

IT Roundup and Annual Meeting Update

In this issue, we delve into the challenges and opportunities regarding the implementation of the electronic health record, how we share it with patients, and how we grow its potential for research through emerging data warehouses. We also draw your attention to the Annual Meeting Update, which describes the exciting plenary sessions offered this year in Orlando. As usual, we welcome your feedback on all things *Forum* at Priya.Radhakrishnan@DignityHealth.org.

IT ROUNDUP: PART I

EHR Through Not-So-Rose-Colored Glasses

Denise Millstine, MD, FACP

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The benefits of operating clinically with an electronic health record (EHR) are touted everywhere. They are brought to us by the sales force of various products, they come through on subject lines of hundreds of emails, and they can be heard on the evening news or read in the paper. Even our federal government is so certain of its superiority to the traditional paper chart that it is mandating its use in the future.

Some of the most commonly cited advantages are accessibility of the records, improved management of paper, better efficiency in clinical care, enhanced patient safety, and higher-quality prevention and chronic disease tracking. If true, this should translate to improved patient care and enhanced patient and physician satisfaction.

My own clinic recently converted to an EHR, and some of the following issues have arisen.

Accessibility

There is no argument that the electronic chart is more accessible than a single tome that needs hands physically laid upon it to make use of its contents. The merging of the chart with various office locations and different specialties was once an impossible dream. Now, working late or off hours in clinic should no longer be necessary as the EHR allows for finishing notes, tasks, and responding to patient calls from home or anywhere with an Internet connection.

When we can access the chart easily, so can many more people. Consequences have been set for those intruding upon the chart of high-profile patients, including steep fines and loss of employment. Patients, already often mistrusting of the written chart, have good reason to be wary of what gets put into a document so easily opened.

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No Patient Left Behind: Ensuring Health Care Equity in Health IT

Mita Goel, MD, and Urmimala Sarkar, MD

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The role of technology in health care is growing exponentially, as consumers increasingly turn to the Internet for health information (61%, according to the Pew study)¹ and as federal legislation incents the “meaningful use” of health information technology (HIT) in health systems. For primary care physicians caring for diverse populations, the HIT revolution brings both promise and concern.

Patient-facing HIT, particularly patient portals, have the potential to lower barriers to accessing personalized health information and health care providers. Furthermore, patient portals constitute a part of meaningful use of HIT in the 2009 HITECH Act and thus are expected to be widely implemented. Although features of patient portals vary by vendor and institution, most allow for enhanced communication between health care providers and patients through features such as secure messaging with providers, lab results review, and simplified processes for prescription refills and scheduling appointments. These features, if de-

signed well, have significant potential for allowing patients and providers to continue self-managing chronic illnesses and well care, even outside of traditional visits. Much of this potential remains unrealized, as interventions appropriate for limited-literacy and limited-English-proficiency settings have not yet been integrated into usual primary care.

On the other hand, a growing body of evidence suggests that the HIT revolution in health care is unequal. The “digital divide,” or lack of access to technology, is known to exist at the level of health systems² and among our patients, as low-income and racial/ethnic minority populations continue to lag behind in Internet access.³ We and others have also found that older individuals, racial/ethnic minority populations, and those with limited health literacy and educational attainment are less likely to use an Internet-based patient portal. This leads to the concern that health benefits emanating from HIT will disproportionately help well-resourced populations and thereby exacerbate existing health disparities.⁴ While we acknowledge the importance of health system and provider-facing HIT, we focus below on the critical importance of patients’ ability to effectively use HIT, particularly patient portals, to self-manage their health.

Based on studies describing disparities in the uptake of portal technology, providing universal access to high-speed Internet or patient portals themselves would not be sufficient to address current disparities.^{3,5-7} Ensuring equitable uptake and use of patient portals requires a coordinated effort from web designers, health systems, health care

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Our Wand, Writ Large

Harry P. Selker, MD, MSPH

Yes, this path is seductive and must be managed, but to leave your wand unused for what you really care about—that's a shame!



Recently I asked chiefs of general medicine (i.e. members of our sister organization Association of Chiefs and Leaders of General Internal Medicine (ACLGIM)) about their jobs—what they liked most, what they liked least, and what they would change if they had a magic wand.

What they liked most included mentoring and developing faculty, working with great colleagues as a leader, and representing and advocating for GIM on their own campuses and beyond. What they liked least included dealing with administrative work, attending meetings that seemed unproductive, fiscal and organizational constraints, and individuals who seemed to generate disproportionate challenges. With a magic wand, they would fix many things: Clinics would be staffed sufficiently to be fully functional patient-centered medical homes with electronic health records that were interoperable among care sites; all members of the GIM family would be integrated across ambulatory, hospital, community, educational, research, and institutional roles, with each articulating and serving the GIM mission; and funds and opportunities would be sufficient to support the development and success of GIM faculty in research, education, and clinical care.

I think the chiefs were a bit shy. They neglected to include their change-the-world work. I know most of the dozen who answered my query, and they have very high purposes to which they would certainly apply a wand. They are deeply involved in SGIM, other organizations, and national efforts, and they con-

tribute a great deal of energy and time to the advancement of GIM, medicine overall, health care, and public health. But their answers told of their objectives in their local roles as chief, not of their additional work to change and improve things on a larger scale and over time, which illustrates again how hard it is to keep your eyes on the prize when your nose is to the grindstone.

Of course, what they liked most and liked least are not unique to chiefs. We all enjoy helping a student or colleague in their work or career trajectory. None of us enjoys administrative burdens and resource constraints, especially as they seem to continue to tighten. And in any of our hands, a magic wand would get lots of use.

What about that magic wand? Of course, it is nothing other than our own hands, linked to our imagination, vision, and energy. It is the conductor's baton, ready to signal the start of a piece. The music is in mind, detailed in the score, but not yet in the air. Perhaps it is a great symphony; perhaps it is a grade school chorus. Perhaps it is a famous medical center; perhaps it is a community clinic. Some contributions will be evident immediately—others not at that place and time. If you help a person's health, it is a lasting contribution. If you teach others how to be more effective in their work, it also will echo in the work of those whom they teach. If you make an advance via your research, it will resonate in the improved care of many. With your wand, look for those opportunities that convert what you like—and what you don't like—into advances you want to see. If it's im-

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portant to you, you should be doing something to make it happen. And as we aggregate around such work, we also fulfill part of what the chiefs wanted to accomplish with their wands—that all generalists work together as a unified community.

