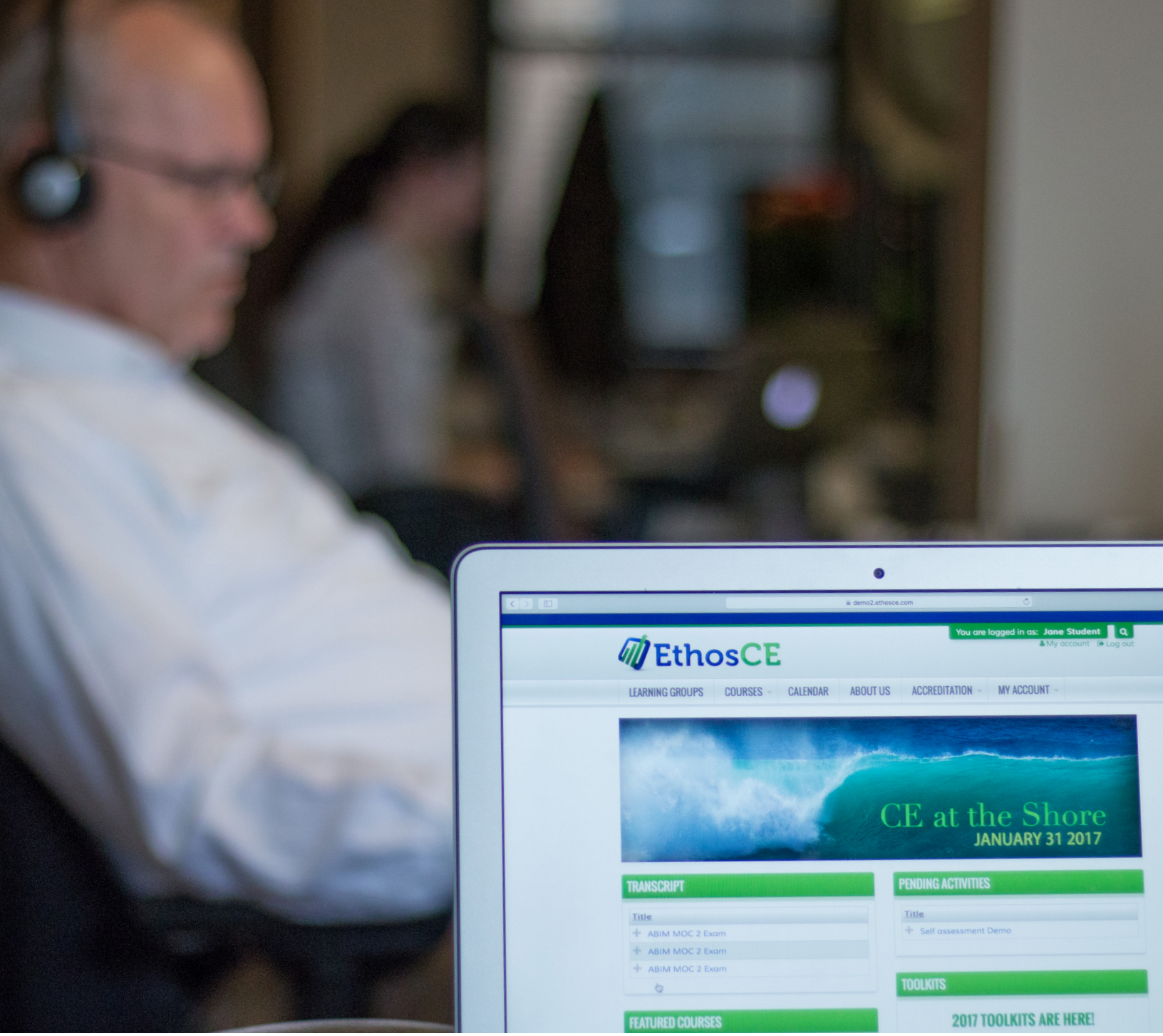


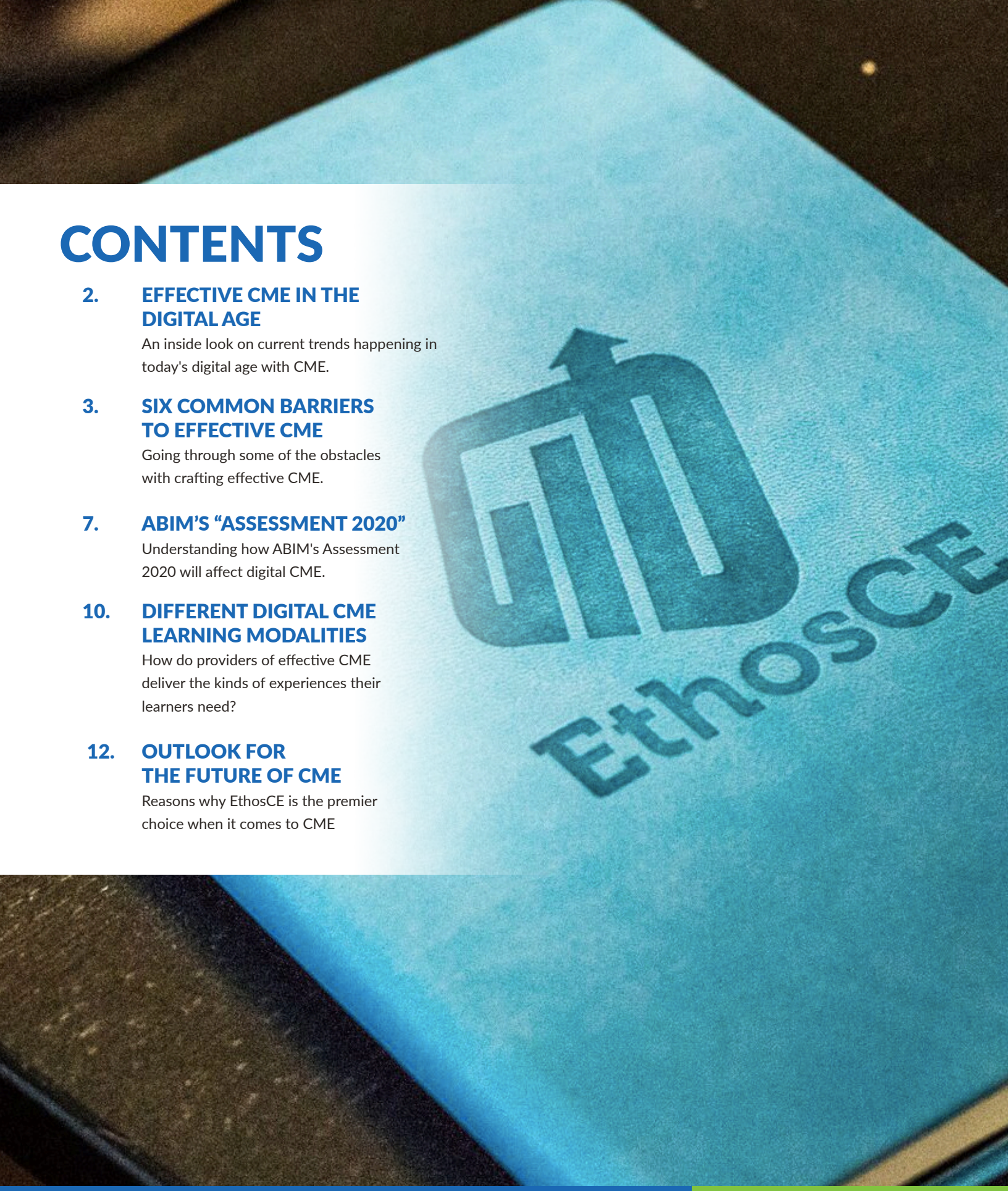
EthosCE
LEARNING MANAGEMENT SYSTEM

EVOLVING TRENDS IN CME

FROM ONLINE SOCIAL LEARNING TO TEAM-BASED COLLABORATIVE EDUCATION

AN ETHOSCE SPECIAL REPORT

CONTENTS



EFFECTIVE CME
IN THE DIGITAL AGE

Chances are you've thought long and hard about how the courses and learning activities your CME team offers live up to the ACCME's definition.

