

VITAL SIGNS



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each patient counts.*



THE TECHNOLOGY ISSUE

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A New Way to Think About Medicine: Physician Entrepreneurs Seize the Moment

BY LUCY BERRINGTON, MS, VITAL SIGNS
EDITOR

It's easy to look around the health care industry and see problems, but more difficult to come up with ideas for solving those problems — and, until recently, harder still to know what to do with those ideas. That is changing. Massachusetts has become a hub of collaboration, investment, and other resources aimed at accelerating and incubating technological projects that could potentially improve the health of populations and individuals. In this increasingly dynamic scene, physicians are central players. “This is a big community in Boston, and a totally new way of thinking about medicine,” says Jennifer Joe, MD, an emergency medicine physician and CEO of Medstro, a social network for physician



Illustration by Chris Twichell

entrepreneurs and their allies in health technology.

The underlying frustration is familiar to most who work in health care. “Medical IT is in poor shape compared to any other industry,” says Andrew Schutzbank, MD, MPH, vice

president for product and technology at Iora Health, a multi-state system that aims to reinvent primary care. “There are fundamental challenges to get over. Fax machines predominate. Many doctors have pagers. Communicating information

is more like hauling buckets than building pipes.”

Obstacles Are Becoming Possibilities

The flipside of that frustration, increasingly evident, is potential. “Young people grew up with tech — smartphones and Facebook — and they get to the hospital as MDs and think this is the worst technology imaginable,” says Dr. Joe, who is also editor-in-chief and co-founder of MedTechBoston.com, a guide to health-related technology resources. “People who feel they’ve been banging their head against a brick wall finally have people excited to listen to them.”

What’s making the difference? A key incentive for technological innovation came with the Affordable Care Act and its push toward

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Can Technology Transform Public Health?

BY ROBYN ALIE, MANAGER, MMS HEALTH
POLICY AND PUBLIC HEALTH

In what ways can technology help us prevent, contain, and manage disease? This is the theme of the Society’s 14th Public Health Leadership Forum on October 26. Keynoting the program will be John Auerbach, president and CEO of Trust for America’s Health (TFAH), a nonprofit that promotes public health policy and disease prevention as a national priority. Previously, Auerbach served as Boston Public Health Commissioner, Massachusetts Commissioner of Public Health, and director of the CDC’s Central Policy Office. *Vital Signs* spoke with John Auerbach

in July about the state of technology in public health.

VS: *What’s the role of technology in promoting an integrated approach to public health?*

Auerbach: To truly move to what we’re calling Public Health 3.0, wherein the public health department is the chief health strategist for the community, technology provides easy and quick access to a range of different data. Public health needs access to the full gamut of information, from reports of infectious diseases, chronic diseases, and



John Auerbach

emerging issues like lead poisoning or drug misuse, to data from EHRs and payers and large health providers.

While at the CDC, we looked at aggregate information of EHRs, in fairly approximate to real time, on state-by-state prescribing of opioids. We could quickly ascertain what effect state legislation would have on prescribing practices. This is just one example. Think what public health could do to help guide policy, programs, and initiatives if we integrated all EHRs and

insurance claims data into our population-level information.

Everything in a community is related to health, including transportation, education, public safety, city planning, etc. With all the information on social media sites, there must be ways to access this data to see what’s happening on a population level. For instance, have people posted to Facebook or Twitter a lot recently that they contracted food poisoning from the same establishments? We should be able to see what people are asking about health, and then public health can appropriately respond.

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PRESIDENT'S MESSAGE



Integrating Technology and Public Health

The speed with which technology advances in health care is impressive. I can remember as an intern when my hospital had its first (head only) CT scanner. It took a long time for the water to fill the conformable plastic interface that surrounded the head, and then one waited 20 minutes for the scan to complete.

Fast forward to today, when CT scanners are everywhere, not limited to the head, and take seconds to get images with much higher resolution than we even dreamed of in 1974. The benefit to patients is clear.

In medicine, however, technology is more than CT scans, ultrasounds, and robotic surgery. When it comes to public health, how we understand technology, utilize it properly, communicate the information obtained, and consequently integrate it into our care is just as important.

Here in Massachusetts, with the country's best health care and a booming tech sector, we are uniquely positioned to improve upon current medical capabilities. One way is by working together to understand how to better integrate medicine and well-functioning technology in meaningful, scalable ways.

At this month's Public Health Leadership Forum, the MMS will bring together leaders from the medical and public health communities, as well as local technology companies. The goal is to advance a dialogue about how information technology, telehealth, and innovation can improve patient access and clinical outcomes as well as foster healthier communities.

This should be an exciting program. If you can possibly attend, I think it will be well worth your time. I hope to see you there. For more information and registration, go to www.massmed.org/PHLF102017.

— Henry L. Dorkin, MD

New Way to Think About Medicine

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value-based care — improving access and outcomes while containing costs — and the accompanying emphasis on population-based health data. That impetus is framing technological progress in terms of public health priorities as much as individual patient goals. In Massachusetts, where health care leadership is central to the state's identity, legislative and regulatory reform has stimulated public-private partnerships and investments designed to jumpstart digital health innovation.

