

Academic Competencies for Medical Faculty

Dona L. Harris, PhD; Katherine C. Krause, MD;
David C. Parish, MD, MPH; Mike U. Smith, PhD

Introduction: Physicians and basic scientists join medical school faculties after years of education. These individuals are then required to function in roles for which they have had little preparation. While competencies needed to perform in medical school, residency, and practice are defined, there is little guidance for faculty. **Methods:** An expert advisory group of the Faculty Futures Initiative developed a document delineating competencies required for successful medical faculty. The proportion of time faculty in various roles should allocate to activities related to each competency was also identified. Competencies and time allocations were developed for various teacher/administrators, teacher/educators, teacher/researchers, and teacher/clinicians. This work was validated by multiple reviews by an external panel. **Results:** Trial implementation of the products has occurred in faculty development programs at four medical schools to guide in planning, career guidance, and evaluations of faculty fellows. **Discussion:** The competencies and time allocations presented here help faculty and institutions define skills needed for particular faculty roles, plan for faculty evaluation, mentoring and advancement, and design faculty development programs based on identified needs.

(Fam Med 2007;39(5):343-50.)

MDs and PhDs hired as new medical school faculty members face challenges, one of which is that they have received little training in significant areas related to academic responsibilities. Physicians know how to treat otitis media, and PhDs have knowledge of their disciplines and research, but how does one become a good teacher? How does one function effectively in committees? How does one navigate the internal and external systems needed to achieve effective medical education, research, and program development?

In the past, it was assumed that intelligent people who have been students for many years have learned or can automatically learn to be successful faculty members, and little or no support for faculty development has been provided. In recent years, increasing attention has been paid to teaching as a valid form of scholarship,¹ and in many institutions the quality of a faculty member's teaching is considered as individuals advance academically. New methods, including portfolio self-

assessment, standardized peer review, and even post-tenure teaching evaluation, have been implemented.² To facilitate high-quality teaching, more attention has been placed on faculty development programs. Systematic enhancement of the role and importance of faculty development has been supported by funding through the Department of Health and Human Services (DHHS) Title VII programs under the Public Health Service, Health Resources and Services Administration. Some of these programs are provided through institutionally sponsored offices and offer on-site preparation for both internal and visiting faculty by providing seminars on basic teaching, research skills, grant writing, etc.³

Most faculty development programs have focused on enhancing the abilities of medical faculty members to succeed and advance in academics. Programs vary in methodology but have been guided by the academic responsibilities and needs of the particular faculty. Faculty development programs also vary among schools because of the differing missions of the institutions, some focusing more on research, others on teaching. Faculty development programs must also evolve to meet the changing needs of society.⁴

There is no recognized body of knowledge and skills required that medical academic faculty must master.

From the Department of Family Medicine (Dr Harris) and the Department of Internal Medicine (Drs Parish and Smith), Mercer University; and the Department of Family and Community Medicine, University of Pennsylvania [retired] (Dr Krause).

One attempt to define the medical academician is the influential work *Successful Faculty in Academic Medicine*⁵ by Bland and colleagues. These authors generated and defined an extensive set of essential skills, goals, and objectives for successful medical faculty in five domains: education, administration, research, written communication, and professional academic skills. More recently, faculty roles in training students and residents have been expanded to require expertise in multiculturalism, care management, and information technology.^{6,7} These definitions developed in parallel with the movement to define competencies expected of medical students, residents, and practicing physicians.^{6,8-12} Still, no comprehensive document exists outlining needed competencies for faculty.

The primary purpose of this paper is to describe the process by which a list of competencies for academic medical faculty members was developed, to link these competencies to faculty roles that exist in most family medicine departments, and to present that list for consideration by readers.

Product Development

Developing the Project Team

In 1997, the Bureau of Health Professions funded the Faculty Futures Initiative (FFI), a program designed to develop a strategic plan for faculty development in family medicine. An administrative/leadership project team and a 17-member advisory team guided the FFI. The latter included representatives from family medicine organizations (eg, Society of Teachers of Family Medicine, American Academy of Family Physicians, Association of Departments of Family Medicine, and the Association of Family Medicine Residency Directors), private foundations (the Robert Wood Johnson Foundation), the primary care disciplines of pediatrics and internal medicine (American Psychological Association, American Academy of Pediatrics, Society of General Internal Medicine), and primary care research (North American Primary Care Research Group). Behavioral scientists, department chairs, program directors, and other widely recognized leaders in their respective disciplines with a commitment to and expertise in faculty development and medical education were also recruited.

