Pharmacy practice and education have undergone a period of unprecedented change and re-orientation, much like the experiences of many other professions and skilled trades. Like any complex system, academic pharmacy must respond to this change in an adaptive manner or risk irrelevance and extinction. However, its ability to respond coherently may be hampered because pharmacy education represents a unique hybrid of constituencies, including biomedical/pharmaceutical sciences, social/administrative sciences, clinical science, and professional practice. Specific interests of faculty members in these various areas may be different, for example, with respect to issues such as faculty development.

In attempting to balance the needs of researchers, practitioners, employers, educators, and students, while endeavoring to adapt to rapidly changing practice expectations, public attitudes, and technology (all within an increasingly constrained fiscal environment demanding increased productivity and accountability), pharmacy schools have developed structures and curricula that, in some cases, may represent ad hoc coping strategies rather than coherent long-term policies. Examples of such ad hoc adaptive practices include adoption of outcome-based assessment (in response to calls for greater accountability), introduction of service-learning components (in response to a need for greater impact in public health), realignment of courses, reframing of teaching and assessment methods, and renovation of chemistry laboratories into practice laboratories.

In academic and professional contexts, “tactics” may be described as maneuvering or management to pursue a short-term objective, in contrast with “strategy,” defined as the purposeful use of systematic means to achieve a longer-term outcome. The distinction, though subtle, is crucial, and hinges upon the need for planning, organizational commitment, and individual allegiance to a series of shared organizational values. Successful tactical responses require only short-term, self-interested alliances; successful strategic thinking requires longer-term dedication and support. Relying on a series of uncoordinated, incremental adaptation tactics, without fundamental reengineering of basic processes and functions is not a sustainable model for institutional, professional, or personal development.

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**SPECIAL ARTICLES**

**Faculty, Student, and Practitioner Development Within a Community of Practice**

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Communities of practice have been identified as a strategic imperative for learning organizations. The application of a community of practice approach to pharmacy education and professional practice has not been previously described. Building upon the tradition of diversity and innovation in pharmacy education, this paper provides an outline of a model curriculum, and highlights the ways in which a community of practice may facilitate professional socialization, enhance intra-faculty member collaboration, improve student learning, optimize practitioners’ continuous professional development, and advance patient care. Importantly, this approach requires greater interdisciplinary collaboration across all silos of pharmacy practice and education, and an integration of basic science, social-administrative science, and clinical science streams within the pharmacy curriculum. Key benefits for students include a more authentic learning environment, an incremental approach to responsible provision of patient care, and a more meaningful role in professional practice. Strategies for implementing a community of practice curriculum within a school of pharmacy are discussed, as are ways of promoting intra-faculty member cooperation and acceptance.

**Keywords:** pharmacy education, community of practice, health professions education, curriculum

**BACKGROUND**

Pharmacy practice and education have undergone a period of unprecedented change and re-orientation, much like the experiences of many other professions and skilled trades. Like any complex system, academic pharmacy must respond to this change in an adaptive manner or risk irrelevance and extinction. However, its ability to respond coherently may be hampered because pharmacy education represents a unique hybrid of constituencies, including biomedical/pharmaceutical sciences, social/administrative sciences, clinical science, and professional practice. Specific interests of faculty members in these various areas may be different, for example, with respect to issues such as faculty development.

In attempting to balance the needs of researchers, practitioners, employers, educators, and students, while endeavoring to adapt to rapidly changing practice expectations, public attitudes, and technology (all within an increasingly constrained fiscal environment demanding increased productivity and accountability), pharmacy schools have developed structures and curricula that, in some cases, may represent ad hoc coping strategies rather than coherent long-term policies. Examples of such ad hoc adaptive practices include adoption of outcome-based assessment (in response to calls for greater accountability), introduction of service-learning components (in response to a need for greater impact in public health), realignment of courses, reframing of teaching and assessment methods, and renovation of chemistry laboratories into practice laboratories.

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cational practices that do not fully meet the needs of students, practitioners, researchers, or (most importantly) the society they all must serve. A more strategic approach to organizational development is required if we are to create a culture within which pharmaceutical care practitioners may be educated and nurtured.