What IT Looks Like

Initiatives such as Pulse@MassChallenge, Baystate Health's TechSpring, and MIT's Hacking Medicine hackathon bring together relevant startup expertise, combining medical, scientific, legal, technical, material, and financial resources. Companies including Philips, Boston Scientific, and Google are offering valuable development support for the best ideas (Philips's current Wearables Challenge, for example, carries a \$10,000 first prize for a novel way to predict patient deterioration and hospital readmission). Large hospital systems are also on the scene; witness Brigham Health's digital innovation initiative, iHub, which aims to "drive more patient-centered, efficient, and safe care" through digital health, and Spaulding Hospital's Innovation Startup Challenge, intended to advance care for patients with spinal cord injuries, stroke, musculoskeletal conditions, and other diagnoses.

Across the health care and IT industry, innovation is focusing on five areas, says John Halamka, MD, MS, emergency medicine physician and chief information

officer of Beth Israel Deaconess Medical Center. Those include improving EHR usability (see page 6); enabling mobile EHR functionality; facilitating communication among care teams; securely sharing patient records; and channeling the ever-increasing flow of patient data — including readings generated by wearables and other tracking devices — into meaningful clinical decision support resources.

Health Care Redesign Drives Change

Traditionally, the scalability and sustainability of innovation has risked falling victim to the perverse incentives that have plagued US health care. "The person who benefits from the innovation is almost never paying for it," says Dr. Schutzbank. Health insurance companies have a low profile on the entrepreneurial scene. "With fee-for-service, no one is incentivized to coordinate care and share data," says Dr. Halamka.

That's why reimbursement models are so crucial to driving technological capacity. "Being paid for outcomes and quality leads to new types of innovation. When data needs to flow for business reasons it generally does. When an MRI is a cost, not a profit service, people will share MRIs," says Dr. Halamka, who serves on Governor Baker's Digital Healthcare Council. Providers and systems in risk-based payment systems (Massachusetts has a head start on the rest of the nation) and self-insured large employers have an outsize presence in this entrepreneurial ecosystem. "Systems like Iora Health and the VA, which operate like a single payer, are among the earliest adopters," says James Ryan, senior editor and co-founder of MedTechBoston.com.

The telehealth program at VA Health exemplifies the technological momentum that can result when the provider is also the payer. "Telemedicine is a way of increasing access, lowering costs, and improving quality," says Ken Freedman, MD, MS, MBA, chief medical officer at the Lemuel Shattuck Hospital, a state public health hospital in Boston, who oversees the telehealth program in the Massachusetts correctional system. The program facilitates virtual medical consults for more than 1,000 patients a year, and is more popular among physicians and patients than in-person visits, he says.

Key Barriers Persist

Technological advancement in health care continues to face basic challenges. The US still lacks a patient identifier or matching system that would facilitate interoperability and patient privacy, for example. And then there is the intrinsic difficulty of quantifying human health experience: "How do you structure that the patient grimaced a certain way when he talked about his back pain?" asks Dr. Schutzbank. Think you may have answers? See "Get Where IT's At: How to Join or Support the Health Innovation Hub," page 6.

Seeking applications for the IT in Medicine Awards

These annual awards from the MMS recognize a medical student and a resident or fellow for projects that use technology to advance the practice or teaching of medicine or the pursuit of clinical research.

DEADLINE: NOVEMBER 26, 2017.
Information and application:
www.massmed.org/cit_award

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Cybersecurity: Why Your Organization and Patient Data Are as Vulnerable as Your Most Gullible Employee

BY JILLIAN PEDROTTY, MHA, MMS SENIOR PRACTICE SOLUTIONS SPECIALIST

Reports of cyberattacks on large, seemingly sophisticated organizations have become dishearteningly common. Health care data is more valuable than data from any other industry, according to a study by the Ponemon Institute — an intriguing goal to would-be hackers.

“You and your organization are as vulnerable as your most gullible employee,” said John Halamka, MD, MS, chief information officer at Beth Israel Deaconess Medical Center. Speaking at the PPRC Talks program at the MMS last year, Dr. Halamka highlighted threats and opportunities associated with cybersecurity specific to the health care industry. The risk is best managed by properly training employees, including assessing staff’s cybersecurity-related knowledge.

What to do if you believe your organization has experienced a data breach or cyberattack:

- **Take it seriously:** Whether you believe the cyberattack affects a small or large number of

Running the Numbers

- \$363** Average black-market rate for an individual medical record
- 19,776** Number of EHR breaches in Massachusetts, 2015
- \$6.2 billion** Annual cost of data breaches to health care industry, 2016
- 88 percent** Health care industry’s share of US “ransomware” attacks, 2016 (cybercriminals demanding ransoms for stolen data)

Sources: Ponemon Institute, IBM, Solutionary

people, addressing it should be high priority. Enact your incident response plan. Assess which elements of your electronic Protected Health Information (ePHI) have been affected; this should drive your response. Your communication strategy should cover if and how stakeholders (e.g., employees, regulators, the media) are notified.

- **Assemble the right team:** Ensure that the organization’s leadership is educated on the response plan and identify stakeholders who should be involved (e.g., the compliance officer, legal team, IT team). The issue may need to be escalated to a cybersecurity and investigation expert for review.

- **Initiate “lockdown” and contain the incident:** Once a potential threat has been detected, change passwords, power down or disconnect systems, and disable outbound network traffic and off-hour access. The goal is to mitigate the risk of the cyberattack penetrating more systems and collecting more data.

- **Recognize that your system has been compromised, and gather answers:** When a cybersecurity incident has been identified, investigate with a view to answering these questions:
 - Who has attacked you?
 - What is the scope and extent of the attack?