During its deliberations, the 21 leadership and advisory committee members identified one central question: "What do faculty need to know?" This question required that we first delineate the competencies needed for success. A subcontract was awarded to two members of the FFI leadership project team who worked as part of the group of 21 to identify faculty competencies required for the different roles and functions of faculty in academic family medicine.

Development of the FFI Faculty Competency Assessment Checklists

Based on a review of the literature,^{13,14} the members of the FFI generated a set of competencies for faculty ranging from clinical preceptors to academic deans, who were then categorized as faculty with teaching and non-teaching responsibilities. Subgroups developed the wording of each competency and categorized it as a component of leadership, administration, research, teaching, curriculum development, multiculturalism, medical informatics, or care management.

The FFI advisory group of 21 individuals (including physicians, educators, and program specialists) achieved consensus on a master list of faculty competencies, recognizing that any list of academic competencies does not replace competence in discipline-specific knowledge and clinical skills. Such skills are monitored through their own boards and accreditation agencies. For the faculty competencies, a checklist format was designed as a guide for faculty members to identify competencies needed to achieve their career goals, for department chairs to identify competencies required of faculty members in particular roles, and by faculty developers for program planning. Next, members of the advisory group received copies of the master list and were asked to indicate whether each competency was relevant to identified faculty roles. The most frequently identified faculty positions were department chair, residency director, clinic director, director of education, predoctoral director, clerkship director, director of research, research faculty, community preceptor, and clinical faculty.

Based on these reviews, a second draft of the competencies categorization was prepared that included estimates of the proportion of time that would be desirable for physicians and nonphysicians in each faculty role to spend in each of the competency areas. This draft was mailed to an external expert panel of three national leaders in family medicine education that included a department chair, a predoctoral education director, and a residency director. Each panel member reviewed the draft for appropriateness of role definitions, competency selections, and time allocations reflecting practice in academic family medicine settings with which they were familiar.

Based on this expert panel input, a revised master list of competencies was prepared using the modal response for each time allocation estimate. This draft was again sent to the expert panel for a second round of review and approval. A final document was prepared that recognizes that all 10 faculty roles have teaching in common.

Competencies and roles in the final document were organized as follows: *teacher/administrator*: chair, residency director, and clinic director; *teacher/educator*: director of education, predoctoral director, clerkship

director; *teacher/researcher*: director of research, research faculty; *teacher/clinician*: community preceptor, clinical faculty. In addition to the approval of the FFI advisory group, input was also obtained from members of the Society of Teachers of Family Medicine's Group on Faculty Development (with more than 100 members) during and subsequent to a national conference presentation. The FFI contract authors prepared the final draft of the document in 2001.⁴

Faculty Competency Assessment Checklists

The process outlined above produced Faculty Competency Assessment Checklists organized by areas of responsibility in eight categories: leadership, administration, teaching, curriculum development, research, medical informatics, care management, and multiculturalism. Table 1 presents the core competencies that are identified as being necessary for all effective family medicine educators. Table 2 presents a list of role-specific competencies required for a faculty member who functions effectively as a teacher/administrator, teacher/educator, teacher/researcher, or teacher/clinician. The second product is the Recommended Time Allocation by Faculty Role Table (Table 3), an estimated percentage of time that physicians and nonphysicians in each faculty role might be expected to devote to activities in each competency category.

Note that there are no time allotments for multiculturalism in Table 3 because faculty members are expected to be sensitive to multicultural issues at all times. Note also that no nonphysician values (in parentheses) are included for the teacher/clinician in this table because we defined the teacher/clinician category for this project strictly as the clinical practice of medicine, excluding faculty in social work, family therapy, and other clinical areas.

