yearly enrollments held steady. State governments were generally supportive of higher education, with fewer concerns about value or accountability. The tenure of presidents, vice presidents, and provosts was significantly longer. The call for health care reform had not reached much urgency. Shortages of pharmacists had not materialized. Faculty recruitment and retention had not come to a crisis point. Economic development was not an expectation of most schools or faculty members. Tuition increases were tied to the education price index. Development occupied a minor fraction of the dean's time. Expectations related to compliance reporting,

Corresponding Author: Jordan L. Cohen, Interim Vice President for Research and Dean Emeritus, 201 Gilmore Hall, Iowa City, IA 52242-1320. Tel: 319-335-2119. E-mail: jordan-cohen@uiowa.edu

Table 1. Tenure of Pharmacy Deans Over Time^a

Time Period	Years of Service, Mean (SD)
1900 – 1919	23.6 (13.6)
1920 – 1939	20.0 (8.9)
1940 – 1959	13.9 (7.2)
1960 – 1979	11.6 (6.0)
1980 – 1999	11.4 (5.7) ^b

^aCohort of deans who began their tenure in this time period. Several served at multiple institutions and their total years of service was used in the calculations

^bOf those deans who began their tenure from 1980 to 1999, 17 are still serving as deans

conflict of interest, sophisticated grants management, and attention to external relations and high quality publicity were modest concerns in comparison to today's climate. Further, many currently unfunded mandates (eg, the American Health Insurance Portability and Accountability Act of 1996 guidelines; introductory pharmacy practice experiences assessments) were not yet factors in operating colleges of pharmacy.

For most of the latter half of the 20th century, the typical pathway to the deanship frequently involved faculty members advancing through the ranks to department chair, and then to assistant/associate dean prior to assuming a deanship. Historically, in all disciplines, many paths have led to deanships, but few included formal (or informal) leadership/management training. Draugalis and colleagues published a series of papers providing a longitudinal assessment of the backgrounds and career paths for a subset of pharmacy deans dating back to 1992,⁴ with updates in 1997⁵ and 2004.⁶ Since 1992, prospective deans have tended to spend more years teaching as faculty members before becoming deans, but that is the only significant change in their paths to deanships, including the customary practice of assuming various administrative ranks (department chair is the most frequent stop along this career path).⁴⁻⁶ Now more pharmacy deans have a doctor of pharmacy (PharmD) degree rather than a PhD as a terminal degree, a development consistent with the steady increase in the breadth and depth of PharmD programs and with the trend of more graduates pursuing academic careers. Draugalis also probed areas that retiring deans perceived as needing strengthening. Mentoring, fundraising and budgeting were cited most frequently and the deanship was characterized as having changed from the *head scholar* to the *chief officer* of the college.⁶ While the level of responsibility and accountability increases at every step of the academic ladder, most deans enter these roles without formal training in management or administration, and instead rely on mentors and coaches as well as on the-job-training, usually acquiring new skills on their own as the need arises.

The Pharmacy Deanship in 2009

Deans today face a highly complex, intense, and constrained environment shaped by many internal and external pressures. Among these are severe pressure on nearly every revenue stream; rapid advances in technology; shifting student demographics; growing demands for accountability from state and federal governments, the corporate sector, and the public; competition for quality faculty; increasingly prescriptive accreditation standards; and expectations to increase quantity and quality of experiential sites. While some might call this as a “perfect storm” of obstacles, it is more likely the new reality rather than a highly unsettled era that will return to “normal” some day.

These factors will have multiple impacts on today's and tomorrow's academic leaders. For the purposes of this paper, these are grouped into 6 major categories: (1) increased complexity; (2) increased accountability; (3) innovation and entrepreneurship; (4) interdisciplinary research and education; (5) external focus; and (6) the future of the profession.

INCREASED COMPLEXITY

Many factors converge to make leadership of schools and colleges increasingly challenging, including increased scrutiny, regulation, accountability, technology, uncertainty in health care, and financial pressures.

