Perspective: Recognizing and Rewarding Clinical Scholarship
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Abstract
Faculty members in medical schools and academic medical centers are in a constant process of generating new knowledge. The cornerstone of academia—and academic medicine—is scholarship. Traditionally, tenure and/or academic promotion in the professorial ranks is awarded to those who meet institutional criteria in the missions of research, teaching, and service, including patient care. In the academic review process, priority is often placed on a record of demonstrated, consistent success in traditional laboratory research, also known as the scholarship of discovery. More recently, there has been greater recognition of other forms of scholarship: education, application, and integration. These forms of scholarship, although less recognized, also result in the generation of new knowledge. In an attempt to understand the breadth and scope of clinical scholarship, the authors searched the extant literature in academic medicine for a definition of clinical scholarship and expanded the search to disciplines outside of medicine. They found that succinct, discrete definitions of clinical scholarship have been published in other disciplines, but not in academic medicine. After reviewing definitions of clinical scholarship from other disciplines, adapting definitions of educational scholarship in academic medicine, and including qualities unique to clinical scholarship, the authors developed a framework for understanding clinical scholarship in academic medicine as a means for opening a dialogue within the academic medical community. This dialogue hopefully will lead to formulating a succinct, discrete definition of clinical scholarship that will allow greater recognition and reward for clinical scholars in the promotion and tenure process.

Medical schools and related academic medical centers (AMCs) are in a constant process of generating new knowledge through the efforts and engagement of their faculty. The cornerstone of academia—and academic medicine—is scholarship. Traditionally, tenure and/or academic promotion in the professorial ranks are awarded to faculty who meet institutional criteria in the missions of research, teaching, and service, including patient care. In their deliberations, promotions committees often place priority on a record of demonstrated, consistent success in the scholarship of discovery. The scholarship of discovery is the generation of new knowledge under rigorous conditions, most often in the laboratory. Knowledge obtained through this process is subjected to critique by other scholars through peer review and, in turn, is disseminated to the wider community of scholars to confirm, build upon, and advance the findings. The dissemination of new knowledge often leads to additional discoveries; as such, it is generative.

What Is Scholarship?
In academic medicine, recognition and reward for the scholarship of discovery are long-standing and represent the foundation of promotion and tenure criteria at most schools of medicine and related universities. Although the scholarship of discovery is critical to knowledge development, other forms of scholarship exist and may also result in the generation of new knowledge. In his seminal work, Scholarship Reconsidered, Ernest Boyer describes four domains of scholarship: discovery, application, integration, and teaching. Despite Boyer’s description of other forms of scholarship, recognition by promotion and tenure committees has been slow, in part because of uncertainty about how to evaluate and weigh the scholarship within these other domains.

In 2007, the scholarship of teaching and learning in academic medicine, often referred to as educational scholarship, was more explicitly defined by Simpson et al. This work, as well as the progress made by consensus groups sponsored by the Association of American Medical Colleges (AAMC), provides the foundation for further defining criteria by which educational scholarship can be evaluated in the promotion and tenure process. Many schools have now begun to recognize and reward educational scholarship in the promotion and tenure process. In some cases, separate tracks have been created to allow for recognition of faculty who excel as educators and who create educational scholarship. Opportunities for peer review and presentation of educational scholarship have increased, and the community of educational scholars has grown in depth and in numbers. Faculty members who focus their academic efforts in the education mission are now able to identify a career path that offers the potential for academic recognition through promotion and tenure.

Two areas of scholarship described by Boyer are less well defined and have not been fully incorporated in the promotion and tenure process: the scholarship of integration and the scholarship of application. One examination of the
promotion and tenure process at an AMC concluded, "We did not have an institutional understanding of scholarship that extended very far beyond the traditional view that scholarship means only the scholarship of discovery." Discussions about recognizing and rewarding the scholarship of integration and application have occurred in the past, but only recently have medical schools incorporated different forms of scholarship as part of their promotion and tenure criteria. Less traditional scholarly products are sometimes perceived as being less important and less valuable than products of the scholarship of discovery. Whereas traditional research-intensive faculty members typically engage in the scholarship of discovery, faculty clinicians are often engaged in activities more closely aligned with the scholarship of integration and application.