Assuming that our wand only can be used a limited number of times, how should we use it? We certainly could spend its entire yearly allocation solving local problems. However, we also want to address the overall state of GIM, health care, and public health. And in this larger vision, “Chance favors the prepared mind.” Without a framework for understanding opportunities for impact, we will miss them.

Yet we seem too busy to respond to new opportunities. We can barely complete patient notes, write grants, finish manuscripts, and attend all our meetings. We cannot possibly add more! To some extent, this is a canard. Not all additional activities add work; by synergies and networking, some may actually expedite overall

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Converting EHR Data into Knowledge: The Benefits of Clinical Data Warehouses in Quality and Safety Research

Daniel R. Murphy, MD, MBA, and Hardeep Singh, MD, MPH

Drs. Murphy and Singh are research scientists at the Houston VA Health Services Research & Development Center of Excellence and the Baylor College of Medicine.

Although electronic health records (EHRs) have brought several benefits to health care, many benefits have not been fully realized. For example, EHRs facilitate the storage of vast amounts of clinical data generated each day, but few systems have been able to effectively put those data to use by permitting efficient retrieval of information in a manner that facilitates quality and safety improvement and research.

The Department of Veterans Affairs (VA) has now successfully implemented and used the VistA EHR system for a decade.¹ VistA has evolved to support a variety of clinical processes and allows secure access to large amounts of clinical and administrative information. However, similar to most other EHRs,² VistA was not built with a research mindset; accessing a cross-section of information about many patients or conducting data mining studies in VistA can often be tedious or impossible. Furthermore, because data is spread among multiple systems in addition to VistA (e.g. scheduling and billing) and each facility manages its own data locally, analysis of data that spans multiple systems or facilities often requires manually assimilating data extracted from multiple sources.

To facilitate performance measurement, quality improvement, and patient safety research, the VA has established regional data warehouses to store data collected from multiple administrative and clinical systems across multiple VA facilities. Additionally, the VA has recently created a nationwide data warehouse designed specifically for researchers.³ Our early experience with using VA data warehouses has shown us the tremendous potential benefits from harvesting data needed to improve patient safety and quality of care as we evolve in our EHR journey.

What is a Data Warehouse?

A clinical data warehouse is a large, centralized repository of information extracted from one or more administrative and clinical data systems (often called “operational” or “transaction” systems). While operational systems are designed to handle high volumes of transaction processes, data warehouses include features to support high volumes and varieties of analytic processes that help to make sense of patterns in data. Most data warehouses are composed of three components: software programs used in obtaining and verifying data from primary sources, the data storage repository, and an interface to facilitate access and analysis of data.⁴

Data Warehouse Benefits

Several benefits exist when data warehouses are used together with EHRs. First, data warehouses combine data from many disparate sources—including legacy and retired systems—obviating the need for time-consuming manual extraction and assimilation of data from multiple systems. Furthermore, as data are combined, they are often standardized to allow comparisons to be made (e.g. gender of “male,” “M,” and “1” might be converted into a uniform value). Second, the integration with tools to perform data mining and statistical analyses allows a wide variety of exploratory analyses to be rapidly performed. Third, because data warehouses are separate from the primary systems that hold the source data, performing analyses does not result in additional load and a concomitant reduction in response time to the “live” EHR system used for clinical practice. Finally, unlike EHRs that typically store data in a patient-centric manner, data warehouses store data in a format that easily allows

cross-patient searches (e.g. “find all patients with systolic blood pressure greater than 140”).

Quality and Safety Projects Using a Data Warehouse

The use of data warehouses has already shown benefit in hospital infection control programs,⁵ efficiency of nursing staffing,⁷ and quality management in oncology.⁸ In our own work, we are using a data warehouse to develop and evaluate several “trigger tools” to detect patients at high risk of harm from potentially delayed or missed diagnoses.⁹ These tools are designed to scan the data warehouse for evidence of potential diagnostic errors (e.g. patients with an unscheduled hospitalization occurring within several days of a primary care visit) or delayed follow-up after an abnormal cancer screening test (e.g. lack of timely colonoscopy after a positive fecal occult blood test). Because these triggers rely on combing through data contained in multiple operational systems (e.g. lab system, patient visit records, clinician scheduling), they would be extremely difficult to conduct without a data warehouse.

Many SGIM members are either already involved or will be involved in EHR initiatives. As many of them might have already realized, few EHRs natively incorporate a data warehouse, greatly limiting the flexibility and efficiency of analyzing the data they hold. The use of data warehouses is likely to evolve in health care as clinicians, educators, administrators, and researchers learn about their tremendous potential to meaningfully measure and improve quality and patient safety.

References

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Plenary Session Offerings for 2012

SGIM Program Committee

Joshua P. Metlay, MD, PhD, of the University of Pennsylvania School of Medicine, and Amir K. Jaffer, MD, of the University of Miami School of Medicine, are plenary chair and co-chair, respectively. David Paul Eisenman, MD, MSHS, of the UCLA School of Medicine, is international programming chair.

The national meeting is approaching. Only a few more months before SGIM descends upon Orlando. We have exciting sessions planned for the meeting and content to meet all your professional and personal goals. We are thrilled to announce our three plenary speakers and to introduce the international program to you. Don't forget to register for the meeting and make your hotel reservations through the meeting website at www.sgim.org/go/am12. Be sure to bring the family—there are plenty of entertainment options for them while you enjoy a fantastic meeting.

Thursday Opening Plenary Session Keynote

Does the Arc of the Moral Universe Really Bend Toward Justice?

Steven A. Schroeder, MD

Distinguished Professor of Health and Health Care, Department of Medicine; Director, Smoking Cessation Leadership Center; University of California, San Francisco

Dr. Schroeder is distinguished professor of health and health care, Division of General Internal Medicine, Department of Medicine, UCSF, where he also heads the Smoking Cessation Leadership Center. The Center, funded by the Robert Wood Johnson Foundation and the American Legacy Foundation, works with leaders of more than 80 American health professional organizations and health care institutions to increase the cessation rate for smokers. It has expanded the types of clinician groups that support cessation, developed an alternative cessation message (*Ask, Advise, Refer*), created new ways to market toll-free telephone quit lines, and engaged the mental health treatment community for the first time. Between 1990 and 2002 he was president and CEO of

the Robert Wood Johnson Foundation. During that time, the Foundation made grant expenditures of almost \$4 billion in pursuit of its mission of improving the health and health care of all Americans. It developed new programs in substance abuse prevention and treatment, care at the end of life, and health insurance expansion for children, among others. At both George Washington and UCSF he was the founding medical director of a university-sponsored HMO, and at UCSF he founded the Division of General Internal Medicine.