> *Continuing medical education consists of educational activities which serve to maintain, develop, or increase the knowledge, skills, and professional performance and relationships that a physician uses to provide services for patients, the public, or the profession.*
>
> *The content of CME is that body of knowledge and skills generally recognized and accepted by the profession as within the basic medical sciences, the discipline of clinical medicine, and the provision of health care to the public.*
>
> *—ACCME definition of continuing medical education*

Have you thought about how today's emerging technological trends can increase your effectiveness at delivering the kind of CME called for by the ACCME—and, more important, by healthcare practitioners (HCPs) themselves?

Dr. Joseph Kim, MD, MPH, MBA has. As the president of Q Synthesis LLC, Dr. Kim is a widely recognized leader in integrating digital tools into CME.

In a recent webinar sponsored by EthosCE, Dr. Kim surveyed several ways early 21st-century technology can transform CME, improving its effectiveness. He discussed what exists today, in addition to where the world can be in a few short years and is, in fact, already heading.

Read on to discover more about...

- What today's HCPs really think about CME, and what's keeping them from being more engaged in it. (The barriers may not always be what you might suspect).
- How ABIM's new model for the MOC process is an opportunity to expand digital learning.
- Ways of using digital technology in CME that are already proving effective—at least one of which is already well within reach of almost any quality CME provider.
- The role of the learning management system (LMS) in delivering effective digital CME.
- Why digital technology stands to make CME and the practice of medicine more human, not less, if clinicians know what to do.

SIX COMMON BARRIERS **TO EFFECTIVE CME**

Healthcare professionals want effective CME because they recognize its value, not just because they need CEUs.

The Global Association for Family Doctors (WONCA) asked members in 78 countries what motivated them to take part in CME. The physicians' answers?

- Personal and professional interest in a topic
- Promised improved efficiency and confidence in their practice
- Possibilities for career advancement.

Mentioned, but not "high on the list"? **Mandates.**

Although HCPs are actively interested in effective CME, several barriers make it difficult for them to get it. Here are six of the most common:

1. Information Overload

Modern medical technology gives HCPs powerful insights into patients' conditions, but it also generates a lot more data practitioners must pay attention to.

Writing for The Hospitalist, Drs. Sean Thomas and David Rosenman show what this trend looks like in the ICU, for example:

Monitors capture moment-by-moment readings of heart rate, blood pressure, respirations, oxygen saturation, temperature, electrocardiographic tracings, and more… We [also] record intravenous fluid and medication rates, artificial ventilation parameters, and so on.

They conclude:

In an age when abundant scientific study and complex healthcare delivery systems are generating volumes of new information, we have a lot to learn about what to do with it all.

Increased information demands more and more of HCPs' time and mental energy—leaving less and less of it available for CME.

SIX COMMON BARRIERS **TO EFFECTIVE CME**

2. Rapidly Advancing Clinical Science

According to Dr. Peter Densen, medical knowledge took a half-century to double in 1950. But by 1980, that doubling took only 7 years. And by 2010, it took just 3.5.

The projected doubling rate in 2020, writes Densen, will be 0.2 years—"just 73 days… What [graduates in 2020 will have] learned in the first 3 years of medical school will be just 6% of what is known" at that time.

Clinical science's exponential growth is one of the most obvious reasons CME matters. But that growth can also get in the way of productive lifelong learning. "Knowledge is expanding faster than our ability to assimilate and apply it effectively," Densen explains.

Learners who try to use traditional CME to keep up with advances in their fields may experience frustration. They may grow discouraged about CME's potential to help them at all.

3. Consolidations And Partnerships

Consolidations among payers in the U.S. medical marketplace are on the rise, which means providers face rising economic pressures, including the pressure to forge consolidations and partnerships.

