Top health industry issues of 2015

Outlines of a market emerge

At a glance

The outlines of a market emerge as financial pressures, regulation, innovation and consumer expectations drive change in the $2.8 trillion US healthcare industry.

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Introduction

More wired, consumer-oriented and innovative than ever before, the $2.8 trillion US healthcare industry is undergoing profound transformation. New entrants, from retailers to technology companies, are arriving with disruption on their minds as the effects of the Affordable Care Act (ACA) continue to ripple through the sector. In 2015, the healthcare sector will begin to look and feel like other industries, catering to customers expecting one-click service. A true consumer-driven market is slowly taking shape.

Patients are leading the way, bearing more of the cost of their own care – and making more care decisions. Patients are no longer satisfied with just meeting with their doctors. Increasingly, they expect to access lab results on their phones soon after leaving the medical center.

The industry is developing products and services destined for sale directly to consumers, from wearable devices and mobile apps to health plans to be sold on private and public exchanges. Companies are devising innovative – and cost-efficient – ways of caring for the nation's most expensive patients. Health systems and insurers are learning more about the 10 million Americans newly insured through the ACA and how they can compete for their business.[1]
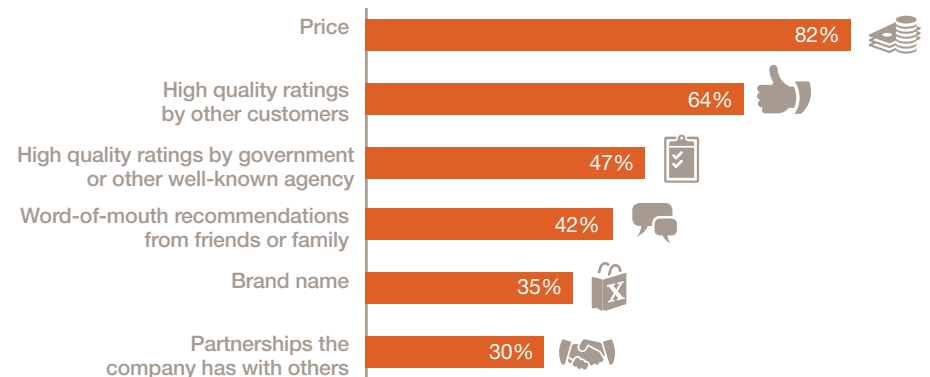
Millennials, raised on technology, are nudging employers to take a more expansive view of "health" benefits. Traditional healthcare companies are seeking partners to develop new products and services, often hitching healthcare know-how to tech and consumer prowess. From drug and device makers to state and federal governments, innovation and technology are propelling healthcare's shift toward transparency. Increased access to data opens the door to new approaches on clinical trials.

In 2015, the future will come into sharper focus. Unprecedented data sharing and transparency will heighten the tension between privacy and convenience.[2] New technology may lead to new regulatory frameworks and clarified rules. Shifts in care will prompt states – and healthcare organizations – to revisit scope of practice regulations that allow non-physicians to assume additional clinical tasks.

Yet even as the industry contends with these emerging issues, healthcare organizations must not neglect the demands of today,

Figure 1: Price and consumer ratings are most important when making healthcare purchasing decisions

Which of the following factors are most important when making decisions about purchases of healthcare products or services?

Price	82%
High quality ratings by other customers	64%
High quality ratings by government or other well-known agency	47%
Word-of-mouth recommendations from friends or family	42%
Brand name	35%
Partnerships the company has with others	30%

Source: HRI Consumer Survey, PwC, 2014

from reducing hospital readmissions to fully integrating data from electronic medical records. In the near term, many healthcare organizations must straddle two worlds.

Each fall, HRI surveys 1,000 US consumers and interviews industry experts to identify the top health industry issues for the coming year. Key findings for 2015 include:

- *Consumers remain concerned about the privacy of their health data.* At a time when data breaches regularly make headlines, 68% of survey respondents said they were concerned about the security of data stored in smartphone health apps; 76% said they were concerned about the security of their medical data.

- *Consumers have mixed feelings about pharmaceutical and life sciences companies' payments to clinicians as regulators demand greater health system transparency.* Industry should prepare for more transparency as these pressures grow from regulators and consumers.

- *Many consumers are ready for non-physician caregivers to do more.* Seventy-five percent told HRI that they were open to clinical "extenders" such as nurse practitioners and physician assistants, performing a wide range of services.

- *Physicians are interested in DIY healthcare products and services, perhaps even more so than consumers.* One-fifth of consumers said they would use a home urinalysis device. But nearly half of physicians said they would use data from such a device to prescribe medication or decide whether a patient should be seen.

- *Millennials define benefits broadly, emphasizing work-life balance over health benefits.* This shift in attitude will force employers to rethink benefits strategies and establish new ways of keeping their workforce engaged and feeling rewarded.

As the industry transforms, health organizations need to be ambidextrous and nimble. Their survival and success depend upon understanding their roles in a transparent, wired, consumer-centric future. Heading into 2015, there's evidence this is beginning to happen. For the first time since HRI began asking, US consumers ranked hospitals and healthcare second only to banks in customer satisfaction, a dramatic leap forward compared to previous years.[3] The ground – and the $2.8 trillion in US healthcare spending – is shifting. In 2015, the industry will feel this shift deeply as it is forced to adjust to a growing New Health Economy.

1 *Do-it-yourself healthcare*

US consumers and physicians are ready to embrace a dramatic expansion of the personal medical kit in 2015, thanks to technological innovation, the public's craving for convenience and a push to deliver lower-cost care. In response, technology companies are building intuitive mobile medical devices and apps that monitor vital signs, analyze blood and urine, track medication adherence and more.

In the New Health Economy, high-tech personal medical kits could help diagnose illness, flag early signs of trouble, allow recovery and rehabilitation to occur closer to home and create virtual workforce capacity. They could enable consumers to take charge of more of their own care, even becoming co-creators of their personal health plans. They could allow clinicians to monitor patients in lower-cost settings – or even from a distance.

In 2015, the final judging round will take place in the $10 million Qualcomm Tricorder XPRIZE, a global competition to create a personal device able to diagnose 16 conditions and measure five real-time vital signs in a non-invasive manner.[4] In the first ten months of 2014, the FDA

cleared 24 digital health devices, including a disposable biosensor system from Vital Connect that enables the remote monitoring of vital signs.[5, 6] More devices are awaiting clearance in 2015.

"Our vision is when every patient goes to the doctor for a checkup, they put one of these on and the data streaming is seamless, secure and HIPAA-compliant," said Vital Connect CEO Nersi Nazari. Shipments of the company's system begin in 2015 and are headed for cardiac patients and clinical trials. Vital Connect's system, which records heart rate, electrocardiography, respiratory rate, skin temperature, activity and posture, is intended to connect clinicians to patients wherever they are.

Clinicians may be more open to using these tools than consumers, according to HRI survey findings. One-fifth of consumers said they would use a home urinalysis device. But nearly half of physicians said they would use data from such a device to prescribe medication or decide whether a patient should be seen.[7] Twenty percent of MDs said that they already prescribe nutrition and weight loss mobile health apps.[8] Nearly 90% of MDs said these patient devices and apps will be important to their practices in the next five years (see figure 2).

Implications

- Hospitals and other care providers should incorporate DIY tools into efforts to engage patients. In risk-based reimbursement environments, these new tools could be a boon, providing quantifiable data over the continuum of care to support outcomes-based reimbursement models. But they could be a bust if they create another layer of data that fails to advance treatment or is cumbersome to analyze. Medical culture also will have to shift, engaging informed patients and nudging physicians to relinquish some control in exchange for useful real-time data.

- Health information technology systems must have secure and open platforms to handle data streaming from many sources, including personal health devices.

- Payment should move in the direction of rewarding algorithmically-derived care insights that lead to better outcomes, often with minimal physician involvement.