Friday Plenary Session Keynote and 2012 Malcolm L. Peterson Honor Lecture

Karen B. DeSalvo, MD, MPH, MSc

City of New Orleans Health Commissioner and Senior Health Policy Advisor to the Mayor

Dr. DeSalvo's responsibilities include direction of the Health Department, whose mission is to protect and promote the health of New Orleanians. Dr. DeSalvo also advises the mayor on local, state, and federal health policy matters. She has 20 years of practice, research, and policy experience aimed at improving access to quality affordable community health care for all. She has been a leader in health sector recovery and health care reform efforts since Hurricane Katrina. In addition to broad health reform, the focus of her work includes the creation of national award-winning models of neighborhood-based medical homes for low-income, uninsured, and vulnerable populations. Dr. DeSalvo was recognized as a Woman of Excellence in Health Care by the Louisiana Legislative Women's Caucus for her health care reform efforts in 2008 and led a delegation who received an award from the National Committee for Qual-

ity Assurance. Dr. DeSalvo is the current president of the Louisiana Health Care Quality Forum and 504HealthNet. She has served on numerous local and national professional boards and is active in the community. She was most recently professor of medicine and vice dean for Community Affairs and Health Policy at the Tulane University School of Medicine.

Dr. DeSalvo is known to many members of the SGIM family, having been a Council member and chair of the Annual Meeting Program Committee. She is also a past president of ACLGIM.

Saturday Plenary Session Keynote

JudyAnn Bigby, MD

Secretary, Health and Human Services, The Commonwealth of Massachusetts

Dr. JudyAnn Bigby oversees 17 state agencies and serves in the Cabinet of Governor Deval Patrick. Her broad range of experience—as a physician, professor, researcher, and health policy expert—gives her unique insights into how the state can best serve the people of the Commonwealth. One of Secretary Bigby's top priorities is ensuring the state delivers high-quality services to Massachusetts residents; some of the program areas she manages relate to health care, insurance coverage, housing, child welfare, public health, disabilities, and veterans. Secretary Bigby also chairs the Health Care Quality and Cost Council, which was created through the 2006 health care reform law and establishes statewide measures to improve quality, contain costs, and reduce racial and ethnic disparities in health care. Until her appointment, Dr. Bigby was the medical director of Community Health Programs at Brigham & Women's

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“To Infinity—And Beyond!” SGIM’s Technological and Communications Advances Will Shoot Members into Orbit

Francine Jetton, MA

Ms. Jetton is SGIM communications director.

As a mother of young children, I am constantly surrounded by animated characters on TV and in our playroom. From Phineas & Ferb to Buzz Lightyear, these characters ask “what if?” and then work together to find solutions to their problems. They show children each day how to creatively use technology, ingenuity, and their own imaginations to make their environment a better place. And through them, my boys grow, learn, and embrace new ways of thinking and playing.

The same analogy can be applied to SGIM. In the past we have heard members ask us for more robust communications, both internally and externally. We knew communications was a problem for us. We wandered a bit into the social media forums to reach out to members online, and we used our existing technologies to inform and connect members where possible. But it wasn’t enough. How, I wondered, could we communicate if the sky were the limit? What could we do if we re-imagined the ways in which we talk to members and reach out to other organizations, media, readers of our publications, and others? Could we really catapult ourselves into a new communications orbit through new technology and our own creativity? I certainly thought about this during the Council retreat in Orlando at Walt Disney World, where I hear dreams can come true.

Over the past 18 months, SGIM Council, members, and staff have been working to make our communications dream come true. We’ve been working to formulate a strategic communications plan both internally and externally to spread the word about the work of SGIM committees and task forces. Part of the fruition of this dream is the revitalization of the SGIM/ACLGIM website. This website, tentatively set to

launch this summer, will be a complete re-imagining of how SGIM/ACLGIM relate to the online world and their members. Social media (through Facebook, LinkedIn, and Twitter) will be embedded in every page. You’ll physically see our members as they Tweet in real time. There will be room for discussion boards on current articles from *JGIM* and *Forum* as well as blogs, podcasts, links to YouTube videos, RSS feeds, and more. This will be a completely new way of relating to our members—from what was a static website full of information from SGIM/ACLGIM to an interactive site where our members form a community to talk to and learn from each other. Of course the site will have a completely new look and feel, along with a new logo. The editors and staff at *JGIM* are also working to redesign their website. It’s being built alongside SGIM and ACLGIM and will be a collection point for all things *JGIM*—author resources, cutting-edge articles and features, and areas where readers can engage with one another.

But a new website cannot be implemented in a vacuum. In order to get it launched, SGIM needed to overhaul its existing technological platform. The first thing we did was invest in a major upgrade for the members-only side of the web platform. You may have noticed an improved user interface when you logged in to update your membership information. This upgrade to a new SQL database technology gained efficiency in database structure and improved response time to member queries. The technology in the national office was also improved: We moved all of our servers into the cloud, providing staff members with instant access to files from wherever they are working; we upgraded our Internet security and

connection speed; and we added instant messaging, video, and computer sharing capabilities to increase staff efficiency.

Additionally, we have implemented new software called Higher Logic, which will become the communications hub for member networking. This tool can provide a myriad of functions to connect members to one another, including:

1. Replacing the current SGIM/ACLGIM Listservs with “Community Discussions,” which allow members to view discussions online at the Higher Logic site, via instant e-mail, or via e-mail digest at the end of each day;
2. Providing “Community Libraries,” which have the ability to store, categorize, and search reference material by several sets of criteria;
3. Providing the ability to maintain an SGIM, ACLGIM, or *JGIM* Community “Event Calendar,” which can be updated by members;
4. Connecting members through a new and improved Membership Directory with search capability and fields to add content on each member;
5. Providing the ability to create Community Microsites for specific targeted groups of members (i.e. committees, regions, interest groups); and
6. Providing blogging and video streaming capability, either on the SGIM landing page or by communities within the Higher Logic site.

