In medical education and health care, the gap between what we know and what we do is large. Surprisingly to some, “doing things better” (applying what we know with greater fidelity) influences patient outcomes and population health more than “doing better things” (discovering new treatments). In a 2005 article, Woolf and Johnson argue persuasively that clinical scientists would need to develop anti-atherogenesis drugs three times as potent as today’s statins to deliver the same benefits as getting all appropriate patients to take statins reliably.

Europe’s superior national health statistics do not result from better bench science (the United States has far more Nobel Prize winners) or from a better infrastructure for clinical trials. More likely, they result from systems that give citizens universal access, support primary care, and apply technology judiciously. We are not advocating dismantling our country’s productive basic and translational research enterprise. Rather, we call for greater balance between generation of new knowledge and applying what we know to work.

As Catrina Kiefe reminds us in this month’s Ask the Expert, federal funding for implementation and dissemination research pales before the NIH budget for basic and “bench to bedside” translational science, not to mention the $2 trillion the United States spends on health care. The new Clinical and Translational Science Awards are part of an exciting NIH initiative to re-engineer the biomedical research enterprise, but the emphasis still slants toward discovery and away from fidelity. SGIM members can utilize CTSAs to synthesize multidisciplinary interventions that integrate medical education, sociology, informatics, and change management advances to deliver effective clinical care.

In any case, as Mark Liebow reports in Policy Corner, the future of the CTSAs is far from assured. In other theme-related articles this month, Preston Reynolds (Funding Corner) describes an ongoing NIH initiative to create Centers for Population Health and Health Disparities; Adam Gordon (This Month in JGIM) surveys recent JGIM authors on the practical implications of their work; and Brian Mittman (From the Field) discusses the controversial question of whether dissemination and implementation (D&I) research is really a science.

Currently, one of the most exciting laboratories for D&I research is the VA Health Care System. In VA Research Briefs, Steve Fihn and Christian Helfrich give an update on the VA QUERIs (Part I). Then, Lisa Rubenstein recounts the role of SGIM members in creating transformational change in primary care within the VA (Part II). There’s other good material in this issue, too, including a guide to the city of Pittsburgh for this year’s SGIM Annual Meeting, to be held April 9-12, 2008. Andy Warhol and an environmentally friendly city. Who knew?

We suggest you bring this issue of Forum with you on the airplane—it will provide background for the meeting’s theme of Translating Research into Practice: Enhancing Education, Patient Care, and Community Health. While we agree with SGIM President Eugene Rich that every SGIM member should be an advocate for change, in this case, SGIM members are already part of the translational tide. Great work, and see you in Pittsburgh!

To provide comments or feedback about this special theme issue, please contact Richard Kravitz at rlkravitz@ucdavis.edu.
Is Dissemination and Implementation Really a Science?

Brian S. Mittman, PhD

The NIH Roadmap for translational research emphasizes the translation of bench science into new clinical treatments and the dissemination and implementation of clinical innovations into routine practice. Here, Dr. Mittman discusses differences in research approaches between the natural, clinical, and social sciences for studying dissemination and implementation.

Approaches viewed as rigorous “gold standards” in clinical research are well suited for evaluating clinical or biologic interventions whose main effects dominate other variables, such as local context and individual subject differences.

The ultimate goal of research in the health sciences is to extend lives and improve health by enhancing the health care that individuals receive.

The National Institutes of Health (NIH) pursue this goal by supporting development of “fundamental knowledge about the nature and behavior of living systems, and the application of that knowledge to extend healthy life and reduce the burdens of illness and disability” (www.nih.gov).

The focus of the Agency for Healthcare Research and Quality (AHRQ) is slightly different, striving to "improve the quality, safety, efficiency, and effectiveness of health care for all Americans" (www.ahrq.gov).

In each case, achieving the agency’s goals requires developing new knowledge and innovations, then effectively implementing this knowledge to obtain its full benefits.

Implementation research emphasizes the development and testing of systematic, generalizable knowledge through application of the scientific method.

Specifically, it develops and then rigorously tests specific hypotheses about implementation intervention causal mechanisms and effects and systematically synthesizes research findings. Implementation interventions often include multiple elements: patient and staff education and influence, case management, organization design and workflow changes, etc. Outcomes are complex, continued on page 13
Because of the Forum production schedule, I am drafting this March column on New Year’s Day.

Naturally, my thoughts turn to hopes for SGIM in 2008. One of these is that we achieve a goal Mike Barry set during his summer Council retreat in 2004: Help every member be an advocate!

The 2008 presidential primaries are already a hot news topic, so it might be natural to assume that by advocacy I mean partisan politics. And of course careful readers of my columns will note that I have spent the past year working for Congressman Pete Stark—not the most bipartisan member of the House of Representatives! I hope the same careful readers will recall, however, my hope that SGIM will be a “Big Tent,” welcoming all academic general internists. By this, I mean we should be inclusive not just for researchers, educators, clinical teachers, hospitalists, primary care physicians, and program administrators but also for the full range of academic general internists’ political views.

All too often, academic professional associations become strongly associated with a particular partisan view. But as general internists working at teaching institutions, the issues we deal with transcend the positions of any particular political party. The theme of the March Forum—translating research into clinical practice—is a case in point. Over the past two years, health policy experts across the political spectrum have recognized the need for more research that aids the decisions doctors and patients must make at the bedside. Whether one believes universal health insurance is best achieved through consumer-driven health plans or a single payer health system, patients and physicians will need information on the relative clinical effectiveness of alternative treatments. Academic general internists are uniquely situated to advise policy makers on the development of such research. We understand the ways in which better evidence can be used to inform patient decision making, the limitations of the safety and effectiveness data collected to secure FDA approval, the diagnostic value of an “incidental finding” on the MRI. Of course, many of us also have the necessary research expertise in clinical epidemiology, decision sciences, health economics, or outcomes measurement to help patients make good choices.