Paul B. Ginsburg, director of the Brookings Institute's Center for Health Policy, testified before the California Senate Committee on Health:

> *Health care markets are becoming more consolidated, causing price increases for purchasers of health services, and this trend will continue for the foreseeable future… For providers, it is becoming an increasingly challenging environment to be a small hospital or medical practice.*

When the economic viability of a doctor's practice or a hospital is on the line, CME may no longer top the list of priorities. CME may come to be seen as a costly luxury, rather than the necessary investment it is.

SIX COMMON BARRIERS **TO EFFECTIVE CME**

4. Care Model Redesign

Whatever its ultimate fate, the Affordable Care Act (ACA) has already, since passage in 2010, substantially transformed how U.S. healthcare is designed and delivered.

The 2016 Medscape Physician Compensation Report, for instance, found that almost half of primary care physicians (49%) and 30% of specialists report more patients because of the ACA. While a Medscape report from the year before found no correlation between higher or lower patient loads and higher or lower-quality care, anecdotal evidence suggests some HCPs worry that connection does exist.

Pittsburgh Tribune reporter Luis Fábregas quoted a long-serving nurse he knows:

> *Most good nurses want to spend time with their patients. But if you have a very sick patient, you have no choice but to spread yourself thin.*

If hard-working, conscientious HCPs feel forced to choose between spending time with the growing number of patients the ACA brings or spending time in CME, it's not hard to guess the choice they'll make.

5. Burdensome Health IT Requirements

The Electronic Health Record (EHR) promises many benefits, including more complete and accurate documentation, greater adherence to best practice guidelines, and fewer medical mistakes. But these benefits have, by and large, proven elusive.

Jenna Howard, PhD and others write in the Journal of General Internal Medicine that while EHR implementation can increase "efficient delivery of clinical care," it can also lead to "increased work hours for clinicians" and "the unintended creation of new work and potential safety problems."

Medscape found that "bureaucratic tasks" are the #1 culprit behind physician burnout (and have been for several years). In 2016, 59% of employed physicians and 54% of self-employed physicians spent at least 10 hours a week doing paperwork. According to the national staffing organization Medstaff, up to 12% of employed physicians and 9% of self-employed spend 25 hours or more each week on paperwork.

Clearly, American HCPs don't yet work in the proverbial paperless office. Until they do, they will continue to feel overwhelmed—and potentially that much more reluctant to carve out time for CME.

SIX COMMON BARRIERS **TO EFFECTIVE CME**

6. Reimbursements Based On Quality And Value

Today's healthcare landscape is changing from volume-based (in which providers are paid based on the number and type of services rendered) to value-based (in which providers are paid based on the quality of care patients actually receive).

"The shift from volume-based to value-based healthcare is inevitable," write Dr. Thomas H. Lee and Laura S. Kaiser for NEJM Catalyst, but "because most providers' business models still depend on fee-for-service revenues, reducing volume (and increasing value) cuts into short-term profits."

In Frontiers of Health Services Management, Robert J Henkel and Patricia A. Maryland spell out the "enormous challenge" in more detail:

> *Not only must [providers] reimagine how they identify, engage, and manage the care of patients, they also need to determine new ways of engaging and aligning physicians and other caregivers in creating better-coordinated care across the continuum.*

While value-based reimbursements should ultimately benefit both patients and HCPs, the stress of short-term financial loss and system-wide adaptation create yet another distraction from CME for today's overwhelmed clinicians.

Medstaff shares this disheartening statistic: 36% of physicians say that if they could go back in time and choose another career, they would. This level of overt dissatisfaction speaks volumes about how overloaded, overworked, and overwhelmed today's HCPs feel.

Dr. Kim acknowledges the barriers effective CME faces. But he also believes the field is facing an enormous opportunity: a chance to reinvent itself as more relevant, more timely, and more adaptable to HCPs' already full schedules.

How will CME accomplish this reinvention?
By making better use of the digital tools today's technology provides.

ABIM'S "ASSESSMENT 2020" **HOW WILL IT IMPACT CME?**

I believe the boards of medicine for the different specialties will help accelerate the process of digital adoption and engagement.
—Dr. Joseph Kim

Another factor that will lead to an increased use of digital tools for CME, Dr. Kim believes, is "Assessment 2020," a new approach to certification from the American Board of Internal Medicine (ABIM).