- When did the attack occur?
- What was taken or impacted?
- Why did it happen?

- **Develop a Proactive Cybersecurity Awareness and Monitoring Strategy:** It’s important to develop a proactive process and strategy for monitoring the environment, identifying any potential issues early, and implementing remediation plans, including how to respond to a cyberattack. Cybersecurity should not be left until after the fact. Health care administrators must be sure that this is an established part of the organization’s operational strategy.

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DocbookMD Puts the MMS Directory and Secure Messaging in Your Hands

BY LEON Q. BARZIN, MMS DIRECTOR: HEALTH INFORMATION TECHNOLOGY

Need to contact a fellow member? Send secure patient information from your phone or tablet to a staff member’s desktop computer? Avoid redundant in-person consultations? DocbookMD, the free smartphone, tablet, and desktop app, may be just the thing.

Since its launch in summer 2013, more than 600 MMS members have exchanged more than 16,000 clinical messages. This free application uses advanced technology to send HIPAA-secure text messages, images (such as wounds, X-rays, and EKGs), or other patient information to your physician colleagues or members of your patient care team. All the

information is saved on secure servers for the required 10 years. Nothing is retained on the phone itself, keeping the information completely secure from theft or loss.

Physicians can invite nurses, physician assistants, and other office staff to join them on DocbookMD, using the CareTeam feature. Physicians remain at the center of patient care and can use DocbookMD to coordinate care across any type of practice setting, independently of your EHR. Physicians control who they invite into the conversation and who can send them messages.



DocbookMD was created by two married physicians after their first anniversary dinner was interrupted. The husband, an orthopedic surgeon, was summoned to the ER to decide whether or not a patient needed surgery (the patient did not). That consultation could have been avoided if the physician had been able to see the patient’s X-ray and an image of the wound on his phone.

As a user of DocbookMD, you can look up any current MMS member by name or specialty and create a “favorites” list of frequent contacts. The member list

is updated weekly and a directory of local pharmacies is included.

DocbookMD is a free benefit, available to MMS members through the Apple App Store and Google Play, where you can download, install, and activate your account.

For general information, visit www.massmed.org/docbookmd. For MMS questions, please email info@massmed.org or call (800) 322-2303, ext. 7311. DocbookMD support is available at (888) 447-3707, opt 5.

This is the first in an occasional series of articles from the Committee on Information Technology about autonomous tech that physicians can use in their clinical lives.

From the Community to the Clinical Trial: Tackling Cancer Disparities on All Fronts

BY ANNIE GOODMAN

There may be no more daunting barrier to ensuring equitable health care than the social determinants of health. Yet there are agents of change within the medical community who are demonstrating how much can be done to reduce disparities in health care diagnosis, treatment, and outcomes. The MMS's 2017 Reducing Health Disparities Award recipient is among them.

"There have been clear research findings that speak to outcomes from underrepresented communities in regards to cancer diagnoses," says Karen Burns White, deputy associate director of the Dana-Farber/Harvard Cancer Center (DF/HCC) Initiative to Eliminate Cancer Disparities. According to the National Cancer Institute, the rates of incidence and deaths from all cancers are 25 percent higher among black Americans than white. A recent study of racial disparities in prostate cancer patients published in *Cancer* found

that black men were less likely than white men to report high quality of care and good physician-patient communication.

Burns White emphasizes the importance of treating the whole patient: "Physicians play a significant role in all of this." That means being mindful of the role of the culture, individual, and family members in the process of cancer care and thoroughly assessing what may stand in the way of patients' making their appointments, understanding their providers, and following their treatment plans. "When a patient shows up alone and the issue is complex, make sure family members are aware of the situation." At DF/HCC, Burns White educates patients about their right to ask questions, be heard by their physicians, and consider different treatment options.



Photo by Josh Rosenfeld
Karen Burns White

Burns White also applies this whole-person principle to communities. She is a founding member of the Faith-Based Cancer Disparities Network, a collaboration involving the Black Ministerial Alliance of Greater Boston, which serves 10,000 low-income children, youth, and families, the American Cancer Society, and DF/HCC. The

network works to raise awareness of health disparities and provide resources designed to address them. Its *Faces of Faith* initiative exhibits cancer survivors' stories. "This is a way for cancer patients to give voice to their walk of the disease of cancer which might help others who are walking that walk," she says.

Burns White's community education also highlights the importance of minority participation in

cancer clinical trials: "The difficulty comes with the need to be creative and innovative about why this is very important. Everyone knows about Tuskegee, but what is happening today?" As founder of the Continuing Umbrella of Research Experiences (CURE) at DF/HCC, she links minority students to opportunities in cancer research. Eighty percent of CURE program participants have chosen to pursue careers in biomedical sciences.

Seeking nominations for the MMS 2018 Reducing Health Disparities Award

Do you know someone who has made significant contributions toward reducing health disparities in Massachusetts? Nominations for the MMS Reducing Health Disparities Award are being accepted until November 3. Visit www.massmed.org/Awards.

John Auerbach

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VS: *What are the challenges?*

Auerbach: Technology is constantly evolving and requires expertise. Public health has to keep up with this, while at the same time maintaining all of its core functions. For underfunded departments, investing in a robust technology component is not inexpensive, and makes decisions incredibly difficult — we shouldn't have to choose between vaccines for needy children and up-to-date infrastructure.

