

Rekindling Student Interest in Generalist Careers

Mark D. Schwartz, MD; William T. Basco Jr., MD; Michael R. Grey, MD, MPH; Joann G. Elmore, MD, MPH; and Arthur Rubenstein, MBChB

Despite changes in the structure of the U.S. health care system, patients continue to need and seek out generalist physicians. However, the proportion of U.S. graduates of medical schools who choose to enter generalist residency training decreased from 50% in 1998 to less than 40% in the 2004 match. Unless we act now to reverse this trend, we may face a shortage of primary care physicians to care for the complex medical needs of an aging population.

This article reviews the history of and trends in career choice and proposes 4 evidence-based recommendations to rekindle student interest in generalist careers: 1) We must improve satisfaction and enthusiasm among generalist physician role models.

2) Schools of medicine should redouble their efforts to produce primary care physicians. 3) We must facilitate the pathway from medical school to generalist residency. 4) The U.S. government should increase funding for primary care research and research training. In the absence of a major overhaul of economic incentives in favor of generalist careers, we will need to work at these multiple levels to restore balance to the generalist physician workforce and align with the desires and expectations of patients for continuing healing relationships with generalist physicians.

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For author affiliations, see end of text.

Rekindle: from Old Norse, *kynda*, to start (a fire) burning; to stir up, arouse, to cause to glow, or illuminate; and from Middle English, to bring forth young (1).

Despite changes to the structure of the U.S. health care system in the past 30 years, most Americans continue to seek regular health care from primary care physicians (2). In our increasingly complex, fragmented, and consumerist health care system, patients still desire a “continuous healing relationship” with “my doctor,” who provides accessible, competent, comprehensive, whole-person care (3). Leading health economists argue that the supply of generalist physicians is not keeping up with demand, as driven by growth of the population and per capita gross domestic product (4). A deficit of 200 000 generalist physicians is projected to occur by 2020 (5). Although experts may quibble about the numbers, most would agree that with fewer than 40% of current graduates from U.S. medical schools expected to enter generalist practice, the projected physician workforce will be out of balance (6).

We must act now to rekindle student and resident interest in generalist careers or face a shortage of primary care physicians who are trained to care for the complex medical needs of an aging population. It will require a broad view and coordinated effort to ensure that an adequate number of potential generalists emerges from the education pipeline.

SELECTION OF GENERALIST CAREERS BY MEDICAL STUDENTS

In a classic study of influences on the career choices of Harvard medical students from the 1940s through the 1970s, Funkenstein concluded that economic incentives and the prevalent ideology are more compelling for most students than are their personal characteristics and original career plans (7). In the post-war “golden age” of medicine (1945 to 1980), medical expenditures grew faster than the number of physicians, exerting market forces on career op-

tions (8, 9). By the late 1980s, generalist residency programs experienced a 30% decrease in applicants, and for the first time, a majority of programs did not fill their positions (6). Students were turned off by what they saw as overworked and dissatisfied generalist physicians and residents, and 40% of internists discouraged students from considering careers in internal medicine (10, 11).

In 1985, Schroeder proposed that we promote generalism by 5 mechanisms: 1) narrowing the reimbursement gap between generalists and subspecialists; 2) selecting medical students with broader biosocial interests and backgrounds, who are more likely to choose primary care careers; 3) increasing the number of generalist faculty role models; 4) shifting the focus of education away from National Board Medical Examination knowledge toward clinical process and skills; and 5) regulating residency positions by specialty boards to redress the ratio of generalists to subspecialists (12).

Although these recommendations were only partially heeded, internal medicine, pediatrics, and family medicine experienced a resurgence in popularity among medical school graduates in the early 1990s. The growth of health maintenance organizations and the institution of the resource-based relative value scale in Medicare reimbursement increased need and opportunities for primary care (13). Policy leaders set a goal that 50% of medical school graduates would choose to enter primary care careers; this target was attained by 1998 (14, 15).

