



## *Top health industry issues of 2018*

*A year for resilience  
amid uncertainty*

*In its 12th year, PwC Health Research Institute's annual report highlights the forces that will have the most impact on the industry in 2018.*



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## Heart of the matter

In year two of the Trump administration, healthcare leaders will be adjusting their strategies to focus on investments, collaborations and efficiencies that build enterprise resilience on a baseline of continued uncertainty. Healthcare players, including the White House, Congress, state lawmakers, industry groups and patient advocates, will continue to parry, feint and thrust, which will likely result in additional policy changes. Healthcare providers and insurers in particular should anticipate the changes as they come. Beyond health reform, additional risks and uncertainties are moving to center stage, as is the consumer, and the health industry is being forced to act.

Major new security breaches came to light last year, one of which exposed to hackers the personal information, including Social Security numbers, of more than 140 million people. In the healthcare industry, new cybersecurity threats, such as ransomware, are targeting payers and providers and even therapeutics, such as medical devices. Hacks are like a “non-natural” disaster, and health organizations and companies should prepare for them with robust defenses and remediation plans—and be able to respond if their networks, or devices, are breached.

Then there are the actual natural disasters, from which Puerto Rico, Texas, Florida and California are still reeling. Natural disasters can lead to health system closures, production outages, drug shortages, chaotic revenue cycle operations, physical destruction and dislocated populations. Resilient health organizations and businesses will make strategic investments before a disaster occurs. Steps such as reviewing insurance policies, protecting critical systems and creating virtual backups to traditional services will help keep medical services or production going if facilities are damaged.

In 2018 the healthcare industry will step up its pursuit of efficiency to improve performance and offset risks. Working largely behind the scenes, artificial intelligence (AI) will help employees make better use of their time and expertise, and streamline decision-making, financial reporting, supply chains and other functions. As a coworker, AI won’t provide comic relief in the cafeteria, but it also won’t forget, tire, get bored or come down with a cold.

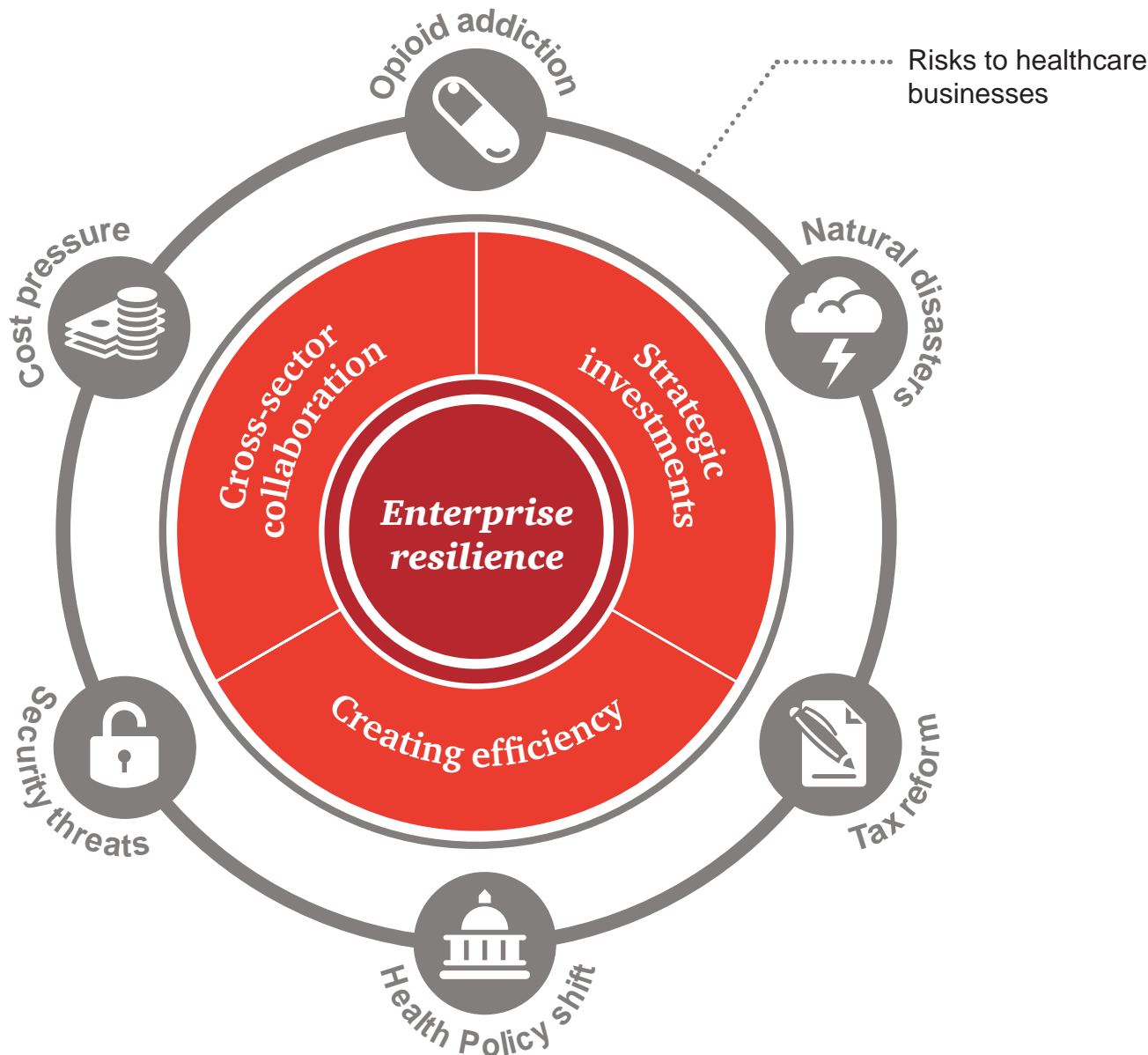
Pharmacy benefits managers (PBMs) and drug wholesalers, facing cost pressures, likely will seek new ways to drive efficiency and prove their value to customers—or risk being cut out of the healthcare supply chain. To increase purchasing power, a health plan and its PBM created a combined specialty pharmacy and mail services company with Walgreens, a retail pharmacy chain. The arrangement also helps integrate medical and pharmacy benefits, opening the door to value-based contracts with drugmakers. New state-level legislation also may lead to efficiency measures, such as allowing Medicaid plans to refuse coverage for certain drugs. Expanded use of real-world evidence may help pharmaceutical and life sciences companies cut clinical development costs. These shifts in the industry landscape likely will force pharmaceutical and life sciences companies to reconsider strategies and business models in 2018.



New collaborations will improve the way health organizations serve consumers. Cross-sector approaches to fight the opioid crisis may help stem the tide of abuse and overdoses in 2018. Identifying the social determinants of health could help predict and prevent poor health outcomes: PwC’s Health Research Institute (HRI) estimates that health disparities account for \$102 billion in direct medical costs annually.<sup>1</sup> In Ohio, screenings and interventions for food insecurity were associated with a 53 percent drop in hospital readmissions and a 4 percent increase in primary care visits. In San Antonio, an insurer’s community partnership program led to a 9 percent decrease in “unhealthy days,” the program’s measure of physical and mental health.

2018 likely will be distinguished by persistent uncertainty and risk for the industry, but these challenges also may spur health organizations to seek out greater cross-sector collaboration, make new strategic investments and create efficiencies, all tactics that shore up enterprise resilience (see Figure 1). In the face of an unsettled environment, the health industry could come out the other side of 2018 stronger and more creative, helping solve some of the nation’s most pressing health issues and becoming more engaged with their patients and consumers than before.

**Figure 1: Healthcare businesses should focus on three key areas to overcome risks and uncertainty in 2018**



Source: PwC Health Research Institute





## Issue 1

# The healthcare industry tackles the opioid crisis

Opioids are the leading cause of death for US adults younger than 50, with as many as 64,000 overdose deaths in 2016, up from 52,000 in 2015.<sup>2</sup> Nearly half of those deaths involved a prescription opioid.<sup>3</sup> Despite the ongoing drumbeat of concern—from policymakers, healthcare organizations and consumer advocates—the crisis has proven complex, with no quick fixes. In 2018, healthcare industry organizations will build on their strengths and collaborate to prevent opioid misuse, improve treatments for chronic pain, and support patients struggling to recover from opioid addiction.

Identifying behavioral markers and social health determinants are critical to prevention. Healthcare leaders must work together on population health and community programs to fight addiction and overdose. States facing the highest numbers of overdose deaths—the most tangible and acute measure of the crisis—are working with first responders and law enforcement to expand access to drugs such as naloxone, which can reverse an opioid overdose if administered quickly.

Working with state and local health officials is one part of Aetna's Enterprise-Wide Opioid Task Force, as is increasing communication between prescribing physicians and patients at risk for opioid misuse or abuse. Aetna is proceeding with a five-year plan to improve how chronic pain is treated, reduce inappropriate opioid prescribing, and increase medication-assisted therapy for members with opioid use disorder.<sup>4</sup> The organization is preparing to launch an interactive dashboard so that consumers can track Aetna's progress toward its goals, said Daniel Knecht, MD, MBA, Aetna's head of clinical strategy and policy.

Aetna also has changed its prescription drug formulary to align coverage decisions with the Centers for Disease Control and Prevention (CDC) guidelines for prescribing opioids.<sup>5</sup> In states hit hardest by the opioid crisis, such as Kentucky and West Virginia, Aetna is using claims and pharmacy data to identify pregnant mothers and babies at risk for neonatal abstinence syndrome, or babies born with opioid

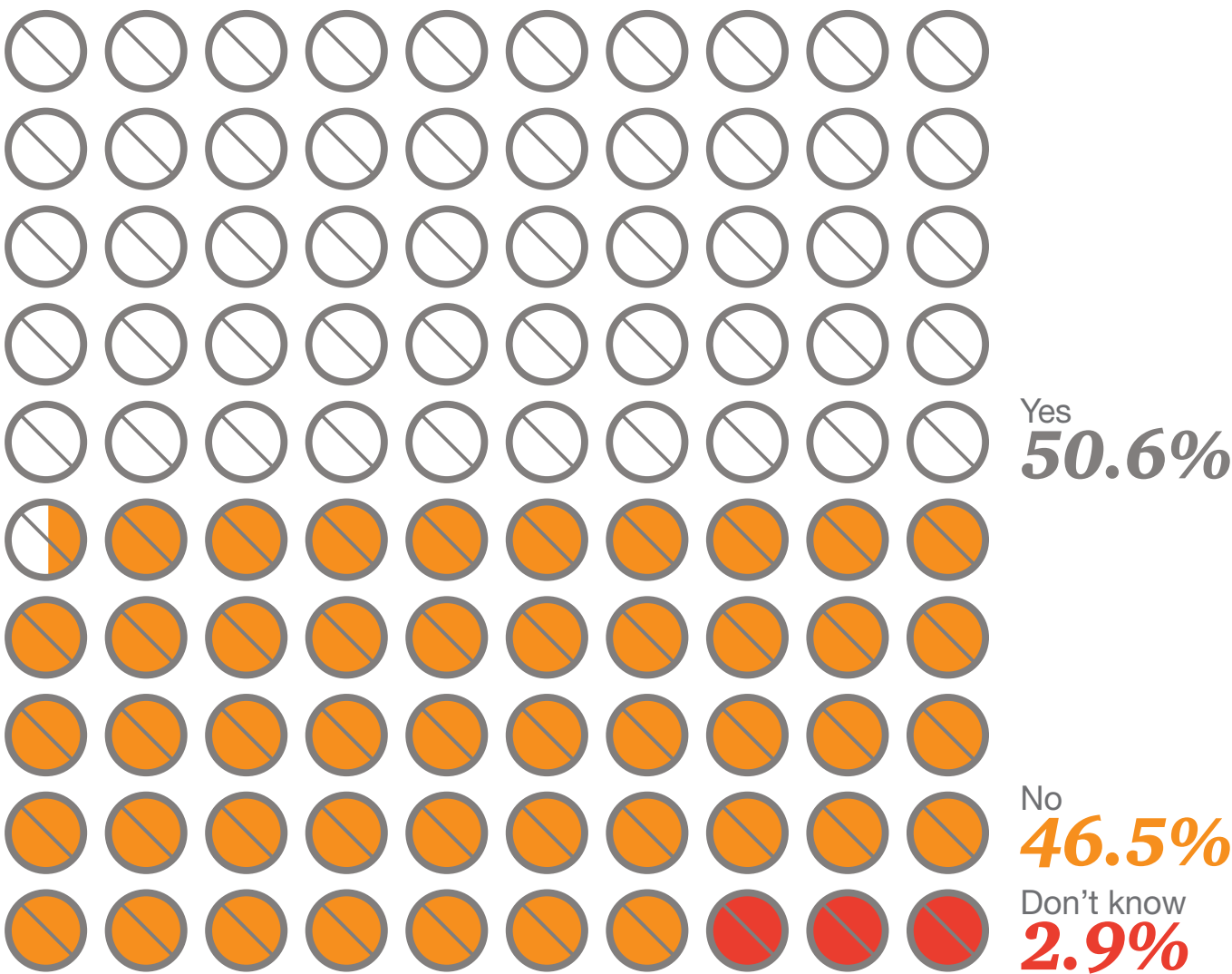


dependence. “Based on signals in the data, our care managers will reach out to the member to engage them and discuss their options,” Knecht said. “A case manager is assigned to that pregnant member throughout the pregnancy and up to a year after birth, to make sure there is adequate support.”

