

Market Snapshot: Digital Health & the U.S. Aging Population

A Parks Associates Snapshot



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Today, the consumer healthcare industry is at a crossroads, with greater uncertainty. Policy makers, healthcare practitioners, technology vendors, and entrepreneurs all demand insights about factors that produce actual results and help consumers manage their chronic conditions, maintain wellness in their daily lives, and address needs as they or loved ones age.

There are many areas that can be addressed by the industry to help create new solutions to keep the aging population at home, leverage technology to help consumers with healthcare and wellness, and address the need for new solutions for consumer healthcare.

Chronic Conditions

The U.S. healthcare system has been fighting a chronic disease epidemic for almost half a century, yet incidences of major chronic conditions continue to climb and more consumers are at risk of having a chronic condition later in their life. The current decade may be critical to the long-term success against this trend as care providers and consumers have many new tools and data at their disposal, while changes in care payment models will reward innovative care practices that bring the chronic disease epidemic under control.

Health insurers now negotiate risk-sharing contracts with, or offer value-based compensation schemes to, healthcare providers, incentivizing the latter to offer population-based care services to consumers. Care professionals are now accountable for actual outcomes—a portion of their payment is now tied to how well they take care of consumers overall, not just in their office. Better outcomes drive higher payments, a principle behind the value-based care model.

This change in the reimbursement model has incentivized care providers to manage consumer health proactively, before chronic conditions kick in, or to minimize their impact on consumer's quality of life.

Close to 60% of heads-of-household in U.S. broadband households have at least one chronic condition, and 27% of these consumers want a monitoring device that tracks their health condition.

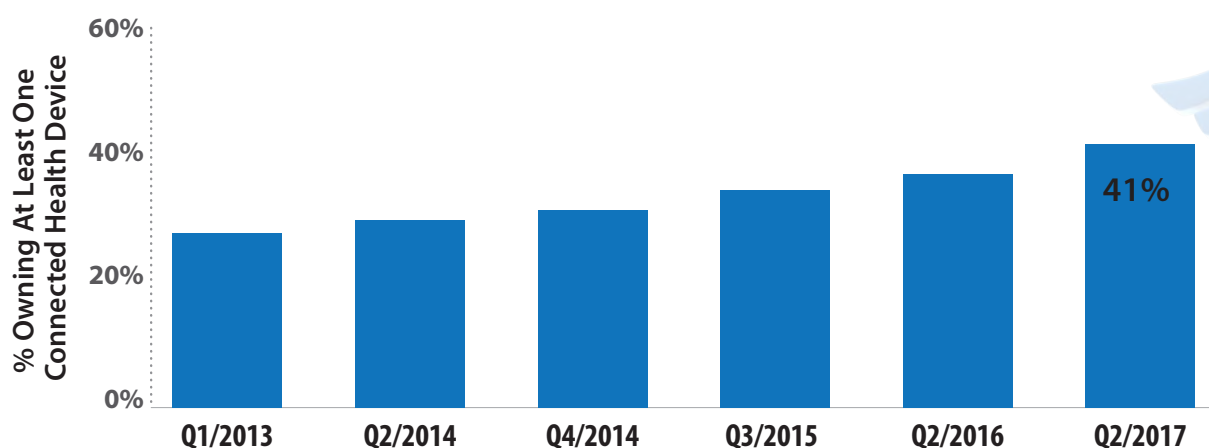
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Adoption of Connected Health Devices

There is a steady adoption of connected health devices used by consumers in U.S. broadband households. Connected health devices include both personal wellness devices such as a Fitbit or a personal medical device like a glucometer with Internet connectivity.

Overall Adoption of Connected Health Devices (2014-2017)

U.S. Broadband Households



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Value-Based Care

While the U.S. healthcare system faces many uncertainties, the shift to value-based care, where payments to hospitals and physicians are tied to care outcomes, is almost certain.