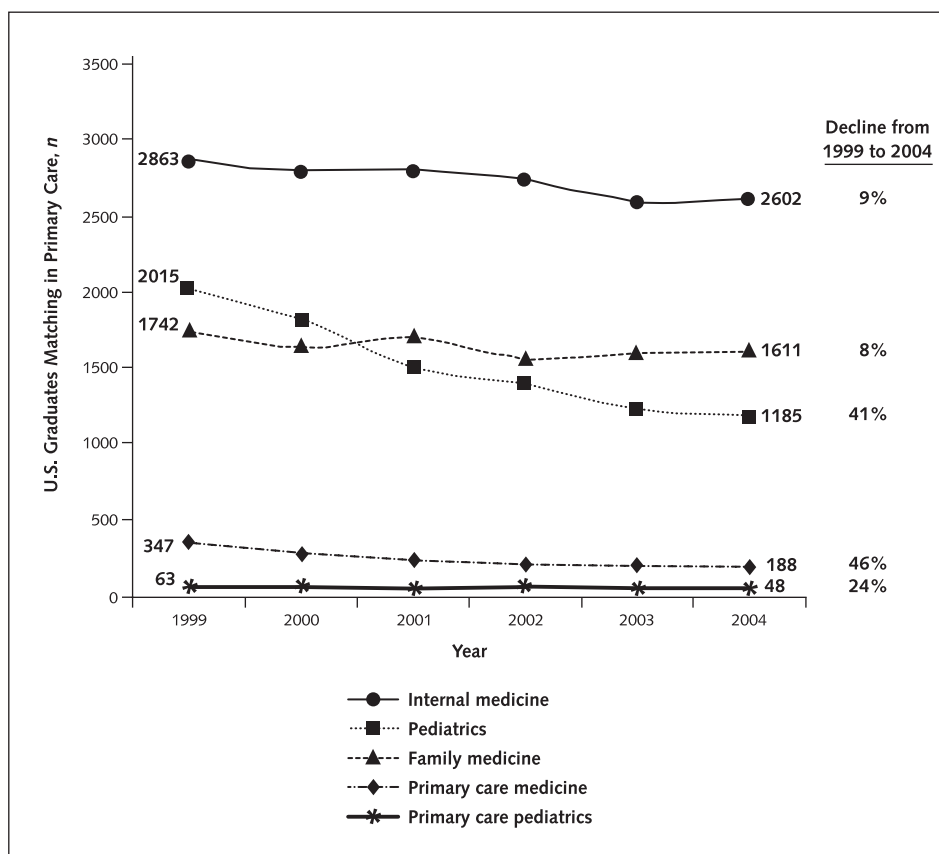
The primary care bubble burst in the late 1990s as the economy entered a recession and reimbursement for cognitive services provided by generalists did not keep pace with increases in procedurally oriented disciplines (16).

See also:

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Conversion of figures and table into slides

Figure 1. Number of U.S. medical school graduates who matched in primary care specialties, 1999 to 2004.



Patients and physicians alike rebelled against the gatekeeper model of the health maintenance organization (17).

The number of senior medical students in the United States who matched into generalist residency positions has been decreasing since the late 1990s (Figure 1) (6). Since the peak in 1998, the proportion of all U.S. graduates who choose residencies in primary care has decreased from 50% to 40% (Figure 2). In the 2004 match, the proportions of positions filled by U.S. graduates were 71% for pediatrics, 55% for internal medicine, and 41% for family practice. The declining interest has been greatest for family medicine, which has seen a 41% relative reduction in the number of positions filled by U.S. graduates. The corresponding reductions for internal medicine and pediatrics have been 9% and 8%, respectively. Because these data include students who go on to subspecialize in internal medicine and pediatrics, the number of students who eventually practice primary care will be even fewer. Moreover, the number of students who choose residencies in primary care internal medicine decreased by 46%, and 24% fewer students chose programs in primary care pediatrics.

Twenty years later, few of Schroeder's recommendations have been implemented, and Funkenstein may still be right. Unless we can substantially reshape market forces, the practice environment, and reimbursement, we will be fighting an uphill battle for the hearts and minds of our

students and residents (18). We present recommendations, some familiar and others newer (and perhaps bolder), to address this critically important dilemma (Table).