Responding to ABIM's desire for "a more meaningful MOC [maintenance of certification] program" in which "assessments are more reflective of what physicians are doing in practice," A Vision for Certification in Internal Medicine in 2020, the Assessment 2020 Task Force's final report, made three recommendations:

- Replace the current, burdensome, once-a-decade MOC exam with a series of shorter assessments (administered no more than annually) that physicians can complete on a computer, at work, or at home (given appropriate identity verification and security).
- Focus MOC on the assessment of cognitive and technical skills relevant to practicing internal medicine. "Assessment of cognitive skills will assure the public that physicians are keeping up with the clinical knowledge that is relevant to patient care," states the report. "Assessment of technical skills will assure that physicians can apply that knowledge to adequately perform the technical procedures." Such assessment will thus give physicians valuable feedback about knowledge gaps they can use CME to help.
- Recognize specializations without the need for underlying certifications. The subspecialty will stand on its own for MOC and will make certification more meaningful and transparent to the public.

Dr. Clarence H. Braddock III, chair of the ABIM Board of Directors, says the report provided "useful insights and recommendations that will be instrumental as we reshape certification to meet physicians' and society's changing needs." said Braddock. ABIM expects to start offering its new certification in January 2018.

ABIM'S "ASSESSMENT 2020" **HOW WILL IT IMPACT CME?**

Dr. Kim thinks this new vision for certification will spur more practitioners to adopt digital tools, including in a CME context, for several reasons:

- The new assessments' emphasis on actual practice means they will use evaluation methods other than multiple choice questions. Technology-based options, such as simulated operations on virtual patients, allow for more in-depth exploration of the question, "How will these clinicians operate in real-world settings?"

- Natural language processing and automated scoring are technological advances that make these more multifaceted, truer-to-life assessments scalable, as they already are in other disciplines (for example, assessing airline and submarine pilots). The technology makes large-scale measurements of practitioners' clinical reasoning and communication skills a viable option.

- Knowing that their future MOC will involve digital assessments will motivate physicians to familiarize themselves with digital tools. "Clinicians who are not necessarily engaged in digital learning are now going to be assessed with some of these tools that are focused around digital platforms," says Dr. Kim. "I think that will help motivate and spur on a generation of learners who are not actively using digital to learn, but if they know that, 'All right, in a few years I'm going to be assessed by some of these digital tools, I need to get comfortable using them and navigating them and applying my clinical reasoning and thought processes to some of these platforms.'"

One way in which practitioners will engage with digital platforms is in the realm of CME.

ABIM'S "ASSESSMENT 2020" **HOW WILL IT IMPACT CME?**

One way in which practitioners will increasingly engage with digital platforms is in the realm of CME. Dr. Kim points to several digital platforms where CME is already taking place, formally and informally.

SERMOsolves

(http://www.sermo.com/sermo-solves/introduction) features discussions of and collaboration around cases among physicians worldwide.

Doximity

(https://www.doximity.com/)
popularly known as "LinkedIn for Physicians" is a crowdsource site where a HCPs can share information, vote and comment on material from other sources (both lay and peer-reviewed), and find out, "What do my peers think is important?"

LinkedIn

(https://www.linkedin.com/)
LinkedIn itself can be used as a CME forum, as the Journal of Continuing Education in the Health Professions online group does *(https://www.linkedin.com/groups/3775806/profile).*

Although Dr. Kim points out that it is easier for non-HCPs to get involved in LinkedIn discussions among physicians, causing distractions.

Yammer

(https://www.yammer.com/)
Yammer and other messaging applications allow physicians to stay connected, blending their formal learning into their daily clinical workflow.

QuantiaMD

(https://www.quantiamd.com/)
Quantia is another online community of physicians, especially popular with residents and early-career clinicians. QuantiaMD uses gamification to create high levels of engagement with its content. For example, learners can ask questions of presenting experts for a chance at winning "Q-points" that can be redeemed for other incentives (such as Amazon.com credit)—and most of that engagement occurs on mobile devices.