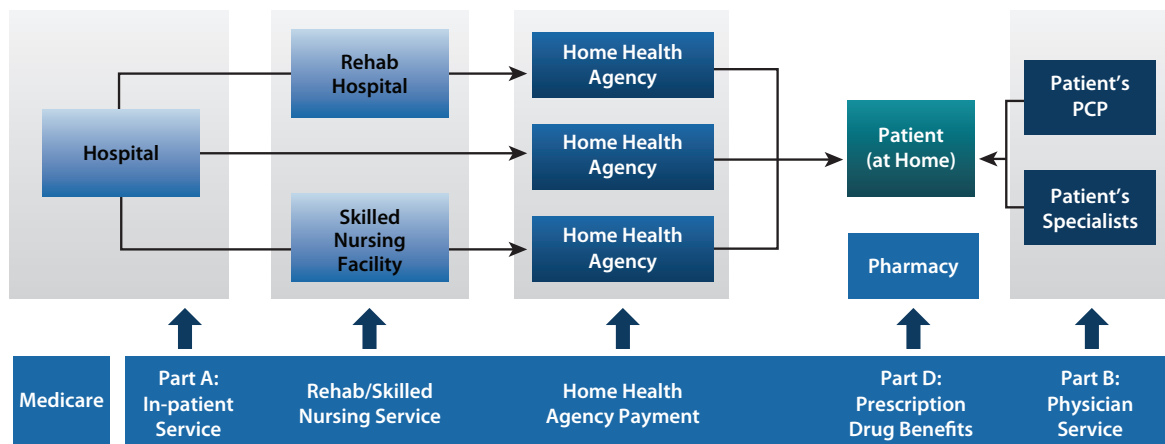
The top five commercial health insurers are well on their way to keep pace with CMS's goal to have 50% of its payment tied to value-based reimbursements by 2018. Although they call their efforts by different terms, their speed in moving payments to value-based care models reinforces the market conviction that such models will continue to spread.



The opportunity for care providers to incorporate and leverage technology in their practice to accomplish desired outcomes is real. However, each care provider must find the best approach based on its unique circumstances, such as patient population attributes, payer mix, staff readiness, and existing IT infrastructure.

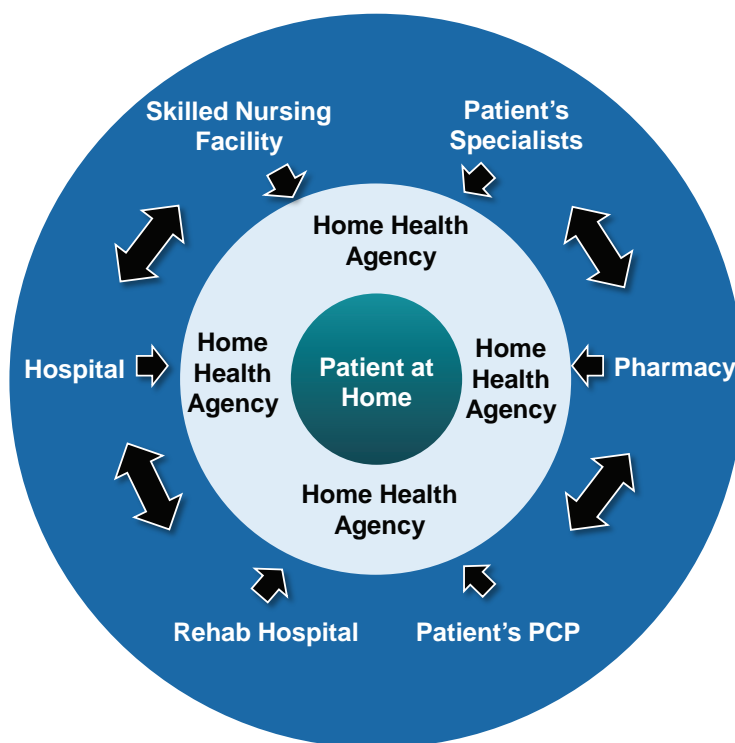
Shifting Care Models for Post-Acute Care

Traditional Post-Acute Care Market Value Chain



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A Collaborative Post-Acute Care Market Value Chain



New ACO Payment Models:

- Bundled payment
- MSSP
- Pioneer ACO
- CPC/CPC+
- Private Payers' Value-based Care Payment Models

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Virtual Care

Interest among employers, insurers, and healthcare systems in virtual care solutions and services has been increasing since 2013. Before then, these industry stakeholders were still debating whether or not to adopt virtual care solutions. Since then, the discussion has shifted to “how” best to implement virtual care solutions, which has a significant impact on patient utilization and cost-benefit analysis.