In addition, while many people think data collection and analysis is easier now than ever — in public health, we've built data collection and storage systems across the states and within government agencies — it's no small task to get all of these data sets integrated in a way that will provide relevant intelligence. And there can be an overwhelming amount of data. Unless there is a dedicated staff person with the relevant expertise and continued training

14TH PUBLIC HEALTH LEADERSHIP FORUM

The Promise and Pitfalls of Transforming Health through Technology and Information

OCTOBER 26, 2017, 1:00–5:00 P.M.

Featuring John Auerbach, president and CEO, Trust for America's Health, and Monica Bharel, MD, MPH, state public health commissioner. Including panels on harnessing technology to improve health outcomes, and clinical and behavioral opportunities for IT and telehealth.

For more information, visit www.massmed.org/PHLF102017 or call (781) 434-7373.

who analyzes it all, it's just not useful. It's even more complicated to input data from other sectors (transportation, education, first responders, etc.) and translate it to health. And of course we must uphold patient privacy.

VS: *In April, TFAH released a report highlighting the funding crisis in public health, and in July, a report identifying public health funding in jeopardy through potential ACA repeal, including \$17.6 million in Massachusetts. Will technology and its benefits be a casualty of funding cuts?*

Auerbach: Overall, the administration has signaled they want an 18

percent cut at HHS and 17 percent cut at the CDC. In addition, most Republican Affordable Care Act repeal proposals have fully cut the Prevention and Public Health Fund, which provides nearly \$1 billion a year to the CDC, of which about \$630 million goes directly to states.

My larger fear would be that, along with these potentially devastating cuts, there could be a dramatic weakening of the technological infrastructure across the state and country. When budgets are slashed, in my experience, infrastructure is the first thing that goes. When we need it,

you can't just plop a bag of money down and all of a sudden have the up-to-date and world class infrastructure needed to respond to a public health emergency, such as infectious disease outbreaks (Zika, Ebola, etc.) and climate-related disasters (hurricanes, wild fires, etc.) — yet we don't typically put forth the resources to have a robust system. That's not how it works. We need continual maintenance on infrastructure, and staff who are trained and experienced in using that infrastructure, from lab tests to disease surveillance reports and everything in between.

Health emergency preparedness funding for states has been cut from \$940 million in fiscal year (FY) 2002 to \$660 million in FY 2016, and health care system preparedness funding for states has been cut by more than half since FY 2005. We don't fund our first responders this way, yet we yank public health funding around from year to year, and it has disastrous consequences.

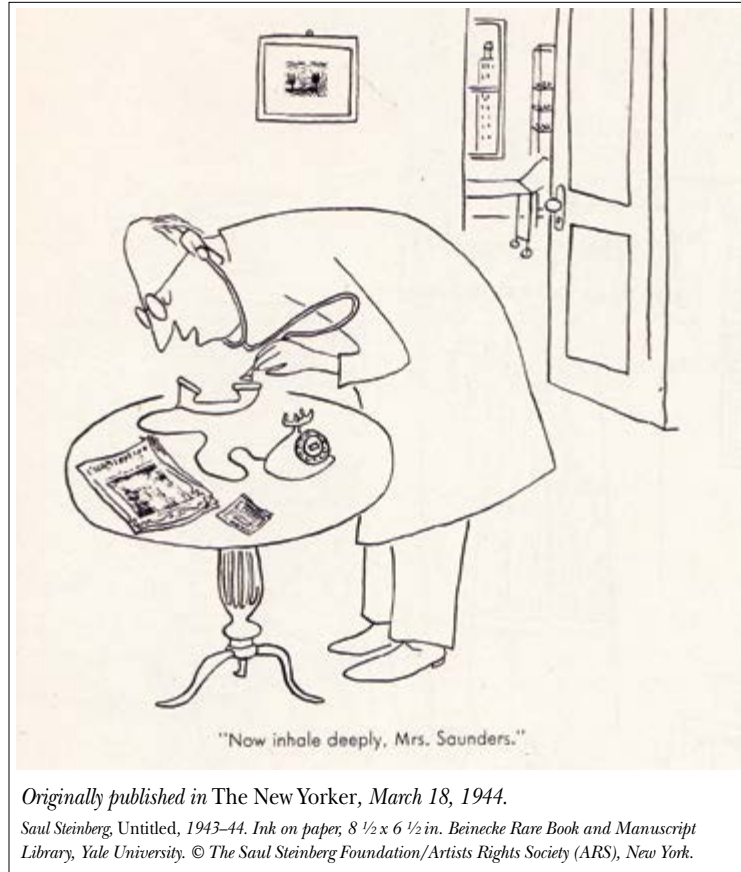
MMS Advocacy Matches Tech Progress in Telemedicine and Interoperability

BY SARAH RUTH BATES, MBE, MMS
GOVERNMENT RELATIONS

Technologies that allow for remote communication are essential to contemporary health care. Telemedicine helps to address inequities in access to health care and the burden of managing chronic illness. Sharing electronic health records (EHRs) facilitates speedy, coordinated care and can reduce redundant interventions and costs. But these developments bring challenges as well. In some cases, the uneven pace of technological uptake reveals blind spots in Massachusetts law and regulations that contradict the Commonwealth's reputation as a leader and innovator in health care policy. Those blind spots are prime targets for MMS advocacy.

