NEW PERSPECTIVES

The CMS Innovation Center
Richard J. Baron, MD

Dr. Baron is director of the Seamless Care Models Group at the Center for Medicare and Medicaid Innovation, Centers for Medicare and Medicaid Services.

The Center for Medicare & Medicaid Innovation (CMS Innovation Center) at the Centers for Medicare & Medicaid Services (CMS) has embarked on an ambitious set of initiatives to test new payment and delivery models that have helped to galvanize transformation in medicine. The CMS Innovation Center was created by the Affordable Care Act to test innovative models of payment and service delivery to reduce expenditures while preserving or enhancing the quality of care provided to Medicare, Medicaid, and Children’s Health Insurance Program (CHIP) beneficiaries.

Opportunities exist today to align strategies between public and private payers to achieve system-wide innovation, thus accelerating the impact of certain models and interventions beyond the world of federal payment. All of our models are tests designed to be potentially scaled up. As a result, all of our models include rapid cycle evaluation built into them from the very beginning and also create ways to accelerate the spread of knowledge gained from the delivery system model tests.

The CMS Innovation Center currently supports models in a number of important areas, spanning the spectrum of population-based prevention down to the level of improvements in the delivery of specific clinical services and procedures. For example, in the Seamless Care Models Group, which I lead, our charge is to focus on initiatives that follow patients across time and settings, resulting in a coordinated and patient-centered care experience. One of our divisions focuses on accountable care models, and the other focuses on advanced primary care models.

The Accountable Care Organization (ACO) Models
The Innovation Center announced the Pioneer ACO Model in May 2011. In December 2011, 32 organizations were selected to participate in the testing of the Pioneer ACO Model, which began in January 2012. The model complements the Medicare Shared Savings Program—the ACO program established by the Affordable Care Act—by offering some provider organizations payment arrangements with higher risk and reward and a transition to population-based payments (or partial capitation) in performance year 3. The model is also intended to test new program features that could be incorporated into the Shared Savings Program in the future.

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From Sinus Congestion to Vision Loss
Shikha Chacko, MD (presenter), and Robin Klein, MD (discussant, in italic)

Dr. Chacko is a graduate of the Primary Care Internal Medicine Residency Training Program at Emory University, and Dr. Klein is faculty at Emory University School of Medicine.

A 58-year-old man presents with vision loss in his right eye. He reports having blurry vision for the last two weeks as well as rhinorrhea, sinus congestion, and subjective fever. He is evaluated at an urgent care clinic for these symptoms; diagnosed with sinusitis; and prescribed diphenhydramine, loratadine, and antibiotics. His symptoms do not improve with the antibiotics. The morning of presentation, he awakes with loss of vision in his right eye and right-sided headache.

The differential diagnosis of vision loss is broad. Vision requires an image to pass through refractive structures of the eye, reach the retina, transmit the image via the optic nerve, and process the image through the occipital lobe of the brain. Problems anywhere along this pathway can cause vision loss. Pathology can be grouped into problems with the media, retina, optic nerve, and brain (Table 1).

The absence of eye pain is important. Most local problems like trauma, keratitis, ulcerations, uveitis, and acute angle closure glaucoma cause pain and redness in addition to vision loss. The absence of a red painful eye points away from these. A common culprit for painless acute vision loss is ischemia, but this most often occurs in the setting of risk factors for vascular disease such as smoking or hyperlipidemia.

The sinus congestion and rhinorrhea that preceded the vision loss are concerning for infections in the sinuses and orbital cellulitis. Alternatively, overuse of anticholinergic medications can lead to mydriasis, loss of accommodation, and even angle closure glaucoma. The physical exam can help narrow the differential.

He denies any eye pain associated with the vision loss or trauma to the head. He reports no past medical history, does not take any medications regularly (other than as mentioned above), and has never smoked.

He is afibrile but hypertensive, with a blood pressure of 180/95 mm Hg. He is alert and oriented, follows commands, and is able to disclose details of his history without difficulty. Frontal and maxillary sinuses are not tender but fail to illuminate. Both the nasal mucosa and oropharynx appear normal.

He has normal visual acuity, intact extraocular movements, and normal pupillary reflex in his left eye. With his right eye, he is unable to count fingers or discern light. He has ptosis and impaired adduction, elevation, and abduction of the right eye. The right pupil is dilated greater than the left pupil. The right pupil and irregularly does not take any medications other than as mentioned above.

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He has normal visual acuity, intact extraocular movements, and normal pupillary reflex in his left eye. With his right eye, he is unable to count fingers or discern light. He has ptosis and impaired adduction, elevation, and abduction of the right eye. The right pupil is dilated greater than the left, and it sluggishly contracts with light. Ophthalmoscopic examination reveals no hemorrhage.

The eye exam is one of the most daunting parts of the physical exam to the internist. Decreased visual acuity in the right eye suggests pathology anterior to the optic chiasm (i.e. the eye or optic nerve). Pathology posterior to the optic chiasm usually presents with hemianopia (visual field loss that respects the vertical midline) and is detected with visual field testing.

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On Specialization
Ann Nattinger, MD

We general internists tend to have a love-hate opinion about focus or sub-specialization within our specialty. When I meet with younger faculty regarding career development, they frequently tell me that one of the reasons they went into general internal medicine (GIM) is the breadth of the field and its emphasis on caring for the whole person. And yet, as I typically advise them, it is difficult to have a successful academic career without some degree of focus. I will argue below that a certain amount of focus can improve clinical care as well.

GIM investigators learn quickly that they must focus on a specific area in order to successfully compete for grant funding and to have a sufficient knowledge base to conduct novel research. The focus area might be a disease area (heart failure quality of care) or a methodological area (improved communication methods), but it should be there. Focus is important in other areas as well. Most general internists who focus on medical education eventually concentrate most of their educational innovation in a specific area, such as the undergraduate curriculum, the graduate curriculum, or team-based learning. This doesn’t mean that they do not teach in other areas or that they cannot change areas over time, but they tend to be most successful if they focus initially in one area.

