

## *The new gold rush*

Prospectors are hoping to mine opportunities from the health industry

*Health Research Institute  
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***The success of health prospectors will depend largely on their understanding of the healthcare market and what consumers and traditional health industry companies are willing to buy.***

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*Heart of the matter*

Healthcare spending  
will encompass nearly  
20% of the US economy  
by 2019.

*HRI surveyed consumers and found they would be willing to spend more than \$13 billion a year of their own money on new healthcare services*

In the 1800s, prospectors flocked to the American West hoping to find their fortune. For some, it was a chance to exploit uncharted territory, while others developed and tested new processes to mine gold and precious metals. Supplier Levi Strauss provided prospectors with a brand of sturdy blue jeans that's still being sold today.

Today, companies and entrepreneurs hoping to find opportunity are looking at the US health system as one of the few bright spots in a sluggish economy. Healthcare is expected to reach 19.6% of gross domestic product by 2019.<sup>1</sup> There's no question that the sector is attractive. Nearly one-third of Americans have worked, now work or would like to work in the healthcare industry, according to PwC's Health Research Institute (HRI) research. Beyond the jobs, healthcare is bursting with new products and services, such as health-related video games, services that rate hospitals, and healthcare mobile applications. HRI surveyed consumers and found they would be willing to spend more than \$13 billion a year of their own money on those new services. Meeting such demand could create a business model for companies savvy enough to fulfill consumer needs—and it could also create new pools of need that are as yet unidentified.

Today's entrepreneurs are turning to the US health system as an opportunity for innovation, differentiation, and profits. Some modern-day health prospectors are already analyzing, interpreting, and monetizing the mountains of data being generated by digital health delivery systems. Others are developing new tools such as mobile devices to help create more-convenient patient care. It is truly an exciting time for health prospectors with ideas and the courage to act on them.

A note of caution: The healthcare industry is not for the faint of heart. It is complex and turbulent, and it operates on basic principles foreign to companies successful in other industries. The industry is highly regulated and built on a system of third-party payments. And some opportunities will overlap as the industry experiences more convergence and fewer sector-specific business models. Many examples exist of companies with failed healthcare entry attempts because of lack of industry knowledge and understanding.

Successful prospectors will find and exploit the right niches by building innovative healthcare business models. The keys lie in determining where to invest time and resources, how to provide value for consumers, and, most important, how to avoid fool's gold.

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1 Centers for Medicare & Medicaid Services National Health Expenditure Data

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*An in-depth discussion*

Seventy-six percent of Fortune 50 companies are in the health industry or have a health division.

## Executive summary

*Following are the main research findings of this report.*

**The healthcare industry continues to grow, creating a huge business opportunity in an otherwise slow economy.**

**Seventy-six percent of Fortune 50 companies are in the health industry or have health divisions.** Of those Fortune 50 companies, 24% would be considered traditional healthcare companies, but an estimated 52% are entering the healthcare market in nontraditional ways.

**Almost one-third of adults in the US have an interest in healthcare employment.** Our survey showed that 18% of adults currently work or in the past have worked in the healthcare industry and that an additional 13% of adults are considering or would consider careers in healthcare.

**The young demographic segment is creating a new health market.** Our survey showed that for receiving primary healthcare services, 42% of consumers aged 18 to 24 years prefer to use an independent company or one owned by a retail pharmacy instead of a traditional doctor's office, compared with only 15% of consumers 55 and older. Additionally, younger respondents are three times more interested in health-related video games and two times more interested in mobile health applications or programs, compared with respondents aged 65 and older.

**Successful entrepreneurial healthcare prospectors find opportunities that abound for those with new and innovative ideas.**

**Online health information services represent a major opportunity. Fifty-six percent of consumers use media and information service companies as their primary online healthcare resources rather than government or traditional health company resources.** When seeking healthcare information online, consumers use those media and information service companies more than three times as much as they use government organizations, health service companies, and consumer-driven organizations.

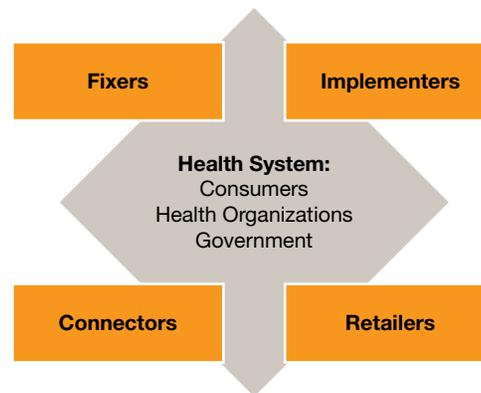
**Alternative sources of healthcare services represent a growing market.** For example, use of retail health clinics almost doubled in the past three years. In 2007, 10% of consumers sought treatment at retail health clinics. In 2010, 17% of consumers reported using retail health clinics. Major reasons for the increase are the conveniences that retail health clinics offer, such as location, decreased wait times, and transparency in services and pricing.

**Consumers in our survey said they would be willing to spend \$13.6 billion a year of their own money on new health-related services and products.** New spending includes an estimated \$4 billion on health-related video games, \$8.9 billion on resources that rate physicians and hospitals, and \$700 million on mobile health applications. Consumers' willingness to pay out-of-pocket for nontraditional healthcare services and products will create revenue streams independent of government and health insurance reimbursement.

**Health prospectors are companies or individuals hoping to profit in the booming health market. Many of them are not traditionally associated with healthcare but instead, are rooted in technology, telecommunications, retail, or some combination.**

The PwC Health Research Institute has identified four main roles in which health prospectors can likely flourish. (See Figure 1.)

Figure 1. Types of health prospectors who are likely to flourish



Source: PwC Health Research Institute

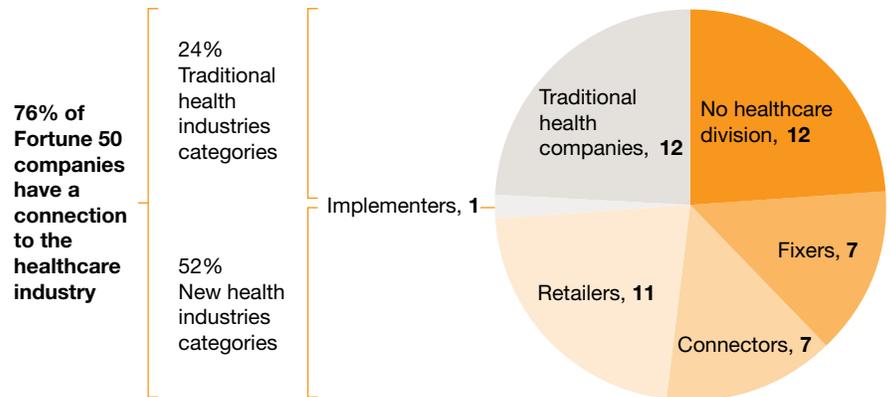
- 1. Fixers** attack the parts of the system that are dysfunctional, bifurcated, and unsustainable. They search for opportunities to improve processes so as to reduce costs in a wasteful system. Their work can help traditional health companies become stronger.
- 2. Implementers** thrive on government spending programs, new regulations, and established industry standards. They understand that the industry is converging, and they are able to work across traditional sectors toward the government's aim to achieve a more integrated model.

