CAN WE AFFORD PRECISION MEDICINE?

Lisa M. Kern, MD, MPH

Dr. Kern (lmk2003@med.cornell.edu) is the associate director of research in the Division of General Internal Medicine and associate professor of medicine and healthcare policy & research at Weill Cornell Medicine, New York, NY.

Note: This essay was adapted from remarks delivered at a panel on the “Future of Medicine” at my 25th college reunion on May 26, 2018. Most of the panelists discussed technological advances that they envisioned, with a focus on precision medicine (an emerging approach to medicine that proposes to customize the selection of treatment for patients in part based on genetic variability).

I’d like to contribute to this discussion by talking about healthcare costs. I’d like to start with the intentionally provocative assertion that we can’t afford precision medicine. We as a country can’t afford it, so we shouldn’t pursue it. I say this not because I really mean it, but because it is striking that we never say things like that. Can we afford it? How do we figure out what we can “afford?”

When I was in college, I majored in psychology, fascinated by the concepts of motivation and behavior. Why do people do what they do? What are the incentives that influence them?

I graduated from college in 1993 and went straight to medical school, which meant that I was a first-year medical student at the time that the Clinton health plan was being debated. I took an elective in health insurance my first semester of medical school, which was taught by Dr. Rashi Fein, a professor who was in Washington, DC in the 1960s when Medicare and Medicaid were created. I was absolutely captivated by this course. I thought, here was a social system, health insurance, that was profoundly influencing the way patients behave and the way providers behave. And we weren’t being taught in medical school how those forces would affect our practice of medicine or what to do about them. I tried to engage my classmates in discussions about health insurance. I would say something like, “Hey, guys, let’s talk about health insurance.” My classmates would say, “Lisa, we’re studying H2 receptors.” And I would say, “Health insurance.” “H2 receptors.” I didn’t get far.

I have since done a residency in internal medicine and a fellowship in research methods and healthcare policy called the Robert Wood Johnson Clinical Scholars Program. I am now an associate professor at Weill Cornell Medicine, where I do research on how to improve healthcare delivery and how to measure those improvements. I also teach medical students, residents, fellows and faculty. My favorite class to teach right now is for second-year medical students. I teach a series of lectures on healthcare policy, and I basically try to answer the questions: “How did we get here? Why is healthcare such a mess?”

As I have taught this class, I have tried to emphasize just how much our healthcare system today is a function of choices that we as a society have made in the past. So, allow me to take you on a whirlwind tour through the history of healthcare financing to see if that helps us answer the question of whether we can afford precision medicine or not.

Prior to 1870, doctors made house calls with their little black bags.1 Patients paid their doctors directly, or gave them something for their effort—perhaps a chicken or a loaf of bread. There were no intermediaries.

Hospitals developed in late 1800s only when we as a scientific community figured out that it was a bad idea to operate on someone in his or her home.1 We figured out sterile technique and then—all of a sudden—we needed expensive equipment and specialized staff, but we didn’t need those things all the time. Physicians were self-em-
FROM THE EDITOR

THERE AND BACK AGAIN
Joseph Conigliaro, MD, MPH, Editor in Chief, SGIM Forum

“Go back?” he thought. “No good at all! Go sideways? Impossible! Go forward? Only thing to do! On we go!”
—J.R.R. Tolkien, The Hobbit

Last week, I received feedback from my Advanced Clinical Experience (ACE) student who spent every Wednesday afternoon with me over 12 weeks as I saw patients in my practice. At the Zucker School of Medicine, ACE students are not there to simply shadow medical attendings but to have meaningful interactions with patients over the period of 12 weeks. This particular student provided a very detailed narrative in his feedback describing his experience. There was something that caught my eye in the narrative of his review that resonated with me. He wrote:

...it was a unique experience to see how he thoughtfully took complicated, distressed patients with numerous issues and directed them to get control of one problem at a time. I was able to see patients at various stages in this process. I was also able to pick up over the weeks how he subtly changed his behavior to suit each patient encounter.

Naturally, I was gratified to hear his description of what he observed and experience what I do for a living. I also recognized his comment as an apt description of one of the roles that we as internists fulfill. We are generalists so we take care of “complicated, distressed patients with numerous issues.” At the same time, we also, in partnership with the patient, “get control of one problem at a time.” It may sound more reductionist than it is, but that description better than any other that I have heard may help me to explain to non-medical people and colleagues what it is I do and why I enjoy it.

This month’s SGIM Forum celebrates the SGIM2018 National meeting with a recap and collection of photos. Last August, I wrote about the meeting as a vehicle for renewal and an anchor point to spring forward with renewed energy in the work that we do and love. We again dedicate the August issue of Forum to commemorate our time in Denver with a review by Meeting chairs, Dr. Lipika Samal and Dr. Saul Blecker, of the highlights of our four days together. Communications Director, Francine Jetton, commemorates the awards and accolades received by SGIM members.

