CES 2018

The Consumer Technology Association kicked off 2018 with its 51st Consumer Electronics Show. CES is an annual forward-looking innovation and technology conference in Las Vegas, Nevada. This year, the show gathered 180,000+ attendees, 4,000+ exhibitors, with over 1,500 exhibitors in the health, biotech, biometric, fitness, and wearable space, covering over 63,000 square feet of show floor space.

CES hosts the greatest collection of ideas—thousands of companies who have identified real consumer problems that can be solved using technology. Despite the fact that most companies will be acquired or will fail, the enthusiasm and inspiration shared will only lead to further innovations and advances.

Consumer electronics? Why do we care?

It is apparent today, more than ever, that health and data touch every category of consumer technology. Technology is the branch of knowledge that deals with the creation and use of technical means and their interrelation with life, society, and the environment. Emerging tech IS cool, but it’s more important to understand how behavior changes when interacting with technology and changing consumer expectations around brand experience. The traditional paternalistic healthcare experience (where the doctor knows best and the patient knows very little) is no more. Patients are now consumers and want control of their own health, with the help of these innovative gadgets. Digital Health saw nearly $6B in funding in 2017 and is expected to continue to grow in 2018.
Inaugural year, only 14 exhibitors including Motorola, LG, and Philips

Camcorder and Compact Discs

Apple Newton, paving the way for Apple iPhone and iPad

HDTV

Plasma TV, Microsoft Xbox

Tablets and Android Devices

VR, 4K TV

Connected TV and Smart Appliances


VCR

Nintendo Gaming System

DVDs

Satellite Radio

Blu-Ray Disc

Connected TV and Smart Appliances
According to CNET, the world-leading consumer technology publication, the “big three” of CES 2018 were:

1. Voice in Everything: The battleground of Amazon, Google, Samsung, and Baidu
2. Mixed Reality (still mixed): The hardware is coming along, the use cases are not—yet
3. Health and Medical: This is the biggest thing in tech, but also has big hurdles to adoption
Overheard at CES:

“An APP (not an 🍎) a day will keep the doctor away.”
What is “Digital Health,” aka “digital therapeutics”?  

Digital health is the convergence of digital and genomic technologies with health, healthcare, living, and society to enhance the efficiency of healthcare delivery and make medicines more personalized and precise.

Digital health tools can be used to:

- Track and monitor
- Manage and improve
- Prevent
- Encourage behavior change

Source: https://storyofdigitalhealth.com/definition/
To make impact, health technology must be four things:

1. **Transparent:** out of the way, allowing the user to be more naturally themselves.
2. **Intuitive:** easy to understand —not only HOW to use, but WHY to use.
3. **Intimate:** tuned to the customer.
4. **Constant:** where the users are (e.g., phone).

Source: CNET @ CES Presentation – The Next Big Thing
Themes

New Data Dimensions for better health: HCPs are encouraged to use remote patient monitoring and want to know more about your life and behavioral data as part of your overall health assessment; this is leading to more personalized care.

The Medical Tricorder is coming: Point of care will be with patients. Consumers are now able to monitor most vitals and many symptoms. Personal technology will be used to track secondary symptoms to combat chronic conditions. AI-enabled diagnostics to baby monitoring to tracking vitals, technology is impacting the healthcare experience and administration.

The Car as your most sophisticated computing device: Sitting in your car has become healthier. The car is the next extension of personal technology experience and may include features such as blood pressure sensors and ergonomic design.

The Home becomes the Health Center: Care will move to the home with the help of digital technologies around remote patient monitoring, connected appliances, virtual care, and telemedicine.
New data dimensions for better health

HCPs analyze data, or pools of biological information, to explore relationships between the environment and the body.

To answer difficult questions like “Why do non-smokers get lung cancer,” HCPs will begin to mix a patient’s social graph and home data with their medical and ‘omic’ data.

They will want to know what you ask Alexa, your tone of voice, steps on your Fitbit, water usage in your home, how often you open your fridge, time between visits to the bathroom.
Remote Patient Monitoring

CMS is serious about encouraging the use of remote patient monitoring, with physician reimbursement Final Rules that took effect on Jan. 1, 2018, and allow up to $60 per patient per month for review of home-based monitoring data. For perspective: in 2014, CMS’ total budget of ~$990B included a paltry $24M for such services, whereas in 2018, if all eligible Medicare patients submitted monitoring data, the collective CMS fees could total ~$20B, a 1000x increase. Instead of doctors resisting patient submissions of their home-based monitoring, they now may start to demand it—and the corresponding fees.

TAKEAWAY: Manufacturers can help customers access these new monitoring services and assist patients in using them more often, thus becoming much more valuable to both physicians and their patients in a rapidly changing environment with many confusing choices around how to monitor and what to do with the data.
Did Star Trek really predict the future?

• In the original television series, the Medical Tricorder was equipped with sensors and analysis software tailored for medical diagnostic purposes. It was the first tool used by a doctor when assessing a patient’s condition.

• We are moving in this direction: we have so many diagnostic and monitoring devices, will we one day have an all-encompassing, holistic medical monitoring device and interpret the results ourselves?

The Medical Tricorder is coming
Notable innovation in monitoring and tracking

New apps that help patients treat their symptoms are showing great promise. Specifically, new apps that help patients monitor and control their breathing have been shown to improve sleep habits, reduce high blood pressure, improve COPD symptoms, and even reduce heart failure. These apps are rapidly achieving status as “Rx” unto themselves and are validating the trend toward remedies that go beyond the pill.

Omron HeartGuide Smart Watch

L’Oreal UV Sense

Siren Diabetic Sock

Neutrogena Skin360 Scanner

Omron, the makers of medical grade blood pressure monitors, has a blood pressure watch undergoing clinical tests that will be submitted to the FDA this year.