HealthTap

(https://www.healthtap.com/)
HealthTap is a telemedicine platform aimed at individuals wishing to consult with a doctor, but it also offers social learning in the form of "Global Rounds," where practitioners who solve complex cases with their colleagues can earn CME credit.

Dr. Kim thinks this model mirrors real practice, in which patients present symptoms to doctors and ask for advice. When physicians post these cases, "a lot of time [they're] going to get multiple specialists chiming in. If you see one big pattern or certain trend, you may want to act on that information." (He acknowledges that the important question of legal liability remains unanswered.)

MOT Board

The **M**olecular **O**ncology **T**umor Board in collaboration with the American Society of Clinical Oncology (ASCO), the College of American Pathologists (CAP), and the Association for Molecular Pathology (AMP) have created a series, in which cases are posted online, discussed in threads in a forum, and then closed after a month, archived, and re-presented as a CME learning activity.

DIFFERENT DIGITAL CME **LEARNING MODALITIES**

How do providers of effective CME deliver the kinds of experiences their learners need? Digital technology brings new options and approaches increasingly within reach.

I believe the boards of medicine for the different specialties will help accelerate the process of digital adoption and engagement.
—Dr. Joseph Kim

1. Second Screen

Smartphones and other personal digital devices have become as ubiquitous among HCPs as among the general population. According to one study, U.S. physician use of smartphones for professional purposes grew from 68% to 84% between March 2012 and March 2015.

Naturally, the smartphone can become (or provide) a ready distraction from learning in didactic CME settings like the lecture hall. But savvy CME providers are enlisting the help of the "second screen" that is in the learner's hand. They offer content that complements or amplifies what is being presented on the main screen in order to increase learner engagement, and divide their presentations into segments in which learners alternate their focus between the screens.

Polls and surveys, slides, video notes, text messages for feedback to faculty and brainstorming with peers—the second screen makes multiple ways of encouraging learners' involvement in and benefit from a CME experience possible.

2. Wearable Screens

Although it became, as CNet says, "a case study in how not to deliver next-generation technology" when introduced in 2012, Google Glass and similar augmented reality (AR) devices may yet prove to be the shape of things to come in CME.

"I don't think the wearable screen has completely gone away," says Dr. Kim. "I believe we're going to see it come back in different forms." Physicians can, for example, use a wearable screen to scan a QR code outside a patient's vital statistics at a glance (literally). Surgeons can operate while wearing a screen that not only provides relevant information but could also be used to record the surgery for others to learn from.

Dr. Yauheni Solad of Yale New Haven Health System is similarly excited about AR's potential. Writing for BrainXchange, he says:

> *I feel medical education will be the main use [of AR] in healthcare. I wish someone gave me some thing similar when I had my pediatric surgery training. The ability to provide context-aware step-by-step recommendations is invaluable, especially for providers who do not perform a particular procedure very often (doctors in training or even doctors in remote locations with limited support). Radiology and the overall area of medical imaging can receive a huge upgrade with augmented reality visualization capabilities. Imagine reviewing all the available images combined in a single 3D model. To me it's truly amazing.*

DIFFERENT DIGITAL CME **LEARNING MODALITIES**

How do providers of effective CME deliver the kinds of experiences their learners need? Digital technology brings new options and approaches increasingly within reach.

3. Virtual Reality

Moving one step beyond AR, which integrates users' visual perceptions with digital elements, virtual reality (VR) replaces those perceptions with simulated ones. While video game enthusiasts have been anticipating immersive VR's benefits for some time, the technology is now entering the mainstream and making its suitability for other uses, including medical education, clear.

VR could change CME at the "simple" level of making conference attendees feel as though they are in the same room as the presenter and other learners, even though they may be hundreds or thousands of miles away. But VR could also immerse learners in computer models, simulated surgeries, and other situation-based educational activities.

Dr. Kim thinks VR may be an even more imminent change than AR. "We're seeing very, very low-cost solutions emerging," he notes.