We expect Higher Logic to be operationalized sometime this spring and to be fully integrated into the SGIM/ACLGIM/*JGIM* websites

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A Burmese Woman with Fever

Cecelia Theobald, MD (presenter), and Kelly Cunningham Sponsler, MD (discussant)

Drs. Theobald and Cunningham Sponsler are faculty in the Vanderbilt University School of Medicine, Department of Medicine.

A 44-year-old woman presents with a three-week history of intermittent fevers, malaise, proximal myalgias, and arthralgias of her shoulders, knees, and hands. She also reports a 15-pound weight loss and nonproductive cough.

Her past medical history is unremarkable. She takes no medications regularly. Family history is unknown. She reports no tobacco, alcohol, or illicit drug use. She is a recent immigrant from Myanmar (Burma) and does not speak English; history is obtained via telephone interpreter.

Fevers are a common presenting complaint. Infections, particularly viral syndromes, are the most common source of fevers encountered by internists. Malignancies and collagen vascular diseases are the other two broad categories that may cause fever. Most febrile illnesses are readily diagnosed through presenting symptoms, a focused physical assessment, and, if needed, simple diagnostic testing.

More history is needed; this can pose a challenge in a non-English speaking patient. Experts recommend using trained medical interpreters rather than communicating through English-speaking family and friends. Social factors, including travel history, sick contacts, occupational exposures, and risk factors for human immunodeficiency virus (HIV) and tuberculosis (TB), will be important. A complete review of systems should be performed.

On further history, she reports immigrating to the United States from Myanmar one year prior. She had previously lived in a refugee camp on the Thailand/Myanmar border for 20 years. She now resides in Tennessee. She has no known exposure to TB and works in the book-binding industry.

Given the patient's travel history,

there are concerns about infectious causes of her fever. Infections such as dengue, typhoid, leptospirosis, and malaria are endemic to Southeast Asia. She is also at risk for acute viral hepatitis, TB, and HIV. Now that she lives in the United States, indolent fungal or tick-borne infections should be considered; histoplasmosis and ehrlichiosis, for example, may be seen in Tennessee.

On examination, attention should first be directed to the vital signs, looking for evidence of severe sepsis, which might change the initial management. Other potentially useful elements of the physical exam include the presence or absence of lymphadenopathy, pulmonary rales, heart murmur, splenomegaly, joint effusions, or skin findings.

On presentation, her temperature is 101.2°F (38.4°C), blood pressure is 112/66 mm Hg, heart rate is 87 beats per minute, and oxygen saturation is 99% on room air. Physical exam is notable for tender lymphadenopathy of posterior cervical, axillary, supraclavicular, and inguinal nodes bilaterally. She has a grade II/VI systolic murmur at the left upper sternal border that does not radiate. The remainder of her exam is unremarkable.

The presence of fever is confirmed. Her diffuse lymphadenopathy is concerning but non-specific. Infection with bacterial, viral, mycobacterial, fungal, protozoan, and spirochetal organisms can result in generalized lymphadenopathy. Non-infectious causes of peripheral lymphadenopathy include malignancy, lymphoproliferative disorders; immunologic processes such as serum sickness; endocrine disorders such as hypothyroidism and adrenal insufficiency; and rheumato-

logic diseases such as systemic lupus erythematosus, rheumatoid arthritis, Still's disease, or dermatomyositis. Any of these illnesses may be associated with fevers, myalgias, and arthralgias.

The remainder of the exam is normal, aside from a systolic murmur, the description of which suggests a flow murmur. When evaluating a febrile patient, key findings are often not detected during the initial assessment; as the work-up proceeds, it may be necessary to repeat a detailed history and physical examination to look for additional clues. The next steps of diagnostic testing should include a complete blood count with differential, routine chemistries, bacterial cultures, urinalysis, chest x-ray, and testing for mycobacterial and HIV infection. If initial testing is unrevealing, or if blood cultures are positive, an echocardiogram should be considered to evaluate for endocarditis.

Laboratory studies reveal a hemoglobin of 9.9 g/dL and WBC count of $2.7 \times 10^9/\mu\text{L}$ (differential is notable for significant lymphopenia representing 1% of total leukocytes). Aspartate aminotransferase and alkaline phosphatase are mildly elevated at 64 U/L and 123 U/L, respectively. Renal function, electrolytes, and creatine phosphokinase are within normal limits.

The patient's CBC shows lymphopenia and anemia. These findings could be consistent with any of our three general diagnostic categories. The slight elevation in AST is likewise non-specific; if it persists, evaluation with a viral hepatitis panel and imaging would be warranted.

While the initial cultures and imaging are pending, consideration is indicated for withholding antibiotic therapy if there is no evident source

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Mile-High Meeting: Recap of the 2011 Mountain West Regional Meeting

Ravi Gopal, MD

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Once again the Mountain West Region presented a lively one-day meeting. Held at Denver's safety net hospital, Denver Health and Hospital, the theme of the meeting was "Serving the Underserved." The meeting set regional attendance records with more than 50% of members and attendees coming from five of the six states in the region.

The content-packed day included oral and poster abstract presentations, four invited lectures, and six workshops. Two of the many highlights of the day included a lecture by Thomas MacKenzie, MD, chief quality officer at Denver Health, and a workshop by Rachel Swigris, MD, and Jessica Campbell, MD, titled, "Why How You Are Working Is Not Working: Manage Your Energy Not Your Time."

Dr. MacKenzie educated the group on Denver Health's adoption of Toyota production system's Lean philosophy in 2005. Driven by a goal to improve quality and remove waste, the Lean system identifies areas that need improvement and, through a series of one-week rapid improvement events, breaks the problem down into component parts, identifies the non-value added events, develops a new process, implements the process, and refines the process for greatest success. They have accomplished more than 300 rapid-improvement events ranging from preventive outpatient care to hospital DVT prophylaxis. Through this process, Denver Health has been able to save \$135 million since 2006 and ranks #1 in the country among academic centers in patient survival.

A second highlight of the meeting was the workshop Drs. Swigris and Campbell hosted. In light of the



burnout that remains very prevalent among resident and attending physicians who increase work hours at the price of personal and professional development opportunities, they provided attendees with a framework for monitoring and replenishing energy. The workshop started with an explanation of four types of energy—physical, emotional, mental, and spiritual—and an exercise to self-assess our personal energy levels. Next they led us through a program to renew our energy. One method focused on main-

taining meaning in work, which may have less influence on what we do than how we do it. A final exercise helped us clarify what it means to be a physician by developing a vision statement for work-life balance. Overall, Drs. Swigris and Campbell presented an interesting workshop that explored ways of maintaining meaningful work and home lives.