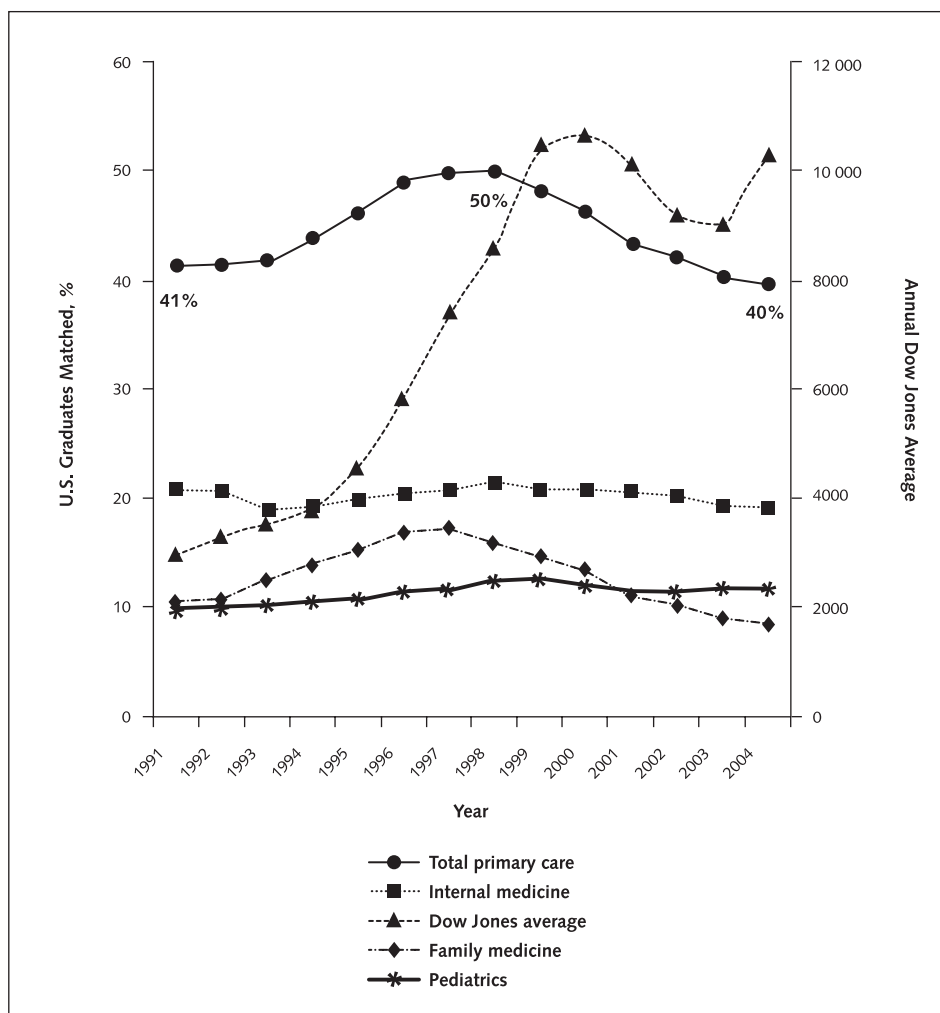
RECOMMENDATIONS

1. Improve Satisfaction and Enthusiasm among Generalist Physicians Who Are Role Models

In a national survey of 460 students and residents, having a positive role model was a strong predictor of choice of a generalist career among senior students (odds ratio, 6.5 [95% CI, 4.2 to 10.2]) (19). However, students and residents are likely to encounter generalist physicians who are poor role models because they are unhappy and stressed, are under tremendous time pressure, feel burned out, and are considering leaving their practices (20). The Community Tracking Study of more than 12 000 U.S. physicians from 1996 to 2001 found that the strongest predictors of dissatisfaction were threats to clinical autonomy, increasing time pressure, and the challenge of maintaining high-quality care (21).

Dissatisfaction among practicing generalists trickles down through housestaff to medical students. In a national survey, student perceptions of resident and attending satisfaction was a strong predictor of generalist career choice (odds ratio, 3.9 [95% CI, 2.7 to 5.6]) (10). Most students

Figure 2. Proportion of all graduating medical students in the United States who matched to generalist residency programs, 1991 to 2004.



interact with resident and attending physician role models before choosing a career path, and in a systematic review, generalist role models were linked to choice of a career in primary care (22, 23). Peer support for primary care from residents was also a strong predictor (odds ratio, 5.7 [95% CI, 1.6 to 20.1]) (19). Unless generalist physicians and residents convey joy in and commitment to their careers, it will remain difficult to recruit students to generalist specialties.