Each virtual care solution has its unique set of user profiles, service utilization attributes, and cost/benefit levers. These new services are causing revenue models to shift as care organizations begin to consider virtual care as an extension of their current systems. The traditional per-member-per-month fee is gradually being replaced by white-labeled SaaS licensing or even transactional revenue-sharing with vendors that provide after-hour care services.

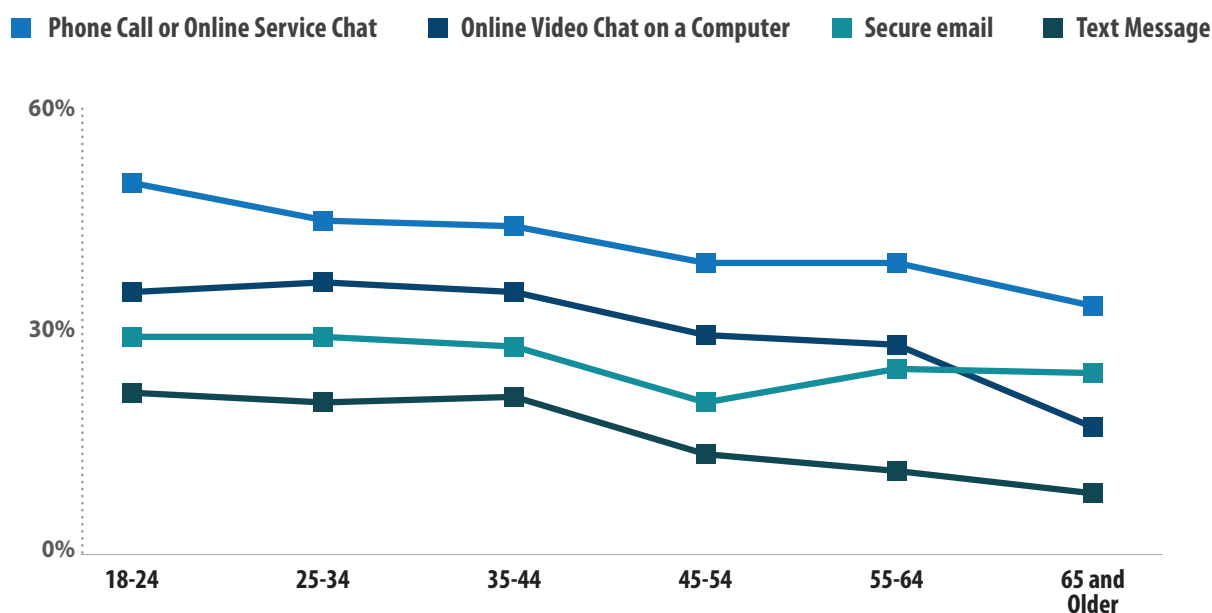
Over the last two years, Parks Associates has witnessed an incremental increase in consumer use of virtual care services and, more importantly, a big shift in perception and action from care providers about virtual care technologies. In short, most care providers have embraced these technologies and the new patient care delivery models supported by such technologies and look for ways to implement or embed such solutions into their current care practices. This market is now supply-driven and will enter a consumer-push stage in which care organizations will actively promote and market such services to end users in order to drive adoption.

Virtual Care Trends:

- 1) **adoption of virtual care solutions** by health systems and hospitals to optimize operations based on severity of patient symptoms and access options
- 2) **diversification of virtual care use cases** from predominantly non-emergent but acute care episodes (like acute respiratory infection) to new ones such as chronic care management, post-discharge follow-up, preventive care delivery, etc.