Reducing the sheer volume of prescription opioids in circulation may require new rules for prescribers (see Figure 2). Even patients who use opioids correctly for chronic pain are at risk; 1 in 4 patients treated with opioids for long-term chronic pain struggle with addiction.<sup>6</sup> “We are using higher-level analytics in our retail pharmacies to understand if a doctor has a high level of inappropriate prescriptions,” said Troy Brennan, executive vice president and chief medical officer at CVS Health. CVS Caremark is limiting opioid prescriptions for acute pain to seven days, a restriction supported by PhRMA, a biopharmaceutical trade organization. And the PBM has placed a daily dosage limit of 90 morphine milligram equivalents per patient, in keeping with the CDC guidelines, Brennan said.<sup>7</sup>

**Figure 2: Half of provider executives surveyed plan to put new restrictions on opioid prescribing practices in 2018**

Does your hospital or health system have plans to restrict, or further restrict, opioid prescribing practices next year?



Source: PwC Health Research Institute Provider Executive Survey, 2017



# Implications



## Improve patient management to bridge gaps in care.

Consistent engagement with patients may help prevent new opioid addictions by identifying social factors that influence patient behavior. Care management programs, such as cancer care management, may be used to help manage at-risk opioid patients. “We are ramping up patient counseling in [CVS] retail pharmacies,” Brennan said.



## Use technology and data sharing to improve healthcare business collaborations.

Combining public and private health data may reveal new insights and focus areas. In Massachusetts, data sharing across many government agencies has made it easier to find at-risk opioid patients. Partners Healthcare has contributed clinical health data to the Massachusetts Department of Public Health-led effort, said Tom Land, director of the department’s Office of Special Analytic Projects. Third-party organizations also may participate in compiling and analyzing health data to inform multi-organization strategies for reducing opioid misuse, dependence and overdose.



## Make safer treatments for chronic pain available.

Some of the most dangerous opioids are the least expensive. Insurers, PBMs and pharmacies should consider the total cost of opioid addiction and overdose. Aetna is partnering with Pacira Pharmaceuticals Inc. and the American Association of Oral and Maxillofacial Surgeons to find oral surgeons with high opioid prescription rates and offer to enroll them in a program that provides free samples of Pacira’s Exparel, a non-opioid local analgesic. It then teaches the doctors how to use it with patients undergoing wisdom tooth extraction.<sup>8</sup>





## Issue 2

# Social determinants come to the forefront

The US spends more on healthcare per capita than other developed nations yet lags in outcomes. Researchers say social factors such as education, income, nutrition and housing explain the difference.<sup>10</sup> As the industry continues transitioning to value-based care in 2018, healthcare organizations should figure out how to address the social factors that affect health.

Greater attention to social factors can affect care utilization patterns, strengthen prevention, and shift services from higher-cost emergency rooms and hospitals to lower-cost primary care settings. PwC estimates that health disparities account for \$102 billion in direct medical costs annually.<sup>11</sup> Insurers that address them can reduce costs, and providers can improve their brand and reduce their risk in value-based payment schemes.

All health sectors have started to try their hand at social interventions. Some providers and insurers are broadening their care teams to include nutritionists, behavioral health specialists, social workers and community health workers trained in addressing nonmedical health-related issues. Pharmaceutical companies are working to address health disparities at the community level.

A 2016 HRI report estimated that relying on an extended care team that includes nutritionists, social workers and community health workers could save providers \$1.2 million a year per 10,000 patients in a value-based payment environment.<sup>12</sup> “I spent \$300k on my medical education. I’m the most important, right?” said Dr. David Berg, co-founder of Redirect Health, a Phoenix-based company partnering with employers to simplify healthcare for lower-wage employees. “Nope. The most important part of getting good results is not the knowledge of the doctors, not the treatment, not the drug. It’s the logistics, the social support, the ability to arrange babysitting.”

Seventy-three percent of provider executives and 50 percent of payer executives surveyed by HRI said their organization has created or is creating partnerships with



allies in local communities—including schools, grocery stores, churches and others—to address social issues. This is important to consumers (see Figure 3).

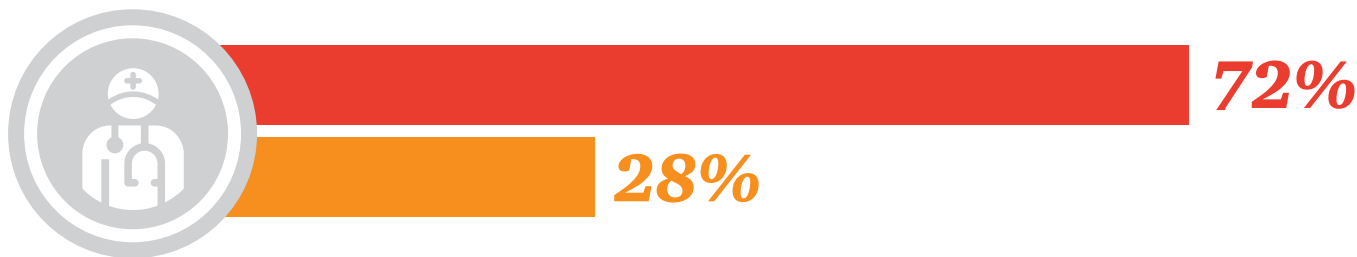
Some collaborations already have paid off. In Toledo, Ohio, ProMedica’s screenings and interventions for food insecurity were associated with a 3 percent drop in emergency visits, a 53 percent drop in hospital readmissions and a 4 percent increase in primary care visits.<sup>13</sup> In San Antonio, Humana’s Bold Goals program using community partnerships was associated with a 9 percent decrease in “unhealthy days,” the program’s measure of physical and mental health.<sup>14</sup>

In Memphis, biotechnology company Genentech’s initiatives to address racial disparities in breast cancer outcomes resulted in 80 percent of targeted women taking steps to manage their breast health, such as getting screened or visiting a resource directory.<sup>15</sup> Early-stage breast cancer treatment has been found to increase the five-year survival rate by over 70 percentage points—and shave \$100,000 off the lifetime cost.<sup>16</sup>

**Figure 3: Consumers want more collaboration between their community and their providers, payers and employers**

How important is it that the following have partnerships with organizations in your local community to help you more effectively manage your health or the health of a loved one?

Doctor or hospital



Insurance company



Employer



■ Important ■ Unimportant

Source: PwC Health Research Institute Consumer Survey, 2017



# Implications



## Expect more attention at the federal and state levels.

The Centers for Medicare and Medicaid Services (CMS) granted \$157 million this year to 32 healthcare organizations in its two-track Accountable Health Communities Model. The five-year demonstration will test innovative payment and delivery models such as becoming a hub to align community organizations or helping patients connect with such organizations.<sup>17</sup> States are pushing value-based reimbursement models for Medicaid amid probable funding changes in 2018 and may look to Section 1115 Medicaid demonstration waivers under the Affordable Care Act (ACA) that let them test models such as pay for performance or accountable care.<sup>18</sup> Providers should brace for more risk sharing for this population, which is disproportionately affected by social disadvantages.



## Focus on sustainability.

Taking social responsibility has helped some organizations engage, maintain and recruit employees. Eighty-four percent of providers said that workforce development and management is important to their success in the next five years. “The millennial generation wants to help people and feel like they’re making a difference,” said Catherine Hamilton, vice president of consumer services and planning at Blue Cross Blue Shield of Vermont. Conversely, organizations that fail to improve their communities may damage their reputations and bring their not-for-profit status into question.



## You can’t fix what you don’t know.

Seventy-eight percent of provider executives say they lack the data to identify patients’ social needs. While clinicians routinely gather standard demographic information in their electronic health records (EHRs), social and lifestyle information—beyond tobacco and alcohol use—is spottier.<sup>19</sup> Only 4 percent of clinicians responding to an HRI survey said they use community data sets to fill in the blanks. Data sharing partnerships and cross-sector collaborations will be critical to match patients with the support services they need.





## Issue 3

# Price transparency moves to the statehouse

Following a trend that has accelerated in recent years, states in 2018 will continue to address rising healthcare costs through pricing and transparency initiatives. No longer content to merely ask manufacturers or providers to report their costs, states are considering and passing new laws to directly control prices and shine light on cost changes. These moves will spur pharmaceutical and life sciences companies to consider new ways to justify pricing, manage legal and regulatory uncertainty and consider novel cross-sector collaborations to show value.

HRI's analysis of state legislation finds that out of 75 healthcare pricing bills considered in 2017, 21 passed. In 2016, only 15 such bills out of 72 passed. The increase suggests pricing efforts are gaining traction in statehouses (see Figure 4). Most bills required manufacturers to report a drug's cost and explain price changes—though payers and providers are increasingly being asked to report similar information. Similarly, new statutes directed at PBMs require them to control copayments, a move that can benefit manufacturers by making products more affordable to patients.

California law requires that manufacturers alert insurers before raising a drug's price and explain the increase. It is possibly the strongest pricing transparency legislation yet passed at the state level and was widely supported by consumer groups, business interests and payers.<sup>20</sup>