**3. Retailers** prosper in high-volume, standardized markets with low margins. They use their deep customer relationships and ubiquitous access to serve new markets, such as primary care.

**4. Connectors** succeed by linking information and technology across the health system. They provide meaningful analysis and context so that clinicians and consumers can make better decisions about health behaviors.

In 2010, three-fourths of the Fortune 50 companies were in the health industry or had health divisions, according to HRI research. “Non-healthcare companies’ entrance into the healthcare market is long overdue,” said Kevin Schulman, MD, director of the Health Sector Management Program at the Fuqua School of Business at Duke University. “In terms of market opportunities, non-healthcare firms have to recognize that there are tremendous opportunities for those who thoughtfully enter the healthcare market. The opportunity for new entrants is to provide goods and services for consumers at higher quality or lower costs than incumbents in this industry do or to create entirely new product categories.” Of the Fortune 50 companies, nearly a quarter are traditional health industry companies. Another quarter have no direct involvement in the health industry. The rest fit into a new lexicon HRI developed: fixers, connectors, retailers and implementers. Retailers make up 22% of the companies, followed by connectors and fixers, both at 14%, and implementers at 2%. (See Figure 2.)

**Figure 2. Fortune 50 company involvement in healthcare**

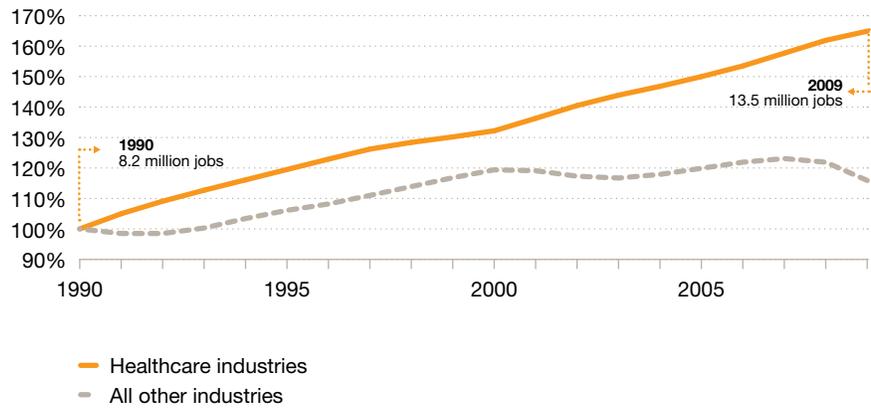


Sources: PwC Health Research Institute and Fortune<sup>2</sup>

<sup>2</sup> Methodology: The top 50 Fortune companies were selected using CNNMoney.com and were grouped into either traditional or nontraditional healthcare companies. Based on a review of company websites, press releases, and news articles, the nontraditional health care companies were grouped into four categories: fixers, connectors, retailers, and implementers. Traditional healthcare companies include providers, pharmaceutical and life sciences companies, and insurance companies. The placement of each company was determined by its type of involvement in the healthcare sector. (For purposes of this report, Berkshire Hathaway was included as a traditional healthcare company because of its investments in pharmaceutical and life sciences companies.)

Additionally, the health industry is also an employment creator. Jobs in healthcare increased 65% between 1990 and 2009, while the rest of the workforce increased 16% over the same time period. (See Figure 3.)

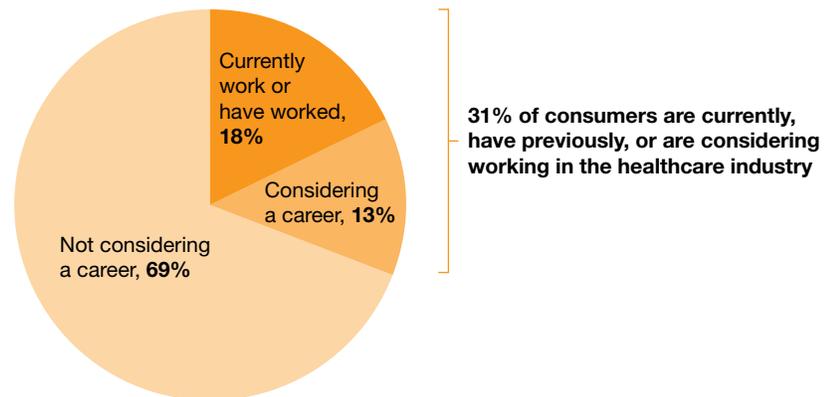
**Figure 3. Percent change in US workforce in healthcare versus all others since 1990**



Sources: US Bureau of Labor Statistics and PwC Health Research Institute analysis

More and more Americans are attracted to the industry, known for stable work and high wages. The PwC Health Research Institute consumer survey showed nearly one-third of adults are currently working, have previously worked, or are considering working in the industry. (See Figure 4.) Their interest in healthcare employment cuts across demographics and is split equally between men and women, age-groups, and even salary bands.

**Figure 4. Percentage of adults in the US considering careers in the healthcare industry**



Source: PwC Health Research Institute consumer survey

The health sector is an area of opportunity for new growth and for new companies. “New companies coming in must know the areas where they can contribute a best practice or other ways of facilitating healthcare,” said Sean Kenny, senior vice president of Industry Services at HP Enterprise Services, a division of HP. “This is where you find the opportunity.” and here is how health prospectors are changing the health system.