Product Dissemination and Implementation

Implementation Trials

Trial implementation of the FFI products has occurred in faculty development programs of the family medicine departments of the University of Washington, Wayne State University, the Northeastern Ohio Universities College of Medicine, and the school-wide program at Mercer University. Faculty development directors at Wayne State University selected 11 FFI leadership and three administrative competencies as the focus of their evaluation and feedback system for building management skills of their unit leaders. At the University of Washington, family medicine faculty development fellows engage in an initial self-assessment in which they measure themselves against selected items from the FFI competencies checklists. Fellows identify competencies in which they are deficient, and these become the focus of their professional development activities during the fellowship. These competen-

cies are also used as the structure and performance indicators of each fellow's evaluation at the end of the fellowship. Faculty developers at Northeastern Ohio Universities College of Medicine have created a faculty assessment system based on the FFI competencies and are using the FFI checklists to guide faculty development planning.

At Mercer University, the FFI competencies have become the foundation of faculty development planning for new faculty. During faculty orientation, the associate dean for faculty development meets with every new faculty member (including both basic science and clinical faculty) to develop an individualized professional development plan. Each new faculty member reviews the FFI checklists and selects competencies he/she needs to enhance to be successful in their academic role. The competencies have proven useful for faculty to see the competencies needed for their current roles and those needed to achieve their career goals. Institutional faculty development opportunities are designed to target the most-commonly identified needs among the faculty as a whole, and individual mentoring is provided to help faculty gain competence in specific areas.

Each program has found these useful for their own particular needs. Uses are highly varied and were not created with the intention of outcomes research.

Discussion

The purpose of the Faculty Competency Assessment Checklists and the Recommended Time Allocation Table is to assist individual faculty members and administrators in career development, program planning, and evaluation. Individuals can use these guides to identify career paths that require competencies they want to develop or already possess. Individuals can plan professional development around competencies that prepare them for academic roles to which they aspire. Similarly, department chairs and mentors can use these checklists and tables when providing career guidance to junior faculty and subsequently as an evaluation tool linked with professional development. Job descriptions could also be prepared using the competencies listings. Institutional faculty development programs could be organized around the competencies recognized as needed by groups of faculty members to more efficiently use faculty development funds.

The competencies were developed using family medicine faculty roles. Other academic departments, such as internal medicine departments, are frequently larger and have a wider array of faculty roles.

The tool presented here will need to be adapted to reflect the wide range of clinical, teaching, research, and administrative activities represented in academic medicine. For example, the percentage of research time recommended for an active family medicine researcher (40%) represents a consensus of active faculty that this

Table 1
Core Competencies for Family Medicine Educators

Leadership
Exhibits integrity, knows self, recognizes and accepts strengths and weaknesses in self and in others
Communicates clearly, openly, honestly, and concisely
Listens to individual's perspectives and encourages individual's initiative and growth
Resolves conflicts, negotiates well, fosters collaboration and cooperation
Establishes trust, values diverse perspectives and talent
Encourages individual initiative, mentors individuals to achieve success
Administration
Communicates effectively in oral, written, and electronic form
Uses technology relevant to one's job
Identifies personal style preferences and how to interact with others
Manages time, sustains one's well-being, balances work and personal needs
Conducts effective meetings with clear agenda and action plan
Plans a career strategy and accurately assesses one's strengths and weaknesses
Works within the confines of mission-based management
Understands ethical underpinnings of one's job and acts accordingly
Teaching
Demonstrates content knowledge
Organizes and conveys major teaching points at a level appropriate to audience
Engages learners, keeps on task, avoids domination
Solicits questions, summarizes main points to reinforce learning
Identifies learner needs
Negotiates learning objectives and selects appropriate teaching methods
Presents a lecture on a clinical or educational topic
Enhances presentation with effective audiovisual aids and handouts
Designs and uses evaluation to make improvements
Uses learner strengths and deficiencies to establish future learning activities
Demonstrates one-on-one teaching
Facilitates small-group sessions
Research
Teaches skills of accessing, analyzing, and applying medical literature to clinical practice
Role models the practice of evidence-based medicine for learner
Becomes an expert in a body of knowledge
Formulates researchable questions; designs, collects, and analyzes data
Evaluates findings and draws conclusions based upon findings
Participates actively as a member of a research team, including statistical consultants
Adheres to guidelines and regulations regarding the ethical conduct of research and use of human subjects
Balances competing faculty obligations to achieve research goals