Comparative effectiveness research, physician payment reform, health professionals workforce, graduate medical education, and health disparities are just a few of the health policy issues that attract the attention of SGIM members.

But how can a single SGIM member make a difference? At the SGIM Annual Meeting in Pittsburgh, the Health Policy Committee will provide resources and advice to help every member be an advocate. During the meeting, SGIMers will be encouraged to send personalized emails on hot topics to their members of Congress. At the meeting, members will be recognized for all their advocacy efforts, whether sending an email, making a call, participating in Hill Day in DC, or visiting their Senator or Congressman’s local headquarters back home.

continued on page 12
Translating Research into Practice: Have We Come of Age as a Research Discipline?

Catarina Kiefe, MD, PhD, with Nina Bickell, MD, MPH

When reviewing key developments in implementation research over the past two decades, it doesn’t take long to come across the name of Catarina Kiefe, professor of medicine at the University of Alabama—Birmingham. Dr. Kiefe has introduced or contributed several seminal ideas, including public outcomes reporting, achievable benchmarks of care, and the “vector” approach to the complex patient. For this column, Forum Associate Editor Nina Bickell talks with Dr. Kiefe about career prospects in implementation research.

Why is translating research into practice important? Can you define implementation research?

As general internists, we know that we need research on how to translate research into practice. We understand that almost all of us are trying to do the best we can for our patients. We know that if we only deliver evidence-based medicine about half of the time when the evidence is available, it is not because we are incompetent, neglectful, or uncaring. We practice medicine within systems that make it virtually impossible to adhere to the myriad of evidence-based practice guidelines that apply to a single of our generally rather complex patients with multiple comorbidities and unmanageable socioeconomic issues.

Further, we are trained within academic medical centers that still often promote an authoritarian approach to learning and changing practice, precluding true collaboration across multiple disciplines.

So what kind of a collective effort will improve the care we deliver? Why is it such a non-trivial matter to improve our performance on apparently simple quality measures such as tobacco cessation counseling for smokers or glucose control for patients with diabetes? As in all human endeavors, answers to non-trivial questions require new knowledge. We need the scientific study of methods to promote the rapid uptake or research findings and hence to improve the health of individuals and populations. This is what we have been calling Implementation Research. Note that the “population” component of this definition is intended to capture the entire range from patient safety through community-based research and include health disparities.

How long have we had implementation research? What have we learned in the early years?

Implementation research has been the focus for many researchers who are general internists for at least two decades. After Jack Wennberg presented the seminal concept of small area variation in quality of care in the late 1970s, the imperative to intervene and improve quality of care began to take hold. At about the same time, the evidence-based medicine approach began to give us a roadmap for defining measures of quality and thus the ability to quantitatively demonstrate the effect of our interventions. During these early years, we have demonstrated with empirical data that in medicine (as in life) “knowing” is not enough for “doing.” We have shown with sophisticated observational techniques and with group-randomized controlled trials that changing practice patterns requires interventions at the health system level at least as much as at the individual provider level. Lately, we have increasingly come to realize that we have not yet tapped in earnest a group with tremendous potential to improve health care: our patients.

Has implementation research attained recognition as an independent discipline? How can we tell? A discipline may be defined as an independent field of study or branch of learning. Implementation Research is actively defining itself, but is it “independent”? We have our peer-reviewed journals that have been promoting our discipline for years (e.g. JGIM and Medical Care); we even have a new journal called Implementation Science. We have national scientific conferences dedicated to Implementation Research, such as the AHRQ yearly Translating Research into Practice conferences, the 2004 VA State-of-the-Art Conference on Implementing Evidence into Practice, and a 2005 national conference sponsored by AHRQ, NIH, CDC, VA, and the Robert Wood Johnson Foundation about where to go next in implementation science.

As a key to deciding whether we are viable within our current milieu, though, have we attained true independence by the standards that promotion and tenure committees at our academic medical centers apply to labeling someone as an independent investigator? Can we fund our academic careers in implementation research from extramural sources? The answer to this, in March 2008, is “maybe.” We have made tremendous progress. We have AHRQ; we have VA HSR&D; and we have philanthropic foundations; implementation research has become a major portion of their funding portfolios. Yet the combined annual budget of AHRQ and VA HSR&D is little over 1% of NIH’s budget, and the threat of extinction for AHRQ continues occasionally to raise its ugly head.

Importantly, it has also been estimated that NIH funds directly most implementation research in the United States, perhaps up to 5% of its total budget. Indeed, we have our own NIH study section to prove it (Health Services Organization and Development). Finally, with the advent of the 2003 NIH Roadmap, a most ambitious transformative effort for continued on page 5
Annual Meeting Preview

More than Pierogi: Pittsburgh is Perfect for SGIM

Molly Conroy, MD, MPH and Adam Gordon, MD, MPH

The 2008 SGIM Annual Meeting will take place from April 9-12 in Pittsburgh, Pennsylvania. In our opinion, Pittsburgh is one of the most underrated cities in the world and primed to host its first SGIM meeting.

Pittsburgh has always struggled with its image as a gritty steel town. For example, the 1983 release Flashdance, filmed in Pittsburgh, focused on old steel mills and the town’s seedy bars. Most people associate the city with these images from the past and fail to recognize the vibrant city that Pittsburgh has become.

Frommer’s named Pittsburgh as one of 13 “Top Destinations for 2008,” along with exotic locales such as Quito, Ecuador, and Essaouira, Morocco. In addition, Pittsburgh has been rated #1 Most Livable City in America by 2007 Places Rated Almanac. Guests to our home in Highland Park are often surprised by the wide green spaces and variety of cultural opportunities.

In 2008, Pittsburgh will celebrate its 250th anniversary. In addition to annual cultural and musical festivals, special events have been commissioned to honor the birthday. Here are our favorite Pittsburgh experiences, which are a nice short walk or quick taxi ride from the David L. Lawrence Convention Center:

- **Silver Clouds:** Andy Warhol was a Pittsburgh native. Although he left the ‘Burgh, much of his Pop Art returned to create the largest single-artist museum in the world. The Warhol Museum, a quick walk across the Allegheny River, has a room of gently floating silver Mylar balloons—one of many permanent and rotating exhibits (www.warhol.org).