Please mark your calendar for our next meeting on October 5, 2012, in Denver. I can assure you that it will be an equally enlightening day.

CMS to Reimburse for Intensive Obesity Treatment in Primary Care: A Step in the Right Direction

Adam G. Tsai, MD, MSCE; Sharon J. Herring, MD, MPH; Melanie Jay, MD, MS

Dr. Tsai is assistant professor in the Division of General Internal Medicine & Colorado Center for Health and Wellness; Dr. Herring is assistant professor of medicine at Temple University School of Medicine, Center for Obesity Research and Education; and Dr. Jay is assistant professor of medicine at New York University School of Medicine.

Medicare announced on November 29, 2011, that it will now reimburse primary care physicians (PCPs) for intensive behavioral counseling for obesity (BMI at least 30 kg/m²).¹ Specifically, Medicare will pay for a face-to-face visit every week for four weeks, every other week during months two through six, and every month during months seven through 12. (Reimbursement for months seven through 12 depends on the patient losing at least 3 kg during the first six months.) This counseling must be done by the PCP or another clinician in the primary care setting (e.g. nurse practitioner, clinical nurse specialist, or physician assistant). Given that more than one third of the US adult population is obese,² CMS's plan for reimbursement is clearly a step in the right direction.

How will CMS's decision change practice?

This decision fulfills recommendations made by the US Preventive Services Task Force (USPSTF) in 2003, in which PCPs were advised to screen all adult patients for obesity and offer intensive behavioral counseling for their obese patients (at least twice monthly for the first three months) or to refer their patients to such programs.³ Despite these recommendations, studies since the USPSTF guidelines were released have documented that PCPs do not always counsel patients about their weight.⁴ Lack of reimbursement has long been cited as a major barrier to the provision of counseling.⁵

CMS's decision to reimburse for weight loss counseling eliminates this critical barrier and is considered a major step forward by obesity experts, as it brings treatment into the primary care office in a way never

done before. By paying for physician time to discuss weight, the decision legitimizes the importance of the topic in contributing to the burden of obesity-related illnesses in primary care. Similarly, it offers patients the opportunity to receive counseling that they might otherwise have to pay for out of pocket (for example, by joining a commercial weight loss program). We hope that private insurance payers will follow Medicare's lead and make intensive counseling available to all patients.

What is missing in CMS's plan?

Most PCPs will need at least some additional training to be comfortable engaging in intensive obesity treatment. PCPs will need to become very comfortable talking to patients about weight and treatment options. Specifically, PCPs will need to be at ease when introducing the topic of weight, discussing the medical benefits of moderate weight loss (10% of starting weight), and providing a range of treatment options. These treatment options should include a combination of self-monitoring (using paper and pencil or web resources), realistic goal setting, discussion of the pros and cons of various self-directed diets (e.g. low carbohydrate, high protein), use of meal replacements, and potentially weight-loss medications and/or surgery. PCPs will need to become comfortable with new skills such as reviewing patients' food records and doing brief motivational interviewing. Currently, physicians report poor competency in many of these areas.⁶ Improved education of PCPs regarding evidence-based counseling strategies, such as the use of the five As (Assess, Advise, Agree, Assist, Arrange), is essential to ensure these CMS codes are used effectively.⁷

What training programs are available?

To successfully counsel obese patients, several options for additional training are available. For those PCPs who wish to become more expert in weight management, 13 professional societies, including the American Heart Association and American Dietetic Association, have teamed to create the "Certified Obesity Medical Physician." This training program is expected to be available in late 2012 (<http://www.obesity.org/certification/comp.htm>). For PCPs who desire a less-intensive exposure but still want more training, there are several one- to two-day continuing medical education courses in obesity evaluation and treatment (Cleveland Clinic, Harvard obesity course, Obesity Society pre-course). In addition to improving their nutrition knowledge and weight management counseling skills, PCPs can familiarize themselves with weight management resources in their health systems and communities (e.g. YMCA Diabetes Prevention Program, VA MOVE! Program).

How much will we as PCPs impact the obesity epidemic through the provision of intensive counseling?

In proportion to the US obesity epidemic, the effect size will likely be modest. As a society, we'll get much larger effects through policy changes that make healthy food choices more accessible and more affordable, as well as prevention efforts that make healthy eating and increased physical activity the default option. However, we must embrace our important role in the treatment of obesity, as we are the providers that patients see most

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Are Hospitalists Part of the Health Care Solution?

Michele Fang, MD

Dr. Fang is clinical assistant professor at the University of Iowa.

More than 30,000 doctors, nurses, and other care providers make up the hospitalist movement. A major driving force behind this growth is the purported savings in hospital costs and reduction in length of stay. Hospitalists have expanded their breadth from not only taking care of patients without physicians but also to expanding services to pediatric hospital medicine and neurosurgery co-management.

However, health care costs do not end with a patient's hospital discharge. A retrospective study of 60,000 Medicare patients from 2001-2006 showed that although hospitalist care yielded an average inpatient savings of \$282 per Medicare beneficiary, there was a higher readmission rate, more emergency department visits, and more patients discharged to skilled nursing facilities than their own homes. This led to an extra \$332 in the month after discharge—mostly from an increase in readmissions. One can make excuses and say it is because hospitalist patients, compared to patients followed by primary care physicians (PCPs), have more medical comorbidities. One might also argue that 30-day readmissions were not a primary goal during the study or that two times as many hospitalist patients came from skilled nursing facilities than from home. The finding that hospitalist care costs more, however, should be a wake-up call to all hospitalists.

Yet several studies have not found a strong association between length of stay (LOS) and readmission. It is more likely that the fragmented hospital care problems result from transitions of care, especially going from hospitalist to PCP. A hospitalist may “forget” to tell the PCP that a patient is being discharged from the hospital so that when the PCP gets a call from the patient about post-discharge problems the PCP instinctively tells the patient to go to the emergency department because he/she doesn't know the details of the hospital stay. In contrast, a PCP following a patient post-discharge may choose to have the patient come to the office for reevaluation rather than directly sending him/her to emergency. Hospitalists also tend to routinely use post-discharge services to nursing facilities when they feel a medically complex but stable patient could crash later; at least at a facility, nurses and physicians will “watch” over the patient.