What about clinical care? The extent to which GIM clinical care benefits from or is harmed by focus is a subject of longstanding debate in our field. This debate has taken various forms over the years. As one example, some have argued that women would benefit from having GIM providers specially trained in women’s health, while others feel that every general internist should be equally well versed in women’s health. Do we risk fragmenting our field by having areas of focus or specialization within our field? Or do areas of focus improve clinical outcomes?

In my mind, the question depends on whether patients are better served by their providers having some degree of focus. After years of running a number of different clinical units, I have come to the conclusion that clinical systems run better if they have anchor personnel—that is, individuals who spend a substantial fraction of their effort within that system, who sit on committees relevant to that system, and who have the primary interactions with the non-physician providers in that system.

Let me use the example of our GIM perioperative inpatient service. At one point in the past, each of our inpatient ward teams took perioperative consultations in rotation with admissions. This meant that each month each ward service would typically have one to three patients admitted with hip fracture. It was a nice opportunity for teaching about perioperative medicine. But important items sometimes were overlooked, depending on the team’s level of expertise with perioperative issues. In addition, our relationships with our surgical colleagues were strained. Each surgeon and each internist tended to have a unique way of approaching a given clinical situation, and we would argue repetitively about deep vein thrombosis prophylaxis regimens, treatment (or not) of asymptomatic pyuria, etc.

Over a period of years, we dealt with this unsatisfactory and unsafe situation by recruiting and supporting a group of perioperative general internists to staff a dedicated service. We now have three inpatient perioperative teams, each with physician and advanced provider personnel focusing on certain surgical areas. This has led to much improved patient outcomes as well as enhanced collegial relationships. Quality and efficiency metrics have improved for the surgical patients, we have hampered out clinical pathways covering key clinical controversies, and some of our perioperative faculty have secondary appointments in key surgical departments, which provides a great deal of credibility for them with the housestaff in those departments. The perioperative faculty value having some time on GIM ward teams, and some of our hospitals rotate on the perioperative services. But in
Some come, fewer see...and ever fewer come back. Such is the state of patient portals and electronic health records as we start 2013. Many studies and advocates have extolled the potential benefits of patient engagement in health care and disease management through the use of patient portals. As a clinician who sees the benefits of portal use and enhanced levels of patient engagement, I often find myself asking my patients to sign up for the portal. I tell them that they can see their lab results online, make appointments, request refills, and e-mail me directly, bypassing the wait time that they often experience on the phone. All of this is available 24 hours a day. No brainer, right?

Not really. Even in practices that offer patient portal access, uptake is slow and fragmented at best. That’s not to say we should not offer this! But patient portals have not proven themselves to be a magic bullet for patient engagement, with only 7% of patients using them. People only go to websites if they have a need or the site provides them with something they cannot get elsewhere.

Though patients may not access portals to be involved in their own health care, we know they are accessing websites for health information. And patients are doing this all over the places and on the go—the Pew Center recently released data showing that a third of cell/smartphone owners used their phone to look up health information. The report pointed out that “in 2010, when the same percentage of US adults owned cell phones, 17% of cell phone owners reported using their phones to access health information. Today, that number stands at 31%, almost double the previous figure.”

There is concern that the use of portals could potentiate already existing health disparities or worse—create new ones. Drs. Mita Goel and Urmimala Sarkar have covered this well in a prior issue of Forum. Several studies have shown that many portal enrollees are white, insured English speakers with health insurance. But here is the interesting thing: The patients who are enrolling and using online health portals are not the same group of patients who use cell phones to access information. The Pew data show that 27% of white non-Hispanics, 35% of Black non-Hispanics, and 38% of Hispanics use their cell phones to look up health information. Before reading on, ask yourself:

- When was the last time you discussed results or information or connected your patient to a website during an office visit?
- When did you or your office staff turn the screen around on a laptop, or share it on a desktop, to engage the patient electronically?
- Have you ever had a discussion with a patient using his/her cell phone?

Data indicate that one in three people in the United States is using a screen (without a physician) outside the office. Additionally, the phones they use to access information are probably in their pockets and handbags as you talk to them at their appointment. Maybe we should be using phones as a bridge and tool for engagement.

I don’t think anyone fully understands why there is a difference among demographic groups regarding portal versus cell phone use. The situation is clearly multidimensional, but there are some early lessons that our patients are teaching us:

1. Lots of health care institutions have portals and other forms of electronic access available. Simply providing it does not mean patients will use it.
2. A third of our patients are using phones to access health information.
3. Patients are using phones—not portals—for health information for a reason(s). Identifying these reasons is key to patient engagement.

Where I work, the portal is only available in English, despite the fact that a very large majority of my patients speak Spanish. And when patients view results or medicines, there is no link beside the result that explains the result or what the medicine is used for. These are key opportunities to further engage patients at the level of electronic health record development.

Everything has to start somewhere, and there is much work to be done to fully engage patients. Until we link patient portals and electronic chart access with patient-level education, we will not see full patient engagement. The Internet and cell phone engagement are helpful ways to access health information technology while portal use becomes truly meaningful. The possibilities are exciting. But most people who use portals in 2013 are saying, “I came, I saw, and I’ll be back when this is more useful.”

References
Am struck by how fabulous a doctor I have become—all because of e-mail. I woke up as is my habit and scanned my e-mails with my morning tea prior to starting to work on my task list. My patient who had enrolled in a bariatric study had undergone a pre-enrollment endoscopy for placement of a study device. She was found to have a concerning gastric lesion and contacted me via secure e-mail in a panic. As I walked into my office, I narrated her story to our gastroenterologist and her concern about cancer. She had her endoscopy and biopsy done that very day. Needless to say, we had a happy patient with a good outcome and a potentially precancerous lesion removed. Normally this process, had she contacted the office and received a referral to the specialist, would have taken about 30 days.

Serendipity or conscientious use of technology to improve the care of a patient? Probably a bit of both. My reach as a physician has truly increased.

Not only was the e-mail communication cost effective (she would have needed the procedure anyway as there was no surrogate), but we managed to bypass unnecessary appointments (one with me and another with the GI physician or his nurse practitioner) and went straight for the answer. She did not lose any time off work or any sleep due to anxiety that it might be cancer.