We suggest some strategies to improve satisfaction and enthusiasm among current practicing generalists. *First, narrow the reimbursement gap between cognitive and procedural services.* From 1998 to 2000, inflation-adjusted income increased 9% for medical subspecialists and radiologists but decreased 2.1% for generalist physicians (24). Although physicians tend to underplay the importance of money in their career choice, the Community Tracking Study noted a “dose–response relationship” between annual income and job satisfaction (25). In addition, medical students have increasingly chosen specialties with higher income potential from 1996 to 2002 (26).

Table. Strategies To Increase Choice of Generalist Careers

Improve satisfaction and enthusiasm among generalist physician role models

- Dramatically enhance reimbursement for cognitive services
- Decrease clinical time pressure with more flexible and controllable schedules
- Enhance the status and promotion of clinician-educators in academic medical centers

Schools of medicine should redouble their efforts to produce primary care physicians

- Modify admission selection criteria to recruit students who are likely to enter primary care
- Implement effective medical school curricula in primary care
- Establish primary care “honors” or “scholars” tracks

Facilitate the pathway from medical school to generalist residency

- Direct training funds to schools with track records of producing graduates in primary care
- Develop or expand primary care fast-track programs
- Link choice of a career in primary care to loan forgiveness

The U.S. government should increase funding for primary care research and research training

- Substantively increase investment in primary care research
- Increase and assure funding for fellowship training in primary care

The resource-based relative value system of Medicare reimbursement, which is to be updated in 2006, should create financial incentives for what primary care physicians do well. Working together, leaders from the 3 primary care disciplines could develop a schedule of care management fees that would pay generalists for the currently non-reimbursable care, such as e-mails, telephone calls, and case management, that they provide as part of managing patients with chronic diseases (27, 28). Some Medicaid programs already pay a case management fee, which provides incentive to improve quality and efficiency of ongoing care (29). Generalists must study budget-neutral models for case-based reimbursement that will promote improved care for patients who require complex care for chronic disease (30, 31).

Second, decrease clinical time pressure with more flexible and controllable schedules. A preference for a controllable lifestyle was the strongest predictor of career choice, accounting for 55% of the variability in specialty choices of graduating medical students in the United States. Generalist specialties were perceived as noncontrollable (26). From 1989 to 1998, the average duration of a visit to a physician's office in the United States increased from 18.4 to 19.9 minutes (32). Nevertheless, most generalist physicians still felt they needed more time per visit to provide quality care. In 1997, physicians said they needed an average of 23% more time than they were allotted for a visit with a new patient (20). Physicians who reported that they needed more time than allotted for patient visits scored lower on 7 of 10 domains of job satisfaction.

Innovations are needed to help physicians work smarter, not just faster. The bewildering array of new expectations and demands by patients, insurers, and regulators causes physicians to rush through visits to provide recommended care. When the associated paperwork is added in, is there still time for healing on our lengthening to-do lists? Research into medical errors in ambulatory care is beginning to link time pressure and physician stress with lower quality in managing chronic diseases (33). Physicians may find a way off the treadmill and to increased quality by adopting chronic care models that include group patient visits, greater use of midlevel providers, improved use of information technology, support for patient self-management, and redesign of practice teams (34). Generalists should take the lead in developing a research agenda that studies the cost-effectiveness of these new models.

Finally, enhance the status and promotion of clinician-educators in academic medical centers and increase funding and recognition for teaching. Exposure to generalist clinician-educators during clerkships can attract students to generalist careers (35, 36). Levinson and Rubinstein argue cogently for promoting clinician-educator generalist faculty, suggesting that new metrics of academic success must be developed and recognized (37). In 1997, just over half of U.S. medical schools had a promotion track or specific promotion criteria for clinician-educators (38). Generalist

professional organizations must collaborate locally and nationally to specify and advocate for models of recognition and promotion of clinician-educator faculty (39, 40).

2. Medical Schools Should Redouble Their Efforts To Produce Primary Care Physicians

As demonstrated by the Robert Wood Johnson Foundation Generalist Physician Initiative, interest in primary care on the part of medical students can be assessed at admission, nurtured and encouraged during medical school, and supported during residency (41). Medical schools therefore have a central role in shaping the physician workforce.

