CONNECTED HEALTH SUMMIT

Engaging Consumers

Event Summary

Aug 30 - Sept 1, 2016

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Connected Health Summit: Engaging Consumers Event Summary and Insights

2016 initiated a new stage for connected health players and consumers using their solutions, following two years of significant market events:

- **2014:** Large consumer electronics companies such as Apple, Google, and Samsung entered the consumer health and wellness market.

- **2015:** Early entrepreneurs in connected health, such as those behind Teladoc, Fitbit, and MyFitnessPal, met with success and notoriety.

These events occurred during the seismic and still ongoing shift from a fee-for-service to a pay-for-performance payment model in healthcare. In 2016, the market has crossed over from early investments and pilot-program collaborations to a critical mass of market winners. Customers of connected health solutions and services are picking their winning vendors and partners for long-term commitments—good news for true innovators and bad news for those with failing solutions.

One factor driving this growth is the continued expansion of the connected home concept and the consumer-based Internet of Things (IoT), which offers a large "opportunity footprint" for health solutions.

The continued emphasis on pay-for-performance is also driving new business strategies for the connected health industry.

In both cases, companies need to engage consumers for their healthcare solutions to be successful, and to do so requires knowledge to target consumers on an individualized basis. Such personal information includes social and attitudinal factors alongside accurate health risk assessment and effective engagement approaches. Providing and analyzing that level of consumer information are key goals for Connected Health Summit: Engaging Consumers, as we analyze the role of innovative connected health solutions in driving changes in consumer behaviors as well as healthcare systems, insurers, and hospital networks.

Thank you to our sponsors for their support of the third-annual Connected Health Summit.

> **Reception:** Independa
> **Session:** higi
> **Lunch:** ARM
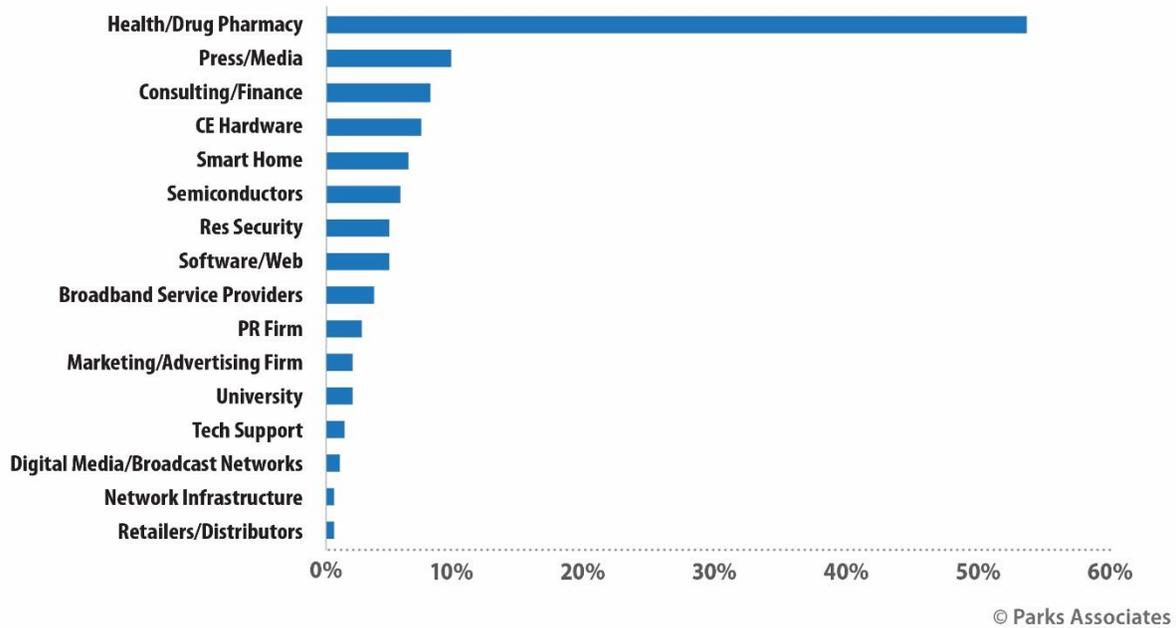> **Advisory:** Care Innovations and Healthways
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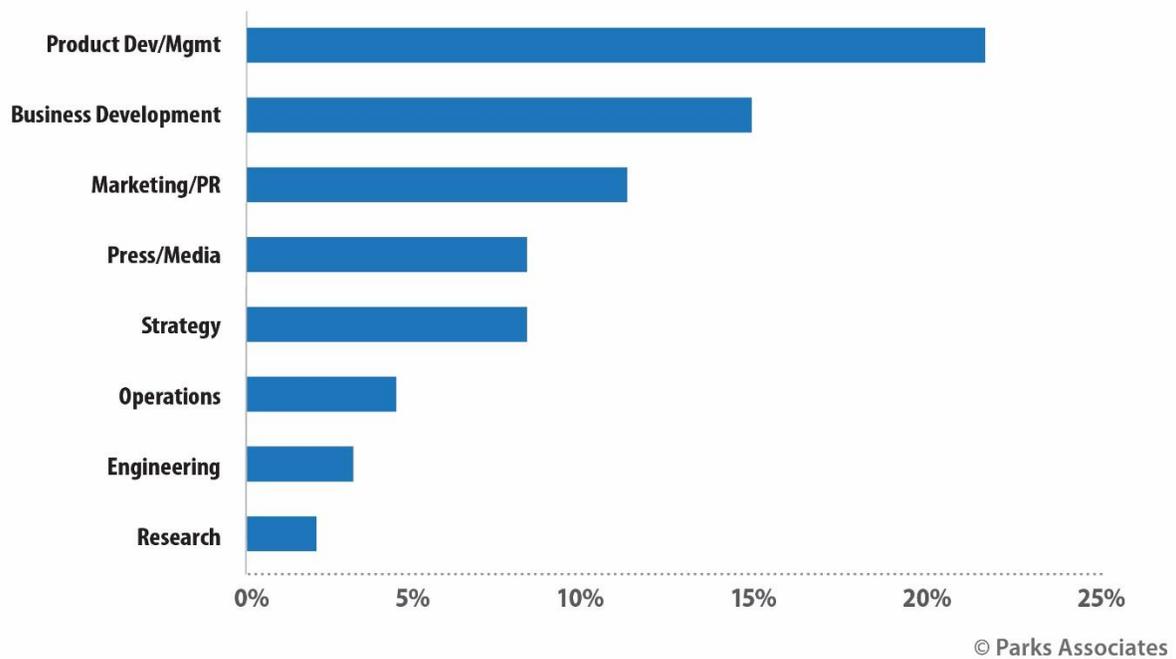> **Charging Station:** California Health Care Foundation
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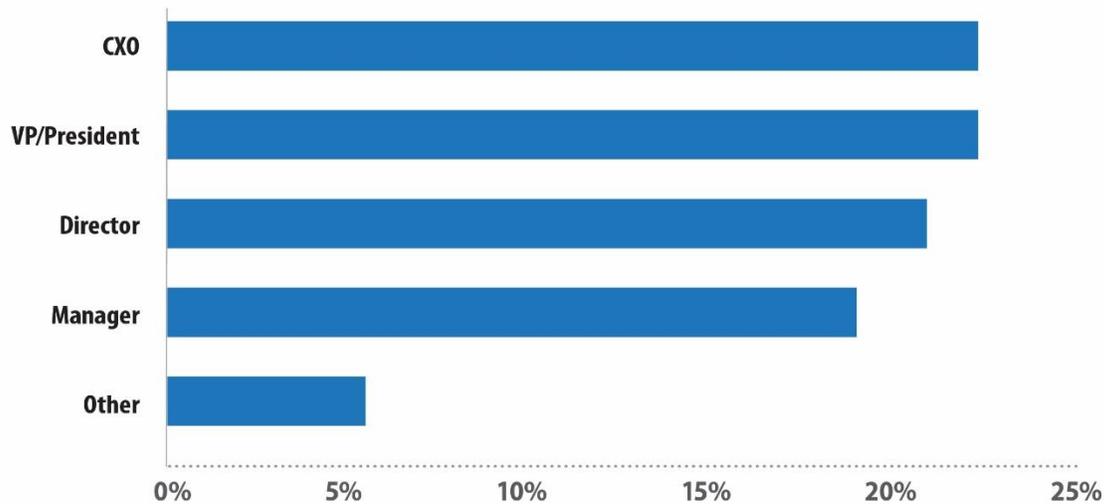
2016 Connected Health Attendees by Industry

Health/Drug Pharmacy
Press/Media
Consulting/Finance
CE Hardware
Smart Home
Semiconductors
Res Security
Software/Web
Broadband Service Providers
PR Firm
Marketing/Advertising Firm
University
Tech Support
Digital Media/Broadcast Networks
Network Infrastructure
Retailers/Distributors

0%   10%   20%   30%   40%   50%   60%

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2016 Connected Health Attendees by Role

Product Dev/Mgmt
Business Development
Marketing/PR
Press/Media
Strategy
Operations
Engineering
Research

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2016 Connected Health Attendees by Title

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WEDNESDAY, AUGUST 31

Setting the Stage: Consumer Trends in Connected Healthcare

Stuart Sikes, President of Parks Associates, discussed the attendee demographics for the 2016 conference, which set a new record for attendance. . He also highlighted lessons of the IoT smart home economy, which has growing applicability to the connected health space:

1. Use and availability of technology will explode

2. Value is built on consumer data

   • Personalization is standard

   • Everyone is in the privacy/security business

3. Disaggregation and displacement of traditional business models will accelerate

   • New, unimagined business models will emerge

4. Adoption is driven by emotional engagement with technology

   • Customer experience is the only differentiator

5. No one company will dominate the Internet of Things

   • Partnerships are necessary

Speakers:

• Stuart Sikes, President, **Parks Associates**
• Harry Wang, Senior Director, Health & Mobile Product Research, **Parks Associates**

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Session Insights:

- Data is driving awareness among health providers. Rewards and penalties are working, leading to consumer accountability and empowerment and resulting in behavior change.
- The connected health marketplace is affected by changes in legislation, consumer values, and new developments in the IoT space. Examples include the ACA and telehealth regulations, consumers' willingness to have their data collected, and the growing technical capabilities of sensors and wearables.
- Over the past three years, support for the connected health market has grown and expanded. Early experimentation has gathered support from funders and the industry, turning the talk to "how" rather than "why."

