



CES 2021: TRENDS & INSIGHTS

Presented by Publicis Health



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INTRODUCTION

This year's Consumer Electronics Show (CES) was entirely remote for the very first time.

In recent years, health & wellness has been showcased more prominently at CES and this year was no exception. An array of content sessions featured speakers from across the healthcare ecosystem and the virtual showroom floor showcased an array of new innovations.

Brendan Gallagher, Publicis Health's Chief Connected Health Officer, and CES veteran, offers his key takeaways from the virtual event which are followed by curated content recaps and showroom highlights from colleagues across Publicis Groupe.

Check out the Appendix for links to the specific implications for health media, takeaways for other industries, and highlights from another virtual event focused on the future of healthcare—HLTH 2020.



TAKEAWAYS FOR CONNECTED HEALTH

Brendan Gallagher, Chief Connected Health Officer, Publicis Health



The COVID-19 pandemic has thrust Connected Health technology and experiences into the general health. What looked like a novel connected thermometer a year ago now predicts outbreaks.



Trust trumps technology. Whether it's understanding why an AI makes decisions, where my data is going, or whether a system or company truly has my back, trust is the currency for investing in outcomes.



Telehealth, in its broadest definition, is THE enabling technology for the shift from “sickcare” to “wellcare.” The surge in tele-visits may fade as the vaccinations roll out, but the experience of managing our care remotely when it makes sense will stay—and this ultimately will increase access.

SESSION SUMMARIES

“PEOPLE DON’T WANT TO BE CONSIDERED A PATIENT WHEN THEY’RE NOT IN THE HEALTHCARE SYSTEM... WE NEED TO FIND AND REACH PEOPLE WITH INDICATORS— BEFORE THEY HAVE SYMPTOMS.”

- Digital Health in 2020 Session, CES 2021

AN INSIDE LOOK AT CES 2021 WITH CNET & BRIAN COOLEY

FEATURING: BRIAN COOLEY, EDITOR-AT-LARGE, CNET

THE TALK

- Publicis Groupe kicked off CES 2021 with an invitation-only keynote from Brian Cooley, Editor-at-Large, CNET. Brian offered a sneak peak at the top technology we could expect at CES and the trends that will shape our industry in the year ahead as marketers look to unlock growth in a platform world.

THE TAKEAWAYS

- Technology is not electronics, it's a connective ecosystem and how we get stuff done
- Great technology is transparent, intuitive, intimate, and constant; the latter referring to the ability of great technology to be present in all of a user's places, physical, mental, and digital.
- Health and wellness continues to grow in market share and presence at industry events like CES and the telehealth advancements of 2020 will only accelerate this trend.
- Digital therapeutics will eventually be as common in the home as a thermometer. These consumer-owned devices will soon perform automatic logs into EHRs and provide vital data to healthcare companies.
- Wellness culture is on the rise in new ways (i.e. remote blood pressure monitoring or athletes monitoring their blood sugar for personal health/wellness)



