

Academic General Internal Medicine: a Mission for the Future

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Abstract

After five decades of growth that has included advances in medical education and health care delivery, value cohesion, and integration of diversity, we propose an overarching mission for academic general internal medicine to lead excellence, change, and innovation in clinical care, education, and research. General internal medicine aims to achieve health care delivery that is comprehensive, technologically-advanced and individualized; instills trust within a culture of respect; is efficient in the use of time, people, and resources; is organized and financed to achieve optimal health outcomes; maximizes equity; and continually learns and adapts. This mission of health care transformation has implications for the clinical, educational, and research activities of divisions of general internal medicine over the next several decades.

Background

The first academic general internal medicine (GIM) divisions were founded in the 1970s. By 1980, 68 US medical schools had GIM divisions.¹ Several forces drove the emergence of academic GIM, including emphasis on primary care in national health policy, expanding need in medical education, emerging interest in academic clinical evaluative sciences, and growing size of departments of medicine with reliance upon divisional affiliation for many administrative functions.² Because GIM did not require subspecialty training, these divisions brought together a wide range of faculty members, often including some of the best teachers and clinicians at the medical center.¹ By 2010, over 150 divisions had been created and many exceeded 50 faculty members.³ Divisions developed areas of focus, however, tensions surrounding the role of GIM in academic medicine also developed over the same time period.^{4,5} The national emphasis on primary care in the 1970s was not translated into reform of reimbursement policy and continued low reimbursement and growing administrative burden made primary care less appealing to academic centers and, for that matter, to medical school graduates.^{6,7}

In the 1990s, some academic medical centers expanded into primary care to increase referrals for specialty services but these experiments largely demonstrated the inability to change referral patterns⁸ and the higher cost of delivering primary care in an academic rather than a community setting.⁹ The absence of an organ system (e.g. cardiovascular system) or disease (e.g. cancer) focus made it difficult for stakeholders inside and outside of academic medicine to understand the rationale for GIM divisions.¹⁰ Research in GIM gravitated towards clinical evaluative science whereas sub-specialty oriented basic science remained the gold standard for most medical schools.¹¹⁻¹³ Several clinical areas of focus that arose within GIM moved into separate organizational units at most institutions (e.g. emergency medicine, geriatrics) and the relationship with other areas (e.g.

palliative care) was variable and in flux.¹⁴ A growing proportion of general internists narrowed their practice to either hospital or ambulatory settings, raising questions about the scope of practice encompassed in GIM.¹⁵

Although these tensions remain largely unresolved today, several trends have arisen that create opportunities for academic GIM. Growing economic and political pressures to reduce health care costs¹⁶⁻¹⁸ and increase value have led to new models of primary care that focus on population management, health outcomes and medical teams rather than episodic individual based care from a single provider.¹⁹⁻²⁰ Similarly, public and private insurers are experimenting with new payment models, such as accountable care and bundled care that focus incentives on quality and efficiency of care.^{21,22-23} The Patient Protection and Affordable Care Act (ACA) will greatly expand health insurance coverage and support new initiatives in primary care and comparative effectiveness.^{24,25-27} Information systems, electronic health records and patient internet portals are diffusing across medical practices and enabling the collection and linkage of data from a wide range of settings.^{28,29}

At the same time, medical education is in a time of transition with duty hour restrictions for residents,³⁰⁻³¹ a shift to ambulatory settings for both residency and medical student training, increasing concern about student debt burden,³² and a focus on teaching practice competencies rather than medical knowledge.³³⁻³⁴ This transition is occurring as the physician workforce also changes, with a growing proportion of women (30% of practicing physicians and 52% of medical students)³⁵, slow shifts in racial and ethnic diversity (17% of current medical students identify as a racial or ethnic minority)³⁵ and a growing focus on work life balance.

Academic GIM has several key strengths that can be leveraged to respond to these trends. These include values, innovation, leadership and transformation. Academic general internists have a strong sense of shared values around the key domains of patient centeredness, collegial support and mentorship, critical thinking and inquiry, partnerships and interdisciplinary collaboration, and social responsibility and equity in health and health care.³⁶ Academic GIM also has a long history of innovation⁴ including serving as the incubator for emergency medicine, geriatrics and hospital medicine,¹⁵ fostering practice innovation, and expanding the scope of clinical research.³⁷ Finally, academic general internists play key leadership roles in many important bridging areas within academic medicine, including medical education and quality and safety. These roles highlight the ability of GIM to serve as leader and convener of the interdisciplinary partnerships that are critical to making academic medicine more than the sum of its parts.