The ideal of the community of practice has been previously described, though its implementation within the context of pharmacy education has not been widely discussed. While the notion of a community of practice may appear either daunting or farfetched, there are examples of how such communities function and thrive. Indeed, in many ways, colleagues operating within the “basic” (ie, biomedical or pharmaceutical) sciences have been modeling such communities of practice within their specific disciplines for many years.

Within the business context, communities of practice have been well described. Gongla and Rizzuto have described over 60 such communities in terms of their evolution, organizational behaviours, supporting processes, and enabling technologies. While none of these organizations were schools of pharmacy, they represented a wide variety of knowledge-intensive organizations (such as Xerox, British Petroleum, the World Bank, and Hewlett Packard) involved extensively in teaching, research, and continuous professional development. Gongla and Rizzuto conclude by describing a generic model for evolution of communities of practice, applicable to most fields or professions.

In this paper, we describe how a community of practice within academic pharmacy could fundamentally transform education, practice, and the health care system and discuss the strategies (not tactics) that are required to support such a transformation. Building on a long tradition of diversity and innovation in pharmacy education, the evolution towards a community of practice represents a strategic integration and enhancement of current curricular elements such as service learning and integrated courses. We argue that academic pharmacy is ideally situated to assume a leadership role in the development of a community of practice, owing to its strong connections to divergent areas in practice and research. To begin this process, we propose curricular evolution, both at the undergraduate and graduate levels, to support greater intra-faculty member collaboration and increased links to practice. In addition, changes in academic administration and leadership to support intra-faculty member collaboration and faculty-practitioner linkages are discussed in the context of creating a broadly based community of practice within pharmacy.

A COMMUNITY OF PRACTICE IN PHARMACY: ACADEMICS FIRST

As a philosophy, pharmaceutical care possesses all the attributes of a strong foundation for a profession because it centers on the need for critical problem-solving skills in the service of society and patients’ needs. As such, pharmaceutical care is as much a way of being as it is a field of specialized knowledge, and a community of practice is an ideal means of generating a culture in which this way of being is a prerequisite for membership. The diversity of pharmacy, both in the fields and divisions that are the academic pharmacy community as well as the student body, serves both as an incredibly fruitful source for, and barrier to, this emergent culture.

The diversity of students and faculty members at many pharmacy schools in North America is tremendous. Students from all ethnic, linguistic, and cultural backgrounds select pharmacy as a profession and thus become part of a diverse intellectual community. Moreover, the typical school of pharmacy is extremely diverse from a disciplinary perspective as well. Pharmacy schools today must include academics from disciplines as disparate as biochemistry, English, and management. The history of pharmacy research, practice, and education has led to a curriculum that gives students an exceptional breadth of academic exposure, spanning basic, clinical, social, and administrative sciences and practices. In general, this diversity may be viewed as an important tool for facilitating strategic thinking, canvassing ideas from a broad array of constituents, and diminishing the possibility of “group-think,” which may hinder creativity. In some schools, however, this diversity may have inadvertently produced 2 or 3 solitudes: bench scientists vs. social scientists vs. clinicians.

Diversity and the Academy

In the past, tactical approaches to curricular development may have viewed such diversity as a hindrance or at best a reality to be tolerated. Within a strategic community of practice approach, such diversity can be tapped to create a paradigm of care that is comprehensive enough to serve the broad needs of a diverse society, from both the perspective of practitioner education and knowledge generation or research.

Social psychologists note that one of the most powerful ways of overcoming stereotypes, faulty attributions, and biases is proximity to and social networking with members of another group. Florida has commented on the importance of diversity as an economic strategy for urban renewal and growth; his studies have demonstrated that urban centers identified as friendly to diversity (cities such as Boston, San Francisco, Austin,
and Toronto) also are places where economic prosperity and wealth are generated. Diversity, while generating wealth, also produces the rich soil in which communities of practice may flourish.