DIGITAL HEALTH IN 2020: RULES OF CONTAGION

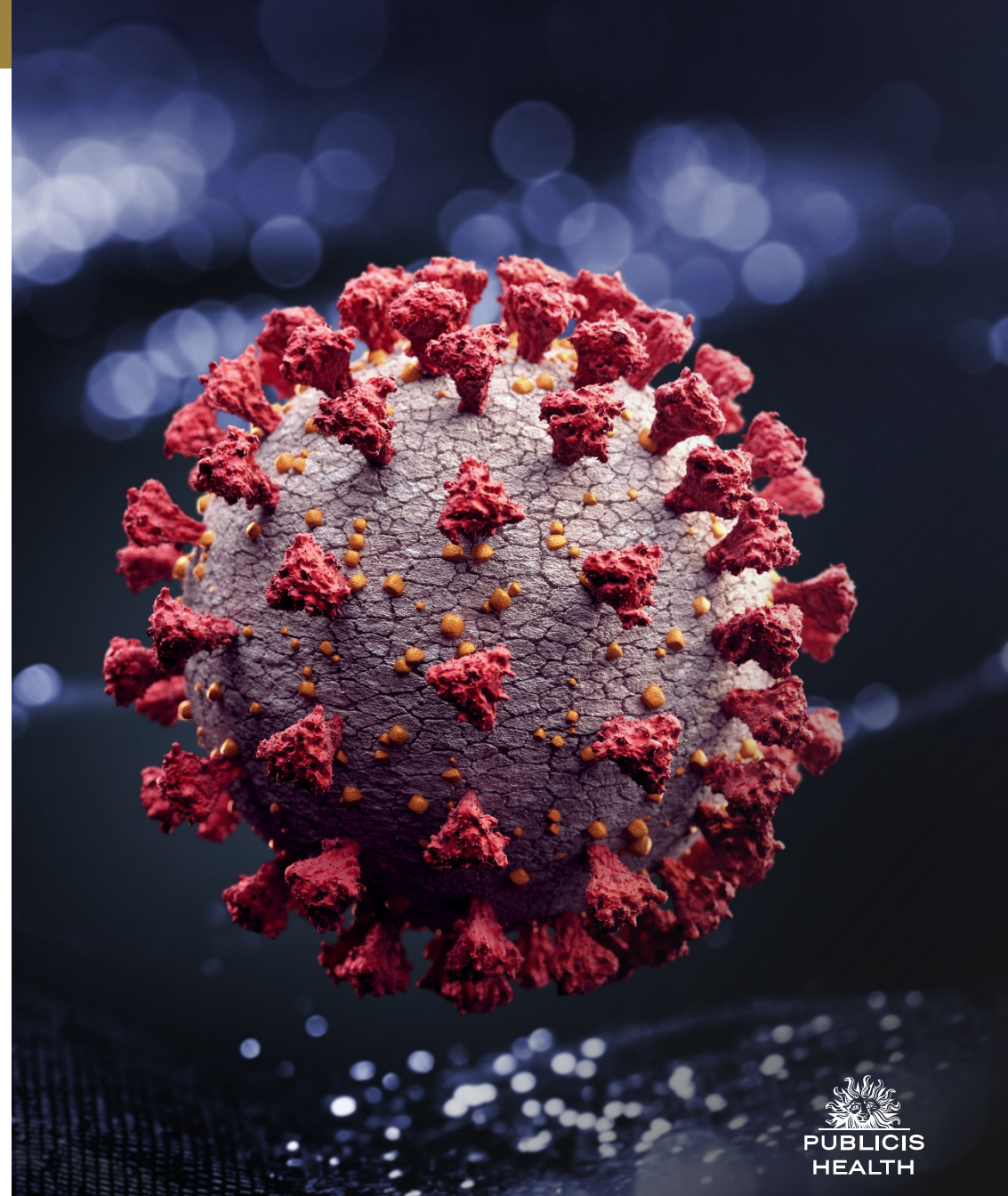
Featuring: David Kirkpatrick, Editor-in-Chief, Techonomy Media; Dr. Vivan Lee, President of Platforms, Verily by Alphabet; Lee Schwamm, VP, Digital Health, Mass. General; Inder Singh, CEO & Founder, Kinsa; Deneen Vojta, EVP, UnitedHealth

THE TALK

The past year delivered a bombshell to the world with the COVID-19 pandemic. The world, particularly the health care system, was forced to respond rapidly and with remarkable agility. Digital health was in demand to do exactly what it was designed to do: treat remotely, diagnose accurately, share massive amounts of data to improve outcomes, and so much more. This session explored how technology delivered, where our health care system and health tech need to improve, and how these new rules of contagion will change the way future pandemics are fought.

THE TAKEAWAYS

- Prior to 2020, only 24% of healthcare organizations offered some form of virtual care
- Year over year, we went from less than 50 million telehealth visits to more than one billion
- Connected health will be essential to fighting future pandemics, in example connected thermometers that monitor temperatures at scale
- We are deconstructing the old delivery model—instead of waiting until a patient is sick and needs to go to an office, home monitoring and digital therapeutics allow us to reassemble a more cost effective and convenience system
- Personalized medicine is the future and will begin with early detection and the monitorization of key indicators that come before symptoms arise



TRUST & IMPACT OF A.I. IN HEALTHCARE

Featuring: Kerri Haresign, Moderator, Consumer Tech Association (CTA); Pat Baird, Head of Global Software Standards Philips Electronics; Jesse Ehrenfield, Chair, American Medical Association; Christina Silcox, Duke Center for Health Policy

THE TALK

AI is transforming health care. It can lead to improved outcomes and lower costs. But how do we get over the barrier of trusting something we can't see or understand? In "Trust and Impact of A.I. in Healthcare," experts unpacked the broad impact of trust on the growth and acceptance of A.I. in health care and discuss what members of the ecosystem need to consider to realize the promise of AI.