> *"Google Cardboard is one of the most exciting technologies because it's very inexpensive. Your phone just slides right into a slot in the front, and just about any smartphone now can transform this piece of cardboard into a virtual reality player."*

As an example of VR's promise for medical education and practice, Dr. Kim points to surgeons' use of the technology to help them operate on an "inoperable" heart condition. At Nicklaus Children's Hospital in Miami in December 2015, Dr. Redmond Burke and his team of cardiologists rendered traditional, two-dimensional CT scans of a four-month-old's heart into three-dimensional models. "With the [VR] goggles," CNN reported, "it was possible to move around and see the heart from every angle—to almost be inside the heart checking out its structure." Repeated VR simulations let the surgeons plan their approach in intricate detail before the operation ever began and, as a result, save the baby's life.

> *"It's exciting to see there are a lot of early adopters who are using technologies like this at the direct patient care level," says Dr. Kim. "At the same time, I believe there are a lot of growing opportunities to educate providers through these technologies, and keep them very engaged."*

HOW WILL DIGITAL CME **MOVE FORWARD?**

Where are clinicians today? How effectively are they using some of these tools? Do they see the potential for the future? And where does education fit into all of this?
—Dr. Joseph Kim

Digital technology isn't magic.

All the social media and second screens in the world won't automatically make CME effective. If anything, the increasing incorporation of technology into medical practice means CME must work harder to accomplish its goals.

CME must learn to ask new questions alongside all the old ones… questions such as:

- Living as we now do in a world of "big data," how do we know how much of that data is actionable? How much will be of practical use to the clinician and the patient?
- What systems, existing or new, must HCPs have in place to use big data in intelligent ways?
- When faced with healthcare recommendations from an electronic support tool, how will you, the giver of care, discern when to defer to the recommendations from the screen and when to pursue the course of action and treatment you judge best?

But the overall future of digital CME does look promising. Dr. Kim notes that because digital CME can provide HCPs with the "new levels of competency and knowledge", physicians can avoid "cookie cutter medicine" based on computer prompts in favor of clinical judgments that are informed by technology but not dictated by it.

As a specific example, Dr. Kim points to the way digital CME can enhance the formation and effectiveness of healthcare teams. Today's digital medical tools make any given clinician's reliance on team members more important because those interactions and collaborations can help them determine where to keep their focus.

Digital CME enables education to take place in simulated teams like never before. "We know we need to be engaging learners in life-like settings," says Dr. Kim. "We need to pull them out of sitting in rooms full of like-minded people."

Online team-based simulations offer specific modules with different educational content for each team member—the specialist, the nurse, the pharmacist, the social worker, and so on. But these modules engage learners in thinking through their knowledge and work in the necessary team-based context. Each sees how they contribute, in a modular fashion, to the solution of the healthcare problem the team confronts.

> *"Physicians used to have to learn on their own—perhaps when they had some spare time on weekends or at night," explains Dr. Kim. "But now they're forced to spend time communicating and interacting with other providers in a digital environment."*

WHAT'S NEXT FOR **DIGITAL CME?**

As Dr. Kim makes clear, today's technology offers powerful potential to revitalize CME as an innovative and exciting endeavor, and to equip HCPs with the knowledge and skills they need to deliver those improved patient outcomes that are the hallmark of effective lifelong learning.