The *Annals* article did not measure the intangible pieces of hospital medicine such as improved patient mortality and morbidity gained from quality improvement (QI) and process improvement. This is probably worth more than the additional \$50 associated with the hospitalist model. Although the length-of-stay reduction—especially when there is fixed reimbursement—can have a large financial impact, hospitalists also may be better at decreasing

hospital-acquired conditions such as catheter-related infections, deep venous thrombosis prophylaxis, and decubitus ulcers. Also, hospitalists have kept the hospitals running when the residency work-hour limits imposed by the Accreditation Council for Graduate Medical Education had reduced the number of inpatients a resident could admit. Hospitalists are often hired to cover the remainder of the patients both night and day.

Hospitalists have the opportunity to reduce costs for care by more than \$282 by ordering fewer tests, teaching our new physicians quality and process improvement, and performing QI projects. With the focus over the last 15 years on LOS, efforts in QI have only recently been emphasized. Yet physician compensation for performing QI is often not rewarded in academic medicine because there are no RVUs for research, it is difficult to get QI published as “original research,” and often QI studies are time consuming to perform. Until hospital medicine puts these issues ahead of LOS or RVUs, we will fail to show our true value to hospitals and our patients.

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of bacterial infection or hemodynamic instability. Given her cough and fever, she should be in respiratory isolation until pulmonary tuberculosis is excluded. She needs a hematologic work-up to better characterize her anemia and leukopenia. Leukopenia, particularly lymphopenia, can be seen in viral infections, hematologic and disseminated malignancies, and rheumatologic processes.

The patient is admitted, and the initial concern is for chronic bacterial, mycobacterial, or fungal infection. Blood, urine, and sputum bacterial cultures are without growth. Her CD4 count is 11 at presentation, but HIV RNA viral load is undetectable. A PPD is negative, as are urine, sputum, and blood cultures for acid-fast bacilli. Given her heart murmur, she undergoes a high-quality transthoracic echocardiogram, which shows no valvular vegetations. CT imaging of the chest, abdomen, and pelvis shows only diffuse lymphadenopathy. Excisional biopsy of a cervical lymph node reveals necrosis but no evidence of neoplastic or infectious process. An infectious work-up is negative for viral hepatitis, CMV, *Histoplasma*, *Blastomyces*, *Ehrlichia*, *Mycoplasma*, *Legionella*, *Bartonella*, *Brucella*, and syphilis.

Extensive testing for infection has been unrevealing. At this point, the patient meets criteria for fever of unknown origin (FUO). This has classically been defined by the presence of fever greater than 38.3°C on several occasions, persisting for at least three weeks without clear etiology after intensive diagnostic testing.

The approach to FUO in this relatively young, previously healthy, recent immigrant from Southeast Asia should be systematic and not biased by the fact that she is from an area of multiple endemic infections. While it is appropriate to consider her infection risk in the context of her social and travel history, the overall fever work-up may not differ significantly from the approach to fever in any other HIV-negative adult patient. Since an infection has not been identified to date, evaluation for non-in-

fectious causes of fever should be pursued, and the history and exam should be revisited.

Given the patient's age and gender, the suspicion for a rheumatologic disease is increased. We have not been given information about her erythrocyte sedimentation rate or presence of rheumatoid factor or antinuclear antibodies; these laboratory tests are recommended as part of the initial diagnostic evaluation of FUO and might help make a diagnosis of rheumatoid arthritis or systemic lupus erythematosus (SLE). Other collagen vascular diseases, such as Still's disease or vasculitis, are more challenging to diagnose but are less likely in the absence of skin findings. Malignancy remains on the list, but an excisional lymph node biopsy was negative, and no primary tumor was detected on imaging. Miscellaneous conditions, such as sarcoidosis and factitious disorder, should also be considered.

Her leukopenia persists, and hemoglobin decreases to a nadir of 7.3 g/dL. She undergoes bone marrow biopsy, which shows low-normocellular bone marrow with trilineage hematopoiesis and no evidence of infection or infiltrative disease. Her creatinine gradually rises from 0.7 mg/dL to 1.8 mg/dL. This is associated with an albumin of 1.3 g/dL and nephrotic-range proteinuria of 3.5 grams/24 hours. She has a markedly elevated ferritin of 3058 ng/mL and low complement levels. Rheumatologic evaluation reveals an ANA titer of more than 1:160 with a smooth pattern, as well as positive anti-double stranded DNA, anti-Smith, and anti-SSA antibodies. A diagnosis of SLE is made.

SLE is a chronic inflammatory autoimmune disease characterized by a wide range of clinical manifestations. Diagnosis is often challenging, as patients may present mainly with constitutional complaints, as with this patient, or with single or multi-organ system involvement. The American College of Rheumatology has proposed 11 diagnostic criteria for lupus, of which four or more are required to confirm the diagnosis.

These criteria include: malar rash, discoid rash, photosensitivity, oral ulcers, arthritis, serositis (pleuritis or pericarditis), renal disease (nephritic or nephrotic syndrome), neurologic manifestations (seizures or psychosis), hematologic abnormalities (leukopenia, lymphopenia, thrombocytopenia, and/or hemolytic anemia), positive immunologic markers (antiphospholipid antibody, anti-DNA, anti-Smith, or false-positive serologic test for syphilis), and an abnormal titer of ANA. Though not part of the formal criteria, fever is seen in more than one third of patients at disease onset, and multi-focal lymphadenopathy is detectable in more than one fourth of patients with SLE.

She is started on high-dose steroids and hydroxychloroquine. Given her renal failure, she undergoes renal biopsy, which shows class IV-V lupus nephritis and fibrinoid necrosis. Immunosuppressive therapy and renin-angiotensin blockade are initiated on an outpatient basis.

Several therapeutic agents exist for the management of end organ disease in SLE. Non-steroidal anti-inflammatory drugs are commonly used to treat musculoskeletal complaints, and anti-malarial drugs such as hydroxychloroquine are effective in treating joint and skin manifestations. Glucocorticoids are used for more significant organ involvement, usually renal and neurologic disease. A variety of immunosuppressive drugs have been studied, including cyclophosphamide, cyclosporine, methotrexate, azathioprine, mycophenolate, and rituximab.