- **The Strip District:** This neighborhood is the heart of foodie Pittsburgh. The Strip is a working warehouse district where one can hear “Pittsburghese” spoken non-stop. You can shop for gourmet cheeses and chocolates, sample locally made salsas, or have a meal (www.neighborsinthestrip.com). The (in)famous original Primanti Brothers sandwich shop is known for piling slaw and fries right on the bread! Street vendors have all things black and gold for the folks at home (moderate walk or very quick ride from Convention Center).

- **Pittsburgh Pirates:** A quick walk over the Roberto Clemente Bridge will take you to a Pirates game at PNC Park, one of the most scenic and fan-friendly baseball stadiums in America (www.pittsburgh.pirates.mlb.com).

- **No sales tax** on clothing in Pennsylvania. Need we say more?

- **Lawrenceville:** The Sunday New York Times Travel Section recently featured this hipster neighborhood (trendy galleries and shops). Local favorite Coca Café and nationally recognized Piccolo Forno are two places to take a break during or after shopping (moderate ride from Convention Center).

- **Run, walk, or bike** along the Allegheny River portion of the Three Rivers Heritage Trail.
**Policy Corner**

**Will There Be Money to Transform Translational Research?**

*Mark Liebow, MD, MPH*

If you talk to people in Washington, you will hear plenty of support for the “transformation” of translational research—research that takes what has been learned from basic science research and translates it to clinically useful information. However, when it comes to putting money behind that verbal support, Congress hasn’t done so well.

The National Center of Research Resources (NCRR), a part of the National Institutes of Health (NIH), administers the Clinical and Translational Science Awards (CTSAs) that fund “a national consortium ... transforming how clinical and translational research is conducted, ultimately enabling researchers to provide new treatments more efficiently and quickly to patients.” The consortium was designed “to re-engineer the clinical research enterprise.” The consortium started with grants made to 12 academic medical centers in 2006 and to another 12 centers in 2007 with a goal of having 60 institutions involved. Of course, getting to 60 will take more money than it takes to fund 12 centers.

However, that kind of money isn’t easy to come by these days because what the Federal government has for annual appropriations, the kind that funds the NIH, is far less than the demands on that money. How Congress allocates that money says much about what the priorities of the government are. For Fiscal Year 2008 the NIH will get $28.9 billion, up $133 million from Fiscal Year 2007. NCRR will get $1.14 billion, up $10 million from Fiscal Year 2007. While the NIH director will ultimately decide how much money to spend on CTSAs, he doesn’t have a large infusion of new money to work with. The increase doesn’t keep up with inflation, much less provide an opportunity for new center awards.

Does this mean Congress has stopped caring about transformational research initiatives? That would be too easy a conclusion. This year’s appropriations suggest that Congress may care more just now about keeping taxes down, paying for the war in Iraq, and funding thousands of other Federal programs than it does about expanding CTSAs. Most Senators and Representatives would be hard pressed to explain what CTSAs are, and even their legislative assistants for health care might struggle to describe how clinical and translation research is conducted. Although ours is a big government, and there is a lot to keep track of, pausing even briefly in the expansion of translational research will have consequences. Academic medical centers that don’t get CTSAs will not hire as many clinical and health services researchers as they would otherwise. The researchers who don’t get positions will need to do something else. Physicians can go into practice or look for academic positions that aren’t as dependent on Federal grants. Researchers who are not also clinicians may have a tougher time finding alternatives. Once these people have left research careers, they may not be easily lured back if Congress decides in a year or two that it’s again time to give more money to NCRR. That makes this situation a bit different from tinkering with the amount of a crop subsidy.

Variations in the annual appropriations process make it less than ideally suited to multi-year initiatives. Sometimes political will can ensure progress toward a goal, as when there was a commitment to double the NIH’s budget over five years, starting about a decade ago. However, the NIH has many champions and few enemies, and more money was available for several of those years. Redirecting how Federal research funds are used in years of tight budget limits will be more controversial and thus harder to do. We should not give up hope but should not assume that because the intent is widely supported—at least in words—the task will be easily accomplished.

To provide comments or feedback about Policy Corner, please contact Mark Liebow at mliebow@mayo.edu.

**ANNUAL MEETING PREVIEW**

continued from page 4

A little farther from the Convention Center, Pittsburgh has quirky, historic, and comfortable neighborhoods and green spaces to explore. Pittsburgh combines the arts and outdoors excitement of a larger city with the neighborhood feel and friendliness of a much smaller one. Be prepared for people you don’t know to chat with you in elevators and call you “Dear Heart” after selling you a pound of imported cheese or a couple of pierogi. We look forward to seeing you in Pittsburgh in April and showing you why our hometown is such a great place to live...and visit!

To provide comments or feedback about Annual Meeting Preview, please contact Rachel Murkofsky at rmurk@hawaii.rr.com.
Building on a major National Institutes of Health (NIH) conference report and numerous reports of the Institute of Medicine and National Academy of Sciences, in September 2002, the NIH issued an RFA for a new program, Centers for Population Health and Health Disparities (CPHHD). This trans-NIH initiative involved three institutes and one office: the National Institute of Environmental Health Sciences, the National Cancer Institute, the National Institute on Aging, and the Office of Behavioral and Social Science Research. Together these agencies committed $60.5 million over five years to establish seven to eight Centers around the country. To date this initiative is the most important effort at NIH to create a translational framework for health disparities research.

In developing this RFA, NIH recognized that a broader perspective was required to elucidate various contributors of health disparities operating at the population level. Consequently, a key objective from the beginning was to generate a research program within each Center and across Centers that embraced the concept of “multiple levels of analysis” in health sciences to examine factors operating at the social/environmental, behavioral/psychological, and biological (organ system, cellular, and molecular) levels.