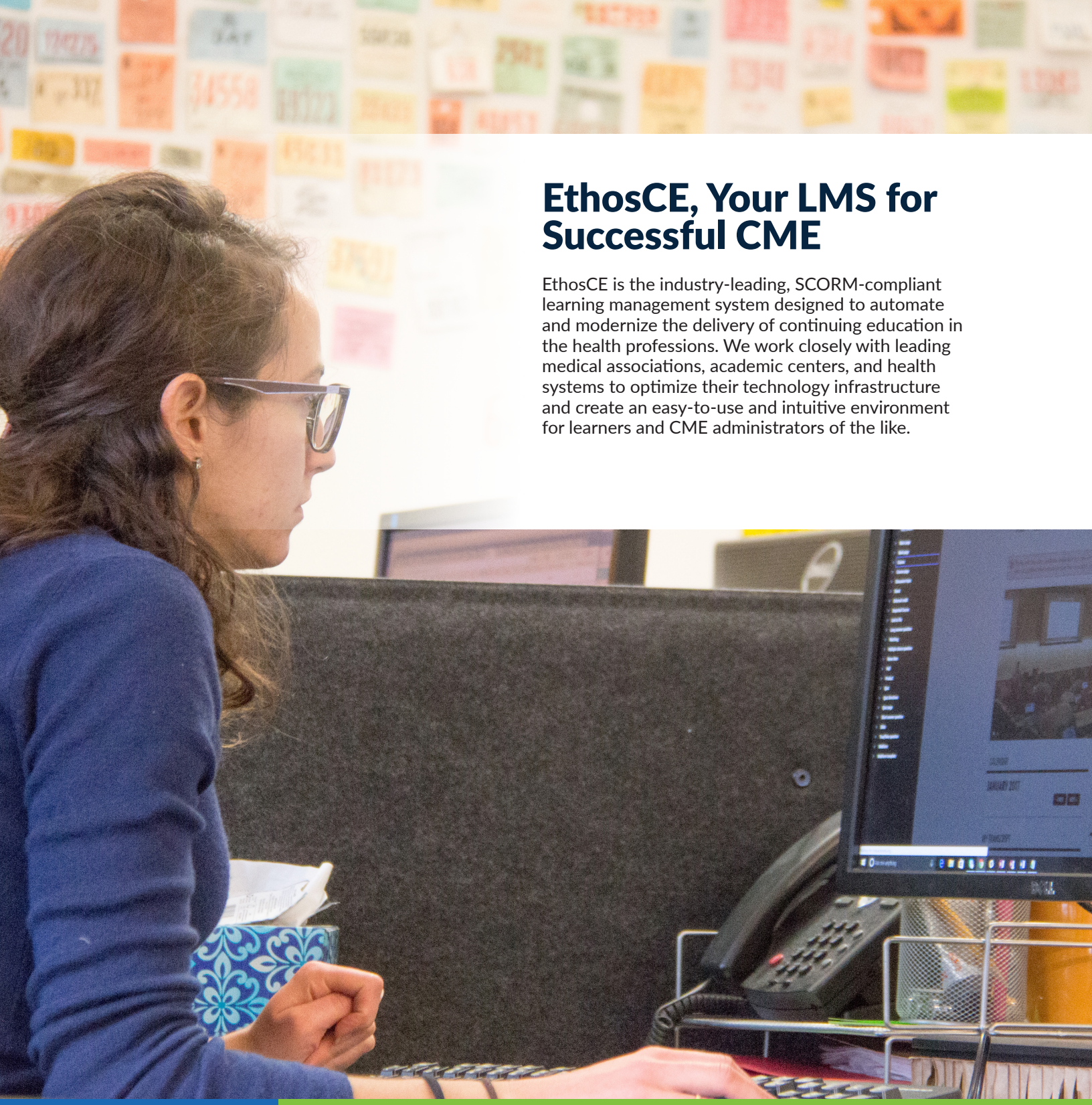
What should you do to begin providing that kind of transformative, digital CME to your organization's learners?

Putting the right learning management system (LMS) in place is foundational.

> *"The fundamental place to begin integrating digital CME into your existing CME program," Dr. Kim advises, "is starting with your LMS. There are still, surprisingly, many organizations that don't have an LMS, and they're looking for ways to capture, record, and disseminate their content. Once you're able to let your learners, your community of clinicians, know, 'We now offer this online learning, and it's not online learning like you can find if you did a Google search; this content is most relevant and has been developed just for you,' it's really going to heighten their level of engagement and interest."*

We at EthosCE invite you to consider us partners in the progression toward more effectively serving your community of learners in today's digital world.

EthosCE is the industry-leading, SCORM-compliant learning management system designed to automate and modernize the delivery of continuing education in the health professions. We work closely with leading medical associations, academic centers, and health systems to optimize their technology infrastructure and create an easy-to-use and intuitive environment for learners and CME administrators alike.
For more information about EthosCE, please contact us at **267-234-7401.**



EthosCE, Your LMS for Successful CME

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