Stakeholders from across the health care system gathered in San Francisco for this year’s ABIM Foundation Forum to consider whether systemic changes intended to make care more rational and effective were instead driving physician and patient dissatisfaction, and if so, to plan how that trend could be reversed. While the adoption of health information technology and the development of performance measurement metrics were heralded as major innovations in health, the reality of implementation has been messier. There was broad agreement at the meeting that a return to an earlier era – without electronic medical records (EMRs) and performance metrics – was neither possible nor desirable. However, participants put forward many ideas for how these innovations could become both more patient-centered and more appealing to physicians.
THE CONTEXT

The Forum began with Richard Baron, MD, the President and CEO of the American Board of Internal Medicine (ABIM) and the ABIM Foundation, and Donald Wesson, MD, the past Chair of both organizations, talking about their personal experience with the introduction of EMRs. Dr. Baron discussed the EMR implementation a decade ago at his Philadelphia primary care practice, describing how the transition from paper to electronic records changed how every person working at the practice did their job and caused internal strife, and how no amount of training could ensure their competence. “I came to the conclusion that without a massive national program, other primary care doctors would be crazy to try to do this,” he said.

Of course, such a massive national program was launched later in the decade, paving the way for widespread adoption of EMRs. Baylor Scott & White Healthcare, where Dr. Wesson practices, recently adopted an EMR system. His key takeaway from that adoption was that EMRs are not a magic bullet to improve care. “Until we fixed our bad processes, our EMR allowed us to do those bad processes faster and with better documentation,” Wesson said.

Despite these frustrations, both physicians agreed that health information technology offered significant benefits, with Dr. Baron describing his ability to use e-mail to continue to care for a patient who was a Peace Corps volunteer in Bosnia, and carried tremendous promise as the national transition from paper to electronic systems continued to gather force.

This year’s Kimball Lecture, the Forum keynote address that honors former ABIM and ABIM Foundation President and CEO Harry Kimball, MD, was delivered by Christine Sinsky, MD, a primary care physician in Dubuque, Iowa, and member of the ABIM and ABIM Foundation boards. Dr. Sinsky’s theme was that creating or restoring joy in practice for physicians and other clinicians can take us a long way toward achieving the Triple Aim of improving the patient experience of care, improving the health of populations, and reducing the per capita costs of care. She described the comprehensive change that has swept the health care system over the past decade and linked that change to an increase in physician burnout, citing statistics that nearly 50 percent of physicians exhibit some level of burnout, and 70 percent of family physicians and 80 percent of general internal medicine physicians would not choose their specialty today. She in turn cited this burnout and dissatisfaction as causes of physician mistakes and reduced empathy, increased referrals, and patient dissatisfaction and nonadherence.

Dr. Sinsky articulated how some answers to this problem could be found in primary care practices around the country that have created more joyful and efficient offices. She led a research team that visited 23 such practices, and has personally visited more than 50 practices in recent years. In these visits, she identified five challenges a successful practice must address:

- Chaotic visits with overcrowded agendas
- Inadequate support to meet patient demand for care
- Vast amount of time spent documenting care
- EMR implementations that push more work to physicians
- Teams that function poorly and complicate work

“Until we fixed our bad processes, our EMR allowed us to do those bad processes faster and with better documentation.”
She then presented a number of solutions that she saw during her site visits, including:

- Reengineering office practices through steps such as having patients obtain blood tests and lab results before their visits, and renewing all medications for the maximum amount of time allowed by law;

- Redesigning how practices use EMRs and health IT through innovations such as enlisting scribes or health coaches who document visits and help in recordkeeping, using semi-circular desks that allow physicians and patients to talk face-to-face while also seeing the computer screen, and empowering nurses and medical assistants to filter physicians’ inboxes and pass along only those messages that truly need a physician’s attention. She cited a project by Dr. David Reuben at the University of California, Los Angeles, in which trained assistants accompanied patients on every visit and handled all documentation, after adoption, patient satisfaction increased while physicians saved 1.5 hours for every four hours of work time; and,

- Increasing the number of nurses or other non-physician clinicians in a practice and empowering them to take ownership of topics such as cancer screening, lifestyle counseling and foot exams for diabetics.