CPHHDs were expected “to create an environment conducive to interdisciplinary and reciprocally beneficial collaborations among biomedical scientists, social scientists, and affected communities with the common goal of improving population health and reducing health disparities.” Simply put, this strategy mandated that “research in the natural sciences be integrated with that in the behavioral and social sciences to create a more comprehensive understanding of disease pathways from molecular to a societal level.”

Eight Centers were funded in 2003. It is highly possible the NIH will issue another RFA to continue/extend the use of this trans-disciplinary approach for health disparities research.

All CPHHDs also had to propose at least one project framed as community-based participatory research with active engagement of community partners in all aspects of the research and analysis of the data. Each Center could focus its other research initiatives on either a clinical condition or more broadly on areas such as the environment or socioeconomic contributors to health disparities.

For the purposes of this RFA, the physical environment included the natural environment, built structures, and physical, chemical, and biologic agents, such as radiation, pesticides, toxic wastes, food and water supply, and infectious agents. The social environment included individual, institutional, and community-level characteristics, such as socioeconomic status, education, racial discrimination, support systems, and institutional and political forces. Social determinants of disease were defined as factors in the social, cultural, and physical environment that interact to influence population health.

While socioeconomic status commonly is used to describe the impact of the social environment on health, this RFA sought to push investigators to expand their understanding of the social determinants of disease. One strategy proposed was to look at the impact of social capital, such as networks of social institutions, membership in churches and civil organizations, and neighborhood groups, as positive mediators against the stresses of living in an urban underserved community or as a significant contributor to disease burden and severity when isolation and fear predominated in the lives of these populations of persons.

CPHHDs proposing to focus on a single disease, such as asthma or breast cancer, were expected to employ multiple research techniques that could include molecular technologies and animal models, qualitative and/or quantitative methodologies, and research in large population databases. The goal was to engage investigators from disciplines across medical centers and universities, public and private organizations, and community partners to address the problem of health disparities from multiple perspectives and research methodologies.

Eight Centers were funded in 2003. It is highly possible the NIH will issue another RFA to continue/extend the use of this trans-disciplinary approach for health disparities research. What is clear is that this paradigm of translational research in health disparities has marked a new era in trans-NIH initiatives that finally may bring the fruits of basic science research linked with that of behavioral, environmental, and social studies into the service of disadvantaged populations through new public policies and public health programs. Most important, it will push everyone to continue to think out of the box. And without disciplinary boundaries, important insights and potential solutions finally may emerge.

To provide comments or feedback about Funding Corner, please contact Preston Reynolds at prestonreynolds@comcast.net.
Implementing Evidence on Primary Care in VA: The Role of SGIM

Lisa V. Rubenstein, MD, MSPH

Dr. Rubenstein is President-Elect of SGIM.

The 2008 SGIM national meeting in Pittsburgh, with its theme “Translating Research into Practice,” challenges us to consider the roles we can play in using science to promote better health care.

SGIM members have strong values and well-developed skills in science, education, teamwork, and leadership. Who better to participate in change?

Let me tell you a story.

In the late 1980s, the VA system was in trouble. The movie Born on the Fourth of July, released in 1989, captured public perception of the VA as a dismal and uncaring bureaucracy. Many foresaw the end of VHA.

Rather than becoming apathetic, SGIM clinician researcher and former President Steve Fihn (VA Puget Sound) joined SGIM clinician educator and Medicine Chief Alan Robbins (VA Sepulveda) to lead the development of a prototype evidence-based VA primary care model.

Between 1989 and 1990, SGIM members Elizabeth Yano, Arlene Fink, and I joined VA Sepulveda as “embedded evaluators,” charged with documenting changes and helping implementers remain focused on science as a guide to change.

The early 1990s were heady days. SGIM clinician educators and researchers Dennis Cope (now Chief of Medicine at Olive View County Hospital), Art Gomez, Scott Sherman, Cordelia Grimm, Dan Garcia, Jacqueline Bowles, and Bruce Chernof (now LA County Health Director) were among those who designed and put into place a new vision of VA primary care, with a major focus on primary care education. Some of them took the word “design” literally, laying floor tiles and painting to finish re-designed primary care space on time.

Clinically, the new primary care vision focused on firm systems, based on research by SGIM members David Cohen, Seth Landefeld, Randy Cebul, Bill Tierney, John Wasson, and others.

Resources at Sepulveda shifted from inpatient care to primary care, a trend later echoed system-wide. Primary care firms, led by general internists, supported interdisciplinary teams, including training in team management and quality improvement.

SGIM members Michael McCoy (former RWJ Clinical Scholar) and Hank Rappaport (former VA medical informatics fellow) led Sepulveda as one of four development sites for the VAs computerized medical record. The Sepulveda prototype primary care model began to spread to new VAs, with innovations from additional SGIM members such as Scott Smith (Boise VA).

Educationally, the new vision shifted training to a primary and ambulatory care focus. Residents spent nearly half their time in ambulatory care. The new firms, with their highly trained staff and high level of specialty support, could deliver both preventive and relatively acute care and education.

So what happened? Hospitalizations decreased. Outpatient care began to incorporate systematically supervised procedure training, morbidity/mortality conferences, intravenous medication capabilities, and other formerly inpatient activities. This configuration proved a strong draw for internal medicine residents, raising the popularity (and board scores) of the San Fernando Valley program to high levels.

The Primary Medical Education Program (PRIME), described by SGIM member David Asch and colleagues, coordinated training across interdisciplinary team members, including physicians, dietitians, physical therapists, and mental health specialists. Not all prototype changes survived the millennium, but many provided evidence for future innovation.