Interest in Communicating Digitally with Medical Professionals by Age

U.S. Broadband Households

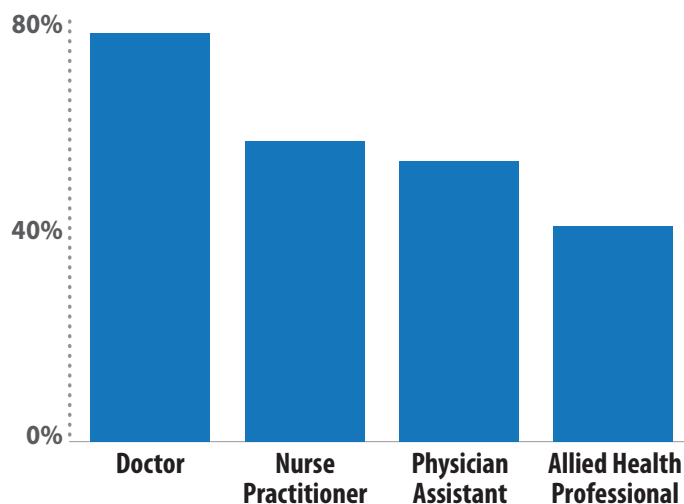


Interest in Remote Care

The high consumer interest for on-demand virtual care options reflects patients' desire for a more convenient care experience and a willingness to experiment to get it.

Interest in Remotely Interacting with Medical Professionals by Type

U.S. Broadband Households Interested in Remote Care Services

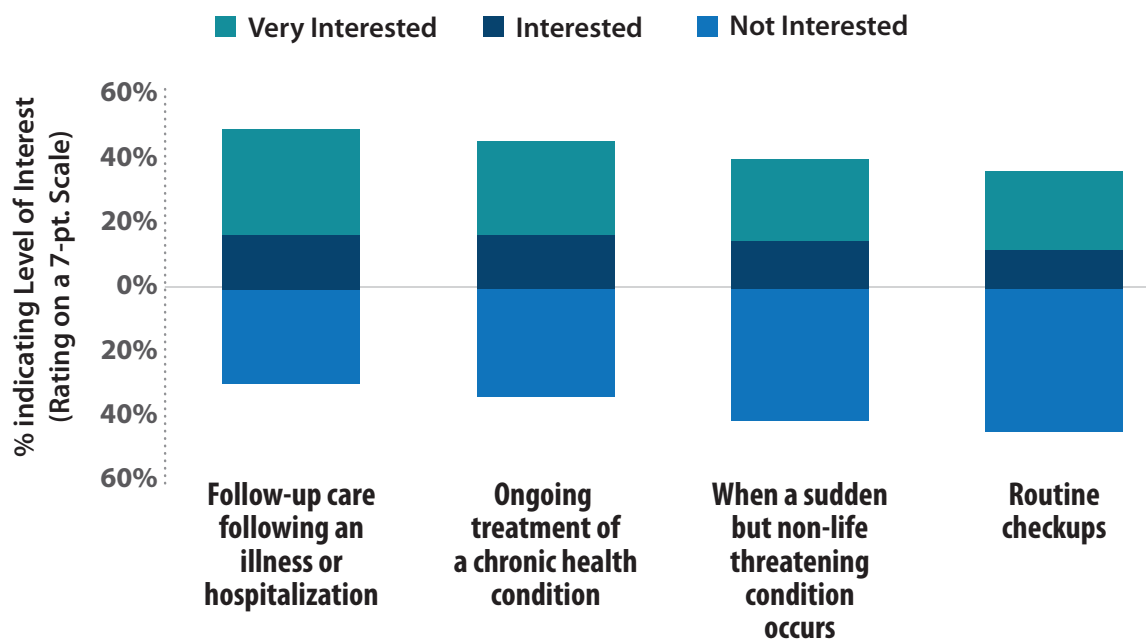


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Interest in Remotely Interacting with Medical Professionals Under Specified Circumstances

U.S. Broadband Households



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Independent Living & Consumer Expectations