As Niels Bohr said, "Prediction is difficult, especially about the future." Nevertheless, beginning with the selection process, some specific factors have been linked with choice of a generalist career. Explicit interest in primary care by an applicant is a predictor of later generalist practice, and schools should strive to measure this commitment (42, 43). Student demographic characteristics, such as female sex, older age, and rural background, were associated with choice of a generalist career, and rural applicants were more likely to practice in rural areas (44, 45). The Medical College Admission Test and grade point average have limited ability to predict success in medical school and may limit selection of candidates with an interest in primary care (46). Schools can increase the likelihood that applicants will choose a career in primary care by increasing representation and leadership by generalist physicians on admission committees. Outreach and targeted recruitment of applicants who are likely to become generalists is a potent demonstration of institutional commitment to producing generalists (47).

Schools of medicine should continue to implement curricula in primary care, ensuring that the rotations are of high quality with dedicated generalist faculty. Exposure to primary care and to potential mentors can be important influences on choice of specialty (23, 48). Schools with clerkships in family medicine are more likely to graduate generalist physicians, and exposure to coursework in primary care during medical school helps solidify initial choices of future generalists (49).

Two multischool initiatives provided a sustained, longitudinal experience in primary care in the preclinical years: the Robert Wood Johnson Generalist Physician Initiative and the Health Resources and Services Administration-sponsored Interdisciplinary Generalist Curriculum (41, 50). The 15 schools that adopted the Generalist Physician Initiative increased their output of generalists from 26% to 36% (51). In the Interdisciplinary Generalist Curriculum project, 18 medical schools successfully collaborated with more than 50 organizations to enhance the real-world experience for medical students (52). Of note, however, various secular forces during the 1990s led to increased choice of generalist residency programs among all graduates. The improvement seen at the schools that adopted the Generalist Physician Initiative did not differ

substantively from the national trend. In fact, program officer Michael Beachler concluded that “Health care system forces, unleashed in the early 90s, were more powerful than any grant program” (51).

Several lessons were drawn from these 2 initiatives. Students valued interaction with patients and generalists early in medical school and appreciated having a generalist mentor (53). For rotations, students should be placed in successful primary care practices in which they can find positive role models for the specialty (54). Community preceptors must be prepared for their roles, and schools should discontinue preceptors who cannot provide good-quality rotations for students (55). Funding is available for faculty development of community preceptors from the Health Resources and Services Administration (HRSA) Bureau of Health Professions, and it should be increased (56). In addition, individual departments can foster more primary care experiences. A recent report on the future of family medicine proposed a new model of practice with a patient-centered team approach, advanced information systems, more functional offices, a focus on quality and outcomes, and enhanced practice finance (57). Use of model practices such as clerkship and resident training sites may increase the attractiveness of generalist careers.

Schools should therefore review existing teaching practices and quickly remediate or remove sites that do not provide students with high-quality experiences. Schools can retrospectively determine whether the training site of generalist clerkships is associated with choice of a generalist career. Selection of teaching practices that are financially successful can demonstrate to students how it can be done. Finally, academic medical centers can offer numerous enticements to their participating training practices, such as access to electronic libraries, vouchers for continuing medical education courses, telephone triage and consultation services, and other nonfinancial means of recognition.

Schools should enhance the prestige and interest in primary care by establishing “honors” or “scholars” tracks for students and faculty in primary care (58; Kalet A. Personal communication). These efforts may help to counter the negative perceptions of primary care at many medical schools (59). Such programs can sustain student interest in primary care and elevate the stature of generalist faculty in the medical center, highlighting the clinical and academic value of generalist physicians. Success of these tracks requires full commitment by the school, given the interdepartmental negotiations required (60).

Whitcomb and Cohen suggested that the recent decline in generalist career choice may be due to our successful efforts to increase students’ exposure to primary care practice (61). If this is true, it is a disturbing paradox. We must strive to create effective models of patient-centered care, with evidence-based management of chronic disease, fully integrated electronic support systems, and a coordinated team approach. Although it is a tall order, our in-

creasingly consumerist patient population will demand no less and competition will drive us in this direction.