An embedded research/clinical partnership became a key component of VA quality improvement locally and nationally. Locally, ongoing data collection played an essential role in keeping negative politics and reactions to change at arms’ length. Managers began to require ongoing researcher-generated data as the basis for decisions. Nationally, general internists and SGIM members Jack Feussner and John Demakis played key roles in formalizing this partnership through the Quality Enhancement Research Initiative (QUERI).

When Ken Kizer, a general internist, health services researcher, and public health leader, became VHAs Under Secretary for Health in 1994, primary care was 40% to 50% implemented nationally, as was VAs electronic medical record.

Ken and his team focused on putting veterans first (patient-centered care). Their leadership brought primary care implementation up to more than 90%, accompanied by financial reallocation (not without pain!).

Jonathan Perlin, another general internist and health services researcher, led implementation of VHAs evidence-based performance measurement system, a key feature of VHAs transformation into a national health care quality benchmark organization.

Current VA clinical leadership continues to highlight the talents of general internists and SGIM members, including those of Dr. Madhu Agarwal (head of VHA Patient Care Services) and Dr. Michael Mayo-Smith, head of primary care within Patient Care Services.

I decided to tell the VA story by naming names of general internists and SGIM members. I know those who read this article will remember others whose work contributed in essential ways to the system changes I described. I also know continued on page 11
VA Research Briefs Part II

Reflections on 10 years of VA QUERI

Stephan D. Fihn, MD, MPH, and Christian D. Helfrich, MPH, PhD

Dr. Fihn is Research Coordinator, VA Ischemic Heart Disease QUERI, and Center Principal Investigator, VA Puget Sound Health Services Research and Development Center of Excellence. Dr. Helfrich is Implementation Research Coordinator, VA Ischemic Heart Disease QUERI and Research Associate, University of Washington Department of Health Services.

A major impetus for the quality improvement movement in health care has been the unpleasant recognition of the long delay between the demonstrated effectiveness of a medical intervention and its widespread implementation. Ironically, health services researchers face a similar frustration when it comes to interventions to promote routine use of effective medical practices.

In 1998, to help bridge this gap between research and practice, the Veterans Health Administration (VHA) created the Quality Enhancement Research Initiative (QUERI). QUERI brought together researchers, practitioners, and administrators to address common and pressing health problems. QUERI centers sought to improve veteran quality of care and outcomes by systematically implementing clinical evidence into routine clinical practice. Nine QUERI centers were established, each focusing on a specific disorder: diabetes, heart failure, ischemic heart disease, mental health, substance abuse, cancer, spinal cord injury, stroke, and HIV/AIDS. In 2005, a new QUERI center on Polytrauma and Blast-related Injuries was created to respond to the unique needs of wounded soldiers returning from Iraq and Afghanistan.

In the first years, building infrastructure and relationships absorbed much of the effort of QUERI. Managers were unaccustomed to working with researchers and had different timeframes and perceptions of problems. Concepts such as validity and reliability were often foreign. Conversely, researchers were unprepared for working with clinical and administrative managers. They failed to appreciate the practical time and resource constraints under which they routinely worked. Moreover, investigators were confounded by the lack of reliable data systems, which made it impossible to accurately identify and monitor processes and outcomes of care in a timely and efficient manner.

With time and effort, however, these barriers began to yield. Important collaborations with leaders in VA Central Office, medical centers, and networks were established.

For example, investigators from the Mental Health QUERI worked closely with Patient Care Services (PCS) and several VA medical centers to develop primary-care-based collaborative care models for depression, which are now being rolled out nationally. The Substance Use Disorder QUERI worked with PCS and VA networks to create national computerized reminders for a brief alcohol screening tool with follow-up protocols. The Diabetes QUERI worked with the VA Office of Quality and Performance to create better performance measures. The Ischemic Heart Disease QUERI worked with PCS and the Office of Information Technology to create national cardiac catheterization laboratory data reporting software and a system to track outcomes of acute myocardial infarction in real time.

All of these activities depended on close, ongoing cooperation between research and operations. Most involved development of or access to extensive new data systems.

At the 10-year anniversary of QUERI, there are numerous successes to highlight, such as those mentioned above, but also hard-won lessons to consider.

First, robust data systems are essential to the effective marriage of research and quality improvement. All major QUERI activities have required access to operational data systems or the creation of new data systems.

Second, investigators have had to shed their customary dispassionate role on the sidelines and actively participate in the “dirty work” of program design and deployment. This frequently entails hard choices between health care service and traditional academic work.

Third, conventional methods of research and evaluation are often not appropriate for this work. Investigators have had to rely upon new and often controversial methods that may be coldly received by the medical literature.

Fourth and most importantly, QUERI has allowed health services investigators to put their work into action. Long relegated to the role of observers with only an afferent limb, VHA health services researchers now have an efferent limb and can begin to directly effect change in the larger health care system.

Despite the early challenges, QUERI has roundly succeeded and also continues to evolve. Over the near term, the QUERI program will be redesigned to ensure closer partnerships between investigators and those responsible for data systems and operations within the health care system.

The lessons of the first 10 years have provided a sound foundation for these changes, which ultimately should continue to translate into better care for the 6.8 million patients who receive care from VHA.

To provide comments or feedback about VA Research Briefs, please contact Geraldine McGlynn at Geraldine.McGlynn@va.gov.
Do authors of recent papers in the Journal of General Internal Medicine (JGIM) think their published research should impact clinical practice or medical education? For this theme issue of the SGIM Forum, This Month in JGIM asked all the corresponding authors of the December 12, 2007, JGIM (volume 12, number 12) about how they see their research affecting clinical practice or medical education.

On December 14, 2007, the corresponding authors of the 15 original articles and brief reports were emailed with two questions: 1) What should we be teaching physicians-in-training based on the results of your original research? and 2) How should practicing physicians provide medical care differently based on the results of your original research? Respondents were asked to be brief and colloquial in their comments and email a response in less than eight days.

Fifteen emails were sent, and nine were returned. All respondents identified at least one specific implication of their research for education or practice.