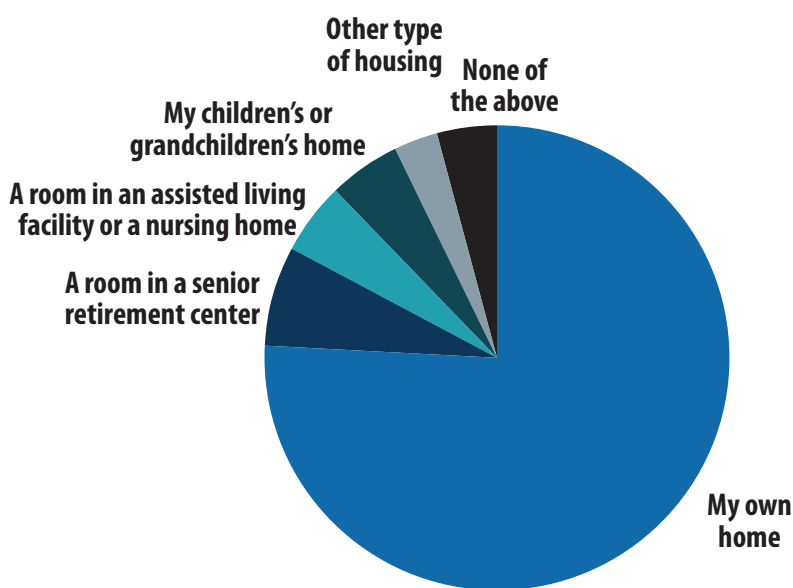
The number of Americans ages 65 and older is projected to more than double from 46 million today to over 98 million by 2060, and the percentage of the total population who are 65 or older will rise from 15% to nearly 24%.

Many smart home solution providers have deep experience in crafting a premium consumer user experience with connected sensors and services. This provides a natural fit for meeting the needs of emerging home health use cases that utilize remote monitoring of vitals, remote communication with caregivers and virtual care providers, location tracking and safety monitoring, activity monitoring, medication adherence alerts, and more.

These services can collect and share health and wellness information with key stakeholders to improve quality of care, reduce unnecessary visits and expenses, support treatment of chronic conditions, inform interventions to avoid hospitalization, and improve social connections to family and friends.

Expectation on Most Likely Place to be Living at Age 80

Among U.S. Respondents 40 and Older



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Consumer Expectations Driving Home Health Services

Two-thirds of pre-elders (ages 40-64) and elders (ages 65+) rank home living aspects such as "healthy living by minimizing the impact of illness and disease" in their top concerns.

50%+ of consumers ages 40 and above rank "living with ease and convenience at home, maximizing efficiency" as one of their top three concerns.

Three-fourths of consumers ages 40 and above plan to be living in their own home at age 80.

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The Growing Elderly Population and Independent Living Solutions

As consumers age, they desire to more proactively manage their health and wellness and adjust their lifestyles to live a safer, richer, and more connected life in the home. Home technology is getting smarter as well, leading to crossover opportunities in which active, healthy, and smarter aging can be accomplished through carefully designed home living experiences. The healthcare industry has also realized that, as more care delivery has shifted to the home, the boundary between medical care and personal well-being is blurring.

41% of consumers in U.S. broadband households find the ability to receive alerts when a person has fallen down very appealing.