3. Facilitate the Pathway from Medical School to Generalist Residency

Whereas the specialty infrastructure is strongly reinforced by grants totaling billions of dollars per year from the National Institutes of Health, generalist departments share only a small proportion of this munificence and therefore depend on a patchwork of funding from state and local governments, private foundations, hospitals, meager clinical services income, and about \$75 million annually in Title VII grants nationally. This figure represents a 24% decrease in Title VII funding from a peak of \$96 million in 1981 (in 2002 dollars) (62).

Since 1984, educational debt increased faster (quadrupled to >\$100 000/student) than medical school tuition (which tripled). Tuition, in turn, increased faster than the consumer price index (which doubled) (63). The debt that a medical student will incur can be an important factor in career choice (64). The lower income potential in primary care may be partially offset by the faster route to practice, but substantial debt remains a disincentive to generalist careers.

In many ways, the challenge of providing physicians for underserved urban and rural areas mirrors the shift in U.S. population away from rural areas to ex-urban and coastal areas. There is already a shortage of rural practitioners, and the rate of new physicians entering rural practice is not likely to keep up with the rate of retirement of current rural physicians, much less improve the already inadequate population-to-provider ratio (65).

Various strategies could be used to facilitate more seamless tracking of students from medical school to generalist residency training. *First, direct training grant funds to schools with proven track records of producing graduates in primary care.* Public funds should be preferentially directed toward schools and residency programs that outperform others in producing generalists. For example, HRSA gives funding preference to programs with a record of preparing primary care physicians (56). As evidence of its effect, between 1978 and 1993, students who graduated from schools receiving Title VII funds were more likely to enter careers in primary care (36% vs. 31%; $P < 0.001$) (66). Such graduates were also 5 times more likely than other graduates in the United States to practice in underserved communities and serve racial or ethnic minorities and socioeconomically disadvantaged persons. Congress last authorized the Health Professions Education Partnership Act, the federal law that controls training grants through Title VII, in 1998. We urge Congress to reauthorize this act to stimulate the further growth of the primary care training infrastructure in the United States, and we agree with the recommendation of the HRSA Advisory Committee to increase the Title VII budget to at least \$200 million (62). State governments should also play a role by providing

“up-weighted” reimbursement for graduate medical education through Medicare to residency programs that demonstrate success at graduating primary care physicians (67).

Second, develop or expand primary care fast-track programs. Primary care “fast-track” programs are dedicated, shortened links between undergraduate education and graduate training in generalist specialties. Medical schools should develop generalist tracks whereby such students are assured preferential admission to generalist residency programs in underserved areas. The American Board of Family Practice began such a program in family medicine residencies in 1991: It allowed senior medical students to begin working as interns with restricted licenses (68). This track cuts 1 full year from the medical school residency pathway. Among other successful elements of the generalist physician initiative was the creation of locum tenens experiences for residents, which helped track residents into community practice settings (52). Concerns that fast tracking might produce suboptimal training can be addressed by careful attention to selection and evaluation through scores on in-training examinations and the rate of board passage.

Policy leaders have long advocated the strategy of directly linking choice of a career in primary care to loan forgiveness. Loan forgiveness through the National Health Service Corps has improved the attractiveness of generalist careers, with 2700 physicians currently serving in the Corps. In 1987, Congress authorized the National Health Service Corps Loan Repayment Program for physicians serving in areas with a shortage of health professionals. The federal government provides up to 50% of the funds to make loan repayment awards to primary care clinicians, with the remainder funded by state and community sources. Public Law 108-357, which was enacted by Congress in October 2004, exempts all funds disbursed for the Loan Repayment Program from gross income and employment taxes (69). Currently, 38 states participate in the program, but federal funding has declined from \$7.2 to \$6.8 million annually in recent years. Almost 60% of National Health Service Corps alumni remain in generalist practice (70). Students reported that loan repayment opportunities would strongly influence their choice of medical school and residency training (71). More recently, 7 of the 14 schools in the Generalist Physician Initiative developed tuition and loan forgiveness programs for students entering generalist practice (52). We recommend that Congress double the current funding authorized for the Loan Repayment Program and more clearly link it with a commitment to practice primary care in underserved areas.