- New entrants and traditional healthcare providers should collaborate on the development and commercialization of these technologies. "Apps formularies," smartphone plug-ins and intuitive devices may become as important to clinicians as the prescription pad was to an MD in 1960.[9]

Figure 2: US clinicians ready to embrace mobile apps and devices
US clinicians were asked how comfortable they are using patient data streamed from mobile health apps and devices

Mobile app/device that can check for ear infection
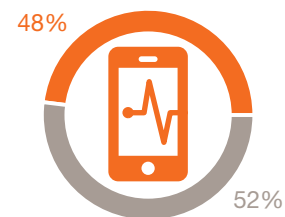
74%

26%

Mobile app/device that can analyze urine

53%

47%
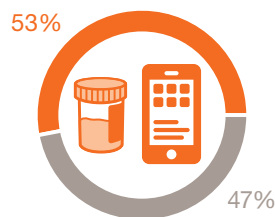
Mobile app/device that can monitor and check vital signs

48%

52%

Source: HRI Clinician Workforce Survey, PwC, 2014

■ Not comfortable ■ Comfortable

Making the leap from mobile app to medical device

In 2015, the US Food and Drug Administration (FDA) is poised to review a record number of mobile health apps as digital health companies respond to demand for more sophisticated mHealth products. The agency has regulated mobile apps for more than ten years and has approved about 100 products, according to the latest data available.[10]

Apps offering sophisticated clinical uses can deliver something consumers covet in healthcare – convenience. Some consumers are even taking matters into their own hands, "hacking" traditional medical devices that lack functions they want, such as the ability to monitor a diabetic child's glucose levels remotely.[11]

This market shift will require digital health companies to bolster their regulatory know-how. Developers will need to answer a threshold question: Does my product need regulatory review? Not all will. But some may benefit from a regulatory stamp of approval.

Under FDA's mHealth approach, the agency will oversee apps that serve as "medical devices and whose functionality could pose a risk to a patient's safety if the mobile app were to not work as intended."[12]

Understanding what triggers FDA oversight and the agency's approval requirements will be key to a company's success. The agency is expected to issue additional

guidance in 2015 clarifying which devices must obtain approval. Congress is debating whether to establish a more formal regulatory framework at the request of companies that want a risk-based regulatory framework.[13]

The FDA review process can be costly and time-consuming. Products that don't need regulatory approval may enter the market with greater ease and at a lower cost. Awaiting agency approval also can lock in a product too early in the innovation process, hampering "release and revise" strategies that have worked well in the tech world to update and improve products after their initial launch.
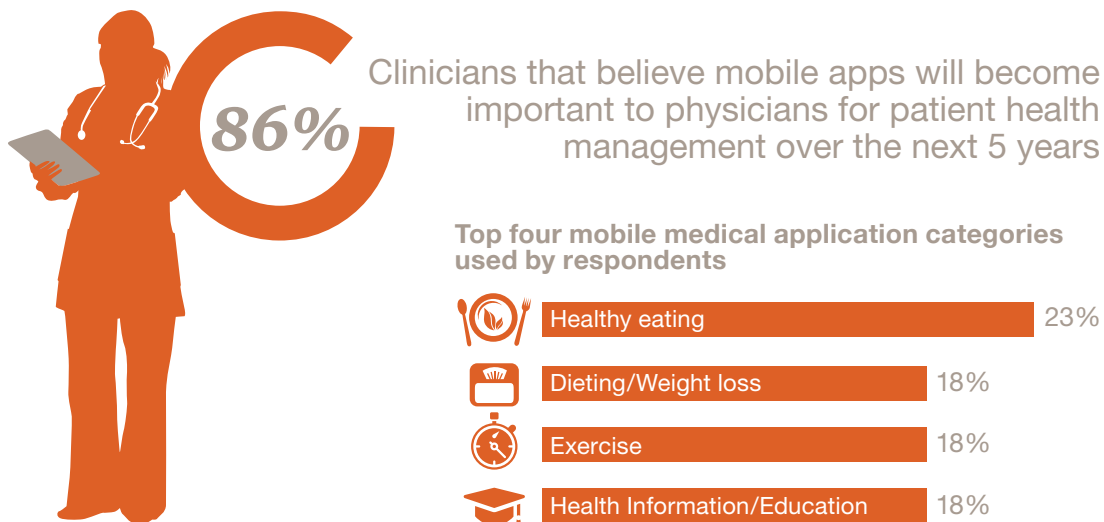
But regulatory approval also may lend legitimacy to products and prove valuable for building successful, sustainable revenue models. The app market – filled with 50,000 free and nearly-free products – is highly saturated.[14]

Companies hoping to capture a share of the nation's $2.8 trillion US healthcare economy will need to focus on reimbursement strategies. These companies ought to design intelligent products armed with diagnostic and treatment capabilities, just the kinds of features that necessitate regulatory review. Apps that have been approved by the FDA allow radiologists to view images on their smartphone and cardiologists to monitor patients for irregular heartbeats.[15]

Implications

- Regulatory approval may provide a competitive edge, setting one firm apart from others in a crowded field. Twenty percent of respondents to an HRI consumer survey said FDA approval was very important in their decisions to use a mobile app.[16] Similarly, 26% of clinicians said FDA approval was most important when deciding to prescribe apps.[17]

- Consumers and providers may benefit from an apps formulary or pharmacy. Apps can be categorized in similar ways to drugs, ranging from low-risk, over-the-counter apps to higher-risk apps that would require prescriptions. Other countries already provide similar services. The UK's National Health Service maintains a public database of over 200 "safe and trusted" apps for British citizens to access.[18]

- Partnerships marrying product development with regulatory expertise may be best-positioned for success. Drug and device manufacturers have decades of experience working with regulators that can be useful to tech and software companies. Manufacturers, especially drug makers, may have less experience developing and deploying digital health platforms that appeal to tech-savvy consumers.

Figure 3: Mobile health apps are becoming a regular part of care

86% Clinicians that believe mobile apps will become important to physicians for patient health management over the next 5 years

Top four mobile medical application categories used by respondents

Healthy eating	23%
Dieting/Weight loss	18%
Exercise	18%
Health Information/Education	18%

Source: HRI Clinician Workforce Survey, PwC, 2014 & HRI Consumer Survey, PwC, 2014

3 *Balancing privacy and convenience*

During the summer of 2014, more than five million patients had their personal data compromised in health system privacy breaches.[19, 20] Because health records contain personal, financial and medical data, this information is an especially attractive target to thieves, commanding up to $1,300 per record on the black market.[21]

Breaches can be expensive. Several national retailers paid nearly $200 million each in damages for breaches in recent years.[22] Yet consumers want one-click access to their data. In 2015, the tension between data privacy and convenience will grow.

"The thing that makes health information unique is it provides a significant opportunity for identity theft," said Bryan Kissinger, an executive director at Kaiser Permanente who oversees its Health Insurance Portability and Accountability Act (HIPAA) Security program. Stolen data can be used for financial gain and to impersonate someone to access medical services, Kissinger said.

Finding the right balance between privacy and convenience will be challenging. In a 2014 HRI consumer survey, more than 65% of respondents said data security was more important to them than convenient access to imaging and test results, doctor's notes, diagnoses and prescriptions. For fitness data, the reverse was true (see figure 4).

In the past five years, Kissinger said, "We have seen an increase in the desire for customers to have access to their data in real-time on their mobile devices. This demand for more convenient access increases the importance to provide this information in a secure manner."

Consumers may be willing to share health data if they see value in doing so. More than half of survey respondents said they would be willing to share data to improve care coordination. Nearly half would share data to support real-time decision-making.

Much of this information will be stored in the "cloud," which is important for convenient access, but may also be vulnerable to cyber threats.

The stakes are high. Fifty-six percent of consumers said that concerns about the privacy and security of their medical information would affect their decisions to tell doctors "everything" about their conditions; 51% said it would affect their decisions to participate in clinical trials.
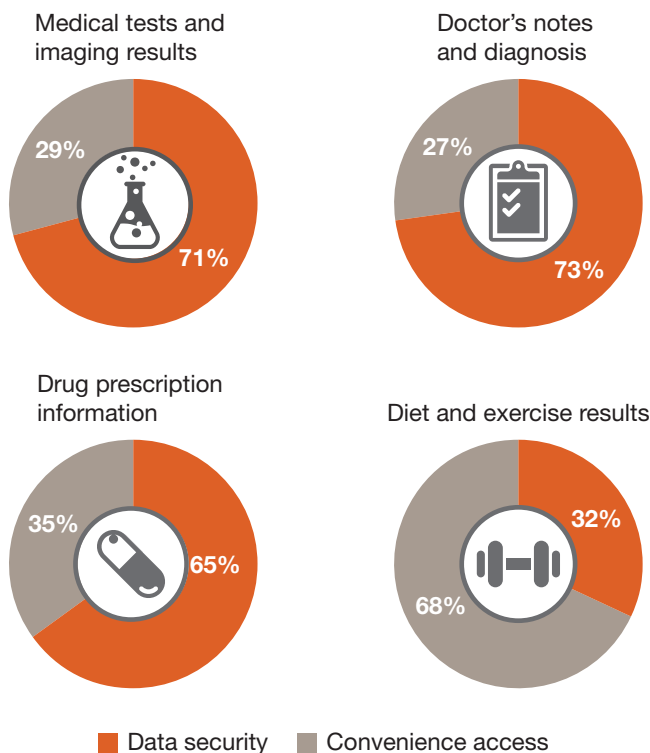
Cyber threats can be barriers to doctor-patient communication and pharmaceutical research if patients and consumers are reluctant to share information and participate in research studies.