One of the most serious complications of SLE is renal involvement, which manifests as an abnormal urinalysis with or without an abnormal serum creatinine level. The most common finding is proteinuria, with definitive diagnosis made by renal biopsy. Six classes of lupus nephritis have been described based on the pathologic patterns found on biopsy. This patient was found to have a

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FROM OUR READERS

Dear Dr. Radhakrishnan:

We particularly enjoyed the December *Forum* featuring generational perspectives on resident duty hours. We direct an elective course for fourth-year medical students on medical education, and the students while interviewing for residency have many questions. The insightful commentaries sparked discussion with our students on this topic. Thank you.

*Kathryn Huggett, PhD,
and Anna Maio, MD
Associate Professors of Medicine
Department of Medicine
Creighton University
Omaha, NE*

Dear Dr. Radhakrishnan:

I was so pleased to find that the New Perspectives column in the December 2011 issue of *SGIM Forum* shed light on an oft-avoided topic: remediation of the struggling learner. The student's vignette highlighted well the many challenges in place today. With new duty hour restrictions and the loss of continuity in many settings of medical education, it is perhaps more important than ever to focus on clinical integration of medical knowledge and mentorship. As a former student of Drs. Cooke and Irby, and now a medical educator myself (having been very fortunate to have had many wonderful mentors), I want to thank you for bringing this important topic to the *Forum*.

Sincerely yours,

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IT ROUNDUP: PART III

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frequently. Our role should be to provide high-quality counseling with ample follow up in order to empower patients and encourage their efforts at weight management.

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IT ROUNDUP: PART I

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Constant accessibility also takes a toll on physicians themselves. Despite long hours and generally high-stress clinical work, physicians must intentionally declare a day off or be drawn into the sense of responsibility and concern for what lies in the electronic task list. The literature lags on the impact of this phenomenon on physician well-being. With the current sky-high prevalence of physician burnout, it is not much of a stretch to recognize we are playing with dangerous potential overload.

Managing the Paper Monster

The EHR should be paperless, but somehow many of the clinical systems with whom your office interacts may not have received that memo. Faxes nearly continuously stream into the office from consultants, insurance companies, pharmacies, and other participants in your patients' care. Managing this paper stack may be more cumbersome after the conversion to the digital world. Chances are you have dramatically downsized your medical records team. New processes are unlikely to have been specifically developed for these changes. Should you scan then task? Leave documents in the physician's mailbox already stuffed with journals and correspondence? If it needs a signature, does an electronic one count? It is not clear that physicians can answer these questions, which should make us feel more compassion toward the staff trying to manage the beast.

Patient Safety

There were many goals set out for the global adoption of the EHR. One primary tenet was the improvement

of patient safety. When all practitioners contributing to a patient's care are operating from the same chart, it is difficult to see how things could be overlooked or duplicated.

Unfortunately, the organization of the electronic chart may or may not be intuitive. The process through which one physician enters instructions following review of results will likely vary. With so many contributors, the chart rapidly becomes huge and much more cumbersome to flip through to find recent updates.

The issue of whether the EHR improves patient safety remains unsettled at best. The Institute of Medicine has gone so far as to issue a report urging governmental agencies to develop defined plans for implementing and assessing safety with electronic records.¹

Message fatigue is another hindrance to the improvement in patient safety. Recently, I prescribed a short-term benzodiazepine to a patient with insomnia. In the same patient's social history, I had entered "denies" under alcohol use. The system was only able to notice that I had pulled "alcohol use" into her chart, not that it was in the negative. The flagged interaction between the sleep agent and her "alcohol use" was unnecessary and led to several clicks before the prescription could be activated. When we frequently see inaccurate warnings, we are likely to skim past them in an effort to maintain efficiency.

Preventive Care and Chronic Disease

EHR vendors have long touted the improved ability of the electronic record to remind physicians when screening studies are due. The days of flipping to the radiology section

and realizing a mammogram is more than one year overdue were said to be long gone.

But this, too, appears to be cumbersome in the EHR. While the system is designed to remind the clinician, the interval of reminders and past studies needs to be entered for each patient individually. EHRs, despite being "intelligent," are unable to anticipate whether you are following the guidelines of the US Preventive Services Task Force, American Cancer Society, or some other professional organization. The amount of data that needs loading has been a significant impediment in our own optimal utilization of this health screening reminder system.

The management of chronic disease is fraught with the same issues. Some markers are easily tracked, such as HgbA1c. Others, such as stress levels following a myocardial infarction, are harder to quantify to establish standards of care. The EHR does make an attempt to set reminders for all clinical conditions, which can quickly amplify the message overload concern described above.

In case you are unsure, I *am* a proponent of the electronic medical record. I believe its usefulness and potential are extraordinary. It does, however, come with some struggles that cannot be ignored if its clinical value is to be optimized.

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FROM THE SOCIETY

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in the summer. This tool will become what the members make of it. The more information you load the more robust it will become. If

we all work together to create a real information-sharing society—though our current and emerging communications solutions—we can

truly make our dreams come true and catapult our members "to infinity, and beyond!"

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Hospital. She was also an associate professor of medicine at Harvard Medical School and director of the school's Center of Excellence in Women's Health. In this role, Dr. Bigby focused on the health care issues affecting low-income and minority women.

From 1996-2007, Dr. Bigby served on the Boston Public Health Commission. She has also served on numerous boards, including the Women's Union and the Medical Foundation. She was a member of the Institute of Medicine's Assuring the Health of the Public in the 21st Century Committee and the Minority Women's Health Panel of Experts for the US Department of Health and Human Services' Office on Women's Health.

Dr. Bigby is known to many members of the SGIM family, having served as president from 2003-2004.

International Programming

Many of us feel helpless watching television coverage of disasters

when they happen. This year we have invited SGIM members who have participated in emergency response to two such events.

The session "Haiti, Care Of Acute and Chronic Diseases After Disaster" will present the experience of a humanitarian physician in Haiti after the devastating 2010 earthquake. Olivier Hagon, MD, a physician trained in emergency medicine and anesthesiology who is the current medical director of the Coordinator Medical Unit Swiss Rescue, will describe the medical management of mass casualties and will illustrate the principles of first aid, improvisation, sorting (triage), and organized help. Dr. Hagon will discuss the logistic barriers to delivering care that were encountered in the aftermath of the earthquake. The challenges of acute and chronic disease care will be discussed specifically. The limits of what can be achieved by a physician in the context of a humanitarian catastrophe will be shared. Finally, a more general

overview on Dr. Hagon's experience in several recent humanitarian catastrophes (e.g. Libya, Kenya) will be presented.