Another patient stubbed his toe. I was able to manage his care through e-mailed photographs to ensure that the cellulitis was indeed improving, thus enabling him to continue work and prevent a hospitalization—all due to the amazing camera on his iPhone.

I could go on and on. I practice, like many of us, in a hospital-based clinic that sees patients with severe forms of chronic disease. Many of my patients have poor health literacy, low socio-economic status, and chronic disease—the deadly trifecta.

The real question and challenge is how to develop scalable programs that provide this instant action, particularly among the top 5% who spend 50% of resources. As of 2010, 77% of the population used the Internet, yet use of electronic health records (EHRs) and their associated patient portals is limited, with fewer patients using them in a meaningful way.

In order to use patient portals, e-medicine has to evolve. At this point, most institutions, physicians, and patient communities are not equipped to handle patient portals and connectivity as they exist on iPhones, iPads, or other “smart” devices. In addition, we must have insurance companies pay for this performance and not the endless lists of parameters that fail to make a measurable impact on public health.

I am also concerned, as we are creating a new class based on Internet and web-based connectivity. Will the top 5% of utilizers who are the sickest be the ones using the patient portals? Will health care systems, insurances, doctors, and patient communities come together in realizing the need for education? Are we looking at another metric of health care disparities?

Let it not be akin to the EHR development, where the users (physicians) have a love-hate relationship with the technology: We love to hate the EHR and what it represents because we were told that we had to use a product without providing input based on our clinical experience.

As we move toward reforming and reshaping our practice of medicine, we must include a vision and a strategy that includes not only offering web- and mobile-based technologies but educating patients on how to use them.

References
Hospitalist Staffing: To Split or not to Split?

Dan Hunt, MD; Alfred Burger, MD; Rebecca Harrison, MD; Will Southern, MD, MS; Tony Boonyasai, MD, MPH; and Luci K. Leykum, MD, MBA, MSc

Dr. Hunt is faculty at Massachusetts General Hospital; Dr. Burger is faculty at Beth Israel Medical Center; Dr. Harrison is faculty at Oregon Health & Science University School of Medicine; Dr. Southern is faculty at Albert Einstein College of Medicine; Dr. Boonyasai is faculty at Johns Hopkins University School of Medicine; and Luci K. Leykum is faculty at University of Texas Health Science Center.

Hospital medicine groups take on many different sizes and structures and many kinds of roles. This diversity is one of the most exciting aspects of the field and one of the most challenging. How to staff and balance housestaff and non-housestaff activities, for example, is a vexing issue. This topic was the subject of considerable discussion at the Hospital Medicine Interest Group meeting at the 2012 SGIM annual meeting. Hence, members of the SGIM Academic Hospitalist Task Force have outlined the potential advantages of each type of staffing model.

Staffing Advantages

In this model, faculty staff their separate services, which:

1. Promotes focus on differing missions. Having dedicated hospitalists who only work on the housestaff service encourages them to focus on improving their teaching skills and engaging in educational faculty development. Dedicated non-housestaff-affiliated hospitalists focus on other administrative or service-oriented goals.

2. Fosters professional flexibility. Each role is delineated in a way that best meets the differing professional needs of each group. The clinician-educator schedule can be created in a way that fosters academic pursuits, while the non-housestaff hospitalists have clearly specified shifts or blocks that also maximize their activities.

3. Nurtures tighter professional connections and identity. In larger groups, it is easy to get “lost in the crowd.” Having subunits of hospitalists who share a primary professional interest can help to foster a closer sense of identity and growth.

4. Facilitates relationship building. Having faculty dedicated to housestaff education or direct patient care allows them to create strong connections with the residency program and clerkship directors. Because of the focused nature of this job, trainees may view the group on equal footing with dedicated faculty in the subspecialties.

5. Better defines position expectations. Clear position expectations are set and maintained over time. Having dedicated subgroups allows more consistency between initial and ongoing job descriptions, thereby promoting greater job satisfaction and faculty retention.

A main challenge in this model is the perception of different tiers of faculty and the challenge of recruiting “lower-tier” positions.

Advantages of an Integrated Group Model

In an integrated model, there is a single pool of faculty who perform all roles, which:

1. Creates a cohesive group of “academic hospitalists.” Having a combined group in which everyone is involved in both housestaff and non-housestaff activities creates a greater sense of identity among all faculty. A stable single group avoids the view of the hospitalist as a “PGY-4” doing uncovered clinical work.

2. Promotes appreciation and understanding. In a single group, everyone appreciates each other’s jobs and unique skills; in the two-tier system, “the grass is always greener on the other side.”

3. Utilizes each person’s skills more effectively. An integrated model with variable job descriptions allows for better utilization of peoples’ skill sets and greater flexibility in meeting career/professional goals over time.

4. Allows flexibility. Having all faculty functionally part of the same “larger group” gives greater flexibility in terms of meeting new needs or quickly filling gaps in the schedule. It avoids the “I don’t do that kind of job” mentality by fostering the “we are all in this together” mindset.

5. Attracts higher caliber applicants. A single model can provide a competitive edge in recruitment. High-quality applicants do not want to be pigeon holed into single-track jobs where they cannot grow. They may be more willing to accept an initially higher clinical load if they feel that their role and scope of work can evolve.

A main challenge with an integrated model is maintaining the perception of fairness. People tend to have different schedules, and changes in roles or rotations must be implemented in a way that is fair to all. In some programs, salaries reflect those considerations.