Data breaches will reenergize the debate about protection and ownership of personal health data. Nearly 25% of all companies detected 50 or more security incidents in the past year, according to PwC's Global State of Information Survey of 2015.[23] Cybersecurity measures will have to focus on what consumers want – health data that is private, secure and accessible.

Implications

- Keep an eye on internal and external threats. Health systems should continue to watch for internal breaches, hire additional cyber security personnel and develop technical strategies to defend against external threats.

- Know your data and activate the right consumer permissions. Many organizations don't comprehend all of the information they collect or keep an inventory of medical devices collecting data. Prioritize safeguards for incoming data based on actions that the organization will take to improve operations and specific consumer needs.

- Learn from other industries. Financial companies and the retail sector have experience balancing consumer convenience, privacy and security. Collaborating with other industries may accelerate development of these strategies. Privacy and security challenges will provide opportunities for entrepreneurial new entrants.

Figure 4: Privacy trumps convenience for most health data
US consumers were asked which is more important to them – data security or convenience – regarding access to different kinds of health data

Medical tests and imaging results
- 29%
- 71%

Doctor's notes and diagnosis
- 27%
- 73%

Drug prescription information
- 35%
- 65%

Diet and exercise results
- 32%
- 68%

■ Data security ■ Convenience access

Sources: HRI Consumer Survey, PwC, 2014

High cost patients spark cost-saving innovations

The costliest 1% of all patients in the US consume 20% of the nation's healthcare spending.[24] In 2015, these high-cost patients – including aging baby boomers and the chronically ill – will be the focus of a US healthcare industry under pressure to contain costs.

Among the most costly patients in America are the "dual eligibles" – the approximately 9.6 million individuals who qualify for both Medicare and Medicaid. In 2010, the Medicare fee-for-service program spent an average of $19,418 on each of these patients – compared to $8,789 spent on other beneficiaries.[25] By 2024, total annual spending on dual eligibles is projected to top $775 billion (see figure 5).[26]

These numbers are prompting healthcare systems, insurers and others to adopt innovative care models that can pinpoint and better manage high-cost patients in lower-cost care settings, providing a more holistic suite of services that address behavioral, social and other issues that affect health and wellness. Strategies include high-tech wearables,[27] virtual care such as telemedicine[28] and low-tech problem-solving, such as ensuring patients on medications that require refrigeration own refrigerators.

Public and private insurers have learned that effective care coordination can steer complex patients to lower-cost care settings instead of emergency rooms and inpatient hospital beds. Many of these programs marshal clinicians, social workers and care coordinators to monitor patients with calls and visits, encouraging them to embrace healthy lifestyle regimens, fill prescriptions and keep physician appointments, a strategy known as "hot spotting."[29]

Health systems are experimenting with a variety of cost-containment programs. After Spectrum Health System in Grand Rapids, Mich., identified 30 frequent visitors to its ERs, it offered those patients medical and case management interventions, such as finding primary care physicians within walking distance of their homes. This reduced emergency room visits by 90%, and the cost of treating them fell from $1.1 million to less than $130,000 within one year.[30]

Buoyed by its success, Spectrum created the Center for Integrative Medicine, a program that employs a "bio-psycho-social" model of care. Patients who visit the emergency department more than 10 times a year are candidates for extra services, such as greater medical management, enhanced social services and heightened psychiatric evaluation and treatment.[31]

In Minnesota, Hennepin Health launched a "social accountable care organization" that assigns coordinators to its highest-risk members. The coordinator addresses medical, behavioral, and economic needs, from housing security to substance abuse issues.[32]

And South Carolina's Health Access at the Right Time program has reduced spending on the state's sickest patients through use of retail clinics, telemedicine, school-based health clinics and community health workers, who can be the system's "eyes and ears" outside the examination room and help secure social services, transportation, food and housing.[33] South Carolina estimates that its fiscal year 2014 spending would have been 64% higher without this program.[34]

Federal efforts will pick up next year. As of July 2014, the US Centers for Medicare and Medicaid Services (CMS) had finalized agreements with 12 states to implement demonstrations in its Medicare-Medicaid Financial Alignment Initiative, a program in which states are working to integrate primary care, acute care, behavioral health and long-term care services for dual eligibles.[35] Early results are expected in 2015.

Implications

- Health systems and insurers that can identify high-cost patients and efficiently coordinate their care will gain market advantage as the industry shifts to value-based reimbursement models. Effective coordination will require close alignment among primary, acute and post-acute care providers.

- Insurers and healthcare providers need to build personal engagement, social and behavioral health capabilities to better care for this population. Clinical challenges will be difficult to remedy if these underlying issues are ignored.

- Technology can drive effectiveness and efficiency. Care providers should use technologies such as remote monitoring and "smart" pill bottles to better understand high-risk populations and manage them in lower-cost care settings. Technology can extend care for populations with little access to transportation.[36]

- The care model should incorporate "unconventional" care partners, from contractors that build ramps for fall protection to retail-based clinics. The ecosystem of care must be broad and holistic.

Figure 5: Dual-eligibles represent high cost, high potential for savings
Differences in average fee-for-service Medicare payments for dual-eligible beneficiaries and non-dual-eligible beneficiaries, 2010

	Medication	Inpatient	Outpatient	Nursing facility	Physician	Hospice	Home health
Dual-eligible beneficiaries	$4,805	$6,122	$2,311	$1,466	$3,209	$676	$806
Non dual-eligible beneficiaries	$1,002	$2,803	$1,133	$572	$2,598	$211	$460
Payment difference	*$3,803*	*$3,319*	*$1,178*	*$894*	*$611*	*$465*	*$346*
Percentage of difference	380%	118%	104%	156%	24%	220%	75%

Source: HRI, MedPAC analysis of the Medicare Current Beneficiary Survey, Cost and Use file 2010

5

Putting a price on positive outcomes

A plethora of new products hitting the market, including many high-cost specialty drugs designed to treat serious diseases, will catalyze demand for new evidence and definitions of positive health outcomes.

Faced with higher out-of-pocket costs[37] and escalating drug prices, consumers – like other purchasers – are becoming choosier about the medicines they buy. In 2015, the growing conflict expected between drug access and affordability will create fresh pressure for data that show these expensive medications work better than others and are worth the premium.

Insurers and an increasing number of health systems in the New Health Economy are limiting access to high-priced drugs. Physicians, particularly oncologists, are beginning to think about drug cost as another product attribute, one that can deliver a serious financial side effect to patients. Oncologists at Memorial Sloan Kettering Cancer Center blocked access to a cancer drug they said wasn't worth the price, compared with other available products.[38] In response to market resistance, Sanofi substantially reduced the net cost of Zaltrap across the US.

The government is also looking to control drug costs in Medicare Part D[39] as more patients begin using expensive specialty medications. Medicaid patients in Arkansas are suing to get access to Kalydeco, a cystic fibrosis therapy. And Gilead's game-changing hepatitis C products aren't covered for all patients due to high costs.[40]

Making an informed choice about whether or not to pay for a medicine will require evidence beyond safety and efficacy data from clinical trials.[41] By tapping into economic data, electronic health records (EHRs), genomic data, labor statistics and other data sets, pharmaceutical companies can communicate drug value in ways that can put cost into context. For example, a high drug bill in the short term may pale in comparison to the cost of decades of ongoing medical care.

By analyzing reams of available data – about drug history, hospital admissions, and disease progression – on patients with specific diseases, pharmaceutical companies may be able to predict which patients will have the best experiences with specific drugs.

