Contributions of General Internal Medicine Teaching Units
A National Survey
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OBJECTIVE: To identify and describe general internal medicine teaching units and their educational activities.

DESIGN: A cross-sectional mailed survey of heads of general internal medicine teaching units affiliated with U.S. internal medicine training programs who responded between December 1996 and December 1997.

MEASUREMENTS AND MAIN RESULTS: Responses were received from 249 (61%) of 409 eligible programs. Responding and nonresponding programs were similar in terms of university affiliation, geographic region, and size of residency program. Fifty percent of faculty received no funding from teaching units, 37% received full-time (50% or more time), and 13% received part-time (under 50% time) funding from units. Only 23% of faculty were primarily located at universities or medical schools. The majority of faculty were classified as clinicians (15% or less time spent in teaching) or clinician-educators (more than 15% time spent in teaching), and few were clinician-researchers (30% or more time spent in research). Thirty-six percent of faculty were internal medicine subspecialists. All units were involved in training internal medicine residents and medical students, and 21% trained fellows of various types. Half of the units had teaching clinics located in underserved areas, and one fourth had teaching clinics serving more than 50% managed care patients. Heads of teaching units reported that 54% of recent graduating residents chose careers in general internal medicine.

CONCLUSIONS: General internal medicine teaching units surveyed contributed substantial faculty effort, much of it unfunded and located off-campus, to training medical students, residents, and fellows. A majority of their graduating residents chose generalist careers.

KEY WORDS: medical education; medical students; residents; internal medicine.


The promotion of generalism and enhanced education of physicians in the primary care disciplines has been an important workforce goal for the United States.1–3 Exposure to the generalist disciplines begins during the undergraduate phase of the medical school curriculum and continues into graduate training for physicians who select generalist careers. The discipline of internal medicine trains 22% of all residents, graduating nearly 7,000 trainees eligible for certification by the American Board of Internal Medicine each year.4 Between 1980 and 1985, 56% of these graduates entered careers in general or primary care internal medicine,5 the largest source of generalist physicians in the United States.

The educational infrastructure required to train such a large number of medical students and graduate physicians in general internal medicine is considerable, enlisting faculty organized into general internal medicine teaching units associated with residency programs in internal medicine. Information describing the structure and activities of these units is limited because they operate within the larger context of departments of internal medicine and are difficult to track by existing data monitoring. Previous studies of general internal medicine divisions focused only on those in medical school or university medical centers, missing the educational contributions of internists who were working in community settings.6,7 To identify and describe general internal medicine teaching units, we conducted a national survey of heads of such units, including those in both university and community settings.

METHODS

The study is based on the results of a cross-sectional mailed survey of heads of general internal medicine teaching units affiliated with U.S. internal medicine resi-
dency programs. A “teaching unit” was defined as the department, division, section, or other equivalent group of internists centered on general internal medicine teaching activities of the residency program. Most of these units are divisions of general internal medicine, although we used a broader definition in order to capture teaching activities outside formal divisions. Faculty were defined as individuals who assume teaching responsibilities within the unit whether or not they are funded or have academic appointments.

The questionnaire consisted of 34 items, including multiple choice, short answer, and scaled responses. Topics included descriptions of unit and faculty demographics and professional responsibilities: teaching activities for medical students, residents, and fellows; involvement in specific parts of the curriculum; and career choices of residents and fellows. Heads of teaching units were asked to classify faculty by their major professional responsibilities and identities. According to our classification, “clinicians” spend 15% or less of their time in teaching activities and the rest of their time in patient care activities, “clinician-educators” spend more than 15% of their time teaching, and “clinician-researchers” spend 30% or more of their time in research activities. Faculty members who did not fit any of these classifications were classified as “other.” Funding levels were defined as “full-time” if the faculty member received 50% or more full time equivalent (FTE) funding from the unit, “part-time” if less than 50% FTE, and “volunteer” if not funded at all by the unit. The purpose of these designations was to capture teaching efforts that are not funded by the teaching unit itself. Location of faculty was defined as the place where a faculty member has a primary office or practice.

A working group made up of members of the Society of General Internal Medicine (SGIM) developed the questionnaire with input from more than 50 members of the Association of Program Directors of Internal Medicine (APDIM). The questionnaire was pilot tested by 8 heads of general internal medicine teaching units that differed by region, size, and affiliation. Since no directory of teaching units existed, the surveys were sent to all 409 directors of internal medicine residency training programs in the United States listed in the American Medical Association Graduate Medical Education Directory, 1996–1997.8 Program directors were instructed to forward the survey to the leader of the teaching unit as defined above. Surveys were sent in December 1996, and followed by reminder letters, telephone calls and e-mail messages, and additional surveys if needed. This process was repeated for nonrespondents again in September 1997 to enhance response rates. Surveys were accepted until December 1, 1997.

Questionnaire responses were manually entered and coded. Response frequencies were evaluated for completeness, and descriptive statistics such as means, ranges, standard deviations, and percentages were calculated using the Statistical Analysis System software version 6.12 (SAS Institute, Cary, NC). Differences among groups were determined by χ² comparisons. Two questions required respondents to rate the degree to which members of their unit are involved in specific training activities on a Likert scale from 1 (contributes to activity but has a minor role) to 5 (primarily responsible for activity). After assessing frequencies, we collapsed the scaled responses into categories describing the level of faculty involvement as none, minor (1–2), moderate (3), or major (4–5).

RESULTS

Response Rate

A total of 409 residency training programs were sent the questionnaire, and 249 (61%) completed and returned it. The survey captured 218 (59%) of 372 categorical internal medicine programs (59 of these also included primary care tracks that were not listed separately in the AMA Graduate Medical Education Directory, 1996–1997), and 66 (63%) of 104 primary care programs that were listed separately in the directory. Some respondents were involved with both categorical and primary care programs.

Characteristics of responding and nonresponding programs were compared using data from the AMA Graduate Medical Education Directory, 1996–1997.8 Comparisons between respondents and nonrespondents indicated no statistically significant differences in terms of university or medical school affiliation, geographic region, and size of residency program. We had no way to determine if respondents and nonrespondents differed in other ways.

Faculty Demographics and Professional Activities

Half of the physicians identified as faculty members in responding units were not funded by the unit but rather were volunteers. Most of the funded faculty were supported at 50% or more time in the unit and are categorized as full-time in this analysis. Most faculty (66%) worked in locations away from a university or medical school. Thirty-six percent of faculty were internal medicine subspecialists. Other demographic characteristics of faculty are listed in Table 1.

Fifty-one percent of funded and 13% of volunteer faculty were classified as clinician-educators (P = .001) (Table 2). The remaining funded faculty were either clinicians (28%) or clinician-researchers (13%), and the remaining volunteer faculty were predominantly clinicians (75%). A higher proportion of funded faculty have academic appointments compared with volunteer faculty (62% vs 46%, P = .001). In both groups, the most common appointment is assistant professor, followed by instructor and associate professor. Only 8% of funded and 4% of volunteer faculty have full professor appointments. We did not assess what proportion of the appointments had prefix designations (e.g., clinical).