Dr. Sinsky stressed that some important improvements require regulatory change and/or institutional support. Examples ranged from states allowing longer maximum prescription periods to reducing the regulatory burden on physicians to sign simple directives in electronic record systems. (Here, she noted that the issue is largely about institutional interpretations of federal regulations, rather than the regulations themselves.) She also called for institutions to support research into care delivery, pointing out that we spend $100 billion annually researching tests and treatments, and that only a tiny fraction goes to exploring how care could be delivered more efficiently and effectively.

She closed on a note of optimism, describing the commitment of organizations such as the American Medical Association and American College of Physicians to improving physician satisfaction and the overwhelming response she has received from physician peers to her work on increasing joy in practice.

A lively dialogue followed Dr. Sinsky’s presentation. One topic was whether practices can afford to take the steps she suggested, such as bringing on additional and/or higher-level personnel. Dr. Sinsky said that most practices she has studied have managed to cover their additional costs by treating a few additional patients per day. Another topic was how EMRs could better support physicians. Here, Dr. Sinsky said that “software isn’t the villain”; although there are design issues, she attributed much of physician frustration with EMRs to their implementation and regulation. She offered, however, that the most important areas for EMR improvement would be usability and assisting with the cognitive workload.

**INFORMATION TECHNOLOGY**

After the Kimball Lecture, attendees heard from a panel that featured a variety of perspectives on information technology and health care, including the voices of both a patient and an IT developer. Amy Berman, a senior program officer at the John A. Hartford Foundation who also has Stage IV breast cancer, said that she told her physician that she wanted a “Niagara Falls trajectory” for her condition, where she felt good for as long as possible and then experienced a rapid decline. As a result, her treatments have focused on preserving her quality of life; she referred to herself as a “poster child for Choosing Wisely®”—she is satisfied with her health and her health care after declining unnecessary tests and treatments that she felt would do more harm than good, and estimates that she has saved herself and the health care system $1 million to date. The EMR system that her care team uses links across providers and settings, but it does not offer any way for her clinical team to focus on documenting and achieving her health goals.
While Ms. Berman would suggest that her physicians are performing well and she is satisfied with her care, there is no mechanism in today’s EMRs to focus care on what matters most to their patients. Rather, EMRs focus solely on one diagnosis at a time. She called for EMR systems that reward physicians who treat the person with a disease, not the disease itself.

Carl Dvorak, the president of EMR developer Epic, commented that the inclusion of patients and patient considerations in the health care system has been one of the key developments he had witnessed over the previous 10 to 15 years. For both the physician and patient experience, he pointed to the importance of design and of training that is specialty-specific, workflow-based, and includes the patient experience. He also said that the voice of the physician is lacking in policy discussions about electronic health records, a sentiment that was echoed by panelist David Kendrick, MD. Panelist Blackford Middleton, MD, placed a similar emphasis on training, suggesting that “six hours of training on an EHR is just not adequate” and that physicians “need to understand how the EHR works in the same way they know how drugs and procedures work.”

During the discussion period, a number of participants stressed positive aspects of the widespread adoption of electronic records, including the ability to build in decision support, enhance shared decision-making, facilitate team-based care and consultation, and more easily show patients relevant images and information.