The scholarship of integration includes making connections across disciplines, moving beyond disciplinary boundaries, placing the specialties in a larger context, and illuminating data in a revealing way, often as a means for educating paraprofessionals and patients. Studies of health care delivery and health outcomes could be considered to be in this category. Other examples of the scholarship of integration in medicine include biomedical technologies and devices such as vascular stents, innovative microsurgical techniques and robotic surgery, and collaborative, multidisciplinary approaches to complex medical problems such as rehabilitation and cancer. The scholarship of application includes application of knowledge to problems of individuals or of society and translation of knowledge to new and practical applications. Community-based participatory research, the global health movement, patient safety practices, and quality improvement initiatives represent areas in which an explosion of scholarship in the domain of application has occurred. Clinical guidelines, patient safety protocols, and checklists for procedures such as central line insertion are examples in this domain of scholarship. Although application of these innovations may result in improved patient care and health outcomes, it is uncertain whether related scholarship is recognized and rewarded in the promotion and tenure process.

How Do We Evaluate Scholarship?

If Boyer's expanded definition of scholarship is to be truly embraced by academic medicine, those who focus their academic efforts in domains other than discovery will need to be recognized for their efforts through the academic reward system of promotion and tenure. As such, an approach to the evaluation of the quality of scholarship in these domains is critical. Charles Glassick described a scholarly approach as meeting six standards: clear goals, adequate preparation, appropriate methods, significant results, effective communication, and reflective critique. Each of these standards is necessary for the creation of scholarship. A scientist may conduct brilliant research within the lab, but the goal of scientific research is publication. A scientific experiment, no matter how spectacular the results, is not complete until the results are published. Similarly, a clinician may demonstrate clinical excellence reflected by high patient satisfaction ratings, an excellent quality and safety record, and generation of substantial clinical revenue. Clinical excellence, however, does not equate to the demonstration of scholarship. Scholarship requires the translation of clinical practice into creative products meeting Glassick's standards that can be subjected to peer review and disseminated. Once a scholarly product is made public, peers can assess its quality and value within the larger community.

What Is Clinical Scholarship?

The clinical setting within an AMC provides an ideal milieu for generating new knowledge. Although the clinical setting is not an ideal environment for the scholarship of discovery, the potential for the scholarship of application and integration may be greater there than in a traditional laboratory research setting. After all, the application of scientific discovery in prevention, clinical intervention, and translational science requires the "laboratory" of the clinical setting and human animal models for hypothesis testing and data generation. Further, the scholarship of teaching in the clinical setting is greatly needed as we endeavor to prepare a new generation of learners to take on the challenges of health care in the new millennium. Shapiro and Coleman argue that "the clinician could make a scholarly contribution if he/she is able effectively to describe both the rationale and the elements of the [health care or clinical] model and communicate these in a way that can be assessed and criticized." Public display of the product of scholarship—whatever form that product may take (publication, abstract, presentation, workshop)—allows others to examine and value it. Every scholarly accomplishment, whether achieved in the clinic or test tube, needs to be shared with and judged by other scholars. The challenge, for clinical scholars seeking to advance a new delivery model or clinical treatment strategy, is to approach the process with the same scientific rigor as would be expected for scientists in the laboratory.

What Comprises Clinical Scholarship?

This question is being actively explored at medical schools as they seek to advance and recognize scholarly work of clinical faculty. AMCs have come to rely on a productive clinical enterprise to help financially support the education, research, and service missions. Clinical faculty members are under great pressure to produce a robust bottom line in the clinical enterprise because the current financial model is contingent on healthy clinical margins to support medical education and, to some extent, research. Many clinical faculty members no longer have protected time to conduct research in the pristine environment of the laboratory. Yet, the award of tenure and recognition through promotion remain tied to demonstrated success as a scholar, typically in the domain of discovery. Under current practices, demonstrated excellence in clinical service without concomitant engagement in and dissemination of scholarship will not result in the award of tenure or promotion.