Of course, many programs are hybrids of these models. Some have core integrated groups but bring on dedicated faculty for activities like night-time coverage. Others have a more permeable “barrier” between groups of faculty. Many of these differences reflect the history of how the groups were started. In either case, continually reassessing division, hospital, and individual needs is critical.
The 2012 Mid-Atlantic regional meeting was hosted by the Christiana Care Health System in Newark, DE, on March 16, 2012. Attendance at the meeting was strong, despite it being Match Day and not having a major metropolitan host city. (No offense, Newark!) The meeting theme, “Generalism on the Front Lines: Defining and Delivering High-Value Health Care,” was woven into the day, starting with the opening keynote session by Sean Tunis. Dr. Tunis is president and CEO of the Center for Medical Technology Policy, prior director of the Office of Clinical Standards and Quality, and chief medical officer at the Centers for Medicare & Medicaid Services (CMS). His talk was titled “Defining High-Value Health Care though Comparative Effectiveness Research.” It was a clarion call to SGIM members to take the lead in performing and translating the research that will, hopefully, transform health care in the coming years.

For the second straight year, the regional meeting hosted a well-received “walking poster tour” for attendees, led by an all-star group of master discussants. Judy Shea, associate dean of Medical Education Research at University of Pennsylvania, led the tour of medical education innovation posters. Alex Federman, MD, associate professor of medicine at Mount Sinai School of Medicine, and Jeanne Clark, MD, associate general internal medicine (GIM) division director at Johns Hopkins University led poster tours highlighting selected research abstracts. The clinical vignette poster tours were led by Pamela Charney, MD, professor of clinical medicine at Weill-Cornell University School of Medicine; Timothy Krohe, MD, associate professor of medicine at Walter Reed National Military Medical Center; and Bimal Asher, MD, clinical director of the GIM division at Johns Hopkins University. The poster tours were a huge hit with attendees. A poster competition, based on content and visual presentation, recognized the top scoring research, innovation, and clinical vignette posters; written feedback from the on-site poster judges was shared with poster presenters at the end of the day.

Other highlights of the day included a lunchtime plenary session with a panel of GIM leaders representing academic, community, rural, urban, hospitalists, and primary care settings who discussed the future of generalism as well as the ties that bind us all in GIM. A career panel, “Faces of GIM,” was geared toward students, residents, and fellows and included a panel discussion followed by small breakout groups to explore and discuss different career paths in GIM. The Medical Education Innovations session featured noteworthy presentations from educators at Christiana Care Health System, New York University Langone Medical Center, and Uniformed Services University of the Health Sciences as well as thoughtful discussion of next steps from experts Paul Haidet, MD, of Penn State and Paul Hennar, MD, of the Uniformed Services University of the Health Sciences.

Throughout the day, attendees especially enjoyed hearing about new research, learning about health policy, meeting with collaborators, and enhancing their clinical and teaching skills. Christiana proved to be a wonderful host site for the meeting and captured the elusive nymph of conference locations—free parking. Christiana allowed its residents to have their afternoon clinic off so they could attend associate-level programming during the afternoon. Heartfelt thanks were given to Dan Elliott, MD, and Neeta Milisincic, MD, meeting chair and co-chair. The bar has been set high for next year’s Mid-Atlantic regional meeting to be held at Jefferson Medical College in Philadelphia on March 1, 2013. Next year’s theme is “Access, Affordability, and Patient Care: The Generalist’s Role in the Future of American Healthcare,” and Jeffrey Brenner, MD, founder and director of the Camden Coalition of Healthcare Providers, will be our keynote speaker. We hope to see you there!
It’s that time of year again when we think about and plan for the annual Society of General Internal Medicine Scientific Meeting. This year we are Celebrating Generalism in all its forms. Denver will be our host city this year, and our planning committee is hard at work to make this the best year ever for you.

This year’s conference will be held at the Sheraton Denver from April 24-27, 2013, in Denver, CO. Our conference theme of Celebrating Generalism will allow us to explore all aspects of general internal medicine—advocacy, education, patient care, research, and all the areas in which we as internists work.

Registration for the meeting will open shortly (check SGIM eNews or the website SGIM.org), and we encourage you to register early to avoid the increased fees for late registration. In addition to the regular meeting, consider coming on Wednesday for additional programming. Precourses as well as the ACLGIM Leon Hess Management Training and Leadership Institute are offered as ways to develop new skills and increase your networking possibilities.

The Program Committee has worked hard to listen to your feedback from previous meetings. One exciting innovation this year will be to have a new opening plenary address during the Thursday session with SGIM President Ann Nattinger. In addition, there will be many innovative and thought-provoking symposia and updates this year. Those interested in expanding into advocacy should keep their eye out for “Entering the Belly of the Beast: Physicians in Government.” Medical educators and those interested in honing clinical or research skills will have access to both symposia and updates that meet your professional development needs.

Our meeting’s success depends on its members. We hope you will plan on attending this year’s meeting in order to share all the innovative work you do as well as network with colleagues and friends. Come Celebrate Generalism in beautiful Denver. See you there!
The Changing United States Medical Licensing Examination®

Steven Haist, MD

Dr. Haist is vice president of Test Development Services for the National Board of Medical Examiners.

The United States Medical Licensing Examination (USMLE®) is currently a series of four examinations co-owned and administered by the Federation of State Medical Boards (FSMB) and the National Board of Medical Examiners® (NBME®). The four examinations include Step 1, Step 2 Clinical Knowledge (CK), Step 2 Clinical Skills (CS), and Step 3. Successful completion of the examination series is required for initial licensure to practice medicine without supervision for all allopathic physicians in all 70 medical licensure jurisdictions across the United States and its territories.

In 2004, the governing entity of USMLE, the Composite Committee, requested an in-depth review of the USMLE program in terms of purpose, design, and format. This request resulted in the formation of the Committee to Evaluate the USMLE Program (CEUP). The work of this group, completed in 2008, culminated in six recommendations. Five of these recommendations were adopted by the Composite Committee in January 2009. The recommendations include:

1. Supporting state medical boards’ two licensing decisions: the first decision point, which is entry into supervised practice, and the second decision point, which is entry into independent practice;
2. Adopting a general competencies schema for the overall design, development, and scoring of USMLE, using a model consistent with national standards (Furthermore, as the USMLE program evolves, it should foster a research agenda that explores new ways to measure those competencies important to medical practice and licensure.);
3. Emphasizing the importance of the scientific foundations of medicine in all components of the assessment process;
4. Maintaining the assessment of clinical skills as a component of USMLE and considering ways to further enhance the testing methods currently used in order to address additional skills important to the practice of medicine; and
5. Developing a testing format designed to assess examinees’ ability to recognize and define a clinical problem, access appropriate clinical and scientific reference resources, and interpret and apply information in an effective manner.

