FROM THE EDITOR

The Evolving World of Quality Improvement
Karen R. Horowitz, MD

In this issue of Forum, we present multiple perspectives on quality improvement (QI) projects. The experienced clinician looks back at a project to improve immunization rates in his practice and asks, “Is this all there is? Was this a productive use of my time and resources?” A medical student learns about barriers to engaging others in QI when multiple competing priorities exist in the workplace. A resident partners with medical informatics researchers to identify patients for a targeted intervention, and an interdisciplinary team performs a root cause analysis to address a delay in diagnosis.

As physicians, the willingness to question, dissect, ponder, and advocate for change in the things we do is not new—it is the essence of professionalism, inherent in the concept and core values of the “good doctor,” a construct that some bemoan as having been lost in the current era of the physician as technologist. On the contrary, what QI has given us is the terminology, taxonomy, and processes for addressing challenges in patient care in a systematic, productive, and measurable way.

What is clear is that our experience with QI is evolving and our expectations are becoming more sophisticated. We are not satisfied with short-term fixes for systemic problems that may not be sustainable. We must factor efficiency and time management into everything we do. Some projects are more suited to the microcosm of our individual practice sites or group of practitioners while others are better suited to the macro-environment of the hospital, accountable care organization, or health care system in which we practice. It is also clear that QI is a team sport—that through the collaboration of an interdisciplinary team, much can be accomplished to the benefit of patients and providers alike.

As we train the next generation of professionals in QI theory and methodology, we should expect increased sophistication in our approach to QI, including improved collaboration, generalizability of projects with maximal impact, and increased acceptance and adoption of new initiatives by those resistant to change. Performance measures should differ for individual providers, teams, and health care systems. To be meaningful, they must address outcomes that are meaningful for patients and within the capability of providers, teams, or systems to enact.
The Role of Medical Informatics in GIM Research
Dustin McEvoy, BS; Benjamin Bearnot, MD; Amy Justice, MD, MSc, PhD; and Lipika Samal, MD, MPH

Medical informatics could potentially facilitate general internal medicine (GIM) research, teaching, and patient care, yet many researchers are unaware of the advantages offered by the field. In an effort to highlight the utility of medical informatics in GIM research, we present the following research “pain point,” a case in which a research investigator struggled to extract electronic data that were routinely collected and stored in the electronic health record (EHR).

Scenario
Benjamin Bearnot, a resident at Massachusetts General Hospital (MGH) in Boston, is interested in methods to better identify and treat patients suffering from addiction. Many of these patients are not correctly identified by physicians at admission and are treated for their overt medical conditions (e.g., withdrawal, Hepatitis C) but not for their underlying addiction. While treatment of the overt medical condition is important, treatment of the underlying addiction is essential to the proper care of the patient. In an effort to better identify addiction patients, Dr. Bearnot has searched for information routinely collected in the EHR that could be used to flag these patients and discovered that nurses at admission frequently collect the AUDIT-C, a three-item screening tool designed to identify patients with alcohol use disorder.¹

The features of this study are described below:

• **Goal**: 1) to describe the demographic and medical characteristics of patients who undergo AUDIT-C screening and to compare those who screen positive to those who screen negative and 2) to examine the subset of patients who are subsequently referred to addiction consultation services

• **Setting**: MGH, a 999-bed medical center located in Boston, MA

• **Population**: All inpatient admissions to an internal medicine floor at MGH

Dr. Bearnot and colleagues determined that AUDIT-C data were collected and stored within the EHR, but they did not know how to extract these data. As far as they knew, the only way to collect the data would be to perform a chart review. It would be preferable to download data as a spreadsheet so that they could be analyzed using statistical software.
Leadership and the Search for SGIM’s New Executive Director
Marshall H. Chin, MD, MPH

The new executive director should be someone who can bring out the best in people and help continue this extraordinary rate of meaningful participation in the organization.

After 18 years of service as SGIM’s executive director, David Karlson retired last June. We will miss David’s wise counsel and warm smile. While goodbyes can be difficult, this transition period provides an opportunity for SGIM to consider anew the type of leadership that will best prepare us for the future challenges and opportunities facing academic general internal medicine (GIM).

Here’s a quick primer on SGIM’s organizational structure. As members of SGIM, you elect SGIM Council each year. Council includes the president, treasurer, secretary, and at-large Council members, among others. Council functions as a board of directors, staying at the 30,000-foot strategic vision level. SGIM’s numerous committees, task forces, and interest groups—all comprised of volunteer members—embark on specific initiatives and programs. Parallel to these member-driven groups, a paid full-time SGIM staff serves to facilitate and implement these visions and programs. SGIM’s Acting Executive Director Kay Ovington is responsible for leading the staff and coordinating activities with SGIM Council. Historically, the SGIM executive director and staff have played supportive roles, following the lead of the elected SGIM Council. (In contrast, some other organizations such as American College of Physicians [ACP] have a full-time paid physician executive director and leadership group that lead the strategic vision of that organization in conjunction with the elected ACP governing group.) Different leadership structures can work well for different types of organizations.

Since graduating from residency, I’ve been very fortunate to have four extraordinary bosses: Lee Goldman, Christine Cassel, Wendy Levinson, and Deborah Burnet. All are remarkable leaders, yet each has a fairly different style. Like many GIM fellows, I had difficulty deciding what my main fellowship research project would be. About four months into my fellowship, Lee Goldman took me aside and said something like: “Marshall, there are those who think and those who do. You tend to be a thinker. Thinking is good. But at some point you need to decide what you want to do and then go do it. We will meet again in one week. If you don’t have your research project idea by then, I will find another project for you.” Suddenly I had visions of a parallel universe in which I was spending my fellowship doing data entry for Lee. Needless to say, I had my research idea ready the following week.

