



THINKSTOCK

# WAITING ON WEARABLES

For two years and counting, *wearables* has been the buzziest of healthcare-related buzzwords, with pundits and technologists alike falling over themselves to tout their behavior-changing potential. And yet here we are in January 2016, still awaiting their iPhone moment. **Sarah Mahoney** delivers a State of the Wearables Union address

**SOMEBODY HAS TO SAY IT:** The emperor probably isn't wearing a wearable.

After all the hype, buzz and start-up scratch, no one can argue that the potential of the wearable category doesn't teem with possibility (the same goes for its close cousins: the ingestibles, the stickables and the implantables). But the healthcare industry is grappling with the embarrassing reality that not only are wearables not saving many lives but they're also not on very many wrists. Rock Health has reported that only 12% of Internet-connected adults have one. Too, most of those devices currently reside in their owner's sock drawer; experts estimate that just 1% of the US population owns such a device and uses it consistently.

On the surface there's more than a bit to be upbeat about. Retail experts are forecasting that wearable devices will emerge as one of the most popular electronics purchases this year, with the International Data Corporation estimating that 72.1 million wearable devices will have been shipped worldwide in 2015—a 173.3% jump over 2014. In the US, the American College of Sports Medicine named wearables the single-most-important trend of 2016. Tech watchers say the Apple Watch, long heralded as the potential hub of the wearable ecosystem, is selling briskly. And Oprah—*Oprah!*—named the Jawbone UP3 as one of her “favorite things” of 2015.

At the same time, Jawbone just laid off 15% of its staff. Garmin, which recently reported a drop in quarterly revenues, says competitive pricing continues to pressure its bottom line even as it increases

ad spending. Nike bailed out on the category, at least for now, with the discontinuation of its Fuel Band. And then there's Google Glass. Remember Google Glass?

Even Apple says that its watch likely won't become a regulated medical device (although the company might develop a different tchotchke that is). Waiting for FDA approval would slow the company down too much and “hold us back from innovating,” CEO Tim Cook recently told the *Telegraph*. For healthcare marketers looking for meaningful ways to get in on this nascent technology trend, it's as confusing as the Great App Stampede of the Aughts.

## Riding the hype wave

Wearables are suffering from the classic rise and fall of the hype cycle, says Larry Mickelberg, chief digital officer of Havas Health. “There is the peak of inflated expectations and then the descent into the trough of disillusionment,” he quips. Reenita Das, a partner with Frost & Sullivan, agrees: “Everyone jumped onto the bandwagon and created some sort of a device or bracelet ... there is no kind of way to monetize this and create a business model.”

Indeed, heading into 2016, observers are taking a more nuanced view of the healthcare potential of these devices. They anticipate the development of differentiated product offerings that can actually change health—and yes, maybe even save lives. Das characterizes it like this: “[The industry] is stepping away from nice-to-have lifestyle devices and addressing some kind of clinical need, like taking care of your chronic disease.”

Connected health's big moment is coming, she adds. “The next era of wearables will take on another level of magnitude, strongly endorsed by physicians. The focus will be more meaningful data, because non-adherence and non-compliance create such a huge cost to the healthcare system.”

The breakthroughs may ultimately stem from partnerships between well-known pharma brands and tech entities, like the Novartis/Qualcomm initiative to track lung-disease patients or UCB's work with MC10's flexible sensors. But there are still major hurdles to overcome, says Mitesh Patel, MD, who teaches medicine and healthcare management at the Perelman School of Medicine and the Wharton School at the University of Pennsylvania.

For one thing, Patel's research has shown that many of the devices just aren't that accurate, even with basics like counting steps. (Smartphones actually perform better.) Medical breakthroughs are unlikely, he says, if medical professionals can't trust the data. And compliance is an issue, with a third of those who buy wearables setting them aside after a few months. And it's a drag to have to charge them and sync data.

“You get this sort of so-what effect,” Patel says. “Maybe you took a few more steps or you ran a little faster. It's just not that compelling.”

The real challenge will be proving that wearables can change outcomes. “The big thing that will drive these devices will be examples of when it really changes behavior,” Patel continues. “For example, can they help heart attack patients adhere to an exercise routine? Or help diabetics lose weight?”

Tech behemoths want very much to be part of this (and of every aspect of medical research, really). Via Apple's open-source Research-

Kit, more than 100,000 iPhone users have enrolled in clinical trials for asthma, breast-cancer, cardiovascular disease, diabetes and Parkinson's disease programs. More recently, studies tracking autism, epilepsy and melanoma were added to the list. Google, for its part, has created a health-tracking wristband that it intends to use in drug tests and clinical trials. It is designed to give researchers minute-by-minute data on patient activity.

There will be a sharper divide between data generated for consumers versus data intended for doctors, says Neema Moraveji, co-founder and chief scientist at Spire, a company that makes a wearable that tracks how patients breathe. He points out that, in many instances,

doctors aren't likely to view a patient's tracker progress reports. (Turns out that in their abundant free time, doctors aren't as eager to discover that we've shaved three seconds off our mile splits as we are.) “They're just interested in knowing the device will increase your compliance,” says Moraveji, who also runs the Calming Technology Lab at Stanford University.

Moraveji believes that consumer interest in devices will shift away from the basic of fitness trackers (“which tells people things they already know, like whether or not they exercised that day or how long their spin class was”) to things with which they are less familiar. Spire, for example, alerts its users when they've crossed the line from focused to stressed-out. “I just had a user tell me he likes it because it feels like he's developing a kind of sixth sense,” he says.

## Coming attractions

But what if everyone in the wearable ecosystem gets past the idea that throwing the device aside now and then is a bad thing? “I think we're past thinking that people will fall in love with one wearable and use it forever,” Moraveji explains. “When the iPhone first came out, there was no App Store,

[because] we all thought we'd only need a few. I think wearables will maybe just be worn occasionally, like jewelry. You'll wear the one that tracks how much sun you're getting in winter months and the one that tracks calories when you're trying to lose a few pounds.”

The next generation of devices, from stickables to smart earbuds, sound like something out of science fiction. There are birth-control microchips, medications that communicate after you've swallowed them and even health-monitoring car seats, which can sense poor posture or tension. “It's not all on your wrist,” Mickelberg says.

But many don't transcend the label of lifestyle devices. “The data they collect isn't interesting,” Mickelberg adds. “It becomes very interesting when [the device is] connected with doctors and then between providers. It wasn't that long ago that this level of detailed health information data was only available about patients in the hospital.”

This is the place where marketers could seize an opportunity to jump into the mix. “With continuous data, we can create communications and nudges that are more targeted, more personal,” Mickelberg explains. “This is how marketing becomes a service, offering the right intervention at the right time. That's the ultimate promise of health wearables.” ■



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**TIM COOK, Apple**