The sixth recommendation encouraged the NBME to be attentive to ways in which it can meet the assessment needs of secondary users of USMLE. While considered important, this recommendation was not officially adopted by the Composite Committee because it did not address the primary purpose of the USMLE—medical licensure.

In order to implement the CEUP’s recommendations, the USMLE program has undergone and will be undergoing significant changes. A series of practice analyses has been completed to assist NBME staff and governance in making informed decisions about examination content and design at both decision points. Three studies have been conducted, two of which were surveys. In the first survey, interns were asked about the clinical activities and procedures they performed, their practice setting, and challenges encountered during August of the internship year. A second survey of newly licensed physicians (four years or less) enquired about experiences with various clinical procedures as well as the reason for initial licensure (e.g. moonlighting) and practice setting. A third study involved an analysis of five national health care utilization databases; the findings from the analyses will help inform the distribution of questions across the examinations by setting, diseases covered, and therapeutics and other clinical interventions assessed.

To further inform examination design and score reporting, the Accreditation Council on Graduate Medical Education (ACGME) competency schema has been adopted and sub-competencies have been defined. The competency schema will also drive research on how best to measure less easily assessed competencies. Also, questions assessing examinees’ understanding of foundational science continue to be included in Step 1 and Step 2 CK and are being included in Step 3 to a greater extent than in the past. All foundational science examination content is assessed in a clinical context and requires understanding and application of basic science concepts important to the practice of medicine. This increased emphasis on understanding and application of important basic science principles in the USMLE examinations may impact examinees’ approach to preparing for Step 3.

The Step 2 CS examination implemented significant changes during the summer of 2012. The examinee-standardized patient encounter now more closely simulates a real physician-patient encounter. Patient responses are designed to foster dialogue that is more like a natural conversation rather than a series of questions followed by yes/no answers. Examinees will not be rewarded for asking many often unrelated questions in as short a period of time as possible. The post-encounter clinical note now requires examinees to link their differential diagnosis to the history and physical examination, rather than only document continued on page 11.
Women made up 48% of all American medical school graduates in 2010.¹ Women physicians often struggle with balancing home life with career, particularly at the timing of childbearing. In a study of 457 family medicine residency programs, 34% of residents became pregnant during their PGY1 year, 40% during PGY2 year, and 23% during PGY3 year.² Similarly, 38% of surveyed pediatricians reported being pregnant during residency.³ In contrast, more than 50% of women surgeons delayed childbearing until they were in independent practice or post-training.⁴ Residency is already a difficult time with long work hours and emotional and physical stress. Previous studies have shown that pregnant physicians have a 1.86 relative risk of an adverse pregnancy outcome compared to non-physicians of similar socioeconomic status.⁵

The main dissatisfaction with maternity leave was not related to birth timing or maternal age at delivery but to work-related issues such as limited leave time, financial concerns, and pressure from partners/coreidents. The average length of maternity leave for family medicine residents was 6.53 weeks. In contrast, a survey of board-certified female urologists found that 14.5% took less than three weeks of leave, and 70% took no more than eight weeks of leave.⁶ Although female urologists in practice were twice as likely to take more than nine weeks compared to those in training, only 30% in practice took this much time. The optimal time for maternity leave was felt to be seven to 12 weeks, with longer maternity leaves extending residency in programs and delaying sitting for boards.

The second most common reason for dissatisfaction was pressure from colleagues who would be obligated to cover missed calls, clinics, and other duties. In a survey of 341 faculty and residents at the Medical College of Ohio, 80% of respondents felt that a pregnant colleague was an inconvenience, as the absent resident’s workload would have to be shared among the other residents. Both faculty and male residents who responded to surveys felt that pregnancy was disruptive to the functioning of the department.⁸

Resident satisfaction was also influenced by the availability of childcare close to campus, extended hours, and good quality care. Currently, 84% of birthing residents were either neutral or dissatisfied with their childcare arrangement.¹ In addition, early termination of breastfeeding secondary to the demands of residency or work was another factor leading to less satisfaction. Given the increase in female physicians and rising maternal age of women entering medical school, these childbearing issues will likely become more important. For both residents and practicing female physicians, well-communicated maternity and paternity leave policies, flexible schedule of rotations and shifts (including part-time options), on-site childcare, breastfeeding facilities, support groups, and mentoring relationships have been recommended by researchers to minimize the impact of pregnancy.¹ It has also been recommended that residents or coworkers who work extra hours to cover residents on leave receive credit for that work. Awareness and a cultural change by residencies and physician leaders to recognize the needs and strengths of female physicians will be even more important in the future.

References
menting the history and physical and listing diagnoses. The Communication and Interpersonal Skills scale has been revised from a Likert rating scale format to a checklist consisting of specific behaviors defined in the literature as essential for effective patient–physician communication. Further changes to the Step 2 CS examination will likely occur and may center on advanced communication skills such as “telling bad news,” discussing care with an angry patient or family member, and counseling patients regarding needed changes in lifestyle.

In addition to the standardized patient examination, clinical skills assessment continues to be an important part of all USMLE examinations. Several years ago, heart sounds were introduced in multiple-choice questions (MCQs), and the avatar used to depict the patient has recently been updated with a stethoscope bell feature. Recently, additional heart sounds have been added, and lung sounds may be added in the near future. The use of pictures is being increased across examinations. Specifically, text descriptions of dermatologic findings are being replaced by pictures and, where appropriate, other physical examination findings described in text are being replaced by pictures as well. In the near future, video may be introduced.