The scholarship of discovery and the scholarship of teaching are now recognized in most promotion and tenure systems. However, scholarship of integration and application are less well understood and, as such, are not afforded a commensurate level of recognition and...
reward. Yet, the need for a cadre of faculty members adept in clinical application of knowledge has never been greater. Barriers to rewarding these forms of scholarship are found not only in medicine but also in pharmacy, nursing, and dentistry. Such barriers include a deep-rooted academic belief system that places primacy on the scholarship of discovery, a tradition of scientific independence to establish reputation, and a reward system overly focused on grant dollars (ideally from the National Institutes of Health) and numbers of publications (i.e., quantity, but not necessarily quality, is rewarded). There may also be a lack of understanding of the uniqueness of academic medicine by other university faculty participating in the promotion and tenure review process. There is a pressing “need for promotion committees to rigorously pursue better ways of evaluating the contributions of their faculty.” The scholarship of integration has not yet gained acceptance as an integral activity of the professorate. Interdisciplinary work, often required in the domains of application and integration, is viewed “as risky and professionally unrewarding.” Likewise, disciplinary isolation discourages integrative scholarship in deference to scholarship in the domains of discovery and education. Too often, these forms of scholarship are “held in lower esteem within academic peer groups.”

A Framework for Understanding Clinical Scholarship

In an attempt to understand the breadth and scope of clinical scholarship, we searched the extant literature in academic medicine for a definition of clinical scholarship. Our search was unsuccessful overall. The work of Simpson et al regarding educational scholarship in academic medicine is instructive; however, an adaptation of the definition of educational scholarship alone does not fully describe the scope of clinical scholarship in academic medicine. In turn, we expanded our search to disciplines outside of medicine and found that succinct, discrete definitions of clinical scholarship have been stated and published in the professional literature of the disciplines of nursing, occupational therapy, and law. After reviewing definitions of clinical scholarship from other disciplines, adapting definitions of educational scholarship in academic medicine, and including qualities unique to clinical scholarship, we identified several components that might be adapted or applied as a framework for understanding clinical scholarship in academic medicine.

Building on this framework, we propose a working definition of clinical scholarship in academic medicine as follows:

- Clinical scholarship in academic medicine uses systematic observation and scientifically based methods to identify, describe, and solve clinical problems.
- Clinical scholarship occurs while in the throes of practice and offers the potential for learning how to improve clinical practice.
- Clinical scholarship is not limited solely to what occurs in the traditional clinical setting of the hospital, outpatient clinic, or clinical practice. Its scope is broad and may extend beyond a disease process to examine what occurs in the lives of patients and families outside the clinical arena.
- The range of systematic observation and measurement may encompass a single patient or span health care systems.
- Clinical scholarship is often interdisciplinary. As such, clinical scholarship makes use of knowledge and methods from other disciplines to enhance understanding.
- Documentation and dissemination of clinical scholarship may include publication, presentation, consultation, evidence of use by others, and applied leadership.
- The knowledge and expertise generated in clinical scholarship is of value. It helps us to anticipate trends, to predict needs, to create effective clinical products and services, and to track and manage clinical processes, outcomes, and impact.
- The use of clinical scholarship helps us solve clinical problems, enhance clinical care, and improve the health of patients, families, and communities.

We offer this definition of clinical scholarship to open a dialogue within the academic medical community. Divisions and departments of medical schools, promotion and tenure committees at medical schools and universities, and other national and international professional societies and interest groups may use these points to engage in further dialogue toward the goal of formulating a succinct, discrete definition of clinical scholarship. As a formal definition is refined, these conversations should consider the myriad creative products representing clinical scholarship.