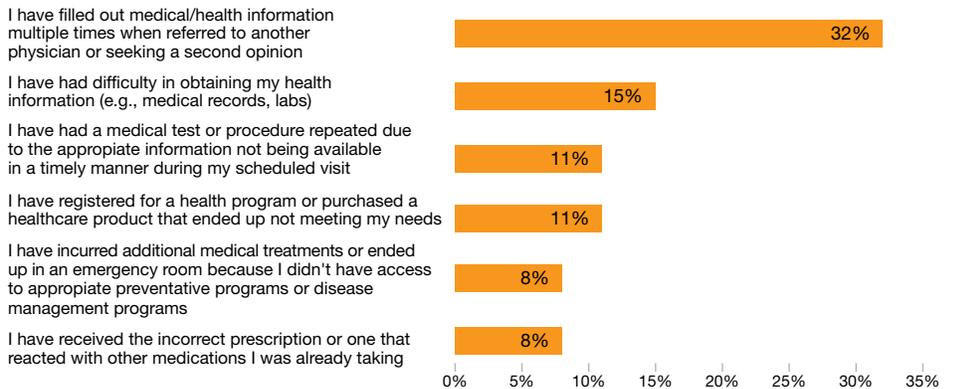
## The fixers

**Fixers** attack the parts of the system that are dysfunctional, bifurcated, and unsustainable. They search for opportunities to improve processes so as to reduce costs in a wasteful system. Their work can help traditional health companies become stronger.

The US healthcare system, while providing some of the best healthcare in the world, is overly complicated and wasteful. As noted in HRI report *The Price of Excess*, of the \$2.2 trillion spent on healthcare nationally, more than \$1 trillion can be considered non-value added.

In the HRI survey, adults said the top three areas needing improvement were all data related: filling out information multiple times, difficulty accessing health record information, and repeating tests because information is not available and timely. (See Figure 5.) Those inefficiencies provide opportunities to improve the healthcare system and capitalize on the savings.

**Figure 5. Where have you seen opportunities to improve the healthcare system?**



Source: PwC Health Research Institute Consumer Survey

Fixers are simplifying the health system by applying technology and creating more-efficient delivery models and care settings. (See Figure 6.)

**Figure 6. The fixer environment**

<b>Dysfunctional, bifurcated, and unsustainable operating environment</b>	<b>Potential solutions</b>	<b>Fixer impact on environment</b>
8% of adults access healthcare services at emergency rooms because they didn't have access to primary care physicians. <sup>3</sup>	<p>Health insurers are paying nurse practitioners to deliver primary care services so as to increase access and steer members to lower-cost settings.<sup>4</sup></p> <p>Engineers are developing kiosks for registration and mobile robots to assist with patient monitoring and with triage of nonemergency patients in emergency rooms.<sup>5</sup></p>	Improvement in efficiency and less pressure on medical staff.
32% of adults have repeatedly filled out the same information, and 15% of adults have had trouble accessing their health information, according to HRI's consumer survey.	Health information technology companies are developing systems to integrate patient records/ data from multiple sources into a single patient view, providing real-time access for physicians to patient information and eHealth applications.	Better coordination, more-timely diagnoses, fewer unnecessary tests.

Source: PwC Health Research Institute analysis

<sup>3</sup> PwC HRI consumer survey, November 2010.

<sup>4</sup> Dan Bowman, CareFirst will recognize nurse practitioners as primary caregivers, FierceHealthcare, November 8, 2010; <http://links.mkt1985.com/ctt?kn=114&m=3213856&r=MjE0NjU4ODk1MTkS1&b=0&j=OTk5NTUyMzMS1&mt=1&rt=0/>.

<sup>5</sup> Robot ER staff could speed triage, FierceHealthcare; [http://www.fiercehealthcare.com/story/robot-er-staff-could-speed-triage/2010-12-07?utm\\_medium=nl&utm\\_source=internal#ixzz1A2T6nOm3](http://www.fiercehealthcare.com/story/robot-er-staff-could-speed-triage/2010-12-07?utm_medium=nl&utm_source=internal#ixzz1A2T6nOm3).

## ***Artificial Medical Intelligence—A technology company automates coding***

A typical hospital has more than 30 coders sifting through paper and electronic medical records to decipher and translate physician notes into numeric diagnosis and billing codes. The process is timeconsuming, costly and prone to error.

As the industry shifts from International Classification of Diseases code ICD-9 to ICD-10, coding becomes even more complex and labor-intensive, with the number of codes expanding from 17,000 to more than 150,000. The costs of coding are going up, and that's an opportunity for fixers. The average coding professional earns \$43,359 a year, according to the American Health Information Management Association. Could some of them be replaced by technology?

Technology is already making inroads in a similar area: medical transcription. Paid at 10 to 12 cents a line, a transcriptionist traditionally typed up every word a physician spoke into a tape recorder. In recent years, many hospitals and physician groups have adopted speech recognition software, and transcriptionists mostly edit the final product.

Artificial Medical Intelligence (AMI) has developed a product, EMscribe, that uses natural language processing technology to review a patient's electronic health record and assign inpatient and outpatient ICD-9/ICD-10 diagnosis and procedure codes and outpatient Current Procedural Terminology codes. The software reads the record, compares specific trigger words with coding guidelines, and interprets the information by its understanding of medical vocabulary and physician terminology.

According to AMI, hospitals using EMscribe have reduced their numbers of coders, redistributing them to other focus areas, such as clinical documentation review and data mining for quality reporting. "Coders become verifiers and validators instead of readers," said Stuart Covit, chief operating officer of AMI. "The software enables them to look beyond the obvious for triggers that went overlooked in the past."

Covit brothers Andrew and Stuart Covit recognized the opportunity because they had personal experiences that led them to ask, Why is this kind of technology not available in healthcare? Now business partners, they saw coding as an area of underinvestment in healthcare. They also knew that existing technology originally developed for the telecommunications industry could be applied to healthcare. After assembling a team of practicing physicians, healthcare administrators, and a technology expert—Elliott Familant, who partnered with the Covit brothers, bringing a background in telecommunications—the company produced its first service product: speech recognition software for transcription. But the partners soon realized that adding coding to that technology would be much more valuable.

At one site, AMI states that EMscribe codes up to 25,000 outpatient records per month. The records never see a coder and are automatically directed to the billing department. In 2004, AMI conducted a pilot project of EMscribe with a large teaching and research hospital. AMI said that within six months, the hospital demonstrated significant cost reduction and a 26% increase in efficiency. Now more than 70 hospitals are using the technology.

Hospitals can also realize significant labor savings: the 650-bed pilot hospital now has nine coders, compared with 30 to 40 coders in hospitals of similar size and acuity. While most hospitals in transition from manual to automated coding will see an increase in reimbursement within the first month, long-term sustainable savings depend on how effectively hospitals redesign their work flows, Covit said.