The fifth recommendation calls for a testing format designed to assess examinees’ ability to recognize and define a clinical problem, access appropriate clinical and scientific reference resources, and interpret and apply information in an effective manner. Extensive developmental work and research to assess such a format’s reliability and validity will take time. In the short term, we have increased the number of biostatistics and epidemiology questions in Step 1, Step 2 CK, and Step 3, and we are currently implementing two new formats to assess an examinee’s ability to apply knowledge of biostatistics in real-life settings. These formats, which appear in Step 2 CK and Step 3, include the use of faux pharmaceutical advertisements and scientific abstracts associated with two and three MCQs, respectively. The questions are designed to assess common and important biostatistical concepts such as study design, number needed to treat or harm, and confidence intervals, as well as skills such as interpreting data displays and applying study results to clinical practice.

In addition, the two-day Step 3 examination will become two independent examinations (tentatively referred to as Step 3A and Step 3B) that will assess different sets of competencies and have separate pass/fail decisions. This change will occur no earlier than the middle of 2014. Step 3B will focus on whether examinees possess the knowledge essential to the independent practice of medicine, including a comprehensive knowledge of clinical medicine. This examination will use traditional MCQs and computer-based case simulations. Step 3A will assess examinees’ ability to apply foundational science knowledge important to the practice of medicine. Step 3A examination will also require demonstration of evidence-based medicine and quantitative reasoning skills important to patient care and lifelong learning. Furthermore, it will assess knowledge related to systems-based practice including patient safety and other competencies. Item formats will include single MCQs related to patient safety and biostatistics as well as sets of MCQs associated with pharmaceutical advertisements and scientific abstracts. MCQs or new response formats with new stimuli may be used in the future to assess knowledge of professionalism and communication and interpersonal skills. Lessons learned in the implementation of the new Step 3 examinations will inform decisions about potential changes to the structure and implementation of Steps 1 and 2, the examinations to support the first decision point, and readiness to enter supervised practice. These changes will not occur before 2016.

In conclusion, the NBME and FSMB are committed to providing the highest quality assessment to inform licensure decisions to protect the health of the public. Assessing different competencies and using new formats may increase costs, but we will monitor these changes over time to minimize the increases. We are also committed to timely and focused communication with a broad range of stakeholders, including medical school faculty, residency program directors, residents, medical students, and the public. More information can be found at www.usmle.org/cru that will be of interest to faculty and other stakeholders.
PRESIDENT’S COLUMN
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each case, the faculty member with less effort in an area benefits from the systems and clinical pathways set up by the faculty members with more effort in the area. Trainees do not very often care for hip fracture patients on an inpatient GIM ward service, but we have dealt with their perioperative curriculum in other ways, including rotations for some on the perioperative service. Our scholarship in perioperative medicine has increased.

Although less far along, I see some focus areas developing within our ambulatory patient-centered medical home practices as well. For example, one internist has special expertise in osteoporosis and provides formal or informal consultation for thorny osteoporosis questions on patients of other physicians. Similarly, another internist provides advice for difficult lipid issues. A few of our practitioners are especially facile with procedures and handle office procedures for others in the practice. I see the development of these primary care focus areas as a positive thing not only because they enhance our quality of care but because they also enhance our teaching and scholarship.

Some general internists wonder whether SGIM as a Society is more closely aligned with those general internists with primary care interests than those with other interests. This is understandable, given the fact that our Society was initially named SREPCIM—the Society for Research and Education in Primary Care Internal Medicine. However, the renaming of the Society in 1988 as the Society for General Internal Medicine affirmed that we embrace the broad spectrum of GIM practice, education, and research. I believe the future will bring even greater focus, with its attendant benefits and risks. Clinically, what brings us together is an overlap in the clinical knowledge base to be mastered by those in different settings, as well as the need for better interaction between our systems of care. General internists are often the “quarterback” of their practice environment (or perhaps the “symphony conductor”). There is an important skill set of being in the quarterback/conductor role, whether as a primary care physician, as the inpatient attending, or as the co-manager of surgical patients. Ideally this skill set should bring our field together as well.

In the end, I do not see it as paradoxical that we embrace some amount of focus in our field while still remaining true to the underlying concept of caring for the whole patient. GIM has become so complex that it is difficult for any individual to remain a master of every single aspect of care. I hope that we can ensure that SGIM remains a Society that draws together individuals engaged in the different focus areas relevant to our field to foster understanding and collaboration and to enhance education and research.

Academic Hospitalist / CLINICIAN EDUCATOR

The Section of Hospital Medicine at the University of Cincinnati College of Medicine, Cincinnati, Ohio, is seeking BE/BC internists to join our faculty as academic hospitalists. 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 alternately attend on traditional resident-led ward teams and provide independent care to inpatients directly. Academic opportunities include participation with our medicine residency, part of the ongoing ACGME Educational Innovations Program; direct teaching of medical students in all four years of our brand-new clinical curriculum; and collaborating with researchers in our Center for Clinical Effectiveness and Center for Health Informatics. Opportunities also exist for training in Improvement Sciences and traineeships with mentored research experiences in Outcomes and Clinical Effectiveness leading to a Master’s degree in Clinical and Translational Sciences. Our hospitalists are leaders in improving both patient care and clinical processes at our primary location, UC Health University Hospital. Ideal candidates will have inpatient clinical experience and a passion for teaching and improving patient care. Salaries are competitive, with opportunities for increases based on productivity. Interested applicants should submit a CV and cover letter to:

Mark H. Eckman, MD, Director, Division of General Internal Medicine, University of Cincinnati Academic Health Center, PO Box 670535, Cincinnati, OH 45267-0535 or via e-mail to Mark.Eckman@uc.edu. This position is available immediately and will remain open until filled.

The University of Cincinnati is an affirmative action/equal opportunity employer. Women and People of Color are encouraged to apply. U.C. is a smoke-free work environment.

SGIM
An afferent pupillary defect is detected by swinging a light from one eye to the other and watching for pupillary response. A positive test means that pupillary response is impaired in the affected eye. An afferent pupillary defect is specific for optic nerve pathology. Prolonged and impaired extraocular movements suggest pathology affecting cranial nerves III and VI.