Japan experienced an unprecedented earthquake disaster, tsunami, and radiation leakage all in one event, resulting in the devastating breakdown of the health care system. The long process of recovering from mass evacuation is still an ongoing problem. We found that generalist physicians with limited experience in disaster medicine—when properly organized—have a lot to contribute, including opening clinics at the shelters, assessing the health care needs of victims, managing chronic diseases, and preventing disaster-associated illnesses. The experiences of the Japan Primary Care Association (JPCA) will be shared, as will generalizable lessons on disaster preparedness from the perspective of generalist physicians. Strategies for international cooperation in large-scale disaster will also be discussed.

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combination of class IV disease (diffuse lupus nephritis) and class V disease (membranous lupus nephritis). Nephrotic syndrome is frequently seen with these two classes of glomerular disease, and therefore angiotensin blockade is indicated in addition to immunosuppressive therapy.

Key Points

1. The etiology of fever typically falls within one of three general categories: infection, malignancy, or collagen vascular disease.
2. Important findings are often missed during the initial evaluation of a patient with fever of unknown origin; repeating a detailed history and physical exam may provide valuable clues to the diagnosis.
3. SLE is a multi-system autoimmune

disease that commonly presents with fever and generalized lymphadenopathy; the diagnosis may be overlooked without a broad differential diagnosis.

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IT ROUNDUP: PART II

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providers, and patient communities. First, patient portals are designed at a high level of technical complexity. Second, systems-level barriers such as awareness of the portal, differential offering of the portal to certain patients, and availability of training and technical support to patients all might influence patient portal uptake. Third, individual patient-level barriers such as lack of perceived value in patient portal technology or lack of motivation to enroll should also be addressed through the development of targeted interventions. Addressing these barriers in a systematic, coordinated manner is essential for promoting equity within institutions introducing or expanding their patient portals.

Thus, implementation of patient portals requires attention to the needs of diverse populations throughout the continuum of development and use. Vendors should incorporate robust usability testing, and portals should be appropriate for those with limited health literacy, who are less likely to adopt even a cutting-edge patient portal.⁸ For example, complicated enrollment instructions, requirements of complex usernames or passwords, or poor design of portal features may prevent patients from enrolling in or using the patient portal. In turn, health care systems need to ensure universal awareness of the patient portal and its features, as well as access and ability to enroll patients. This would require several steps, including developing and providing compelling informational materials in simple language and in non-English languages as needed by the broader patient population. To maximize exposure to information, materials would need to be distributed using print, audio, and Internet-based channels. Currently, some health care systems require providers to individually invite patients to participate in the patient portal, which may lead to unequal access to the portal, particularly if providers are susceptible to unconscious stereotypes or bias that prevent regular provision of portal ac-

cess. To promote equity, all patients should have equal opportunity to enroll in the patient portal. Patient-facing interventions to promote use of the patient portal—through Internet-enabled computers located in waiting rooms, peer health educators, or community leadership—should also be part of efforts to ameliorate digital disparities.

These proposed interventions highlight the importance for health care institutions to partner with vendors, providers, and patient communities to maximize the uptake and use of patient-facing technologies in an equitable manner.

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PRESIDENT'S COLUMN

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work and accelerate reaching goals. Perhaps an opportunity arises to serve on an important committee, and you are about to exercise your “No” reflex. However, perhaps you really should know about the area to be addressed by the committee, making the opportunity a very efficient way to learn a lot. This might lead to a new area of endeavor for you that would enhance your career and satisfaction. Maybe there are others involved—some you know and some whom you would like to know—as well as possibilities for establishing relationships with good people and colleagues and making important connections. And a degree of citizenship is important. Yes, this path is seductive and must be managed, but to leave your wand unused for what you really care about—that's a shame!

We need to attend to balancing these local and national objectives. For the GIM chiefs, and for us all, our constant and diligent efforts on local issues can obscure our vision of our larger objectives. Besides attenuating our impact, this can contribute to our being overwhelmed by doing what we like least. The chiefs and the rest of us need to help each other in this balance. For ourselves and for our overall impact in using our attention, energy, and time—our wand—we must consider all our objectives, writ large.

SGIM

Clinician Investigator

The University of Kansas Medical Center, Department of Preventive Medicine and Public Health in Wichita, KS is seeking a clinician investigator to join the current pool of talented faculty members.

The successful candidate would be expected to have a strong interest in health disparities with a focus in geriatric populations and to achieve the following goals:

- Conduct independent and collaborative clinical research
- Develop into an independent clinical researcher within four years (working both as a principal investigator and co-investigator)
- Teach within the MPH/MSCR program and Health of the Public rotation
- Work closely with clinical research teams to develop grant proposals
- Grant writing/editing
- Participate in medical clerkships, residencies and fellowships
- Mentor graduate students

An MD/MPH or MD/PhD is required. The candidate must have or be willing to apply for federal funding and a strong interest in developing a national reputation.

For information, contact Tracie C. Collins, MD, MPH, Chair and Professor, Kansas Health Foundation Distinguished Professor in Public Health Department of Preventive Medicine & Public Health (316) 293-2627.

EOE/AA Employer

Epidemiologist

The University of Kansas Medical Center, Department of Preventive Medicine and Public Health in Wichita, KS is seeking an epidemiologist to join the current pool of talented faculty members.

We are seeking a candidate with the following goals:

- To conduct independent and collaborative research in clinical epidemiology
- Obtain extramural funding, teach introductory and advance epidemiology
- Work closely with departmental faculty to help develop grant proposals that require epidemiologic expertise
- Provide consulting services both internal and external to the medical school
- Provide mentoring to both faculty and students

An MD, PhD, or comparable degree is required. Depending on the individual's interests and qualifications, an appointment within the Mid-Continent Center for Outcomes and Health Services Research would be available. The candidate must have or be willing to apply for at least one federally funded R01 grant or a comparable foundation grant. He/she should have experience presenting/publishing original research findings, and a strong interest in developing a national reputation as an outstanding epidemiologist.

For information, contact Tracie C. Collins, MD, MPH, Chair and Professor, Kansas Health Foundation Distinguished Professor in Public Health Department of Preventive Medicine & Public Health (316) 293-2627.

EOE/AA Employer