While the absolute number of stakeholders vital to our enterprise may not have increased over the years, clearly there is a need to devote more time and effort to ensure their continued engagement and support. Senior university administrators and governing boards are demanding more fiscal and academic program accountability. Faculty members must gain comfort with a new paradigm of “customer focus” and the expectation that we must respond rapidly to new threats and opportunities with less time to build consensus. Students, parents, and donors must have confidence that the program can be sustained over the long term and will prepare graduates for life and work over the course of their career. The practice community must see the school as responsive to the changing educational needs of practitioners as they strive to evolve their practices. Scholarship must remain a fundamental part of our core mission. Especially in the face of severe external pressure to expand capacity to meet real and perceived shortages of pharmacists, our programs must attract and retain scholarly faculty members who will contribute to knowledge in the pharmaceutical and clinical sciences and help advance practice.

The net effect is that planning, implementation, and program delivery require high-level, sophisticated leadership teams made up of deans, department and division

chairs, and highly specialized staff members. Building a strong leadership team and creating a college-oriented culture today may be the greatest challenge facing deans challenged today with a need to stabilize programs while looking ahead to an uncertain future. Finances, personnel management, technology, contracting with the private sector, development, external relations, research administration, financial aid, and academic pedagogy are all more complex today and require more focused and specialized expertise of others on your team. Deans cannot be “hands-on” in every area of the college, and must delegate responsibility and authority comfortably, with the assurance that their values are reinforced and sustained by their leadership teams.

The need to rapidly recruit/develop a strong leadership team is especially critical and problematic for new schools of pharmacy, since experience and history with the college and university is non-existent. This dearth of talent coupled with the demands to move rapidly to achieve precandidate status and admit the first class creates a significant challenge and hastily assembling this team may compromise the long term viability of the program in the eyes of the Accreditation Council for Pharmacy Education (ACPE)

The increasingly important role of the dean in development merits special mention. Deans must lead the effort to improve relations with alumni, friends, and other constituencies, and make the case for private support for the college. Scholarships, fellowships, equipment, student activities, and faculty support can be improved through stronger private giving. Deans can make the case to donors for providing support beyond their annual giving, explaining to donors that endowed gifts can help stabilize and sustain program excellence and faculty retention for many years. Accomplishing this requires a personal commitment on the part of the dean to improving his or her fund-raising skills; it also requires an understanding of how internal and external constituencies can improve outreach and support. Deans need to create strong development teams and effectively connect these teams to partners within the college and across the campus, as well as to alumni and friends, through external relations, publications, and alumni affairs.

INCREASED ACCOUNTABILITY

State and the federal governments, granting and regulatory agencies, governing boards, parents, employers, and students demand more of pharmacy schools and colleges than they did 20 years ago. The routine oversight need to collect extensive data for purposes of benchmarking, assessment, and regulatory compliance requires more sophisticated technology, highly trained staff, and a significant capital investment. A few examples illustrate

these changing expectations. For continued reaccreditation schools must now collect and interpret a mass of data to satisfy Accreditation Council for Pharmacy Education (ACPE) assessment requirements. For another, we need greater security for information technology to meet HIPAA and FIRPA requirements. We also need to make sure our colleges and schools interface electronically with other campus offices, including with the registrar, personnel, facilities management, and financial systems. Other examples include tracking and management systems for donors and clerkships, pre and post-award grants and contracts expertise, management of conflict of interest reporting requirements, and animal care and investigational review board follow-up requirements.

The ability to document evidence of student outcomes and program quality is important to many of our constituents. Parents and prospective students compare programs before applying. Regents, trustees, legislators, and prospective donors press for objective evidence of quality and national stature. Patients and payers want evidence of quality patient care when evaluating delivery of pharmaceutical care. Funding agencies, foundations, and others who support our research programs need to be assured that we are diligent in our oversight of conflict-of-interest compliance, with increasingly detailed expenditure and effort-reporting requirements, and that we can clearly demonstrate a track record of success.