These findings help localize the pathology to the orbital apex, which contains the neurovascular structures of the eye including cranial nerves III, IV, and VI; the trigeminal nerve; the optic nerve; and the superior ophthalmic vein. Pathology at this site yields a constellation of signs and symptoms collectively termed orbital apex syndrome. Hallmarks of orbital apex syndrome are vision loss, ophthalmoplegia, anisocoria, and pupillary defects.2

A variety of conditions can present with orbital apex syndrome. They include mass lesions like head and neck or neural tumors; inflammatory diseases like sarcoidosis, lupus, and vasculitides; vascular lesions like aneurysm; traumatic causes following surgery, injury, or fracture; and infections. Imaging and labs would be helpful to discern the cause.

Laboratory studies reveal a blood sugar above 400 mg/dL, creatinine of 2.3 mg/dL, and normal bicarbonate and anion gap. White blood cell count was 11.9 x 109/L. Further testing reveals a hemoglobin A1c greater than 12%. He is diagnosed with diabetes and started on insulin therapy.

CT scan of the orbit and brain reveals mucosal thickening in the maxillary, frontal, sphenoid, and ethmoid sinuses with air fluid levels consistent with sinusitis. MRI reveals paranasal sinusitis and vascular engorgement of the right superior ophthalmic vein concerning for cavernous sinus thrombosis. He is started on antibiotics for sinusitis. Cavernous sinus thrombosis is a complication of this pattern of infection via retrograde flow from the superior and inferior ophthalmic veins.

Staphylococcus aureus is the most common pathogen followed by Streptococcus, gram-negative rods, and anaerobes. Fungal infections occur less commonly. However, the setting of a new diabetes diagnosis and poorly controlled blood sugar raises suspicion for a fungal infection from Aspergillus or Rhizopus.

Nasal cultures grow coagulase-negative staphylococci. He undergoes endoscopic evaluation of the sinuses, and biopsy reveals Rhizopus. He is started on Amphotericin B and undergoes surgical debridement, including maxillary enterostomy, ethmoidectomy, and sphenoidotomy.

He continues antifungal therapy for three months. After completing this course, the cranial nerve palsies resolve; however, his visual acuity remains impaired. He is still on insulin therapy and reports better glycemic control.

Mucormycosis is a fungal infection that typically affects immunocompromised patients.2 It is frequently cited in patients with diabetes with poor glycemic control. Other predisposing conditions include hematologic malignancies, neutropenia, trauma, iron overload, and use of immunosuppressants or illicit intravenous drugs. Typical sites of infection are the sinuses, lungs, and skin. Vascular invasion, tissue necrosis, and septic thrombosis are hallmarks of the infection. Dissemination as well as direct extension to the orbits and brain can occur. The mortality rate of mucormycosis in diabetic patients has been cited as high as 44%.

Evidence of infection of sinuses and orbital soft tissues may be seen on CT. Nasal swab and culture is insufficient to rule out mucormycosis. Diagnosis requires histopathological evidence of fungal tissue invasion. Given its invasive nature and high mortality, diabetic patients with suspicious symptoms should undergo imaging and endoscopy to evaluate possible mucormycosis. Treatment includes a prolonged course of antifungal therapy and often surgical resection of infected necrotic tissue. Aggressive glycemic control is also imperative. Delay in diagnosis and treatment may result in tissue necrosis, permanent opthalmologic deficits, and even death.

Key Points

1. Vision loss has a broad differential. History and physical exam can help localize the pathology.
2. Orbital apex syndrome arises from pathology in the orbital apex that contains the important neurovascular structures of the eye.
3. Fungal infections can spread from sinuses to the orbit leading to neurologic impairment, septic thrombosis, and tissue necrosis.

References

FROM THE SOCIETY
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“I’m excited to be a part of something that I think will be helpful to the GIM community,” says Eva Aagaard, MD, chair of the SGIM Education Committee and TEACH faculty member. “TEACH will provide clinician-educators with some important core skills that will help them grow as teachers and feel happier, more effective, and more fulfilled in their work. It’s innovative in its design—we are really trying to develop something that is both useful and efficient for people. Also, the cross collaboration of faculty from all over the country—all of whom use these teaching skills on a daily basis—really makes for a unique learning environment not just for the participants but for us as teachers. I learn something new from the TEACH faculty every time we meet.”

TEACH alumni are encouraged to continue these peer-to-peer interactions even after the certificate is conferred. Participants attend a welcome reception in year 1 and a certificate reception with capstone presentations in year 2, allowing additional opportunities to network with medical educators and demonstrate the skills acquired through the program.

The application period for the 2013 class is now closed. Applications for the 2014 TEACH class will be accepted next fall. For more information, visit www.sgim.org/go/TEACH or contact Julie Machulsky at machulskyj@sgim.org.

SGIM

NEW PERSPECTIVES
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The Pioneer ACO Model offers providers several payment options with varying and escalating levels of risk and reward. The model also tests among other things: 1) a novel expenditure benchmark methodology that is consistent with prospective patient alignment and that reduces reliance on risk-adjustment methods; 2) a requirement that ACOs eventually commit to deriving the majority of their revenues (Medicare and non-Medicare) from similar outcomes-based contracts; 3) the effectiveness of timely data sharing with appropriate technical assistance; and 4) infrastructure to support intensive shared learning activities.

But not every health care organization was ready to become a Pioneer. For entities such as small physician-led organizations or those in rural areas that would like to participate in the Medicare Shared Savings Program but may lack access to the capital they need to get started, the Innovation Center announced the Advance Payment ACO model in October 2011. This model was available to eligible ACOs that had been accepted into the Medicare Shared Savings Program in either the April or July 2012 or January 2013 application periods and also applied for the Advance Payment model, a process that included describing their organizational structure and plans for investing the funds. Available funds were paid as an “advance” on the savings it is hoped these organizations will realize in the Shared Savings Program relative to traditional Medicare fee-for-service care. There are currently 20 ACOs participating in the Advance Payment Model.

