4. Time — Protected time must be set aside for creative thinking and scholarship. It is the willingness to make this commitment in the face of competing demands that is the unique attribute of the clinical investigator.

With good training, dialog with patients, and collaboration, our faculties will find patient-centered research to be a most rewarding pursuit. Studies may range from case reports to large data-set analyses. They will add new knowledge and give professional stimulation and personal fulfillment. This paradigm for medicine fits with the 20th century paradigm for science developed by Einstein and Heisenburg and presented by George Engel.

> What is being studied is inseparable from the scientist, who derives mental constructs of his/her experiences with it as a means of characterizing his/her understanding of its properties and behavior.[1,8]

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The Task of Medicine[1] is an outstanding report filled with interesting dialog and provocative ideas. Single copies can be obtained free of charge from the Henry J. Kaiser Family Foundation, 2400 Sand Hill Road, Menlo Park, CA 94025.

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Advanced Achievement in Internal Medicine:

The End of the Line for Voluntary Recertification

THE FIRST American Board of Internal Medicine recertification examination — in fact, the first recertification examination by any certifying board — was given in 1974 to 3,355 candidates. The second recertification examination was given to 2,240 additional volunteers in 1977. By 1980, despite enhancements to the examination to include more questions that could be self-selected by content by the examinee, enrollment declined to 1,947; this included a substantial number of repeaters who had become eligible since the first examination. More than 40,000 internists were eligible for each of these voluntary examinations. Why did so few participate?

Discouraged by the decreasing trend in enrollment, the Board seriously reconsidered a policy of time-limited certification that had been abandoned in 1970. In the early 1980s, there were lengthy discussions and heated debates about instituting time-limited certification. While straw votes in small committees sometimes favored time-limited certification, arguments against it were: 1) the inadequacy of evaluation methods to test the many aspects of competence of the practicing internist, and 2) the admittedly unpredictable problem of what would happen to diplomates who were unsuccessful in recertification.

When time-limited certification was again defeated, a new committee was formed and charged to devise an approach to voluntary recertification that would be so appealing as to be persuasive. The new committee* created Advanced Achievement in Internal Medicine, or AAIM, a program that has often been referred to as "the last gasp of voluntarism."

In creating this examination, the American Board of Internal Medicine attempted to understand what had made initial certification so successful since its beginning in 1936 and to adapt that to the recertification examination. The essential ingredients were felt to be the creation of a high standard for certification com-

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*The following Board members contributed to the AAIM project: Martin Brotman, MD; Robert B. Copeland, MD, Chairman; Nicholas E. Davies, MD; Laurence E. Earley, MD; Donald T. Erwin, MD; Eugene P. Frenkel, MD; Richard J. Glassock, MD, Chairman; Stephen E. Goldfinger, MD; William R. Hazzard, MD; Edgar B. Jackson, Jr., MD; Harry R. Kimball, MD; Lloyd H. Smith, Jr., MD, Chairman; O. David Taunton, MD; John S. Thompson, MD; Gerald E. Thomson, MD; F. Warren Tingley, MD; Hibbard E. Williams, MD; and Kenneth A. Woeber, MD.

TABLE 1
Performance Data of AAIM Candidates

Module	Number of Takers	Number Failed	Percent Passed	Average Score (%)	Passing Score (%)
Core internal medicine	1,403	15	99	80	64
General internal medicine Medicine I	1,164	41	96	75	61
General internal medicine Medicine II	509	9	98	75	60
Allergy/immunology	30	1	97	83	65
Cardiovascular disease	277	4	99	82	64
Endocrinology and metabolism	106	0	100	81	59
Gastroenterology	124	0	100	79	61
Hematology	112	2	98	77	56
Infectious disease	79	2	97	82	61
Medical oncology	116	0	100	76	58
Nephrology	88	1	99	77	57
Pulmonary disease	146	7	95	79	61
Rheumatology	55	2	96	80	60

bined with peer pressure to create an accolade of achievement. The AAIM committee therefore set about to create a new accolade, one that would be so compelling that eventually it would draw the majority of internists into voluntary, periodic reevaluation.

To determine what would be meaningful and attractive to diplomates, the Board launched a modest marketing and public relations campaign. A focus group of 12 AAIM-eligible physicians was convened in Chicago and led by a marketing consultant. A one-day meeting sought to uncover (or focus) those issues that related to acceptance of the AAIM examination. Hypotheses developed at that meeting served as a guide to the development of a research questionnaire that was mailed to 2,000 AAIM-eligible internists. The results of this survey (with a 24% response rate) indicated that three out of ten internists expressed interest in AAIM. Characteristics of those interested suggested that they 1) had already taken recertification examinations, 2) believed keeping up to date is important, 3) believed in the intrinsic value of cognitive tests, and 4) believed that such tests provide valuable recognition.

Common reasons for declining involvement with AAIM were the perceived lack of validity of tests, the lack of time to study, and nearness to retirement. Internists who indicated they would not be interested in AAIM stated that they had little need to prove their competence to either themselves or their peers.

Advanced Achievement in Internal Medicine was a one-day proctored, multiple-choice-question examination given on May 16, 1987. The morning session consisted of questions on general internal medicine that were compulsory for all candidates. The afternoon consisted of two sessions for which each candidate selected two modules of questions from a possible 12. There were modules in the nine subspecialties of medicine, allergy and immunology, and two on general internal medicine. (Table 1) Candidates had to pass all three modules to be awarded certification of Advanced Achievement in Internal Medicine.