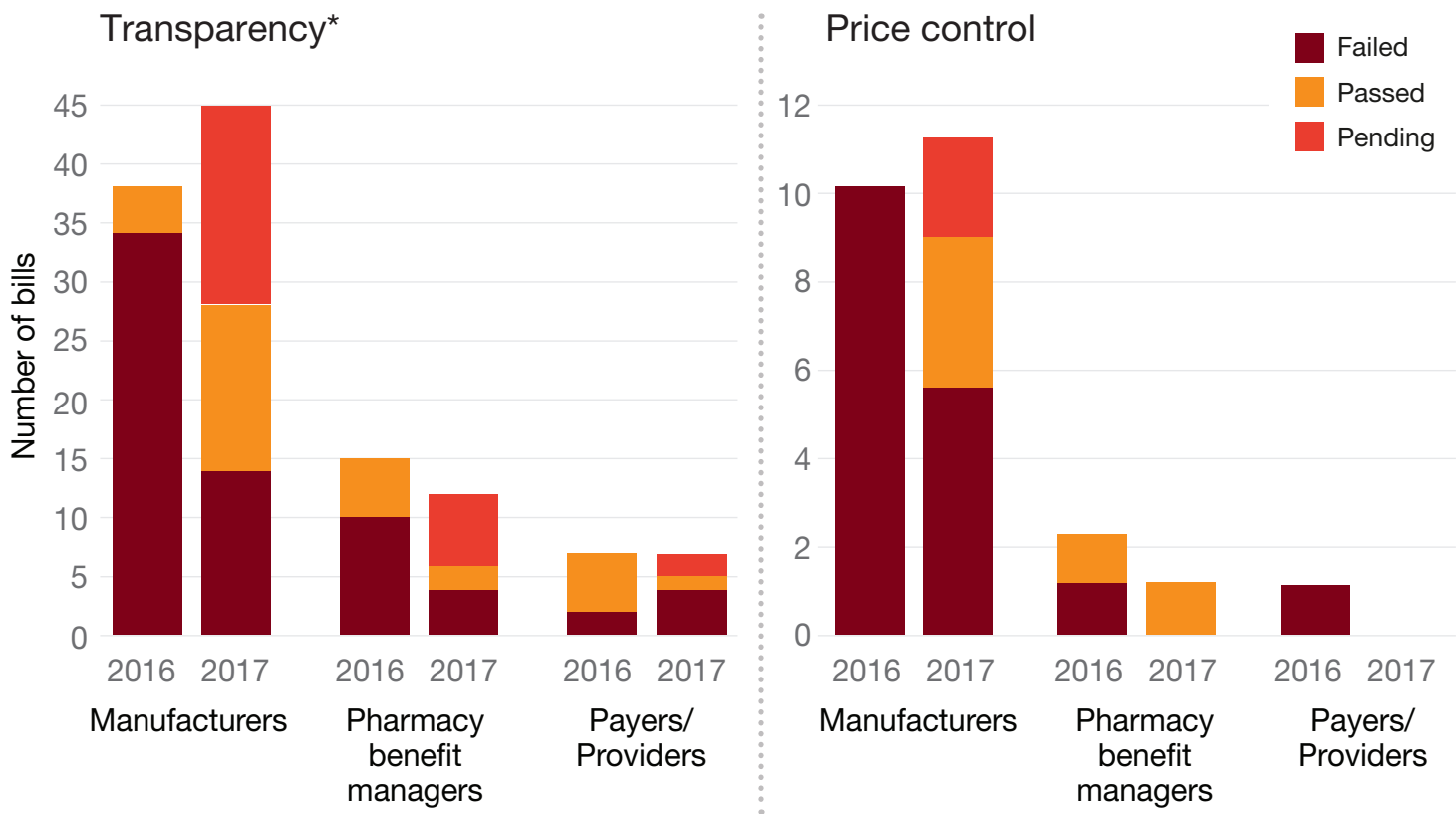
Several states are instituting price controls and requiring more clarity on hospital costs. Successful initiatives in Maryland, New York and Vermont are changing not only the states' approach to drug transparency but also the responsible parties' responses.<sup>21</sup> Likewise, Florida's patient's bill of rights laws passed in 2016 entitles patients to information about treatment costs.<sup>22</sup> Not all measures pass, of course. A ballot measure that would have restricted state spending on drugs in Ohio was resoundingly rejected by voters.<sup>23</sup> A similar measure was defeated in California in 2016.<sup>24</sup>



Massachusetts has considered taking an entirely different approach to pricing controls in asking the Trump administration for permission to allow the state’s Medicaid program to refuse to pay for some drugs, citing rising costs of care and increases in the percentage of residents covered under commercial insurance.<sup>25</sup>

Maryland’s law presents a new kind of response, one likely to occur more frequently. The law directed the state to monitor price increases and sue manufacturers if it believed an “unconscionable increase” had occurred. In response, the Association for Accessible Medicines, a trade group for generic pharmaceutical companies, filed a lawsuit to block the state from enforcing the law.<sup>26</sup> The litigation is ongoing.

**Figure 4: State drug pricing and transparency legislation has gained traction in recent years**



\* Includes study orders

Source: PwC Health Research Institute analysis of data from CQ, National Academy of State Health Policy, National Conference of State Legislatures



# Implications

## Pricing is both a strategic and operational consideration.

Pricing decisions must be made strategically and with an eye toward consumer perception of brand and value. Without the expectation of value, set pricing may force manufacturers to readjust, as was the case when Sanofi provided discounts for one of its products after Memorial Sloan Kettering Cancer Center decided it wouldn't use the drug.<sup>27</sup>

## Manage legal and regulatory uncertainty.

With regulations varying from state to state, manufacturers and payers must contend with a complex environment. They should track each state's requirements so they can navigate regulations, strategically decide which environments to do business in, and figure out whether legal responsibilities allow flexibility.

## Forces other than legislatures will influence future regulations.

States are exploring new ways to address transparency and price controls, placing measures on the public ballot or instituting legal challenges. This shift creates new alliances, such as consumer groups partnering with health insurers. Organizations that consider these new initiatives can form successful strategies.





## Issue 4

# Natural disasters create devastation that lasts long after the event passes

Natural disasters such as the hurricanes that battered Puerto Rico, Florida and Texas, and the wildfires that ravaged the western US, can wreak havoc on health systems and manufacturing operations. During a natural disaster, health systems face closure, chaotic revenue cycle operations, destroyed or damaged physical assets and displaced workforces and patients (see Figure 5). Once the event is over, systems face possible credit downgrades, reduced operations and capital limitations. Pharmaceutical supply chains can be disrupted by offline manufacturing operations, leading to product shortages, labor shortages and lab testing issues. Health systems and pharmaceutical companies with strategies at the ready can increase the pace of recovery and avoid making premature decisions that could do harm in the long term.

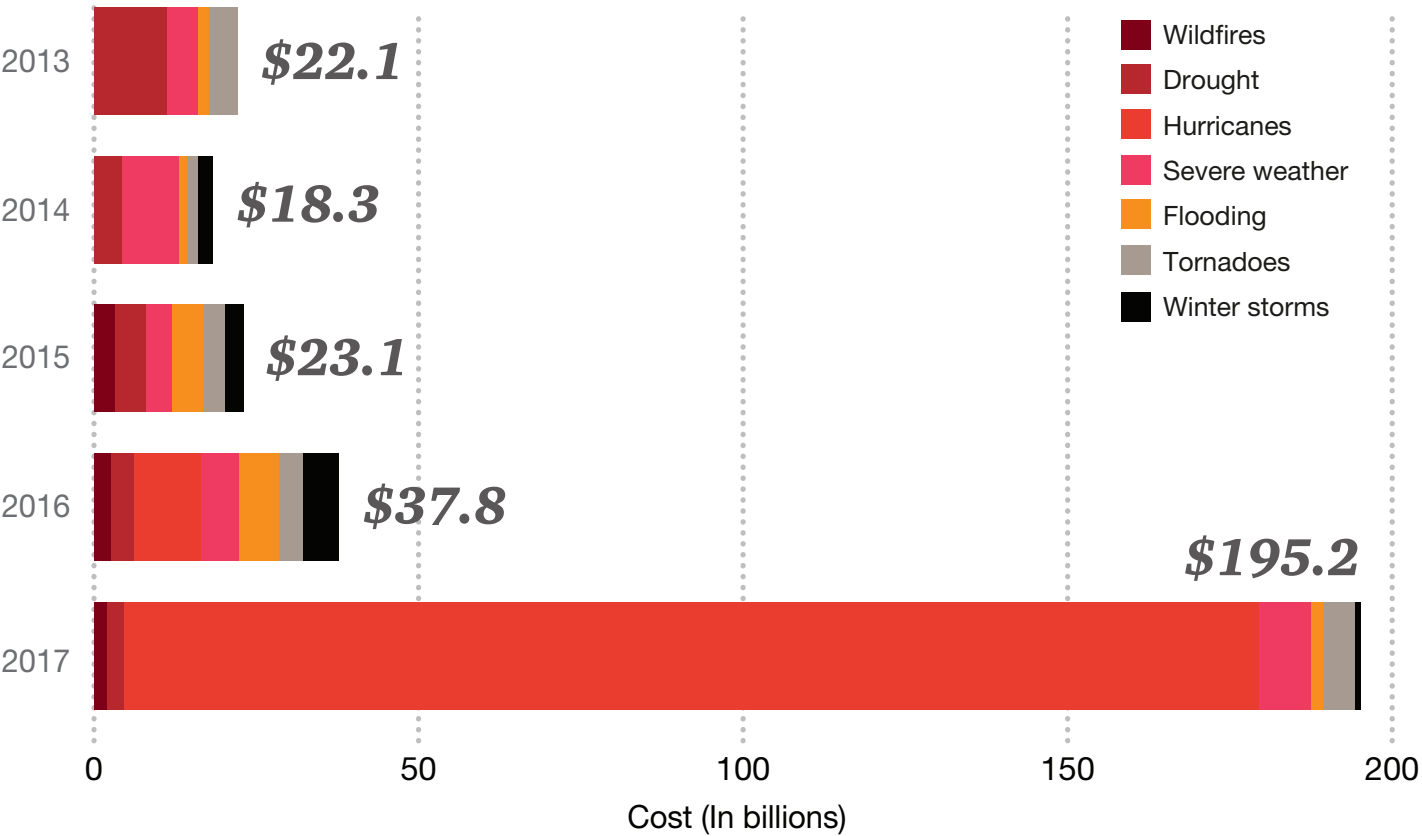
The physical results of disaster are often the most evident. Facilities may be abandoned because they're destroyed.<sup>28</sup> Damaged buildings and assets can become targets for theft.<sup>29</sup> Repairs can lag as claims move slowly.<sup>30</sup> Health systems can protect against significant damage by shoring up physical resources. After Tropical Storm Allison caused significant damage to Texas Medical Center in Houston, for example, the system built a network of submarine-style floodgates to protect physical assets. "Even though we had streets filled with water, none of our facilities were affected by [Harvey's] flooding," said Bill McKeon, president and CEO of Texas Medical Center, who credits the hospital's preparations for allowing operations to continue.<sup>31</sup>

Natural disasters can disrupt financial operations by delaying revenue cycle activities, though the effect can be mitigated. The CHRISTUS Health Southwest Louisiana system was able to avoid significant disruption because it had moved back-office functions out of state.<sup>32</sup> After Hurricane Sandy caused a drop in patient volume, NYU Langone Medical Center underwent a credit review. Thanks to planning, the system was able to quickly resume services, and its credit rating was maintained.<sup>33</sup>



Planning for clear lines of communication and altered care standards that occur when disasters lead to diminished resources can mitigate legal and reputational damage. Hospitals that do suffer damage must handle patient concerns about institutional viability and continuity of care. After Hurricane Katrina, over 200 lawsuits were filed against providers alleging liability for patients’ deaths and suffering.<sup>34</sup>

**Figure 5: Disasters have cost the US between \$18 billion and \$200 billion each of the last five years**



Source: HRI analysis of data from National Oceanic Atmospheric Administration<sup>35</sup>



# Implications



## Bolster physical and emergency resources.

Consider taking extra measures to protect the physical plant and keep care going, such as placing power generators and other critical systems in an underground concrete location or placing backup systems in nonvulnerable regions. Have a virtual backup to traditional services, understanding that virtual care can provide medical assistance in the event of damaged facilities. Remember that disasters can cause population shift, so consider capital planning carefully. Evaluate any insurance policies, including coverage, period of indemnity, limitations and deductible to ensure they meet the consequences of a major event.



## Conduct scenario planning well in advance.

Determine current levels of resilience and start planning for what comes next. Prepare for a potential loss of market share in the wake of serious damage, and consider the impact of a credit rating downgrade should the facility not have the same population makeup after a major event. Hospitals should aim for ample days of cash on hand to remain financially stable during and after a disaster.



## Have a public relations plan.

Form a plan to handle the disaster's aftermath with patients, employees, insurers, vendors, credit rating agencies, and investors and creditors as critical audiences. Plan to combat negative or false information on social media during and after a disaster, as patients and employees may be scared off. Establish positions that will allow for growth and prove immune to a disaster's effects, such as regular community engagement events or patient-family advisory councils.





## Issue 5

# Medicare Advantage swells in 2018

Opportunity for health insurers in Medicare Advantage—the private alternative to government-offered Medicare—will expand in 2018 as more Baby Boomers reach age 65.<sup>36</sup> But mounting pressure to deliver on government quality ratings and gain operational efficiencies may squeeze some insurers out of the market. With more potential customers, competition among insurers in Medicare Advantage is intensifying. That means health plans must make smart strategic investments in customer experience designed to appeal to a growing population of tech-savvy seniors.

