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# AAIM Report on Master Teachers and Clinician Educators Part 4: Faculty Role and Scholarship

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The Alliance for Academic Internal Medicine (AAIM) is composed of key internal medicine-based professional bodies committed to the preservation, growth, and refinement of the specialty. Member organizations include the Association of Professors of Medicine, the Association of Specialty Professors, the Association of Program Directors in Internal Medicine, the Clerkship Directors in Internal Medicine, and the Administrators of Internal Medicine.[1] A primary mission of AAIM is to foster change in medical education to best meet the needs of future practitioners, academicians, and leaders in internal medicine. To this end, in 2006, AAIM chartered the Education Redesign Task Force, composed of representatives of the member organizations and of the American College of Physicians and the American Board of Internal Medicine, to address several topics critical to the mission of internal medicine education.[2] A second task force was similarly chartered in 2008 and charged to examine and make recommendations on 3 additional issues: defining the essence of internal medicine; formulating a pathway toward competency-based medical education; and describing and examining issues related to clinical medical educators, specifically the master teacher (MT).

## FACULTY ROLE OF THE MASTER TEACHER AND CLINICIAN EDUCATOR

The importance of the MT and clinician educator (CE) to modern medical schools cannot be overstated and has been well documented.[3-6] As discussed in the first part of this series,[7] these individuals are not likely to be a "triple threat" faculty (accomplished in biomedical research, teaching, and clinical care) because the skills now demanded by highly regulated educational and clinical programs cannot be mastered by faculty who must spend their time performing scientific research, competing for grants, and navigating the increasingly complex paths of research safety and regulations.[8-10] Therefore, MTs will be, of necessity, a distinguishable subgroup of the faculty.

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Most medical schools have struggled with how to integrate the MT and CEs into their faculty model.[6,11,12] The most obvious challenge relates to those achievements of MTs and CEs that define academic success justifying promotion, tenure, and full university faculty membership on par with investigators.[5,13,14] For research faculty, metrics to measure scholarly success are well-established, generally standardized, and allow for portability between institutions.[6] They include grant awards, research publications and journal impact, named lectureships, and extramural acknowledgement of scientific reputation through the National Institutes of Health study section participation and invited authorships.[11,14] As would be expected, CEs fall short on such measures[11,15,16] because their positions were created and individuals recruited to provide far different services to their institutions. Teaching, direct patient care, and clinical and educational administration rarely result in a body of work leading to peer-reviewed publications.[17,18] The work of MTs and CEs is far less likely to result in extramural reputations of expertise, as their impact is mostly local, rather than on the academic community at large.[11,12,15,17-19] Consequently, traditional metrics used by promotion and tenure committees fail to provide meaningful assessment of CE accomplishments.[15,20]

**PERSPECTIVES VIEWPOINTS**

- Master teachers will be career-dedicated clinician educators with enhanced skills in all areas of clinical medical education.
- Focused faculty development will be required throughout their careers, as well as innovative resourcing models to support them.
- Master teachers will be measured in part be redefined scholarship and tenure criteria to become full contributing members of medical school and academic medical center faculty.

To recruit, retain, and support MTs, their positions will need ensured longevity consistent with that of other faculty groups.[4,5,12,21] Academic success must be defined by sufficiently objective measures to make the path to academic promotion and retention consistent, transparent, acceptable to non-CE university faculty, and aligned with organizational needs and expectations when initially creating the positions.[11,20,22] Objectively measuring success will require alternative definitions of scholarship, acknowledgement of the value of the essential services relevant to the MT and CE roles, and alignment of scholarly expectations with their job descriptions.[22,23] Goals must be clearly communicated to young CEs and reviewed periodically through the pre-promotion period to ensure progress.[4,12,24] Finally, the institutions' value of their contribution should be reflected in reasonable opportunities for acknowledgement through tenure awards.[8]

## Academic Promotion

Several articles have described existing CE tracks and promotion models.[11,14,20,22,25] Most use criteria that recognize the CE's important contributions, yet suffer from significant subjectivity, imprecision, and varying relative value to other metrics.[11,19,25] Although many different schema have been used with varying degrees of success,[26] employed criteria can be categorized into 2 broad primary categories, scholarship and service, with some consideration given to the softer measure of personal attributes.