Also in this month’s issue, Drs. Leung, Rodriguez, and Morgan keep the spirit of the Annual Meeting on continued on page 11
PARTNERING FOR HEALTH EQUITY

Giselle Corbie-Smith, MD, MSC, President, SGIM

...cross-disciplinary collaboration and engagement of non-academic partners are key factors in initiatives to increase the effectiveness of health services. Given the magnitude, complexity, and scope of problems within current health systems and communities, such partnerships are critical to advancing health equity.

Since 2004, I’ve collaborated with Community partners in eastern North Carolina on Project GRACE (Growing, Reaching, and Advocating for Change and Empowerment). This community-based participatory research (CBPR) partnership started at a point in my research when I wanted to move beyond describing minority participation in research to finding ways to engage communities of color in research that was responsive to community needs and interests. Project GRACE has been one of the most rewarding experiences of my research career. I have had the opportunity to work shoulder-to-shoulder with community- and faith-based organizations, healthcare organizations, and private citizens, all with the same goal of eliminating health disparities and achieving health equity in rural eastern North Carolina.

This focus on engagement and working collaboratively with nonacademic partners is part of a growing interest in patient, family, and community engagement in clinical care and research settings. Today, bringing multiple and varied perspectives together to solve complex problems in health and healthcare is a well-established and evidence-based approach. Partnering with community entities, similar to inter-professional collaboration or working with multidisciplinary research teams, brings its own challenges and rewards. Bridging disciplinary differences can be time-consuming and extremely challenging as can partnering with community entities. The success of both approaches depends on building an authentic partnership and integrating diverse viewpoints which may be complementary, or at times may seem to be at odds. The team members must value diversity, commit to the mission rather than individual positions when perspectives differ, and actively manage conflict. Despite these challenges, cross-disciplinary collaboration and engagement of non-academic partners are key factors in initiatives to increase the effectiveness of health services. Given the magnitude, complexity, and scope of problems within current health systems and communities, such partnerships are critical to advancing health equity.

continued on page 12
At this year’s 2018 SGIM Annual Meeting, we presented a Clinical Update in alignment with the meeting theme of Health Information Technology (IT): Clinical Informatics. Clinical Updates at the annual meeting are opportunities to highlight in 60 minutes important published papers in the preceding year on a certain topic, and in the format of clinical vignettes. This article is the first of a series, each written as a narrative review, that summarizes key papers that we presented about clinical informatics for generalists.

Introduction
For the Clinical Update, we focused on literature in six subtopics of clinical informatics:

- desktop medicine
- policy recommendations on electronic health records (EHR) and health IT
- clinical decision support
- population health
- mobile devices in clinical care
- mobile devices in clinical research informatics

In this series in SGIM Forum, we will summarize and provide references for further reading on each topic in more depth than was possible during the live session. This first article in the series focuses on desktop medicine, its universal and global nature, how it is categorized and quantified, and briefly notes ongoing efforts to address its burden and consequences.

Methods
We searched titles and abstracts from five journals, published between March 2017 and March 2018, for original research, reviews, and research letters. These five journals were selected as having the highest likelihood of publishing informatics studies that would be most relevant to general internal medicine physicians: Journal of the American Medical Informatics Association, Applied Clinical Informatics, Annals of Internal Medicine, JAMA Internal Medicine, and Journal of General Internal Medicine.

Additional papers published in other journals or up to two years prior to the annual meeting were included if they were particularly impactful in one of the key theme areas identified for this Clinical Update.

Case Vignette
Dr. van Laar finishes her fully booked clinic schedule. Even though she had two no-shows, she just barely stayed on-schedule between office visits, care coordination, and follow-up on urgent same-day results. She now has patient phone calls to do, secure messages to respond to, and new results to address in her electronic inbox. Clinical documentation from appointments and phone calls are also incomplete.

Desktop Medicine
The vignette describes a scenario familiar to general internists, who bear growing administrative burdens that manifest as increased time spent on desktop medicine and reduced time spent on patient care. Desktop medicine consists of activities such as communicating with patients through a secure patient portal, responding to patients’ online requests for prescription refills or medical advice, ordering tests, sending staff messages, and reviewing test results.1

The greatest concern is that added time performing administrative tasks translates to lost time for humanism and empathy. Distractions produced by the EHR can erode these qualities of a physician-patient relationship, which Sulmasy, et al., noted in the March 2017 JGIM on ethical implications of EHRs and makes recommendations focusing on how EHR use must be in service of the patient.2 In May 2017, the American College of Physicians described seven public policy statements and recommendations as strategies aligned with the mindset of Patients Before Paperwork, also an ACP campaign to reduce administrative burdens.3

Several studies were published 12 months prior to the Annual Meeting that tabulated physicians’ desktop medicine time and patient care time. Methods used either
a time-motion study approach, akin to Sinsky, et al., original study published in 2016,4 or EHR time-stamps or audit logs to passively monitor physicians’ distribution of time. Time-motion studies involve direct observations and presumably offer the most accurate possible measurements of time spent on certain activities, but limitations include the time-consuming nature of the method (i.e., an individual is observing the physician’s work) and the Hawthorne effect (i.e., the physician’s behavior changes due to the presence of an observer). EHR timestamps and audit logs can be a useful, scalable means for measuring visit time, but suffer limitations that stem from a lack of direct observation: measures of time are imprecise (e.g., if a physician does not log in to the EHR during a patient visit), may be overestimated (e.g., if a physician forgets to log out of the EHR), and do not represent all possible desktop medicine activities (e.g., time a physician spends talking on the phone).