(continued on next page)

Table 1
(continued)

Medical Informatics
Reads and accesses medical literature on the World Wide Web
Evaluates medical literature and translates into clinical and professional practice
Demonstrates basic computer knowledge and skills, utilization of hardware and software
Demonstrates communication skills using e-mail, networking, centralized and distributed integrated systems, multimedia work stations, medical language and classification, database management systems
Understands, teaches, and practices evidence-based medicine
Care Management
Discusses the history and financing of health care, principles of cost control, and resource allocation
Defines principles of shared financial risk among provider, patient, and payor
Discusses increased provider accountability for quality of care delivered, role of reimbursement in influencing care decisions
Teaches vocabulary and principles for effective functioning in managed care organizations (MCOs) and integrated health systems
Acquaints learners with models for assessing performance and delivery
Explains and implements utilization review concepts
Explains and applies concepts of cost-benefit analysis to determine best quality of care at minimum cost
Describes the barriers to health care access
Multiculturalism
Promotes individual self-awareness of multicultural differences and practices nonjudgmental interactions at all levels of medical training and practice
Describes changing demographics of various populations locally and nationally
Identifies the cultural epidemiology of health and illness problems of specific ethnic groups
Meets defined local health needs of selected minority, ethnic, and at-risk populations
Discusses the effects of cultural perspectives on medicine, health, illness-seeking behavior
Advocates for cultural competence in health care organizations and professional groups

is a minimum level needed to achieve an independent research agenda. Achieving and sustaining this level is difficult in most family medicine programs; larger departments often have faculty with research percentages of 80%–100%. We believe the process described here could be used by any discipline to develop a similar, discipline-specific set of competencies.

Identification of competencies for resident education is a major emphasis of the ACGME.⁸ Recent efforts have expanded the competency constructs to clinical and preclinical medical education.¹⁰⁻¹² All of these projects have begun with expert panel reviews to identify competencies to be taught and evaluated. The usefulness of this movement will be assessed by the clarity brought to program development and evaluated by the effect on the product of medical education.⁶ Long-term evaluations of programs that use such checklists for guiding individual and institutional faculty development are needed to validate these expert panel-derived tools.

Acknowledgments: This work was supported by a contract through the Division of Medicine and Dentistry, Bureau of Health Professions, Health Resources and Services Administration, Department of Health and Human Services, Contract No. 240-96-0026. It was presented at the Society of Teachers of Family Medicine 2003 Annual Spring Conference in Atlanta.

The authors thank the Faculty Futures Initiative Advisory Committee, including the external advisers Alfred O. Berg, MD, MPH, and William J. Kane, MD; and the external panel members D. Melessa Phillips, MD; Pam Snape, MD; and L. Thomas Wolff, MD.

Corresponding Author: Address correspondence to Dr Harris, Mercer University School of Medicine, 1550 College Street, Macon, GA 31207-0001. 478-301-5133. Fax: 478-301-2547. harris_d@mercer.edu.

REFERENCES

1. Boyer EL. Scholarship reconsidered: priorities of the professoriate. Princeton, NJ: The Carnegie Foundation for the Advancement of Teaching, 1990.
2. Simpson D, Hafler J, Brown D, Wilkerson L. Documentation systems for educators seeking academic promotion in US medical schools. *Acad Med* 2004;79:783-90.
3. Reznich CB, Mavis BE. Pilot test of family medicine faculty development fellowship accreditation guidelines. *Fam Med* 2000;32(10):709-19.