Role of a shared mission

There are several reasons to define a shared mission at this time. By articulating what it means to be a general internist, the expression of a central mission facilitates the attraction of outstanding new faculty and subsequent fellows, residents and students. The challenges facing health care and medical education often seem daunting and even insurmountable. At the same time, the pressure for change in these domains is growing quickly and offers important opportunities for leadership. As noted in

the famous justification for undertaking the mission of the space program by President Kennedy, embracing shared goals “not because they are easy but because they are hard”... “...will serve to organize and measure the best of our energies and skills.”³⁸

SGIM developed an overarching mission stating that the ultimate goal is to transform health care delivery so it meets the needs of our patients, communities, and society while providing a meaningful and enjoyable career for all members of the health care team. (Insert Table 1 here) This mission statement applies to academic GIM more broadly, defined here as the range of GIM activities—in clinical medicine, education, and research—within academic medical centers. The next section reviews how this mission can guide clinical and educational activities in academic GIM. Last, we discuss the role that research activities should play in evaluation of these activities within academic GIM and across the broader stage of health care transformation. .

Comprehensive, technologically advanced and individualized.

Academic GIM has long embraced the importance of comprehensive patient care, particularly around the inclusion of psychosocial and behavioral issues and the care of patients with multiple chronic diseases.^{4,10} However, health care has become increasingly fragmented over the last several decades, including the growing segregation of inpatient and outpatient activities among GIM providers.³⁹ Innovation is needed to create new models for delivering comprehensive care that include coordination of services and providers along the continuum of care and across sites of care. Academic GIM can lead in the development, piloting, evaluation and implementation of these new models building on current advances in the patient centered medical home and transitions in care programs.^{40,41}

Information technology is well integrated into the culture of most academic GIM units, which, in turn, are well positioned to push for technologically advanced care. Over the next decade, the rapidly increasing amount of data from electronic health records, patients and even home monitoring equipment should be harnessed to improve clinical decision making, chronic disease management, quality improvement activities, and the appropriate allocation of resources.⁴² Similarly, information technology should be pushed to facilitate patient engagement, in order to increase healthy behaviors, improve adherence, and share cost information. The next decade will also create an important opportunity for advancing the individualization of care drawing upon advances in information technology, understanding of biological variation and the growing emphasis on patient preferences and experience.^{43,44} However, substantial challenges exist in aligning this opportunity with the tenets of evidence based medicine let alone the growing emphasis on population health and population health care financing. Academic GIM should lead in developing creative approaches to these challenges including pushing innovation to enable truly individualized, evidence-based clinical decisions at the point of care.

Academic GIM must also lead in transforming medical education to create doctors who are committed to and capable of delivering comprehensive, technologically advanced, and individualized

care within the systems that will comprise the practice of the future. In addition to the growing focus on patient centered care, this requires expanding medical education to encompass key new skills including coordination of care, continuous quality improvement, data analysis, and team leadership and management.⁴⁵ Furthermore, technologic advances offer real time learning opportunities that can be shared among learners and even brought to patients at the bedside. Similarly, the use of lifelike models and computer simulation can increase skill attainment, enabling the learner to practice until competency and comfort are mastered.⁴⁶ Academic GIM should lead in technologically advanced education and the development of new strategies to engage learners in these areas.

Efficient with the use of time, people and resources

Academic GIM has long emphasized the core clinical skills to provide efficient care, including an understanding of medical evidence and a parsimonious approach to diagnosis. The growing pressure on health care costs creates a major opportunity for academic GIM to build upon these skills to make a sustained impact on health care value. Achieving the dual goals of maximizing comprehensive, technologically advanced, individualized care and controlling health care costs for a population of patients requires both the implementation of “win-win” strategies that achieve better individual outcomes at a lower cost and the development of transparent, ethically based approaches to conflicts between individual patient demands and evidence-based protocols when they arise. These strategies will benefit from innovation in multiple areas of key importance to academic GIM including disease prevention and wellness, patient physician communication, clinical decision support, price transparency, and physician payment and incentives.⁴⁷ Furthermore, as the evidence grows demonstrating the importance of social factors for controlling health care costs, academic GIM is well positioned to lead investment in this area, including advocating for the importance of community engagement and investment outside of the health care system.⁴⁸ Community relationships are important for addressing concerns about health care rationing and shifting stakeholders from a disease focus to a prevention and wellness focus.