Wendy Levinson was my chief during most of my time as junior faculty. Wendy is an international expert in doctor-patient communication. Besides advising on the technical aspects of my research, Wendy made a conscious effort to check on how I was feeling about the research process and the various challenges of a junior clinician-investigator. She explicitly addressed my emotional well-being in my career development. In reality, Lee and Wendy are more similar than I am conveying in these two brief vignettes. For example, Lee is an excellent listener, has great intuition about people, and is a tremendous supporter of his mentees. Besides her outstanding emotional intelligence, Wendy is an astute strategic thinker and is appropriately decisive. Lee Goldman and Wendy Levinson, who happen to be former SGIM presidents, demonstrate that both leadership styles can be extremely effective.

Which brings us back to the question of what kind of leadership should we be looking for as we search for the new SGIM executive director? Bob Centor is chairing the search committee whose members are Michael Barry, Shobhina Chheda, Bradley Crotty, Arthur Gomez, LeRoi Hicks, Dan Hunt, Monica Lypson, Happy Menard, Bill Moran, Kay Ovington, Brita Roy, Mark Schwartz, Valerie Weber, and Ellen Yee. Last year a committee chaired by Barbara Turner and comprised of Michael Barry, Tom McGinn, Ann Nattiger, and Lisa Rubenstein performed a scan of SGIM and the external environment and raised a number of issues to consider...
It is impossible to ‘teach’ the principles that we loosely clump together as ‘quality improvement (QI)’ or ‘systems-based practice.’ The only way to get trainees to adopt specific improvement strategies is to model them ourselves.

This insight hit me last year after a challenging attempt to implement another “QI curriculum” in our outpatient resident practice. After 10 years, I concluded that no matter what materials I designed, no matter what software we used, no matter what model we chose (e.g., PDSA, A3, six sigma), getting large numbers of residents to conduct meaningful QI in the outpatient setting was forever going to be like pulling teeth. I concluded that unless my colleagues and I were walking the walk on a daily basis, it was going to be very challenging to ever see the change we were hoping for in the practice of trainees.

With this in mind, I embarked upon crafting a personal “QI practice.” Modeled on “yoga practice”—a set of exercises yoga practitioners go through on a regular basis—I set aside one hour of uninterrupted time each week during which I would perform a series of structured activities directed at improving the quality of the care I deliver. My “QI hour” would include data collection, self-education, changes in practice, and logging my experiences. This report represents themes that have arisen in the first 12 weeks of this practice.

What I Did
In the first week, I outlined my weekly “QI hour” schedule. I brainstormed and identified 10 elements of care delivery that I believed deserved my undivided attention for an hour a week. My list included screening items, chronic disease metrics, and other areas such as end-of-life care planning.

I first chose to tackle pneumococcal vaccination (PV) because of my knowledge deficits around these vaccines, the opportunity for improvement (i.e. my PV rates were abysmal), and incentives (financial) to our practices from local insurers for improved PV rates. In weeks one and two, I educated myself about PV and who should get it. I investigated our practice’s standard operations around vaccine delivery, who was assigned to monitor overdue vaccinations, and why those protocols were not being followed.

Next, I solicited the list of “my” patients “overdue” for PV. I methodically reviewed the list, correcting documentation errors that mistakenly categorized patients as eligible for PV—including deceased patients—or erroneously identified them as overdue (e.g. immunizations documented in my notes yet “invisible” to the data query).

I then drafted and sent a letter to targeted patients explaining their eligibility for PV. I signed an order for the appropriate vaccine so patients could make an appointment and receive PV without my further involvement.

In week six, I solicited another list and surprisingly found a new group of patients on my “overdue” list. I repeated the exercise above with this new list.

I then began piloting a series of exercises during each patient care session, tweaking my practice daily to find activities I could live with that would improve my PV rates.

What I Learned
I thought I would work on PV for two weeks (maximum) and then move on to other items on my list. Much to my surprise, meaningful PV improvement has consumed my entire dedicated “QI hour” for the first 12 weeks.

First and foremost, I improved my knowledge of current vaccination recommendations for PPV23 and PCV13. I created a PV indication “cheat sheet” for easy reference. I answered my remaining questions about PV indications for patients with diabetes and malignancies by contacting the Immunization Action Coalition and the Centers for Disease Control (CDC).

I learned that our medical assistants (MA) were supposed to initiate a PV order for eligible patients when they arrived for visits, and I came to understand why they were not doing so. I re-learned how (and where) to appropriately document a patient’s refusal of vaccination, as well as how to document when PV was previously completed. I learned what my division defined as “PV eligible” patients and was surprised to learn that I was responsible for the immunization of patients who had seen me only once, as long as three years ago.

I learned that electronic health record (EHR) errors explained a sizable portion of my variance. My list of “eligible” patients included about 30 people who did not belong there—including deceased patients, patients I had never seen, patients who had changed primary care providers, and “fake” patients crafted for training but inexplicably assigned to me as their primary care physician.

I came to realize that the legwork on each project—the self-education, gathering of information from multiple sources (including experts, office stakeholders, and patients), requesting data, and contacting patients—takes much longer than I

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A patient presents to the pain clinic for management of chronic back pain. During the visit she reports progressive neck enlargement and intermittent hoarseness lasting for months. Concerned about the possibility of an underlying structural lesion, the physician orders an MRI of her neck. The pain specialist is unaware that a CT of the thorax, ordered by the patient’s primary care physician (PCP) nearly two years ago, identified a right goiter with substernal extension. The patient is unaware of the CT findings, although she was advised by the PCP to schedule an appointment after the CT. The results of the CT are not documented in the PCP’s notes, and there is no record of any attempts to reach the patient about the CT findings.