For example, based on the results of her study, "Barriers of and Facilitators to Physician Recommendation of Colorectal Cancer Screening," lead author Carmen Guerra stated, "Educating physicians-in-training about colorectal cancer screening (CRCS) guidelines may not be enough for them to consistently recommend screening to all their eligible patients over 50." Her study found that although interviewed physicians had high awareness of CRCS guidelines, many patient, physician, and system barriers prevented the physicians from consistently making a screening recommendation to every eligible patient. She concluded, "We should educate trainees on how to modify the many barriers to screening by using reminder systems, such as flowsheets and checklists."

In the paper "Continuity Clinic Satisfaction and Valuation in Residency Training," lead author Steve Sisson noted that satisfaction with outpatient clinical preceptors and clinical operations was important to the value of residents' training experiences. He stated, "Clinic preceptors are likely to have the most important impact on how residents value clinic, especially in their behaviors as role models. Clinic preceptors should demonstrate to residents the knowledge, behaviors, and attitudes of what they think the ideal general internist should be in order to improve how residents value their ambulatory experience. Nearly all aspects of precepting are associated with how residents value their ambulatory experience."

Dave Hatem had something different to say about education. "I think that for those physicians in training engaged in teaching, our study underscores the importance of assessing learner's needs to allow for targeted teaching to meet those needs," he said. Hatem's study, "Teaching the Medical Interview: Methods and Key Learning Issues in a Faculty Development Course," found that skilled teachers were able to access learner's needs in real time and adjust their teaching to enhance learning. "Our study reinforced that learners need to be given adequate opportunity to reflect on and obtain feedback on their performance to understand what was done well and to underscore and emphasize new learning," he said.

Based on the results of his paper, "Self-Confidence in and Perceived Utility of the Physical Examination: A Comparison of Medical Students, Residents, and Faculty Internists," Edward Wu explained that faculty physicians should teach, and periodically re-teach, physicians-in-training physical examination skills that they are less confident in. He expressed an important caveat: "This means that we as faculty physicians need to feel confident in these skills and feel that they are important to learn. It is essential, though sometimes challenging, to find faculty instructors who are genuinely interested in teaching all aspects of the physical exam and regard it as vital to the treatment of a patient."

David Greenburg indicated that his study, "Identifying Medical Students Likely to Exhibit Poor Professionalism and Knowledge During Internship," will be of use to residency program directors who rank applicants for the residency match. "Based on our findings the single most important attribute to consider is a student's third-year grades," he indicated. Furthermore, the findings in his research should "be reassuring to medical students who experience academic difficulties during their basic science years but are able to do well on Boards and during their clinical years. These students can continue to perform well during internship."

Several authors also indicated that the results of their research can potentially change clinical practice. Based on the results of her paper, "Reasons for Not Intensifying Medications: Differentiating 'Clinical Inertia' from Appropriate Care," Monika Safford said clinical practice might not be in line with quality of care initiatives. She noted, "Our research shows that physicians consider many important clinical issues when seeing a patient with uncontrolled high blood pressure, appropriately electing not to intensify medications in many cases. We hope that practicing clinicians can withstand the very real pressures from quality-of-care..."
that the people I mention may not all be familiar to all of you.

I told this story because the Veterans Health Administration (VHA) change process highlights how essential primary care is to the success of health care. It also highlights the power of general internists and other SGIM members, working as a group, to produce evidence-based change through research, education, policy work, and quality improvement.

I hope that this story highlights for you the critical role that involved, engaged SGIM members are likely to play in future US and international health care reform. I hope that each time you read a name, you saw yourself, too, as an important name in this or other stories. Together, we can help steer health care in a new positive direction.

To provide comments or feedback about VA Research Briefs, please contact Geraldine McGlynn at Geraldine.McGlynn@va.gov.
Some of my own most memorable experiences were made possible by my participation in health policy for SGIM, encouraged by some of the giants of academic GIM. When John Noble was SGIM president he got me involved in health policy, helping me meet the famous Chair of the House Appropriations Committee, William Natcher from Bowling Green, Kentucky. With John Noble’s encouragement, I testified before Natcher’s Committee and met with him in the hearing room, in his private office (filled with the memorabilia of a long career in public service), and in his small storefront district office in Bowling Green. Past SGIM President Steve Wartman encouraged my expanded involvement in SGIM Health Policy (and co-authored a paper on GME reform with me). Lee Goldman as President nominated me for the new PHS Primary Care Policy Fellowship, and SGIM President Bob Fletcher helped me with an interdisciplinary briefing to Congressional staff on primary care policy. Who could have imagined that the first Hill meeting arranged by John Noble would lead, so many years later, to my RWJ Health Policy Fellowship and helping staff the House of Representatives 2007 debate on comparative effectiveness research?

Not all SGIM members need to be so involved in health policy that they wind up working on the Hill! There’s too much important research to conduct, students and residents who must be taught, and patients to be cared for! But SGIM is a small organization, so we need every member’s voice to be heard in Washington.

My hope for 2008 is that every SGIM member make at least one contact with a member of Congress on some issue important to academic GIM; drop by a Town Hall meeting, leave a message at the district office, make a phone call, send an email. Be an advocate!

“If you think you’re too small to have an impact, try going to sleep with a mosquito.”

—Anita Roddick

To provide comments or feedback about President’s Column, please contact Eugene Rich at EUGENERICH@creighton.edu.

initiatives that promulgate increasingly aggressive treatment targets and continue the judicious use of appropriate inaction.”

Estella Geraghty’s research, “Primary Care Visit Length, Quality, and Satisfaction for Standardized Patients with Depression,” concluded that ambulatory visit length was a significant determinant of standardized patient satisfaction. “Physicians who work in HMOs or who have busy practices risk jeopardizing patient satisfaction because, inevitably, their patient visits are shorter,” she explained. “So when more time just can’t be carved out for the visit, physicians may want to find alternate ways to improve patient satisfaction. Small steps, like exhibiting greater empathy, enhancing active listening skills, decreasing waiting-room time, asking more open-ended questions about primary complaints and allowing patients to respond with minimal interruption could help compensate for unavoidably short visits.”