One study of a large accountable care organization in California examined EHR logs using timestamps and time allocation data in an EHR in order to track physician time spent on desktop medicine tasks.5 EHR logs from more than 637,000 out-of-patient visits done between 2011 and 2014 by 471 primary care physicians were studied. Among their findings, physicians’ time was about evenly split between during clinical time, with 3.08 hours spent face-to-face and 3.17 hours performing desktop medicine tasks.

At Geisinger, audit logs were used to analyze workflow for >36,000 primary care encounters that occurred from January 2009 to June 2011 at 26 clinic locations at Geisinger Clinic.5 Interestingly, this study found that time spent with patients was on average longer before 10:00 a.m. (16.3 minutes) compared to after that time (15.4 minutes or less).

In time-motion study of Swiss residents, 36 internal medicine residents were observed (696 hours in total) and categorizing what activity they performed and where. This study found that they spent an average of 1.7 hours per day with patients and an average of 5.2 hours per day using computers.6 Fifty-two percent of their time was spent on indirect patient activities, while only 28.0% was on direct patient activities.

A study in Amsterdam, the Netherlands, involved observing 24 residents of various specialties at two academic centers (more than 162 hours of observation in total) and categorizing their activities as documentation, patient care, peer communication, and other activities.7 This study found that 38% of residents’ time was spent on administrative tasks, 37% on educational activities or collaborative meetings, and only 13% on direct patient contact. Further, the observations were performed before and after implementation of a structured EHR and concluded that documentation time had increased by at least 8.3%, which translates to about one additional minute per 11-minute visit.

Discussion
In summary, studies confirm what we anecdotally experience: Face-to-face time with a patient is between 13%6 to slightly above 50%1 of a physician’s time (higher would be desirable). About one-third more to than one-half of a physician’s time is spent performing desktop medicine tasks.4-7 These are fairly consistent findings, regardless of method of study, EHR vendor, or country.

Administrative demands are typically driven by billing and coding requirements, regulatory requirements such as care quality reporting, patient safety surveillance, and, further, increasingly for research and other secondary uses. Although a direct causal relationship between EHR use and burnout is difficult to quantify, it has already become a generally accepted phenomenon via unintended natural experimentation and observation. One study published in the 12 months prior to the Annual Meeting sought to quantify this relationship and through a cross-sectional survey found statistically significant relationship between EHR alert burden and physical fatigue and cognitive weariness.8

It is important to highlight that these administrative burdens also impact residents, which is concerning for a variety of reasons. As learners in early career and professional development stages, their entire future career still lies ahead of them. If untenable and growing administrative burdens continue, this portends potentially serious long-term consequences relating to the long-term sustainability of the physician workforce.

In terms of solutions, streamlining documentation has become the greatest target for improvement, given its role as the most time-consuming burden of all types of desktop medicine tasks. A variety of possible solutions may lie ahead, some of which are in different stages of maturity. In the short-term, the use of medical scribes via phone or in-person offer physicians a way to free up their attention for the patient. Other alternatives consider speech recognition instead of keyboard and mouse usage for data entry,9 or engaging patients in co-production of content for documentation.10 Lastly, there are industry-academia collaborations towards developing artificial intelligence (AI) based solutions, including virtual scribes (also called digital or AI scribes) to facilitate clinical documentation. These are the most promising technologies for redistributing generalists’ time and attention to focus on direct patient care, yet are also the least mature in development, evaluation and implementation.

The next article in this series will focus on policy recommendations for electronic health records (EHR) and health information technology.

References
For the complete reference list, please visit https://tinyurl.com/ybgn5mv7.
The Society of General Internal Medicine presented numerous awards and grants during its Annual Scientific Meeting, held April 11-14, 2018, at the Sheraton Denver Downtown in Denver, CO. SGIM is proud and pleased to announce the recipients by category. For more information about SGIM’s awards, please visit https://www.sgim.org/career-center/awards-and-grants/2018-award-winners.

Recognition Awards
The Robert J. Glaser Award—Presented to Kurt Kroenke, MD, (Indiana University School of Medicine), for outstanding contributions to research, education, or both in generalism in medicine. The award is supported by grants from the Henry J. Kaiser Family Foundation, the Commonwealth Fund, and individual contributors.

Elnora M. Rhodes Service Award—Presented to Marilyn M. Schapira, MD, MPH, (University of Pennsylvania), for her outstanding service to SGIM and its mission of promoting patient care, research, and education in general internal medicine.