*Interdisciplinarity* among faculty members can be encouraged by changes to organizational structures, tenure, promotion, and merit pay policies that support individuals’ attempts to work with others outside their usual discipline. One way to enable collaboration across disciplines is to restructure departments and curricular accountability. Currently, individual faculty members are held accountable for transmitting knowledge concerning their disciplines. Since the disciplines generally are self-contained knowledge paradigms, this can serve only to reinforce the silo effect. On the other hand, consider an administrative structure that requires faculty members to assume responsibility for enabling students to achieve a defined (and limited) set of outcomes related to pharmaceutical care. In a hypothetical situation, Drs. Kim (a medicinal chemist) and Brown (a clinical pharmacist) might be responsible for ensuring that all students are able to identify, solve, and prevent drug-related problems in the area of cardiology and Dr. Singh (a pharmacologist) and Green (a community pharmacist) would be accountable for the same outcomes, only in infectious diseases. In practice, all 4 would have to collaborate to ensure the construction of a knowledge paradigm that encompassed all their individual disciplines.

At the graduate level, diversifying the membership of students’ supervisory committees is possible; for example, requiring inclusion of at least one faculty committee member who is from a different discipline than that of the student or the student’s supervisor, may provide an opportunity for fresh perspectives and interdisciplinary interaction. Structuring interdisciplinary graduate programs to create new scientists and clinicians who are comfortable speaking the language of both (or all 3) solitudes is necessary.

### The Perils of “Professionalizing” Professional Education

In addition to the disciplinary divide, in schools of pharmacy there often is a power-based division between professors and students because the former wield power over the latter in the form of evaluation. To build truly collaborative communities of practice, these power structures must be critically examined and deconstructed. Failure to account for the power structures inherent in traditional education may inhibit the transfer of knowledge from school to practice, insofar as formal education may appear detached from and not relevant to the “real world” of professional practice. This phenomenon has been described by Contu and Willmott in the context of power relations and learning theory. From this perspective, academic pharmacy (and particularly the idealized view of pharmaceutical care frequently described) may be seen as out-of-touch with reality and not necessarily related to day-to-day experiences of pharmacists since academic pharmacists and professors often practice in idealized, atypical settings such as tertiary care institutions.

In many ways, the current power structure of pharmacy education may be seen as a result of the “professionalization of professional education,” and the development of a cadre of “professional” pharmacist-educators who work in settings that may seem remote and unlike most traditional pharmacy practices. The need for and practical value of having professional education institutionalized within a university context was hotly contested a century ago. Then, Cardinal Newman wrote eloquently of the role of the university in society as a place of inquiry rather than simply a training school. Flexner agreed, arguing that it was precisely this role of the university that ought to make it the home for professional (in particular) medical education, since medical training without a spirit of inquiry produces technicians who can neither adapt to a changing world nor transform their world for the better.

As universities have evolved towards large, bureaucratized institutions increasingly governed by financial needs and constraints, professional schools have become both cash cows and sacred cows; the former because professional school tuitions frequently subsidize other programs within an institution, and the latter because professional schools inevitably bring a measure of prestige and cache to an institution.

Unfortunately, the results for students may be a suboptimal environment for learning and development. To some extent, the tradition of service-learning that is now commonplace in pharmacy education attempts to address the gap between the university and society in a tactical sense. In a more strategic sense, however, service-learning cannot simply be a course or 2 that a student takes in order to fulfill a degree requirement (and demonstrate lip service to the university’s commitment to social engagement). Instead, the underlying ethos of service-learning – the notion that learning represents a continuum of experiences in a variety of environments, all of which mutually reinforce one another – must become integral to the values and culture of academic institutions.

Many learners intuitively understand and demonstrate this ethos through their actions. What is the best
way to study for a test on psychopharmacology? Spend time with an agency serving the needs of those with psychiatric illnesses and speak with people who are the recipients of psychiatric medicines. Such interactions help make didactic material meaningful, relevant, and memorable in a way that lectures, case studies, and clinical simulations may not.