In 2017, more plans entered the market than exited, but new customers are flocking to plans with proven track records that cater to their individual needs.<sup>37</sup> CMS assigns Medicare Advantage plans an annual ranking of one to five stars based on quality and performance. In 2014, 52 percent of Medicare Advantage enrollees were in the highest-rated plans with four or more stars; in 2017 that rate had increased to 68 percent.<sup>38</sup>

Medicare Advantage is projected to cover nearly 21 million people in 2018, a 5 percent increase over 2017.<sup>39</sup> To win new members and achieve the highest star rating, plans will have to provide a high quality customer experience. Executives of Medicare Advantage plans surveyed by HRI indicated that consumer demands and expectations, along with consumers and providers taking on more risk, would have the greatest impact on how they do business in the next five years.<sup>40</sup>

“Experience is going to be more and more important going forward,” said Kurt Small, president of government markets at Blue Cross and Blue Shield of Minnesota. “What members can handle and digest today is different from what they could five years ago. For instance, Baby Boomers aging in are technologically literate. They’ve been buying groceries online and shopping on Amazon.” According to HRI’s consumer surveys, older adults are increasingly willing to use digital health services (see Figure 6).

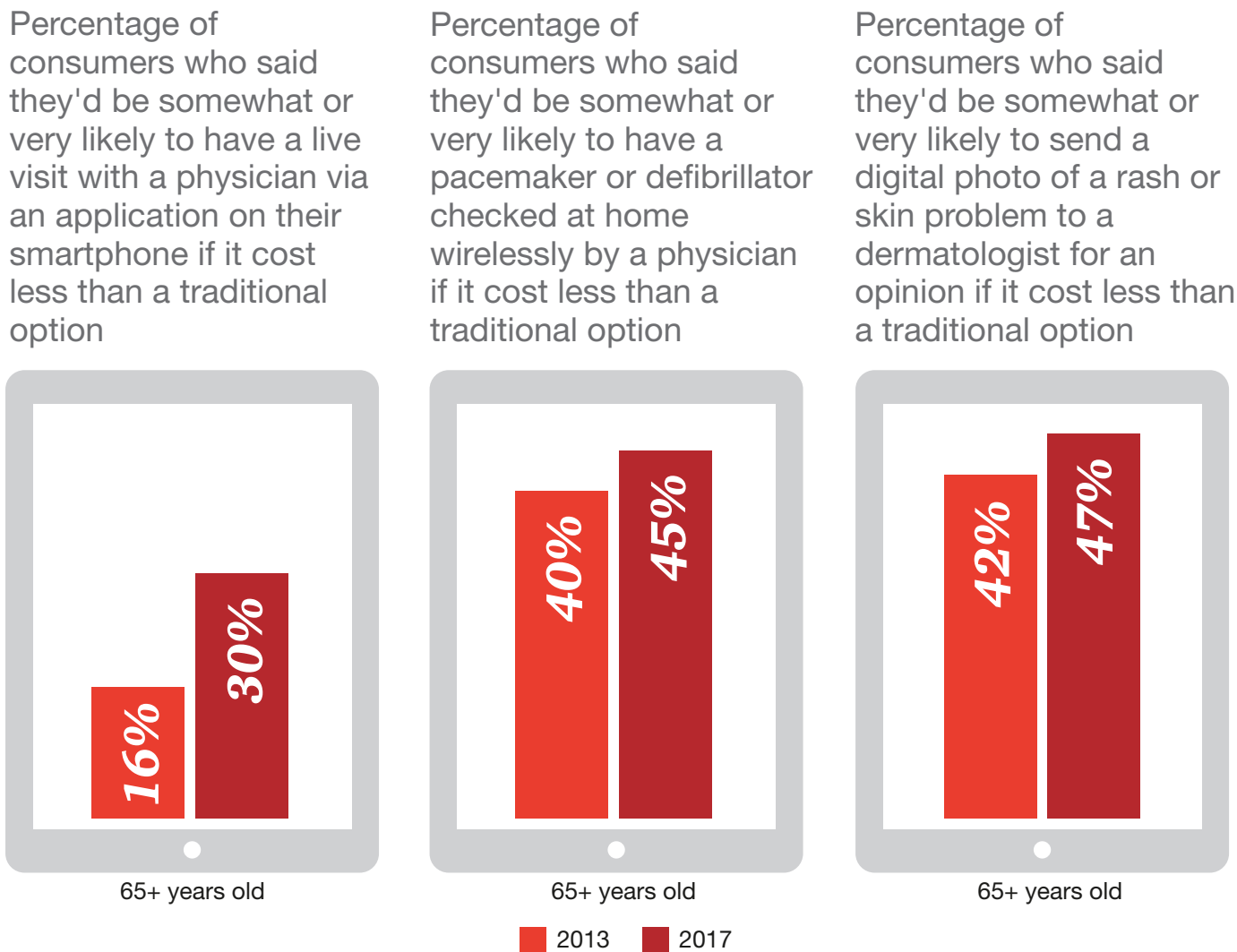


Humana is already taking advantage of this shift in preferences. The insurer has teamed with San Francisco-based digital behavioral medicine company Omada Health to deliver an online health program that combines education, coaching and health monitoring for its Medicare Advantage members at high risk of developing diabetes. A year in, members enrolled in the program interacted with the digital platform an average of 19 times a week and had seen meaningful improvements in health, losing an average of 7.5 percent of their body weight.<sup>41</sup>

Humana also is thinking about how to better engage its Medicare customers by focusing on their social needs, addressing issues like access to safe and nutritional food and fostering optimism, the latter of which has been linked to an increase in healthy days.<sup>42</sup> CareMore, a subsidiary of Anthem Inc., is taking a similar approach, which has resulted in a partnership with the ride-sharing company Lyft to give patients nonemergency medical transportation, using a chief togetherness officer to combat social isolation, and making an alliance with a fitness center geared to older adults.<sup>43</sup>

With these investments, CareMore’s benefits cost the government less than traditional Medicare benefits do, and its members have had fewer hospital admissions and shorter lengths-of-stay.<sup>44</sup>

**Figure 6: US consumers 65 and older are increasingly willing to use digital devices at home and visit with doctors virtually**



Source: PwC Health Research Institute Consumer Surveys, 2013 and 2017



# Implications

## Design products locally.

Delivering a high-quality member experience starts by offering health plans tailored to individuals' needs at the community level, such as managing certain conditions, and preferences, such as a desire to see clinicians virtually. Insurers should survey how local members value different plan features, then shape products accordingly—for example, balancing premiums with access to preferred providers, and deploying holistic care models that target prevalent health risks in a community, like diabetes.

## Invest in consumers early.

Turnover in Medicare Advantage is relatively low, making it important for health plans to capture members early through analytics-driven marketing that targets messages based on geography and channel.<sup>45</sup> With computers being seniors' most preferred platform to research and choose health insurance, insurers should prioritize easy-to-use websites.<sup>46</sup> Health insurers also should take advantage of social media platforms, which seniors increasingly use.<sup>47</sup> Companies should educate older adults about Medicare Advantage before they turn 65. Only 28 percent of consumers ages 50 to 64 surveyed by HRI said they were familiar with Medicare Advantage.<sup>48</sup>

## Be prepared for greater scrutiny.

The federal government is ramping up reviews of Medicare Advantage plans.<sup>49</sup> To avoid penalties, health insurers should manage risk by focusing on members, paying particular attention to services such as timely member notifications, an adequate network, and up-to-date provider directories. They also should establish codes that accurately describe members' conditions, and they should make sure doctors know the coding system.





## Issue 6

# Health reform isn't over, it's just more complicated

Congress failed to repeal and replace the ACA through a single piece of legislation in 2017, but the Republican party likely will continue to pursue health reform in 2018 through a more fragmented approach.<sup>50</sup> Already, the White House, administration officials and Republican lawmakers have used executive orders, rule-making, CMS waivers, federal appropriations, tax reform and the courts to roll back or transform parts of the 2010 law.<sup>51</sup>

2018 likely will bring continued efforts to reduce and cap federal Medicaid spending, expand access to lower-premium health insurance, loosen ACA consumer protections, soften the individual and employer mandates and repeal ACA taxes and fees (see Figure 7).

Health leaders should prepare for a year characterized by continued policy changes and ongoing uncertainty. A rise in the uninsured rate could apply more cost pressures on the industry—from providers to insurers to pharmaceutical and life sciences companies—eroding gains made through other transformation efforts. To succeed in such an environment, health organizations—especially healthcare providers and insurers—should develop greater agility, efficiency and resilience while building a sophisticated understanding of how changes to federal and state health policy might affect them.<sup>52</sup>

The health reform change with the most potential for disruption likely would be an eventual transformation in federal spending on Medicaid, including significant cuts, along with greater variability in how states administer the program, according to modeling by HRI and PwC's strategy practice, Strategy&.<sup>53</sup> All five of 2017's repeal and replace bills proposed unwinding the ACA's Medicaid expansion and restricting federal spending on the program.



While significant funding cuts are not expected in 2018, Republican congressional leaders and administration officials have indicated they are still interested in pursuing changes to the Medicaid program in 2018 through legislation and regulatory actions.<sup>54</sup> Rolling back the Medicaid expansion and introducing a block grant system could reduce federal spending on the program by up to \$800 billion over 10 years, according to analyses of repeal and replace legislation by the Congressional Budget Office and the Joint Committee on Taxation.<sup>55</sup> In November, CMS laid out streamlined processes for applying for Section 1115 demonstration waivers, which allow states greater flexibility in administering the program.<sup>56</sup> CMS also is encouraging states to adopt work requirements and other eligibility restrictions through these waivers.<sup>57</sup>

Key decisions will be made in state capitals. Faced with federal funding cuts, state lawmakers likely would have to weigh whether they want to focus on delivering services more efficiently, spend more state money to fill the funding gap, cut optional services, restrict eligibility requirements or some combination of these options.<sup>58</sup> Absent cuts, state lawmakers and bureaucrats still will weigh whether they will seek program changes through waivers.

Many of the health reform changes being discussed in Washington involve giving states more freedom to shape how healthcare is funded and delivered within their borders. The US departments of Labor, Treasury, and Health and Human Services are engaged in rule-making to expand access to association health plans and short-term, limited-duration health coverage, both of which are exempt from some ACA provisions.<sup>59</sup> The plan types available in each state would be molded locally, with implications for insurers and providers, which could eventually see patients with coverage similar to the “mini-med” plans sold before the ACA.<sup>60</sup>

A constantly shifting health policy landscape produces uncertainty. St. Louis-based Ascension, a faith-based provider that operates in 22 states, is focused on improving, said Nick Ragone, senior vice president and chief marketing and communications officer. “We’re less focused on the minutiae of different legislative proposals,” Ragone said, “and more focused on what we’re doing to integrate ourselves and help the health system to be really nimble, really flexible and really be patient- and consumer-friendly.”



These health reform challenges are an opportunity to think about making strategic investments. Progressive health systems may choose to make bold moves in this unsettled moment as their competitors freeze. Now is the right moment to engage with local regulators, communities and even competitors on public health topics such as social determinants of health, opioid abuse and disaster planning as a key part of an overall value-oriented public policy stance.

**Figure 7: Health reform in 2018 means taking many different routes to achieve a portfolio of goals**

Health reform goal	2017 approach	2018 approach	2018 entities	Most affected
Reduce and cap federal Medicaid spending, including ACA Medicaid expansion	Repeal and replace legislation	Reduce spending through budgetary process and granting of CMS Section 1115 waivers; create block grant or per capita system for federal funding through federal legislation	US President Congress HHS State lawmakers	Healthcare providers in the 32 states that expanded Medicaid under the ACA, especially those with high Medicaid exposure, could see cuts to reimbursements, reduced reimbursable services or a rise in uninsured patients
Expand consumer choices for health insurance	Repeal and replace legislation	Expand access to association health plans and short-term limited duration insurance through rule-making process, Section 1332 waivers	HHS Labor Treasury State lawmakers	Healthy shoppers on the individual market could find cheaper premiums; insurers may benefit from sales of a wider variety of plans. Older individuals who earn too much to receive ACA premium tax credits could face much higher premiums for ACA exchange plans
Soften ACA individual and employer mandates	Repeal and replace legislation	Loosen enforcement of mandates	IRS Congress	Consumers and businesses that wish to go without health insurance, or cannot afford it
Expand use and usability of health savings accounts (HSAs)	Repeal and replace legislation	Expand HSAs through tax reform or other legislative measures	US President Congress	Financial services firms could benefit if HSAs are made more attractive and take off with consumers; consumers with the money to invest in them also could benefit
Repeal ACA taxes and fees	Repeal and replace legislation	Repeal select ACA taxes and fees through tax reform	US President Congress	Medical devices-makers; repealing the excise tax on nonretail medical devices, supporters on both sides of the aisles of Congress

Source: PwC Health Research Institute



# Implications



## Focus on state capitals.

State lawmakers and policymakers likely will make critical decisions if many health reforms are enacted. This conforms with a broader trend toward state autonomy in healthcare policy that has gained momentum over the last year. Health organizations, particularly those doing business in multiple states or with customers in multiple states, should consider beefing up compliance and local advocacy efforts.