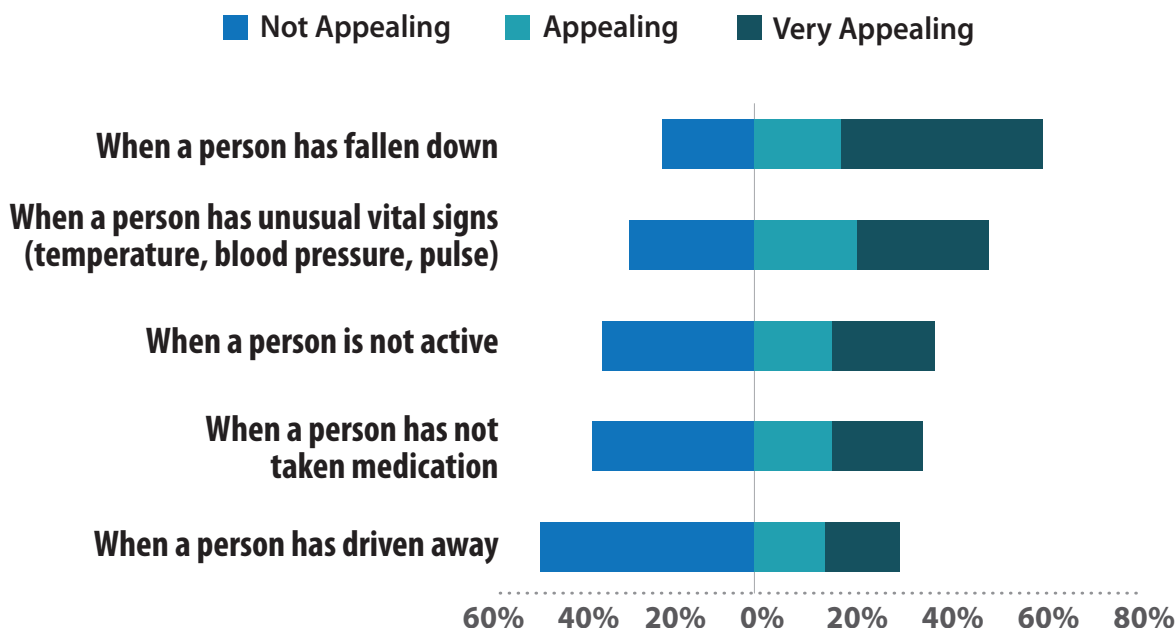
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Such opportunities used to be overlooked because this particular demographic group was not tech-savvy. This assessment is about to change. As this demographic continues to expand in size and their technology use becomes more widespread, many adjacent industries will be able to reposition and enhance their products and solutions to meet eldercare needs.

For instance, the smart home industry is actively exploring growth opportunities in the eldercare safety market, whereas the toys and robots industry is working on life/care companion solutions. Ride-sharing app developers like Uber and Lyft are beginning to build solutions specifically targeting seniors and their families, and HomeAdvisor is carving out independent living products and installation services as an individual category.

Appeal of Health Monitoring Use Cases

U.S. Broadband Households



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Independent Living & Caretaker Solutions

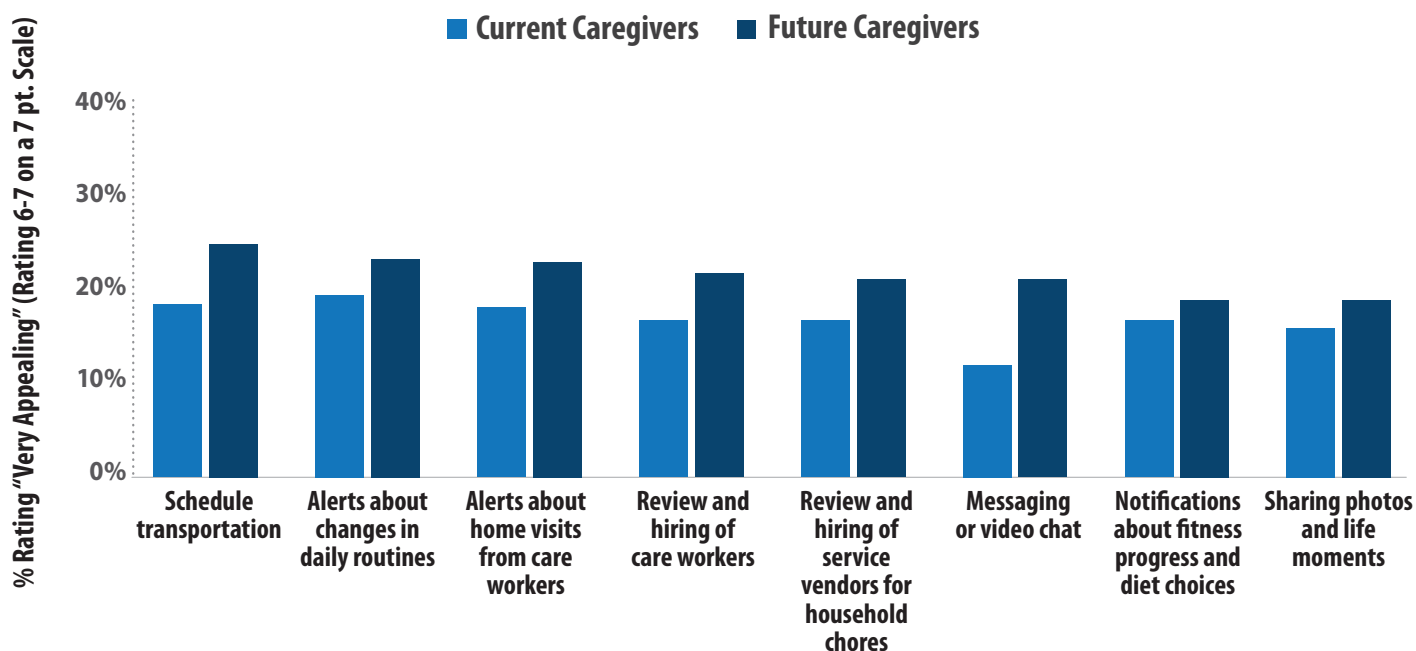
With more than 20 million consumers 75 years and older in 2016 and the continuing retirement wave of the baby boomer generation, the U.S. eldercare market is under significant pressure. Many seniors live away from their grown-up children. The family connection is important to them, yet they desire independence. The market opportunity to support these independent senior citizens and help their families do a better job in caregiving is significant.