This in no way is meant to dismiss the importance of these or other formal academic modes of teaching. Rather, from a learner’s perspective, a blended approach allows opportunities for reinforcement of academic material through social engagement (including legitimate peripheral participation, as outlined in part 1 of this paper) and provides for the most meaningful educational experience. In return, learners can contribute meaningfully, albeit at different levels, based on their abilities and skills. A junior student may contribute a smile, a friendly ear, and a pair of hands to lift things, while a more senior student may contribute more obviously (though not necessarily more importantly) through identification of drug-related problems.

Thus, important structural changes in administration, leadership, and curriculum are required to support academia’s leadership role in developing communities of practice. Building on the experience and success of service-learning and incorporating patients and their communities into educational programs is an important first step. However, this incorporation of patients and their communities into the curriculum must be more than simply lip service or 1 or 2 courses structurally isolated from the rest of the academic program. Instead, ways of actually integrating real world needs into the fabric of curriculum will provide a meaningful and mutually beneficial way of addressing both societal priorities and learners’ needs.

CREATING A COMMUNITY OF PRACTICE WITHIN PHARMACY

Unlike other professions, pharmacy students’ experiential and in-service training may at times be viewed as a burden to the practice and the pharmacist. Preceptors (practitioner-instructors) agree to supervise students for a wide variety of reasons, ranging from financial compensation to personal satisfaction from teaching, to a desire to recruit a pharmacist post-graduation. While the altruistic motive for practitioner involvement in student development is admirable, and the selfish motive an unfortunate reality, both mask an underlying structural problem within pharmacy practice and education.

In a strictly practical sense, pharmacy students are sometimes a burden because they are not necessarily allowed to contribute to a practice at a level commensurate with their skills and abilities. This situation is different in some other professions. For example, it would be impossible to imagine the practice of medicine in North America without interns and residents. These individuals staff emergency rooms and walk-in clinics, provide direct patient care services, solve clinical problems, and assume responsibility for their actions with relatively indirect supervision from attending physicians. Similarly, in law and accounting, the clerkship system provides an opportunity for a relatively independent scope of practice (with commensurate responsibility) for students prior to them becoming fully independent practitioners. While supervisors are still available for consultation and support, they are not as directly involved in certain activities as their students. For example, a graduated chartered accountant would rarely directly perform an audit, but instead would charge a student to do so – along with a commensurate level of responsibility and accountability. While some may argue that pharmacy students perform analogous functions, this is not formally recognized by regulatory bodies nor is it consistently applied.

The result is a difference in the way pharmacy students are perceived, forced to remain on the periphery of the profession, while medicine, law, and accounting students are an integral part of their respective disciplines. In an environment of increasing time requirements for experiential training in pharmacy, schools of pharmacy can no longer rely simply upon the goodwill and good nature of pharmacist-preceptors to supervise students; instead, students must be seen as an integral part of the pharmacy workforce, contributing meaningfully and uniquely to the workplace, not simply “learning” at the expense of the organization. Such a transformation will require a fundamental reconfiguration of pharmacy curriculum, as well as regulatory change to support more independent work by students and a legal structure that provides accountability and responsibility apportioning for errors and omissions by students.

One potential model for this conceptualizes pharmacy education as a series of stages in professional development, not unlike a graduated licensing system for drivers. Currently, in pharmacy practice, an individual goes from being a student (with little or no responsibility or legal accountability) to a pharmacist (with significant responsibility and legal accountability) relatively quickly, and generally after passing a series of examinations or other activities that do not actually assess that individual’s ability and willingness to assume responsibility. In some jurisdictions, a pre-registration or internship period may exist, in which there is some incremental legal
accountability, but frequently this liability is assumed by the supervising pharmacist.

A graduated licensing system would prescribe certain rights and responsibilities over time, and would allow a pharmacist to accrete full practice rights gradually rather than overnight. For example, graduates from year 2 of a 4-year program could be licensed as pharmacy technicians with authority to double-check prescriptions verified for therapeutic accuracy by a pharmacist (including repeat prescriptions). Any errors made by the student would be the student’s responsibility, and he or she would be expected to have liability, errors, and omissions insurance to cover malpractice. A graduate from year 3 of a 4-year program could be licensed as a pharmacist for the purpose of supervising a pharmacy, ordering narcotics, and conducting inventory control, as well as providing independent, unsupervised advice to patients regarding nonprescription medications. Only PharmD graduates would be licensed to provide pharmaceutical care to patients.