THE TAKEAWAYS

- Trust in A.I. must be built across three pillars: technical trust, regulatory trust, human interaction trust.
- Humans have an innate trust for medical professionals and clinicians but can be wary of new technologies like A.I. As a result, communication, transparency, and "explainability" is key in driving adoption by both HCPs and patients.
- Machine learning presents new challenges because it often defies explanation, in some cases not even the developers can understand how a software is doing what it's doing and therefore not all ML products are able to be used under FDA authority.
- Responding to the question, "what are some elements that concern you in data quality and trust?" the panelists responded with:
 - Data is messy, it can be wrong and even it when it's right, it doesn't always tell the full story. We need to strengthen digital health data to improve A.I.
 - All data is biased, and we may not always understand why
 - Data needs context, often people focus on the numbers and not the origin and context



DIGITAL HEALTH: BUSINESS GROWTH & OPPORTUNITIES

Featuring: Lisa Suennen, Manatt Phelps & Philips, LLP; Wainright Fisburn, Cooley LLP; Bill Evans, Rock Health; Jill Gilber, Digital Health at CES/CTA, Lynne O'Keefe, Define Ventures; Sydney Thomas, Precursor Ventures

THE TALK

This presentation was a deep dive into the hottest markets and investment growth areas in digital health. A panel of powerhouse investors took a deep dive into the most important emerging gradients and how they are fueling a continued surge of innovation.

THE TAKEAWAYS

- While telehealth usage soared to 76% of Americans in 2020 (from 11% the year prior) we need to focus on getting both consumers and HCPs comfortable with telehealth and digital therapeutics
- Healthcare consumerization will continue and be a hotspot for VCs but there's tension on the other side of the coin—can venture-backed healthcare make money serving underserved populations or Medicaid populations?
- Integrated payer and provider systems were able to withstand the "storm" of COVID-19 in a differentiated way.
- Responding to the question, "what surprised you most about digital health investment this year?" the panel responded with: investors were quick to come back, health demonstrated strength and VCs are paying attention, interest in hybrid models, changing nature of consumer engagement within healthcare.



MEANINGFUL VALUE FOR ALL: WALMART KEYNOTE

Featuring: Doug McMillon, President & CEO, Walmart; Tiffany Moore, SVP, Consumer Technology Association (CTA)

THE TALK

- Walmart CEO Doug McMillon sits down to discuss how the turbulent nature of 2020 reinforced the company's focus on creating meaningful value for all – from shareholders and suppliers, to customers and employees. Mr. McMillon will illustrate how Walmart is prioritizing shared value while also running a strong business through its Covid-19 response, fight for greater racial equity, and recent climate commitments.

THE TAKEAWAYS

- It's not any single technology that's going to change the world or how we do business—what we are trying to solve for is how do these different technologies work together and how can we ensure they interact more effectively.
- We don't ever want to surprise people with how they use their data, but we do want to use it to inform our AI platforms to get better at forecasting and leveraging consumer data to personalize insights and ensure we are using their time efficiently.
- Healthcare has always been important to Walmart—from supporting our own employees to offering pharmacy, hearing, and clinical services in our stores. This will be a continued area of investment for us.
- Walmart Health has pivoted to a preventative approach, bringing quality, value, and price to preventative care to ensure all communities are able to have easily accessible, non-intimidating, pricing transparent care. This approach will require an omnichannel digital and physical healthcare offering and platform.





World Premiere
Mercedes-Benz
VISION AVTR

SHOWROOM HIGHLIGHTS

A wide-angle shot of a large audience seated in a dark theater, looking towards a brightly lit stage. On the stage, a futuristic, glowing car is displayed on a circular platform. The background features a large screen with the Mercedes-Benz logo and the text 'World Premiere Mercedes-Benz VISION AVTR'. The scene is illuminated with blue and white lights, creating a high-tech atmosphere.



CES 2021: A DIFFERENT KIND OF SHOWROOM...

Typically, the CES Exhibition Hall floor is a maze of thousands of booths and even more people for as far as the eye can see. This year, CES 2021 event organizers and participating companies had to think outside of the box.

Proctor and Gamble for instance, created the “LifeLab Everyday” expo which allowed users to create their own avatar and then take them through an experience, history, and vision, of the massive consumer goods giant.

While this section will focus on health and wellness innovations, including the rise in contact free sensors and remote biometric data-sharing platforms, make sure to check out the link to the Publicis Groupe recap in the Appendix for a more expansive look at the innovations from CES 2021’s virtual showroom.

XANDAR KARDIAN INC.

- Xandar Kardian uses radar technology to monitor the environment and the people within it. The goal is to collect data on the presence of individuals, their number, and their well-being. The technology is intriguingly granular. The Xandar radar is so accurate that it can not only determine the occupancy of a room, but also measure the heart rate and breathing patterns of each individual occupant in a non-invasive way.
- By not using listening devices or cameras, this technology can unobtrusively monitor seniors for well-being, detect falls, and notify of emergencies, all while maintaining the anonymity of the subjects if desired.