Herbert W. Nickens Award—Presented to Arleen F. Brown, MD, PhD, (University of California, Los Angeles), for a demonstrated commitment to cultural diversity in medicine.

David R. Calkins Award in Health Policy Advocacy—Presented to Jeffrey R. Jaeger, MD, (University of Pennsylvania), in recognition of his extraordinary commitment to advocating on behalf of SGIM.

ACLGIM Chiefs Recognition Award—Presented to Mark Linzer, MD, (Hennepin County Medical Center). This award is given annually to the general internal medicine division chief who most represents excellence in division leadership.

Lawrence S. Linn Award—Presented to Jules Chyten-Brennan, DO, (Montefiore Medical Center). This award is presented to young investigators to study or improve the quality of life for persons with AIDS or HIV infection.

The ACLGIM UNLTD (Unified Leadership Training in Diversity) Award—Recognizes junior and mid-career faculty from underrepresented groups with proven leadership potential. Recipients of this award receive a training scholarship to attend the Leon Hess Leadership Institute hosted by ACLGIM. The 2017 recipients are Alda Maria R. Gonzaga, MD, MS, (University of Pittsburgh), and Chavon Onumah, MD, MPH, (George Washington University).

The ACLGIM Leadership Award is given to a member of the ACLGIM who is within the first 10 years of faculty appointment. It recognizes skills in leadership in any number of areas of academic medicine, including clinical, educational, research or administrative efforts. The 2018 recipient of this award is Wallid F. Gellad, MD, MPH, (VA Pittsburgh/University of Pittsburgh).

The Quality and Practice Innovation Award—Recognizes general internists and their organization that have successfully developed and implemented innovative role model systems of practice improvement in ambulatory and/or inpatient clinical practice. The 2018 award was presented to Division of General Internal Medicine/Enhanced Care Program, University of Pittsburgh, Jodie A. Bryk, MD.

Research Awards
John M. Eisenberg National Award for Career Achievement in Research—Presented to Carol M. Mangione, MD, MSPH, (University of California, Los Angeles), in recognition of a senior SGIM member whose innovative research has changed the way we care for patients, the way we conduct research, or the way we educate our students. SGIM member contributions and the Hess Foundation support this award.

Outstanding Junior Investigator of the Year—Presented to Mitesh S. Patel, MD, MBA, MS, (University of Pennsylvania), for early career achievements and overall body of work that has made a national impact on generalist research.

Mid-Career Research and Mentorship Award—Presented to Sei J. Lee, MD, MCR, (University of California, San Francisco), in recognition of mentoring activities as a general internal medicine investigator.

Best Published Research Paper of the Year—Presented to Michael L. Barnett, MD, MS, MN, (Harvard Chan School of Public Health), for his 2017 publication “Opioid-prescribing patterns of emergency physicians and risk of long-term use”. This award is offered to help members gain recognition for their papers that have made significant contributions to generalist research.

Founders’ Award—Presented to Madeline R. Sterling, MD, MPH, (Weill Cornell Medical College), for her proposal entitled “Understanding the Perspectives of Home Care Workers Who Care for Adults with Heart Failure”. The SGIM Founders Award provides $10,000.
D

espite his lack of Internet access or maybe because of it, Benjamin Franklin accomplished much over his lifetime (1705-1790): He was an author, printer, political theorist, statesman, scientist, musician, inventor, civic activist, and one of America’s Founding Fathers. But was Franklin able to manage his time to accomplish all this?

To begin, I recommend reading Franklin’s classic essay “The Way to Wealth.” Summarizing 25 years of Poor Richard’s advice, the essay explores the classic themes of work ethic, frugality, and the search for a healthy life.

If you are fortunate, you will have “protected time” for research. However, you also have competing demands on your time including clinical, teaching, and “citizen ship” duties (i.e., journal clubs, reviewing manuscripts, volunteering). When you add to these family and self-care responsibilities, it can be easy to feel burned-out. The following are concepts I use to achieve my professional goals and enjoy the rest of my life. I hope you may also find them useful:

1. **Apply the 80/20 Rule.** The Pareto Principle states that 80% of results come from 20% of our efforts. Thus, focus on creative tasks only you can perform (e.g., identify new projects, write grants and manuscripts, deliver presentations, treat patients).

2. **Create a prioritized “to-do” list every week.** Spend half or more of your time in the “Important-Not Urgent” Quadrant 2 of Stephen Covey’s Time Management Matrix.

3. **Focus.** Try to complete 2-3 Quadrant 2 tasks each week. Refer to your “to-do” list daily, especially when you feel you are slipping into Quadrant 4. Limit Web surfing and other procrastinations.

4. **Preserve “blocks” of uninterrupted time.** Block 3-4 hour slots of your protected time for Quadrant 2 activities that “drive your economic engine” (e.g., grants, papers, work on co-investigators’ projects that support your funded effort). Do not schedule meetings in those time slots.

5. **Delegate.** Delegate “6T” tasks to preserve time for Quadrant 2 activities (Tiny, Tedious, Time-Consuming, Teachable, Terrible At, Time Sensitive).