Such a model possesses several important advantages over the current licensure system. First, students would become valued employees and an integral part of the workplace, with independent rights and responsibilities. Second, students would gradually learn how to assume responsibility and demonstrate accountability over a series of years and within specified areas, rather than suddenly having such responsibility thrust upon them. Third, such a system would assist with human resources planning within the profession, particularly in remote or under-serviced areas, or in institutions during off-peak hours where a fully qualified pharmacist may not be required. A graduated licensing system may also facilitate inclusion of a large (and growing) number of international pharmacy graduates (foreign-trained pharmacists who have received their pharmacy education/training at nonaccredited schools and who are currently seeking licensure in the US or Canada) in the workforce.

Perhaps more importantly, such a system would allow for a more effective transition between academia and practice, and broaden the community of practice for pharmacy. Currently, the distinction between student and practitioner is unnecessarily abrupt and arbitrary. By introducing a system that provides for a more seamless and gradual transition to independent practice, students can assume increasing levels of responsibility in a variety of practice-specific contexts.

**A Student’s Eye View of a Community of Practice: One Curricular Model**

Thus far, we have described the necessary antecedents for creating a community of practice within pharmacy. The focus has been on 3 key groups: academics, community groups, and practitioners. This focus is necessary since a community of practice cannot simply emerge spontaneously, but instead requires commitment and input from a variety of stakeholders. Importantly, academic pharmacy is positioned to assume a leadership role in this transformation, but this will require changes to the structure of academia that would facilitate interdisciplinarity and more authentic incorporation of patients into the fabric of pharmacy education. In addition, structural changes to the licensing process that would allow pharmacy students to be an indispensable part of the pharmacy workforce, rather than overhead or a burden, are necessary.

While each of these concepts has its own merits and challenges, each by itself will not generate the community of practice we envision. Rather, an integrated approach, one that utilizes curriculum as a unifying tool for development of community of practice, is required.

In Table 1, we present a potential curricular model, one that incorporates many of the themes of this paper. It is presented as neither a template nor an ideal, but rather as a “straw dog” for discussion and debate; a way of illustrating one way in which the principles discussed may be incorporated in a professional curriculum. This curriculum is structured around the notion of a community of practice, and weaves university-based learning within a broader context of practice- and community-based development opportunities. For convenience, the calendar year has been divided into trimesters (each 4 months in length), with the academic year beginning in September. Issues related to recruitment and admissions policies are beyond the scope of this discussion; however, it is essential that such policies are consistent with the goal of developing pharmaceutical care providers and that students in a community of practice are intellectually and emotionally capable of providing pharmaceutical care.

In this curricular model, traditional, standalone discipline-bound courses and the building blocks approach to curriculum are eliminated. Such models do not provide sufficient interdisciplinarity, nor do they allow students an opportunity to build connections between different domains of knowledge within pharmacy. Instead, the university-based component of the curriculum has been conceptualized around a series of integrated courses.

As the term suggests, integrated courses provide an opportunity for material from a variety of disciplines and fields to be woven together within the context of pharmacy practice. As such, each course will provide students with an opportunity to acquire fundamental knowledge from a variety of fields through specific application...
to authentic practice-related problems and situations. Though logistically complex, integrated courses provide students with an opportunity to learn how all parts of the curriculum matter and can be applied to professional practice. To support development and implementation of integrated courses, faculties of pharmacy must develop inter-faculty member collaborative mechanisms to encourage, for example, communication between medicinal chemists, clinical pharmacists, and medical sociologists, so each may contribute their perspective to the teaching of pharmacy students. Importantly, existing reward structures that currently skew faculty members away from interdisciplinarity must be revisited.