Another characteristic is that the software is agnostic to changes in the coding set, which allows for an easier transition from ICD-9 to ICD-10 codes. "The software takes the learning curve out of ICD-10 in a big way," said Covit. "Nothing changes as we move from one coding system to another, because the software is focused on the physicians' grammar and based on how they practice medicine."

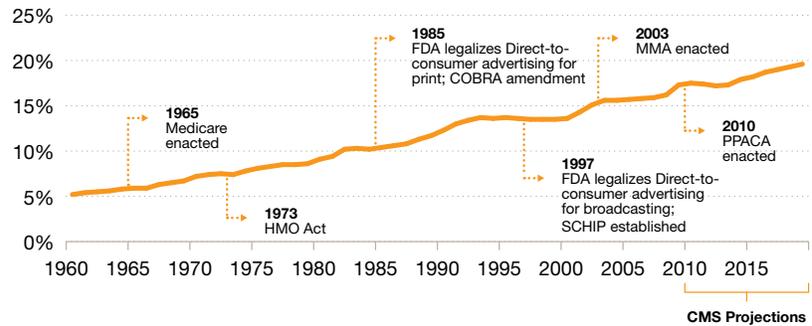
## The implementers

**Implementers** thrive on government spending programs, new regulations, and established industry standards. They understand that the industry is converging, and they are able to work across traditional sectors toward the government's aim to achieve a more integrated model.

Because government is the single largest purchaser of healthcare services and products, policy reforms quickly affect spending. Over the past four decades, the government has periodically implemented major healthcare legislation, beginning with Medicare in 1965. (See Figure 7.) Major changes in regulations create business opportunities for lawyers, accountants, consultants, architects, engineers, clinicians, and marketers. And they also spawn new types of businesses. For example, in the 1960s, when Medicare established a health insurance payment system for older people, it created a need for thousands of new hospital beds. Medicare indirectly fueled the construction industry as well as new investor-owned hospital companies that rushed to build hospitals throughout the southern United States.

The 10-year implementation of the Patient Protection and Affordable Care Act (PPACA) will bring similar waves of opportunities as it changes the business models of insurers, providers, and pharmaceutical companies. That in turn opens further opportunities: for all kinds of service and product companies. For example, the government is attempting to redesign the health system through outcomes-based payments, health insurance exchanges, comparative effectiveness research, medical homes, and accountable care organizations. As providers and payers prepare for compliance with new regulations, health prospectors will need to understand how the health system functions. “The three areas least known to new entrants are the US Food and Drug Administration (FDA) and regulatory restrictions, reimbursement and understanding how you get paid, and work and data flows to clinicians. These issues all reflect the need for prospectors to really understand the healthcare industry,” said Charles Parker, executive director of Continua Health Alliance, an association of healthcare and technology companies.

**Figure 7. Percent of gross domestic product spent on healthcare from 1960 to 2019**



COBRA = Consolidated Omnibus Budget Reconciliation Act, HMO = health maintenance organization, MMA = Medicare Prescription Drug Improvement and Modernization Act, PPACA = Patient Protection and Affordable Care Act, SCHIP = State Children’s Health Insurance Program

Sources: Centers for Medicare & Medicaid Services National Health Expenditure Data and PwC Health Research Institute analysis

For example, the PPACA requires that Medicare penalize hospitals when patients are readmitted within 30 days of discharge. This prompts hospitals to look toward other providers and services that can help them reduce and document readmission rates. Additionally, services that improve patient compliance and accountability will be valued to further improve outcomes and protect against the new penalties. (See Figure 8.)

**Figure 8. The implementer environment**

<b>Government spending, new regulations, and industry standards shape the operating environment</b>	<b>Potential solutions</b>	<b>Impact on environment</b>
Healthcare reform aims to integrate services and migrate to an outcomes-based payment system to reduce costs.	Information technology and other integration tools to support reform changes, monitor payment changes, and help providers adjust to new payment systems.	New solutions will support regulatory changes and set new industry standards and expectations.
Overall mobile health market size is estimated to grow from \$1.4 billion in 2008 to \$12.7 billion by 2014. <sup>6</sup>	Tools to access information and data via smart phones and other remote devices.  Devices to treat patients remotely or provide off-site evaluations by physicians.	Mobile health can reduce costs, improve efficiencies, and increase access to information.

Source: PwC Health Research Institute analysis

<sup>6</sup> PwC Health Research Institute. Healthcare unwired: New business models delivering care anywhere, 2010.

## ***RTKL—Building less is more***

The so-called edifice complex of building more and building bigger to address health system issues is a solution of the past. “Efficiencies are now being modeled so that we can build smarter rather than simply building bigger. The trend is renovation versus new construction,” said David Morgareidge, practice leader of operational modeling and simulation at RTKL Associates Inc., a global architecture and design firm serving the health industry.

By bringing in from the manufacturing industry certain process improvement and design methodologies like Six Sigma, Lean Six Sigma, and building information modeling, RTKL is trying to reduce capital costs. “Industrial engineering techniques from manufacturing have taught us how to be more efficient with physical space. However, it is also important for us to understand the unique processes involved in healthcare in order to design appropriate spaces,” said Morgareidge. “These studies often suggest decreasing the number of exam rooms and square footage instead of increasing them.”

For example, RTKL reports the use of industrial engineering techniques at a hospital in Seattle resulted in a 41% decrease in the hospital’s floor area and a 44% drop in the distances employees traveled within the

hospital. To achieve those types of efficiencies, RTKL develops a simulation of patient and caregiver flows. Minute-by-minute patient and provider movements are captured through tracking tags that identify commonly used procedures, common pathways, interactions with medical equipment, and clinical processes. One result from that simulation model was the indication to design more-flexible space that could be shared by multiple departments. According to Morgareidge, “Such spaces have eased interdepartmental interactions and increased the coordination of care because the lines between departments have become softer.”

Using the data, RTKL designs spaces to decrease wait times and take advantage of underutilized areas. For example, in a recent case study, RTKL examined the use of clean supply/medication rooms on a single inpatient floor and found that nurses spent a great amount of time going back and forth to those rooms. RTKL designed a supply closet, or nurse server, for each patient room, which saved, on average, 60 hours of nursing time per day, or 21,900 hours of nursing time per year. “This analysis allowed the nurses to do more nursing rather than collecting medical supplies,” said Morgareidge.

## The retailers

**Retailers** prosper in high-volume, standardized markets with low margins. They use their deep customer relationships and ubiquitous access to serve new markets, such as primary care.