4. The U.S. Government Should Increase Funding for Primary Care Research and Research Training

Concern is increasing about the declining number of clinical researchers (72, 73). The Institute of Medicine noted in 1996 that primary care research in particular “represents a largely uncharted frontier awaiting discovery and exploration” (74). In 2003, the Institute of Medicine Clin-

ical Research Roundtable concluded that many potential physician-scientists are dissuaded from careers in research because of the scarcity of experienced mentors in primary care research, few opportunities for research training in primary care, additional training time required while paying down educational debt, and steep competition for research funds (75).

The budget of the Agency for Healthcare Research and Quality, a major source of funding for primary care research funding, pales in comparison to that of the National Institutes of Health (\$206 million versus \$18 billion). Federal funding for faculty development and fellowship training in primary care research is also limited and is vulnerable each year to political whims. Such training is required to grow the pool of generalist role models and leaders in academic medical centers.

First, the United States should substantively increase investment in primary care research. Increased research funding would attract more students and residents to careers in primary care by enticing physicians into careers in generalist research. Generalist researchers are more likely than nonresearch faculty to be promoted and recognized by medical schools (76, 77). The enhanced status of generalist faculty at medical schools and training programs would have increased influence within departments and schools and could focus health services research on questions that demonstrate the specific value of generalists to patients and learners.

The proposal by the Institute of Medicine to establish the National Clinical Research Enterprise, a new public-private partnership, is bold and visionary (78). The model describes 2 obstacles to translating basic biomedical research into improvements in the health of the public: transfer of basic discoveries into human testing from bench to bedside, and implementation of proven strategies into the daily practice of medicine (79). Generalist physician researchers are uniquely positioned to translate new scientific discoveries into practice through clinical, outcomes, and health services research.

The research agenda of the National Clinical Research Enterprise should be shaped and guided by experts that include generalist physicians with extensive experience in varied primary care practice systems. Despite enormous strides in medical science and record-high spending on health care delivery, many of our medical advances have not translated into improved public health. This translational disconnect comes at great cost to society. More research should be done to determine the most cost-effective clinical strategies and models of health care delivery. We agree with the recommendation of the HRSA Advisory Committee that the U.S. Department of Health and Human Services should convene a working group from the HRSA, National Institutes of Health, Centers for Disease Control and Prevention, Agency for Healthcare Research and Quality, and generalist professional organizations to collaborate on ensuring that new knowledge is translated

into primary care education and practice (62). Generalist physicians should direct this national agenda.

Novel mechanisms are needed to fund this expansion. The existing research funding infrastructure, which was established more than 40 years ago, is outdated, fragmented, and inefficient. We agree with the recommendation of the Institute of Medicine to devote 0.25% of the budgets from all stakeholders in health care to support building the infrastructure of the National Clinical Research Enterprise. Congress should also create tax incentives to promote investment in translational research by health care purchasers and payers.

Second, the U.S. government should increase and assure funding for faculty development and fellowship training in primary care. By 1997, 215 generalist fellows graduated from research training programs sponsored by the National Research Service Award. Most became academic generalist faculty, and 36% were clinician researchers (80). Most subspecialty fellowships are funded by clinical revenue through indirect reimbursement for graduate medical education from Medicare. Funding for generalist fellowships is currently limited to competitive and vulnerable external sources. Each year, professional societies lobby Congress to maintain funding for HRSA Title VII training grants. Substantially increased and stable funding for Title VII must be a national priority.

More stable sources of research training funds would allow programs to focus on long-term development and training. Strategies include expanding funding of educational loans for physicians who commit to training in primary care research (National Institutes of Health Clinical Research Loan Repayment Program) and increasing funding by the National Institutes of Health of “K” career development awards for patient-oriented research, “K30” research training grants, and practice-based research networks (81–83).

SUMMARY

The simplest reason for the impending shortage of generalist physicians is “It’s the economy, stupid.” **Figure 2** shows the association between choice of a generalist career and the Dow Jones Index over the past 14 years. A similar correlation was observed between the 1987 stock market crash and the decline in the choice of generalist career in the late 1980s. Funkenstein maintained that the effect of the market is pervasive and that students are quick to trade in their generalist ideals for the economic security of higher-paying fields. Economic concerns trickle down to students from faculty and residents, which further shapes students’ career choices.