L’Oreal is at it again and released their new wearable fingernail that lets users know when they’ve had too much sun. Swipe it over your phone, allow it to collect the data, and voilà: you receive information about how to avoid the sun.

Diabetes patients are susceptible to foot injuries and diabetic foot ulcers. Inflammation can cause a rise in temperature and the Siren sock’s temperature sensors can detect and send signals early.

In an effort to combat Skin Cancer, JnJ released a skin scanner that attaches to your phone and connects to an app that lets the user can see skin health over time.
Digital therapeutics should be used to monitor, treat & manage disease and comorbidities or secondary symptoms in concert with traditional therapy.

- **60%** of deaths are linked to chronic disease.
- **80%** of those deaths are linked to behavior.

**UnitedHealthcare** and **DexCom** have launched their continuous glucose monitoring (CGM) wearable solution for those battling type 2 diabetes.

**Oska Pulse** delivers pulse electromagnetic field therapy to reduce minor or chronic pain, cutting the need for prescription drugs.
Sleep tracking is important when tracking efficacy and outcomes; 58% of people living with migraine, lupus, fibromyalgia, endometriosis, and hemophilia experience ‘painsomnia’

Syncing to the Nokia Health Mate app, the Nokia Sleep pad slips under your mattress and records sleep and snoring patterns. It can also be programmed to turn your lights off or change the temperature in your room via wifi.

Philips Smart Sleep is a connected headband that has sensors delivering boost tones to encourage rest.

Sleep Number didn’t have any new announcements about its smart bed this year, but is looking to the future to find ways to diagnose abnormal heart rates and sleep apnea.
The new “mobile health”

Vehicles will soon be our most connected device and a hub for our personal data.

Consumers spend an enormous amount of time in the car and will soon be able to use that time more wisely—feeding vital information into a system that can provide encouragement and assistance for living a healthier life.

“Imagine a vehicle that knows whether you’re stressed and nudges you to take a breath before the next scheduled appointment. Because it can read your pulse and see your upcoming schedule. A vehicle that can adjust ambient lighting, sounds, and even scents to soothe the driver and passengers. A vehicle that becomes a key component of an active yet balanced lifestyle, working in unison with smart devices in the home and with wearables to generate a more holistic picture of one’s vital data.” – Mercedes Benz
Healthcare is coming to your home—whether it is through remote patient monitoring, smart home devices, telemedicine, or Uber-like health services.

The smart home is not only making it easier to dial up perfect lighting, temperature, and music/video access—it’s now keeping the fridge full and the laundry clean, too. In addition, the kitchen helps you eat healthier foods, the living room keeps you more relaxed and focused, the playroom serves up the most enjoyable exercise, and the bathroom helps you monitor current health conditions and predict future disease.
Heal released a diagnostic health data integration platform called Wellbe. Heal is an app-based physician house call service that can now track data from 100+ disconnected digital health tools.

The HiMirror Mini uses facial recognition to analyze dark spots, sun spots, wrinkles, and acne on your face, keeping track of the data over time.

The Samsung family hub smart fridge functions as a smart home hub; it can tell you what’s inside your fridge, suggest recipes, and source coupons.

This partnership is driving personalized virtual care to millions of patients. They were quoted saying they don’t think the future hospital is a hospital at all.
What else did you miss?

SimForHealth VR Medical Training

Samsung Modular TV “The Wall”

The Netflix Parody Biotech Booth: Publicity for a show

The Peloton Treadmill: Bringing group fitness home

Me.Mum’s Fertility Tests

Robot Sophia’s First Steps

LG Rollable OLED TV

Samsung Notebook 9 Pen
FROM QUANTIFYING THE SELF TO CARING FOR THE SELF

Health & wellness is one of the most difficult marketplaces to crack when it comes to innovation—thanks to regulation, inconsistent doctor/patient adoption, and previously limited technology for bringing disparate data together. However, this year we saw the integration of the technology needed to track and connect data with the medical care needed to provide real care and understanding.

The result? A shift from mere technology devices to technology-driven solutions, driven by sensors, AI, wearables, and even robots. This year wasn’t simply about smartwatches and single-use sensors. This isn’t about collecting personal data for the sake of humblebragging about the number of steps you’ve taken or how many calories you’ve eaten. This is a move from quantifying the self to caring for the self. We saw more health & wellness technologies than ever before, designed to prevent, support, treat, and even eradicate health issues ranging from sleep to diabetes to cancer.

These new wearables/carriables, no matter what stage they are of FDA approval and where they sit on the body, signal the era of being able to not only track ongoing illness, but also stave off potential new ones via preventive tracking and treatment. The larger connected systems we saw go beyond sharing personal data solely with the user wearing it to offering unprecedented support capabilities by monitoring and supporting consumers with chronic ailments, preexisting conditions, and even picking up on potential health issues before they are known to be an issue.

WHAT THIS MEANS FOR MARKETERS

Doctors, data, devices, oh my! This trifecta of necessary components to monitor and ensure consistent health support is now a possibility thanks to emerging tech tools that can connect different platforms and trackers seamlessly via apps and other options. The more data connected, the stronger overall story you glean about a patient’s care, resulting in empowered patients and the ability to provide value through ongoing support for both patients and their families.

Revisit and reconstruct the day-to-day patient care experience. By focusing on the consumer first, we tap into the ability to free patients, especially those with chronic illness, from the constant confines of a doctor’s office—changing their lives and their attitudes toward the medical experience.
Kristin Mengel, WPP Health & Wellness
Destry Sulkes, MD, WPP Health & Wellness
Can’t get enough?
Check out WPPHealth.com/ThinkWell for more WPP Health & Wellness ideas and insights for 2018.