Two specific forms of integrated courses are described. Integrated pharmacotherapeutic modules are conceptualized around integrated teaching, learning, and assessment in courses such as pharmacology, medicinal chemistry, clinical biochemistry, pathophysiology, and anatomy. These courses are focused on specific disease states. Having built up a pharmacotherapeutic fund of knowledge that is based on disease states, the Patient Care Integration Series provides students an opportunity to apply learning in the context of patients with multiple, interacting, complex disease states as well as complex psychosocial needs. Such sequencing allows for reinforcement of knowledge and skills and a closer approximation to the complexity of professional practice.

### Integration Across Disciplines: The Key to Community of Practice

Three key integrated foundation courses have been identified in this curriculum: *Health of Communities,*
Patient Assessment, and Pharmacy Practice. Health of Communities addresses issues of the health care system, including determinants of health, health promotion, regulation of health care professionals, and the economic and sociological implications of health care. Specific disciplines addressed in such a course would include principles and methods of community health, managerial and behavioural sciences, epidemiology (including biostatistics), sociology, and economics.

Patient Assessment is conceptualized as an integrated course covering principles and methods of the medical sciences, as they relate to identification of drug-related problems. Specific disciplines addressed in such a course would include anatomy, physiology, pathophysiology, microbiology, and patient interviewing/physical assessment. At the conclusion of this course series, students should be able to apply their understanding of health and illness to a structured information gathering process with patients in order to identify drug-related needs.

Pharmacy Practice represents an interdisciplinary course covering topics in pharmaceutical sciences (including basic physical and medicinal chemistry, pharmacokinetics and pharmacodynamics, pharmaceutics, pharmacy law, and drug distribution systems). By connecting these previously standalone disciplines within an integrated course framework, students would be able to more effectively understand complex issues related, for example, to drug schedules and regulations, the drug discovery process, and their role in clinical research and postmarketing surveillance activities.

These courses (in total, offered for 12 months across 3 trimesters) represent the foundation for professional practice and effectively weave together pharmaceutical and medical sciences with professional practices. Of course, for such courses to be successful, there must be significant collaboration between instructors, and a commitment to model a communities-of-practice approach for students. Such a commitment would require new teaching methods, for example, the incorporation of patients and practitioners into the “formal” academic programming in a meaningful way. New models for educational delivery that allow for authentic clinical problem solving, with practitioners and patients as co-participants, and faculty members as “expert” resources must be developed to allow for effective implementation of integrated courses.

Curricular integration extends to the remainder of the curriculum, which has been conceptualized as a series of twelve 1-month pharmacotherapeutic modules, including 8 months of pharmacotherapeutics and 4 months of patient care integration. Once again, within each module, a high degree of collaboration is required among faculty members. For example, clinical pharmacists would be teaching alongside medicinal chemists, epidemiologists, pharmaco economists, and clinicians. The community of practice teaching and learning model previously described would continue; students, practitioners, and patients working together with faculty members as expert resources to address authentic, real-world clinical problems and cases. While the specific selection of topic modules in this proposal has been guided by convenience, the principle of integrated pharmaco therapeutic modules must be maintained.

The expansion of experiential education within the pharmacy program has been of significant importance in advancing the knowledge and skills of new graduates. While the integrated modules described above do require contributions from practitioners and patients as part of the university-based program, ensuring that experiential education is seamlessly woven throughout the curriculum is equally important. To this end, we propose 5 distinct 4-month experiential placements, at varying levels of complexity and difficulty, to provide an opportunity to reinforce learning and apply it within a real clinical setting.

These experiential placements have been conceptualized around the notion of situated learning and the transition of novices from legitimate peripheral participation to more complete integration in practice. The experiential program begins with a 4-month unstructured placement, in which students are required to observe, reflect upon, and contribute to their practice based on their level of knowledge and skills. During the unstructured placement, students will have an opportunity to observe and rehearse the role of the pharmacist, without having to assume direct responsibility for patient care. Preceptors of students will have the opportunity to model their practice philosophy and interactions with patients and benefit from students’ feedback.