Perhaps we should just batten down the hatches, ride out the storm, and wait for good weather to return. But as any good captain knows, you must still keep a firm grip on the tiller and steer your way through the waves. Staffing in primary care has been riding the economic waves for de-

cares. The curves in **Figure 2** might suggest that we are back where we started and that all the activities in the early 1990s did not work. In contrast, we contend that various structural and policy changes contributed to increasing the rate of choice of a generalist career to the stated goal of half of all U.S. graduates by 1998. These changes included the growth of health maintenance organizations, introduction of the resource-based relative value scale changes in Medicare reimbursement, and various targeted funding opportunities for education and training in primary care.

Rather than simply riding out the economic decline, we urge proactive and persistent efforts to rebuild the U.S. generalist training infrastructure to meet the needs of the public. The U.S. population is aging, experiencing multiple chronic diseases, enduring intolerable disparities in health, and becoming increasingly multicultural. In this new context, generalist physicians will remain the keystone in meeting the health needs of our changing public. Prevalent forces include a growing focus on patient-centered care, chronic disease management, fully integrated electronic support systems, and reimbursement for case management. Our increasingly consumerist patients will demand such coordination and sophistication from us. In such a practice environment, the particular skills of the generalist will be ever more valued.

Attracting the next generation of generalist physicians will require substantial effort. Short of a major overhaul of economic incentives, we will need to work at multiple levels to restore balance to the physician workforce. Our recommendations span admission to and the curriculum and culture of medical schools, residency and fellowship training, clinical practice, research support, and development and promotion of faculty. These efforts will require a coordinated, interdisciplinary, multipronged approach among physicians, policy makers, insurers, academic medical centers, and patient groups.

Collaboration among family medicine, internal medicine, and pediatrics will be necessary and wise, as the combined force of generalists comprises 30% to 40% of all physicians (84). Advocates for combining the 3 disciplines have long argued that this would have substantial social and political benefits (85). This would require professional organizations and academic departments to set aside their traditional allegiances to speak with one voice for the value of primary care to the public health.

Over the past century, concerns that the dynamic forces shaping medicine will make the generalist obsolete have repeatedly surfaced, each time motivating a reexamination of our education and health care systems. The rise of specialization, technology, third-party insurance, and the patient-consumer are among the many influences that have challenged and shaped our physician workforce. With each period of uncertainty, generalists have found their footing and demonstrated their value to education, research, care delivery systems, and patients (86).

So how do we rekindle student interest in primary

care? How can we light a generalist fire under our students? How can we bring forth the next generation of generalists? We exhort current generalist physicians to remember and convey the wonder and excitement of our chosen specialties with students and residents. As in previous eras, we will need to reshape economic incentives and prevalent ideology and align with the desires and expectations of our patients for continuing healing relationships with generalist physicians.

From New York University School of Medicine, New York, New York; Medical University of South Carolina, Charleston, South Carolina; High Street Health Center, Springfield, Massachusetts; Harborview Medical Center; Robert Wood Johnson Clinical Scholars Program; University of Washington School of Medicine, Seattle, Washington; and University of Pennsylvania, Philadelphia, Pennsylvania.

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Requests for Single Reprints: Mark D. Schwartz, MD, New York University School of Medicine, Division of General Internal Medicine, Veterans Affairs New York Harbor Healthcare System, Medical Service (111), 423 East 23rd Street, New York, NY 10010; e-mail, mark.schwartz@med.nyu.edu.

Current author addresses are available at www.annals.org.

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Current Author Addresses: Dr. Schwartz: Division of General Internal Medicine, New York University School of Medicine, Veterans Affairs New York Harbor Healthcare System, Medical Service (111), 423 East 23rd Street, New York, NY 10010.

Dr. Basco: Division of General Pediatrics, Medical University of South Carolina, 135 Rutledge Avenue, PO Box 250561, Charleston, SC 29425.

Dr. Grey: High Street Health Center, 140 High Street, Springfield, MA 01199

Dr. Elmore: University of Washington School of Medicine, 325 Ninth Avenue, Box 359780, Seattle, WA 98104-2499

Dr. Rubenstein: University of Pennsylvania, 3620 Hamilton Walk, Room 295, John Morgan Building, Philadelphia, PA 19104-6055.