Physiological Data:
 RHR: 74 BPM
 RR: 19 BPM
 Body Motion Index: 25

Occupied
 Physiological Status:
 Awake

*Patented





BIOINTELLISENSE

- [BioIntelliSense](#) offers a Remote Patient Monitoring (RPM) platform with multi-parameter vital signs, biometrics, symptomatic events, and an effortless patient experience via its FDA-cleared BioSticker™ and BioButton™ devices, providing clinicians high resolution data trending and analytics tools to deliver medical grade care into the home.
- The medical-grade disposable wearable continuously measures temperature, heart rate and respiratory rate at rest with clinical accuracy. Advanced data services analyze statistical changes that may indicate the signs and symptoms of an early COVID-19 infection.
- BioButton vital sign measurements, combined with daily health screening results, algorithmically generate a 'Cleared' or 'Not Cleared' status prior to entry at work, school, event or travel.



ZIBRIO, INC.

- Zibrio Pro is a smart scale with a twist. It also evaluates the user's balance and stability and, along with its companion Balance Coach App, provides insights into the user's balance ability as well as a personalized wellness plan based on the resulting data. In addition, the Zibrio Pro can monitor users for potential congestive heart failure by watching for specific weight-gain patterns.
- The Zibrio Pro assesses the user's stability by recording micro-patterns of stance while standing on the scale. This data is then analyzed by A.I. algorithms based on 7 different balance studies and over 3000 human balance tests to derive a balance score and a fall probability score.
- Using the Balance Coach App along with the proposed wellness strategies, the user's balance and fall probability scores are tracked over time to improve autonomy and confidence.
- Zibrio is a partner with the AARP Innovation Lab.



MEDICATIONS, SUPPLEMENTS, AND STAYING HEALTHY

- The Israeli smart packaging company, [IMPACX](#), tracks product usage for drug adherence and replenishment. Users can “connect the cap to the app via Bluetooth, all saved in cloud”.
- [Digital COVID health pass](#), designed by IBM, helps users share their verifiable health information without exposing any of the underlying data used to generate it.
- [ALGOCARE](#) is a South Korea-based customized nutritional supplements system that enables consumers to micro-manage their personalized nutrition. It works by blending fine quantities of ingredients with each dispensation, adjusted to address the user’s specific health needs at that moment.
- Another South Korea-based company, [Caremile](#), created a walk-through thermal body scanner and fever detection system, integrated with an automated full-body disinfectant spray.
- [Riwi](#) extracts unique, continuous sentiment data from finance, international security, and humanitarian sectors, including from within closed societies. It’s able to reach communities in which 60% of the population have never answered a survey before. Their innovation is to plant survey questions across the thousands of unclaimed domains on the Internet. They’ve interviewed than 1.6 billion individuals to date, across 80+ languages, in 229 countries.



CAPTURE

everything
you're noticing



DIGITAL AND MENTAL WELL-BEING

- Users can register for [Folia](#) through their medication's manufacturer invite code, and then interact with a daily health monitoring regimen. A data profile begins to take shape, benefitting both the user and other patients with similar diagnoses. Over time, the data forms into graphs, revealing actionable insights.
- [Bodyguard](#) protects individuals, families and businesses from online toxic content, cyberbullying, and hate speech. It functions as a moveable intermediary layer for a wide variety of social media and related platforms. The app deploys AI to tackle the difficult challenge of identifying negative content when the context is ambiguous, and helps users focus on positive interactions while being shielded from the negative ones.



APPENDIX

ADDITIONAL RESOURCES

Publicis Health Media’s “2021 Trends & Insights Report”

Specific to health media, this resource from Publicis Health Media looks at CES 2021 through the specific lens of health media. Featuring insights from executives across PHM, as well as an interview between Andrea Palmer, President, PHM and Jill Gilbert, Producer, Digital Health, CES, this is a must-have resources for health media marketers.

Publicis Groupe Subject Matter Expert Round-Up

This resource includes the perspective of experts from across Publicis Groupe on how the trends at CES will impact an array of industries. For ease, we’ve excerpted the health & wellness showroom highlights into this deck, but if you’re interested in the future of financial services, CPG & Retail, Telecoms & Entertainment, Hospitality, and Automotive, make sure you check out the Publicis Groupe SME Round-Up for commentary about the entire week.

HLTH 2020 Recap

If you missed it, the HLTH 2020 conference hit on many of the same themes as CES, with deep dives into the future of digital health, the role of personalization in wellness, and how COVID-19 will continue to change how we engage with our health.

Thank you