The Forum’s first day closed with remarks from Howard Bauchner, MD, the editor-in-chief of Journal of the America Medical Association (JAMA). He began by reminding everyone of the “good old days” that predate the introduction of modern technology, which featured medical records that were often falling apart, x-rays that were sometimes found after patients were discharged and other inefficiencies that potentially harmed care. However, he recognizes that the introduction of EMRs has been a major contributor to physicians’ feeling that they are under siege, and commented that it is one of the most common topics in the opinion pieces submitted to JAMA. He said that he suspects the issue will become less emotional over time, but also cautioned against unrealistic expectations for how many functions EMRs can perform. He also recognized the significance of burnout, but wondered whether it is truly that different from a decade ago and questioned how to reconcile the reports of burnout with the record number of students entering medical school this year. As with the Kimball Lecture, he closed optimistically, saying that “medicine is still an extraordinary career and that should be conveyed to students.”

**PERFORMANCE MEASUREMENT**

The Forum’s second day began with presentations about performance measurement. Frank Opelka, MD, Medical Director, American College of Surgeons and the Executive Vice President of Health Care and Professor of Surgery at Louisiana State University (LSU), discussed how LSU has leveraged existing data sources to create measures and improve performance. LSU uses a wide variety of data streams (administrative data, registries, EMRs, birth and death certificates, etc.) that are compiled in a data warehouse on a Platform as a Service (PaaS) using apps that can then provide statistically valid and actionable data on the health of its patient population. Teams working on specific diseases/conditions then work with technology experts at LSU to create apps that include key measures. Dr. Opelka said that LSU’s clinicians “can’t get enough measures fast enough.”

Bryan Sexton, PhD, the Director of the Patient Safety Center at the Duke University Health System, then spoke with the group about how quality improvement efforts affect workplace environments, and vice versa. Earlier in his career, Dr. Sexton helped lead a project to reduce hospital-acquired infections, and he described how while the overall reductions were impressive, 20 to 25 percent of facilities either showed no improvement or even got
worse. He described the intensity of the project and said the level of burnout was linked directly to the institution’s success. He then looked more broadly at the health care system, arguing that it had not "done a good job of creating workforce environments that make people thrive." He discussed the importance of sleep, describing his research about sleep levels for clinical staff at Duke, which showed that the quality of care and the teamwork climate grow worse as sleep levels decline. Dr. Sexton shared a simple intervention that became one of the key takeaways from the Forum—writing down three good things each night before bed.

The presentations from Drs. Opelka and Sexton were followed by a reactor panel. Gilbert Salinas, MPA, the Acting Chief Clinical Officer at Rancho Los Amigos National Rehabilitation Center and a Fellow at the Institute for Healthcare Improvement, was paralyzed by an accidental gunshot wound at the age of 17. He talked about the qualities he valued then and remembers now about the clinicians who treated him at the time, particularly their "humanity and compassion." He said it "strikes [him] how far we’ve gone away from the patient in measurement. He stated, "It is time for us to pull away from asking ‘what is the matter with you?’ and start to ask, ‘what matters to you?’" His organization partners with a patient advisory council to inform measurement efforts.

Patrick Courneya, MD, Executive Vice President and Chief Medical Officer for Kaiser Foundation Hospitals and Health Plan, Inc., said that the most compelling measures are those that relate to chronic diseases: because so much of health care is devoted to treating them, they have a profound effect on patients’ lives, and we already know so much about treating chronic disease that there are more valid opportunities for measurement. He also suggested that the multiplicity of existing measures do not necessarily correspond with patients’ interests, drawing an analogy to the aviation industry, in which pilots are evaluated on many measures but passengers care about only three: arriving safely, on time and with their luggage.

Patrick Conway, the Deputy Administrator for Innovation and Quality and Chief Medical Officer at the Centers for Medicare & Medicaid Services (CMS), discussed CMS’s progress in aligning measures across federal programs, while recognizing that alignment with the private sector still requires a lot of work, and that the measurement enterprise can be burdensome for physicians. He also echoed the view that we are often not measuring what is most important to patients, such as quality of life and spending healthy days at home. Dr. Conway also discussed the importance of culture and the ideal of finding relevant measurements.

