Commentary: **The Flexnerian Legacy in the 21st Century**

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Abstract

The climate of academic medicine today was shaped in part by Abraham Flexner's recommendations in 1910's *Medical Education in the United States and Canada.* At the celebration of the 100th anniversary of the Flexner Report, however, some wonder whether the times require another look at our complex system of medical education. In fact, an underlying theme of many articles in this special issue of *Academic Medicine* is that the medical education community's response to the Flexner Report—and the individualistic, expert-centric culture to which it gave rise—may now work *against* the collaboration needed for greater integration across the medical education continuum, highly networked teams in discovery research, and interprofessionalism in clinical care. The question, as many authors suggest, is not whether medical education is being true to Flexner, but whether academic medicine is responding to the implications of post-Flexnerian education and whether it is able to embrace the cultural change needed to address 21st-century health care needs.

This commentary examines this cultural shift and identifies some key trends behind it, concluding by suggesting five success factors for achieving transformational change, including ways the Association of American Medical Colleges is working to support its members in these efforts.

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If Abraham Flexner toured all U.S. and Canadian medical schools today, he might post progress reports on his blog for all to read. As he traveled across the continent, he would see constant reminders of public health challenges—from security precautions taken at mass transit systems to protect against bioterrorism threats to hand sanitizer dispensers to ward off H1N1 influenza. On arrival at his hotel, his complimentary copy of *USA Today* might carry the latest update about soaring health care costs alongside a story heralding the newest breakthrough from federally-funded biomedical research.

As Flexner journeyed from campus to campus, he would not see the storefront proprietary medical schools of a century ago, but he might, along the way, notice retail stores delivering health care services. And as he marveled at the nation's 8,752 residency programs[1]—none of which existed a century ago—he might also note the many young physicians who come not just from the United States, but from countries all over the world.

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Clearly, today's environment of learning and practice for physicians is far different than the one Flexner critiqued a century ago. Then, the tremendous variability in the quality of medical schools led Flexner to describe many facilities as "wretched" and "filthy" and lacking faculty and/or adequate clinical material.[2] Academic medicine responded to his challenge by addressing these and other issues identified in *Medical Education in the United States and Canada,* laying the foundation for the high-caliber system of education in place today—one that provides its graduates with a solid scientific foundation as well as training for state-of-the-art practice. The many excellent articles in this special issue are a testament to this remarkable transformation.

Yet even as we celebrate the 100th anniversary of the Flexner Report, some wonder whether the times require another look at our complex system of medical education. As authors Irby and colleagues[3] note in their article about the upcoming 2010 report by the Carnegie Foundation for the Advancement of Teaching, "the forces of change are again challenging medical education and new calls for reform are emerging." In fact, an underlying theme of many articles in this issue is that the medical education community's response to the Flexner Report—and the individualistic, expert-centric culture to which it gave rise—may now work *against* the collaboration needed for greater integration across the medical education continuum, highly networked teams in discovery research, and interprofessionalism in clinical care. The question, as many authors suggest, is not whether medical education is being true to Flexner, but whether academic medicine is responding to the implications of post-Flexnerian education and whether it is able to embrace the cultural change needed to address 21st-century health care needs.

This commentary examines this cultural shift and identifies some key trends behind it, concluding by suggesting five success factors for achieving transformational change, including ways the Association of American Medical Colleges (AAMC) is working to support its members in these efforts.

The Two Sides of the Flexnerian Legacy

As noted by Curry and Montgomery,[4] Flexner posited as his "central thesis" that the university is essential to the provision of a modern medical education. More specifically, Flexner lauded the academic model of the European university, a paradigm that focused on individual professional achievement and within which success was based on the individual acquisition of factual knowledge. Over time, this focus on the

individual led faculty members to become essentially "free agents" in each of academic medicine's mission areas, with corresponding proprietary references to "my lecture," "my grants," and "my clinic." Just as powerfully, scientists and clinicians began to identify more strongly with their "discipline" or their "specialty" than with their academic institution.

However, a different reality faces us now. For example, with scientific knowledge growing exponentially,[5] an individualistic culture works against the integration and sharing of new knowledge needed in each mission area, particularly medical education. Additionally, and as also noted by Curry and Montgomery,[4] although medical school is still the "definitive" part of medical education, it is no longer the "ultimate stage" in a continuum that increasingly is intertwined with "elements of a variety of disciplines that are better represented in other parts of the university."

Moreover, as medical education moves toward outcome-based assessment, having knowledge is no longer sufficient. Students and physicians must also be able to apply that knowledge to everyday clinical situations. Just as important, young physicians must be able to effectively interact with patients, patients' families, and other health care professionals, as well as respond to the complex organizational demands of the health care system. Further, they must commit to lifelong learning that includes the ability to self-reflect and assess their own performance.