A total of 1,403 diplomates took the AAIM examination. The average age of candidates was 48 years; the range was 36 to 77 years. Ninety-six percent were men. All had to be certified in general medicine as a requirement; 44% were certified in a subspecialty. Twelve percent reported being certified by a specialty board in addition to the American Board of Internal Medicine. Sixty-six percent were from community hospitals.

The overall initial pass rate for AAIM was 95%. Forty nine of the 65 unsuccessful candidates (77%) failed only one module. As part of the AAIM program, candidates who were unsuccessful on the initial examination were given an opportunity to obtain certification through a reexamination. All candidates were required to pass the core section and reexamined candidates were allowed to repeat failed self-selected modules or to take a new module in place of the one failed. Fifty candidates took part in the reexamination. Of these, 37 passed. These additional passers raised the overall examination pass rate to 98%.

Although a 98% pass rate might seem to indicate that the AAIM examination was easy, there is evidence to suggest that, rather, this self-selected population was very well prepared. Despite having completed residency training at least ten years prior to taking the AAIM examination, AAIM candidates performed as well on general internal medicine and better on subspecialty questions than did candidates taking these identical questions on the initial certifying examinations. Both AAIM and internal medicine examinees had average scores of 76% correct for the general internal medicine questions, and AAIM examinees had an average score of 79% for the subspecialty questions, compared with 77% for subspecialists.

When the latest AAIM examination was initially conceived, the criterion for judging its success was an

increase in the number of candidates over the 1,947 that took the last recertification examination in 1980. Despite valuable lessons for the Board from the research effort, the venture into marketing, and the newly devised examination format and scoring method, the AAIM experiment failed.

With the failure of AAIM to attract substantial numbers of candidates, the American Board of Internal Medicine reluctantly accepted the fact that any voluntary reevaluation program, no matter how well conceived, was also likely to fail. The Board was uncertain whether this resulted because voluntary recertification meant too little or because any recertification with the potential for failure meant so much. But it is clear that making recertification a requirement to remain certified increases the stakes. Thus, in December 1986, the Board voted unanimously to require recertification of future internists by limiting the duration of all certificates issued in 1990 and thereafter.

After considerable effort, the hope for the evolution of a new, compelling accolade to emerge from voluntarism was abandoned. But an important question remains. How will internists certified before 1990 respond now to recertification which, for them, will always be a voluntary effort? — LYNN O. LANGDON, MA, LOUIS J. GROSSO, MED, *American Board of Internal Medicine, Philadelphia, PA 19104-2675.* RICHARD J. GLASSOCK, MD, *Harbor-UCLA Medical Center, Torrance, CA,* ROBERT B. COPELAND, MD, *LaGrange, GA,* HARRY R. KIMBALL, MD, *New England Medical Center, Boston, MA*

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Changing of the Guard

THE FIRST ISSUE of *Journal of General Internal Medicine* was published four years ago. Now, in little more than a blink of the eye, it is time to turn the *Journal* over to new editors. We will watch its continued maturation under David Dale's leadership with pride and anticipation.

We wrote an editorial in the first issue outlining our dreams for the then-new undertaking.[1] Have these dreams been realized?

At the outset, we thought the most important content of the *Journal* should be reports of original research, the kind that can guide the practice of primary care/general internal medicine. We hoped that the articles, taken as a whole, would span the many content areas of general internal medicine and would be based on the many scholarly disciplines that general internists embrace.

Now, 185 original articles later, the *Journal* has indeed published original research of great diversity: clinical research (49% of articles), medical education (13%), physician–patient relationships (13%), technology assessment and decision analysis (7%), health policy and clinical economics (11%), consultation medicine (3%), research methods (4%), and many other topics. There have also been an equal number of contributions that are not original research: clinical reviews, always so well received, as well as editorials, perspectives, and book reviews.

We continue to think that original research should be the most important feature of the *Journal*. The research has helped define the discipline of general internal medicine. It has also set in motion a peer review process in the general internal medicine community. Through it, members have shared expertise and set their own standards. So far, over 500 people have contributed peer reviews, critiquing the methods, writing, and relevance of submissions to the *Journal*. Many of these reviews have been extremely thoughtful and constructive. One recent author sent a comment with his submission: "We are sending this manuscript to the *Journal of General Internal Medicine* because everyone knows you get the best reviews there."

We like to think that the *Journal* not only promotes scientific rigor but also is a forum for the many important issues bearing on the practice of medicine today. *Journal* contributors, as a group, have a highly developed sense of social justice. The Society is a welter of task forces and special interest groups, tackling important problems: alcoholism, physician–patient interactions, access to care for the poor, women in medicine, to name just a few. The *Journal* has published articles about all these topics. They are especially interesting to generalists, to be sure, but they are also important to all of medicine.

The *Journal* is beginning to play yet another role, not anticipated at its birth. It is becoming a full-fledged, contributing member in the community of medical journals. In a little more than a year after its first issue, the *Journal* was listed in the *Index Medicus*. The *Journal* has joined the international efforts to promote the use of SI units.[2] The *Journal* was among the first to adopt the "more informative abstracts" structure de-