The pain specialist advises the patient to follow up with her PCP for further evaluation of hoarseness. The patient schedules an appointment in the resident teaching clinic. The resident orders pulmonary function tests that are consistent with extrathoracic obstruction. A CT of the neck is ordered and performed two weeks after the MRI. Both reveal a retrosternal goiter. Per the CT report, the goiter has enlarged significantly compared with the previous study and is now encroaching on the trachea.

During a follow-up visit with her resident physician, it is learned that the patient has been exposed to unnecessary repetitive imaging and that previous imaging was missed for review, resulting in a delay in appropriate diagnosis and treatment. After recognition of this event, a root cause analysis is performed in order to prevent missed testing in the future and to prevent potential patient safety adverse events.

A root cause analysis (RCA) is a method in risk analysis that helps identify contributing factors associated with an adverse event. The result of a specific unsafe act (active error) that produces an adverse event often has multiple contributory factors (latent errors) that create an unsafe environment. By placing blame on an individual, weaknesses in the operating structure of the system remain unchanged, creating a vulnerability for a repeat adverse event. In an effort to prevent adverse events from recurring, it is necessary to identify and either mitigate or eliminate the contributory factors associated with an adverse event. As a result, a new standardized system process is created, altering the previous environment that allowed for an active error to occur.

In an RCA, a series of steps are taken. First, a team is formed and led by an individual with expertise in RCA who was not directly involved in the adverse event. Information is gathered through flowcharts regarding the adverse event in order to identify what happened. Next, the causes or contributing factors are determined by utilizing fishbone diagrams and the “Ask Why Five Times” technique. Finally, recommended actions are summarized and shared with leadership to propose changes in the standardization of the system processes.

The World Health Alliance for Patient Safety has identified poor test follow-up as one of the major processes contributing to unsafe patient care. This problem has been well described during transitions of care. In one study, 41% of patients were discharged with laboratory and radiological test results still pending. Between 20% and 62% of tests pending at the time of discharge were not followed up post-hospitalization; for patients discharged from the emergency department, the range is estimated to be 1% to 75%. In a recent study of radiology follow-up using an e-mail alert system for important imaging findings, 20% of electronic reports were not viewed by the referring physicians. Recent studies focus on lack of follow-up of tests ordered in the ambulatory setting. Between 7% to 62% of alerts displayed through a computerized provider order entry system were not reviewed within 30 days. The consequences of missing results can be significant, resulting in delayed diagnoses, adverse drug events, and increased visits to the hospital.

The factors that contribute to missed test results are the type of system or practice used (i.e. electronic health record (EHR), paper system, or hybrid), procedures for communicating critical test results, and the test result practices for patients moving across care settings.

In this case, an interdisciplinary team was formed comprised of residents, academic faculty, and EHR information technology professionals. Two main root causes associated with the adverse event of unnecessary imaging and missed imaging results were identified: 1) Each care setting used a different EHR system, and 2) there was no standard system for test result reporting of important or urgent imaging for the outpatient resident PCP clinic. The first root cause identified was that the inpatient hospital, pain clinic, and outpatient resident clinic all used different EHR systems at our medical center, creating a lack of transparency in health care management between different providers. As a result, the pain specialist was unable to access the PCP’s health care management plan and acknowledge a work-up for the patient’s symptoms that was already in process. The second root cause recognized was that residents are not present in the clinic every week. Consequently, the cover continued on page 12.
What Could Go Wrong? A Medical Student’s Reflection on Implementing Quality Improvement Changes

Connie Chin

Ms. Chin is a fourth-year medical student at Case Western Reserve University School of Medicine in Cleveland, OH.

And it ought to be remembered that there is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success, than to take the lead in the introduction of a new order of things.

—Nicolo Machiavelli

I started my quality improvement (QI) research project in my third year of medical school with very limited previous exposure. In my first two years, topics such as stricter hand hygiene to decrease infection rates were mentioned only briefly. Nevertheless, it was enough to pique my interest. As I learned more about the field, I felt inspired because these success stories defined a true collaboration among disciplines seeking the same goal—better patient care.

And so I was excited to embark on my first quality improvement project. The goal was to increase doctor-patient communication. The project seemed simple enough. A piece of paper prompting for questions would be distributed to each patient. The patient would write down a question if he/she had one. The question would be collected, and the physician would then see the patient to respond. I thought to myself, “What could go wrong?”

I spent the first couple of days introducing myself and the project to everyone who worked on the floor (i.e., physicians, nurses, case managers, patient liaisons) and informing each of them of their roles and responsibilities. Everyone thought the project was a great idea and commented on the importance of addressing doctor-patient communication. Receiving such an overwhelmingly positive response, I felt even more confident about the implementation of this project. But once the study began and it was time for people to participate in the project, I was surprisingly met with some resistance. Papers were not being completely distributed, and questions were no longer enthusiastically answered. I even felt as if I were an annoyance to some when I checked in to see if people had any comments or concerns. More and more it seemed like the responsibilities required for the success of this project were not being met.

Needless to say, it was not going as smoothly as I had hoped. Going into the project I felt well prepared for developing and carrying out a QI project thanks to the Institute for Healthcare Improvement Open School courses; however, I found that the challenges were much greater in practice.

There was an endless line of hurdles in front of me, and despite how badly I wanted to remove those hurdles, I could not. It was difficult to see a project I believed in so much come apart. However, among the struggles and barriers, there lay an opportunity to learn and try again—a chance to reconnect the pieces in a different way.

Instead of trying to advance multiple changes, which was not leading to progress, I decided to simplify things. I eliminated the steps of distribution and collection in order to focus on answering patients’ questions. In response, I noticed better participation and was able to collect more data.