## Scenario plan.

In an unsettled policy environment, health organizations should focus on understanding how potential policies would specifically affect their business projections, and construct volatility ranges for those policies. They should work to understand fixed costs and federal and state policy decisions' impact on margin.



## Slim down costs.

Health organizations should work to understand their costs, determining what it truly costs to achieve a particular health outcome. Many health organizations struggle with allocating overheads; the more progressive ones have moved to activity-based costing. Another benefit of understanding the cost is more precise and defensible pricing in the era of increased scrutiny.

Health organizations also should attempt to standardize costs by studying the variability in the cost of delivering a health outcome and then seeking to eliminate it through evidence-based medicine, standardization and automation. Finally, health organizations should consider examining their fundamental cost structure and optimizing their portfolios to free up or fill up stranded capacity” and become more fit for growth.



## Diversify.

Health organizations should revisit or consider businesses that are tightly tied to the ACA repeal/replace debate. For example, for payers, this might mean considering avenues such as workers' compensation, voluntary insurance, or provider enablement or group member advocacy.





## Issue 7

# Securing the internet of things

Internet-connected medical devices are holding the health system together—playing critical roles in such tasks as patient care, medical records and billing—but each connected device is a potential door for cybercriminals. Following a year marked by major, industrywide cybersecurity breaches and a 525 percent increase in medical device cybersecurity vulnerabilities reported by the government, hospitals must take quick, decisive action to maintain data privacy, secure connected medical devices and protect patients (see Figure 8).<sup>61</sup>

Hospitals have become a popular target for so-called “ransomware” attacks, such as WannaCry, in which intruders gain access to files, encrypt them and demand payment in cryptocurrency in return for access to the files.<sup>62</sup> In 2017, at least two US hospital systems experienced problems after being hit by WannaCry,<sup>63</sup> and 16 hospitals in the UK were unable to access internet-connected devices.<sup>64</sup> PwC’s Global State of Information Security Survey (GSISS) found that 16 percent of all providers and payers suffered a ransomware attack in 2016.<sup>65</sup> Eleven manufacturers of medical devices issued warnings about the potential for the WannaCry event to affect their devices, and several were confirmed to have been affected.<sup>66</sup>

Many hospitals have thousands of medical devices connected to their networks.<sup>67</sup> Some, lacking purchasing controls or strict networking rules, don’t even know how many such devices they have, let alone how secure they are. PwC’s GSISS survey found that just 64 percent of providers and payers said they have performed a risk assessment of connected devices and technologies to find potential security vulnerabilities, and only 55 percent of those said they have put security controls in place for these devices.<sup>68</sup>

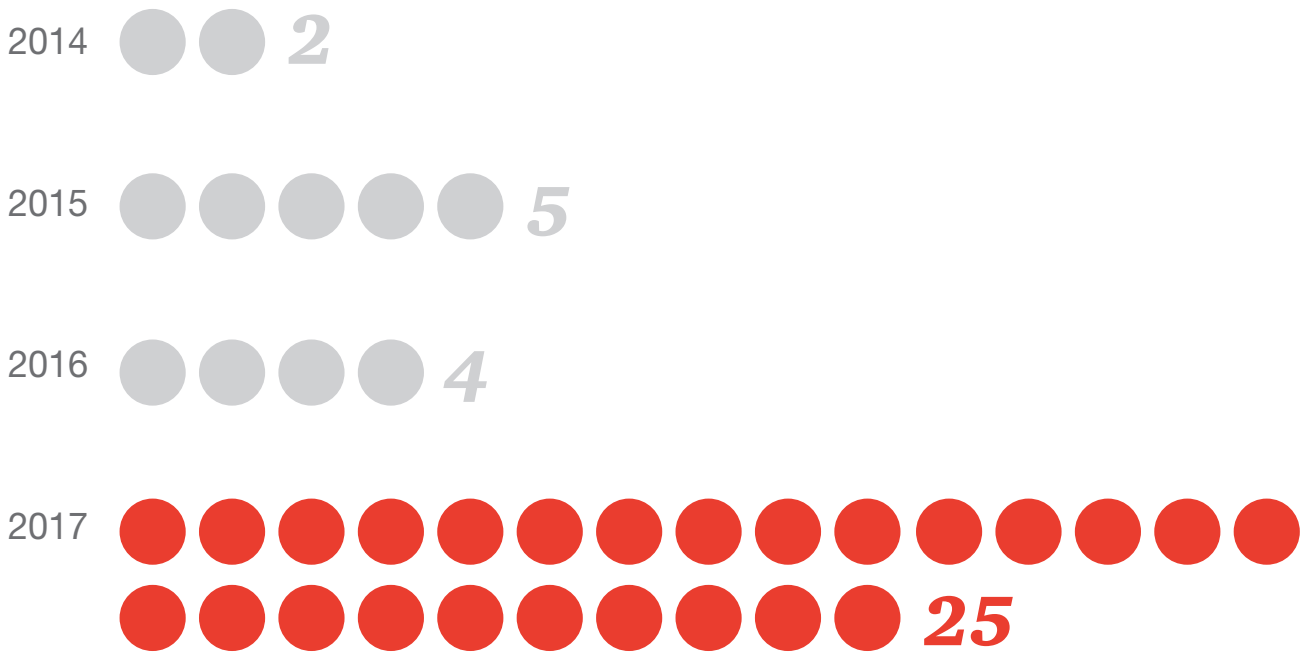


Staff training, too, remains a critical problem. Only 31 percent of healthcare payers and providers plan to train their employees on security practices for the internet of things this year.<sup>69</sup> Another 31 percent say they plan to establish policies for internet-connected devices this year.<sup>70</sup>

“Everyone is rethinking their security practices in the wake of WannaCry,” said Chantal Worzala, vice president of health information and policy operations at the American Hospital Association. The problem, she said, is that “hospitals literally deploy thousands of devices, and trying to remediate all of those devices is a pretty daunting challenge in the heat of the moment if there’s a cybersecurity attack. This is particularly true when many device companies do not provide information about potential vulnerabilities or updates and patches to fix vulnerabilities.”

Another problem is that regulators can be slow to alert the public. It took more than a year for the FDA to issue a warning about a critical device vulnerability after researchers discovered it in late 2014.<sup>71</sup>

**Figure 8: Device vulnerabilities are being reported at record rates**  
Medical device cybersecurity vulnerabilities reported by the Department of Homeland Security’s Industrial Control Systems Cyber Emergency Response Team, by year



Source: PwC Health Research Institute analysis of Department of Homeland Security ICS-CERT security publications. Data current as of Sept. 25, 2017



# Implications



## Hacks are like a “non-natural” disaster.

Hospitals and life sciences companies should prepare for cybersecurity incidents to happen more often and invest in the planning, defensive measures and personnel required. They can do so by preparing as they would for a natural disaster. They should create and test cybersecurity breach and remediation plans. Facilities should be prepared to respond if their devices go down, or even if they suspect that their network has been breached. And they should create business continuity plans that are accessible offline.



## Understand the risks to your organization.

Security failure can mean devices rendered inoperable, critical patient records being stolen or unavailable, and even facilities being shut down as a precaution. The financial and reputational cost of a breach affecting patient health can far exceed the lost revenue from business disruption. Twenty-six percent of consumers affected by a hacking incident say they’ve decided to change doctors, hospitals, insurers or medical organizations because their medical information had been stolen in a hacking incident.<sup>72</sup> Thirty-eight percent say they would be wary of using a hospital associated with a hacked medical device.<sup>73</sup> The increasing use of connected devices in EHR systems means companies’ value-based payments also could be at risk if there’s concern about the collected data’s integrity.



## Providers should strategically consider how they manage internet-connected devices.

Cybersecurity risks can be managed using a layered approach, including limiting who has access to devices and limiting what the devices can do. While 95 percent of provider executives think their practice is secure against cybersecurity threats, just 36 percent of providers and payers have access management policies in place, and 34 percent have a cybersecurity audit process in place.<sup>74</sup> Many companies also lack in-house cybersecurity expertise and will need to find it externally. Companies can also use language in vendor contracts to establish what device manufacturers are responsible for, including security updates and security support. The Mayo Clinic, for example, requires its vendors to adhere to security standards before Mayo will purchase their products.<sup>75</sup>





## Issue 8

# Patient experience as a priority and not just a portal

Healthcare providers have succeeded in making administrative tasks easier and more convenient for patients.<sup>76</sup> Patients can pay bills online, and they get appointment reminders by email or text (see Figure 9). But 2018 will be about making significant strategic investments in patient experience so it changes behavior and improves outcomes—a critical goal as the industry turns toward paying more for value, not volume.<sup>77</sup> Some healthcare organizations also will begin to use patient experience to differentiate themselves in the market.

Forty-nine percent of provider executives said revamping the patient experience is one of their organization's top three priorities over the next five years. Many already have or are building the role of chief patient experience officer. In a few organizations, including Texas Health Resources (THR) in Dallas-Fort Worth, this position reports directly to the CEO.

Delivering a better experience pays in CMS' new value-based payment scheme under the Medicare Access and CHIP Reauthorization Act (MACRA). Provider reimbursements will be based in part on patient engagement efforts such as promoting self-management and coaching patients between.<sup>78</sup> But organizations have traditionally built patient experience efforts around the industry's satisfaction surveys and measured performance based on satisfaction scores, service volume and revenue. Though they're important, these measurements don't get to the root of what patients value most or what motivates them to get and stay healthy.<sup>79</sup>

Just as retailers have harnessed data's power to understand consumer behavior, healthcare organizations must obtain a 360-degree view of patients to engage them—and get a return on their investments. “An ability to derive meaningful information from linking disparate data about patients becomes a differentiator for an organization in a competitive market,” said Winjie Miao, executive vice president and chief experience officer at THR, who also is handling THR's systems integration efforts.