Simona Bo’s research paper, “Effectiveness of a Lifestyle Intervention on Metabolic Syndrome. A Randomized Controlled Trial,” concluded that physicians should refer physical inactivity and unhealthy diet counseling to trained professionals. “Physical inactivity and unhealthy diet even during the short term give to metabolic deterioration and could be considered as a progressive disease,” she said. “The usual prevention strategy by the patients’ family physicians, not individualized lifestyle recommendations, seems ineffective in contrasting the tendency of a high-risk group toward progressive weight gain and worsening in metabolic variables and cardiovascular risk factors.”

In another paper, “Beyond Comorbidity Counts: How do Comorbidity Type and Severity Influence Patients’ Treatment Priorities and Self-Management?” author Eve Kerr focused on matching the right clinical interventions to patient needs. “The medical community needs to find ways both to recognize the many challenges patients with multiple chronic conditions face and to help patients prioritize their self-care tasks,” she said. “In many cases, providers also need help to understand which of the many interventions and treatments their patients are eligible for might be the most important in terms of optimizing health and quality of life. We need to develop tools that help us weigh these different options and take patient preferences into account so that we can better counsel and support our patients. These types of tools are missing from our practices now but are essential for moving us to the next stage of caring for these complex patients.”

As indicated by the responses to our survey, December 2007 corresponding authors believe that that their work has implications for clinical training and practice. Many of the articles emphasized implications for research, but few offered concrete steps to apply these implications to medical training or practice. Translation and implementation of this new knowledge, published in the December 2007 issue of JGIM, is an important next step in enhancing the quality of health education and health care delivery.

To provide comments or feedback about Recently in JGIM, please contact Adam Gordon at Adam.Gordon@va.gov.
from improvements in health status and biologic outcomes, to quality of life, to self-efficacy and changes in clinician and patient behavior.

The empirical phenomena under study in implementation research (complex social interventions, processes and mechanisms of change) are largely social and behavioral in nature (e.g., the behaviors of professionals and organizations) rather than physiological. Thus, implementation science relies heavily on research approaches from both social and natural sciences.

There are two major differences between the approaches of these disciplines.

First, social science research often operationalizes concepts such as “systematic,” “rigorous,” and “objective” in a different manner from the natural sciences. Thus, natural science researchers with limited training in the social sciences may view unfamiliar implementation science research approaches as insufficiently systematic and rigorous.

For example, implementation research frequently evaluates implementation strategies that are protocol driven but intentionally customizable to local circumstances (and hence highly variable). This necessary customization may be mistaken for a researcher’s failing to ensure a rigorous design and internal validity. However, a design requiring strict adherence to a protocol producing intervention standardization across all sites, while appearing to reflect a high level of internal validity, will generally yield negligible external validity. This design would offer little value in generating knowledge and insights into implementation processes as they exist in actual care delivery settings.

Second, social science deals with higher levels of heterogeneity and complexity and lower levels of predictability common in the social (vs. natural) world. Approaches viewed as rigorous “gold standards” in clinical research are well suited for evaluating clinical or biologic interventions whose main effects dominate other variables, such as local context and individual subject differences.

Research evaluating complex social interventions (whose main effects are often dominated by non-interventional factors) must rely on other approaches. For instance, behavioral change intervention effects will be influenced by local technology available to run the intervention, willingness of real-world participants to change or participate, support to sustain the intervention after the study ends, and many other factors. The assumptions and requirements of conventionally accepted clinical trial approaches (e.g., homogeneity, stability) are often not met.

Furthermore, the types of tacit knowledge required for successful behavior change in contexts characterized by extreme heterogeneity and complexity must be generated and communicated differently from the explicit knowledge produced via natural science research approaches.

Several recent articles have discussed the nature of knowledge required for effective decision-making in the domain of implementation vs. clinical practice. They have suggested the value of newer approaches to generating knowledge such as theory-based evaluation and realistic evaluation. These discussions highlight the desire for implementation research to proceed in a systematic, rigorous, and scientific manner while also reflecting continuing uncertainty regarding the most appropriate ways to achieve this goal.

Recognition and momentum to address these challenges are building. Thus, success in strengthening the scientific foundations of implementation science seems likely. SGIM members are well positioned to contribute to these efforts and to show leadership in applying newer research approaches to help broaden the implementation science toolkit and enhance the field’s output.

SGIM

To provide comments or feedback about From the Field, please contact Brian Mittman at Brian.Mittman@va.gov.
Positions Available and Announcements
are $50 per 50 words for SGIM members and $100 per 50 words for non-members. These fees cover one month’s appearance in the Forum and appearance on the SGIM Web-site at http://www.sgim.org. Send your ad, along with the name of the SGIM member sponsor, to ForumAds@sgim.org. It is as-sumed that all ads are placed by equal opportunity employers.

Top Ten in Quality and Livability:
Live in a 2007 top ten All American City, become a partner in an organization whose health plan is ranked top ten in the nation, work in a highly functional practice model with excellent nursing support, participate in practice-based research. Medical Associates Clinic and Health Plans is a 100-physician multi-specialty group practice in Dubuque, Iowa, on the banks of the Mississippi River. Salary highly competitive. BC/BE GIM physician and hospitalist positions available. Contact Christine Smisky, MD csimsisky1@mahcalthcared.com or Ali Boaright at ali.boatright@stratummed.com 1-800-582-8286 extension 4110.

Positions available for full-time clinician-educators
The Division of General Internal Medicine, Department of Medicine at the University of Colorado Denver Anschutz Medical Campus seeks full-time clinician-educators interested in a career as a clinician, practicing and teaching in the outpatient setting. Positions are at the Instructor or Assistant Professor level. Candidates must be board certified or board-eligible in internal medicine. The physician will practice eight or nine half-days per week seeing patients and precepting residents and students in the internal medicine faculty and resident group.

