Medical innovation and digital snake oil: AMA CEO speaks out

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In his address to the AMA’s House of Delegates at the 2016 Annual Meeting last weekend, AMA CEO and Executive Vice President James L. Madara, MD, used the term “digital snake oil” to begin a critical conversation about emerging technologies in medicine. Following his remarks, he sat down with AMA Wire® for a conversation on what it means to separate the snake oil products from the products that improve patient care.

The premise of Dr. Madara’s remarks was that innovations in medicine must be validated, evidence-based, actionable and connected. For new technologies to reach their potential, they must exhibit these primary features in order to bring patients and physicians closer together for the common purpose of improving health outcomes.

Since the speech, reporters, physicians and people from across the field of health IT have had questions for Dr. Madara. Here’s what he had to say on the AMA’s role in the ever-changing landscape of health care in the digital age.

AMA Wire: What has been the response to your remarks and your use of the term “digital snake oil”?

Dr. Madara: The early response has fallen into two general camps, which is exciting because it has initiated a healthy and much-needed discussion about this issue. The first camp is those who are generally comfortable with the pace of development of new technologies, the tsunami of digital tools and apps that I spoke of, and who perhaps aren’t concerned or don’t know enough about the potential health risks of what sometimes amounts to un-validated toys.

The second camp sees this issue differently, and their response to me has been: “That’s right, we are moving toward a mess where the useful tools are not clearly differentiated from the toys. We had better get this right if we really believe in a digital health future.”

Physicians recognize the tremendous potential in digital health and are looking to the AMA to help make sense of the changing landscape and incorporate new technologies into their
practice—technologies that have been shown to improve patient care and outcomes.

But there is too much fantasy right now, blending what could and should be possible with what actually exists today. There are books, for example, that are still promoting use of un-validated approaches that are now under federal investigation—unhelpful and misleading to say the least. This makes a hash of our current digital health state and slows progress.

**AMA Wire: Why did you choose this message for the House of Delegates?**

**Dr. Madara:** The AMA has a long history of speaking out on issues important to physicians and patients. Our predecessors helped stamp out medical quackery in the 19th Century, as well as created the first code of clinical medical ethics, and crafted the nation’s first educational standards in medicine.

Digital health, which spans the entire ecosystem of health IT, continues to play a greater role in the practice of medicine. The AMA is carefully examining the role health IT plays in providing high-quality care to patients and is helping physicians navigate and successfully use these technologies to improve health. We are identifying key challenges physicians face with health IT and focusing on improved usability and interoperability.

At the core of the AMA’s mission—to promote the art and science of medicine and the betterment of public health—is the work to improve the health of the nation. With that in mind, we speak out when the all-important physician-patient relationship is threatened or a new health risk is identified.

**AMA Wire: Which current digital technologies in medicine do you consider to be “snake oil”?**

**Dr. Madara:** Right now we are often dealing with first-generation technology that has a remarkable potential to change medicine, health care delivery and even the doctor-patient relationship. The term digital snake oil isn’t meant to be a criticism of any one product, rather a critique of a direct-to-consumer industry that exists today with little oversight and often questionable scientific evidence to support the claims made.

Though these products may be well-intended, far too many provide incomplete or inaccurate snapshots of a patient’s health and, ultimately, fail to deliver on their promises. Our challenge is finding, fostering and refining the real medical advancements—separating the medically useful from the merely entertaining.

One can find products, for example, that claim to measure your blood pressure but in the fine print indicate the product is for entertainment only—that the readings are not to be trusted! I believe a digital environment is critical to enhancing medical practice. However, mixing the medically useful digital advances with what amounts to poorly-validated digital toys slows the advance of this
promising field.

**AMA Wire:** Are you saying there is a deliberate attempt by these tech innovators to deceive the public?

**Dr. Madara:** The vast majority of these products are well intended, even if they fail to deliver true health benefits. Health is not just another field of entertainment. While some new technologies represent wonderful advances in medicine, hidden among them are countless other products that don’t have an appropriate evidence base and others that just don’t work well—elements that impede the care physicians provide and serve no purpose but to confuse patients and waste time.

Another misguided direction in the digital health space stems from a failure to correctly understand the interconnected nature of health care. Health and health care are not monolithic, linear manufacturing processes. Rather, they are more akin to a systems engineering model with the added layer of considerable practice-to-practice, geographic and other variations. As such, interconnectedness and data liquidity are critical and, unfortunately, we have precious little of either today. Isolated tools, even when validated, do not fit this model.