This predictive power is further enhanced by the emergence of genomic data. About half of American consumers report a willingness to pay more for personalized medical products.[42] But consumers are divided about whether they would be willing to pay for the tests that enable these treatments (see figure 6).[43]

Incorporating genomic information into treatment decisions remains a challenge but it also represents "an opportunity to demonstrate greater drug effectiveness" and better outcomes with fewer side effects among subsets of patients, according to Dr. Gianrico Farrugia, director of the Mayo Clinic's Center for Individualized Medicine.
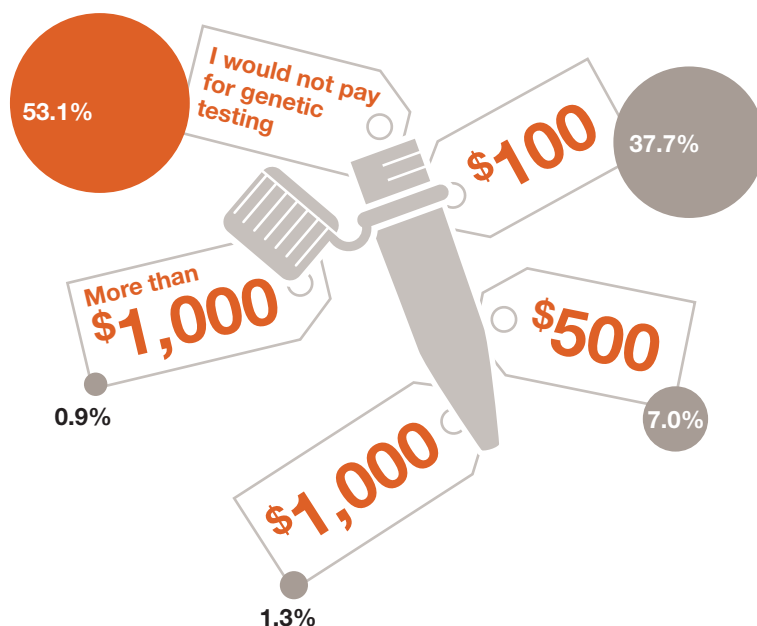
User data is routinely used in other industries to showcase the value of a product. The convergence of technology and market forces in healthcare will make patient data a powerful factor in the cost/benefit equation.

Implications

- Drug makers should collaborate with health systems or integrated delivery networks to synthesize de-identified EHR data, claims data and genomic data. The shift from relying on retrospective data analytics to prospective data captured from new sources such as patient registries, wearable devices and social media will require a more flexible architecture for storing and analyzing health data. Employer-sponsored insurance plans also may respond to economic data, such as days lost from work.

- As consumers shoulder more costs, new ways to promote adherence are critical. For example, when a drug demonstrates positive outcomes, insurers could offer financial rewards for refilling medications on time and experiment with incentives to ensure the benefits of having a patient on therapy aren't sacrificed by non-adherence.

- Communicating new evidence about drug value to key stakeholders – insurers, physicians and patients – will require additional skills. Pharma account managers, sales reps and patient engagement specialists should collaborate with quantitative analysts or bioinformaticists to customize new drug information for specific audiences, to redefine value and improve reimbursement decisions.

Figure 6: Most US consumers are unwilling to spend much for genetic testing

Amount US consumers are willing to pay for genetic testing

53.1% — I would not pay for genetic testing

37.7% — $100

7.0% — $500

1.3% — $1,000

0.9% — More than $1,000

Sources: HRI Consumer Survey, PwC, 2014

6

Open everything to everyone

The push to make health industry data transparent isn't just about helping people shop for affordable healthcare. New transparency initiatives targeting clinical trial data, patient outcomes in the real world and financial relationships between physicians and pharmaceutical companies will improve patient care and open up new opportunities. In the cloud, there is a silver lining in 2015.

The European Medicines Agency (EMA) will begin publishing clinical trial data used to support the approval and authorization of new drugs in Europe in 2015. Making clinical trial data publicly available will help to avoid duplication of trials, foster innovation and encourage development of new medicines.[44] The EMA is beginning with clinical trial reports, but will include the release of anonymized patient data in coming years. In November 2014, the US Department of Health and Human Services proposed new rules that would require clinical trial sponsors to report the summary results of all clinical trials, not just trials for products that receive FDA approval.

Today, many clinical trial data sets are never published, denying researchers valuable information. One study of 585 registered clinical trials found that 29% of trials – with an estimated enrollment of 300,000 people – went unpublished.[45]

That is changing. As of October 2014, 520 organizations – including physician groups, patient advocates, government regulatory bodies and one large pharmaceutical company, GlaxoSmithKline – had signed the AllTrials petition, which calls for "all trials registered, all results reported."[46]

Large pharmaceutical and medical device manufacturers are contributing clinical trial data sets to Project Data Sphere, the Yale University Open Data Access Project and other programs. Previously-closed clinical trial data sets now are open to university-affiliated researchers, and, in the case of Project Data Sphere, to anyone with an Internet connection. Contract research organizations are using newly-available clinical trial data to design better trials based on learnings from similar drug testing.

Regulators are opening their data sets too. The OpenFDA initiative, launched in 2014, provides a public database for analyzing drug and medical device adverse events, recalls and labeling information. Patients and physicians can search the data sets to examine the real-world frequency of side effects associated with specific products. The FDA is encouraging development of third-party mobile apps to connect patients taking the same medicines, so they can share health experiences.[47]

And another open data initiative, FDA's Open Payments law, went live in September 2014. Open Payments, previously known as the Sunshine Act, makes financial relationships between the drug and device industry and physicians public for the first time.

While physicians receiving payments from pharmaceutical companies have garnered headlines, consumer attitudes are mixed. About one-third of consumers said they would lose trust in their physicians upon learning about money received from a pharmaceutical company. Another one-third said such payments would not affect their physician trust levels (see figure 7).[48]

In 2015, the health industry will begin to feel the effects of heightened transparency as consumers, physicians, insurers and pharmaceutical and life sciences companies and others become armed with more data.

Implications

- Newly-accessible clinical trial data provides the ability to better understand disease pathways and progression in specific patient populations, identify biomarkers, conduct smaller, more focused trials and avoid past mistakes.

- Sharing data internally, across organizational silos, allows companies to build data-sharing capabilities with less risk. Executives should invest in data-sharing and analytics in anticipation of new transparency regulations and to gain a competitive edge by learning how to combine data sets for insight into product development.

- HRI's survey data suggest that some consumers will continue to trust their doctors, regardless of drug industry payments. Organizations that can demonstrate value to patients and physicians by improving care and outcomes will continue to form symbiotic relationships with customers.

- To optimize drug development, companies should tap into OpenFDA's adverse events database, which includes nearly four million records from 2004 to 2013. The database highlights problems with currently used medicines, allowing R&D programs to focus on new product attributes that will be meaningful to patients.

Figure 7: US consumer views are mixed on pharma dollars for MDs
US consumers' trust in doctors receiving pharmaceutical company payments

13%	37%	36%	14%
Trust more	Trust less	No difference	Unsure
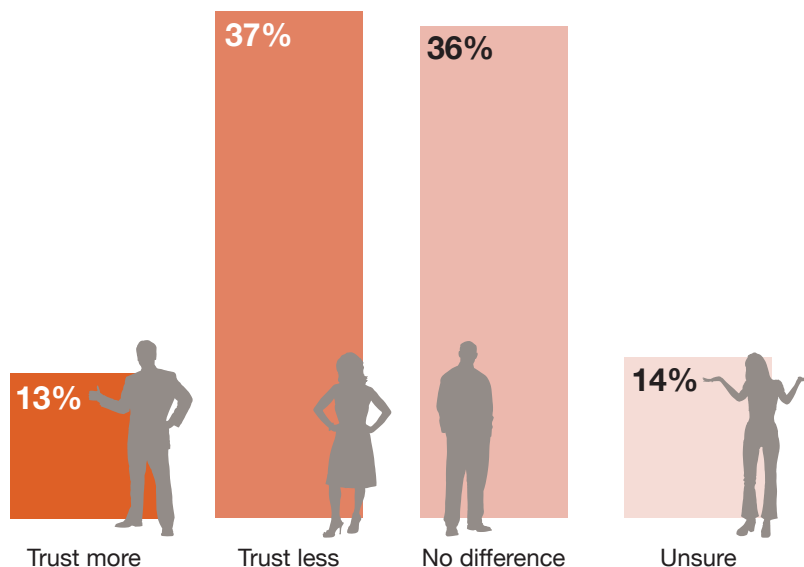
Sources: HRI Clinician Workforce Survey, PwC, 2014 & HRI Consumer Survey, PwC, 2014

7 Getting to know the newly insureds

One year after millions of Americans gained healthcare coverage for the first time, the industry is beginning to understand this population, its health status and consumer preferences. 2015 will be a revelatory year for the US health sector as a portrait of the more than 10 million newly insured emerges.[49]