From Selling Products to Selling an Integrated Care Experience

The U.S. boasts the world's largest healthcare market, accounting for $3 trillion in spending, or 17.2% of the country's GDP in 2014. Spending on treatment for patients with chronic conditions accounts for approximately two-thirds of total health expenditures. In the past, healthcare providers and insurers have tried multiple approaches to address cost, access, and quality of care challenges, with little to no success.

The Affordable Care Act (ACA), passed in 2011, is shaping up to transform the care delivery and financing models in this country. Among many of its ground-breaking rules, the ACA promises to shift the traditional fee-for-service payment model to the new one based on pay-for-performance. The Center for Medicare and Medicaid (CMS) has set the goal to make 50% of its payment in 2018 based on pay-for-performance criteria. When this goal is translated into specific reimbursement policies, quite a few have been implemented. For instance, CMS' hospital readmission penalty has entered its fourth year of enforcement, and this penalty has prompted many hospitals to change their care service model by providing more proactive care service into a patient's home. In another example, CMS cut reimbursement rates for diabetes care supplies at the beginning of 2014, and prompted diabetic monitoring device makers to look for ways to demonstrate that diabetes supplies are a critical component in diabetic care management.

These changes represent both a challenge and an opportunity to healthcare industry incumbents whose business models were traditionally tied to volume-based reimbursement, be it the number of prescriptions, procedures, or medical consumables. They now begin to explore collaboration with hospitals, physicians, and health systems to ensure that patients achieve better care outcomes with the help of their products. In addition, they pay more attention to product designs and marketing to engage healthcare consumers for not only sales of their products, but also usage and compliance.

This panel discussed such pay-for-performance trends and how medical device makers, drug companies, and chronic care solution providers respond to reimbursement model changes with the right product and solution strategy to achieve positive care experience and help their companies adapt their business with agility in this transition.

Speakers:

- Jeroen Brouwer, Director of Business Development and Sales, **Philips**
- Ranndy Kellogg, President & CEO, **Omron Healthcare Inc.**
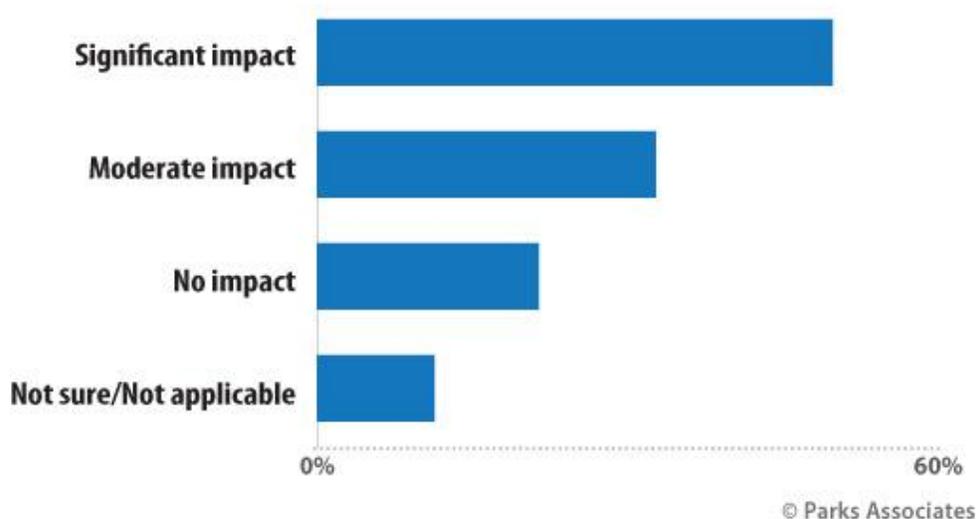- Jim Pursley, Chief Commercial Officer, **Livongo Health**

- John Vander Meulen, General Manager, Commercial Markets, **Johnson & Johnson, Health and Wellness Solutions**

Moderator: Harry Wang, Senior Director, Health & Mobile Product Research, **Parks Associates**

Session Insights:

- Emphasis on product user experience will help to reduce friction and increase activation. If consumers love a product, they will use it - however, many consumers don't love the products they have. Poor usability can limit consumer engagement, even by consumers who are aware of their health risks and care options. Device makers need to make products that are more engaging and consumer-friendly.
- There is a need to deepen engagement with nurses, doctors, and health behavior specialists in order to broaden behavior change methodologies. Expanding beyond physical activity, nutrition, and biometrics will help the industry tap into the individual's internal motivations in order to enhance the outcomes for wellness.
- A current organization's operating model will notice a moderate-to-significant effect from the changes in reimbursement policies being made by public and private insurers within the next 12 months. Insurers are going to have to focus more on health outcomes.
- Companies need to avoid data overload by finding ways to analyze data that are meaningful for their business and customers. They need to determine what drives consumers, identify how to meet their needs, and understand what motivates them to adopt and continue healthy behaviors. Analytics can be used to measure engagement and evaluate the effectiveness of the product. Data can help to create predictors, learn lessons, and indicate adjustments to a product value proposition to create better behavior.
- Some of the biggest challenges identified are:
  - o Legislation: policies are constantly changing.

- o   Employee talent: needs are changing and the right experience is getting harder to find. Companies need to manage talent and be prepared to hire new types of people as business grows and changes.
- o   Limitations of predictive analytics: limited capabilities and lack of a holistic view of the patient.
- o   Interoperability for sharing data: open platforms may offer a solution. The health industry needs to settle on a standard of how to measure engagement—the gaming industry might have the model to follow.
- Major players, such as Phillips, are transitioning to a health pure play, focusing on healthy living, prevention, diagnosis, treatment, and home care. Companies looking to lead in holistic services for consumers need to focus on improving population health outcomes and efficiency through integrated care, real-time analytics, and value-added services.
- Successful programs will have creative and consistent strategies to encourage consumers to activate for initial use and also to continue use for ongoing engagement.

KEYNOTE: Beyond Devices – Addressing the Diabetes Epidemic with Data and Services

The world is facing a diabetes epidemic with 415 million adults worldwide living with the disease, and the costs associated with treating and managing diabetes have topped $673 billion. Decades of technology innovation hasn't solved this problem. To effectively address diabetes, a shift in thinking is required. We must look beyond devices to develop holistic solutions which improve outcomes and reduce costs. A combination of technologies, big data, informatics, and world-class patient management are all required to transform diabetes care for greater freedom and better health.

Speaker:

- Annette Brüls, President, Diabetes Service and Solutions, **Medtronic**

Session Insights:

- Diabetes is a significant healthcare issue due to high aggregate spending on healthcare services, symptoms that severely impact quality of life, and a large volume of people with diabetes, which is predicted to continue to grow another 50%.
- Diabetes is a self-managed disease—more than 95% of the care for diabetes comes from the patients themselves. This chronic disease needs to be managed around the clock by the patient and their community, far beyond a physician's care. Physicians only see patients for intermittent office visits.
- So far, technology hasn't solved the diabetes epidemic. Currently one-half of people living with diabetes are not in glycemic control.
- Continuous glucose monitoring gives a more accurate view of sugar trends compared to blood glucose meter readings. Sensors can stay in the skin for 6 days, and patients who are able to view their health data on their smartphones, with additional context correlating past results, can be influenced to shift their health behavior for the better. Continuous glucose monitoring with smartphone displays helps reduce low blood sugar events by two per year. It also helps reduce high blood sugar events by 41 per year and helps 66% of people stay in range more often.

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- The next step in diabetes management is integration—with other sensors, mood/sleep/location monitoring, meals and logbooks, connected devices, and medical costs. This information will need to be distilled and made into actionable insights.
- Medtronic has collaborated on programs that have improved health outcomes for diabetic populations by making processes easy for patients and providers and including data reporting that is clear and actionable. For example, the IBM Watson platform will allow Medtronic to predict hyperglycemic episodes up to three hours in advance, with 80% accuracy.
- The Canary Health Program acts to prevent new diabetes cases: 80% reduction of new diabetes cases, 5:1 ROI, 0.93 drop in HbA1c using the self-managed digital intervention.