The Comprehensive Primary Care Initiative
Many in primary care practices agree that the biggest barrier to transformation in practice is transformation in payment. The model of “usual primary care,” supported by usual fee-for-service visit-based payments, does not reliably offer some of the high-value services that could be offered in a primary care practice, including care coordination, proactive inter-visit care for at-risk patients, or risk stratification and customized care management based on identified risk factors. Many experts agree that strengthening and augmenting primary care capacity—not to do more of what we do now but to do something related but different—is critical to having a high performing delivery system. The Comprehensive Primary Care initiative (http://innovation.cms.gov/initiatives/Comprehensive-Primary-Care-Initiative/index.html) tests a new model for delivery of primary care in collaboration with other public and private payers that rests on three foundational elements: enhanced payment, robust use of electronic health records (EHRs), and continuous improvement driven by data. The model defines five core functions of high-value comprehensive primary care: 1) risk-stratified care management, 2) 24/7 access to a clinician with access to information, 3) proactive management of chronic disease and prevention, 4) patient and family engagement, and 5) care coordination across the medical neighborhood. CMS will pay a monthly care management fee—on average, $20 per Medicare beneficiary per month in the first two years—and offers an opportunity for practices to share in savings achieved for their Medicare beneficiaries—not of the Innovation Center’s investment in the initiative—generated as a result of practices’ participation in the program.

When the Innovation Center released the initiative, it invited public and private payers across the country to propose an enhanced non-visit-based support strategy aligned with the one offered by the CMS Innovation Center, to commit to an aligned data sharing strategy on quality and cost, and to declare where in the
country they would be prepared to offer it. We learned that insurers, employers, and state Medicaid agencies across the country were interested in attaining higher value primary care. Ultimately, 44 separate payers agreed to offer increased revenue to selected primary care practices in seven markets across the country (Hudson Valley region of New York; the states of New Jersey, Arkansas, Colorado, and Oregon; the greater Cincinnati-Dayton Ohio/Northern Kentucky region; and the greater Tulsa, OK, region).

Having identified the areas of overlapping interest, the Innovation Center invited primary care practices in those markets to apply. We set very high selection criteria standards. Because effective use of health information technology is key to the success of the primary care model we are seeking to test, one important focus for the selection criteria was participation in the Medicare and Medicaid EHR Incentive Programs and attesting to meaningful use of EHRs. We have now selected 500 practices, including more than 2,000 individual clinicians. Roughly one third are general internists, and two thirds are family physicians.

The five “primary care functions” have been “operationalized” as a set of nine practice milestones that practices need to achieve by the end of program year 1. The operating assumption is that more can be done to empower and support participating practices to provide them the resources to realize our shared goal of better patient health at lower cost.

We plan an ambitious curriculum delivered through a national and local learning community to help them achieve the milestones and position themselves to be successful at improving quality while decreasing total cost of care.

**Conclusion**

We are very hopeful that, given the Innovation Center’s statutory authority to test models that could be expanded to test on a nationwide basis, these models will succeed in contributing both to payment reform and development of newer higher-value models of accountable care and of primary care practice. The models being tested represent decades of experience and thoughtful leadership by those who have fought tirelessly for a system where physicians can be better supported in delivering the kind of patient-centric care that we all know will lead to improved outcomes and long-term sustainability.

We hope SGIM members will get involved with those in their community engaged in these programs, studying the initiatives and/or continuing to develop the knowledge base on which effective models of care delivery need to be built.

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**The Division of General Internal Medicine, at the University of Iowa Carver College of Medicine**

is seeking to hire physician investigators. Rank will be at the level of Associate, Assistant Professor or Associate Professor based upon experience and productivity. Individual must have an MD (or DO) and be authorized to work in the U.S. Additional requirements are advanced training in health economics, outcomes research, epidemiology, biostatistics, cost-effectiveness, shared medical decision making, or other related methodology. Individuals hired at the level of Assistant Professor or higher are expected to have a track record of peer-reviewed publications and a clear plan for developing independent research funding in one of the following areas: cost-effectiveness and decision analysis; patient safety; shared medical decision making; or quality improvement. Investigators with experience in the following clinical areas: hospitalist medicine; infection control; and musculo-skeletal outcomes research are highly desirable. Salary is commensurate with experience.

The University of Iowa is located in Iowa City, a vibrant community located in the rolling hills of southeastern Iowa. The community offers excellent schools, quality entertainment, literary, musical and cultural opportunities and Big 10 sporting events.

Initial inquiries may be sent to:
Kristin Goedken, University of Iowa Hospitals and Clinics, 200 Hawkins Drive—SE 620 GH
Iowa City, IA 52246 Tel: 319-356-4241 Fax: 319-356-3086 Email: kristin-goedken@uiowa.edu

Or

Peter Cram, MD MBA, Director, Division of General Internal Medicine:
peter-cram@uiowa.edu.

To apply interested applicants should search the Jobs@UIOWA site: http://jobs.uiowa.edu/content/faculty and search for requisition #59933

The University of Iowa is an equal opportunity and affirmative action employer. Women and minorities are strongly encouraged to apply.
Clinician Investigator

THE MEDICINE INSTITUTE OF THE CLEVELAND CLINIC

The Medicine Institute of the Cleveland Clinic is seeking to recruit junior and mid-career investigators for its new Center for Value, Quality and Effectiveness Research. The Center has strong institutional support with the goal of improving population health and reducing costs through practice redesign, information technology, and evidence-based, patient-centered care. Faculty appointments are available through the Cleveland Clinic Lerner College of Medicine. Candidates should have an MD or a PhD with advanced training in large database analysis, outcomes research, qualitative methods, biostatistics, cost-effectiveness, or shared medical decision making. Applicants interested in hospital medicine, cardiovascular disease, preventive medicine, chronic disease management and geriatrics/palliative care are particularly welcome. Qualifications include a track record of peer-reviewed publications and a clear plan for developing independent research funding. Investigators will have access to exceptional clinical data sources, generous support and strong mentorship. For physician investigator candidates, practice and teaching opportunities are available—board certification is required.

Michael Rothberg, MD, MPH
Director, Center for Value, Quality and Effectiveness Research

Interested candidates should apply online at http://my.clevelandclinic.org/medicine-institute. Please contact Jen Kambries at kambies@ccf.org with any questions you may have.

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