What is known? Since July 2013 about six million young adults between age 19 and 34 gained coverage, the largest increase of any age group.[50] Younger enrollees who bought health plans on the exchanges tended to sign up later and purchased less coverage than their older counterparts.[51]

The newly insured are using their benefits, displacing the previously uninsured. A recent analysis by HRI found double-digit increases in Medicaid admissions among the three largest health systems in states that expanded the program, despite only slight increases or decreases in overall volume.[52]

Primary care doctors, surgeons and other specialists saw measurable increases in the proportion of patients with Medicaid in expansion states.[53] In mid-year 2014 earnings calls, insurers also reported higher-than-expected use of oncology, maternity, musculoskeletal and other specialty services, possibly reflecting pent-up demand.[54]

This population will change in 2015 as more states expand their Medicaid programs and the individual mandate penalty – the requirement that most Americans have coverage – takes effect. Early research suggests that the remaining uninsured are likely younger and healthier than those who have already purchased coverage, and they may help insurers balance financial risk. They're also poor and may find it difficult to buy coverage and pay for care, especially if they are in high-deductible health plans.[55]

Many also will require help understanding their benefits. In a recent consumer survey, HRI found that 65% of consumers who purchased individual policies and 75% of those enrolled in Medicaid were unclear about what a drug formulary was.[56]

As healthcare companies learn more about these new customers, they're developing more nuanced strategies. Cigna CEO David Cordani noted the company was focused on "product positioning, network sharpening, [and] clinical management programs" in 2015.[57]

As knowledge of the new exchange and Medicaid populations grows, more healthcare companies are viewing the newly insured as customers worth pursuing. In 2015, the number of insurers offering coverage on the ACA's public exchanges will increase by 25% compared to 2014, with insurer participation doubling in four states and participation rising in at least 32 more.[58]
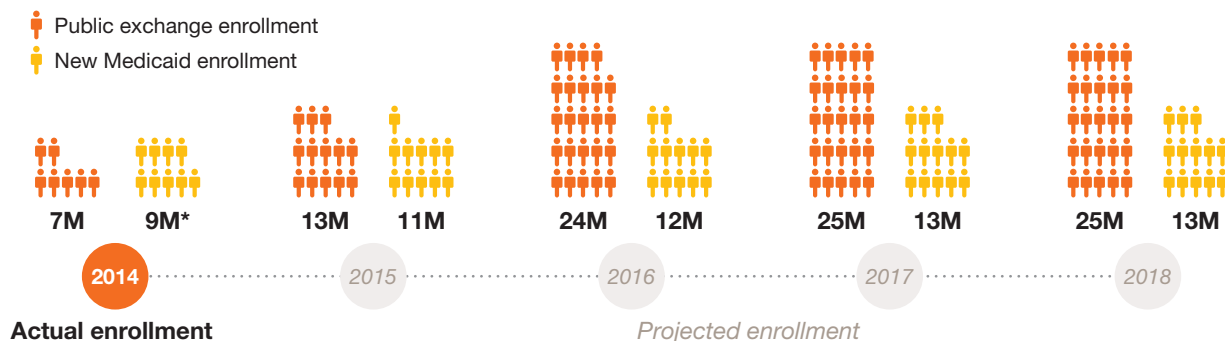
Implications

- Healthcare providers should, in general, contract broadly with insurers and help uninsured or underinsured patients enroll in coverage at the point of care through enrollment navigators and/or assisters. A 2013 HRI analysis showed that most hospital systems were not fully prepared to help identify, educate, and enroll patients.[59] Health systems approaching maximum capacity should assess whether new patients with Medicaid or exchange coverage could displace patients with higher-paying insurance.

- To manage unhealthier enrollees, insurers should engage members early through coordinated use of health risk assessments, disease management and social support programs. Armed with deep data analytics, insurers can partner with providers skilled in population health management. New technology start-ups, such as those working with doctors to form accountable care organizations, may help lead the charge in managing patient care and reducing costs.[60]

- Insurers should deploy marketing campaigns that target demographic and language differences among potential customers. Insurers will need different strategies to pick up new members and retain current ones. Some are investing in bricks-and-mortar stores, while others are using social media to engage customers.

Figure 8: The number of newly-insureds projected to grow dramatically
ACA insurance enrollment will grow rapidly in 2015 and 2016, providing a window of opportunity for companies to attract new healthcare consumers

Public exchange enrollment
New Medicaid enrollment

| 7M | 9M* | 13M | 11M | 24M | 12M | 25M | 13M | 25M | 13M |

2014 · · · · 2015 · · · · 2016 · · · · 2017 · · · · 2018

Actual enrollment   *Projected enrollment*

*8.7 million

Sources: HHS, CBO Updated Estimates of the Effects of the Insurance Coverage Provisions of the Affordable Care Act (April 2014). Actual 2014 enrollment numbers are as of Sept 2014 for exchanges and August 2014 for Medicaid.

Note: CBO's forecasts are net projections that take into account individuals shifting away from public coverage. The numbers include not just the newly insured, but also individuals who have previously had coverage (such as through an employer).

Note: HHS recently issued a revised 2015 public exchange enrollment estimate of 9 to 9.9M. These numbers have not yet been officially incorporated by the CBO.

Physician extenders see an expanded role in patient care

In 2015, states will lead the way in allowing nurses, nurse practitioners, physician assistants and pharmacists to do more. Scopes of practice for these so-called "extenders" will expand as the US healthcare system absorbs millions of newly insured consumers under the ACA and stretches to care for a cresting wave of aging baby boomers.

These clinicians could offset shortages of physicians, allowing all caregivers to practice at the tops of their training. Some non-physician clinicians will be at the center of efforts by retail clinics to claim part of the $20 billion market[61] for minor outpatient and emergency department visits.

By the end of 2014, more than half of states were weighing expanding the clinical duties of nurses, physician assistants, pharmacists and others. By October 2014, New Jersey, Pennsylvania and Michigan had bills in play to expand the roles of nurse practitioners. In 2015, another dozen states are expected to introduce or reintroduce similar legislation.[62]

These efforts follow in the footsteps of states such as North Dakota, which is extending pharmacist roles into telepharmacy, and Indiana and Vermont, which opened their first nurse practitioner-led primary care practices in 2014.[63,64]

Consumers are ready for this shift. Three-quarters of consumers say they would be comfortable seeing a nurse practitioner or physician assistant for physicals, prescriptions, the treatment of minor injuries and ordering lab tests,

an HRI survey found. Half would be comfortable going to a pharmacist instead of a doctor for some services.[65]

Some physicians are on board. More than one-third of doctors surveyed by HRI say over half of their patient encounters could be handled by extenders.[66] Physicians working alongside extenders say they spend more time with patients, better coordinate care and enjoy more work-life balance.

Even so, some physicians remain reluctant to cede patient care to other clinicians. Taming long-standing turf battles over who should treat patients – and where – could hinder efforts to expand scope of practice legislation. The American Medical Association, for example, contends that nurse practitioners and other clinicians lack the needed medical training to fully diagnose patients.[67]

Still, the supply of primary care nurse practitioners and physician assistants is expected to increase by 30% and 58% respectively during the next five years.[68] "There will be more use of care 'extenders' to deal with patients," said Sam Ho, chief medical officer at UnitedHealthcare. "This includes nurse practitioners, physician's assistants, case managers, pharmacists, and non-licensed community health members."

Some enterprising medical groups believe extenders are crucial for care models that deploy nurses, therapists, dieticians and social workers to keep patients healthy and preferably, at home. One model, which relies on nurses closely monitoring patients

after they are discharged from the hospital, has worked for a dozen Bon Secours Medical Group practices in Virginia. The program has reduced unexpected readmissions to fewer than 2% in the four years since it developed its patient-centered medical home program.[69]

Implications

- Initially, extenders may not slow growth in the cost of care as increased demand could lead to rising wages. HRI found that only 27% of doctors employing extenders have lowered prices.[70] Practice workflows and reimbursement must change to accommodate new staffing models.

- Technology should ease the transition of care from doctors to others. HRI found that medical groups using more extenders are more likely to use mobile health technologies and e-visits.[71]

- Retail clinics could benefit from expanded scope of practice laws that allow them to rely on pharmacists to deliver more care. Health systems should pursue strategies that leverage the use of retail clinics as a way to gain patient share and better control costs.