INNOVATION AND ENTREPRENEURSHIP

Entrepreneurism has become an essential characteristic of deans, faculty members and entire universities in this era of diminishing resources. Deans in particular are expected to identify new revenue streams, make strategic risk-versus-benefit judgments when investing college resources, and be prepared to be held accountable. Examples include leveraging faculty positions with other departments, colleges, hospitals, pharmacies, or other organizations; evaluating the marketplace to assess viability of increasing tuition; seeking opportunities to work collaboratively in ways that reduce expenses or provide economies of scale; investing in joint ventures or public-private partnerships; and developing practice plans that provide incremental revenue as well as patient care experiences consistent with the mission. All of this must be done in the context of the university's mission and values, as well as legal and statutory requirements. This may also require the need to recruit some faculty and/or staff members with an interest in technology transfer, and/or business acumen and regular communication with faculty, alumni, and student leaders in building new opportunities.

Although this paper is focused primarily on the professional education programs in our colleges, a brief

consideration of the future direction of graduate education and research is also appropriate. The significant trend to focus federal funding toward interdisciplinary research and translational science has altered the structure of many graduate programs. Interdisciplinary research programs are increasingly more attractive to the best graduate students and the broader mix of faculty members across other colleges and disciplines can increase competitiveness for funding and create a critical mass of investigators and mentors. While disciplinary identity remains critical to many pharmacy faculty members, new mechanisms for jointly directing, funding, and housing research centers or institutes and interdisciplinary graduate programs must evolve if our programs are to remain competitive in recruiting the top students and the most funding. An additional challenge that will require innovation and entrepreneurship is how to replace the wealth of academic knowledge and skills that will be lost as an unprecedented number of senior faculty members from all disciplines reach retirement age in the coming decade.

INTERDISCIPLINARY RESEARCH AND EDUCATION

Commitment to interdisciplinary research is crucial if pharmacy schools and colleges wish to remain involved in work that benefits society. Examples of large-scale interdisciplinary research funding abound, including initiatives like the National Institutes of Health (NIH) Roadmap, the Federal Drug Administration's critical path, and the Agency for Healthcare Research and Quality (AHRQ) Centers for Education on Healthcare Research and Quality (CERTs). Pharmacy faculty and graduate students across the country are involved in all of these programs and have increased the visibility of pharmacy education and research within their institutions and among federal funding agencies and the broader peer-review community. Notable has been pharmacy's active participation and leadership in interdisciplinary research and graduate degree programs in translational sciences, pharmacogenomics, health policy, pharmacoeconomics, biotechnology, pharmaceutical engineering, nanotechnology and many other fields.

The problems of our health care delivery system in terms of cost, fragmentation, accessibility and mediocre quality have been well documented and highlighted by the Institute of Medicine Quality Chasm Series. These reports and several others call for better coordination and communication among providers, enhanced information technology to assure efficient exchange of health information and shifting the focus of care to the patient instead of the provider.

In light of these health care delivery problems, many sectors have called for incorporating interdisciplinary education into the curricula of all health professions educational programs. The Institute of Medicine, the Joint Commission for Accreditation of Health Care Organizations, the Association of Academic Health Centers, and the American Association of Medical Colleges have called for a shift from the current silo-driven education to a model where greater interaction with students in other health fields occurs to develop familiarity with roles and interprofessional trust. While the barriers to achieving this are significant both on and off campus, the Institute for Health Care Improvement has challenged several major health science centers to address this deficiency in education,⁷ Clarion, a student-led interdisciplinary group based at the University of Minnesota,⁸ now sponsors national competition among interdisciplinary student teams who present cases on patient safety issues and increased attention is now being paid to incrementally changing our educational model. The ACPE has also incorporated a standard addressing the need for team-based education along the entire continuum of the curriculum in the most recent revision effective in July 2007.⁹

While colleges and departments remain the primary organizational structure in most universities, significant attention is now being paid to enhancing interdisciplinary research and teaching and patient care. Cross cutting center, institutes, and collaborative are appearing and benefit from increasingly sophisticated information technology systems. In many cases lines between disciplines, departments, and even colleges are blurring as the desired outcome trumps process and structure. Challenges remain, particularly in today's financial climate, and presidents, provosts, and deans must find funds for cross-cutting research and education and other activities that fall outside the purview of individual department chairs. While the challenge in identifying sources of funds for novel program arrangements is substantial, an even more important challenge for deans to address are obstacles in the way of promoting this new culture of innovation and calculated risk taking. Deans must work with faculty members to facilitate modifications in procedures for assigning space, developing start-up packages and criteria for appointment, promotion, and tenure. Beyond these substantive issues, we have yet to resolve the difficulties in working across institutions when all of the necessary collaborative expertise does not reside on our own campuses.