As telemedicine proliferates, the MMS is working to ensure that state and federal laws keep pace with that growth. While incorporating telemedicine into clinical practice can reduce delivery costs over time, it requires significant upfront investments — a commitment that is hard to make when reimbursement for telehealth services is limited or uncertain. Massachusetts, for example, is one of only two states that does not require reimbursement for Medicaid services delivered via telemedicine.

In November 2016, the MMS House of Delegates enacted policy to promote parity in both insurance coverage of and reimbursement for



telemedicine. The states have been significant battlegrounds for the fight for parity in telehealth coverage and reimbursement. In 2014, 19 states and Washington, DC, had parity laws addressing telemedicine for private payers; today, 31 states and DC have such laws. In July, the MMS testified in support of three bills that seek reimbursement parity in Massachusetts. On the federal level, the MMS

is monitoring two bills that seek to expand telemedicine under Medicare.

Interoperability (accessing records across different physician practices or institutions) is one of the primary benefits of EHRs — in theory. In practice, it faces technological, legal, and logistical barriers. The Medical Society has been involved in well over a decade of state and federal advocacy around this issue.

At the federal level, the Society has focused on challenges relating to health systems and vendors; the MMS met with Acting CMS Administrator Andy Slavitt last year to discuss how CMS regulations could be revised to facilitate interoperability. At the state level, Dr. Joseph Heyman, past president of the Society, led a push to successfully change regulations impeding the transfer of patient records via the secure Massachusetts Health Information Highway ("the Mass Hlway"). That shift, which no longer required patients to opt in to the service, removed a major barrier to interoperability and aligned the Commonwealth with the vast majority of states.

That change, however, does not apply to the intranets used to store and update patient records within physician practices. In August, Dr. Heyman urged Governor Baker to pass legislation extending the opt-out policy of medical record sharing to these intranet networks. The MMS is advocating for the passage of this legislation.

When technological progress brings difficulties, those can manifest as policy issues. Massachusetts in particular has lagged behind other states in legislation relating to both telemedicine and interoperability. The MMS advocates for policy that enables physicians and their patients to derive the greatest possible benefits from these technologies.

MassPAT Turns One Year Old: Are You in Compliance?

BY BRENDAN ABEL, JD, MMS LEGISLATIVE
COUNSEL

As MassPAT, the new Massachusetts prescription monitoring program, reaches the first anniversary of its unveiling, it's a good time to ensure that you've fully integrated the new usage requirements into your clinical practice.

MassPAT should be checked prior to issuing every Schedule II and III narcotic prescription, and before writing a patient's first benzodiazepine prescription. Compliance with these requirements is important for several reasons. First, it provides important insight into your patients' controlled substance prescription history.

Second, as we move beyond the inaugural year of MassPAT, more entities — including the Board of Registration in Medicine and the Department of Public Health (DPH) — are likely to be paying close attention to physicians' use of the system pursuant to these statutory requirements.

Data released by the DPH demonstrate physicians' responsiveness to the new reporting system. "With searches increased by 500 percent between the first quarter of 2015 and the first quarter of 2017, it's clear that Massachusetts doctors are taking seriously the MassPAT requirements and the importance of MassPAT as a tool in confronting this epidemic," said

Henry L. Dorkin, MD, FAAP, president of the MMS. "Even more important, robust data from [the] DPH showing sizable reductions in opioid prescriptions are further evidence that physicians are redoubling their efforts to find alternatives to opioid analgesia whenever possible."

Users of MassPAT (previously known as the Prescription Monitoring Program) may recognize a subtle yet important change to the prescribing information that's available to be viewed in the system. As of August 1, 2017, dispensing information for prescriptions for gabapentin, a non-controlled substance, will be submitted to MassPAT by pharmacies.

This change was prompted by the Commissioner of Public Health, who has the authority to designate additional drugs of public health concern to the list of drugs reported into MassPAT. This does not change your usage requirements; it only means that you will now be able to view prescriptions for gabapentin when you query a patient's record.

For more information, visit www.massmed.org/masspat.

This column should not be construed as legal advice. Readers with specific legal questions should consult with a private attorney.

Can EHR and Physicians Ever Be Friends?

BY LUCY BERRINGTON, MS, AND SARAH RUTH BATES, MBE, MMS GOVERNMENT RELATIONS AND RESEARCH ANALYST

The electronic health record (EHR) arrived with high hopes, but many physicians associate it with deep despair. Heralded as a way to improve physician practice and patient care, EHR quickly took the blame for burdensome tasks and rules, and disrupting provider-patient interactions. The electronic record epitomizes physicians' "complex and often adversarial relationship with technology," says Andrew Schutzbank, MD, MPH, vice president for product and technology at Iora Health, an expanding primary care network headquartered in Boston.

In the conversation about physician burnout, many invoke EHR as a culprit. "My sense is that the current dysphoria in medicine revolves a great deal around the electronic medical record," said Abraham Verghese, MD — a Stanford University professor of the theory and practice of medicine — at a Medscape event in July. The EHR contributes to (and reveals) "time bankruptcy," a source of declining self-care among some physicians, says Steven Adelman, MD, director of Physician Health Services at the MMS: "One of the profiles of physicians who get referred to PHS is a doctor who cannot complete his or her charts on time. This doctor characteristically has a backlog of hundreds of charts."