Effective Population Health Management Strategies: Success and Lessons Learned

Traditional chronic care management programs have shown limitations in bending the healthcare cost curve. Population health management (PHM) is an adapted approach to contain healthcare cost drivers by proactively managing a broad population with different clinical, socio-economic, and behavioral attributes. PHM takes many forms but at its core is effective consumer engagement to reduce their overall health risks.

Both payers and care providers are incentivized to offer population health management as a means to achieve their respective financial goals. Payers target the reduction of claim costs, whereas care providers aim to earn more revenue via pay-for-performance contracts and minimize potential penalty associated with at-risk contracts. Population health management solution providers have seized such business opportunities by providing technology-enabled care management tools and data analytics capabilities to improve the efficiency and effectiveness of PHM programs.

This panel shared successes and lessons learned in running population health management programs and illustrated business opportunities ahead.

Speakers:

- John Kao, CEO and President, **Alignment Healthcare**
- Jonathan Leviss, M.D. FACP, Chief Medical Officer, **AMC Health**
- Kristine Mullen, Vice President, Wellness Strategies & Solutions, **Humana**
- Karissa Price, Chief Marketing and Strategy Officer, **Healthways**
- Mimi Winsberg, MD, Medical Director, Psychiatry Lead, **Ginger.io**

Moderator: Harry Wang, Senior Director, Health & Mobile Product Research, **Parks Associates**

Session Insights:

- Healthcare providers are moving their discussions from the boardroom to actual implementation of new solutions. They are starting to focus on quality and value of population health, but it's still moving slowly.
- Care management can improve outcomes, but it comes with upfront costs, especially with technology. Medicare and Medicaid aren't set up for these upfront costs, so the private sector might be more effective in perfecting population management before bringing it to Medicare/Medicaid.

- The goal of population health is to keep consumers as healthy as possible. Population health success will come as a result of:
    o holistic consumer-focused engagement
    o coaching/care management system
    o capital
    o technology
- Data presented to the individual needs to be tailored to that individual. Applications need to determine how much engagement is needed in order to effectively influence behavior change and make recommendations based on a user's needs. One solution can be 24/7 continuous coaching support, which allows care management and access to technology. Behavior change occurs when consumers are engaged upfront and are able to tell their own story.
- Data collected should be all-encompassing and come from all types of sources in order to have a holistic view of the individual. Companies need to have a complete view of the individual, including the care team and caregivers, and this view includes non-clinical data. Claims data, clinical data, and demographic data are all of interest, but need to be brought together in one view to be meaningful. Once this happens, an increase in ROI will follow.
- There is an opportunity to add human interaction to enhance digital monitoring, with coaching conversations to help patients to understand their own data and respond appropriately. Coaching intervention is most effective if begun early in outreach, when the patient is most affected by information shared about their health and is motivated to take action.
- Experts are looking at different levels of intervention—not just managing disease but also slowing its progression, reversing it (e.g., Healthways Ornish program for heart disease), or even preventing it altogether.
- Population-level health can be managed by payers or health systems that take on risk or that take on entire geographic areas through partnerships that leverage community organizations outside the traditional healthcare system. Humana has 25% of their Medicare Advantage population receiving home visits/care and 40% receive wellness and preventative services.

Fireside Chat: Best Strategy for Health Systems to Thrive in Value-based Care Model

This conversational discussion covered a range of topics about managing patient experience in and out of healthcare facilities. These topics included:

- Hospital/health system's preparedness for the transition to value-based care
- Information technology needs for managing such transition
- Patient experience improvement—what it means to health systems and how they implement changes
- Transition to home: patient and family expectations and technology's role
- Continuation of patient engagement while they are at home: why, how, and best practice advice

Speaker:

- Kelly Macken-Marble, VP, Ambulatory Care, **CentraCare Health**

Session Insights:

- The healthcare system should move away from calling people "patients" and consider them "customers." Customers have a choice as to where they receive care, while the term patient implies illness even as many of our customers are not actually sick. Adapting to this new mode of thinking is often difficult for care providers but will help them adapt in this very consumer driven market.
- There is a timeline for the shift to value-based care based on CMS reforms—and where Medicare goes, commercial payers should follow. This timeline is helpful for health systems as they work to build needed infrastructure to support a more value-based payment model.
- The overall customer experience needs to boil down to providing the consumer and family with a great experience across the entire care system. Integration of the "voice of the consumer" is critical when developing solutions targeted to customers.
- There is a need for more predictive modeling tools, as companies need a tactical way to analyze all the data being collected by so many device and access points.
- Hospitals face significant pressure to reduce the length of stay. Patients who come for health services are sicker than ever and require more attention to ensure smooth transitions out of residential care or between providers. Transitions from one care center to another can be risky, and it is important to get it right. More organizations are getting better about including the care provider, patient and family in the transition.

From Fee-for-Service to Pay-for-Performance: Success Stories

For centuries, doctors have had a commanding role in healthcare delivery. The entry of the modern health insurance industry forced doctors to mind their service delivery costs and operate by the access rules created by health insurers through negotiated network contracts between insurers and doctors. However, the healthcare industry has recognized painfully that past ways of doing business are no longer sustainable. The consensus is that the economic model behind current healthcare delivery is broken because it rewards doctors and hospitals based on service volume, not quality.

The shift from fee-for-service to pay-for-performance requires more frequent and deeper engagement with consumers out of the doctor's office and emergency rooms. Legacy systems, however, were not designed for this type of care and engagement. Care provider facilities, organization, policies, infrastructure, and marketing efforts have to be re-tooled toward performance goals.

In this presentation session, care providers shared insights from their efforts to affect the organizational change necessary to succeed in a pay-for-performance system. Presentations focused on successes, obstacles faced, and the important work that remains to be done.

Speakers:

- Dr. Alexander Grunsfeld, Director of Neurology, **Sentara Healthcare**
- Angie Kalousek Ebrahimi, Senior Manager, Wellness Market Solutions, **Blue Shield of California**
- Anne Weiler, Co-founder and CEO, **Wellpepper**

Moderator: Jennifer Kent, Director, Research Quality & Product, **Parks Associates**

Session Insights:

- Providers are naturally concerned about how they will get paid for implementing new healthcare devices or protocols with their patients. In order to have a value-based system, nurses, doctors, physicians, etc., need to agree on how to divide payments, which isn't easy to do. Currently, the priority for prescribing treatment is "how do I get paid" and then what is best for the customer. There needs to be a shift in this thinking, placing the customer's needs first.
- Pharmacists are the point of education and have a direct influence on the customer, but they are not factored into the care process. This is an area that can have an impact in creating value for the consumer if it were to change.
- Pay-for-performance is a model where outcomes are paramount. This means looking at areas that are working. "Lifestyle medicine" focuses on the same areas as wellness, such as lack of exercise, diet, low social support, etc., with clinical data supporting improved outcomes from its first-line therapeutic use. Randomized controlled trials are a gold standard for vendor-based programs.
- Effective implementation of treatment plans depends on good communication between providers, patients, and their caregivers. However, discharge planning is often poor, and sometimes patients are sent home with little to no instruction. Patient self-management tools can help bridge the gap between daily life and doctor visits.
- The industry is undergoing an awkward transition phase, where health care players are forced to straddle two curves that represent the old Fee-for-Service model and the new focus on value-based/ Pay-for-Performance payment. This transition will cause challenges as revenue will drop as volume decreases, while initial quality reimbursement remains low. The initial investment in IT will be high and put physician workflows and roles in disarray. Currently, what health systems find valuable—such as automated follow-ups—isn't what payers find valuable. Instead, they find value in things such as reducing unnecessary ER visits.
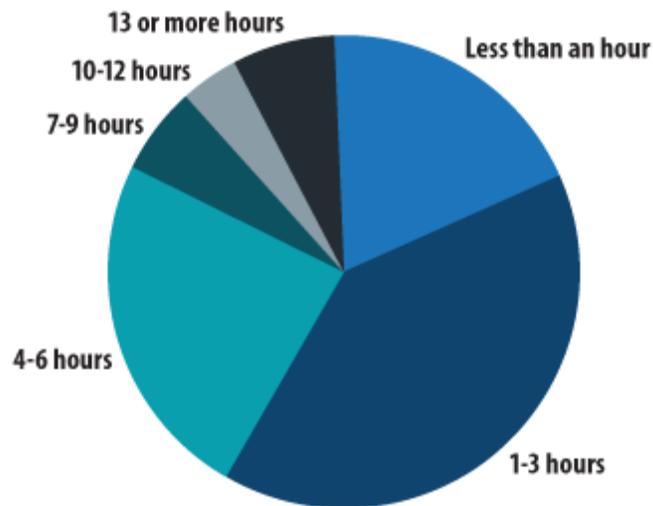
Engaging Caregivers for Coordinated Care

The number of family caregivers will greatly increase in the next five years as the baby boomer generation ages. Eight percent of broadband households provide care to a family member; an additional 14% anticipate doing so in the next five years. These family caregivers carry a heavy workload. Four out of five caregivers spend more than an hour per day performing caregiving tasks, such as taking their relative to doctor's appointments, shopping for them, cleaning their homes, and even helping them bathe and dress. Nearly 20% spend more than four hours a day performing these tasks.