**Scholarship.** Two major positions (one built upon the foundation of the other) have been proposed and frequently cited relevant to a redefinition of scholarship for MTs and CEs. The Ernest L. Boyer Project[27] described 4 domains of scholarship: discovery (acquisition of new knowledge consistent with traditional hypothesis-driven research), integration (drawing together knowledge from discovery and disseminating its best applicability to practice), application (the practice of high-quality medicine), and teaching (conveying knowledge, skills, and wisdom to other practitioners and physicians-in-training). Boyer[28] described 3 essential components of scholarly work: public access/dissemination, subjection to peer review, and transferability for other scholars to build upon its substance. Simpson and Fincher[29] applied this model to medical education to include 6 qualities of scholarship: clear goals and objectives of the work; adequate preparation (implying thorough understanding of previous work in the field); application of rigorous scientific methods; results that meet the parameters of significance; effective presentation of the work to the scholarly community; and thoughtful reflection upon the work, its place in the greater body of associated knowledge, and its applicability to the ultimate goals of the field.[30]

Although the fully-committed MT is unlikely to have the time, effort, expertise, or interest in pursuing projects that would meet all the scholarship categories,[31] most MTs will perform activities meeting some or many of these criteria. Activities directly related to their practice and teaching could qualify as scholarship under these definitions,[32,33] particularly if the need for an extramural reputation were reduced or excluded.[5,11,18] Table 1 lists sample activities by Boyer[28] domain; modification and adaptation will likely be necessary to ensure organization-specific mission alignment for the MT.

**Service.** Both clinical and educational services are additional contributions of CEs that deserve credit toward promotion; without such services, medical schools and

**Table 1** Scholarship for the Clinician Educator[27–29]

| Domain | Achievement | Example |
|---|---|---|
| Discovery | Formal educational research | New teaching technology |
| | Grant for educational research | Robert Wood Johnson Foundation |
| | Clinical trials | Industry or NIH-supported multicenter trials |
| | Database research or epidemiology | Chart review |
| | Advanced degree in research | Masters of public health |
| | Editorial board/manuscript reviewer | Referenced journal |
| | Educational grant reviewer | Institutional, national educational organizations |
| | Abstract reviewer (national organization) | Meetings of national/regional professional organizations |
| | Invited article/editorial | Education-related journals |
| Integration | Narrative review articles | Office management articles |
| | Systematic review articles | Clinical areas where large RCTs are unavailable |
| | Textbooks and chapters | Comprehensive review of clinical area |
| | Meta-analyses | Clinical areas lacking level 1 evidence |
| | Expert consensus statements | Government or professional organization |
| | Evidence-based guidelines | Government or professional organization |
| | State-of-the-art journal articles | Diagnosis or management: utility of specific technology |
| | Reviewer/editorial board of integration-specific journals | Bench to bedside |
| | Care paths for home institution | Diabetes care |
| | Science-to-practice projects | American Heart Association "Get with the Guidelines" |
| Application | Case reports | Case from personal practice |
| | Publications in quality improvement literature | Practice-based learning |
| | Clinical quality measures | InterQual, Joint Commission |
| | Customer/patient satisfaction surveys | Press Ganey |
| | Clinical care awards/recognition | Physician of the Year |
| | Peer faculty evaluations | Intra-departmental and inter-departmental clinicians |
| | Learner evaluations | Student, resident, fellow teacher evaluations |
| | Referring physician evaluations | Extramural, community-based providers and network physicians |
| | Formal peer review history (hospital quality management) | Percentage of level 1 reviews |
| | Resource management (utilization review) | Lengths of stay and readmissions |
| | Use of evidence-based medicine in practice | Consultations |
| | Leadership/active participation in professional organizations | State medical association: committee chair; organizational educational product authorship |
| | Collaborative clinical care | Interdepartmental product lines, centers of excellence |
| | Local care path development/championship | Heart Failure Society of America heart failure disease management |
| | Extramural consulting | Individual or group consulting for systems improvement/feasibility |
| | Advanced degree | Masters of Business Administration |
| Teaching | Teaching awards | Teacher of the Year |
| | Classroom teaching quality | Learner and peer evaluations |
| | Clinical teaching quality | Learner and peer evaluations |
| | Curriculum development | Clerkship, elective, or clinical rotation |
| | Educational innovations | New use of existing technology |
| | Formal mentorship (faculty advisor) | Faculty advisor, mentoring committee |
| | Question writing for extramural assessment organization | Internal Medicine In-Training Examination, National Board of Medical Examiners, American Board of Internal Medicine |
| | Special projects | Journal clubs, EBM courses |
| | Role modeling | Professionalism, evidence-based practice |
| | Faculty development | Faculty mentor, leader of faculty development programs |
| | CME course presentations/leadership | National or institutional |
| | Invited lectures | Grand rounds, named lectureship |
| | Advanced degree | Master of Medical Education |