The project faltered at times, but I did leave with lessons learned about myself and others, and I developed a greater appreciation for all the hard work that goes into implementing change. Here are a few take-home points I’d like to share for students embarking on their own QI projects:

1. **We are creatures of habit, and resisting change is often easier than changing.** Most people want to embrace change, but for most it does not come naturally. When I first started this project, people really celebrated the idea of increasing doctor-patient communication. However, when the time came to make changes in their daily routines, the staff found it difficult to keep the end goal in perspective, which leads to the second point.

2. **Start with a few simple changes.** The first few improvement cycles did not succeed due in part to the sudden increase in the team’s responsibilities for the project. In retrospect, I was trying to implement too much change at once. But after I simplified the changes in later improvement cycles, I was finally able to collect a good amount of data.

3. **Advertise your project.** This point is especially relevant in academic teaching institutions where the staff may not necessarily be the same day to day. Be proactive in explaining your project and asking if people have questions. It is likely that people may not remember all the details of your project. Be your project’s biggest advocate!
Improving Care: How Can SGIM Best Support Practice Improvement and Innovation?

Jim Bailey, MD, MPH, and Martin Arron, MD, MBA

Drs. Bailey and Arron are chair and co-chair of the Practice Management Subcommittee of the Clinical Practice Committee.

SGIM Council has charged the Practice Management Subcommittee of the Clinical Practice Committee (CPC) to: 1) promote best practices in practice redesign, organization, operations, and efficiency; 2) foster communication and collaboration among members of SGIM’s membership who lead and study practices; and 3) help develop and promote innovative practice models such as the patient-centered medical home and neighborhood. In a word, Council sees that supporting practice improvement should become a major priority for SGIM. They recognize that supporting practice improvement and innovation will help to further align the interests of general internists with those of their patients. Simultaneously, this strategic initiative should help members take full advantage of value-based payment opportunities, improve work environments for primary care physicians, support practice transformation, and make SGIM more attractive to members.

In response to this charge, the CPC and its Practice Management Subcommittee have undertaken the following major initiatives to better serve our members’ practice improvement needs:

1. **Enhancing SGIM practice improvement website resources.** At our May 2015 committee meetings in Toronto, we affirmed the need to revamp our web presence to make practice improvement resources more readily available to our members and to provide access to content of high relevance to SGIM members and others seeking to redesign their practices. We agreed on the following website redesign principles:
   - Use open-access SGIM web pages to share key practice improvement resources,
   - Create a rebranded landing page to direct members to practice improvement resources,
   - Feature resources developed by SGIM members and collaborate with other like-minded organizations to share best content, and
   - Increase availability of workshop materials in order to facilitate sharing and improving workshops across regions.

   This website enhancement initiative is in the early design phase, but we are envisioning a prominent SGIM landing page that serves as a directory to open-source practice improvement resources under an easily identifiable website such as SGIM.org/ImproveCare. Our website needs to make it easy for SGIM members to share and find best practice improvement resources. If you are interested in contributing content, ideas, or website design expertise, contact Jim Bailey (jeb@uthsc.edu).

2. **Increasing regional and national workshop offerings in practice improvement.** Meeting workshops and symposia have already been highly successful in disseminating knowledge to the membership about innovation in practice management, but more workshops are needed. We are expanding past successful workshops on using the new annual wellness visit, transitional care management, and chronic care management billing codes. We are reaching out to high-performing and innovative practices led by SGIM members throughout the country and asking them to submit workshops for upcoming regional meetings. In addition, we are building a larger library of open-source practice improvement resources from prior workshops, precourses, and other presentations that we plan to make more readily available through SGIM.org so that members can adapt these materials to present workshops in their region. We will be surveying members regarding areas of greatest interest for workshops in practice improvement. We have developed a proposal for a major annual meeting symposium focused on practice redesign, and we have asked Council and the Annual Meeting Planning Committee to consider having a dedicated category for “practice improvement” for workshop submissions to future regional and annual meetings. If you are interested in contributing to future workshops, or adapting a past workshop to present in your region, contact Martin Arron (MAarron@chpnet.org).

3. **Promoting “Improving Care” SGIM Forum articles and SGIM eNews.** This column inaugurates a new regular column in SGIM Forum focused on practice improvement and innovation called “Improving Care.” We have begun to identify practice improvement topics of interest to our members and are asking members working in the trenches of primary care to report their stories and experiences of success and failure as part of our effort to share key lessons and continued on page 13.
In the fall of 2014, the SGIM Membership Committee launched the membership survey to understand the needs of our members and gauge their satisfaction with the Society. The questionnaire was based on prior surveys and designed to be comparable to those from 2004, 2009, and 2012. We formulated 60 questions for trainees (i.e. students, residents, fellows) and 71 questions for full members. Seven questions were open ended, and the rest were multiple choice. All survey questions underwent several rounds of review and were pilot tested before launch. The survey was sent to all SGIM members via e-mails that included a SurveyMonkey® link and 10 reminders (i.e. seven through SurveyMonkey, two included in E-news, one through the All Member Open Forum) as follow-up requests to participate in the membership survey. An editorial in Forum also supported this endeavor. There were a total of 1,011 respondents, which represented approximately 31% of the membership. A summary of the highlights of the quantitative portions of the survey follows.

**Respondent Characteristics**

**Gender.** As shown in Table 1, survey respondents in 2014 were 54% female and 45% male. (Approximately 1% preferred not to answer.) This was consistent with a trend over the last seven years of more women joining SGIM and/or completing the SGIM Membership Survey.

In the two oldest age groups (i.e. greater than age 65, age 55 to 64), men outnumbered women by approximately 2 to 1. In the two youngest age groups (i.e. age 25 to 34, age 35 to 44), women outnumbered men by approximately 2 to 1.