- Some health systems will have to work harder than others to communicate the advantages of seeing an extender instead of a physician. HRI's survey found consumer willingness to be seen by extenders varies by region and type of service.[72]

Figure 9: Nurses, nurse practitioners and other extenders gaining new responsibilities across US
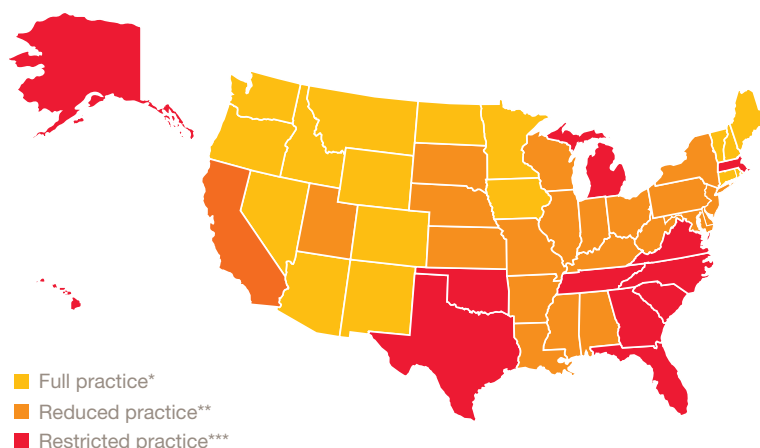
US consumer comfort in seeing a nurse practitioner or physician assistant ranges from 66%–87% across all regions.

- Full practice*
- Reduced practice**
- Restricted practice***

*Full practice: Physician extenders can practice completely independent of physician approval

**Reduced practice: Physician extenders can do certain actions (treat, diagnose) independently but will need physician approval for other actions (prescribe medication)

***Restricted practice: Physician extenders need physician approval for all actions

Source: American Association of Nurse Practitioners and PwC's Health Research Institute Consumer Survey

9 *Redefining health and well-being for millennials*

As the US economy rebounds and baby boomers retire, employers, insurers and health systems are looking for creative ways to engage, attract and retain the next generation of healthcare consumers. On the heels of the baby boomers and generation X are the millennials who are redefining the definitions of health, well-being and value.

The children of baby boomers, the nation's 80 million millennials were born between the early 1980s and the early 2000s. Shaped by the Internet revolution, they are prompting us to rethink how we work, socialize and interact with the world. In 2015, they will help propel a New Health Economy that advances beyond healthcare to support a broader market of good health and well-being. HRI has calculated that Americans spend more than $267 billion a year on health and wellness.[73]

Millennials in the workplace are different from prior generations. They seek more than money from their jobs; they are looking for fulfilment at work and in life. They expect to have multiple jobs and possibly careers during their lifetimes to achieve these goals. According to a study conducted by PwC, the University of Southern California and London Business School, 38% of millennials expect not to work at one place for nine years or more, as compared to the 30% of non-millennials interviewed.[74] They value flexibility, convenience and technologies that deliver more personalized experiences that meet their needs and emphasize well-being.

In 2015, the US Bureau of Labor Statistics predicts millennials will be the majority in the US workforce and by 2030 they will make up 75% of it,[75] causing employers to refocus their employee benefit strategies. Some experts believe that healthcare benefits have less influence on employee recruitment and retention post-ACA because insurance exchanges provide non-employer based health insurance options. Innovators will look beyond traditional health benefits and support more engaging and supportive end-to-end employee experiences, with a greater focus on how the employee experience influences the overall well-being and engagement of that worker.

Employers in the technology industry are leading the way. Until the end of the last century, unions helped set benefits standards for many companies. But in today's environment, high-tech companies are the new influencers, focusing less on benefits and more on creating cultures around employee engagement. They understand that an organization's well-being is entwined with the well-being of its employees and that happier employees tend to be more committed, productive, creative and – most importantly – less likely to leave for the next best offer.

In 2015, employers, insurers and providers wishing to win over millennials will develop new approaches to motivate them with meaningful incentives and educate them on h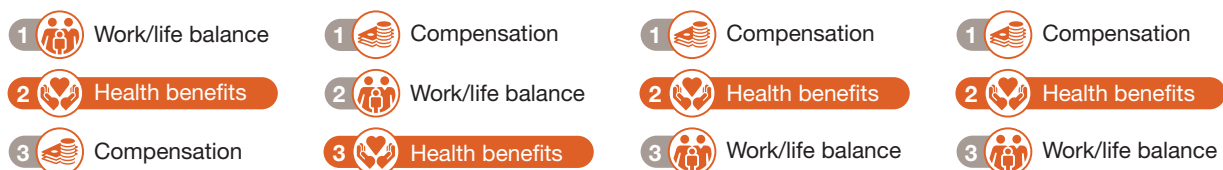ow to achieve their goals. That requires convenient access to resources, personalized and timely feedback and support with aligned programs and seamless processes.

Implications

- Employers will pivot to better meet the expectations of millennials by reorienting strategies from wellness to well-being and from employee benefits to the broader "employee experience." Leading employers are pursuing strategies and tactics aimed at specific cohorts of employees while providing all greater flexibility, convenience, relevance, education and guidance.

- Insurers and healthcare organizations will work closely with employers and consumers to support and enhance the well-being of their members and patients. They will work to understand and deliver on the expectations of this new generation of millennials.

- New entrants will continue to disrupt how consumers, employers, insurers and clinicians interact. Look for national retailers to expand service offerings related to health and well-being, for private health exchanges to offer more holistic employee experiences and for new mobile technologies to create communities of personalized, real-time support and feedback.

Figure 10: Work/life balance tops younger workers' priorities for jobs
Top 3 choices for the most important thing to millennials career choices, as voted by various age demographics

1 Work/life balance
2 Health benefits
3 Compensation

1 Compensation
2 Work/life balance
3 Health benefits

1 Compensation
2 Health benefits
3 Work/life balance

1 Compensation
2 Health benefits
3 Work/life balance

Across all age groups, there is agreement on the top 3 priorities.

The order of importance reflected each age group's values.

ages 18–24
ages 25–44
ages 45–64
ages 65+

Source: HRI Consumer Survey, PwC, 2014

10 *Partner to win*

In 2015, partnerships are no longer anticipated to be a market differentiator, but the norm. To thrive in this hypercompetitive new environment, successful companies will work together on innovative products and services and seek expert partners to help fill the gaps in their businesses.

Take as an example the recently-announced collaboration between AbbVie, a research-based biopharmaceutical company, and the Google-backed life sciences firm Calico. Together the companies are working to discover, develop and market new therapies for patients with age-related diseases such as cancer.[76] Calico will use its technical expertise to establish a new research and development facility, and AbbVie will use its scientific and clinical development support and commercial experience to bring discoveries to market.

Vivity, a new health plan joint venture between Anthem Blue Cross and seven Los Angeles health systems, is tackling population health management. Anthem and its partner systems will share profits and losses, a risky venture with high value potential if they achieve their goal of competing with the integrated system Kaiser Permanente.[77]

It's no longer enough to partner just to stay in the game. An HRI analysis of the *Fortune 50* companies found that 40% – or 20 out of

50 – pursued new healthcare partnerships in 2014 (see figure 11). Consumers also see value in these new alliances. In a recent HRI survey, 58% agreed that they would be more likely to choose a healthcare company that partnered with others to improve services.[78]

As collaborations multiply in 2015, incumbent health businesses will face mounting pressure from competitors that are already engaged in industry-defining relationships, such as Walgreen Co., CVS Health, and Wal-Mart Stores.

Last September, Walgreen Co., announced a long-term partnership with blood test innovator Theranos to bring new affordable testing services to Walgreens stores.