EXTERNAL FOCUS

Historically, colleges or schools of pharmacy have focused internally to achieve their missions and have maintained control of resources they deemed necessary

for success. As the trend toward interdisciplinary activities in teaching, research, and service continues, the need grows for greater integration with other units on and off campus as well as the private sector. Deans would be advised to make effective use of external advisory boards to vet ideas and programs and encourage innovative thinking.

Senior administration often focus on university-owned or run hospitals and larger colleges such as medicine, business, and engineering in developing strategic plans and funding models. While not normally done intentionally, it often reflects pharmacy's relatively low profile in the broader scheme of universities and even health care delivery. Deans must be especially vigilant at reiterating the important contribution that pharmacy schools and colleges can make to health care delivery and interdisciplinary research and educational priorities, as all institutions focus and consolidate. I have often characterized this as the need for *being at the table* for all key discussions. It requires a very proactive presence to remind university administrators of the quality services and return on investment that pharmacy can bring to a university.

THE FUTURE OF THE PROFESSION

At the heart of our colleges is the professional doctorate program in pharmacy. While institutions differ in terms of the relative size and strength of their graduate, research, clinical, and sales and service programs, facilities, faculty and staff resources revolve in large measure around the size and scope of PharmD programs. The pressure to increase the number of pharmacy graduates to meet recently highly publicized pharmacist shortages has occupied a number of our schools and resulted in significant class size expansions in many institutions, as well as the creation of nearly 20 new schools of pharmacy over the past 8 years. This in turn has created serious shortages of qualified pharmacy faculty members and placed extreme pressure on all schools to identify and maintain high quality experiential education sites. Pharmacist shortages and increased prescription volume have also cut into the time that practicing pharmacists can spend with our students, a trend that further threatens the delivery of our programs.

The difficulty beyond the short-term pressures has to do with our current uncertainty about the future workforce needs in pharmacy. In response to regularly reported vacancies, mainly by the chain drug industry, a real time aggregate demand index that drills down to individual states has been established and maintained.¹⁰ While it is clear there are significant shortages of pharmacists in many fast growing urban areas and selected

rural sites, there is much less certainty these shortages will continue into the future as technology and technicians continue to facilitate dispensing as health care costs continue to rise.

Another confounding factor is the continued absence of a robust payment system for pharmacist services. This severely limits our ability to forecast the number of patient care oriented pharmacists who will be required to provide optimal medication management. Additional research and strong advocacy will be needed to convince payers, employers, policy makers, and the public that pharmacy, as it is practiced on a daily basis, adds value to our health care system sufficient to prompt changes in the current product-oriented payment system.

If and when this practice model becomes broadly financially viable, it is not clear whether the current generalist PharmD model will be appropriate or sufficient for preparing students. If pay-for-performance systems are created, specialist practices may require significant postgraduate training and credentialing. Knapp and others published the results of the deliberation of a credible and broad-based task force looking at the future pharmacy workforce in the year 2020.¹¹ This task force forecasted a practice paradigm that reduces pharmacist's direct involvement in dispensing while predicting a major increase in the number of pharmacists required to provide direct and indirect patient care. Within the past 2 years, both the American College of Clinical Pharmacy (ACCP) and the American Society of Health-System Pharmacists (ASHP) have developed white papers and established policy stating that a minimum of 1 year of residency training will be required of all pharmacy graduates doing *direct patient care* after 2020.^{12,13} Johnson reviewed this rationale while justifying the continuing need for more dispensing pharmacists.¹⁴ This policy was discussed in depth in the House of Delegates at the most recent meeting of the American Pharmacists Association, where it was ultimately modified to endorse postgraduate training as a direction for pharmacy education moving forward without a specific timeline.¹⁵

In many respects, we are still debating the role of the pharmacist after more than a century and are trying to create an educational paradigm that somehow balances the dispensing role with one that is nearly pure patient care. Given the continuing pressure to reduce health care costs and the easy target that a carved-out drug benefit represents, we are at yet another critical crossroads. Deans in particular must exert strong leadership, and engage the profession as well as policymakers, if we are to succeed in becoming full members of the health care team who add value to patient care and are recognized and compensated accordingly.