Despite a dip in out-of-pocket health spending during the recession, this type of spending is expected to increase as the economy recovers. HRI's survey found that 61% of consumers over the age of 18 years expect to be paying more out-of-pocket for healthcare services in the future. Part of this spend will be on nontraditional health products and services that create new markets. For example, HRI's report [\*Healthcare unwired: New business models delivering care anywhere\*](#) found consumers are willing to spend approximately \$43 billion on home health and remote monitoring devices.

Consistent with those results, our most recent survey showed that consumers are willing to pay \$8.9 billion for resources that rate physicians and hospitals, \$4 billion for health-related video games, and \$700 million for mobile health applications. (See Figure 9.) Interestingly, the amounts consumers were individually willing to pay for products and services are very similar to historical health insurance co-pay amounts.<sup>7</sup>

As with any product or service, consumer preferences are affected by demographics. The HRI survey showed:

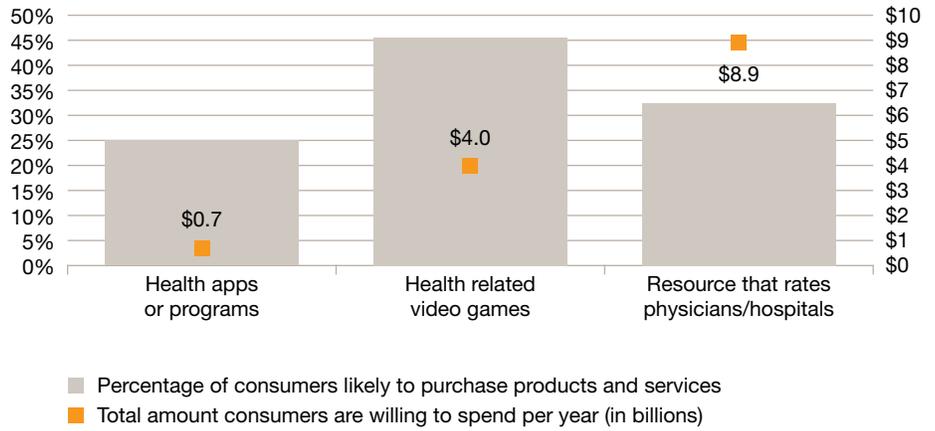
- 46% of consumers aged 55 to 64 are likely to spend out-of-pocket for resources that rate physicians/hospitals, compared with 29% of consumers aged 35 to 44.
- 30% of consumers aged 18 to 24 are likely to spend out-of-pocket for health apps or programs to monitor and track health conditions, compared with 12% of consumers aged 65 and older.
- Nearly 50% of consumers aged 25 to 34 are likely to spend out-of-pocket for health-related video games, compared with 16% of consumers aged 65 and older. (See Figure 10.)

“Companies are focusing on ease of use for consumers so they don’t lose consumer buy-in due to device complexity,” said Continua’s Parker. “Retail electronic stores see this as an opportunity in that they may be able to create a better consumer offer than traditional health companies can, given their roots.” To capture consumer spend, products and services need to be fun and engaging. If the service appears to be clinical, consumers are more likely to believe it should be covered by their insurance—regardless of their actual ability to pay for the product or service.

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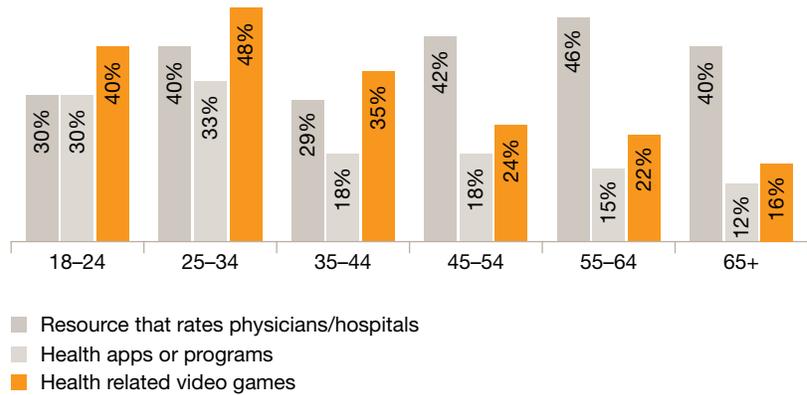
<sup>7</sup> JP Sommers and BL Crimmel, *Medical Expenditures Panel Survey—Statistical Brief #209*, July 2008; [http://www.meps.ahrq.gov/mepsweb/data\\_files/publications/st209/stat209.pdf](http://www.meps.ahrq.gov/mepsweb/data_files/publications/st209/stat209.pdf).

**Figure 9. Estimated market size in billions for non-traditional healthcare products and services<sup>8</sup>**



Source: PwC Health Research Institute Consumer Survey and PwC Calculations

**Figure 10. Age variations in consumers' willingness to spend out of pocket**



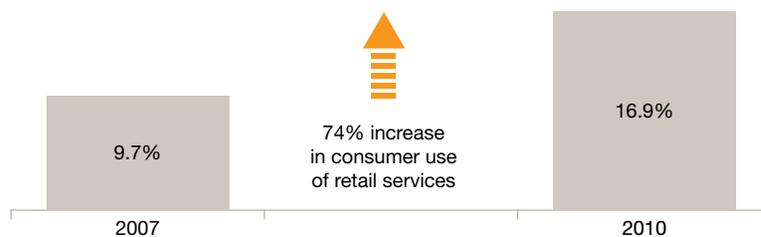
Source: PwC Health Research Institute Consumer Survey

<sup>8</sup> Methodology: The market calculation based on consumer survey response for each category. The population of the US older than age 18 was based on the 2009 census (<http://quickfacts.census.gov/qfd/states/00000.html>) and was multiplied by the percent of consumers in our survey who responded they would be likely to use the product or service in the next two to three years. That population was multiplied by the maximum price consumers were willing to pay for the product or service. For purposes of this analysis, health apps and video games assume two products purchased per year; resources that rate physicians/hospitals were annualized based on a monthly fee.

HRI's consumer survey clearly indicates that consumers are willing to purchase products and services outside of traditional healthcare settings and companies. Duke University's Schulman agrees, saying, "Even if you have insurance, the deductibles and coinsurance may be so expensive, people can't use their insurance to access the healthcare system, which forces patients to find services outside of traditional healthcare delivery organizations. At the end of the day, people like their doctors, but loyalty can be trumped by high costs and low service quality." From 2007 to 2010, the percent of consumers who sought treatment at retail clinics increased by 74%. (See Figure 11.)