Hours Spent Per Day on Caregiving Tasks (Q3/15)
Among Caregivers Performing Selected Tasks

Pie chart segments labeled: 13 or more hours, 10-12 hours, 7-9 hours, 4-6 hours, 1-3 hours, Less than an hour

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Currently, family caregivers' interest in using apps for caregiving far exceeds their current use. For instance, 40% of current caregivers find the idea of using an app to get alerts about emergencies "very appealing," but only 7% of caregivers are already using apps with this feature. This indicates that awareness of solutions on market is low and current solutions are not meeting market demand. Yet, given their intimacy with ailing or fragile family members, and their frequency of contact, caregivers have the potential to dramatically impact the health outcomes of those they care for.

Education and outreach—for both caregivers and seniors—must be a priority. Medical professionals are highly trusted and may be a good educational resource. However, they are oftentimes crunched for time and resources. Alternatives such as health coaches and health educators focus on patients' lifestyle and needs; these care providers make education and recommendations their top priority. Additionally, patient communication and educational solutions are one of the three key areas in the digital health markets, alongside virtual care solutions, that could and should target caregivers. IoT technologies have made virtual care and patient communication and education solutions possible, but need active engagement of caregivers to allow the technologies to grow.

The panel discussed how best to engage family caregivers as a resource to affect health outcomes.
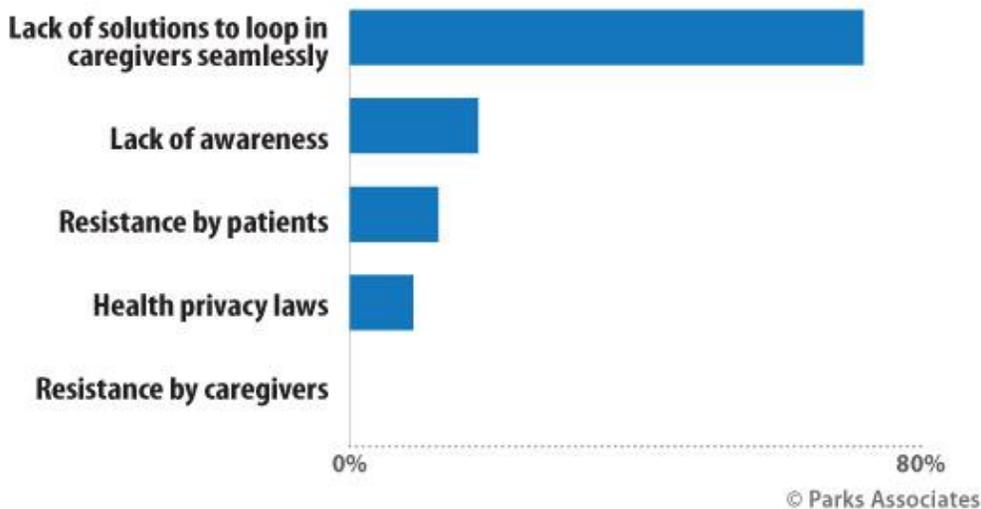
Speakers:

- David Inns, CEO, **GreatCall Inc.**
- Asif Khan, Founder & CEO, **Caremerge**
- Jeff Makowka, Director, Market Innovation, **AARP**

Moderator: Jennifer Kent, Director, Research Quality & Product, **Parks Associates**

Why are caregivers underutilized by the health system?

Session Insights:

- Parks Associates research reveals more interest in caregiving apps than actual usage. Less than 40% of current family caregivers use an app to assist with caregiving tasks. There is a big opportunity to create simple end-to-end solutions. Consumers and family caregivers need to be engaged at all touch points. Seniors don't get sick every minute, so caregiver apps need to have a process to get them engaged, including processes for onboarding, discharge, and ongoing monitoring. These apps also need to look to other areas, such as social media, to keep people engaged.

- Family caregivers need simple, easy-to-use tools that are embedded into their workflows and that help make the time spent providing care more efficient and streamlined.

- The great problem in marketing to family caregivers is that they often don't define themselves as "caregivers." The industry needs to culturally reposition how it defines the roles of all individuals involved in the care process and to incentivize the stakeholders. The system needs to raise awareness among these "caregivers" and market the tools available to them, since there is no single, obvious channel where they can go to get the help, tools, and resources they need.

- One potential solution is to use apps to help create engagement with family members and their caregivers through direct communication updates like meal times, movement around the house, and medication timing.

- The population is aging, and a growing number of people need a caregiver, who in turn need support to accomplish their tasks. Interventions that help family caregivers be more productive could significantly impact healthcare spending in the coming years. Interventions can assist caregivers or support self-care to help reduce stress and risk of burnout.

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Integrated Technology and Data Platforms to Enable Better Care

Leveraging consumer and patient data to provide better care is a transformative opportunity. As consumers increasingly own and carry more smart devices capable of easing the burden or reporting activities, health providers can more easily provide insight on health conditions and characteristics, as well as provide wellness coaching.

Once care providers have a clear picture of who their customers are, what motivates them, and how to reach and engage them, care providers can incorporate this knowledge into three business/operational areas:

- Marketing communications on education and product/service introduction
- Engagement optimization for wellness and chronic care management programs
- Increase in service utilization without crunching resources

Complexities, however, include data collection, data safeguarding, data coordination and patience privacy. These challenges require the cooperation of many industry segments and the coordination of many systems to provide seamless, easy-to-use solutions.

Speakers:

- Ash Damle, Founder and CEO, **Lumiata**
- Bettina Experton, MD, MPH, President & CEO, **HUMETRIX**
- Natalie Lawrence, Director of Business Development, **PokitDok**
- Lance Myers, Ph.D., Chief Technology Officer, **Sentrian**
- Michel Nadeau, CEO, **Tactio Health Group**

Moderator: Stuart Sikes, President, **Parks Associates**

Are you willing to disclose information on your activities such as amount of exercise, foods consumed, and alcohol consumption?
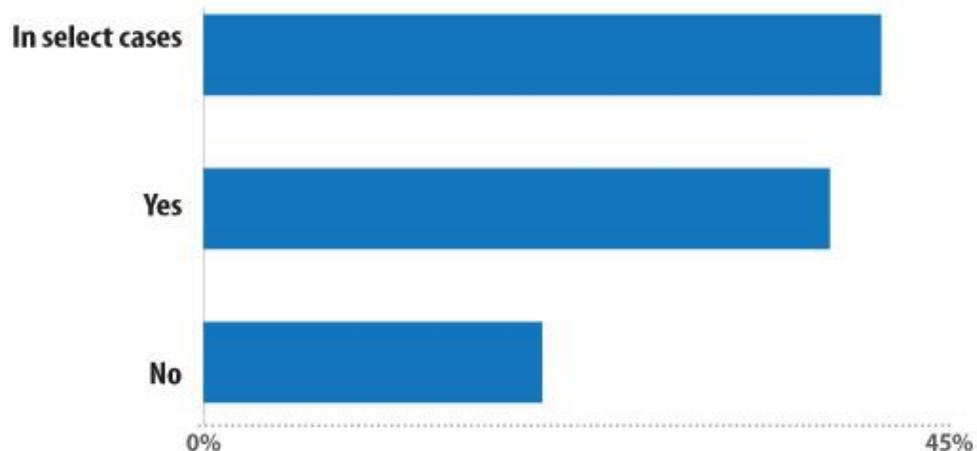
CONNECTED HEALTH SUMMIT POLLING CHART — Engaging Consumers

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- People need to take control of their health data, and companies need to keep users engaged in the process and educate them on how to share data with all relevant parties in order to provide the best continuity of care. There are differences across generations for how comfortable people are with sharing and using their own health data. Educating consumers about usage of their data will help them become more comfortable with sharing their health information across providers and platforms.
- Companies can create different shared data models depending on how engaged the customer wants to be and what they are willing to pay for.
- There are fundamental flaws in the connected health ecosystem that prevent big data from being monetized. Consumers must go through retail to find a connected health device and will possibly experience friction when finding, evaluating, installing, and using the device. There is also currently no value placed by healthcare providers in predicting or avoiding healthcare events.
- Healthcare device adoption has increased over the past few years, especially among those under age 44. Connectivity provides value to these consumers, allowing them to engage with their own data and communicate online with providers; however, this data can't be kept in a silo. There needs to be a product ecosystem that talks to itself. Connected devices and the data they provide need to be brought together, be actionable, and have an ROI for providers and payers. Consumers will need to lead the charge to break data out of silos—their expectations and demands will drive the industry.
- Personalized medicine is possible through automated systems and medical AI.
- Fundamental challenges organizations currently have with data include:
  - How do I collect the needed data?
  - What do I do with the data collected?
  - How do I derive meaning/use from it?
- To monetize data, a company must first find the right data its clients need. What are their pain points? What drives readmissions, and where are the data vacuums? What is the critical data that care providers must have?
- The key to successful data capture and integration is good planning with aligned incentives so that the different pieces of the process work together, provide actionable intelligence to providers, and make sense for the consumer.