Health care innovators are exploring ways to salvage the relationship between physicians and EHR. "How

do we turn EHR into your friend, not your foe — a tool, not a burden?" asks John Halamka, MD, MS, chief information officer of Beth Israel Deaconess Medical Center, who co-authored an NEJM Perspective article in August on where EHR can go from here. The solutions are emerging from third parties, rather than traditional EHR vendors, he says. Popular tech goals of the moment include enabling mobile devices to interact with EHR, building secure communication capability within care teams, and facilitating clinical decision support.

Turning Data into Wisdom

"I try to create tools that turn data into wisdom," says Dr. Halamka. He and his colleagues are piloting an app, BIDMC At Home, that gathers patient-generated data (for example, blood pressure readings and body weight), incorporates it into the EHR, and interprets it for clinicians, generating alerts as necessary. They have also created health care applications for ambient listening devices, such as Amazon's Alexa, with the goal of accessing seamless support in care settings for both providers and patients: "In a room with a patient, you can get a blood test, bring in a nurse, get a social worker." (During our phone call, he asked Alexa what was coming up that day, and she listed his upcoming activities.)

"How do we turn EHR into a tool, not a burden?"

— John Halamka, MD, MS

Other projects include reinventing the EHR almost from scratch: think of a new generation of EHR bred and raised to be kind to physicians and patients. At Iora Health (slogan: "Restoring humanity to health care"), a collaborative care platform, Chirp, is integrated in the entire care experience — either "through Chirp for Patients, available on any device, or up on the monitor on the wall of an exam room," says

Dr. Schutzbank. "This way, we are able to bring patients into their record, allow coaches and providers to focus on patients instead of keyboards, and have a resource for teaching and discussions." Chirp is far from reaching its potential, he says, yet "the perception from our physicians is that in many ways it is light years ahead of anything out there."

Reclaiming Physicians' Time

Alternatively, EHR might be redesigned so that patients and physicians barely see it. "We want to make the technology as invisible as possible. If they didn't notice the EHR in the room, our mission would be accomplished," says Kevin Tolin Scheper, vice president of customer performance management at athenahealth, which develops network-enabled systems and services for health care providers.

The *raison d'être* of the company, he says, is to eliminate tasks that

divert physicians from direct patient care. Their cloud-based platform, athenaClinicals, is designed to automate certain processes, delegate appropriate tasks, build shortcuts into workloads, and handle administrative demands, such as organizing incoming faxes. The platform has 100,000 active providers. That reach enables "deep visibility" into how physicians and staff engage with it, helping to identify best practices and sources of physician dissatisfaction, says Scheper. When physicians struggle — spending a disproportionate amount of time on charts, for example — the platform offers an intervention, which can take the form of emails, popups, phone calls, or 1:1 coaching via screen share and webcam. "Our goal is to help physicians regain control of their time by optimizing the way they document care. They can use their newfound time to spend more time with their patients, see additional patients, or go home on time," says Scheper.

EHR-physician rapprochement is a long-term goal. Any proposed solution may create new questions or pressure for additional resources. The Iora platform is designed around patient encounters involving two providers (for example, a physician and a health coach), and the oversight embedded in smart systems may, to some physicians, signal the loss of professional autonomy that is itself associated with burnout. Nevertheless, the healing process is underway.

Get Where IT's At: How to Join or Support the Health Innovation Hub

Bring Your B Game (as in Boring)

"People going into this space are assuming all the simple problems are solved, so they go to the more complex ones. If you're putting the Porsche factory on the edge of the cliff, it doesn't matter how nice you make the Porsche; it's still going over the cliff. A boring technological solution to a boring problem would probably hit it big."

—Andrew Schutzbank, MD, vice president, product and technology, Iora Health

Build Your Team

"Clinicians need to be partnered with the right type of resources; the engineer, someone who can navigate the waters. Brigham and Women's has CIOs inspiring these clusters of teams within the hospitals. Traditional health and medical device companies see that they need to partner with physicians and build that community in order to be successful in the future."

—Jennifer Joe, MD, CEO, Medstro; emergency medicine physician, Boston VA Hospital System

Collaborate with Public Health

"It's so important to work with our local and state public health departments to coordinate campaigns to share information, identify problems, and come up with creative ways to promote health. We can prevent epidemics and save lives if we have the resources, work together, and better harness data and technology to ensure we know what's going on in as near real time as possible — that is how we build a Culture of Health."

—John Auerbach, president and CEO, Trust for America's Health (TFAH)

Additional Resources

- MMS IT in Medicine Award: www.massmed.org/cit_award
- NEJM Group Open Forum: www.medstro.com/groups/nejm-group-open-forum/discussions
- AMA Physician Innovation Network: www.innovationmatch.ama-assn.org
- Venture Café Foundation: www.vencaf.org

MMS Member News and Notes



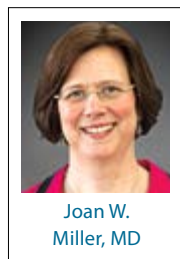
Stephen B.
Corn, MD



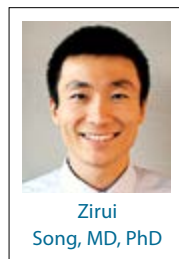
Meredith
Fisher-Corn, MD



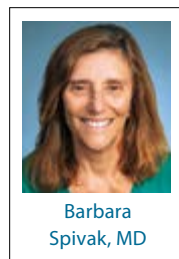
Don R.
Lipsitt, MD



Joan W.
Miller, MD



Zirui
Song, MD, PhD



Barbara
Spivak, MD

STEPHEN B. CORN, MD, and MEREDITH FISHER-CORN, MD (residencies and fellowships: Harvard Medical School) have received the Special Award for Major Contributions to the Reintroduction of Cannabis as Medicine from the 2017 International Association for Cannabinoid Medicines. Dr. Corn and Dr. Fisher-Corn, founder and editor-in-chief of **TheAnswerPage.com**, and co-developers (with the MMS) of the Comprehensive Cannabis Curriculum, were selected to develop provider training by the New York Department of Health, the Pennsylvania Department of Health, and Florida's Medical Association.