Two semi-structured experiential placements are included, as students’ knowledge and skills become more advanced. During the first placement, students will be expected to “step up to the plate” and begin to contribute substantially to the practice, for example, by working as a pharmacy technician. By the end of the semi-structured placements, students should have achieved the competency of qualified pharmacy technicians, and should be able to contribute to the efficiency and effectiveness of compounding and dispensing practices. While expectations related to direct patient care will be limited at this stage, students would be required to assume responsibility for drug distribution activities, and this would require, for example, students’ liability
insurance for errors or omissions. In this way, students have the opportunity to incrementally build their responsibility framework over time and learn the implications of accountability within a professional context.

The final 2 structured experiential placements would be similar to high-level clinical placements in current PharmD programs. In these placements, students would incrementally gain experience in the provision of pharmaceutical care to complex patients. By the conclusion of the final rotation, students should be able to assume full responsibility for their care plans and recommendations, although supervision from qualified clinical faculty members would still be required. A key component of the structured experiential program would be the requirement to identify, undertake, and complete a pharmacy practice research opportunity in order to develop a culture of scholarship within professional practice.

To provide opportunities for students to explore the diversity of pharmacy practice, a series of elective courses could be developed for the final trimester, to allow for specialization options. Areas of particular interest might include educational research opportunities to help cultivate the next generation of pharmacy faculty.

This curriculum, centered on the notion of communities of practice, provides significant opportunities for helping students learn, helping preceptors advance their practice through faculty support, and help academics develop interdisciplinarity in their research activities. Such a curriculum provides an important trajectory for practice, a way for students to incrementally build their confidence and competence in practice before assuming sole responsibility. In such a model, from day one of their education, students are full members of the pharmacy community, actively working (in integrated courses and unstructured placements) with preceptors and patients to solve authentic problems in practice. Such a model requires commitment from all groups as well as a heartfelt interest in student development and professional practice enhancement. Such an interest can be generated by administrative support and appropriate rewards and incentives; however, it must also come from a commitment and passion deeply felt by each member of the community of practice.

Additional administrative support can also be provided to smooth the transition to integrated courses and activities. Key support staff members would include trained facilitators to bridge between various disciplines and fields, as well as practice leaders to drive performance of a team of academics, students, practitioners, and patients. Individuals within the organization must be identified who can work within large bureaucratic systems (like universities or hospitals) to reduce barriers to interdisciplinarity, and to allow such a program to become self-sustaining and legitimate within the culture of the organization. Finally, sponsors or champions who have access to financial and other resources necessary to support the community of practice are needed. While assistant and/or associate deans would traditionally assume these roles, a process for allowing others in the organization to build the community of practice is necessary and desirable.

CONCLUSIONS

The rationale for and curricular model of a community of practice in pharmacy that we have presented is far-reaching and complex. We have argued that pharmacy, as a profession, is faced with the choice of adapting itself or becoming irrelevant. For fundamental change to occur in practice, fundamental changes in education must also occur. A significant pool of untapped potential within the profession remains: our students. Development of educational models that more fully embrace students’ potential, provide a more logical division of responsibilities among faculty members and practitioners, and delineate a clear trajectory for student progression from novice to expert is needed to reorient practice.

The community of practice provides a unifying construct through which education, practice, and continuous professional development may be viewed. Pharmacy has a historical advantage in developing its community of practice in the diversity that is inherent in our profession. While such a strength may introduce organizational complexity, it can provide the fertile soil in which a community of practice may develop.

The curricular model we have presented incorporates important innovations in education, including integrated courses and a staged experiential program. Such a curriculum, however, is heavily reliant upon effective and efficient interdisciplinary pedagogy—one that embraces disciplinary diversity. Administrative and structural changes will be required to support such a pedagogy. Such changes to the organization of the teaching enterprise will also have the dividend of allowing practitioners and patients to more fully contribute to the education of pharmacy students.

We hope this paper will provide readers with an opportunity to reflect upon their own curricula and conceptualize the possibilities inherent in constructing communities of practice within pharmacy. The idealized model presented here, while not necessarily an impossible task, is certainly fraught with logistical peril. However, as a community of administrators, teachers,
researchers, and practitioners, it is essential that we begin the dialogue on the shape of our schools – and our profession – in the 21st century.

REFERENCES