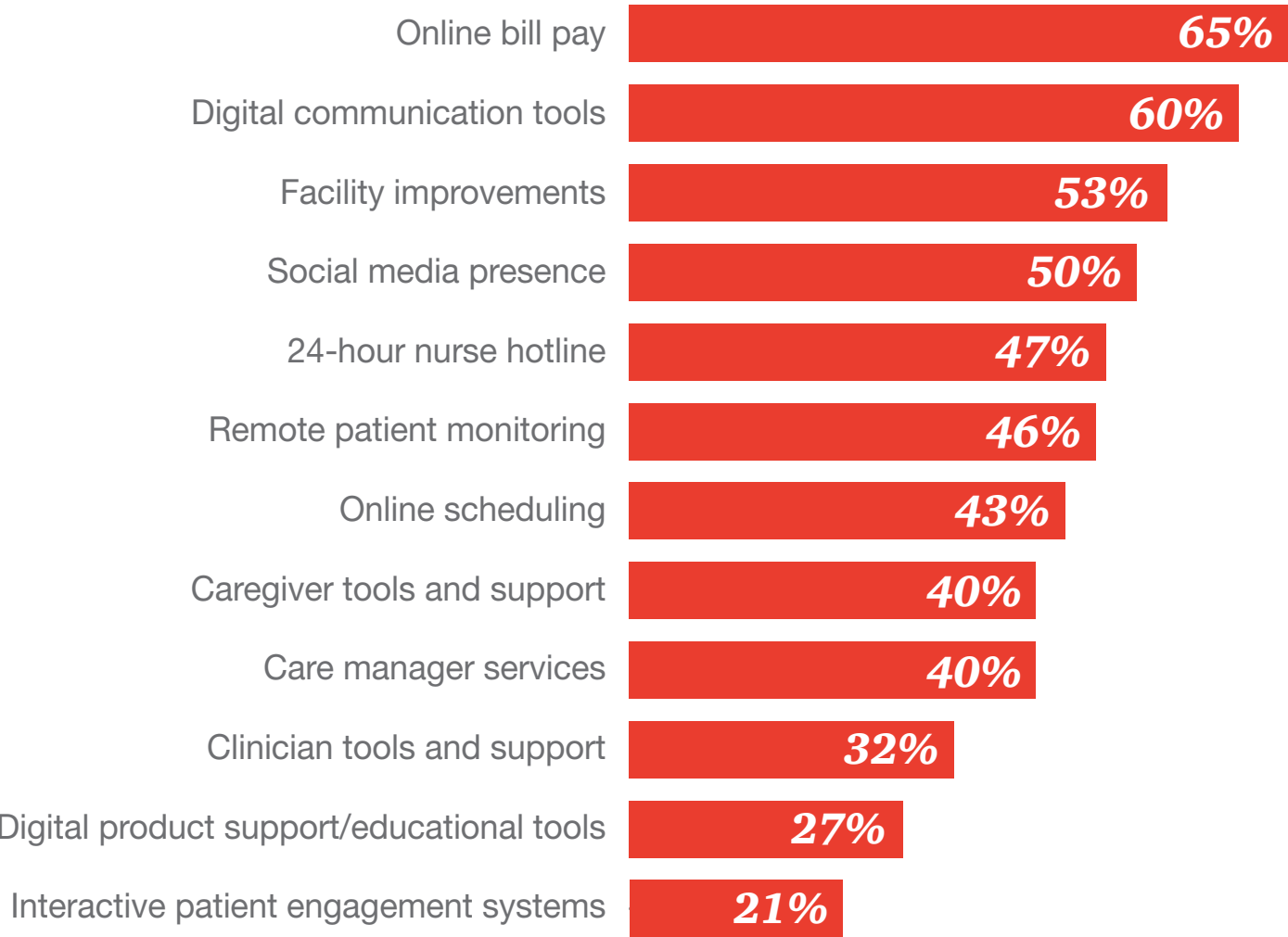


Measures that can help organizations understand patients more completely include supplementing demographic profiles with information on the preferences and social circumstances that shape patients’ everyday health decisions. These include cultural values, work and home commitments and neighborhood dynamics. Accolade, a company that helps employees and health plan members navigate the health system, uses machine learning to find patterns in the information patients provide and use that knowledge to predict behaviors.

Eighty-eight percent of insurers are investing in technology to improve the member experience. Humana’s analytics, for example, can predict a member’s fall risk and help create interventions. “These members might not have ventured outside of their home independently before, because they feared they would have a fall,” said Vipin Gopal, Ph.D., enterprise vice president of clinical analytics at Humana. “But now they go out because they have the confidence that someone will be alerted immediately if they do fall, giving them mobility and much needed sense of security.”

**Figure 9: Healthcare providers are investing in a number of services to enhance patient experience**

Which of the following services to enhance patient experience does your organization currently offer?



Source: PwC Health Research Institute Provider Executive Survey, 2017



Patients generate reams of data about their lives through wearables, pharmaceutical apps and spending habits. But providers say they lack the data to understand different patient segments and struggle to aggregate data from multiple sources. 2018 could be the year the health sectors rally around the patient experience by filling each other's missing links.

## Implications



### Make every interaction count.

Connect data points across and beyond the organization to understand how the patient's experience fits into your business. "Improving overall patient experience will require strong organizational strategies around bringing in disparate data sets, governing them, establishing ownership, and utilizing them to provide real-time, actionable information about the patient," THR's Miao told HRI. This includes connecting experience measures to utilization data to help organizations bring dissatisfied patients back, and to help focus investments on services that will increase patient satisfaction.



### Invest in patient experience tools with operating models.

Educate patients and clinicians on how to use the tools; integrate them into care; and manage the data they generate. "As a physician, I need a framework so that I'm not putting more burden on my patient to use yet another device or take yet another action," said Dr. Ivor Horn, chief medical officer at Accolade. "We have to consider how we can use tools that fit into the life flow of the consumer, in a way that works for them and creates an experience they want. It shouldn't be about how the consumer fits into our process."



### Marry workforce and patient experience.

Seventy-three percent of provider executives say balancing patient satisfaction and employee job satisfaction is a barrier to efforts to improve the patient experience. But the two have the potential to go hand in hand. The Cleveland Clinic saw major improvements in patient experience measures after conducting programs to engage employees in the mission of caregiving.<sup>80</sup>





## Issue 9

# Meet your new coworker, artificial intelligence

Artificial intelligence (AI) already is disrupting transportation, marketing and financial services, among other sectors. In health, this technology is gaining momentum and has the potential to significantly alter the industry, from the exam room to the back office to the supply chain. In fact, healthcare's back offices and supply chains are where AI is gaining traction now, generating quiet efficiencies that don't garner the same headlines as visions of virtual physicians and robotic nurses but have profound potential to disrupt the industry.

Health businesses are using AI to automate decision-making, create financial and tax reporting efficiencies, automate parts of their supply chains, or streamline regulatory compliance functions. Tax functions in particular stand to benefit from artificial intelligence and robotic process automation (RPA) to simplify and automate processes once done exclusively by humans, such as interpreting, deciding, acting and learning.

For example, companies can use AI/RPA to determine an entity's tax filing status, analyze the potential tax impacts of changes to accounts, help prepare and review tax returns, calculate tax rates, identify items that could be fraudulent or trigger an audit, and help respond to an audit if it does occur.<sup>81</sup> Some processes may be more easily automated than others, but even partial automation can help employees make better use of their time and expertise.

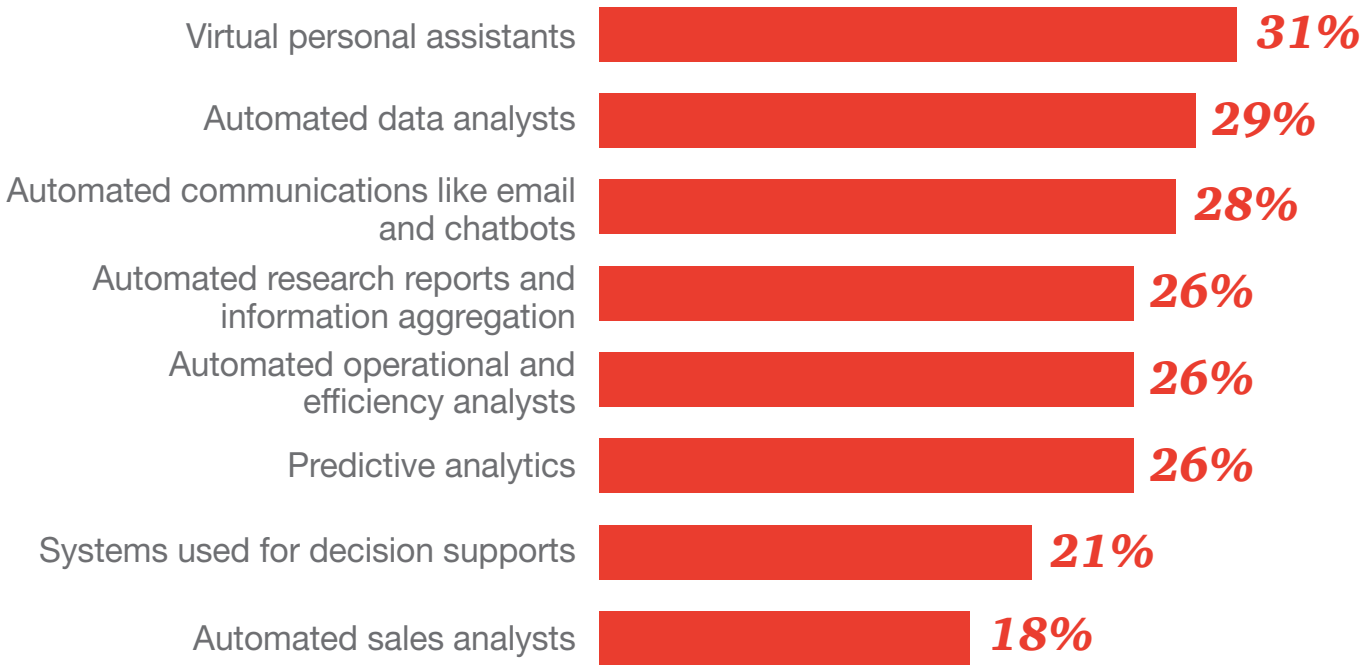
Repetitive tasks in particular may benefit from the introduction of AI and machine learning to replace or supplement human interaction. AI doesn't forget, tire, get bored with tasks or develop carpal tunnel syndrome. Healthcare providers can leverage AI tools to help their staff analyze routine pathology or radiology results more quickly and accurately, allowing them to see more patients and realize greater revenues.<sup>82</sup> Companies such as Boston-based Cogito Corp. are using AI to help health insurers better understand and respond to customers who contact their call centers, making those businesses more effective and efficient. A pharmaceutical company could use AI to automate the intake, analysis, follow-up and reporting of adverse event reports associated with their drugs.



Medical product development also can benefit from AI. The R&D process for new drugs is exceedingly slow and expensive, with some products taking more than a decade to obtain FDA approval after being discovered and costing \$1 billion to develop. And that’s if a company gets approval. Several companies are trying to turn this paradigm on its head, using AI tools to better identify which compounds are likely to succeed based on early-stage clinical data.

“We identify drugs that are stuck in the pharma traffic jam,” said Dan Rothman, chief information officer at Roivant Sciences, a Basel, Switzerland-based global pharmaceutical company using AI to assess drug candidates abandoned by other companies and bring them to market. “AI gives us a higher probability of obtaining success, even if we have some failures. It gives us more ‘at bats.’ There’s a lot of value to be found in making the drug development process more efficient.” Roivant isn’t alone. Other companies, such as UK-based Exscientia, are using their AI drug discovery platforms to partner with major pharmaceutical companies like GSK and Sanofi to target specific disease areas (see Figure 10).<sup>83</sup>

**Figure 10: Business leaders think AI can have a large impact on their business**



**39%** of provider executives say they’re investing in AI, machine learning and predictive analytics.

Source: PwC Health Research Institute analysis of PwC Bot.Me: A revolutionary partnership, PwC Consumer Intelligence Series survey, 2017, and PwC Health Research Institute Provider Survey, 2017



# Implications



## Use AI to augment and supplement your workforce.

Employees function best when they're able to practice at the top of their license or abilities. If AI tools help with or handle repetitive tasks, employees can focus on more important tasks, working smarter instead of harder. Business executives told PwC they hope to be able to automate tasks such as routine paperwork (82 percent of respondents), scheduling (79 percent), time sheet entry (78 percent) and accounting (69 percent) with AI-enabled tools.<sup>84</sup> These investments are already underway. Thirty-nine percent of provider executives told PwC they were investing in artificial intelligence, machine learning and predictive analytics.<sup>85</sup>



## Data are crucial to AI success.

An AI tool is only as good as the data it uses for decision-making. Companies should invest in finding, acquiring and creating good data, standardizing it and checking it for errors. Companies should consider how their systems capture, collect, clean, integrate, enrich, store and analyze data. They should collect data in a way that allows it to be integrated with other relevant systems and in a way that allows questions to be answered.



## Partner to win.

Although three-quarters of health executives plan to invest in AI in the next three years, many lack the ability to implement it.<sup>86</sup> Just 20 percent of respondents said they had the technology to succeed with AI. Companies should consider ways to acquire these capabilities, including partnering with technology firms or hiring the right expertise.<sup>87</sup>





## Issue 10

# Healthcare's endangered middlemen

With frequent news about drug price hikes and hospital bills that bankrupt consumers, healthcare spending has become prominent in public and political discourse. Amid finger-pointing on rising costs, healthcare purchasers—including health insurers, employers and the government—are scrutinizing the industry's middlemen. In 2018, intermediaries such as PBMs and wholesalers will be pressed to prove value and success in creating efficiencies or risk losing their place in the supply chain.