Seniors' medical/non-medical eldercare needs span a broad spectrum of categories, including the desire to connect with family members, the need to live safely at home, the motivation for better self-care, and the interest in dealing more effectively with daily routines and house chores such as preparing meals, repairing home appliances, shopping for groceries, and using transportation services for personal leisure or doctor visits.

The 40 million-plus family caregiver population in the U.S., on the other hand, is also eager to contribute their own resources or trial new caregiving tools. Many come to realize they would rather be prepared when an unexpected event happens to their aging parents. Major surgeries, medical emergencies, and home accidents could throw the whole family into chaos, and grown-up children subsequently assume the active caregiver role and discover that there are so many things to learn and deal with—from cooking meals and providing transportation to sorting through insurance claims and filling out medical power-of-attorney forms.

Appeal of Caregiving App Features Among Current and Future Caregivers

Among U.S. Respondents in Specified Groups



Optimizing Healthcare Experiences through Patient Data

Patient experience enhancement through CRM solutions and smart patient engagement strategies has gained significant attention in recent years. As the healthcare industry becomes more patient-centric, the ability to incorporate patient data into care delivery strategy becomes more urgent.

Sources of digital data that could benefit the healthcare industry have exploded since 2010. These data can be consumers' socioeconomic status, attitudinal and perceptual beliefs on health and wellness, shopping behaviors, self-care activities, and personal health data collected through interactions with connected devices, credit scores, locations, and even daily routines and social media activities. Another potential treasure trove is human genomic data that show how predisposed a consumer is to diseases.

These data, after cleaned, standardized, linked, integrated, and applied with analytics, can support care providers in the following ways:

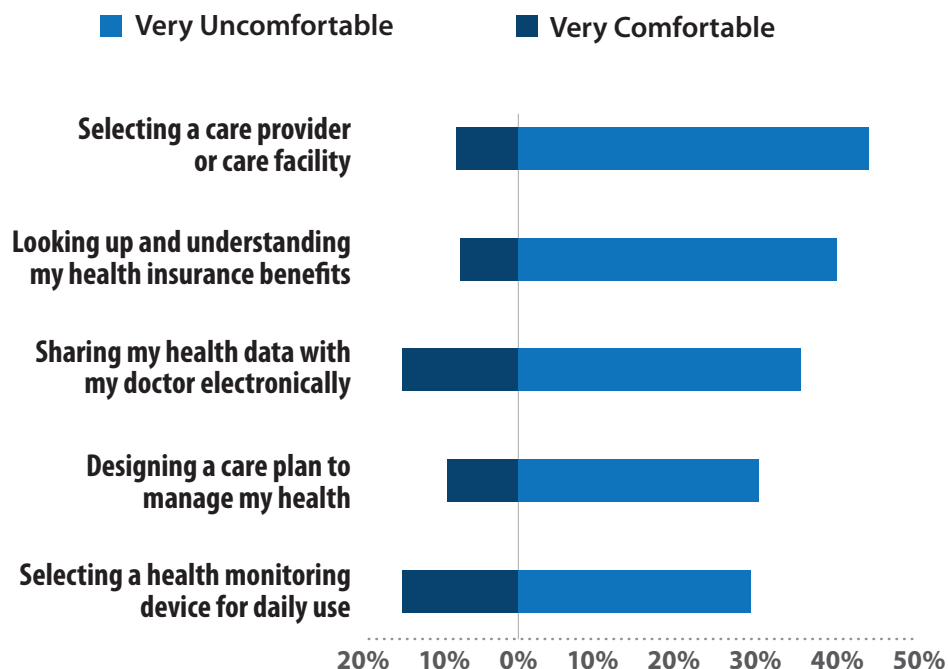
- **Clinical decision support:** Help doctors understand a patient's health status and progress in both absolute and relative terms, compared with other patients with similar diagnosis and conditions, and guide doctors to intervene at the optimized time in patient care.
- **Population risk stratification:** Help health systems and payers better understand the risk profiles of their customers or members so as to develop effective engagement and treatment strategies for population health management.
- **Quality gap analysis:** Help a hospital or a physician practice understand how well they deliver care in compliance with quality standards and use evidence-based guidelines. They can identify the quality gaps and develop strategies to close them.
- **Population behavior simulation:** Through predictive analytics, care providers can simulate the characteristics of patients, their behaviors, their providers, and what impact these factors can have on their utilization of health resources and care providers' performances. Similarly for payers, this simulation capability can help insurers understand how their claim costs will change as the type and number of insured change and how interventions like population health management can impact cost curves.



There are hurdles to overcome before these patient data use cases can be fully developed/designed and implemented. For instance, consumers are still not comfortable in sharing data with care providers, and care providers are concerned about junk data and liability associated with data sharing. These challenges will be addressed by the health industry from regulatory, technology, and financial angles over time.

Comfort in Completing Health Activities

Among 58% of U.S. Broadband Respondents with Chronic Conditions



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About The Authors



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As Director, Research Quality & Product Development, Jennifer manages Parks Associates' process for producing high-quality, relevant, and meaningful research. She acts as an internal advocate for Parks Associates clients and leads the company's efforts at conceptualizing and implementing digestible, relevant research presented in an optimal manner. Jennifer is always looking at the most effective ways to provide research to Parks Associates clients.

Since joining Parks Associates in 2009, Jennifer has worked on the mobile and health research team, specializing in the connected health, mobile payment, and connected car markets, as well as the consumer research team, analyzing consumer data related to the connected home and consumer electronics markets. Jennifer earned her Ph.D. in religion, politics, and society and an M.A. in church-state studies from Baylor University. She earned her B.A. in politics from the Catholic University of America in Washington, D.C.

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Brad Russell, *Senior Analyst, Parks Associates*

Brad Russell explores leading-edge issues in connected consumer electronics, smart home devices and platforms, IoT data privacy and security, and data-driven applications. He has a background in marketing communications, technology startups, and online media. Brad balances the art and science of market research to generate insights that lead to more astute business decision making and value-generating practices.

Brad received his BS degree in advertising and marketing from the University of Texas at Austin. He also earned MDiv and DMin degrees from two leading seminaries with concentrations in ethics and cross-cultural leadership.

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Founded in 1986, Parks Associates creates research capital for companies ranging from Fortune 500 to small start-ups through market reports, primary studies, consumer research, custom research, workshops, executive conferences, and annual service subscriptions.

The company's expertise includes the Internet of Things (IoT), digital media and platforms, entertainment and gaming, home networks, Internet and television services, digital health, mobile applications and services, support services, consumer apps, advanced advertising, consumer electronics, energy management, and home control systems and security.

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