HRI's consumer survey found that overall, 12% of surveyed consumers want to have physicals in a retail clinic. Additionally, 42% of consumers aged 18 to 24 reported they would prefer to use an independent company or one owned by a retail pharmacy to receive primary healthcare services (e.g., basic services for colds, immunizations) instead of a traditional doctor's office, compared with only 15% of consumers 55 and older. The branding of retail clinics is also important in building trust with consumers. HRI research found that the majority of consumers would prefer to be treated at a retail clinic that partners directly with a local hospital or physician practice.

**Figure 11. Retail Clinic usage trend in 2007 and 2010**



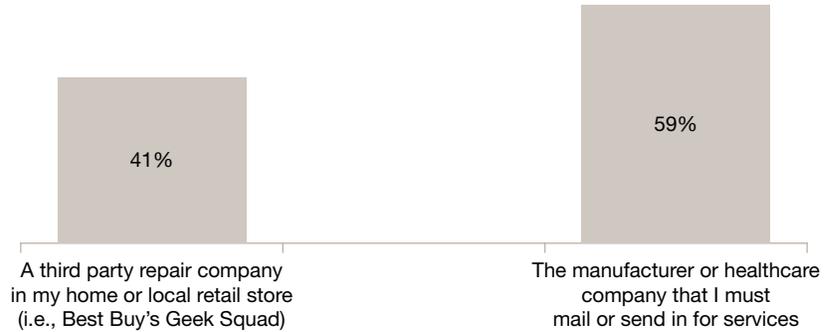
Source: PwC Health Research Institute Consumer Survey

Big-box electronics stores and retailers are just beginning to tap the huge opportunity for wireless and remote medical devices in the health industry.<sup>9,10</sup> With the increase in medical equipment use, consumers will need setup, calibration, repair, and maintenance services as well. Forty-one percent of consumers in HRI's survey are willing to use a third-party repair company for those services. (See Figure 12.) It shows they may turn away from traditional medical equipment manufacturers.

9 Brian Dolan, Best Buy brings health tech to 40 U.S. stores, mobihealthnews, November 11, 2009; <http://mobihealthnews.com/5381/best-buy-brings-health-tech-to-40-u-s-stores/>.

10 Best Buy, Solutions for enhancing personal health and fitness now available at select Best Buy stores, November 11, 2009; <http://www.bby.com/2009/11/11/solutions-for-enhancing-personal-health-and-fitness-now-available-at-select-best-buy-stores/>.

**Figure 12. If I have problems with home medical equipment or a home monitoring device, I would prefer to have it fixed by:**



Source: PwC Health Research Institute Consumer Survey

Retailers can capitalize on high-volume services and strong customer relations to bring together key stakeholders and to provide more value for other businesses and consumers. (See Figure 13.)

**Figure 13. The retailer environment**

**High volume, low margins, and deep customer relations drive the operating environment**

Large-scale consumer-based companies are entering into the healthcare industry by capitalizing on their current relationships and penetration in the consumer market.

Average time patients spent in emergency rooms was four hours and seven minutes in 2009.<sup>11</sup>

Retailers have the capacity to change how primary care is delivered—through their volume of business and various go-to-market strategies.

**Potential solutions**

Electronic retailers' purchases in bulk to drive down prices. Help with installation, maintenance, and repair.

Continued expansion and growth of retail clinics to provide alternative. Providing services during expanded hours.

Models for retail services and urgent-care centers to deliver primary care services more effectively, utilizing a variety of medical professionals to care for patients.

24-hour support through online and telephone hotlines.

**Impact on environment**

Wider access by consumers, which could improve health.

More choice in consumer healthcare products.

Patients may find it easier to seek treatments in a timelier manner to prevent more-serious conditions from developing.

Alternative services can help reduce overcrowding of hospital emergency rooms.

New methods of primary care healthcare enable consumers to get quicker access to information, including live clinical support.

Services marketed directly to consumers will give consumers more control over how they address their own healthcare needs.

Source: PwC Health Research Institute analysis

<sup>11</sup> Press Ganey, Patients Spent Average of Four Hours, Seven Minutes in U.S. Emergency Departments in 2009; [http://www.pressganey.com/newsLanding/10-07-22/Patients\\_Spent\\_Average\\_of\\_Four\\_Hours\\_Seven\\_Minutes\\_in\\_U\\_S\\_Emergency\\_Departments\\_in\\_2009\\_According\\_to\\_New\\_Report\\_from\\_Press\\_Ganey.aspx#](http://www.pressganey.com/newsLanding/10-07-22/Patients_Spent_Average_of_Four_Hours_Seven_Minutes_in_U_S_Emergency_Departments_in_2009_According_to_New_Report_from_Press_Ganey.aspx#).

## ***Walgreens—A retailer expands its healthcare footprint***

Three years after buying a chain of retail healthcare clinics called Take Care Clinics, Walgreens continues to expand its offerings in the healthcare market. “Our biggest asset is our real estate,” said Peter Hotz, group vice president of Walgreens Take Care Clinics. “We believe that lifestyle management and behaviors are drivers behind the majority of our healthcare problems today. The best way to address this is face-to-face interactions with patients. With our footprint, we are strategically positioned to do this.”

Walgreens is expanding retail sales through new wellness products, nutraceuticals, and durable medical equipment product offerings. The clinics’ services are being expanded to include more preventive services such as physicals, health risk assessments, biometric screenings, and management of chronic conditions. Pharmacists, who have been the clinical faces of Walgreens, are increasingly complemented by physicians, physician’s assistants, and nurse practitioners. “We think pharmacists are tremendously underutilized, and we’re changing how we use them. They have relationships with patients and can play a pivotal role in prevention and managing chronic conditions,” said Hotz. Two years ago, Take Care Clinics certified its pharmacists to provide immunizations. The result was a ninefold increase in flu shot administration. The next step is to make pharmacists even more accessible by moving them out from behind the counter for more-direct interactions with customers.

Walgreens also is expanding through Take Care Health Centers that provide work site medical and pharmacy services such as treatment of work-related or acute injuries or illnesses, routine medical care, or management of chronic conditions. Walgreens is among the first to take its own medicine: it opened a work site clinic in November 2010 at one of its own distribution centers. The company believes that work site health centers can help employers better manage costs, increase access, and provide consistency of services across large geographic regions. However, this represents a shift in direction as Walgreens goes from a predominant consumer focus to more of a balance with a business-to-business model.