As pharmacy costs have become the fastest growing component of healthcare spending, purchasers are examining pharma's intricate web of buyers and sellers.<sup>88</sup> According to HRI's analysis, stock values for five of the largest intermediaries in the pharmacy supply chain have slumped in the last two years as demands for lower costs and better outcomes have intensified (see Figure 11).

Pharmacy benefit managers have been criticized widely for opaque pricing and rebate practices.<sup>89</sup> In 2017, Anthem Inc. signaled that it's overhauling its PBM strategy, while Aetna Inc. called the traditional, standalone PBM model a "troubled relationship."<sup>90</sup> State legislatures are considering new laws that will require PBMs to disclose more pricing information.<sup>91</sup>

Wholesalers are suffering financially because of ongoing deflation in generic drug pricing and because manufacturers are limiting branded drug price increases in response to public and political pressure.<sup>92</sup> Because they typically receive a percentage of a brand name drug's price, wholesalers earn more whenever a manufacturer increases the drug's price.

Middlemen will have to reassert their value to avoid extinction. "It's not that purchasers don't value their relationships with intermediaries," said Mike Thompson, president and CEO of the National Alliance of Healthcare Purchaser Coalitions. "In general, where companies have stepped up and taken innovative approaches to move to value, purchasers have their back." Amazon has acquired wholesale



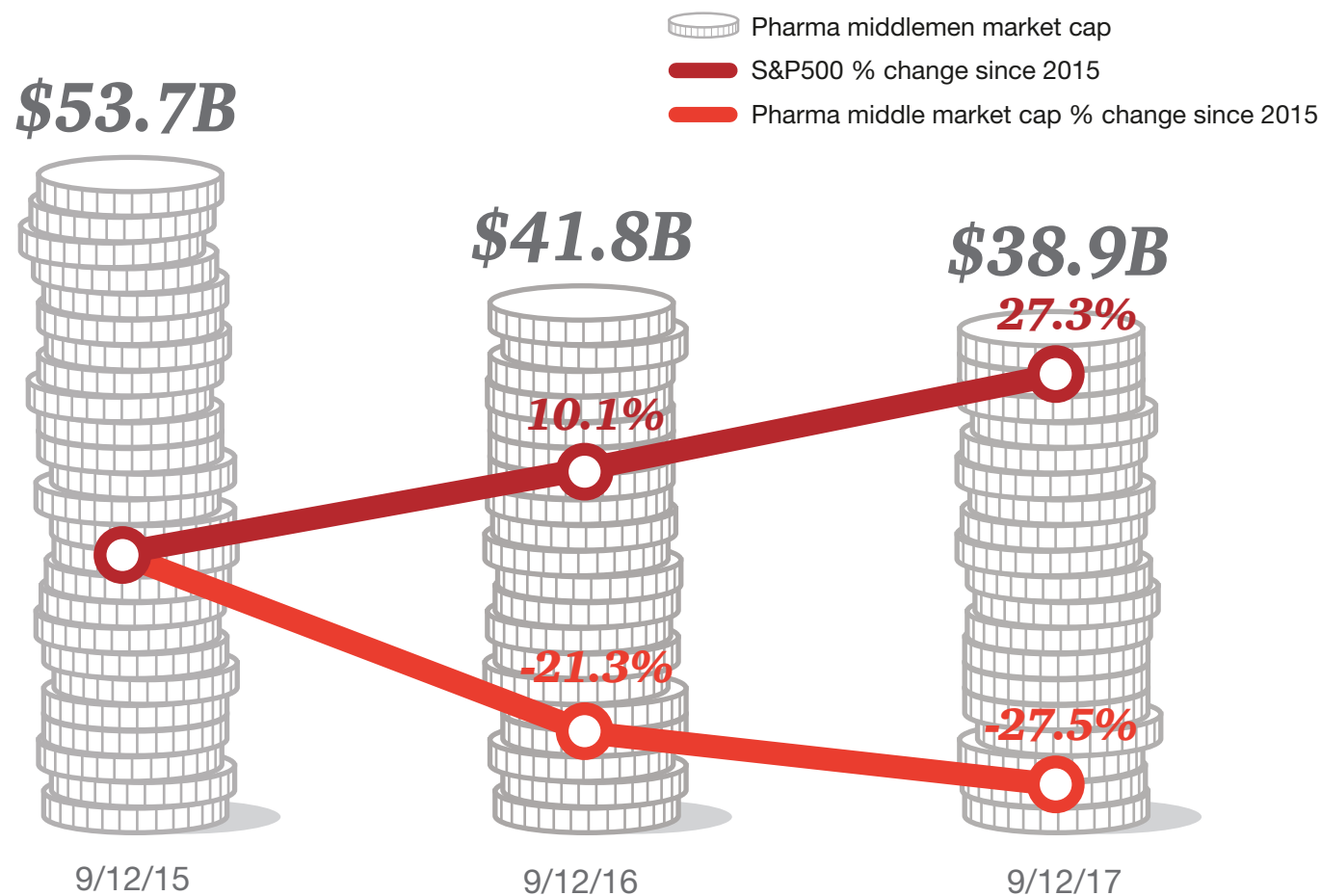
pharmacy licenses in 12 states, with at least one other pending, signaling a possible entry into the pharmacy business by the online retail giant.<sup>93</sup>

In an effort to reinvent their value, Prime Therapeutics LLC—a PBM owned by several Blue Cross and Blue Shield health plans—has created a combined specialty pharmacy and mail services company with Walgreens.<sup>94</sup> With a PBM, retail pharmacy chain and health plan working together, the alliance aligns economic incentives across the supply chain better, increases purchasing power to reduce the cost of goods, and enhances medical and pharmacy benefits’ integration.<sup>95</sup>

Industry newcomer EmpiRx Health, based in New Jersey, has an evidence-based clinical care management program in which pharmacists work with physicians to ensure patients get the most appropriate treatments.<sup>96</sup> Express Scripts announced in October that it will acquire South Carolina-based eviCore healthcare, an evidence-based medical benefit management services company, to fight overutilization and waste by making sure the right patients get the right treatments.<sup>97</sup>

Eschewing traditional payment models, some PBMs—including EmpiRx, Cigna Pharmacy Management and RxAdvance—also are moving toward value-based care, putting themselves at financial risk with guarantees on per member per month costs and using outcomes-based contracts with pharmaceutical companies.<sup>99</sup>

**Figure 11: While the overall economy has strengthened since 2015, stock market value for pharma’s middlemen has declined**



Source: PwC Health Research Institute analysis of two-year stock performance<sup>98</sup>



The quest for savings goes beyond the pharmaceutical sector. Twenty percent of employers are considering sidestepping health insurers to contract directly with a provider or accountable care organization in the next three years.<sup>110</sup> Providers recognize the opportunity. Seventy-seven percent of provider executives surveyed by HRI said bypassing insurers to contract directly with employers will be important to their organization's success in the next five years.<sup>101</sup> Companies like Texas-based Euphora Health and California-based Carrum Health are enabling this future with technological platforms that connect employers to top-performing providers directly.

## Implications

### Diversify how you provide value.

Healthcare intermediaries should evolve to be more than just a pass-through serving a contracting function. They should increase pricing transparency and take responsibility for more of the value chain. That includes holding manufacturers accountable for drug efficacy, driving population health by merging pharmaceutical and clinical data, and helping individual patients manage their care better. Doing so can help intermediaries secure their place in industry. Companies should look for ways to diversify their lines of business, building out capabilities for care management and data analytics on their own or through partnerships.

### Revisit contracts.

Healthcare purchasers should regularly re-evaluate contracts with industry middlemen. They also should demand greater transparency and prioritize models based on outcomes—which drive better clinical management—not merely seek the best price by volume.

### Consider taking on more risk.

Healthcare providers should take advantage of chances to work directly with purchasers, such as signing direct contracts with employers. They also could consider launching their own specialty pharmacies to offer more integrated patient care and create new revenue.





## Issue 11

# Real-world evidence a growing challenge for pharma

Changes at the FDA will prompt pharmaceutical and life sciences companies to take a hard look in 2018 at their ability to collect and use real-world data, which is patient health and outcomes data gathered outside of randomized controlled trials. As the 21st Century Cures Act takes effect, the industry may see new opportunities to use these data for faster, less costly FDA approvals and freer communication with payer formulary committees.<sup>102</sup> Some real-world data are already being collected as a byproduct of digital apps and wearables and through EHRs and claims databases.<sup>103</sup> But pharma companies' enterprisewide data capabilities are largely underdeveloped. Companies wishing to seize new opportunities and enjoy the resulting efficiencies will have to decide whether to build, acquire or outsource these capabilities.

The FDA routinely accepts real-world data for postmarket commitments such as safety monitoring but has not embraced them for new drug approvals or label revisions.<sup>104</sup> The 21st Century Cures Act of 2016 changed that, and a framework for applying the law to drug companies is expected by the end of 2018, with guidance to follow in 2021.<sup>105</sup> The act requires the FDA to consider additional uses of evidence drawn from real-world data for drugs and devices.<sup>106</sup> These include replacing clinical trials with "real-world evidence" to support new indications.<sup>107</sup> Companies generally need at least one Phase III clinical drug trial to gain approval for a new indication, with costs for a single trial approaching \$300 million in some cases.<sup>108</sup> The alternative presents a significant opportunity.

Other FDA guidance released this year about the communication of healthcare economic information is expected to loosen restrictions on the types of evidence pharma companies may use when negotiating with payers about drug pricing and formulary placement in value-based contracts.<sup>109</sup> This could create a heightened focus on increasing the number of patient registries, observational studies and patient-reported outcomes.

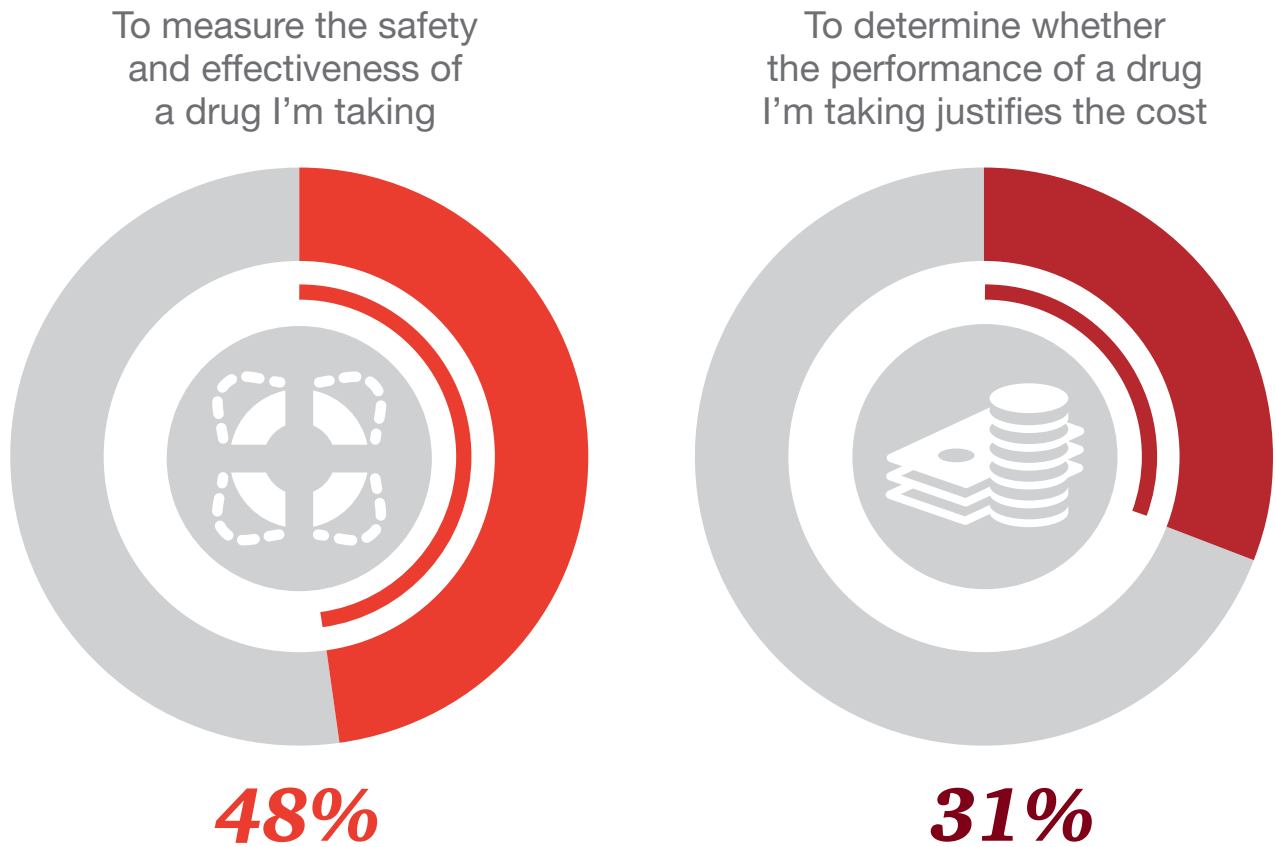


Medical device companies have begun taking advantage of the new flexibility.<sup>110</sup> In June, Edwards Lifesciences’ Sapien 3 transcatheter aortic valve replacement was approved by the FDA for additional uses based on real-world evidence.<sup>111</sup> Pharmaceutical companies should take lessons from the device sector—the FDA released final guidance on real-world evidence for that sector in August—but they likely will have a steeper climb. Drugs, for the most part, do not generate data the way many medical devices do. Healthcare providers and insurers hold the keys to claims, EHRs and wearables data necessary to understand how drugs are working outside of clinical trials.