Given these multiple levels of uncertainty, pharmacy schools and colleges must start planning today and anticipate how our current programs evolve and adjust to educating the appropriate numbers of practitioners who can deliver direct patient care while also assuring a safe, effective, and efficient system for drug distribution. Campbell posed some vital questions regarding the future direction of our professional programs.¹⁶ He specifically challenged the academy to embrace our long-sought patient care roles for the benefit of society and questioned whether the newly adopted ACPE Standards 2007 clearly articulated and planned to hold programs accountable for producing graduates who assure society's future needs for optimizing pharmacotherapy. He also argued that the current standards equivocate greatly in terms of requiring that all programs address this patient care focus, and challenges us to ultimately delegate the dispensing role to technical, but highly trained personnel. These are key issues as we look ahead in terms of curricula, faculty recruitment and retention, commitment to scholarship, and amassing the requisite resources and infrastructure needed to meet societal needs and our own institutional and collegiate goals.

LEADERSHIP ISSUES FOR THE ACADEMY

The position of dean today demands much more in the way of demonstrable skills and experience in management, finance, personnel, team building, planning, development, and mentoring. While many of us moved directly from faculty or modest administrative positions into the deanship and learned on the job, more in-depth management and leadership training is highly desirable. AACP has responded to currently offer the Academic Leadership Fellows Program annually to 30 qualified faculty members who participate in a year-long training program.¹⁷ In this program, faculty members are nominated by their deans, and if selected, they are introduced to the opportunities and challenges of leadership and management. This is done under the tutelage of both a local mentor and experienced administrators who serve as national faculty members. This program is now in its fifth cycle and several of the program's graduates have assumed positions as CEO deans. In the fall of 2007, AACP piloted a Deans Developmental Training program in conjunction with Gallup University to provide sitting deans the opportunity to ascertain their strengths and undergo a helpful 360-degree analysis to provide feedback from their direct reports and superiors and help them identify strengths and weaknesses related to their leadership. Chase and Yanchick edited a comprehensive treatise for new deans that features short, readable chapters authored by experienced faculty members and administrators.¹⁸ There are numerous other ex-

cellent academic leadership and deans development programs available outside of AACP, and prospective deans are urged to avail themselves of training programs specific to their needs, either before they seek deanships or soon after they have been appointed. Notable among these are the Harvard School of Management programs, the American Council on Education Fellow Program, the ASHP Pharmacy Leadership Institute, and the Leaderpoint Comprehensive Management Development Program.¹⁹⁻²²

Deans would benefit from learning many of the skills that corporate executives use to run large multifaceted organizations with multiple products and constituencies. But finding the balance is key—deans must weigh efficiency, productivity, and focused strategic planning on the one hand with the mission-driven, knowledge-seeking university enterprise on the other. Faculty members are driven by their sense of independence and academic freedom, and a growing number in the basic sciences do not have pharmacy backgrounds, potentially limiting their ability to participate fully in all elements of the mission. Strategic plans must now be much more fluid and not constrain opportunism following appropriate due diligence. Also, the type of decisions now required to take advantage of opportunities described in this paper must now be made in very short timeframes, not always consistent with full faculty consultation or consensus, and will require making decisions with less information and more potential risk than we have been used to. In summary, the successful deans of tomorrow must be confident and decisive leaders who engender trust, surround themselves with strong management teams, and constantly communicate to the entire faculty, staff, and alumni about the major issues and factors that directly and indirectly impact our programs. A quote by Kotter in a December 2001 *Harvard Business Review* paper captures this new paradigm well: "Management is about coping with complexity. Leadership is about coping with change."²³