6. **Write shorter emails.** Deans and chairs write terse, one-sentence emails. They don’t have time to craft long replies and neither do you. Stuck on a long message thread? Request a call or meeting in your reply.

7. **Learn when to say “No” to requests for your time.** Do you need to attend that meeting, review another manuscript, or go on NIH study section the same cycle you are trying to submit your own grant application? Avoid becoming overcommitted. Learning to say “No” is a part of success.

8. **Use “interstitial time” to handle non-urgent tasks.** Waiting for your computer to boot-up in the morning? Is your 11 am appointment running late? Stuck on hold? Flight delayed? Clean your desk, update your to-do list, unsubscribe from newsletters. Catch-up with professional reading, listen to podcasts for new ideas. Five minutes here, ten there… it adds up!

9. **Organize your work space.** Have two computer monitors to create slide presentations and write manuscripts, but avoid distractions on the second

---

**Covey’s Time Management Matrix**

<table>
<thead>
<tr>
<th>URGENT</th>
<th>NOT URGENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Important</strong></td>
<td></td>
</tr>
<tr>
<td>Quadrant 1</td>
<td>Quadrant 2</td>
</tr>
<tr>
<td>Crises</td>
<td>Relationship Building</td>
</tr>
<tr>
<td>Pressing Problems</td>
<td>Planning</td>
</tr>
<tr>
<td>Projects with Deadlines</td>
<td>Recreation</td>
</tr>
<tr>
<td><strong>Not Important</strong></td>
<td></td>
</tr>
<tr>
<td>Quadrant 3</td>
<td>Quadrant 4</td>
</tr>
<tr>
<td>Interruptions</td>
<td>Busy Work</td>
</tr>
<tr>
<td>Some Phone Calls</td>
<td>Some Phone Calls</td>
</tr>
<tr>
<td>Some Mail</td>
<td>Some Mail</td>
</tr>
<tr>
<td>Some Reports</td>
<td>Time Wasters</td>
</tr>
</tbody>
</table>
References

10. Educate yourself on teamwork and personnel issues. Benjamin Franklin didn’t accomplish everything by himself and neither will you. Learn to work through teams to accomplish goals. Empower your research coordinator, provide general directions, monitor progress, communicate daily, remove administrative hurdles, and provide the resources needed to move your projects forward.

Address HR issues early (e.g., hiring, promotion, disciplinary actions). Seek advice from senior colleagues and administrators on potential problems early and before they become major time-consuming events (e.g., research misconduct by a disgruntled employee). Read books about great teamwork to improve your skills.

11. Hire help at home. Maximize quality time with your family. If you and your partner have full-time careers, you will benefit from hiring someone to do basic cleaning, yard work, and a nanny for childcare tasks. To quote my oldest brother, “happy wife, happy life.”

12. “Sharpen the saw.” Time management is about living a more fulfilling life. We all like the golden eggs, but it’s important to take care of the goose that lays them too! Use time saved at work to spend with friends, doing leisure activities, hobbies, and exercising. I watch Netflix on the elliptical at the gym to since I watch almost no television at home, listen to podcasts on long walks, and exercise while my kids are at soccer practice. I also schedule weekly “date nights” with my wife and children.

Founded in 1942, the American Psychosomatic Society is an international multidisciplinary academic society whose mission is “to advance and integrate the scientific study of biological, psychological, behavioral and social factors in health and disease.” Learn more about the Society at http://www.psychosomatic.org and follow us at @connectAPS.

FROM THE EDITOR (continued from page 2)

Health Information Technology alive in this and subsequent issues by highlighting relevant literature on six key themes in clinical informatics. Dr. Lisa Kern gives a compelling case about how we may need to choose between two seemingly unrelated but competing priorities: precision medicine and music teachers. Finally, Dr. Bruce Rollman brings us back to the practical advice of Ben Franklin.

Of course, the meeting is over and we can’t go back there again. The new program committee, chaired by Drs. Brita Roy and Lenny Lopez, are already busy planning for next year’s meeting in Washington, DC. SGIM President, Dr. Giselle Corbie-Smith, gives a nice example of an innovative community partnership and prepares us for SGIM19 by looking forward to partnering with learners, patients, community members and other stakeholders.

Over the last few months, since SGIM2018, so much has happened in health care, immigration, government, and society as a whole, the implications of which will likely not be fully realized for years to come. Regardless of where you reside on the political spectrum, you can hardly describe the public discourse on many of these issues as a partnership. We as general internists need to take these numerous complicated and distressing issues as they relate to our patients and health care and get control of them one problem at a time.

It’s the only thing to do! On we go!
Community-Campus Partnerships for Health (CCPH), an organization whose mission is “...to promote health equity and social justice through partnerships between communities and academic institutions,” provides a framework for thinking about what constitutes authentic partnerships. The framework includes four components—guiding principles of partnership, quality processes, meaningful outcomes, and transformative experiences:1

1. **Guiding Principles of Partnership:** CCPH principles focus on building relationships, developing a structure and processes to do the work, and ensuring fair distribution of power. Critical elements that characterize an authentic work relationship include: 1) having mutual trust, respect, genuineness, and commitment by all parties involved; 2) valuing multiple kinds of knowledge and life experiences; 3) building on identified strengths and assets; 4) working to address jointly agreed-upon needs; and 5) increasing the capacity of all partners.