Not only are Theranos' tests low cost (50% of Medicare reimbursement rates or less) and covered by major insurance carriers, but test results can also be made available in hours, accelerating diagnosis and treatment decisions.[79]
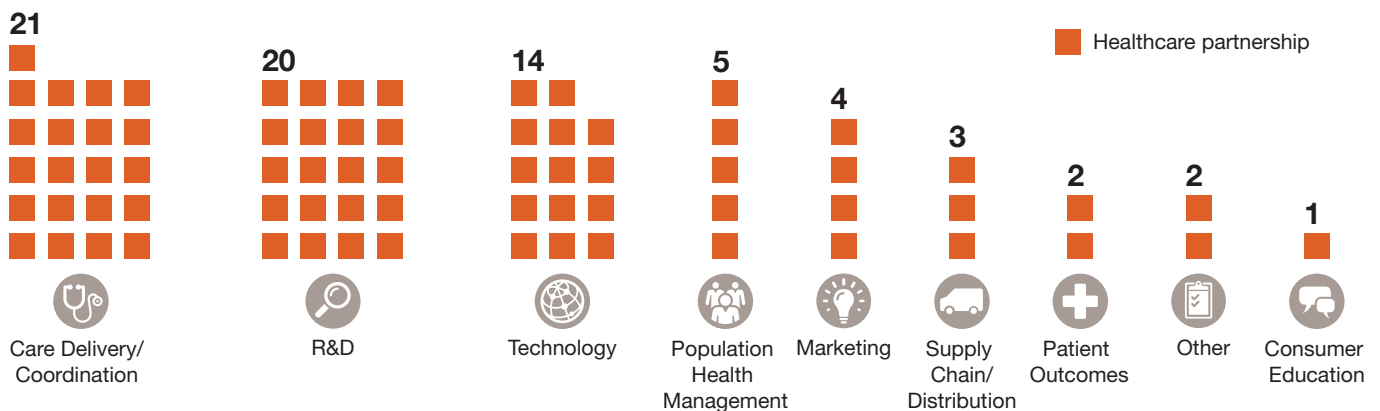
Implications

- Organizations should pursue both strategic partnerships that give them an innovative edge and commodity-driven relationships that can help drive down costs and fill business gaps.

Many traditional healthcare companies may find tremendous value in partnering with new entrants that are disrupting the health system with new care delivery and payment models.

- Companies entering into partnerships should lay out clear terms for collaboration. Partners should ensure that critical intellectual property is protected in order to allow each organization to grow independently. Companies that fail to maintain their core structure in a partnership risk takeover.

- New arrangements ought to require each partner to have "skin in the game." Partners with stakes in the effort are more likely to devote time, energy and their best resources to create collaborations with meaningful results. Organizations also might consider compensating leaders based on the success of the partnership, similar to a start-up.

- Collaboration requires clear definitions of objectives, governance structure and communication channels. Some partnerships also have a defined life cycle, so partnering organizations might agree early on to a likely exit strategy with timeframes for accomplishing milestones.

Figure 11: Fortune 50 companies are busy forming healthcare partnerships

The biggest companies formed over 70 distinct healthcare partnerships, which fell into the following categories

21	20	14	5	4	3	2	2	1
Care Delivery/ Coordination	R&D	Technology	Population Health Management	Marketing	Supply Chain/ Distribution	Patient Outcomes	Other	Consumer Education

■ Healthcare partnership

Source: HRI analysis of public financial statements, GlobalData reports, press releases, and other media.

Note: Some of the 20 companies formed multiple new partnerships in 2014.

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1. Benjamin D. Sommers, et al., "Health Reform and Changes in Health Insurance Coverage in 2014," The New England Journal of Medicine. 371(9), 867-874.

2. PwC Health Research Institute, "New Health Economy," April 2014. (http://www.pwc.com/us/en/health-industries/healthcare-new-entrants/index.jhtml)

3. PwC Health Research Institute, "Top Issues Consumer Survey," 2014.

4. Qualcomm Tricoder XPRIZE Overview. (http://tricorder.xprize.org/about/overview)

5. HRI analysis of US FDA 510(k) clearance database, reviewed Oct. 8, 2014.

6. Vital Connect 510(k) clearance submission to FDA, June 3, 2014.

7. PwC Health Research Institute, "Clinician Survey," 2014.

8. PwC Health Research Institute, "Clinician Survey," 2014.

9. William Falk, et al. "Making Care Mobile: Introducing the apps pharmacy," PwC, 2014.

10. Christy Foreman, "Keeping Up With Mobile App Innovations," FDA Voice. March 21, 2013. (http://blogs.fda.gov/fdavoice/index.php/2013/03/keeping-up-with-mobile-app-innovations/)

11. Kate Linbaugh, "Citizen Hackers Tinker With Medical Devices," Wall Street Journal. September 26, 2014.(http://online.wsj.com/articles/citizen-hackers-concoct-upgrades-for-medical-devices-1411762843)

12. US Department of Health and Human Services, Food and Drug Administration, Center for Devices and Radiological Health, and Center for Biologics Evaluation and Research, "Guidance for Industry and Food and Drug Administration Staff: Mobile Medical Applications," September 25, 2013. (http://www.fda.gov/downloads/MedicalDevices/.../UCM263366.pdf)

13. Mark Sullivan, "58 tech companies ask Congress to codify health IT laws so innovators know what the rules are," Venturebeat.com. October 7, 2014. (http://venturebeat.com/2014/10/07/58-tech-companies-ask-congress-to-codify-health-it-laws-so-innovators-know-what-the-rules-are/)

14. App market statistics as reported by 148apps.biz and appbrain.com. Accessed October 14, 2014

15. Brian Dolan, "23 notable FDA clearances for digital health apps, devices so far this year," Mobi health news. September 24, 2014. (http://mobihealthnews.com/36795/23-notable-fda-clearances-for-digital-health-apps-devices-so-far-this-year/)

16. PwC Health Research Institute, "Top Issues Consumer Survey," 2014.

17. PwC Health Research Institute, "Clinician Survey," 2014.

18. NHS Health Apps Library. (http://apps.nhs.uk/)

19. "Community Health System Reports Breach of 4.5M Patients' Data," iHealthBeat. August 2014. (http://www.ihealthbeat.org/articles/2014/8/18/community-health-system-reports-breach-of-4m-patients-data)

20. Montana Department of Public Health and Human Services, "State notifies, offers insurance and identity protection services," June 2014. (http://www.dphhs.mt.gov/newsevents/newsreleases2014/june/identityprotection%20.shtml)

21. "Hackers Sell Health Insurance Credentials, Bank Accounts, SSNs and Counterfeit Documents, for over $1,000 Per Dossier," Dell SecureWorks. July 15, 2013. (http://www.secureworks.com/resources/blog/general-hackers-sell-health-insurance-credentials-bank-accounts-ssns-and-counterfeit-documents/)

22. Dierdre Fernandes, "More firms buying insurance for data breaches," The Boston Globe. February 2014. (http://www.bostonglobe.com/business/2014/02/17/more-companies-buying-insurance-against-hackers-and-privacy-breaches/9qYrvlhskcoPEs5b4ch3PP/story.html)

23. PwC, "Global State of Information Security Survey of 2015," 2014.

24. Doug Trapp, "Who Are the Chronically Costly? Healthcare's 1%" amednews.com. March 5, 2012. (http://www.amednews.com/article/20120305/government/303059955/4/)

25. Medicare Payment Advisory Committee, "A Data Book: Health care spending and the Medicare program," June 2014. (http://www.medpac.gov/documents/publications/june-2014-data-book-section-4-dual-eligible-beneficiaries.pdf?sfvrsn=2)

26. The Lewin Group, "Increasing Use of the Capitated Model for Dual Eligibles: Cost Savings Estimates and Public Policy Opportunities," November 2008. (http://www.mhpa.org/_upload/lewindualeligibleswithupdatedexecsummmary9-11.pdf)

27. PwC Health Research Institute, "Health wearables: Early days," October 2014. (http://www.pwc.com/us/en/health-industries/healthcare-new-entrants/index.jhtml)

28. PwC Health Research Institute, "Healthcare's new entrants: Who will be the industry's Amazon.com?" April 2014. (http://www.pwc.com/us/en/health-industries/healthcare-new-entrants/index.jhtml)

29. Atul Gawande, "The Hot Spotters," The New Yorker. Jan. 24, 2011. (http://www.newyorker.com/magazine/2011/01/24/the-hot-spotters)

30. Spectrum Health Medical Group, "Bio-psycho-social intervention of high-frequency emergency department users," December 2011. (http://www.shmg.org/documents/CIM%20bio%20phycho-social%20intervetion%20PPT%20posters%2011%20x%208%205single.pdf)

31. Spectrum Health Medical Group Center for Integrative Medicine (http://www.shmg.org/cim)

32. James Maxwell, Michael Bailit, Rachel Tobey, and Christine Barron, "Early Observations Show Safety-Net ACOs Hold Promise to Achieve The Triple Aim And Promote Health Equity," Health Affairs Blog. September 15, 2014. (http://healthaffairs.org/blog/2014/09/15/early-observations-show-safety-net-acos-hold-promise-to-achieve-the-triple-aim-and-promote-health-equity/)

33. National Academy for State Health Policy, "Strategies to Support Expanded Roles for Non-Clinicians on Primary Care Teams: Two State Case Studies," August 2014. (http://www.nashp.org/sites/default/files/NASHP-Non-Clinician-Workforce-Slides_0.pdf)

34. South Carolina Department of Health and Human Services, presentation at South Carolina's 17th Annual Rural Health Conference.

