E-VERYTHING for E-veryone E-VERYWHERE

From apps to smart houses to the Internet of Things, "e" is enabling solutions to solve healthcare's biggest challenges.

s eSolutions, which encompass everything from mHealth to technologies that are making houses smarter, continue to improve the quality of life for patients and caregivers, they also making physicians' lives better and more complicated at the same time. They are also driving huge data sets that need to be analyzed and acted upon to improve health outcomes now and in the future.

It's amazing to think that someday, and not that far in the future, smart houses will be wired to detect everything from falls to heartbeats, allowing for better in-home care for the elderly, chronically ill, and mobility challenged. Programs and algorithms are already in the works that go beyond temperature setting and light controls. Someday your house will literally be able to save your life. For example, researchers at the University of Texas at Arlington are exploring a high-tech apartment where health-tracking technology is built into the appliances, furniture, and even the floor.

Reports show that consumers, aka patients, and physicians are wiring up for the digital healthcare disruption to come.

mHealth by the Numbers

- 59% of consumers said mHealth will change how information on health issues is found
- ► **52%** said mHealth would make healthcare more convenient
- 51% said mHealth will change how providers or services send general healthcare information
- ▶ **49**% said mHealth will change their overall health management
- ▶ **48**% said mHealth would change how they manage chronic conditions
- ▶ **48**% said mHealth would change how they communicate with providers
- 48% said mHealth will improve healthcare quality
- 46% said mHealth will substantially reduce healthcare costs

Source: Becker's Hospital Review

A recent study from Strategy& reported that physicians are 50% more likely to own a tablet than other consumers; 40% of physicians said tablets help cut down time spent on administrative tasks; and the number of nurses and physicians using smartphones in their everyday practices increased by 10% in the last year, from 78% in 2012 to 86% in 2013. The report also cited that there are more than 10,000 medical apps available for consumers, but only 28% of smartphone users and 18% of tablet users report being "very satisfied" with the quality of the apps.

Furthermore, 88% of physicians want patients to monitor their health at home, including weight, blood sugar, and vitals. And finally, just more than half of patients, 52%,

said they would be comfortable undergoing a video consultation with their physician.

Alego Health puts the mobile health market at more than \$1.3 billion and it's expected to grow to more than \$20 billion by 2018. For physicians, smartphones are the most prominent device in the care setting, and it's estimated that more than 62% of doctors use tablets while more than 72% of nurses and other caregivers use smartphones in the care setting.

From a patient perspective, almost every person in the United States — 247 million — have downloaded a healthcare app for their personal use. There are more than 40,000 apps available for use by patients.

Alego also cites that physician use of de-

EXECUTIVE VIEWPOINTS



KEVIN DUFFY
Global VP, Life
Sciences Vertical,
Kelly Outsourcing and
Consulting Group



THOMAS TISDALE

VP, Talent Supply Chain Analytics, Kelly Outsourcing and Consulting Group

LEVERAGING DATA IN LIFE SCIENCES

By adopting eSolutions, biopharmaceutical leadership will be better equipped to proactively evaluate their talent supply chain, inherently, becoming more competitive in the market sector. High-performing organizations have access to more data points than ever before; through the examination of available information, organizations can channel best practices through predictive analytics and industry benchmarking. The end-goal is actionable insights that will enable organizations to make key decisions that will optimize their

talent supply chain and human capital management needs going forward.



NORA TSIVGAS

Senior VP, Director of Client Services Ogilvy CommonHealth Payer Marketing, part of Ogilvy CommonHealth Worldwide

UNDERSTANDING THE VALUE

HCPs and patients are seeking to understand the changing dynamics of healthcare. Herein lies the opportunity for manufacturers. When cost is top-of-mind, thanks to high-deductible health plans and rising copays, patients avoid care. Manufacturers can help balance the equation by raising the understanding of value. Everyone wants to know: What am I getting for my money? Stroke prevention, blood sugar control, weight loss, convenience, and fewer hospitalizations are just a few things most people are willing to pay for. Manufacturers that communicate value successfully will be more likely to thrive.

EXECUTIVE VIEWPOINTS



PETER VON BARTHELD
Associate Director,
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DATA LEAD TO STRATEGIC SUCCESS

Data is everywhere, but that doesn't mean they are being used by everyone. By fully embracing data, you will have what you need to perform an accurate analysis of how well — or not — your marketing channels are performing, and to what you can attribute success or failure. We need to ask ourselves three key questions: are you organizing your data to facilitate attribution; are you getting closer to a single customer view; and are you putting the pieces together to get a picture across all platforms? Improved accuracy leads to more informed and more strategic decision-making. Better decisions can result in significantly better outcomes, and a growing roster of satisfied clients.