Another notable gender difference was the higher percentage of female respondents who reported working part time in 2014—16% compared to 4% among male respondents. An in-depth analysis of the gender differences found in the survey is being prepared by the SGIM Membership Committee for publication in 2016.

**Age.** Overall, a higher percentage of respondents in 2014 were 55 years or older compared to prior years, but 2014 showed an increase in the proportion of members in the 25 to 34 age group (Table 2).

The three most valuable professional resources were felt to be the: 1) the annual national meeting, 2) presentation opportunities at the annual national meeting, and 3) networking opportunities.
Improving Care Through Listening to Patients and Families

James M. Richter, MD, MA

Dr. Richter is chair of the Clinical Practice Committee.

Patients and families are being asked to take an active role in their own health care and engage as partners with their health care providers to improve their own health and that of their family members. Building a patient- and family-centered primary care practice that views patients and their families as members of the health care team demands culture change and new openness on the part of providers. Patients and families have expertise, experience, and perspectives that are critical to bringing about this transformation. Innovative health care systems are involving patients and families as leaders and advisors for peer education and support. Patients and families are participating with providers in developing medical homes and organizational systems that support collaborative self-management. Providers are also involving patients and families as advisors and partners in other quality improvement and redesign initiatives.

Patient and Family Advisory Councils (PFACs) are groups of patients, family members, and staff who partner with practices or hospitals to improve the quality of health care and the care experience. Hospital councils across the United States have contributed to important and lasting changes. Massachusetts has been a national leader in recognizing the value of the patient and family voice and is the only state that requires hospitals to establish PFACs. As a result of the law, all Massachusetts hospitals have patient and family advisors working with them to improve care. Currently, 93 PFACs in Massachusetts are actively working to help improve care in acute care and rehabilitation hospitals. However, PFACs are not nearly as common in the ambulatory setting, even though PFACs or more informal gatherings for smaller practices represent a best practice for ambulatory centers as well.

The Patient-Centered Outcomes Research Institute (PCORI) is partnering with SGIM with an educational grant to encourage SGIM member-led investigation to improve health care systems. Health care organizations are faced with crucial decisions about improving their systems of care, but they often lack critical information about the perspectives and values of their patients or customers. Patient-centered research can help them provide better care more effectively and efficiently, leading to improved patient-centered outcomes. PCORI is particularly interested in comparing health care system-level approaches to improving the safety, effectiveness, patient-centeredness, timing, efficiency, equity, and accessibility of care and health care practice. The PCORI Improving Healthcare Systems Program funds and manages research studies that will provide valuable knowledge to patients, their caregivers, and clinicians.

The Baldrige Program is the nation’s public-private partnership promoting organizational performance excellence and emphasizes the importance of patients in performance improvement efforts. The Baldrige Customer and Market Focus Criteria addresses how an organization seeks to understand the voices of customers and meeting customers’ expectations and requirements. They stress relationships as an important part of an overall listening, learning, and performance excellence strategy. Customer satisfaction and dissatisfaction results can provide vital information for understanding a medical practice’s customers and the marketplace. In many cases, such results and trends provide the most meaningful analysis of this growing population of SGIM to be published in 2016.

| TABLE 3. PERCENT OF SURVEY RESPONDENTS WHO IDENTIFY AS HOSPITALISTS |
|-----------------|-----------------|-----------------|-----------------|
| Hospitalist     | 2009 | 2012 | 2014 |
| Yes             | 11%  | 15%  | 22%  |
| No              | 89%  | 85%  | 78%  |

Distribution of Work Effort. Survey respondents were doing more

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monly reported salary range was $150,001 to $175,000 for assistant professors, $175,001 to $200,000 for associate professors, and $200,001 to $225,000 for full professors.

Hospitalists. The percentage of survey respondents who identified as hospitalists increased in 2014 to 22% from 15% in 2012 and 11% in 2009 (Table 3); 64% of hospitalist respondents reported being age 44 or younger. The SGIM Membership Committee is completing an in-depth analysis of this growing population of SGIM to be published in 2016.

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Assessment

The problem faced by Dr. Bearnot and colleagues is a common one among clinical investigators not versed in data extraction methods involving EHRs. Many clinical investigators, after receiving appropriate institutional review board approvals, resort to sitting in front of a computer screen and conducting a chart review by sheer brute force. There are many problems with this approach. First, it is time consuming. Most of these investigators are busy clinicians whose time would be much better spent considering what the data mean rather than trying to recollect data that have already been collected. Second, it invites error. These individuals may make errors in re-recording the data that were not present in the original record. Third, it is very difficult to collect all relevant data on a statistically meaningful sample of patients due to the sheer effort required. Fourth, it raises issues about how the data are cleaned and interpreted that are better addressed at the analytic stage rather than during initial recording. Specifically, investigators are often tempted to simplify or interpret data at the point of data extraction and may not be consistent in how this is done. Finally, by failing to learn how to systematically extract data from the EHR, investigators doom themselves to the same painful process the next time they want to answer an important clinical question.

Intervention

After Dr. Bearnot discussed the pain point with senior informatics researchers at MGH/Partners Healthcare, a data extraction tool was repurposed for this project. The tool was used to extract the AUDIT-C data from the Clinical Application Suite at MGH, which houses several applications in the MGH EHR, including the order entry system, results viewer, and list management system. Responses were extracted in a coded manner, allowing for analysis of the data in a number of meaningful ways, including association with referral data. This represents a secondary use of nursing data, which leverages routinely collected clinical data within the EHR for the investigation of important research and quality improvement questions.

Reference

thought it would. It cannot be a solo physician job, and an important part of this effort is going to be crafting manageable workflows for others in the practice.