To be effective, partnerships should: 1) focus on establishing structure and processes to support the work of collaboration; 2) have a clearly defined purpose that can make allowances for taking on new goals as circumstances change; 3) agree on the mission, values, and goals of the partnership; 4) establish measurable outcomes and processes for accountability; 5) with the input and agreement of all partners, develop and use systems and processes for decision-making and conflict resolution.

Finally, a successful partnership must attend to the distribution of power so that it strikes a balance among partners, enables resources to be shared, and ensures that all partners share the benefits of the partnership’s accomplishments. Clear and open communication must be an ongoing priority; partners should strive to understand each other’s needs and self-interests and develop a common language to avoid misunderstandings and potential conflict.

2. **Quality Processes:** Quality processes are designed to support the continued success of the partnership and include conducting internal assessments and assessments by people outside the partnership to determine: Are we adhering to the guiding principles of an authentic partnership? Are we upholding the key values critical to an authentic partnership: openness, honesty, respect, trust, and integrity? Issues and conflict will inevitably arise; jointly-developed processes provide the mechanism for members to address these as they surface.

3. **Meaningful Outcomes:** Outcomes of partnerships should be tangible, measurable, and relevant to all stakeholders. Authentic partnerships are formed to achieve results, not merely to exist. In defining relevant outcomes, the partnership must take into consideration elements important to both the community and the professional disciplines (often academic researchers) involved in the project. The outcomes define what success looks like for the partnership. For researchers and often for community collaborators, publications, marketing materials, and manuscripts can be examples of tangible outcomes. Other tangible outcomes may include organized efforts directed at policy changes, changes in delivery of direct services within the community, and an increased visibility of local health care resources. Each partner may value particular outcomes differently, based on his or her set of priorities. Recognizing and appreciating the differing values will take some intentional efforts on the part of all engaged in the partnership.

4. **Transformative Experiences:** Transformative experiences are another form of outcomes, albeit less tangible than publications or marketing materials, and may be one of the most important results of successful partnerships. Transformative outcomes result from participation in the partnership process and represent a change in the thinking and/or behavior of each partner individually and collectively. Examples of transformative experiences include: increased personal understanding and commitment; expanded personal, community, or institutional capacity; increased or expanded funding sources, and/or; more knowledgeable and engaged communities that can be leveraged for other projects.

In my experience with Project GRACE, the focus on our mission, an organizational structure to do the work, and an intentional focus on process are the elements that have led us to such a long-standing and productive collaboration. In its early days, we developed a set of bylaws in which we were explicit about our mission, how we would be organized to do the work, and the ways in which equity was built into the organization of our steering committee and our decision-making process. My community partners insisted that we engage outside consultation to ensure we were addressing “isms” (e.g., racism, sexism, elitism) that might be occurring in our partnership in the same way that those “isms” were affecting the health of communities we were hoping to serve with our work. We worked to build the capacity of each member of our partnership, not only in terms of research skills and community expertise, but also by building the collective capacity of...
employed, and most of our patients were still at home. But physicians needed operating rooms, and hospitals needed patients. So they agreed to share. Physicians were given “admitting privileges” to bring their patients to the hospital and use the hospitals’ facilities when needed.\(^2\) The patients then paid the physician and the hospital separately. No money changed hands between the physician and the hospital. The physician and the hospital were each autonomous, dependent on each other but separate.

Health insurance didn’t develop until the 1940s, in the context of World War II. During that war, many men of working age were overseas fighting, and the U.S. government froze wages at home, so that any extra money could be put toward the war effort.\(^3\) This led to fierce competition among employers for the scarce employees (including women) that were still in the United States. Health insurance began as a benefit that allowed employers to compete for scarce workers without raising wages.\(^3\) Health insurance developed in a way that allowed patients to contribute funds to an insurance pool, employers contributed funds, and the insurance company paid the physicians and the hospital separately. Sound familiar? That is the same financing structure we have today. This is important, because the way health insurance developed in WWII was an artifact of history, not a national strategy for how to structure health care for the country for decades to come. Health insurance may be good (and I believe it is), but it also somewhat unintentionally made healthcare costs invisible. No one could tell anymore how much healthcare costs. No more chickens or loaves of bread.

Now fast forward to the 1980s, when I was in elementary school. The United States at that time spent about 8% of the economy or gross domestic product (GDP) on health care.\(^4\) By 2014, that had increased to more than 16%, and it’s still rising.\(^4\) So the percentage of the economy spent on healthcare has more than doubled in my lifetime.