KEYNOTE – Connected Health & Retail – Re-imagining the Future of Preventative Care Delivery

Retailers play a unique and growing role in the new consumer health and wellness ecosystem as potential access points for health screenings, immunizations and other preventative care interventions. This keynote presentation addressed how technology companies and retailers can collaborate to turn a trip to the grocery store into the beginning of a customer's journey towards incremental steps to improve their health.

Speaker:

- Alex Hurd, Senior Director, Product Development, Growth and Payer Innovation -- Health & Wellness, **Walmart**

Session Insights:

- Customers across all demographic spectra are struggling with the explosive growth of healthcare out of pocket expenses over the last decade.
- The U.S. spends nearly 18% of GDP on healthcare expenditures.
- If we want to empower individuals with the tools and the education to improve their health, then we might consider retail as a complement to the healthcare system. Today, a patient will see their physician on average once per year, however, patients are likely to see their pharmacist once per month and visit the grocery store once per week.
- Retail offers a venue to reach consumers in locations where they already are with great frequency and connect them to solutions to help them make incremental improvements towards a healthier life.
- Walmart is well positioned to support such a framework:
  - **Footprint:** 90% of the U.S. population lives within a ten-mile radius of a Walmart store.
  - **Traffic:** 140 million unique customers visit Walmart every week and Walmart.com is one of the most visited websites in the U.S.
  - **Assortment:** broad assortment of products and services, from pharmacies and vision centers to groceries, electronics, outdoor gear and exercise equipment.
- The industry needs to develop new business models to shift the focus towards preventative care.
- The future of preventative care may depend on retail health, connected health and the healthcare system developing new eco-systems to more effectively work together and create value-added experiences for the healthcare consumer.

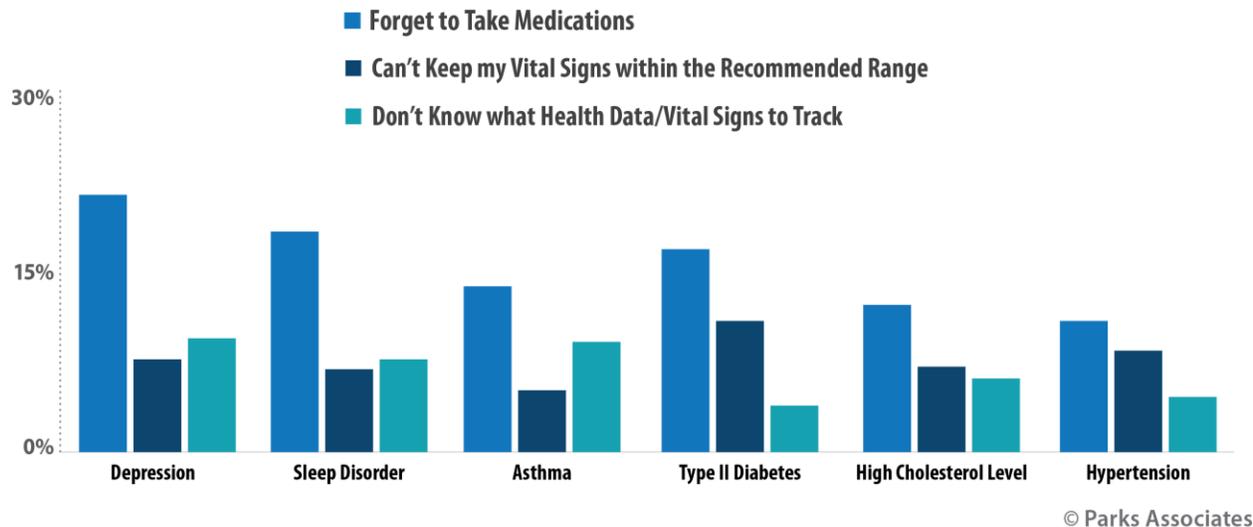## Integrating Smart Home Solutions into Connected Health Experience

As smart home adoption increases and consumers become more familiar with the capabilities of connected devices, use cases are expanding beyond the original drivers of security and safety. With an established and growing presence in the home, interactive security and home control services are well-positioned to expand offerings into health and wellness. Medical alerts and emergency response monitoring, daily activity monitoring, and remote video-based communication and caregiving are a few of the early health-related applications than have been integrated with smart home providers.

As an example of emerging uses cases, consider that taking medication on time is one of the top-five challenges encountered by patients with chronic conditions. New smart medication adherence devices enable adherence notifications, and remote monitoring and control by caregivers.

Healthcare Management Challenges by Chronic Condition
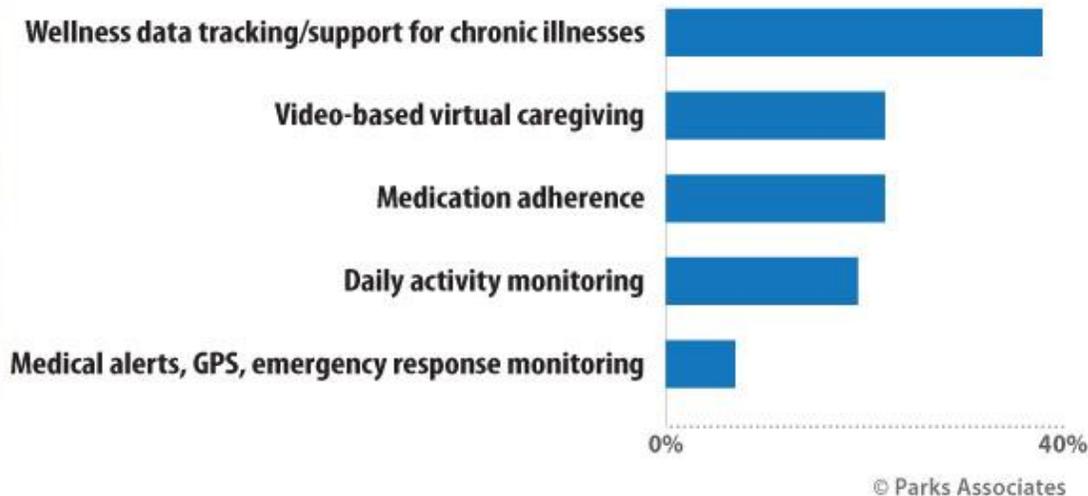### U.S. Patients with Specified Chronic Condition

Legend:
- Forget to Take Medications
- Can't Keep my Vital Signs within the Recommended Range
- Don't Know what Health Data/Vital Signs to Track

Categories: Depression, Sleep Disorder, Asthma, Type II Diabetes, High Cholesterol Level, Hypertension

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Speakers:

- Don Boerema, Chief Corporate Development Officer, **ADT**
- Christian Garcia, CEO, **Ubilogix representing ZigBee Alliance**
- Darryl Jones, Senior Director of Strategic Marketing and Analytics, **Zonoff**
- Lainie Muller, Director, Wellness, **Alarm.com**
- Daniel Wong, VP of Sales, Marketing & PLM, **MivaTek**

Moderator: Brad Russell, Research Analyst, **Parks Associates**

CONNECTED HEALTH SUMMIT POLLING CHART
Engaging Consumers

What health-related use cases for smart home solutions are you most interested in?

- Wellness data tracking/support for chronic illnesses
- Video-based virtual caregiving
- Medication adherence
- Daily activity monitoring
- Medical alerts, GPS, emergency response monitoring

0% — 40%

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Session Insights:

- Today's devices use a variety of standards, making it difficult for them to communicate across platforms or with other devices. Solutions need to provide the ability for full integration, and the system as a whole needs to help make the consumer's life easier with data that is simple to receive and can communicate any cause for concern or immediate action.

- Data is not consistently collected. Some of it is collected in real time, while other data is gathered once a day or less. Collection strategies depend upon the audience and what it will be used for. The patient, family members, and the patient's doctor may want to see different data in different formats. The most important part is that companies remain transparent about what data is being collected and what is being done with it.

- Existing sensors in the home can be re-purposed to do a number of things as long as they can ensure HIPAA compliance and a great user experience. As the population gets older and sicker, this will become important in value-based care. For example: ADT Health is ADT's core platform, repurposed. Health and wellness devices just plug right in to the platform and feed directly to EHRs. Home health providers are also leveraging these systems for the opportunity to save on staffing during the night shift, by using video monitoring instead of on-site team members.

- Smart home platforms can extend into health monitoring and wellness through B2C, B2B, or B2B2C models. There is also a huge opportunity to package together all of the services people need to age-in-place. Revenue-sharing and partnerships will be keys to enabling these goals.

- Interoperability will continue to be a challenge. Smart home providers will both try to partner with HIT organizations and build their own solutions. The specifics will vary according to the audience—family caregivers need different information than payers/providers, for example. A strong solution offers a well-rounded ecosystem, with simple plug-and-play components, on a platform that can be flexible, for a price that is affordable for the consumer.