The most important lesson I have learned is this: There is immeasurable value in designating time for review and reflection on the processes of care delivery, and the impact of this work is directly proportional to the time dedicated to it. If a physician begins a project believing that real change can be achieved by doing this between patients, at night, or at the beginning or end of the day, he/she should not be surprised to find minimal progress even months after starting. So I am sticking with Q1 hour and will be excited to see whether the test of time supports my impression.

What I Still Need to Learn
Most of my knowledge gaps relate to our EHR and how my institution expects us to use it. For example, I have been unable to determine how to request changes to order sets that might make vaccine ordering easier. I still cannot generate my own list of patients overdue for PV and export it to a spreadsheet.

I have several outstanding questions about how my “performance” is calculated: Do I get credit for documenting a patient declining a vaccine? Does vaccination during an inpatient admission “count”? Will PCV13 vaccination satisfy the insurers who are incentivizing PV? I am hoping to find answers to these questions soon.

What Was Lost
Invariably, devoting one hour to a new task means giving something else up. What “fell off the list” as I added an hour a week of “care of my care delivery system”? Most obvious was advocacy. In the past two months, I have made little time for my advocacy committee work and regrettably have skipped some meetings and missed some deadlines. Some elements of the July resident clinic transition—one of my prime responsibilities—fell off my radar. There were interns who arrived without EHR access and nights with no phone coverage for resident patients. Notably, I found no clear causative link between “QI hour” and these two gaps; it’s simply an observation.

It was also pointed out to me that what started as a personal exercise has consumed a fair bit of office resources. My requests for data generation, my conversations with the MAs during their work day, and the changes in practice workflow I was requesting pulled staff from their day-to-day roles. I have had to be cognizant of that impact.

Going Forward
I plan to meet with the MAs to modify our PV protocol to suit their needs and keep patients moving quickly. I also will help them draft a script they can use when asking patients about PV. I will develop resident education materials regarding PV and will ensure that the residents in my practice know that PV is a practice priority. I will reinforce it with e-mails, posters, and podcasts.

I will investigate the possibility of sharing PV incentive payments with our staff. I strongly believe that if we expect our MAs to be our foot soldiers in vaccination efforts, we need to identify ways to share financial incentives.

Most importantly, with this project I will demonstrate to trainees and colleagues that it is possible to effect change in care delivery by dedicating scheduled time to structured QI activities. In this era of CLER visits and milestone reporting, I hope my “QI practice” can serve as a nidus for trainee, practice, and institutional change for how clinicians spend some non-face-to-face time. I believe that only when trainees see faculty role models “walking the walk” will they begin to incorporate these skills into practice. My belief is that then they will be far more willing partners in influencing the care delivery systems in which they will spend their careers.
ing resident may be oblivious to an urgent test result if he/she did not order the test, despite the result waiting in the ordering resident’s EHR inbox.

The greatest limitation to a productive RCA is the inability to create feasible recommended actions. Unfortunately for our health care system, due to budget and contract constraints within each hospital care setting, it is not feasible for the inpatient, outpatient, and pain clinic to all have the same EHR system to facilitate data flow between health care management locations. However, in order to facilitate follow-up of prioritized studies and to decrease missed results, our outpatient resident clinic implemented a centralized e-mail inbox that receives all incoming prioritized test results. Additionally, a physician—in our case, a resident on his continuity clinic week—is now specifically assigned to be responsible for reviewing and managing these on any given day. By implementing this standardized system, our outpatient resident clinic has utilized the RCA to find a feasible solution to decrease missed test results and subsequently decrease delays in appropriate diagnosis and treatment.

References

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<tr>
<th>Contributing Factors</th>
<th>Action Plan</th>
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<tbody>
<tr>
<td>Multiple EHR systems utilized across the health care system</td>
<td>Standardize the EHR across all health care settings in the hospital network. Critical lab value reports are e-mailed to a centralized e-mail inbox of the outpatient clinic EHR.</td>
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<tr>
<td>No standard for urgent test result reporting</td>
<td>One senior resident rotating in the outpatient clinic is responsible for following up on critical lab value reports in the centralized e-mail inbox throughout the clinic day.</td>
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FROM THE SOCIETY: PART II

(29%) spent 25% or more of their time on research in 2014 compared with 37% in 2004 and 34% in 2012.

Overall, respondents in the 2014 survey preferred less clinical and administrative activity and more time for research and teaching. Only 29% of respondents spent 25% or more of their time doing research while 41% preferred to be spending 25% or more of their time doing research. Currently, 38% of respondents were spending 25% or more of their time teaching. A total of 56% preferred to be spending 25% or more of their time teaching.

Job Satisfaction. Overall, job satisfaction remained high among survey respondents: 86% ranked their job satisfaction at a six out of 10 or higher compared to 89% in 2012 and 91% in 2004. Of note, the highest job satisfaction (i.e. six or higher) was reported among respondents age 25 to 34 (92%) and those age 55 or older (90%). The lowest job satisfaction was reported by participants age 45 to 54 (83%). By region, the highest job satisfaction (i.e. six or higher) was in the Northwest (96%) and Mountain West (95%) while the lowest job satisfaction was reported among international (82%), Mid-Atlantic (83%), and Midwest (84%) respondents.

Membership Payment. A greater percentage of survey respondents paid for their SGIM membership out of pocket in 2014 (43%) compared to 2009 (36%). There were no comparable data for 2012 and 2004. Most of the SGIM membership (82%) received a flat dollar amount for scholarly activities and professional dues while 18% had a variable/incentive-based program. The most common range of institutional funds available was $1,001 to $2,000.