Table 2
Competencies Required for Specific Family Medicine Roles

	Teacher-Administrator		Teacher-Educator		Teacher-Researcher		Teacher-Clinician			
	Chair	Residency Director	Clinic Director	Director of Education	Predoctoral Director	Clerkship Director	Director of Research	Research Faculty	Community Preceptor	Clinical Faculty
Leadership										
Develops a shared vision	✓	✓	✓	✓			✓			
Discusses how program priorities and goals relate to institutional mission	✓	✓								
Accepts different perspectives/approaches, balances individual success with team success, can work with a variety of individuals	✓	✓	✓	✓	✓		✓			
Builds teams and balances individual success with team success	✓	✓	✓	✓			✓			
Establishes clear goals, invites input, weighs evidence, and acts accordingly	✓	✓	✓	✓	✓		✓			
Administration										
Develops and implements a system-wide change and measures effectiveness of intervention	✓	✓	✓	✓	✓		✓			
Develops and operates within the constraints of a budget	✓	✓	✓	✓	✓		✓			
Demonstrates fiscal responsibility and attention to values in managing a project/program/grant	✓	✓	✓	✓	✓		✓	✓		
Demonstrates skills in grant writing and resource acquisition	✓	✓		✓	✓		✓	✓		
Intervenes effectively with a challenging employee or subordinate	✓	✓	✓	✓	✓	✓	✓			
Creates supportive environment for self-improvement and organizational growth	✓	✓		✓			✓			
Describes environmental pressures on health science center/residency program and effects on faculty roles and functions	✓	✓								
Teaching										
Demonstrates bedside teaching		✓	✓		✓	✓			✓	✓
Prepares and introduces patient and learner		✓	✓			✓			✓	✓
Demonstrates skills in physical exam and patient interaction		✓	✓		✓	✓			✓	✓
Observes and solicits questions from patients		✓	✓			✓			✓	✓
Evaluates learning and provides feedback for further patient assignments		✓	✓			✓			✓	✓
Identifies and analyzes teaching and learning styles		✓		✓	✓				✓	✓
Manages difficult learners and dysfunctional behavior in one-to-one and small-group teaching		✓	✓	✓	✓	✓	✓	✓	✓	✓
Implements different evaluation methods (NBME shelf exams; modified essay questions; problem-based learning exercises; OSCEs and standardized patient vignettes; computer-based examinations; self-assessment; peer, preceptor, staff, and patient evaluation)		✓		✓	✓	✓				
Curriculum Development										
Conducts a needs assessment that includes program and learner needs		✓	✓	✓	✓	✓	✓			✓
Designs a curriculum or program that includes development of learner		✓	✓	✓	✓	✓	✓	✓		✓
Determines program content		✓		✓	✓	✓	✓			
Develops instructional materials that best facilitate learning		✓	✓	✓	✓	✓	✓	✓		✓
Evaluates instruction and translates learning objectives to competency		✓	✓	✓	✓	✓	✓	✓		✓
Uses evaluation information to make changes in the course/program		✓	✓	✓	✓	✓	✓	✓		✓

(continued on next page)

Table 2
(continued)

	Teacher-Administrator		Teacher-Educator		Teacher-Researcher		Teacher-Clinician			
	Chair	Residency Director	Clinic Director	Director of Education	Predoctoral Director	Clerkship Director	Director of Research	Research Faculty	Community Preceptor	Clinical Faculty
Research										
Communicates research results to professional audiences by peer-reviewed abstracts, posters, oral presentations, and publications	✓	✓	✓	✓	✓	✓	✓	✓		✓
Creates supportive research infrastructure and environment	✓	✓		✓			✓			
Promotes research and scholarly activities within the academic unit, hospital, medical school, and/or university	✓	✓		✓			✓	✓		
Prepares research proposals	✓			✓			✓	✓		
Leads research skill development among faculty, residents, and students							✓	✓		
Values research in decisions affecting annual reviews and promotion/tenure	✓	✓		✓			✓	✓		
Locates funding sources	✓	✓		✓			✓	✓		
Participates in professional societies and networks with similar research interests							✓	✓		
Role models, mentors, and actively teaches research skills to students, residents, and faculty							✓	✓		
Manages all phases of research projects (timelines, budget, personnel)							✓	✓		
Medical Informatics										
Teaches principles of medical reasoning, decision making, probability, and evaluation of decision-making systems		✓	✓		✓					✓
Defines quality analysis, resource indicators, activity monitors, productivity	✓		✓				✓			✓
Discusses clinical informatics, including quality, accuracy, and interpretation of medical data variables	✓	✓	✓			✓	✓	✓		✓
Utilizes office computers, including practice management systems, computerized medical records, and analysis of clinical activity	✓	✓	✓						✓	✓
Care Management										
Develops evaluation methods for MDs in training to reflect performance standards generated by health care delivery systems		✓	✓		✓	✓				
Teaches contract review and negotiations	✓	✓	✓						✓	✓
Demonstrates how to function effectively in a managed care environment while preserving the educational mission	✓	✓	✓		✓	✓			✓	✓
Balances needs of the individual/family with those of the community while providing patient-centered care	✓	✓	✓		✓	✓			✓	✓
Multiculturalism										
Performs culturally sensitive histories and physical examinations	✓	✓	✓		✓	✓			✓	✓
Works with family, translators, and complementary medical practitioners, treatment plans	✓	✓	✓		✓	✓			✓	✓