DON R. LIPSITT, MD (University of Vermont College of Medicine, 1956, residencies: Albert Einstein Medical Center, US Public Health Service, Beth Israel Hospital) has been honored with a named award by the Academy of Psychosomatic Medicine for Achievement in Integrated and Collaborative Medicine. Dr. Lipsitt is professor of clinical psychiatry at Harvard Medical School and Cambridge Health Alliance, and a past president of the Massachusetts Psychiatric Society.

JOAN W. MILLER, MD (Harvard Medical School, 1985, residency: Harvard Medical School) has been appointed to the Association for University

Professors in Ophthalmology Board of Trustees. Dr. Miller became the first woman physician Professor of Ophthalmology at Harvard Medical School, and the first woman to chair the Department of Ophthalmology. She is also the first woman appointed as Chief of Ophthalmology at both Mass. Eye and Ear and MGH.

ZIRUI SONG, MD, PHD (Harvard Medical School, 2014, residency: MGH), has received the 2017 Award for Excellence in Clinician Investigation from the Society of General Internal Medicine (New England). Dr. Song is an internist at MGH and assistant professor of health care policy at Harvard Medical School. He

has served on the MMS Committee on Publications and the MMS Task Force on Health Care Reform.

BARBARA SPIVAK, MD (Tufts University School of Medicine, 1976, residency: St. Elizabeth's Medical Center), has been appointed to the Centers for Medicare and Medicaid Services' new Technical Expert Panel, which supports the Merit-based Incentive Payment System (MIPS). Dr. Spivak, who practices internal medicine in Watertown, serves on the AMA-IPPS Governing Council, chairs the MMS Committee for Quality of Medical Practice, and has been president of Mount Auburn Cambridge IPA since 1997.

ACROSS THE COMMONWEALTH

District News and Events

NORTHEAST REGION

Charles River — Nasir A. Khan, MD, Scientific Meeting. Wed., Oct. 25, 6:00 p.m. Dane Estate, Pine Manor College. Speaker: Gail Gazelle, MD, FACP, FAAHPM; Topic: Building Your Resilience Self™: Strategies to Move from Burnout to Well-Being.

Middlesex Central — Executive/Delegates Meeting. Thurs., Oct. 19, 7:45 a.m. Emerson Hospital, Concord. **Annual Breakfast.** Fri., Oct. 27, 7:30 a.m. Emerson Hospital, Concord. Speaker: Senator Jamie Eldridge; Topic: Single Payer Health Care.

Norfolk — Fall District Meeting. Wed., Oct. 18, 6:00 p.m. Sheraton, Needham Hotel, Needham. Speaker: Alden Landry, MD; Topic: Diversity in Medicine and Its Impact on Our Patients.

Suffolk — Fall Meeting. Tues., Oct. 3, 6:00 p.m. Downtown Harvard Club, 1 Federal St., Boston. Speakers: Brandon Marshall, PhD, and Dennis Dimitri, MD; Topic: Supervised Injection Facilities: Public Health, Politics, and Implications for Massachusetts.

Northeast Regional Office: (800) 944-5562 or mjussaume@mms.org or lhoward@mms.org.

SOUTHEAST REGION

Barnstable and Bristol North — Family Fun Event. Sun., Oct. 1, 10:00 a.m. optional tour; noon luncheon followed by self-guided tours. Heritage Museums & Gardens, Sandwich.

Barnstable, Bristol North, Bristol South, Norfolk South, Plymouth — Southeast Regional Caucus.

Tues., Nov. 21, 6:00 p.m. LeBaron Hills Country Club, Lakeville.

Southeast Regional Office: (800) 322-3301 or skozlowski@mms.org.

WEST CENTRAL REGION

Berkshire — Fall District Meeting. Wed., Oct. 11, 6:00 p.m. Hotel on North, Pittsfield. Speaker: Alfred DeMaria, MD, president of the Massachusetts Infectious Diseases Society; Topic: We Can Do Even More with Immunization.

Hampden — Fall District Meeting. Tues., Oct. 10, 6:00 p.m. Delaney House, Holyoke. Topic: UMMS-Baystate Regional Campus: The PURCH track. What does it mean for us? For more information, call HDMS at (413) 736-0661.

Hampshire/Franklin — Fall District Meeting. Tues., Oct. 24, 6:00 p.m. Lord Jeffrey Inn, Amherst. Speaker: Alex Calcagno; Topic: Health Care.... Reform? The Federal Perspective.

Worcester — 12th Annual Louis A. Cottle Lecture. Wed., Oct. 18, 5:30 p.m. Beechwood Hotel, Worcester. Speakers: Jessie Gaeta, MD; Dennis Dimitri, MD; Matilde Castiel, MD. Topic: Safe Injection Sites: Heresy or Creativity? For more information, call WDMS at (508) 753-1579.

West Central Regional Office: (800) 522-3112 or csalas@mms.org.
Contribute statewide news at (800) 522-3112 or csalas@mms.org.