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- Privacy is a concern in user adoption, but ultimately this will come down to financial considerations. Monitoring is the most cost-effective solution to track aging patients to ensure compliance and safety, but the industry must find a balance between privacy and dignity.
- More opportunities include two-way communication to coach the caregiver or person being monitored based on the data and when and how to share data directly with the formal healthcare system, including providers and payers.

THURSDAY, SEPTEMBER 1

Consumerization of Healthcare: Driving Trends

Consumers will drive the next stages in healthcare, and in response, the industry is providing them with more and more options to "medicalize" the IoT. This session explored in-depth the consumerization concept in healthcare, the factors driving this shift, and strategies for connected solutions that can progress beyond traditional patients to serve a diverse consumer market with disparate needs, demands, and expectations.

Speakers:

- Kian Saneii, Founder & CEO, **Independa, Inc.**
- Harry Wang, Sr. Director, Health & Mobile Product Research, **Parks Associates**

Session Insights:

- Retail organizations will drive the consumerization of healthcare, not providers.
- Due to the Affordable Care Act, CMS can change Medicare payment codes without the approval of Congress. This is a very significant and underreported benefit of ACA. This allows Medicare to support new forms of care more easily.
- A keyword for the future is "frictionless," or figuring out how to automate the delivery and documentation of healthcare services.
- A paradigm shift could happen in redefining health as keeping people out of the system, supported by the rise of retail organizations that will drive healthcare through their link to consumers.

Innovative Devices for Consumer Care

Innovation is the driving force of the medical device industry. Digital technology has further enhanced devices' usability and functionality. Thanks to core technology advances in areas such as sensors, digital signal processing, software, and connectivity, health and wellness devices have become easier to use, more portable to carry, and better at sharing data with care professionals.

The industry has also witnessed breakthroughs that led to new approaches of measuring vital signs and delivering medicines at home. Such examples include non-invasive vital sign monitors, glucose measurement using body fluid, smart insulin pumps, handheld ultrasound, home-use CPAP machines, and a host of wellness monitoring and tracking devices for stress, sleep, hearing, posture, pain, heart rate, sunlight exposure, etc. These "health IoT" products greatly expanded consumers' knowledge about and ability to deal with health and wellness challenges.

Parks Associates' survey data indicate that as of 2Q16, 36% of broadband households own at least one connected health or wellness product. As more personal health devices make their way to the market, consumer awareness and interest will spike. It is imperative that device makers offer consumers a compelling experience and convincible benefit in order to stand out from thousands of digital health products introduced to market each year.

This panel asked speakers to share their company's experience in designing and marketing their digital health products, and how to respond to challenges such as meeting regulation requirements, gaining distribution channels, and most importantly, building a consumer experience that makes them *want* to use, and use such a device repeatedly with fun, not fear.

Speakers:

- David E. Albert, MD, Founder & Chief Medical Officer, **AliveCor**
- Richard Fury, MD, Director, **TPMG Tech Group**
- Ravi Kuppuraj, Chief Architect for Patient Care and Monitoring Solutions, **Philips**
- Simon Longbottom, VP of Preventive Health, **Nokia**
- James R. Mault, MD, FACS, VP and Chief Medical Officer, **Qualcomm Life**

Moderator: Harry Wang, Senior Director, Health & Mobile Product Research, **Parks Associates**

Session Insights:

- Consumers are adopting more connected and mobile devices, which are being integrated more seamlessly into consumers' daily lives and are also becoming more discrete.
- Doctors are still skeptical about migrating to digital devices, except for the phone, which is now used for messaging. However, doctors were also once skeptical about EMRs, and they have now fully adapted. That is an indication that once it becomes a trusted method, doctors will adapt. Cultural changes need to happen, and it takes time to overcome initial fears.
- It used to be said that a dollar saved in healthcare is a dollar of revenue lost. This is changing with value-based care—for example, with bundled payments, everything that used to be revenue will now be cost. Devices and remote care will help providers manage this cost, and physicians will follow the money, meaning that economic incentives also need to change. Doctors are not currently paid for reading emails and reviewing data. This is a critical factor for success of the new system.
- The technology for consumer health devices has been around for a long time. The challenges are in the use of the data generated. The next chapter of capitalizing on data will mean having a smarter strategy for the design and path of dissemination, to optimize consumption by provider and consumer audiences. Providers have never done anything like this big data challenge before, and the care delivery system isn't really set up for this. Innovators will need to build momentum to overcome the inertia in the healthcare system that slows down change. Success in the consumer health device space comes down to the algorithms, the analytics, and the ability to present information in an actionable way.
- People must want to use these devices in order for them to be useful. Don't make them start new habits; instead, link to healthcare services in the way people already live with existing devices that they like to use.
- Financial changes such as bundled payments will shift risk to the provider and result in more attention on care provided in the home/outside the traditional healthcare system.

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- Device innovations must be based on scientific research and follow FDA guideline. The failure of Theranos should send an alert to entrepreneurs in the business of innovations to respect basic science and regulatory compliance.

KEYNOTE – Applying Digital Health Technology to Engage Patients and Consumers to Better Health

Attendees learned about the latest trends in connected digital devices and wearables that are reshaping how we engage and empower patients to take a proactive role in managing their health. Today's technology is enabling us to improve day-to-day treatment management for patients with chronic conditions. Critical, real-time health data is now available right on your smart watch or handheld device and can be instantly shared with physicians, caretakers, and family members. More than ever before, whether managing healthcare to improve overall wellness or to reduce the everyday stresses that come with managing chronic conditions, the digital revolution is upon us, and it's a true game changer for the medical field.

Speakers:

- David Rhew, Chief Medical Officer and Head of Healthcare and Fitness, **Samsung Electronics America**

Session Insights:

- Consumerization of healthcare changes roles and incentives for patients and providers, requiring patients to be more engaged and accountable for their own health. More activated and engaged consumers have better health outcomes. To accomplish this, data needs to be relevant, customized, and seamless and should provide a super user experience. It also needs to be properly secured to overcome privacy and security concerns.
- This trend also brings increased importance to the patient's social circles, so digital interventions need to factor in community involvement in the patient's health and everyday habits.
- Virtual reality is not just used for medical training. Virtual reality is a new resource to help patients to manage their pain by distracting them. It can be used for therapeutic purposes, and studies show a reduction in pain, anxiety, stress, and a need for narcotics among patients after they used virtual reality technology in therapy sessions.
- Technology has become easier to integrate into everyday life, scaling down from smartphones to current-day wearables to unobtrusive sensors that will be used in the near future. Samsung sees new wearable sensors as the future of digital health, with a steady progression from phone apps to wearables (smart watch form factor) to new sensors either worn on the body or in the environment. These mobile personal technology interventions can be combined with coaching feedback loops, and studies report results for those conditions are comparable to traditional healthcare delivered through provider and pharmaceuticals.
- When consumers use both wearables and certain apps that are tailored to their condition, they may see that it is more effective and less costly than the utilization of prescription drugs. For example, the BlueStar diabetes treatment app was found to reduce A1C levels by 1.9, compared to an average drop of 1 by prescription drugs alone. In terms of pain treatment, patient trials with the Gear VR have shown a reduction in pain levels on those treated by up to 25%.

Sensors and IoT Technologies for Connected Care

Data, data, everywhere, all for a byte of insight. Emerging IoT technologies provide unprecedented access to and analysis of data from home and mobile environments, monitoring equipment, personal medical devices, health and wellness apps, electronic medical records, public health data sets, and more. Consumer comfort levels in selecting a health monitoring device for daily use and sharing health data with a doctor electronically each increased 6% from 2014–2015. This suggests a growing awareness of options and an increasing comfort level with the kind of data sharing that can contribute to improved care and better outcomes.
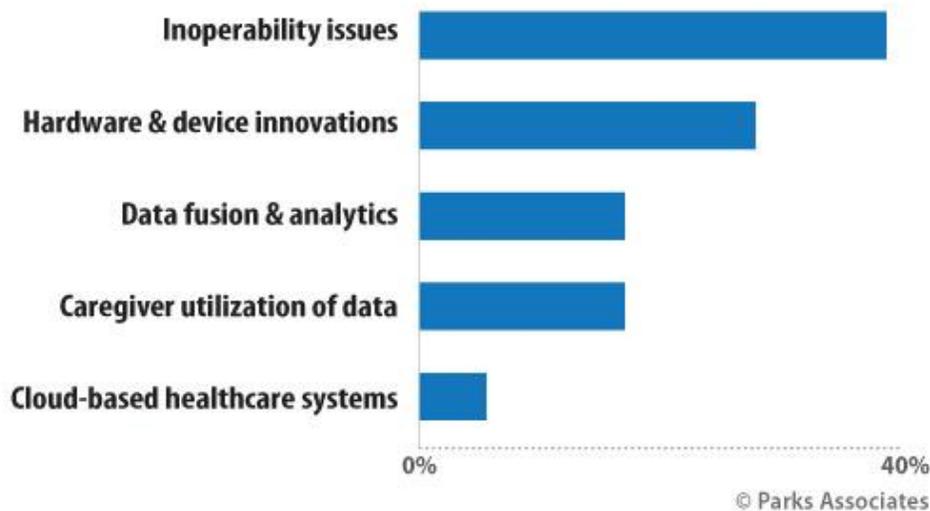
Speakers:

- Michael Erben, Director of Sales, **Multi-Tech Systems, Inc.**
- Karthik Ranjan, Director Healthcare Technology, **ARM**
- Bill Scheffler, Director of NA Sales and Business Development, **Sigma Designs/Z-Wave**

Moderator: Brad Russell, Research Analyst, **Parks Associates**

Which aspect of today's discussion of sensors and IoT technologies is of most interest to you?