Faculty have the option of attending one to two months annually on the general medical inpatient services, and have diverse opportunities to participate in medical education.

The faculty shares the responsibilities for night, week-end, and vacation coverage with other members of the group practice and will participate in decisions regarding the practice operation.

Salary range: Negotiable (commensurate with education and experience). This will be either a full-time or 6/8ths VA appointment and clinical responsibilities will not exceed 25% FTE. U.S. Citizenship required. The Department of Veterans Affairs is an Equal Opportunity Employer.

Salary range: Negotiable (commensurate with education and experience). This will be either a full-time or 6/8ths VA appointment and clinical responsibilities will not exceed 25% FTE. U.S. Citizenship required. The Department of Veterans Affairs is an Equal Opportunity Employer.

Salary range: Negotiable (commensurate with education and experience). This will be either a full-time or 6/8ths VA appointment and clinical responsibilities will not exceed 25% FTE. U.S. Citizenship required. The Department of Veterans Affairs is an Equal Opportunity Employer.

Salary range: Negotiable (commensurate with education and experience). This will be either a full-time or 6/8ths VA appointment and clinical responsibilities will not exceed 25% FTE. U.S. Citizenship required. The Department of Veterans Affairs is an Equal Opportunity Employer.

Salary range: Negotiable (commensurate with education and experience). This will be either a full-time or 6/8ths VA appointment and clinical responsibilities will not exceed 25% FTE. U.S. Citizenship required. The Department of Veterans Affairs is an Equal Opportunity Employer.

Salary range: Negotiable (commensurate with education and experience). This will be either a full-time or 6/8ths VA appointment and clinical responsibilities will not exceed 25% FTE. U.S. Citizenship required. The Department of Veterans Affairs is an Equal Opportunity Employer.

Salary range: Negotiable (commensurate with education and experience). This will be either a full-time or 6/8ths VA appointment and clinical responsibilities will not exceed 25% FTE. U.S. Citizenship required. The Department of Veterans Affairs is an Equal Opportunity Employer.

Salary range: Negotiable (commensurate with education and experience). This will be either a full-time or 6/8ths VA appointment and clinical responsibilities will not exceed 25% FTE. U.S. Citizenship required. The Department of Veterans Affairs is an Equal Opportunity Employer.

Salary range: Negotiable (commensurate with education and experience). This will be either a full-time or 6/8ths VA appointment and clinical responsibilities will not exceed 25% FTE. U.S. Citizenship required. The Department of Veterans Affairs is an Equal Opportunity Employer.

Salary range: Negotiable (commensurate with education and experience). This will be either a full-time or 6/8ths VA appointment and clinical responsibilities will not exceed 25% FTE. U.S. Citizenship required. The Department of Veterans Affairs is an Equal Opportunity Employer.

Salary range: Negotiable (commensurate with education and experience). This will be either a full-time or 6/8ths VA appointment and clinical responsibilities will not exceed 25% FTE. U.S. Citizenship required. The Department of Veterans Affairs is an Equal Opportunity Employer.

Salary range: Negotiable (commensurate with education and experience). This will be either a full-time or 6/8ths VA appointment and clinical responsibilities will not exceed 25% FTE. U.S. Citizenship required. The Department of Veterans Affairs is an Equal Opportunity Employer.
The Ohio State University College of Medicine is seeking faculty physicians at the Assistant or Associate Professor level to serve as Clinician Educators in the Division of General Internal Medicine, Department of Internal Medicine.

We are the only Central Ohio academic medical center and are ranked 38th by US News & World Report. The medical center has a six-hospital campus with 962 beds, including University Hospital, named one of “America’s Best” by US News & World Report for fifteen years in a row.

By joining the Division of General Internal Medicine, you will join approximately 25 generalists at three clinic sites. Faculty has inpatient and outpatient clinical and teaching responsibilities including strong and innovative undergraduate and graduate educational programs. Opportunities exist for career development in leadership and administration, educational scholarship through the Office for Scholarship in Medical Education, and research collaboration through our Primary Care Research Institute. Successful candidates must be BE/BC in Internal Medicine.

Academic appointment is commensurate with experience.

To join our team, please send your cover letter and CV to:
Holly Hammond, Division Coordinator, General Internal Medicine
The Ohio State University, 456 W. 10th Ave, Crumlett Hall 4510, Columbus, Ohio 43210
Holly.Hammond@osumc.edu, Fax: 614-366-2360.

The Ohio State University is an Equal Opportunity/Affirmative Action Employer. Qualified women, minorities, Vietnam-era Veterans, disabled veterans and individuals with disabilities are encouraged to apply. This is not a J-1 opportunity.

Public Health System in Sunny Colorado Seeking Academic General Internists

The Division of General Internal Medicine at Denver Health is recruiting 2-3 BC/BE General Internists. Denver Health, an affiliate of the University of Colorado Health Sciences Center, is a fully integrated network of 8 community health centers and a 400 bed hospital. Our mission is to provide access to quality preventive, acute, and chronic health care for all citizens of Denver, regardless of ability to pay.

We are seeking clinician-educators interested in practicing and teaching primary care or urgent care in a dynamic, state-of-the-art health care delivery system. In addition to full scope primary care, responsibilities may include urgent care, inpatient attending at Denver Health Medical Center, clinic management, and/or supervision of trainees. Participation in clinical research by Denver Health faculty is encouraged and facilitated.

We offer a competitive salary, excellent benefits, home call, and the great Denver location. Most sites are eligible for NHS loan repayment. Experience in ambulatory care and Spanish language ability are highly desirable.

Please submit CV to:
Thomas D. MacKenzie, MD, MSPH,
Director of Internal Medicine, Denver Health, 777 Bannock St., MC 1914, Denver, CO 80204
E-mail: thomas.mackenzie@dhha.org