With these changes, Walgreens is looking more and more like a healthcare provider. So, will other providers see Walgreens as a competitor? or a partner? “A few years ago, hospitals didn’t even want to be in a conversation with us regarding our retail clinics. Now, we’re meeting with them two or three times per week, and they’re realizing they need more partnerships. They’re looking for us to manage chronic patients, reduce emergency room load, and improve access, and they want to work with us on specialty and ancillary services,” said Hotz.

## The connectors

**Connectors** succeed by linking information and technology across the health system. They provide meaningful analysis and context so that clinicians and consumers can make better decisions about health behaviors.

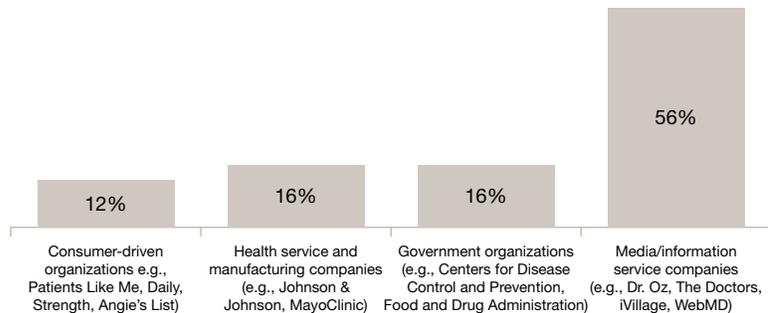
More data and information are being collected than ever before, and this translates into major opportunities. Successful connectors will develop systems that meet government requirements, while others will determine how to provide meaningful analysis of the data and how the data can be used to support initiatives such as personalized medicine and targeted drug therapies. Rick Cnossen, director of Intel's Worldwide Health IT Program Office, comments on Intel's efforts: "People are short-term motivated, and there are some tools coming out to help, such as medication reminders. If we can understand why people miss their medications, we can improve treatments and outcomes."

In 2010, providers spent \$88.6 billion on developing and implementing electronic health records, health information exchanges, and other health information technology initiatives.<sup>12</sup> As cited in our [Top Issues for 2011](#) report, the health information technology spending trend will continue, boosted by new government regulations and the tight deadlines by which to meet them. Many different online organizations provide healthcare information. But HRI's consumer survey found that consumers are three times more likely to get information from media and information services companies, such as WebMD, than any of the other sources. Clearly, these healthcare media outlets have branded themselves as trustworthy sources of information for consumers as more consumers utilize the Web for information. Prospectors will have an opportunity to broker those new areas of health information because consumers may require neutrality and noncommercial sources of info. (See Figure 14.)

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<sup>12</sup> Kenneth F. Brant et al., "Forecast: Enterprise IT Spending by Vertical Industry Market, Worldwide, 2008-2014, 1Q10 Update," Gartner.

**Figure 14. Sources consumers will most likely use for online healthcare information**



Source: PwC Health Research Institute Consumer Survey

Social media are already providing insight that informs strategic business decisions about new products and services. For example, social networking sites can offer companies valuable information around the public's sentiments about a company's brand or products. However, players need to understand how consumers are using new medical and social networks, like Facebook and Twitter, to improve health education and treatment.

As companies communicate with consumers to sell products and services, certain data and usages, preferences, and buying patterns will be developed. However, healthcare organizations must adhere to another layer of regulations in their marketing of products and services. As cited in our KnowledgeLine report [\*Joining the conversation: Life sciences industry ventures into social media despite regulatory uncertainty\*](#), industry players will soon need to adhere to rules and regulations for online engagement. A 2009 FDA hearing magnified the need for clear, published guidance on monitoring and responding to interactive content, but no clear responsibility has been defined. Overall, connectors can use a variety of tools to bridge industries, government, and consumers to positively affect the healthcare system. "Many companies are weary of adopting new healthcare technologies, and they don't want to believe or don't realize that the adoption is happening so quickly among end users. Most companies love new ideas but are hesitant to be the first adopter because they want validation the idea will catch on. So it's important to create incentives to be a leader in the market," said Doug Elwood, MD, cofounder and chief of strategy and business development at Zibbel, Inc., a healthcare solutions company. Traditional companies will need to utilize these new services to improve their services and adapt to a quickly changing environment. (See Figure 15.)

**Figure 15. The connector environment**

**Exponential increases in healthcare data and the need for meaningful analysis, technology advances, the bridging industries, government, and consumers drive the operating environment**

	<b>Potential solutions</b>	<b>Impact on environment</b>
Technology companies are entering the healthcare market and improving communication and data/information management.	<p>Technology companies that support the integration of information across healthcare sectors and can address HIPAA regulations and other regulations regarding patient privacy.</p> <p>Communication companies that introduce a range of telehealth services, including mobile technologies, to help medical professionals monitor, store, and share patient data.<sup>13</sup></p>	With so many companies entering the market, the industry will need to continue establishing data-sharing standards so that traditional healthcare companies can invest in and implement technologies with confidence.
Government and private payers are expanding the use of mobile health apps.	Applications to help patients find a health center and track patient symptoms. <sup>14</sup>	Mobile apps can help increase patient access to services and improve outcomes through remote monitoring of conditions.
Ninety-two percent of hospitals are using some form of social media to reach consumers, but only 13% say social media use is driving an increase in patients and revenue.	Data mining that drives marketing, revenue and customer satisfaction.	Social media can help traditional healthcare companies better connect with consumers and compete more effectively with traditional retail marketing companies.

Source: PwC Health Research Institute analysis

13 Computerworld, AT&T rolls out patient data exchange, mobile monitoring services; [http://www.computerworld.com/s/article/9194738/AT\\_T\\_rolls\\_out\\_patient\\_data\\_exchange\\_mobile\\_monitoring\\_services](http://www.computerworld.com/s/article/9194738/AT_T_rolls_out_patient_data_exchange_mobile_monitoring_services).

14 iHealthBeat, Federal Agencies Unveil Health-Related Smart Phone Applications; <http://www.ihealthbeat.org/articles/2010/11/2/federal-agencies-unveil-healthrelated-smart-phone-applications.aspx>.

### ***Zibbel, Inc.—A connector that leverages the iPad to tighten the patient-physician relationship for amputees***

The Zibbel cofounders wanted to design an application that would collect data when patients are outside the walls of a hospital or clinic. Data collected in such real-time settings can help providers obtain more information that can help them and their patients better manage care.

The company's product, which is being piloted with a group of amputees through a large academic medical center, collects data throughout the continuum of a patient's journey, assisting in a personalized manner at whatever stage the patient happens to be in during the recovery process. For example, if a patient doesn't properly monitor a skin condition, it could result in an infection and could eventually require another amputation.