Participants then had the opportunity for small group discussions in which they plotted what they would say if they had 10 minutes with either a developer of measures or EMRs. Suggestions for the measure developers included:

- focusing on patient-reported outcome measures;
- creating a measure on health care workforce resilience;
- developing a measure evaluating physicians’ ability to take a rich patient history and whether patients feel they were included in decision-making; and,
- limiting the total number of measures, and replacing “horizontal” quality measures with “vertical” measures that would measure organizational culture regarding quality and safety.
Suggestions for EMR developers included:

- incorporating basic “personal” information about patients, such as their treatment goals, their insurance details (i.e., do they have a high-deductible plan), and even how to pronounce their names;
- developing analytics that would not only record patient preferences but use those preferences to influence the care plan and relevant measures; and,
- enabling a competitive marketplace for building apps that would go “on top of” the electronic medical record.

The second day concluded with remarks by Dana Gelb Safran, ScD, the Senior Vice President of Performance Measurement and Improvement at Blue Cross Blue Shield of Massachusetts. She described the appeal of data and measurement, which have the power of revealing things we don’t know and offering insights that can inspire us to act and make care better. But as the Forum discussion demonstrated, system actors are struggling with operational issues, cultural issues and challenges created by the payment and regulatory environment. Indeed, she said she heard during the first two days of the Forum that “there’s no shortage of barriers to getting where we need to go.” At the same time, she said she heard a lot of solutions in the presentations and discussions. She said that we should strive for “simplicity” in measurement, keeping our eye on the three elements of the Triple Aim. And to achieve our goals, she said that we “need to see payment reform and payment models that hold us accountable for total medical expense, quality of care and outcomes of care.”

Training and Professionalism

The Forum’s final day started with a presentation by Christopher Moriates, MD, an assistant clinical professor at the University of California, San Francisco (UCSF) and the Director of Implementation Initiatives at Costs of Care. He began by reflecting on his experience as a trainee, when he was burned out and fantasized about quitting medicine only nine months into his internship. Following on a theme developed by Dr. Sinsky, Dr. Sexton and others, he stressed the ill effects of burnout, which he said leads to errors, erodes professionalism and strains relationships. In medical training, he traced burnout to the tension between too many hours of work and not enough patient contact. While forced reductions in duty hours have partly addressed the former problem, they have exacerbated the latter one. Dr. Moriates suggested that trainees’ work needs to be connected to the purpose that inspired them to become physicians, which requires returning trainees to the bedside. He said that residency programs should have clear expectations for daily teaching rounds, require less non-physician work from trainees and provide some time for reflection in the formal curriculum, even if only half a day each year.

Rebecca Shunk, MD, spoke about the Center of Excellence in Primary Care Education, a collaborative effort involving the schools of medicine and nursing at UCSF and the U.S. Department of Veterans Affairs. Dr. Shunk is the Co-Director of the center, which teaches inter-professional learners to deliver team-based patient care in the VA’s PACT (Patient Aligned Care Team) model. Under this patient-centered care model, a team including trainee primary care providers, a registered nurse, a licensed vocational nurse and a clerical associate provide care to a panel of 1,200 patients. Nurse practitioners are trained alongside physicians and other interprofessional trainees, and the educational focus includes inter-professional collaboration, patient-centered communication, sustained relationships and performance improvement. Trainees learn a number of practical skills that
aren’t taught in medical school, such as how to have effective team huddles, do handoffs, offer and receive feedback, and resolve conflicts. This model offers extensive patient contact, putting into practice Dr. Moriates’ prescription for enhancing training.

In the following session, Jo Shapiro, MD, the Chief of the Division of Otolaryngology at Brigham and Women’s Hospital, spoke about how institutions can better support their physicians and foster professionalism among them. With the strong support of leadership, she created and directs the Center for Professionalism and Peer Support at her hospital. The center’s mission is “to encourage a culture that values and promotes mutual respect, trust and teamwork.” It includes an initiative to promote professionalism (defined as “behaviors that support trustworthy relationships”), training in teamwork and communication, peer support, coaching physicians in disclosing errors, and supporting defendants in malpractice cases. The center’s professionalism initiative includes a program that handles all concerns regarding unprofessional behavior on the part of physicians within the hospital as well as a mandatory professionalism training workshop, required of all physicians and trainees.