MARK HEINOLD CEO, PDR

AUDIENCE SEGMENTINGThe advances are not in

the technology, but in the wisdom of applying it. We

must continually innovate in data analysis insights and targeting — communicating the right messages on the right platforms to the right people. Technology affords us the opportunity to speak very precisely to segmented audiences — among HCPs and patients — so that our ideas are delivered intelligently and with clarity.

DATA ANALYTICS

Data analytics is one of the most important skill sets that will be needed in the future. We are facing mountains of input. But every day we are becoming more sophisticated in finding the mother lodes of vital information and identifying the nuggets of intelligence that continue to refine our understanding of the marketplace. This will help us move away from mere product-oriented messaging and communicate precisely what patients and physicians want and need to hear.



DREW ROMES
Director, Integrated
Multichannel Engagement,
Quintiles

MULTICHANNEL ENGAGEMENT

Most sales and marketing teams recognize at a high-level that a multichannel approach would help them deliver a more robust and cost-effective communication strategy, and they are beginning to take steps in this direction. However, achieving a fully integrated multichannel engagement experience that optimizes the delivery of communications across every deployed channel still remains elusive for many companies. It will take innovative technology solutions coupled with significant process and culture change to fulfill the promise of integrated multichannel engagement.

CUSTOMER PREFERENCES

The integration of data from multiple sources is paramount to understanding customer preferences. Likewise, integrating actual channel promotional efforts — both personal and non-personal — is key to meeting those preferences with a consistent message, creating a synergistic

effect that has much greater impact than any one channel communication effort has if delivered alone. Better understanding customers, integrating its technology platforms and outreach, and using data to drive engagement will go far to loosen the ties that currently curtail the industry from reaching its potential.



SUZANNE CARUSO

VP of Clinical Solutions,
WIRB-Copernicus Group

INTEROPERABILITY TO EXPAND

The biggest advance in the

eClinical space over the next few years will be expanded interoperability between systems owned by different companies. Sponsors will no longer allow their service partners to continue to work in silos because that leads to too much operational inefficiency. In the future, we will see more dynamic systems that are purpose-built to integrate with other systems and deliver operational excellence.

TRANSPARENCY PROVIDES COMPETITIVE ADVANTAGES

One of the biggest competitive advantages of adopting an eClinical solution is transparency. Too often companies find themselves at the end of a study trying to locate specific documents, such as a particular signed 1572 or a normal lab range, which were collected via email when the study began four years ago. eClinical solutions allow companies to put safeguards around document collection and processing to ensure that all paperwork is collected at the right time and also stored in a consistent location throughout the trial for easy retrieval and use.

vices will increase alongside consumers. Top uses for smartphones by those in healthcare are using generic search functions (46%), accessing professional resources (38%) and communicating with colleagues (38%). Top uses for tablets among clinicians are editing or viewing electronic health records or e-prescribing (49%), using generic search functions (39%), and accessing a professional resource (24%).

Tech Revolution

Merrill Matthews, Ph.D., a resident scholar with the Institute for Policy Innovation, recently wrote while policymakers, and the country, struggle over challenges facing and created by the Affordable Care Act, real healthcare reform is happening almost completely outside of that loop, driven by technology and innovators, many of whom are from outside the healthcare industry.

Health IT or digital health — the generic terms used to describe these disruptions that include the use of mobile devices and telemedicine, among other changes — are breaking almost every standard healthcare paradigm. It's that "creative destruction" that economists frequently refer to, transforming how care is delivered, received, tracked, paid for, and even understood.

And unlike traditional healthcare, where the more money you have the more healthcare your get, the health IT revolution largely ignores those barriers.

According to the Pew Research Center, 90% of U.S. adults have cell phones. And while about 99% of those making above \$50,000 are cell-phone users, 90% of those between \$30,000 and \$50,000 and 84% for those making less than \$30,000 also have them.

"Medical services and products are reaching out to patients, especially through their mobile devices, transforming these mobile devices into a new type of medical home," Dr. Matthews says. "Physicians and other healthcare providers used to be at the heart of the healthcare system, driving all of the decisions, monitoring patient care, determining the best therapies, and serving as gatekeepers to hospitals, tests and prescription drugs. But increasingly it's technology-empowered patients who are at the heart of the system. While they aren't doctors, nurses, or case managers, they have access to information that once was only available to healthcare providers. We are entering the age of any 'anytime anywhere care."