NIH = National Institutes of Hospitals; RCT = randomized controlled trials; EMB = evidence based medicine; CME = continuing medical education.

**Table 2** Institutional Service of Clinician Educators[3,22,34,37]

| Mission | Achievement | Example |
|---|---|---|
| Education | Program directorship | Residency, fellowship |
| | Clerkship directorship | M3 internal medicine |
| | Course directorship | Preclinical undergraduate course |
| | Rotation directorship | Student or resident elective rotations |
| | Graduate medical education committee | School or departmental |
| | Dean's office appointment | Assistant/Associate dean |
| | Medical school committee | IRB, promotion and tenure |
| | Teaching workload | Months on teaching service, learner clinics/week; educational RVU |
| Clinical | Service/section leadership | Medical Service chief, Chief of Staff |
| | Clinical directorship | Emergency Department, MICU, noninvasive lab |
| | Peer reviewer | Hospital/practice peer review committee |
| | Disease management program | Comprehensive diabetes care |
| | Hospital committees | Medical |
| | Community/outreach/telemedicine clinical provider | Underserved/rural healthcare |
| | Health department | State epidemiology |
| | New line of care | Niche service; sleep medicine |
| | Financial | Work RVU; billings/collections |

their affiliated medical centers could not function.[17,22,34] Clinician educators are typically the most involved, knowledgeable, experienced, and qualified physicians to provide guidance, leadership, and participation across a range of committees, clinical programs, working groups, and administrative roles essential to these missions.[3,32] Table 2 provides examples of the types of service by mission. As with scholarship, this organizational scheme is but one possible approach; each institution would likely customize the general structure based upon their particular needs.

**Personal Attributes.** Mentorship and role modeling will be essential responsibilities of the MT.[7,24,35] As such, many schools have included some measure of desirable personal attributes that they wish were modeled to their trainees.[20] Both the promotion of patient-centered health care, and the Accreditation Council on Graduate Medical Education core competency of Professionalism, support this position.[36] Yet, aside from the testimony of professional colleagues, objective measures of such qualities are largely absent.[25] All health care organizations profess commitment to these behaviors for their providers and trainees to use; thus, this third category may become an important determinant of meaningful contributions of MTs and CEs to their supporting organizations.

### Measurement of Scholarship and Service

Many of the most important accomplishments of CEs lack objective metrics. While many services and some scholarship activities lend to standardized measure (eg, institutional review board membership, years of work as hospital service chief), quality of clinical practice, quality of education, and other measures are largely assessed by learners, peers, and colleagues, and are subject to considerable systematic bias.[11,20] A 1997 survey of U.S. medical schools determined that achievements deemed most important by clinical department chairs and promotion committees were assessed by the least reliable metrics.[20,25] Clinical benchmarks can be applied to select aspects of care in some settings but are rudimentary assessments of overall practice quality at best and certainly insufficient for metrics alone. Although a review of options for reducing bias and standardizing measures of clinical and educational performance is beyond the scope of this discussion, the area is ripe for formal research toward developing robust, validated evaluation tools.

## CONCLUSIONS

In earlier sections of this report, the need and skill set for MTs were presented, training options available to acquire these skills reviewed, and options and models for their support presented. In part 4, key issues related to faculty roles, redefined scholarship, and suggested metrics for success of MTs and CEs have been presented. The final section of this report will examine tracking tools and address tenure for clinical medical educators.

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