Session Insights:

- Connected health platforms need to support a consumer's ability to share their data. The patient owns their personal data, and they need to feel empowered in order to use it. Device form factors are evolving to accommodate integration of multiple sensors. Cellphones, an already-trusted platform, are also integrating more sensors. Machine learning is the next step in proving efficacy, allowing solutions providers and systems to directly measure interventions and outcomes instead of only looking at what others have done.
- Challenges exist in chronic disease management: communicating with patients in the way they want to be reached, understanding the chronic condition, creating a partnership between both

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patients and providers, and changing provider models and workflows are all challenges that need to be tackled for chronic disease management to be successful.

- Companies that embrace interoperability, physician-focused workflows, and partnerships see the most success. However, no single organization can do this alone. Healthcare is local, and healthcare is delivered uniquely—a one-size-fits-all solution won't work. Market participants will need to sort out liability for cloud-to-cloud transitions.

- There are "care deserts" where patients don't have easy access to specialists or high levels of cares, and technology-enabled services are lifelines for those living in these remote locations or otherwise without access to care.

- Predictive analytics can sometimes come up with amazing results. For example, they can help to predict moves into more advanced levels of care 30 days in advance, simply by looking at factors such as bedtimes, waking times, restroom breaks, and activity levels. This information is available by simple home sensors and wearables, all current technology.

- The difference between success and failure, assuming a deep technology infrastructure already exists, comes down to leveraging others' expertise and building a service layer around the technology. Stuff is only stuff, but services keep people engaged.

- Liability is one obstacle in connected sensor technologies. All devices must be tested for security to avoid liabilities (i.e., testing the smartphones and smart watches that incorporate these sensors).

- Consumers are becoming more comfortable with self-care processes including selecting a health monitoring device and sharing data with a physician.

- One way to boost usability is to plan more convenience so data collection is embedded in standard device functioning (e.g., booting up and powering down a device).

- Faster cycle time can increase innovation, so ideation is accomplished and moved to the prototype stage more quickly, then used to capture real-time user feedback through testing.

Connected Health Partnerships: Strategies to Manage Chronic Conditions

With about two-thirds of the American population being overweight or obese and 26 million Americans suffering from type I or type II diabetes there is a growing demand, by both professionals and consumers, for better tools and services for self-care outside of the doctor's office. At the same time connected health device ownership is on the rise, increasing from 24% in 2013 to 33% in 2015.

Connected health devices such as digital fitness trackers, networked weight scales, and connected blood pressure meters help consumers better understand and monitor their personal health. The information that connected health devices transmit is crucial for early awareness of consumers' possible health problems. In addition to the large overweight/obese and diabetic populations, 14 million Americans suffer from severe chronic respiratory problems, and 68 million have hypertension. Healthcare professionals may need to rely on data from connected health devices to detect health problems early. The devices also assist care professionals and population health management firms by feeding data into a larger personal health information pool.

Yet, with an increase in technology comes a decrease in doctor's office visits, where physicians are able to ask questions and perform routine check-ups that could potentially detect health problems at an early stage. This creates the issues of motivating consumers who may not realize they are at risk, building a

new culture and incorporating incentives for primary care doctors to help engage consumers, and giving consumers the right tools and information to take on self-care.

Comfort in Self Care for Chronic Condition
Consumers in U.S. Broadband Households with a Chronic Condition
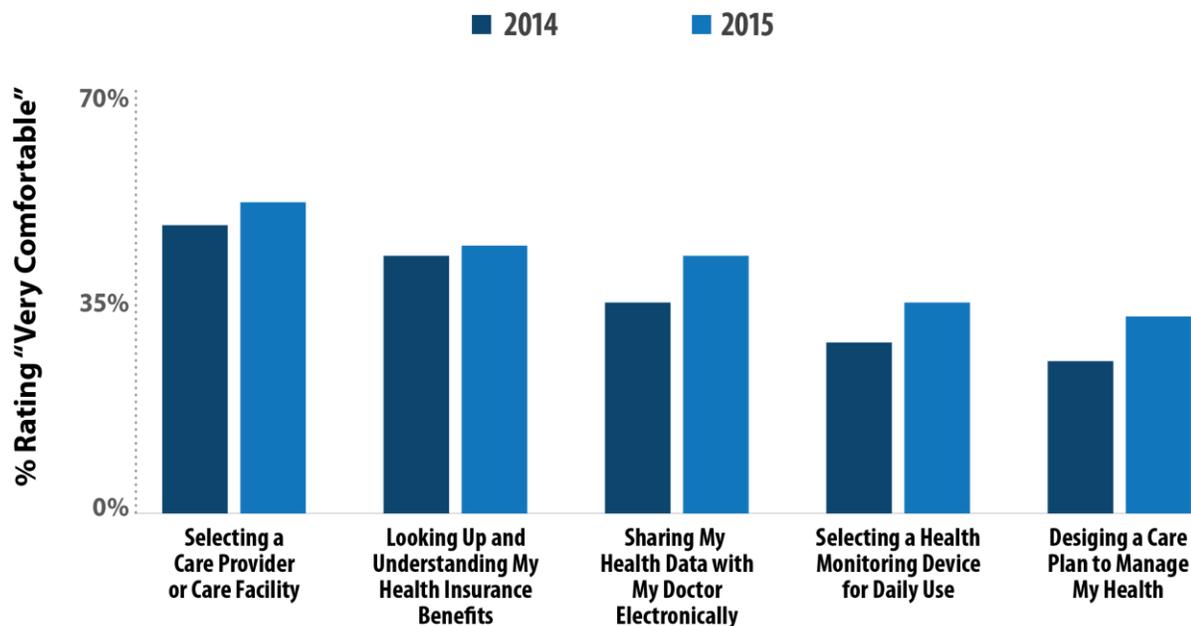
Parks Associates data shows that Americans are slightly more comfortable managing chronic conditions or well-being on their own than a year ago. This panel addressed the progress made toward supporting self-care for chronically ill patients, and the specific areas where more work needs to be done. Speakers shared success stories and lessons learned from implementing technology solutions to manage chronic conditions, and ways to improve these programs and partnerships.

Speakers:

- Marcus Grindstaff, Chief Operating Officer, **Care Innovations**
- Christopher Nicholson, CEO, **mPulse Mobile**
- Eric Rock, CEO, **Vivify Health**

Moderator: Jennifer Kent, Director, Research Quality & Product, **Parks Associates**

Session Insights:

- Managing chronic conditions is a partnership between the provider, patient, and caregiver(s). Patients need to be proactive about self-care, and they will start to engage more when they have a trusted provider to help them along the way.
- Chronic disease management is evolving as more patients gain health insurance and are exposed to options of digital monitoring and data-sharing with providers.
- The best business environment to support these patients will feature deep partnerships with flowing data that is agnostic for use on platforms or operating systems.

- Technology needs to be an enabler to solve the problems that are important to the customer.
- Providers need to visit with the population being served to better understand the context for their solutions. It is also valuable to engage providers to help create clinical pathways and products.

KEYNOTE – Strategies to Implement Effective Employer Wellness Programs

In this keynote, Stuart Slutzky of HumanaVitality discussed market trends on employer wellness programs and focused on his company's strategies in design and deployment to constantly improve employee engagement and outcomes for these programs.

Speaker:

- Stuart Slutzky, Chief, Product Innovation, **HumanaVitality**

Session Insights:

- Driving behavioral change means understanding behavioral economics. The industry has to offer meaningful rewards with intelligent incentives, such as rewarding people for behaviors that lower risk factors. Humana members earn points that can be redeemed for tangible rewards for engaging in over 30 verified activities such as completing a health assessment or biometric screening, receiving annual preventive care screenings, and exercising daily using a wearable device or at a participating fitness facility.
- Health assessments can produce great information, but consumers are skeptical about their privacy. Also, the facts alone don't drive change—the key is to deliver information in a way that matters. For example: a 30-year-old smoker won't care if they only make it to 80 as opposed to 90, but if they learn that they have the health of a 45-year-old, it could change their perspective.
- A successful health engagement program has the following elements:
    - Must be personalized to fit the needs of the consumer
    - Must be verifiable, otherwise the temptation to "game" the program is too great
    - The incentives must be intelligent, to provide meaningful rewards
    - Must be surrounded by a supportive culture
- On the employer side, the biggest barrier to drive success is time. As a plan is implemented, it evolves from participation to engagement to outcomes. One must not expect instant outcomes.
- In order to drive health engagement to improve outcomes, the industry must simplify the experience and enhance the value. Wellness needs to be integrated into the workplace culture, including visible support from leaders and designated champions. Strategic design of insurance benefits also helps with consistent incentives for wellness.
- People enjoy wellness programs that are fun to participate in, such as "gamifying" the process so people see their progress and can compete with others. HumanaVitality has been successful utilizing gamification to incentivize people to buy healthy foods from Walmart.
- Programs need to find ways to capture as much valid data as possible from real patients in order to generate a meaningful ROI. The only way to have a sustainable wellness program with ROI is with verifiability.