Controlling the direct and indirect costs of medical education and training is central to the future of medical education. Medical education debt has grown to the level that it often determines specialty choice.⁴⁹ Education and training contribute to the high cost of health care in academic medical centers.^{9,50,51} Academic GIM should take the lead in developing, implementing and evaluating new strategies to ensure that medical education is efficient and can help to reduce the costs experienced by the student/trainee and by the health care system. These strategies should leverage advances in delivery models and technology, maximize the ability of future providers to deliver high value health care, limit the influence of industry, enable students to pursue careers in primary care, and push for innovation in graduate medical education financing that increases funding stability and transparency. At the same time, academic GIM must advocate for financial support for the educational mission within academic medical centers and lead the development of new models that value faculty educational activities.

Instills trust within a culture of respect

Academic GIM has long emphasized the importance of trust and respect to the delivery of health care, the patient experience, and the workplace environment.³⁶ Given the centrality of these domains, academic GIM should lead innovation in practice structure, staffing and processes that increase patient trust and strengthen respect and teamwork between patients and providers and across providers. These activities include increased engagement between academic GIM practices and the communities they serve, new approaches to strengthening the patient- physician relationship in the setting of team based care, and new strategies for practice management that encourage communication and engagement. The process of creating a culture of trust and respect should be driven by data on the experiences of stakeholders including patients, staff and providers.

A team based approach to healthcare is also increasingly emphasized.⁵² Academic GIM should lead in the development of interdisciplinary and interprofessional education, forging bonds with nursing and allied health educators to develop curriculum and clinical learning that meets the patients' needs while augmenting individual and team knowledge. This new culture requires physicians who are empathic, good communicators, effective team members, and facile with new technologies. Academic GIM should lead in moving past easily measured metrics such as GPA and MCAT scores to develop measures of key domains such as professionalism, empathy and an ability to work well with others. These domains should be used not only to identify the ideal physician of the future but also to distinguish between successful trainees and those at risk who may require intervention. Innovation in the assessment of these domains is critical given the decreased routine contact between attending and trainees because of work hour restrictions.

Is organized and financed to achieve optimal health outcomes

The organization of health care to achieve optimal health outcomes mandates substantial changes in health care workforce roles, moving from a single provider across a patient's lifespan to the development of teams overseeing populations of patients. Academic general internists should lead these changes, both by assuming "accountability" for populations of patients and by developing and implementing new approaches to the organization of care. Just as is needed for new models of comprehensive care, these approaches must overcome the current fragmentation of services to bring together inpatient and outpatient experiences, and coordinate care across specialists, and among different members of primary care teams (e.g. nurse practitioners and physician assistants, medical assistants, health coaches and community health workers). Access to primary care is fast becoming a national crisis and requires rethinking the organization of care as well as investment in the primary care provider pipeline.⁵³ Although academic centers may vary in the organization of the inpatient and ambulatory functions of GIM, maintaining and strengthening the integration of these two domains will be critical for creating seamless care.

Given the current problems with fee for service payment and historical challenges with the primary care gatekeeper function, academic GIM must push for substantial innovation in health care

financing to support new approaches to care delivery and strengthen the primary care system, and then become early adopters of these new payment models. Academic GIM should lead in ensuring that these new models separate clinical decision making from other influences that may encourage low value health care. Additionally, academic GIM must maintain the broader system's focus on ethical issues raised by physician payment incentives that may encourage either reduction in services or over-use of services.

These changes in the organization and financing of health care create opportunity for innovation in medical education. Innovation in this area may build upon the ongoing shifts from inpatient to ambulatory settings for internal medicine training, encourage the development of skills related to population management and value based care, and even examine new ways in which medical trainees can contribute to the success of these new organizational and payment approaches.⁵⁴ Furthermore, academic GIM has a particular responsibility to ensure that these changes in health care delivery are translated into increased interest in GIM and primary care medicine among trainees.

Maximizes equity

Disparities in health and health care remain a national crisis.⁵⁵ Many GIM units have had a long standing commitment to safety net care and play a key role in both delivering services and drawing attention to disparities in health and health care. Over the next decade, academic GIM should assume a leadership role in ensuring that changes in health care maximize access to high-quality, affordable care for all patients, including vulnerable patient populations.^{27,56} This leadership should include direct service and advocacy activities while encouraging innovation targeted at improving outcomes and reducing disparities among vulnerable populations.⁵⁷

In medical education, the growing interest in global medicine among trainees may also build their commitment to equity in health care delivery in the US.^{58,59} Academic GIM is well positioned to foster and support this trend in order to build a workforce to address local, national and global issues of equity and social justice. Of equal importance, academic GIM should lead in strengthening the linkages between community engagement and the development of a diverse physician workforce, including the development and support of pipeline programs and the creation of opportunities for minority trainees to participate in community based activities.