Recognizing and Rewarding Clinical Scholarship

Defining clinical scholarship will allow clinicians to be rewarded for the various contributions they make to AMCs. This recognition is critical for successful recruitment and retention of clinical faculty and for the continued academic engagement of seasoned clinical faculty. Two recent analyses describing the status of academic medical faculty based on AAMC data raise concerns for the academic workforce of the future. One study revealed that the average age of the typical faculty member in 2007 was 48.7 years; for basic scientists, the average was over 50 years of age. The pipeline for replacing these faculty members may not be robust enough to meet future needs, neither in academic medicine nor in clinical care. Another study revealed that the 10-year retention rate for academic medical faculty is 60%. That is, 40% of those appointed to faculty positions are no longer employed in academic medicine 10 years later, representing a significant rate of turnover. Turnover creates a financial burden to organizations and, in aggregate, to academic medicine. In a recent guest editorial, one author laments the potential negative consequences of the loss of clinically excellent physicians to academia. To sustain academic medicine and fulfill the teaching, research, and service missions at AMCs, better mechanisms are needed to recruit new faculty members, to develop them to their full potential as scholars, and to retain those already in place. To achieve this goal, we need to value the contributions of faculty in all four domains of scholarship, and we must reward such contributions.

Clinical scholarship often requires teamwork, collaboration, and interdependence. For many years,
demonstrating independence was required for the award of tenure or promotion. Today, demonstration of interdependence may be a more useful measure. However, promotion and tenure criteria in many AMCs have not changed to align with the contemporary demands on faculty. Morahan and Fleetwood argue that the academic promotion process is out of alignment with the demands placed on faculty today. Defining, recognizing, and rewarding clinical scholarship in the promotion and tenure process is one way to begin correcting this misalignment. In response to similar issues in the recognition and reward of educational scholarship, Simpson et al suggest documentation of educational scholarship through the use of the Educator’s Portfolio. Between 1992 and 2002, “the number of medical schools whose promotion packets include portfolio-like documentation associated with a faculty member’s excellence in education has increased by more than 400%.” Similarly, documentation of clinical scholarship through development of a “Clinician’s Portfolio” would allow clinical scholars to document and present their contributions for review by peers in the promotion and tenure process. It is interesting to speculate about whether a pattern of growth would result similar to the one that unfolded with the implementation of the Educator’s Portfolio in academic medicine.

Some institutions have begun to include the Educator’s Portfolio as part of the materials submitted for consideration by promotion committees. A similar approach is needed to provide clinicians with a mechanism for demonstrating clinical excellence and scholarship. One examination of promotion criteria for clinical educators called for improvement of the quality of the measures used to assess the clinician–educator’s performance. At the Miller-Coulson Academy of Clinical Excellence at the Johns Hopkins School of Medicine, an internal committee and an external review section evaluate portfolios showcasing clinical contributions to judge whether applicants to the academy should be offered membership. Other health-related disciplines have begun to use clinical portfolios to comprehensively assess clinical performance. The development of a clinician’s portfolio, akin to the Educator’s Portfolio, would allow clinical scholars to document and present their contributions for review by peers in the promotion and tenure process.

Opening the Dialogue for Clinical Scholarship

We offer our proposed definition of clinical scholarship as a means for opening a dialogue within the academic medical community. This conversation needs to continue at multiple levels: in divisions and departments of medical schools, in promotion and tenure committees at medical schools and universities, and at national and international levels within disciplines and professional societies. We believe clinical scholarship can be defined succinctly and evaluative criteria established. We also believe clinical faculty members will present myriad creative products representing clinical scholarship. Educators have developed multiple venues through the AAMC to present educational scholarship. The Group on Educational Affairs meetings, Research in Medical Education conferences, and MedEdPORTAL represent venues commonly used by scholars to present innovations in medical education. Similar processes should be created to facilitate the work of clinical scholars in parallel to what has been accomplished for educators. We urge the AAMC to take the lead in helping constituent members create processes to recognize and reward clinical excellence and related clinical scholarship in academic medicine.

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References