**INNOVATIONS**

For the final few hours of the Forum, all participants became innovators. Attendees were divided into 14 groups, each of which created their own innovation designed to solve an HIT or performance improvement/measurement challenge. A representative from each group presented its innovation, all participants voted for their favorites, and then the top six vote-getters refined their ideas (with input from new team members whose first concepts had not advanced) and competed for first place in the tournament. In the end, three winners were selected:

- **Global Patient Positioning System** (First Prize): This interactive tool would provide a “patient view” and a “clinician view” of a patient’s health in a multi-colored circle on the front page of the EMR. The circle on the front page would include segments on lifestyle, health habits, family and community support, chronic illness, gaps in care, psychological wellness and economic status. Each segment would be colored green, yellow or red to reflect whether this aspect of health was positive, negative or neutral. The middle of the circle would include a photo of the patient, as well as their family (or even pets). Patients could hover over elements of their record to obtain more information and clinical decision support, and could correct elements they believed were inaccurate. This would be a vast improvement over existing electronic systems, which require clinicians to view multiple screens and click repeatedly to obtain a holistic view of their patients and their health.

- **Cloud 9 Solutions** (Second Prize): This innovation would draw on data from all electronic record systems, keeping identified data secure and allowing patients easy access to their own records while making de-identified data available for research.

- **All of Me** (Third Prize): This technology would allow clinicians to quickly access important personal information about patients (care preferences, recent significant life events, etc.) to foster better physician-patient relationships.

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*This would be a vast improvement over existing electronic systems, which require clinicians to view multiple screens and click repeatedly to obtain a holistic view of their patients and their health.*
CONCLUSIONS

ABIM and ABIM Foundation President and CEO Richard Baron offered concluding remarks. He used two articles as frames. One was an analysis of physician dissatisfaction by Forum participant Abigail Zuger, published in the *New England Journal of Medicine* in 2004, which discussed the anguish and “terrible nervous tension” physicians experience. This is a reminder of what is at stake as we restructure how care is delivered and the environment in which clinicians deliver and patients receive care.

The other article, published by Spencer S. Jones, PhD, et al, in *The New England Journal of Medicine*, was “Unraveling the IT Productivity Paradox – Lessons for Health Care,” which applied to health care earlier analyses of why an expected major increase in productivity from IT improvements in the 1970s and 1980s never materialized. It considered three explanations: mismeasurement (i.e., the wrong tools were used to measure productivity), mismanagement and poor usability.

Applying those categories to the discussion at the Forum, Dr. Baron thought there was strong agreement that mismeasurement is a current problem, but less of a shared sense of what the right measures would be. He said he thought it was striking how the group coalesced in the discussion and the innovation tournament around the idea of incorporating patient goals and voices.

The measures that should matter are the ones that are significant to patients, just as Dr. Courneya distinguished between the vast amount of data available to pilots and the three measures that matter to him and other passengers: was the flight on time, was it safe and did his bags arrive?

Dr. Baron said mismanagement related to not using electronic tools in health care for what the tools are good at doing. Most physicians weren’t trained in using information technology, and compliance officers are explaining to them how it should be used. This combination is not optimal, and there needs to be a sharper understanding system-wide about how these tools can be used.

As for usability, Dr. Baron reminded participants of Epic President Carl Dvorak’s statement that design is critical and never ends. He also referenced the importance of activating professionalism in clinicians.

We hope that participants left the Forum energized to use the tools available to make their systems work better for patients and clinicians alike, and to work over the coming year to move toward a health system that measures what matters, takes heed of patient preferences and experiences, and restores joy in practice.