In research, the model of the autonomous investigator (with the R01 standing as validation of both independence and expertise) runs counter to the increasing complexity of today's research environment, the rapid pace of discovery, globalization, and the need to interface with other key disciplines. While the R01 continues to be critical for important foundational science, academic medicine must also look to programs that emphasize teams of highly networked scientists and the open sharing of information, such as the National Institutes of Health Clinical and Translational Science Award consortium.

In clinical care, the primacy of the sole practitioner is colliding with the health care needs of a society that is increasingly diverse, living longer, and requiring greater chronic care. In this regard, many of Flexner's basic recommendations still apply, as Halperin and colleagues[6] observe, "especially those concerning the physician as a practitioner whose purpose is more societal and preventive than individual and curative." (This notion is echoed by Muller and colleagues,[7] who call for reinstating service as a core mission of academic medical centers.) However, in contrast to Flexner's time, health care today is moving toward integrated delivery systems and teams of health professionals working together to collectively address patient needs.

Moreover, powerful factors external and internal to the clinical enterprise are converging to render the fee-for-service model virtually unsustainable. In many ways, driven by this payment model, the current U.S. health care delivery "system" has become a collection of loosely connected, independent facilities and providers. As Prislin and colleagues[8] observe, although the United States continues to be capable of providing the best care of any nation, all too often the American health care delivery system "fails to assure affordability and equitable access and quality [to an extent] that the system is no longer sustainable." Within the academic clinical enterprise itself, Flexner's vision of a full-time, salaried clinical faculty, a body which now is 109,257 strong (AAMC Faculty Roster data as of September 30, 2009), ironically has had the effect of promoting the very problem Flexner hoped to address.[9] As observed by Barzansky and Kengy,[9] "Instead of deriving their salaries from the resources of the medical school, they [clinical faculty] are significantly contributing to institutional financing through their practices. Flexner's concern about the 'distraction' of clinical practice interfering with faculty participation in education has come full circle, remaining a primary issue in medical education today."

Critical Success Factors in the 21st Century

As academic medicine looks toward the next 100 years, five factors will be critical to transforming medical education once again to better address society's health care needs. The AAMC has many resources to offer its constituents in this transition, and several are noted below.

Organizational culture. Over time, and through various structures, academic medicine has held tenaciously to the grand tradition of rewarding the demonstration of combined independence and expertise with tenure, the top rung of its hierarchical professional ladder. Though making the cultural shift away from this model will be challenging, academic medicine does not have to abandon every element of its traditional culture. In fact, educators, investigators, and practitioners should fight to retain their commitment to overall excellence, even as they shift from working as individuals to more frequently working in collaborative teams.[10]

Leadership. In addressing future challenges, academic medicine will need leaders who are able to focus on the long term and ensure that the right decisions "happen," no matter how difficult, unpopular, and even personally risky these decisions may be. In contrast to the larger-than-life, command-and-control figures we have traditionally associated with leadership, academic medicine requires what author Jim Collins[11] describes as Level 5 leaders—people who are "ambitious first and foremost for the cause, the movement, the mission, the work." The AAMC has numerous faculty leadership and recruitment tools and resources available, and readers are encouraged to visit http://www.aamc.org/opi/leadership/start.htm.

Innovation. As noted earlier in this commentary, many have called for "new models" of medical education. But is it a revolutionary overhaul of the system that is required, or a higher level of integration along the continuum of medical education? For example, as this issue of *Academic Medicine* goes to press, the AAMC has been in discussion with policy makers regarding innovative platforms called Healthcare Innovation Zones, in which academic medical centers would stand at the nexus of integrated delivery systems. These zones would not just be platforms to innovate around new care delivery models, but also to innovate with regard to medical education curricula and training across the continuum of education. For additional information on this new concept, see http://www.aamc.org/reform/hiz.htm.

Stewardship. With large clinical cross-subsidies to support teaching and research becoming a thing of the past, success will require a much higher level of transparency regarding revenue sources and the subsequent allocation of them in the service of the three mission areas. The AAMC took a leading role in "mission-based management"[12]—the concept of medical schools and teaching hospitals having a better understanding of their funds flow and assessing the alignment with resource allocation. With the future constraints on clinical income, this kind of effort now takes on a new level of importance.

Courage. This fifth factor may be most important of all. Changing the organizational culture, exerting transformational leadership, advancing innovation, and better using scarce resources requires courage. Fortunately, academic medicine is populated by many educators, investigators, and practitioners with courage. After all, one does not undertake medical education, biomedical research, or patient care without some degree of personal courage. Readers can thus take heart that the kind of transformational change required, while difficult, is already under way at many of our institutions.

Conclusion

In the century since the publication of the Flexner Report, medical education repeatedly has shown its collective ability to confront tough questions and to utilize innovation as a source of continuing improvement. As the reform of health care delivery has taken national center stage, it is imperative that academic medicine apply the same level of energy and scrutiny to its enterprise as it did a century ago. As a first step, readers of *Academic Medicine* are encouraged to consider the many thoughtful articles in this issue and discuss them with colleagues and students.

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