35. MaryBeth Musumeci, "Financial and Administrative Alignment Demonstrations for Dual Eligible Beneficiaries Compared: States with Memoranda of Understanding Approved by CMS," The Henry J. Kaiser Family Foundation. July 24, 2014. (http://kff.org/medicaid/issue-brief/financial-alignment-demonstrations-for-dual-eligible-beneficiaries-compared/)

36. PwC Health Research Institute, "Healthcare delivery for the future," November 2014.

37. PwC Health Research Institute, "The cost of innovation: A closer look at specialty drugs," 2014. (http://www.pwc.com/us/en/health-industries/behind-the-numbers/specialty-drugs.jhtml)

38. Peter B. Bach, Leonard B. Saltz, and Robert E. Wittes, "In Cancer Care, Cost Matters," The New York Times. October 14, 2012. (http://www.nytimes.com/2012/10/15/opinion/a-hospital-says-no-to-an-11000-a-month-cancer-drug.html)

39. CMS Health Plan Innovation Request for Information, October 2, 2014. (http://innovation.cms.gov/initiatives/HPI/)

40. Jason Millman, "The drug that's forcing America's most important – and uncomfortable – healthcare debate," The Washington Post. July 24, 2014. (http://www.washingtonpost.com/blogs/wonkblog/wp/2014/07/24/the-drug-thats-forcing-americas-most-important-and-uncomfortable-health-care-debate/)

41. PwC, "From Vision to Decision: Pharma 2020," July 2012. (http://www.pwc.com/gx/en/pharma-life-sciences/pharma2020/vision-to-decision.jhtml)

42. PwC Health Research Institute, "Improving America's Health Consumer Survey," 2014.

43. PwC Health Research Institute, "Top Issues Consumer Survey," 2014.

44. European Medicines Agency, Publication of clinical reports, February 19, 2014. (http://www.ema.europa.eu/ema/index.jsp?curl=pages/news_and_events/news/2014/10/news_detail_002181.jsp&mid=WC0b01ac058004d5c1)

45. Christopher W Jones, et. al, "Non-publication of large randomized clinical trials: cross sectional analysis," The British Medical Journal. October 29, 2013. 2013;347:f6104. (http://www.bmj.com/content/347/bmj.f6104)

46. AllTrials. (http://www.alltrials.net/)

47. OpenFDA (https://open.fda.gov/update/openfda-innovative-initiative-opens-door-to-wealth-of-fda-publicly-available-data/)

48. PwC Health Research Institute, "Top Issues Consumer Survey," 2014.

49. 10.3 million since the beginning of open enrollment on October 1, 2013. Benjamin D. Sommers, et. al., "Health Reform and Changes in Health Insurance Coverage in 2014," New England Journal of Medicine. August 28, 2014. (http://www.nejm.org/doi/full/10.1056/NEJMsr1406753)

50. Does not include the more than 3 million young adults (18 to 26) who gained coverage under their parents' plans prior to 2013. Sarah Collins et. al., "Gaining Ground: Americans' Health Insurance Coverage and Access to Care After the Affordable Care Act's First Open Enrollment Period," The Commonwealth Fund. July 2014. (http://www.commonwealthfund.org/publications/issue-briefs/2014/jul/health-coverage-access-aca)

51. Cigna's (CI) CEO David Cordani on Q2 2014 Results - Earnings Call Transcript, July 31, 2014. (http://seekingalpha.com/article/2366055-cignas-ci-ceo-david-cordani-on-q2-2014-results-earnings-call-transcript)

52. PwC Health Research Institute, "Medicaid 2.0: The health system haves and have nots of ACA expansion," August 2014. (http://pwchealth.com/cgi-local/hregister.cgi/reg/pwc-hri-aca-medicaid-expansion.pdf)

53. ACA View, Tracking the Impact of Health Care Reform, July 14, 2014. Robert Wood Johnson Foundation and AthenaHealth.

54. Cigna's (CI) CEO David Cordani on Q2 2014 Results - Earnings Call Transcript, July 31, 2014. (http://seekingalpha.com/article/2366055-cignas-ci-ceo-david-cordani-on-q2-2014-results-earnings-call-transcript)

55. Adele Shartzer, "Who Are the Remaining Uninsured as of June 2014?" Urban Institute Health Reform Monitoring Survey. July 29, 2014.

56. PwC Health Research Institute, "Top Issues Consumer Survey," 2014.

57. Cigna's (CI) CEO David Cordani on Q2 2014 Results - Earnings Call Transcript, July 31, 2014. (http://seekingalpha.com/article/2366055-cignas-ci-ceo-david-cordani-on-q2-2014-results-earnings-call-transcript)

58. ASPE Issue Brief: Health Insurer Participation and New Entrants in the Health Insurance Marketplace in 2015. September 23, 2014.

59. PwC Health Research Institute, "Health systems developing strategies to capture newly-insured," Sept 2013.

60. Farzad Mostashari, "Launching Aledade," June 17, 2014. (http://www.aledade.org/launching-aledade-3/)

61. National Center for Health Statistics; 2009 Rand study.

62. Kopanos, DNP, FNP, Tay. Vice President State Government Affairs, American Association of Nurse Practitioners. Personal interview. October 6, 2014.

63. Tim Johnson, "New health care model testing in Burlington," Burlington Free Press. August 2014. (http://www.burlingtonfreepress.com/story/news/local/2014/08/30/new-health-care-model-tested-burlington/14809133/)

64. Holly Campbell, "Purdue rural healthcare clinics nationally recognized," Wlfi.com. September 17, 2014.(http://wlfi.com/2014/09/17/purdue-rural-healthcare-clinics-nationally-recognized/)

65. PwC Health Research Institute, "Top Issues Consumer Survey," 2014.

66. PwCHealth Research Institute, "Clinician Survey," 2014.

67. Christine Vestal, "Nurse Practitioners Slowly Gain Autonomy," The Pew Charitable Trusts. July 19, 2013. (http://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2013/07/19/nurse-practitioners-slowly-gain-autonomy)

68. US Department of Health and Human Services, "Projecting the Supply and Demand for Primary Care Practitioners Through 2020," November 2013. (http://bhpr.hrsa.gov/healthworkforce/supplydemand/usworkforce/primarycare/index.html)

69. PwC Health Research Institute, "Data-driven progress: As informatics evolves, clinicians find ways to stay ahead of illness and revamp care delivery," May 2014. (http://www.pwc.com/us/en/health-industries/health-research-institute/assets/pwc-hri-himss-report.pdf)

70. PwC Health Research Institute, "Clinician Survey," 2014.

71. PwC Health Research Institute, "Healthcare delivery of the future: How digital technologies can bridge the gap of time and distance between clinicians and consumers," November 2014. (http://www.pwc.com/us/technologyandinnovation)

72. PwC Health Research Institute, "Top Issues Consumer Survey," 2014.

73. PwC Health Research Institute, "Healthcare's new entrants: Who will be the industry's Amazon.com?" April, 2014. (http://www.pwc.com/us/en/health-industries/healthcare-new-entrants/assets/pwc-hri-new-entrants.pdf)

74. Moritz, Bob, "The US Chairman of PwC on Keeping Millennials Engaged," Harvard Business Review. November 2014. (http://hbr.org/2014/11/the-us-chairman-of-pwc-on-keeping-millennials-engaged/ar/1)

75. Mitchell, Alastair, "The Rise of the Millennial Workforce," Wired. August 2013. (http://www.wired.com/2013/08/the-rise-of-the-millennial-workforce/)

76. "Abbvie and Calico Announce a Novel Collaboration to Accelerate the Discovery, Development, and Commercialization of New Therapies," AbbVie press release, September 3, 2014. (http://abbvie.mediaroom.com/2014-09-03-AbbVie-And-Calico-Announce-A-Novel-Collaboration-To-Accelerate-The-Discovery-Development-And-Commercialization-Of-New-Therapies)

77. Melanie Evans, "Reform Update: Anthem's Vivity alliance with seven L.A. systems aims at Kaiser," Modern Healthcare. September 17, 2014. (http://www.modernhealthcare.com/article/20140917/NEWS/309179965)

78. PwC Health Research Institute, "Top Issues Consumer Survey," 2014.

79. Caitlin Roper, "This Woman Invented a Way to Run 30 Lab Tests on Only One Drop of Blood," Wired. February 18, 2014. (http://www.wired.com/2014/02/elizabeth-holmes-theranos/)

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