Trainees. A total of 80 trainees, fellows, residents, or students responded to the question regarding likelihood of pursuing a career in general internal medicine. The majority (86%) of those who completed the survey said they were likely to pursue a career in GIM. Trainees reported that their most important needs from SGIM were: 1) clinical skills development, 2) finding or working with a mentor, and 3) selecting a fellowship or residency program.
FROM THE SOCIETY: PART I
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best practices. We are in the process of scheduling topics and articles for the year, so if you are interested in writing an “Improving Care” column for Forum, contact Jim Bailey (jeb@uthsc.edu).

4. Fostering potential SGIM-AMA STEPSForward Collaboration. The American Medical Association (AMA) recently launched STEPSForward (www.stepsforward.org), a set of free, online, interactive practice transformation toolkits to help physicians and their staff redesign their practices, improve patient care, and enjoy their work. Over the last six months, we have been working with SGIM member Christine Sinsky, MD, who is now vice president for professional satisfaction for the AMA, to consider co-developing and co-branding of selected STEPSForward practice improvement modules in order to expand SGIM member access to relevant and evidence-based practice improvement information through www.SGIM.org. The work is grounded in studies conducted in part by SGIM members, including the Rand-AMA study on physician career satisfaction and the American Board of Internal Medicine Foundation-sponsored study, “In Search of Joy in Practice.” The goal of STEPSForward is to improve the health and well-being of patients by improving the health and well-being of physicians and their practices. Individual SGIM members have already been engaged in creation and/or review of several of the initial practice transformation modules. We are working to extend this informal partnership to include additional module development and co-branding of modules in which SGIM members have played a significant role following review and approval by the SGIM Practice Management Subcommittee of Clinical Practice. As of the writing of this column, we have: 1) developed and pilot tested a peer-review process for STEPSForward modules (co-authored by, or with significant contributions from, SGIM members) by the Practice Management Subcommittee and 2) approved modules for co-branding that meet Subcommittee standards for relevance, clarity, and clinical evidence. If you are interested in contributing to the development or review of future STEPS-Forward modules, contact Christine Sinsky (christine.sinsky@ama-assn.org) or Jim Bailey (jeb@uthsc.edu).

Please let us know if you are interested in helping with this work or if you have ideas for other ways we can support SGIM members in their efforts to redesign their practices and improve the care their patients receive.

FROM THE SOCIETY: PART II
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Satisfaction with SGIM
Most survey respondents (81%) reported their SGIM membership as very valuable or essential and plan to renew next year. Eighteen percent reported their membership was valuable but were unsure about renewing. Only 1% found their membership not valuable and did not plan to renew.

Networking, regional and national meetings, and opportunities to present their work were cited as the most critical aspects of SGIM’s value. Job and career listings, opportunities to volunteer, and continuing medical education credits were cited as the least important aspects of the Society.

The three areas that survey respondents felt that SGIM did not emphasize enough were: 1) facilitating members’ career advancement, 2) developing members’ leadership skills, and 3) developing administrative skills for SGIM members.

The three most valuable professional resources were felt to be: 1) the annual national meeting, 2) presentation opportunities at the annual national meeting, and 3) networking opportunities.

Most respondents (83%) attended at least one national annual meeting within the last five years, while 58% reported attending at least one regional annual meeting within the last five years. In terms of regular conference attendance, 47% of respondents attended three or more national annual meetings in the last five years, while 26% attended three or more regional annual meetings in the last five years.

“Members of the SGIM Membership Committee that contributed to this survey include:

1. Irene Alexandraki
   Florida State University
2. Robert Fogerty
   Yale University
3. Maria Frank
   Denver Health Hospital Authority
4. Robin Klein
   Emory University
5. Michael Lazarus
   University of California - Los Angeles
6. Marilyn Schapira
   University of Pennsylvania
7. Melissa Wei
   University of Michigan
8. Jeffrey Whittle
   Clement J. Zablocki VA Medical Center
**NEW PERSPECTIVES**

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meaningful information not only on customers’ views but also on their marketplace behavior, positive referrals, and their contribution to the sustainability of health care organizations operating in an increasingly competitive marketplace.

At the Massachusetts General Hospital where I work, we are working to listen and learn from patients and families through our primary care “Ambulatory Practice of the Future,” which operates a “Care Alliance.” This is an ambulatory PFAC that facilitates an ongoing dialog among patients and staff to promote innovation and the optimization of care. Care Alliance members have played a major role in developing and providing input about written information for new patients and staff processes as well as reviewing survey results. The Clinical Practice Committee is aiming to spread this work throughout the country by sharing these best practices on SGIM.org and at our regional and national meetings.

PFACs represent a new and critical best practice that SGIM needs to champion in ambulatory primary care settings nationwide. Not only can patients and family members shape the patient experience at hospitals, but they can also promote truly patient-centered care in ambulatory and community settings. In particular, patients and family members can assist medical practices and groups by participating on key clinic-based and system-wide committees, reviewing educational materials for patients and families, lending their wisdom to staff, and helping to shape the patient experience at hospitals, but they can also promote truly patient-centered care in ambulatory and community settings.

**TASK FORCE UPDATE**

**Geriatrics Task Force and Geriatrics Interest Group Update**

Jennifer Carnahan, MD, MPH, and Seki Balogun, MBBS, FACP

Dr. Carnahan is an advanced geriatrics research fellow at the Indiana University Center for Aging Research, Regenstrief Institute, Inc., and Dr. Balogun is associate professor in the Division of General Medicine, Geriatrics and Palliative Care at the University of Virginia Health System, in Charlottesville, VA.

With the advent of the “silver tsunami,” geriatrics has become an increasingly important topic in all specialties, including general internal medicine (GIM). The goal of the Geriatrics Task Force (GTF) and Geriatrics Interest Group is to facilitate the interface between geriatrics and general internal medicine through education, research, and practice updates.