Now, most people can’t feel the difference between 8% GDP and 16% GDP in their daily lives. But I did. My family and I live in New York State, and in 2011, Governor Andrew Cuomo signed a law capping property taxes, allowing them to increase by no more than 2% per year.\(^5\) That’s not necessarily a bad idea. Force people to live within a budget. Except that perhaps it had unintended consequences. In 2012, my husband and I were at a meeting of our local school district when they announced that they would be cutting art teachers from the district. Why? Because the amount that the schools had to spend on healthcare for their teachers was going up, and they could no longer increase the school’s budget, so they had to cut somewhere. The art teachers had to go. Wait, what? The United States can’t manage to control healthcare costs, so my kids lose art instruction? Yup. The economy doesn’t keep growing indefinitely. When we spend more on healthcare, we encroach on funds needed to support other parts of the economy.

My students and I have found more than 20 reasons why healthcare costs so much in the United States. The role of insurance and the lack of price transparency are parts in a much larger story. But we don’t have a national budget for healthcare, and no one is incentivized to help the costs come down.

So, can we afford precision medicine? Precision medicine is supposed to be individualized medicine, customized medicine. And you can be sure that anything custom is more expensive than anything standard. I don’t know if we can afford precision medicine. But I’m thinking that the music teachers will be the next to go.

**References**

support to junior investigators who exhibit significant potential for a successful research career and who need a “jump start” to establish a strong research funding base.

National Institute on Drug Abuse (NIDA)—Mentored Training Award in Substance Use Disorder Treatment Science Dissemination—Presented to Payel J. Roy, MD, (Boston Medical Center). Supported by the National Institute on Drug Abuse (NIDA) from the National Institutes of Health (NIH) and sponsored by the Society of General Internal Medicine (SGIM)

Clinician-Educator Awards
National Award for Career Achievements in Medical Education—Presented to Patricia S. O’Sullivan, EDD, (University of California, San Francisco), for a lifetime of contributions to medical education.

Frederick L. Brancati
Mentorship & Leadership Award—Presented to Robin E. Canada, MD, (University of Pennsylvania). The Brancati Award honors an individual at the junior faculty level who inspires and mentors trainees to pursue general internal medicine and lead the transformation of health care through innovations in research, education, and practice.

National Award for Scholarship in Medical Education—Presented to Colleen C. Gillespie, PhD, (New York University School of Medicine), for her individual contributions to medical education in one or more of the following categories: Scholarship of Integration, Scholarship in Educational Methods and Teaching, and Scholarship in Clinical Practice.

Mid-Career Mentorship in Education Award—Presented to Carla Spagnoletti, MD, MS, (University of Pittsburgh). This award recognizes the mentoring activities of general medicine educators who are actively engaged in education research and mentorship of junior clinician educators.

Presentation Awards
Mack Lipkin, Sr.—Associate Member Awards are presented to the scientific presentations considered most outstanding by students, residents and fellows during the 2018 SGIM annual meeting. Awards are made based on participant evaluations of the presentations and are endowed by the Zlinkoff Fund for Medical Education. The award winners for 2018 are as follows:

• Sumit Agarwal, MD, (Harvard Medical School, Brigham and Women’s Hospital), “Benzodiazepine Prescribing Trends in the United States”;
• Utibe Essien, MD, (Harvard Medical School, Massachusetts General Hospital), “Race, Ethnicity, and Use of Non-Vitamin K Antagonist Oral Anticoagulants in Patients with Atrial Fibrillation: A National Study”;
• Adam Markovitz, BS, MD/PhD Candidate, (University of Michigan), “Changes in Coded Severity Under Accountable Care”.

Milton W. Hamolsky—Junior Faculty Awards are presented to the scientific presentations considered most outstanding by junior faculty during the 2018 SGIM annual meeting. Awards are made based on participant evaluations of the presentations and are endowed by the Zlinkoff Fund for Medical Education. The award winners for 2018 are as follows:

• Maya Venkataramani, MD, MPH, (University of Pennsylvania), “Impact of Parental Eligibility for the Deferred Action Program for Childhood Arrivals (DACA) on Children’s WIC Receipt”;
• Matthew Pappas, MD, MPH, (Cleveland Clinic Foundation), “Resuming Warfarin Following Upper Gastrointestinal Bleeding among Patients with Nonvalvular Atrial Fibrillation—A Microsimulation Analysis”;

SGIM Clinical Vignette Oral Presentation Award—Recognizes the best presented clinical case by a medical student, internal medicine resident or GIM fellow (not faculty) at the SGIM National Meeting. This year’s recipient is Sina Salehi Omran, MD, (University of Pittsburgh), “Gut Check: An Unusual Cause of Electrical Storm.”

Outstanding Quality & Patient Safety Oral Presentation Award recognizes the most outstanding oral abstract presentations related to quality assessment, gaps in quality of care, medical errors, quality improvement or patient safety in the inpatient or outpatient setting at the SGIM National meeting. This year’s awardee is Sondra Zabar, MD, (NYU School of Medicine Department of Medicine), et al., for the abstract titled, “Simulated First Night-on-Call (FNOC): Establishing Community and a Culture of Patient Safety for Incoming Interns.”