IN MEMORIAM

The following deaths of MMS members were recently reported to the Society. We also note member deaths on the MMS website, at www.massmed.org/memoriam.

John M. Bergland, MD, 85; Westport, MA; Johns Hopkins University School of Medicine, Baltimore; died June 30, 2017.

Joseph M. Corcoran, MD, 94; Springfield, MA; Georgetown University, Washington, DC; died July 11, 2017.

William R. Irving, MD, 84; Methuen, MA; McGill University Faculty of Medicine, Montreal; died July 3, 2017.

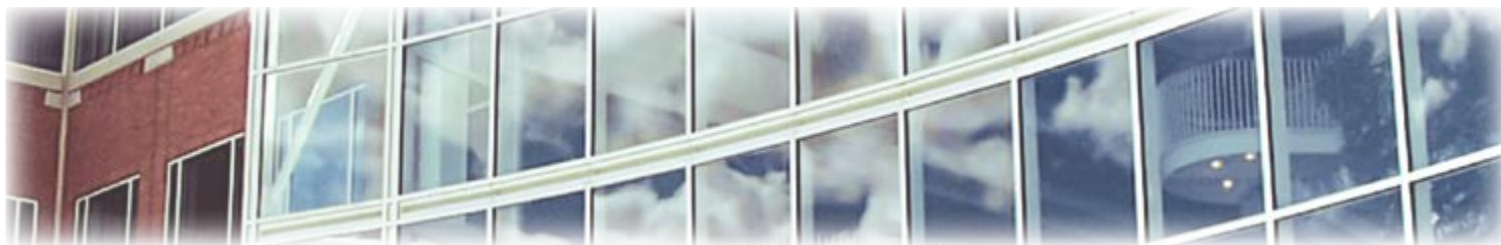
Richard S. Johannes, MD, 70; Newton, MA; Johns Hopkins School of Medicine, Baltimore; died July 12, 2017.

Wayne E. Miller, MD, 82; Athol, MA; Temple University Medical School, Philadelphia; died April 25, 2016.

Michael P. Plevyak, MD, 49; East Longmeadow, MA; SUNY Upstate Medical University, Syracuse; died August 13, 2017.

Elmer M. Purcell, MD, 92; Concord, MA; University of Arkansas College of Medicine, Little Rock; died June 18, 2017.

Alfred W. Scott, MD, 91; Newton, MA; Harvard Medical School, Boston; died July 15, 2017.



THE TECHNOLOGY ISSUE

- 1 > Physician Entrepreneurs Seize the Moment
> Can Technology Transform Public Health?
- 2 > President's Message: Integrating Technology and Health
- 3 > How to Respond to a Cyberattack
> Secure Messaging with DocbookMD
- 4 > Tackling Cancer Disparities on All Fronts
- 5 > MMS Advocacy Matches Tech Progress
> MassPAT: Are You in Compliance?
- 6 > Can EHR and Physicians Ever Be Friends?
> Join or Support the Health Innovation Hub
- 7 > MMS Member News and Notes
> Across the Commonwealth



MASSACHUSETTS
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VITALSIGNS

VOLUME 22, ISSUE 8, OCTOBER 2017

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MMS AND JOINTLY PROVIDED CME ACTIVITIES

LIVE CME ACTIVITIES

Location is MMS Headquarters, Waltham.
Visit www.massmed.org/cme/events.

Public Health Leadership Forum: The Promise and Pitfalls of Transforming Health through Technology and Information
Thursday, October 26, 2017

ONLINE RISK MANAGEMENT CME ACTIVITIES

Visit www.massmed.org/cme.

Comprehensive Cannabis Curriculum
(1-16 Modules)

Legal Advisor

- Terminating the Doctor-Patient Relationship
- Dealing with Difficult Patients
- Treating Patients with Mental Illness
- Ethical Boundary Violations and How to Avoid Them

- Legal Obligations in Treating Patients with Disabilities
- Treating Patients with Limited English Proficiency
- Understanding Disclosure, Apology and Offer
- An Introduction to Advance Directives
- Legal Duties and Options When a Patient Raises Suicide
- Identifying Drug Dependence
- Who Has Rights in the End-of-Life Care with Patients

FOR ALL OTHER ONLINE CME ACTIVITIES,
visit www.massmed.org/cme.

CME CREDIT: These activities have been approved for *AMA PRA Category 1 Credit™*.

FOR ADDITIONAL INFORMATION AND REGISTRATION DETAILS, GO TO WWW.MASSMED.ORG/CMECENTER, OR CALL (800) 843-6356.

2017 Interim Meeting

of the MMS House of Delegates

Friday and Saturday,
December 1-2, 2017

MMS Headquarters
and the Westin Hotel, Waltham



- Register at www.massmed.org/interim2017/register.
- Submit your resolutions at www.massmed.org/resolutions by **Tuesday, October 17**. Resolutions must be submitted on the template.
- The deadline for reserving hotel rooms is **Monday, October 30**. Please visit www.massmed.org/IMI7reservations or call the hotel at (781) 290-5600.
- Other Interim Meeting events include the Town Hall Forum with the presidential officers, the Annual Oration, the biannual Ethics Forum, and the 12th Annual Research Poster Symposium.

Restoring Well-Being to the Medical Profession:
WHAT CAN INDIVIDUALS, TEAMS, AND ORGANIZATIONS DO?

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