NBME—National Board of Medical Examiners
OSCE—Objective Structured Clinical Exam

Table 3
Recommended Time Allocations by Faculty Role

Competency Category	Teacher-Administrator		Teacher-Educator		Teacher-Researcher		Teacher-Clinician			
	Chair	Residency Director	Clinic Director	Director of Education	Pedagogical Director	Clerkship Director	Director of Research	Research Faculty	Community Preceptor	Clinical Faculty
1. Leadership	20 (20)	15	10	20 (15)	10 (10)	5	15 (15)	0 (5)	0	5
2. Administration	50 (40)	30	30	10 (25)	20 (20)	15	10 (15)	10 (5)	5	10
3. Teaching	10 (10)	15	20	20 (20)	10 (20)	20	10 (15)	10 (25)	10	25
4. Curriculum development	0 (0)	5	0	10 (10)	15 (20)	15	10 (10)	10 (5)	0	10
5. Research	5 (10)	10	5	15 (20)	10 (15)	10	35 (30)	40 (40)	5	5
6. Medical informatics	5 (20)	5	5	5 (10)	5 (15)	5	10 (15)	10 (20)	5	5
7. Clinical	10 (0)	20	30	20 (0)	30 (0)	30	10 (0)	20 (0)	75	40
Total percent of time	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

The percent in parentheses reflects time allocations (ie, percentage of full-time equivalent) for nonphysicians who would not serve in roles requiring clinical activity

- Faculty Futures Initiative (FFI). Strategic directions for the future of family medicine faculty development: who, what how? Final report, September 18, 2001. Leawood, Kan: Society of Teachers of Family Medicine, 2001. (Sponsored by the Division of Medicine and Dentistry, Bureau of Health Professions, Health Resources and Services Administration, Department of Health and Human Services, contract no. 240-96-0026.
- Bland CJ, Schmitz CC, Stritter FT, Henry RC, Aluisse JJ. Successful faculty in academic medicine: essential skills and how to acquire them. Springer Series on Medical Education. New York: Springer Publishing Company, 1990.
- Epstein RM, Hundert EM. Defining and assessing professional competence. *JAMA* 2002;287:226-35.
- Liaison Committee on Medical Education. Functions and structure of a medical school. Section II, educational program for the MD degree. www.lcome.org.
- Accreditation Council for Graduate Medical Education. ACGME Outcome Project. www.acgme.org.
- Goroll AH, Sirio C, Duffy FD, et al. A new model for accreditation of residency programs in internal medicine. *Ann Intern Med* 2004; 140:902-9.
- Goroll AH, Morrison G, Bass EB, et al. Reforming the core clerkship in internal medicine: the SGIM/CDIM Project. *Ann Intern Med* 2001; 134:30-7.
- Windish DM, Paulman PM, Goroll AH, Bass EB. Do clerkship directors think medical students are prepared for clerkship years? *Acad Med* 2004;79:55-61.
- Family Medicine Curriculum Resource Project (FMCR). www.bhpr.hrsa.gov/medicine-dentistry/famed.htm.
- Henry RH. Developing research skills for medical school faculty. *Fam Med* 1997;29(4):258-61.
- Bogdewic SP, Baxley EG, Jamison PK. Leadership and organizational skills in academic medicine. *Fam Med* 1997;29(4):262-5.