Best Geriatrics Oral Abstract Presentation Award—Yael Schenker, MD, (University of Pittsburgh), “Associations between Polypharmacy, Symptom Burden, and Quality of Life in Patients with Advanced, Life-Limiting Illness.”

Best Geriatrics Poster Presentation Awards:
• Carolyn Gibson, PhD, MPH, (San Francisco VA Health Care System), “Emotional and sexual abuse are associated with aging-related genitourinary dysfunction among older community-dwelling women”;• Jill Huded, MD, (Louis Stokes Cleveland VAMC), “Functional Impairment of Older Adults

continued on page 15
Presenting to a VA Medical Center Emergency Department: Findings from the GERI-VET Program;

- Jeffrey Kullgren, MD, MS, MPH, (Ann Arbor VA and University of Michigan), “A National Survey of Older Americans About Overuse of Health Care Services”.

Best Hospital-Based Medicine Oral Abstract Award
- Oanh K. Nguyen, MD, (UT Southwestern Medical Center), “Man vs. Machine: Accuracy of Physicians vs. EHR-Based Model Predictions for 30-Day Hospital Readmissions”;
- Michael B. Rothberg, MD, MPH, (Cleveland Clinic), “Development and Validation of a Risk Assessment Model for VTE in Hospitalized Medical Patients”.

Best Hospital-Based Medicine Poster Presentation Award—Valerie Press, MD, MPH, (University of Chicago), “Improving Self-Management Skills Presenting to a VA Medical Center Emergency Department: Findings from the GERI-VET Program”;

- Michael B. Rothberg, MD, MPH, (Cleveland Clinic), “Development and Validation of a Risk Assessment Model for VTE in Hospitalized Medical Patients”.

Best Women’s Health Oral Abstract Presentation Award—Mara Murray Horwitz, MD (Harvard Pilgrim Health Care Institute and Harvard Medical School) “Timing of contraceptive initiation and family planning relative to sexual initiation among young women in the U.S., 1984-2015.”

SGIM

References
ANNUAL MEETING: PART II

ANNUAL MEETING WRAP-UP

Lipika Samal, MD, MPH, and Saul Blecker, MD, MHS

Dr. Samal (lsamal@bwh.harvard.edu) is an assistant professor of medicine at Brigham and Women’s Hospital and was the chair of the 2018 Annual Meeting. Dr. Blecker (saul.blecker@nyumc.org) is an assistant professor of population health and medicine at NYU School of Medicine and was the co-chair of the 2018 Annual Meeting.

As the chairs of 2018 Annual Meeting in Denver, we would like to highlight some of the many successes of the meeting as well as to thank the staff, volunteers, presenters, and attendees for contributing to making this such a great meeting.

The theme of the meeting was Health Information Technology, an area which is integral to every aspect of health care. This theme was well integrated throughout the meeting, which included many discussions on how digital innovations can enhance—and sometimes detract from—our work, whether in the hospital, the clinic, or the classroom. This topic was launched with an excellent precourse led by informatics leaders David Dorr and William Hersh, in which 40 attendees learned about informatics core competencies, unintended consequences of health IT, opportunities to deliver interventions through electronic health records, ways to use electronic data for research, ways to use health IT to decrease health disparities, and future opportunities for health IT. In light of the success of this precourse, we are hoping to follow it up with a more comprehensive learning opportunity for general internists interested in health IT. Join the SGIM Connect Medical Informatics Interest Group listserv to stay up to date on this effort.

David Horvitz of Microsoft Research delivered the Malcolm Peterson plenary lecture. He discussed the opportunities for using artificial intelligence in medicine. Other health IT innovations included the Innovations in Clinical Practice and Innovations in Medical Education hands-on “tech alleys,” in which more than 20 SGIM members displayed health technology that they had developed. The Shark Tank allowed three finalists to show off their innovations and respond to constructive criticism from a panel of judges.

Additional highlights were plenaries by Thomas Gallagher, who encouraged us to overcome our innovation inhibitions, and Stephen Cha, who demonstrated opportunities to improve healthcare access through state-level initiatives. Finally, our foray into including patient advisors in our national meeting, a special effort by our outgoing and incoming presidents, was a resounding success.

We’d like to acknowledge each of the patient advisors for their contribution to the meeting: Maret Felzien, Ray Haeme, Susan Lowe, Sergio Sanchez, Marcia Dailey, Kenneth Dailey, and Jessica Sand.

We would also like to thank the staff members of the national SGIM office for their unbelievable commitment to making this meeting such a success. In particular, we are thankful to have had the opportunity to get to know and work with Lisa Le, who led us successfully in her first full year as manager for the annual meeting. Tom Gallagher provided invaluable leadership and guidance. We had an outstanding program committee, who worked tirelessly to make sure that the content was superb. And, of course, the meeting could not have happened without the outstanding contributions of all of our members who brought their best science, supportive words, and thoughtful, incisive commentary.

We can’t wait to see you again in Washington, DC!