Bring Doctors to Your Home: Virtually and In Person

Technology is transforming care delivery models. Consumers look for more convenient and cost effective means to receive quality healthcare services, whereas hospitals and physicians strive to reach more patients, engage patients more effectively, and deliver care with efficiency. Care providers are also motivated to maximize efficiency because the overall shift to value-based care payment models: No matter they are bundled payments, risk sharing contracts, or capitation contracts, these payment models reward providers for their efficiency, not the volume of care.

Consumer needs and care providers' business requirements have created a perfect opportunity for on-demand care solution providers to thrive. Since 2010, more than 25 on-demand care software, solution, and service providers have emerged, offering direct-to-consumer services or supporting existing care providers in implementing such care solutions. Technologies that support on-demand care experience include telephonic, video, text message, IVR, or any combinations of them. Consumers can virtually meet a doctor from home, from a kiosk at a retail clinic, or request a doctor visit like they call for an Uber ride. The scope of services has also expanded. Doctors can see patients for routine checkup, non-urgent ailment, discharge follow up, and health coaching. Patients can visit, from the comfort of their home, primary care doctors, psychiatrists, dermatologists, dietitians… the list keeps growing.

This panel examined the trends and business models in this fast-growing on-demand care sector that redefines how a patient seeks/receives care, and explored technology solutions' role in supporting consumer's quest and care providers' interest in delivering more efficient care through this on-demand model.

Speakers:

- Ray Costantini, MD, Co-Founder & CEO, **Bright.md**
- Henry DePhillips, MD, FAAFP, Chief Medical Officer, **TelaDoc**
- Sander Duncan, Vice President of Business Development, **Pager**
- Dr. Sanjay Patil, Chief Medical Informatics Officer, **MDLIVE, Inc.**
- Jon Pearce, CEO and Co-founder, **Zipnosis**

Moderator: Harry Wang, Senior Director, Health & Mobile Product Research, **Parks Associates**

Session Insights:

- The rise of telehealth supports the healthcare paradigm shift, where healthcare now needs to be brought to consumers on their terms. The consumer stands at the center, and technology is the layer around the consumer providing control and interaction with providers.
- A key lever for adoption of virtual healthcare services will be for providers to endorse telemedicine and educate their patient populations that this is a safe alternative. E-visits make asynchronous care delivery possible, and chat platforms are especially appealing to people younger than 35.
- A "delightful" consumer experience is critical for success. There are two customers for a product: the patient and the provider. It is important to understand their workflows and what their unique needs are. A provider should encourage their preferred method for data collection in order to make it meaningful.
- There are many touch points for the patient, creating a multimodal opportunity for communication. Each mode is valuable in its own unique way to help identify pain points as well as solutions.

- The industry is in the middle of a perfect storm in terms of payment transformation. Currently, there is no engagement with patients outside of the doctor's office—patients must go in and physically see their provider. Telehealth can alter this paradigm, although it suffers from unequal demand. Some states have much higher demand for telehealth than others, irrespective of population size.

Everything Disruptive: What Consumers Can Expect from Care Innovators

The connected health market is flooded with new ideas, innovations, and entrants. The wearables market is just one area bringing in new players from outside the healthcare industry, and many of these entrepreneurs are applying their experience and thinking into health-based startups, hoping to shake up healthcare with disruptive solutions and business models. In this panel, innovators presented new ideas to the audience and a group of venture capitalist executives for input and feedback. Following this session, VCs further discussed these new ideas and other industry-leading innovations.

Speakers:

- Andrew Altorfer, CEO, **CirrusMD**
- Sachin Chaudhry, Founder and CEO, **TrustCircle**
- Kent Dicks, CEO, **Life365**
- David Goldsmith, Chief Strategy Officer, **WEGO Health**
- Davide Vigano, CEO and Co-Founder, **Sensoria, Inc.**

Moderator: Harry Wang, Senior Director, Health & Mobile Product Research, **Parks Associates**

Session Insights:

- This session featured short pitches from five entrepreneurs, who presented their start-ups to the conference audience and the panel of investors.
- **Cirrus MD**: A value-based virtual healthcare platform with text-messaging, image sharing, and video visits. It has a B2B2C model, where it partners with healthcare organizations looking to move into value-based care. "Everyone wants text-messaging in virtual healthcare."
- **Trustcircle**: A patient communication and collaboration platform, keeping patients, family caregivers, and healthcare providers in the loop. It follows a B2B2C model, and already works with the Kenyan government and in India. The solution targets organizations that already have a vetted community - the circle of trust is already established. Trustcircle has interoperability with EMRs - data flows into the EMR, into the app, and then back into the EMR. There is no overhead for providers with this solution.
- **Life365**: Solution for family care coordination. The new "Rain" platform offers a connected health hub with clinical backend integration. The Rain tracking band can interface with other devices and has a battery life of 5-7 days. Its goal is to "tell if granddad is alive and moving." If more data is desired, more devices can be added to the platform. A cellphone is not required with Rain; it uses Wi-Fi and Sigfox to communicate with the cloud.
- **WEGO Health**: A marketplace for vetted patient experts. Problem: healthcare companies need access to experts to vet their solutions. Solution: digital matching platform to connect companies to these experts. WEGO has recruited over 100k patient leaders with expertise in over 150 topics.

- **Sensoria**: Smart clothing platform. "Smart clothes are wearable computers." Sensoria's smart socks are washable and have three sensors, including an ankle accelerometer. It also offers smart bras and shirts. The Sensoria platform has apps and an AI to interpret these multiple points of input for actionable information. The solution is aimed mostly at athletes, but the company is also interested in breaking into health, especially aging, where mobility and physical therapy are issues. Smart clothing solves the pain points of usability and can withstand over 100 wash cycles; the batteries last over a year (energy harvesting tech can extend this, too).

Venture Capital and Investment Trends in Consumer Health

The United States, like many countries worldwide, is witnessing dramatic change in healthcare that is bringing about more consumer-centric products and services. Regulators, insurers, and care providers are shifting to a patient-centered approach that engages patients as active participants in their own care management. Concurrently, design breakthroughs, technology advances, and mass adoption of mobile consumer devices have made consumer-centric care possible in ways previously impossible. Consumer electronics companies have taken note; the result is the rise of a young but very dynamic market for connected health and wellness devices that help care providers better engage their patients as well as assist consumers with their self-care needs. This market joins other consumer-facing health technology market segments, including aging-in-place technologies and disease management.

The dramatic changes to government health legislation are, of course, subject to change if Democrats lose the White House in 2016. Even with a party change, however, the economic pressures of health costs will continue to drive change.

With smart home products increasingly offered by home security, telco, and cable companies, connected health products and concomitant cloud services are on the roadmap for service providers, who, along with care providers, are searching for convincing evidence that these products generate increasing revenues or measurable decreased costs.

Speakers:

- Casper de Clercq, Partner, **Norwest Venture Partners**
- Dan Galles, Partner, **Providence Ventures**
- John Gardner, Partner, **Nokia Growth Partners**
- Dan Gebremedhin, MD, Principal, **Flare Capital Partners**
- Levi Shapiro, Founder, **mHealth Israel**

Moderator: Stuart Sikes, President, **Parks Associates**

Session Insights:

- Revenue comes in stages—there is a plateau at each stage of growth, until the company moves on to the next stage and expands its market. Very few companies are making lots of money off of data right now, but many are headed in that direction.
- Digital therapeutics looks like a good direction right now.
- Hospitals will pay for acute care but not chronic care. Employers care about chronic care because they want to take care of their employees.

- Device makers may be better served by getting CE approval and launching in Europe first. Start-ups may gain more from an international launch because there tends to be lower regulatory barriers that enable faster rollouts and feedback from real consumers.
- A key strategy to success in this area is to find ways to reduce friction while engaging patients.
- California has become a more mature market for value-based reimbursement, while most of the rest of the United States still focuses on fee-for-service.
- People who are excited about the adoption rates of devices like FitBit need a reality check: a triathlete has a higher level of motivation to monitor their health that may not be shared by someone suffering from a chronic disease.

CONNECTED HEALTH TRACKER SERVICE

Understanding Consumer Adoption of Connected Health Devices and Services

Core Research Areas

Consumerism of Healthcare

Digital Disruptions in Healthcare Service Delivery

This research addresses:

- Consumer adoption and usage of healthcare devices and services, including five years of consumer survey data
- Case studies of care providers leveraging technologies to change consumer behaviors
- Market entry, business models, and engagement opportunities for care providers, device makers, fitness companies, and health programs

Parks Associates consumer segmentation and analysis identify 14 consumer segments within four major health consumer categories.

This segmentation allows care providers the flexibility to target health consumers at scale without losing the ability to micro-target individual segments.

Led by **Harry Wang, Senior Research Director, Parks Associates**, a recognized expert in digital health research since 2005.

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