The Zibbel application collects data that is self-reported or captured via medical devices such as a weight scale, glucose monitor, or blood pressure cuff. Based on each patient's data, Zibbel pushes customized educational information to the patient's smart phone or iPad.

Each physician is also provided with an iPad to track, update, and access patient data. As part of its pilot, Zibbel is developing such metrics as pain levels, patient satisfaction, education results, falls, and prosthetic wearing times. Such metrics can affect re-admission rates, wound care, and treatment plans. While the customized data is helpful for each patient, aggregation of the data can help providers target treatments more effectively.

"We think there should be a focus on technology and a holistic approach to prevention and disease management, and it must include patient engagement and incentives to truly work," said Doug Elwood, MD, cofounder and chief of strategy and business development at Zibbel.

In addition to marketing to medical centers, Zibbel is targeting large pharmaceutical companies that may want to co-brand the service to providers. Elwood said the application can improve pharmaceutical companies' ability to direct therapies and marketing.

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*What this means for your business*

The success of health prospectors will depend largely on their understanding of the healthcare market and what consumers and traditional health industry companies are willing to buy.

## Direct-to-consumer health prospectors

Before direct-to-consumer health prospectors decide where to enter the market, they must understand how they'll get paid. "Healthcare is an opportunity area that should be attractive and easy to get into. In reality, it is attractive and very difficult to get into. There are many failures in this sector, and the landscape is littered with them," said Kenny of HP Enterprise Services.

To succeed in their niches, nontraditional direct-to-consumer health prospectors need to determine how they'll stake their claim and how they'll take steps to protect their territory. If yours is a traditional direct-to-consumer healthcare company, you'll need to address those same concerns and decide how you want to continue reaching consumers. HRI's consumer survey found that high current price points and difficulty finding time in schedules were barriers for respondents 34 years of age and younger, whereas barriers identified for respondents 35 years and older include services not offered in their area, complicated technology, and privacy and security concerns. To avoid such stumbles, direct-to-consumer healthcare prospectors should focus on four opportunity areas. (See Figure 16.)

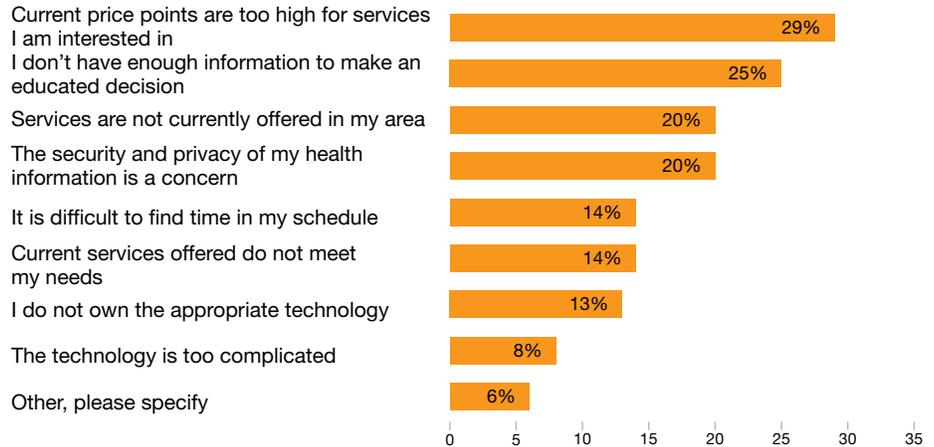
**Price.** Consumers are used to paying prices that are close to co-pay levels. If prices are higher, consumers might not be willing to purchase the goods and services. Twenty-nine percent of consumers say current prices are too high for the services and products they're interested in using. Particularly during the current recession, consumers have been more cost conscious regarding their spending.

**Lack of information.** Whether through social media, direct advertising, or other means, companies must better educate consumers on products and services. Consumer education and health literacy can result in adoption. According to the HRI consumer survey, not having enough information about products and services to make an educated decision was a concern for 25% of consumers. Companies should aim to increase transparency regarding treatments and outcomes.

**Limited access.** Access to care is a growing issue, providing lots of opportunities for companies to reach underserved markets. Twenty percent of consumers cited as a barrier the availability of services being offered in their area. Companies should try to reach underserved markets and educate consumers on how to access their services. By improving access, a large customer base can be developed to further expand opportunities for profitability.

**Privacy.** HIPAA regulations are being more widely enforced. In the HRI consumer survey, over 20% cited security and privacy of information as concerns. Companies need to make sure they not only meet required HIPAA guidelines but also continue building consumer trust. To accomplish that, companies should collaborate with local and state governments to meet security HIPAA guidelines.

**Figure 16. What, if anything, keeps you from using/purchasing products or services like the ones we have been asking about to help maintain your health? (Select all that apply)**



Source: PwC Health Research Institute Consumer Survey

## Business-to-business health prospectors

Nontraditional business-to-business health prospectors need to determine the role collaboration will play in their strategies and how they'll protect their territories. Traditional business-to-business healthcare companies need to address the same concerns. To succeed, business-to-business healthcare prospectors should focus on four opportunity areas.

**Rate of technology adoption.** When a new technology or product gets developed, providers may not want to be first adopters because they risk not being reimbursed by payers. Companies should create incentives to reward early adopters and focus on services that improve quality factors, such as patient satisfaction or reduced admission rates, which can generate significant value for a healthcare system and increase revenue.

**Accessibility.** Today's applications and services are developed for different platforms beyond the traditional computer-based applications, including iPhones and iPads, the Android operating system and other Web-based applications. Companies should work with new technology companies to drive quicker adoption and create demand.

**Competing interests.** Investors want a focused product that is tailored to meet specific business needs and that will provide a direct return on the investment. Business models need to balance both consumers' needs and investors' needs. If necessary, companies should scale back their initial plans to make sure the product will have meaningful results.

**Quantified business return.** Too often, in the past, business-to-business solutions have been sold based on qualified benefits but have not been shown to deliver to the buyers' bottom lines. Today, users of business-to-business offerings demand solutions that provide them with quantifiable returns on their investments. The ability to forecast, measure, and report on real business metrics will be a key differentiator for prospectors in the future.

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## About the research

This report discusses the growth of the healthcare market, forces affecting change, and business opportunities that capitalize on changes within the healthcare industry. To inform the research, HRI conducted a thorough literature review, in depth interviews, and in the fall of 2010, HRI commissioned an online survey of more than 1,000 consumers balanced by age and gender.

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