Dr. Matthews cites the example of the mobile app, BlueStar, which targets type 2 diabetes, which was recently approved by the FDA.

"A healthcare provider must order it, a pharmacist can supply a code to download and activate it on a mobile device, and insurance can cover the cost," he says. "The outcomes patients derive from its use are better than those derived from most drugs in diabetes alone. And a significant drop in emergency room visits and hospitalizations through use of the product signals a big dent in healthcare costs."

Dr. Matthews challenges us to think about how to turn increased access to care into better and more affordable care.

He says first, those devices and apps that go beyond information and actually play a role in providing care should go through the appropriate approval process to demonstrate both safety and effectiveness. Depending on the therapy, that could mean double-blind, placebo-controlled studies, or a note to file with the regulatory agency. A company can't just claim its product improves quality; it needs to demonstrate it.

Second, he says, the innovation and competition that have been the hallmarks of the technology industry will help drive lower costs. In healthcare, once a drug or device is invented,

it seems the prices only go up. In technology, once a product or software is invented, the prices only seem to go down. Fortunately, technology is driving this new healthcare revolution. Letting engineers and entrepreneurs invent and compete is the best way to change the old health system paradigm.

Third, and finally Dr. Matthews says, the government must refrain from its worst impulses.

"Health IT innovations will be disruptive and will likely change the way we think about and practice healthcare," he says. "Those whose companies and industries are being disrupted often complain to government and elected officials in an effort to disrupt the disrupters. Government can be a catalyst for change, but it can also be a roadblock. But the government is also a consumer of healthcare. Medicare and Medicaid finance the care of more than 100 million Americans. And the government is providing subsidies for millions more through the Affordable Care Act. No entity will benefit more from this new healthcare paradigm, saving taxpayers billions of dollars while improving health outcomes.

mHealth Adoption

OUT OF 165,000 HEALTH APPS, ONLY 36 MAKE UP DOWNLOAD MAJORITY

There currently are 165,000 mobile health apps, compared with 43,000 in 2013, but nearly half of all downloads are generated by just 36 apps, according to IMS Institute for Healthcare Informatics. Its recent report says 40% of all mHealth apps have seen fewer than 5,000 downloads.

The report states 26,864 apps are directly related to patient health and treatment, yet more than half boast single functionality and have limited value in enhancing healthcare outcomes.

Nearly 25% of the 165,000 apps, which include both iOS and Android options, focus on disease treatment management; two-thirds, meanwhile, focus on wellness and fitness. Developers also are creating innovative data features, with one in 10 apps boasting device and sensor integration.

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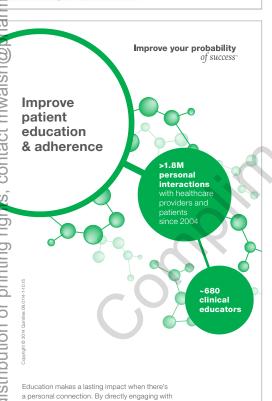


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Outsourcing: February 2016

Space Commitment: January 4, 2016 Sponsored Editorial Deadline: January 8, 2016 Featured Show Distribution: SCOPE

Market Research:March 2016

Space Commitment: February 2, 2016 Sponsored Editorial Deadline: February 9, 2016 Featured Show Distribution: PMRG 2016 Annual Conference

Talent Optimization: March 2016

Space Commitment: February 2, 2016 Sponsored Editorial Deadline: February 9, 2016

Mobile Solutions: May 2016

Space Commitment: April 1, 2016 Sponsored Editorial Deadline: April 8, 2016

► Clinical Trial Solutions: June 2016

Space Commitment: May 2, 2016 Sponsored Editorial Deadline: May 9, 2016 Featured Show Distribution: 2016 DIA Annual Meeting

► Marketing: September 2016

Space Commitment: August 1, 2016 Sponsored Editorial Deadline: August 8, 2016 Featured Show Distribution: e-Patient Connections

Data Management & Health Information Services: September 2016

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► Patient Solutions: October 2016

Space Commitment: September 2, 2016 Sponsored Editorial Deadline: September 9, 2016 Featured Show Distribution: 2016 mHealth Summit

Supply Chain & Logistic Management: October 2016

Space Commitment: September 2, 2016 Sponsored Editorial Deadline: September 9, 2016

eSolutions: November/December 2016

Space Commitment: October 10, 2016 Sponsored Editorial Deadline: October 17, 2016 Featured Show Distribution: 2016 ePharma Summit