REFERENCES

1. The AACP Academic Management System Alexandria, VA: American Association of Colleges of Pharmacy; 1990.
2. Wolverton M, Gmelch WH, Monitez J, Nies CT. The changing nature of the academic deanship Vol 28. ASHE-ERIC Higher Education Report. San Francisco: Josey Bass; 2001
3. Clawson DK, Wilson EA. The medical school dean, reflections and directions. Kuttawa, KY. McClanahan Publishing House; 1999.
4. Draugalis JR. Career paths for today's pharmacy deans and implications for administrative career planning. *Am J Pharm Educ.* 1992;56:373-80.
5. Draugalis JR, Harrison DL. Administrative career planning: a five year update on the pharmacy deanship. *Am J Pharm Edu* 1997;61:45-50.
6. Plaza CM, Draugalis JR, Slack MK, Skrepnek GH. Administrative career planning: A ten year update of the pharmacy deanship. *Am J Pharm Educ.* 2004;68(1):Article 8.

7. Health Education Collaborative. Cambridge, MA: Institute of Healthcare Improvement. <http://www.ihl.org/IHI/Topics/HealthProfessionsEducation/EducationGeneral/EmergingContent/IHIHealthProfessionsCollaborativeSelectedProjectsandActivitiesFY05.htm>. Accessed January 12, 2009.
8. Clarion – University of Minnesota Health Center. Minneapolis, MN. <http://www.chip.umn.edu/CHIP/committees/clarion.html>. Accessed January 12, 2009.
9. Accreditation standards and guidelines for the professional program leading to the doctor of pharmacy degree. Chicago, IL. Accreditation Council for Pharmacy Education. 2006. Available at: http://www.acpe-accredit.org/pdf/ACPE_Revised_PharmD_Standards_Adopted_Jan152006.pdf Accessed January 12, 2009.
10. Pharmacy manpower project. Aggregate Demand Index. Available at: www.pharmacymanpower.com
11. Knapp DA. Professionally Determined need for pharmacy services in 2020. *Am J Pharm Educ.* 2002;66:421-9.
12. American Society of Health System Pharmacists. ASHP long range vision for the pharmacy work force in hospitals and health systems. *Am J Health-Syst Pharm.* 2007;65:1320-30.
13. Murphy JE, Nappi JM, Bosso JA et al, American College of Clinical Pharmacy's vision for the future: postgraduate pharmacy residency training as a prerequisite for direct patient care practice. *Pharmacotherapy.* 2006;26:722-33.
14. Johnson TJ Pharmacist workforce in 2020. Implication of requiring residency training for practice. *Am J Health-Syst Pharm.* 2008;65:166-70.
15. House of Delegates of The American Pharmacists Association annual meeting and exposition. San Diego, CA. March, 2008.
16. Campbell WH. PharmD accreditation standards 2007: Much is implied, little is required. *Ann Pharmacother* 2006;40:1655-61.
17. Academic Leaders Fellows Program. Alexandria, VA. American Association of College of Pharmacy. <http://www.aacp.org/site/page.asp?TRACKID=&VID=1&CID=937&DID=5804>. Accessed January 12, 2009.
18. Chase P, Yanchick V, eds. *The Dean's Compass*. Alexandria VA. American Association of Colleges of Pharmacy, 2008.
19. Management courses. Cambridge, MA. Harvard University Web site. <http://www.extension.harvard.edu/2007-08/programs/management/cert/>
20. Academic Fellows Leadership Program. Washington, DC. American Council on Education Web site. <http://www.acenet.edu/Content/NavigationMenu/ProgramsServices/FellowsProgram/index.htm>
21. Pharmacy Leadership Institute. Bethesda, MD. American Society of Health System Pharmacists Web site. <http://www.ashpfoundation.org/MainMenuCategories/CenterforPharmacyLeadership/TrainingEducationalOpportunities/PharmacyLeadershipAcademy.aspx>
22. Leaderpoint Comprehensive Management Development Program. Mission, KS. Leaderpoint. Available at: <http://www.leaderpoint.biz/accp.htm>
23. Kotter JP. What leaders really do. *Harvard Business Review.* December 2001;85-96.