One of the GTF’s most successful activities has been the Distinguished Professor in Geriatrics Program. Started in 2004, this yearly program identifies a notable internist or geriatrician to deliver a keynote address at the annual meeting and lead a walking tour through geriatrics-related posters. These activities facilitate career development of SGIM members in academic fields directly related to older adult medicine.

Over the years, the GTF has led an effort to elaborate on the future of geriatrics research through a generous grant from the Association of Subspecialty Professors. This year, the Association of Subspecialty Professors awarded the group a grant to develop best practices for the transition of care from skilled nursing facilities (SNFs) to home. Positioned at the interface between geriatrics and GIM, older patients who face this transition are at risk for poor outcomes such as hospital readmissions and medication errors. A group of internists, geriatricians, and SNF providers from across the country convened in July 2015 to develop best practices for transitions of geriatric care. The first edition of these best practices is due to be released in 2016.

Another achievement of the GTF and interest group this past year was to communicate the interests of generalists in the latest update of the Beers Criteria for Potentially Inappropriate Medication Use in Older Adults. These criteria are one of the most widely recognized prescribing guides to prevent adverse medication effects in vulnerable older adults. They are updated periodically by the American Geriatrics Society, and as one of the largest groups of generalists in the country, SGIM was asked to provide comments on the latest draft of the updates.

We are also currently working on workshop submissions on Medicare wellness visits and geriatric preoperative evaluations for the SGIM annual meeting. To further the mission of the GTF and interest group to inform SGIM members of cutting-edge issues in the care of older adults, the GTF will begin providing periodic updates in geriatrics via *Forum*. Stay tuned for more to come!
General Internal Medicine Opportunities
Hybrid Position as Academic Hospitalist/
Bone Marrow Transplant Specialist

The Section of Hospital Medicine at the University of Cincinnati College of Medicine, Cincinnati, Ohio is seeking Board Eligible Internists to join our faculty as academic hospitalists with a specialty focus on the care of patients with cancer including those undergoing bone marrow transplantation. As part of the Division of General Internal Medicine, which performs the bulk of resident and student teaching for the Department of Medicine, you will provide patient care in several settings, including attending on traditional resident-led ward teams, attending on the resident-led medical consultation service, leading a hospitalist team including an intern and/or physician assistant, and as a nocturnist functioning as the senior General Medicine faculty member at night while cross-covering our Bone Marrow Transplant and Malignant Heme service.

Academic opportunities include:

- Teaching in our Internal Medicine Residency program which has been granted status as an ACGME Educational Innovations Program;
- Proficiency in the care and management of patients following bone marrow transplantation;
- Research mentorship in Hematology/Oncology;
- Direct teaching of medical students in all four years of our new clinical curriculum; and
- Collaborating with researchers in our Center for Clinical Effectiveness and Center for Health Informatics.

Opportunities also exist for participation in Improvement Sciences and mentored research experiences in Outcomes and Clinical Effectiveness. Our hospitalists are leaders in improving both patient care and clinical processes at our primary location, University of Cincinnati Medical Center.

Salaries are competitive, with opportunities for increases based on productivity.

If you are interested in joining UC Health in Hospital Medicine, applicants should contact either Mark Eckman, Director, Division of General Internal Medicine via email at Mark.Eckman@uc.edu or Justin Held, Interim Director, Hospital Medicine, via email at Justin.Held@uc.edu

We are recruiting for July 2016.

The University of Cincinnati is an affirmative action/equal opportunity employer.
INTEREST GROUP UPDATE

Academic General Internal Medicine in Latin America Interest Group
Eliseo J. Perez-Stable, MD, and Raul Mejia, MD

Dr. Perez-Stable is with the National Institute of Minority Health and Health Disparities, and Dr. Mejia is with Centro de Estudios de Estado y Sociedad (CEDES) and Hospital de Clinicas, Universidad de Buenos Aires, Argentina.

The Academic General Internal Medicine interest group was established at the 1993 SGIM Annual Meeting and led by Eliseo Perez-Stable and Edgardo Vazquez. SGIM Council approved an affiliation agreement at the time with the Sociedad Argentina de Medicina Interna General (SAMIG) in recognition of the nascent interest in ambulatory education, clinical research, and generalist principles in providing care in Argentina. Over the past 22 years, the interest group has focused on three main objectives: 1) to discuss specific public health problems that affect Latin America and how these impact the role of the primary care generalist, 2) to share results of research studies completed in Latin American countries frequently in collaboration with funded researchers in the United States, and 3) to facilitate networking between general internists from the United States and Latin American countries and to enhance South-South communication among researchers.

At every SGIM annual meeting, the interest group has brought together general internists based in Latin America as well as SGIM members who have worked in Latin America or have a special interest in the area. Up to three short presentations about relevant topics are offered with a special emphasis on a general internal medicine perspective. Some examples of topics include the implementation of a patient-centered medical home in Argentina; the impact of managed care in Latin America; tobacco industry interference in medical meetings in Latin America; and comparisons of health care systems and problems in Chile, Ecuador, Mexico, El Salvador, and Argentina. Investigators from Latin America also present the results of research projects performed in their countries. The meeting provides a forum for discussion, education, and networking.

Every year colleagues with an interest in Latin America join the interest group and identify opportunities for implementing workshops or meetings outside the United States and placing interested students or residents in clinical or research experiences. There have been at least five SGIM members who have been on a sabbatical leave in Latin America during this time and a dozen others who have been invited as visiting professors. Medical students and residents have also been funded by institutional summer grants to conduct research and have international clinical experiences.

With the passage of time, the interest group has become a space for discussing the growth and evolution of models of general internal medicine in Latin American countries. We invite all SGIM members interested in Latin America health issues to join the interest group at the 2016 annual meeting.