According to a Price Waterhouse study released just last month, 65 percent of adults who own and use a wearable device are “excited” by the opportunity to use a wearable to interact in a doctor’s office, which is also the site they identified at the highest level of trust level in interpreting the data collected by the device. At the same time, a recent Commonwealth Fund report stated that while mobile applications are a “potentially promising tool for engaging patients in their health care …” only about 43 percent of iOS apps and 27 percent of Android apps appeared to be useful.

**AMA Wire:** Do you consider electronic health records (EHR) to be a form of digital snake oil?

**Dr. Madara:** No. But, EHRs are symbolic of a system that is not fully functional or living up to its potential. There are significant usability challenges when it comes to EHR implementation and the delivery of quality care. To resolve these challenges, the AMA put forth eight EHR usability priorities to be urgently addressed and we are partnering with multiple stakeholders to improve EHR usability for physicians.

A detailed AMA Rand study revealed that, while physicians do not want to go back to paper and see the promise of EHRs, they are highly frustrated by the current form of these records. They tend not to be interoperable, at least not with ease, and many argue that the copy-and-paste culture they induce actually deteriorate the quality of the medical record. One day we will look back on the current 1.0 state of the electronic record the way we currently look back on typewriters.

The AMA is taking a multi-pronged approach to helping to influence the improvement and evolution of EHRs and working to ensure physicians have high-performing EHRs that support a learning health

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system. We continue to consult with experts in the EHR and digital health fields, speak to vendors, advocate for changes to the Meaningful Use and EHR certification programs, and promote interoperability through participation in industry-led efforts.

**AMA Wire: Is the AMA trying to slow the development of new products?**

**Dr. Madara:** It’s the opposite actually. We want a more robust conversion to support a digital environment that consists of evidence-based tools that are validated, actionable, and interconnected. Taking such elements and intermixing them with toys that do not have these characteristics, slows progress.

We need to get digital tools right. The AMA is taking a leadership role to support the development of new technologies by building a bridge to tech innovators and entrepreneurs so that physicians have a seat at the table when new technologies are being designed and created. This ensures that new innovations, once fully formed, have real-world applications in clinics and hospitals … that they work to reduce inefficiencies in health care delivery, improve patient access, lower costs and, ultimately, increase the quality of care.

The AMA is committed to innovation and collaboration that will help advance our ongoing work on behalf of the nation’s physicians and patients to meet the needs of 21st Century health care. We call this the AMA’s health innovation ecosystem.

For example, in Chicago we are partnering with the technology incubator MATTER, connecting entrepreneurs and physicians at the very point of the “idea conception” to develop new technologies, services and products to better serve physicians and patients. And earlier this year, we launched Health2047 in San Francisco. Health2047 is an integrated innovation company, which takes on many of the problems sourced from AMA studies (as well as from others) and applies rapid prototyping and design to achieve tools based on physician need. Emerging prototypes will be iterated with physicians until the tool gets it right. Partnering with industry on the development of needed products is an additional possible pathway for Health 2047.

**AMA Wire: Are consumers at risk by these so-called “defective” tech products? Do you have research that supports that claim?**

**Dr. Madara:** Consumers can be at risk when new technologies make claims that cannot be supported by evidence and science—particularly if they are allowed to enter the marketplace unchecked.

In calling attention to these emerging technologies, the AMA is trying to raise awareness about the risks and establish high industry standards so that consumers know what they’re getting and can trust the data as they track their general wellness and manage chronic diseases. The field of medicine deserves the same attention to validated interconnected digital quality as the field of aviation. Can
you imagine digital instruments that are not validated, not evidence based, not actionable, and not connected being used in a cockpit?

**AMA Wire:** What’s next? How should the AMA carry this message forward?

**Dr. Madara:** By leading with action, such as our work at MATTER and our role as founding investor in the Health 2047 innovation studio, the AMA is not simply sitting on the sideline. The promise of a functional, supportive digital future is simply too important for that. We need to do all we can to ensure that digital medicine lives up to its promise, even if it means calling attention to so-called innovations that confuse, and therefore inhibit, the supportive digital future that physicians and patients want.

We look forward to that day when a trustworthy, validated, interconnected digital environment both frees and support physicians to do what they value most—spend time with their patients.