While 82 percent of provider executives believe that data sharing with drug companies will be important in the future, past collaboration efforts have had problems. Providers have struggled with legal hurdles, and they fear data breaches. Pharma companies have expressed concern about EHR data quality and lack of data governance.<sup>112</sup> Also, gathering data from manufacturers is highly fragmented because they focus at a brand level. To complicate matters, consumer attitudes about sharing their data are split (see Figure 12).

**Figure 12: Consumers are more interested in sharing data to help measure the safety and efficacy of a drug than to help determine whether its price is justified**

For what purposes would you be comfortable having your medical and health information shared among healthcare organizations?



Source: PwC Health Research Institute Consumer Survey, September 2017



Real-world evidence partnerships with pharma could create new revenue streams for cash-strapped health systems or provide resources and technical expertise to extract meaningful population health insights. Integrated health systems are “looking for value beyond product and price ... they want to know how pharma can help them solve the broader issues affecting their businesses,” said John Haney, area vice president, Southeast, at Johnson & Johnson.<sup>113</sup>

As the new FDA framework changes the cost-benefit equation, payers, drug companies and providers should renew efforts to cooperate on making the most of real-world evidence.

## Implications



### Align on interests.

When considering provider collaborations, focus on a shared goal or common problem.<sup>114</sup> This could be a particular therapeutic area or a common desire to deliver precision medicine. Also seek partners who already have broad patient consent to share data. Many integrated delivery networks have invested in research and data infrastructure and aspire to use this as a market differentiator and to attract partners.



### Consider who's already built it.

Drug companies may choose to partially sidestep the thorny task of grassroots data collection and aggregation by using secondary data sources. For example, OptumLabs, owned by UnitedHealth Group, includes clinical and claims data on 150 million individuals gathered from partners including co-founder Mayo Clinic.<sup>115</sup> HealthCore, a subsidiary of Anthem, maintains a database of medical, pharmacy and lab data covering nearly 65 million individuals.<sup>116</sup>



### Make your own data by being “smart.”

Similar to medical devices, some digital pharma ventures—such as “smart” pills and pill bottles that connect to the internet—gather data on their own.<sup>117</sup> This kind of venture may be a natural extension for pharma companies that already have invested in digital capabilities to take patient engagement apps and tools to market.





## Issue 12

# Tax reform moves forward

Republican lawmakers are moving forward with tax reform. While some of the specifics are still being negotiated, the outlines—a corporate tax rate reduction and a shift to a territorial system—are known. These changes will require new strategies from health organizations in 2018, and may demand rethinking of business models and supply chains.

Tax legislation passed by the House Republicans in November proposed reducing the federal corporate tax rate from 35 percent to 20 percent.<sup>118</sup> Doing so could help put US companies on more equal footing with foreign competitors when deciding where to invest in operations, how to structure their organizations and where to hold profits. It also could help spark new foreign investment and competition within the US.

Of interest to businesses with foreign holdings—which includes many pharmaceutical and life sciences companies—is the transition from a worldwide to territorial tax system. Under the US's current worldwide taxation policy, the amount of money held by US companies overseas has steadily increased because foreign earnings are subject to the US corporate tax rate only when they are repatriated to the US.<sup>119</sup> In contrast, under a pure territorial tax system, foreign earnings would be taxed in the country where the profits were generated but not a second time when earnings are brought back into the US. This would give companies greater flexibility in how and where they spend their money.

As part of a territorial system, tax reform proposals have included a one-time mandatory deemed repatriation of US companies' historic foreign earnings. Healthcare companies hold about 25 percent of the approximately \$1.8 trillion currently held overseas by the 50 companies with the largest amount of indefinitely reinvested foreign earnings—the second largest share held by any industry (see Figure 13). Repatriation would give these companies a chance to bring these profits back into the US at a special tax rate.<sup>120</sup>



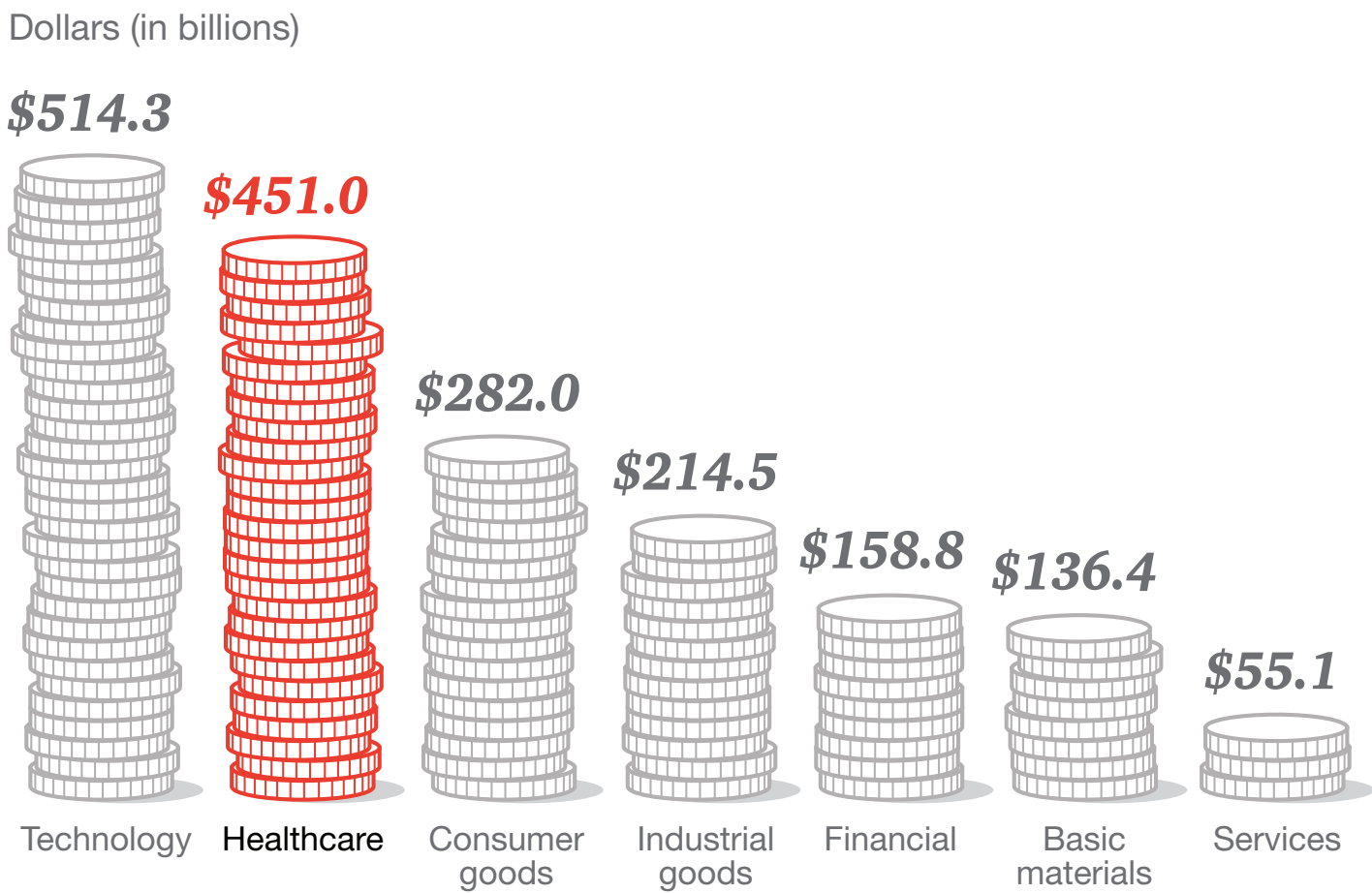
Pharmaceutical companies—and other organizations rich in intellectual property—are concerned that efforts to limit possible erosion of the US corporate tax base under a territorial system could target income from intangible assets.<sup>121</sup> A so-called “round trip rule” would impose US tax on profits generated overseas related to products exported for sale to the US.

“Without a doubt, the round-trip rule is the biggest thing we’re worried about,” said David Lewis, vice president of global taxes at Eli Lilly. “We’d be back to where we started; once again we’d be at a strategic disadvantage.” Facing higher tax rates and less flexibility with where to spend capital, companies fear the tax could make them targets for takeover by foreign companies.

For-profit companies that do most of their business domestically—like many health insurers and providers—are interested in proposals that would allow businesses to fully expense the cost of new depreciable assets, excluding structures, which could prompt investment in fixed capital and accelerate acquisitions.

Tax-exempt healthcare organizations are concerned about potential changes affecting charitable giving, such as repeal of the estate tax, a tax imposed on estate assets exceeding \$5.49 million per person. Eliminating the tax could weaken the incentive for individuals to make philanthropic donations rather than bequeathing assets to beneficiaries. Tax-exempt organizations also are watching for proposals that affect standards for income tax exemption and excise taxes.

**Figure 13: Healthcare companies hold more foreign earnings overseas than all other industries except technology companies**



Source: PwC Health Research Institute analysis of Audit Analytics Tax data<sup>122</sup>



# Implications



## Prepare for technology updates.

New tax provisions will require making updates to financial reporting systems to capture new and different information. Based on proposed reforms, companies should audit their systems to figure out what changes they will have to make. For instance, new capital expensing rules would require systems to be reprogrammed to calculate the depreciation of fixed assets differently.



## Continue to model as more information becomes available.

As lawmakers get closer to final legislation, companies should continue to model proposed provisions' effects and develop action plans to mitigate risks and take advantage of potential opportunities. This should include considering options for deploying repatriated cash and planning for resources to meet tax requirements on foreign earnings. Organizations with advanced insight into reform's impact will build enterprise resilience, positioning themselves to respond to changes more quickly once they take effect.



## Educate and advocate.

Until tax reform legislation passes, companies should continue to educate industry trade groups and members of Congress about reform provisions' potential implications. While all US businesses will support a lower corporate tax rate, healthcare companies will be competing with other industries to make sure tax reform legislation satisfies their priorities.



# Endnotes

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## About this research

This annual report discusses the top issues for healthcare providers, health insurers, pharmaceutical and life sciences companies, new entrants and employers. In fall 2017, PwC's Health Research Institute commissioned an online survey of 1,750 US adults representing a cross-section of the population in terms of insurance status, age, gender, income and geography. HRI also oversampled to obtain data on specific market segments. The survey collected data on consumers' perspectives on the healthcare landscape and preferences related to healthcare usage.

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PwC's Health Research Institute (HRI) provides new intelligence, perspectives and analysis on trends affecting all health-related industries. The Health Research Institute helps executive decision-makers navigate change through primary research and collaborative exchange. Our views are shaped by a network of professionals with executive and day-to-day experience in the health industry. HRI research is independent and not sponsored by businesses, government or other institutions.



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