Continually learns and adapts

The ability of health care to continually learn and adapt is critical for any improvements to be sustained over time. Health care transformation must be a dynamic process that embraces change and innovation while applying rigorous standards of evaluation. Given its emphasis on innovation and evaluation, academic GIM is well suited to lead in this area. This leadership should include ensuring that these processes are included within practices and other organizational units where

change is occurring, but also developing and implementing strategies for bringing together these lessons into broader learning collaboratives and other forums.⁶⁰ Academic GIM should partner with community practices to share academic skills in evaluation and dissemination while increasing the scope of learning and impact for academic GIM. At the same time that continual learning and adaptation is being implemented in clinical practice, medical educators must teach and role model a commitment to lifelong learning. Imprinting lifelong learning is critical to ensure that the physicians of the future can fulfill the vision of a health care system that continually learns and adapts.

Research in Academic GIM

Academic GIM should continue to play a key role in developing the research agenda around the organization and financing of health care, including the patient centered medical home⁶¹ and payment reform. GIM researchers, who often combine clinical expertise with statistical, epidemiologic, economic, and health services expertise, are well situated to conduct high quality collaborative research of evolving models of payment reform and health care delivery as well as the contextual factors that lead to greater or lesser success. Randomized controlled trials will not be the rule, and there will be pressure to scale up seemingly successful models with relatively little information about why a model was successful. Understanding the role of provider characteristics and tools, such as expanded information technology, use of physician extenders, team-based care, changes in work flow, and use of non-visit based interactions with patients will be key to dissemination of successful models. Implementation science and rapid cycle evaluations will play a growing role in this area and should be supported and developed by academic GIM. The current science in these areas is poorly developed, and academic GIM should lead in creating new methods.

Nearly all proposals for practice transformation and payment reform require some type of accountability for delivering high-quality and high-value care. GIM researchers should play key roles in developing research methods for measuring quality and efficiency in a meaningful way that encompass multiple domains of care. There is no agreement about the best way to combine multiple measures of quality into composite measures. Key domains of trust, respect, and other patient-reported outcomes are often overlooked. Similarly, there is no consensus on how to define or measure value and efficiency. There are also numerous practical challenges to creating workable pay for performance mechanisms, and additional research is needed to determine how to best use incentives to achieve desired outcomes. Improving risk adjustment strategies will be crucial to all methods of quality assessment and reporting and payment reforms. Finally, GIM researchers should lead in assessing the impact of these changes on equity in access to care and care outcomes, as well as the development and evaluation of interventions tailored to specific populations to improve equity.

The need for rigorous research on the utility and value of new technology is large and growing rapidly. Given their foundation in clinical evaluative sciences, GIM researchers are well suited to lead efforts to optimize and evaluate new technologies, including information technology, social media,

and genomic clinical applications. The ability of these technologies to enhance patient engagement in care will be important to understand, as will their impact on health care quality and value.

The delivery of high quality, high value care will also require an expanded foundation of comparative effectiveness research and research methods. Critical in this endeavor will be the development of new approaches to reconciling the population focus of most comparative effectiveness research with the push to an individualized model of care, where the right decision often differs across a population of patients. Better tools to inform patients about personalized risks and benefits and to allow patients to incorporate their preferences into informed, individualized and evidence-based decisions will be important.

The ability of academic GIM researchers to address the important goals of evaluating new models of care, the financing and organization of healthcare, and efficiency and value in healthcare, requires that academic GIM advocates for resources to support the development and training of researchers with the requisite skills, as well as funding mechanisms to support their work. The focus of the NIH on organ systems rather than care organization creates challenges to funding the types of research needed to support the development of a functional health care system, as well as any research that cuts across the whole patient. Funds for GIM research training are limited and should be expanded, and new career paths need to be created to support the development and sustenance of clinician-innovators.

Conclusion

An overarching mission to transform health care delivery provides a unifying force for academic GIM at a time of tremendous opportunity and uncertainty. This mission has important implications for academic GIM across clinical, educational, research and community activities; however, it is clear that true success will best be achieved by weaving these activities together as we create, implement, evaluate and disseminate innovative new approaches to health care delivery and, perhaps most importantly, for training the next generations of physicians to deliver on this critically important mission.

Table 1 Mission Statement

To lead excellence, change, and innovation in clinical care, education, and research in general internal medicine to achieve health care delivery that:

- Is comprehensive, technologically advanced and individualized.
- Instills trust within a culture of respect
- Is efficient in the use of time, people, and resources
- Is organized and financed to achieve optimal health outcomes
- Maximizes equity
- Continually learns and adapts

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