



accenture>consulting

DIGITAL HEALTH

Accenture 2017 Internet of Health Things Survey

Invest Today to
Grow Tomorrow

OVERVIEW2

REMOTE PATIENT MONITORING11

WELLNESS AND PREVENTION16

OPERATIONS20

RECOMMENDATIONS24

DEFINITIONS25

CONTACT US26

The Internet of Health Things (IoHT) is already delivering tangible cost savings, but continuous investment is essential. To succeed in the digital economy, healthcare providers and payers must take full advantage of IoHT now to grow their businesses in the long-term. Connected devices using the Internet of Health Things are beginning to transform healthcare delivery.

By introducing more connectivity, remote monitoring and information gathering, IoHT can encourage better use of healthcare resources, more informed decisions, a reduction in inefficiencies or waste and the empowerment of health consumers.

According to estimates, the value of IoHT will top US\$163 billion by 2020, with a Compound Annual Growth Rate (CAGR) of 38.1 percent between 2015 and 2020¹. Within the next five years the healthcare sector is projected to be #1 in the top 10 industries for Internet of Things app development².

¹ "The Internet Of Medical Things-What Healthcare Marketers Need to Know Now," January 2016, Victoria Petrock: Contributors: Annalise Clayton, Maria Minsker, Jennifer Pearson, eMarketer.

² Ibid

Figure

1

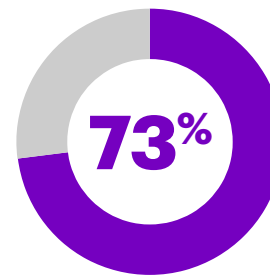
What is The Internet of Health Things?

Internet of Health Things (IoHT) is the integration of the physical and digital worlds through objects with network connectivity in the healthcare industry. IoHT transforms raw data into simple, actionable information and communicates with other objects, machines or people. IoHT can be leveraged to improve access to health, quality of care, consumer experience, and operational efficiency.

Accenture research shows healthcare executives are all too aware of the changes IoHT is bringing to their industry. Yet they also acknowledge that their leaders do not yet fully understand IoHT's potential (Figure 1).

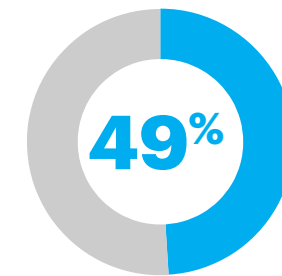
Internet of Health Things (IoHT) will make big waves

But healthcare leaders do not understand the potential impact.



IoHT = major change

Almost 3/4 of healthcare executives say IoHT will be disruptive within three years.



But my leadership does not understand.

Around one-half of healthcare executives say their leaders completely understand what IoHT means to their organization.

Figure

2

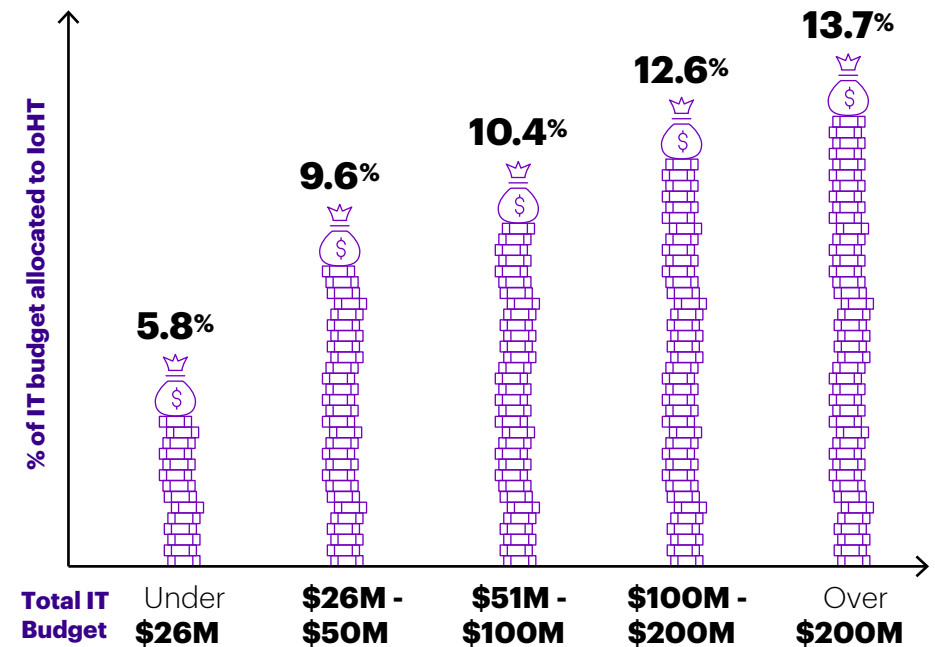
Internet of Health Things (IoHT) is a significant budget line item.

As IT budgets grow, so do IoHT investments.

IoHT: Who is investing and how much?

It is not just technology departments that are investing in IoHT. While 57 percent of healthcare organizations surveyed say that their IT departments lead the IoHT charge, 26 percent say their research and development (R&D) divisions are leading their IoHT efforts and one in ten organizations even have dedicated IoHT subsidiaries or business units.

Today, healthcare organizations allocate on average around 10 percent of their annual IT budgets to investments for IoHT solutions; this amount grows incrementally as the size of IT budgets as a whole grow larger (Figure 2).



Providers and payers are seeing real value from IoHT investments

Healthcare providers and payers are investing in IoHT programs in three areas of their businesses—remote patient monitoring (RPM), wellness and prevention, and operations—and are seeing real value from the initial programs. The value is being demonstrated from IoHT programs in the areas of medical or administrative/operational cost savings, improvements in consumer experience, and revenue growth through consumer attraction/retention (Figure 3).



Figure 3

Value is being achieved from Internet of Health Things (IoHT) programs in three business areas:

- 1) Remote patient monitoring (RPM)
- 2) Wellness and prevention
- 3) Operations

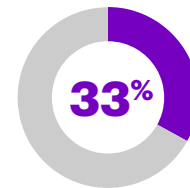
IoHT services has driven medical and operational cost savings in the programs and patient populations to which it has been applied thus far.



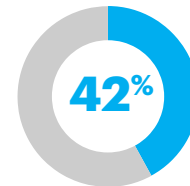
Remote patient monitoring

To what extent are your RPM IoHT solution(s) driving these value levers?

Figure 3a



of **PROVIDERS** report extensive **operational cost savings** from their RPM IoHT programs.



of **PAYERS** report extensive **medical cost savings** from their RPM IoHT programs.



Operational/Administrative Cost Savings



Medical Cost Savings



Consumer Attraction/Retention



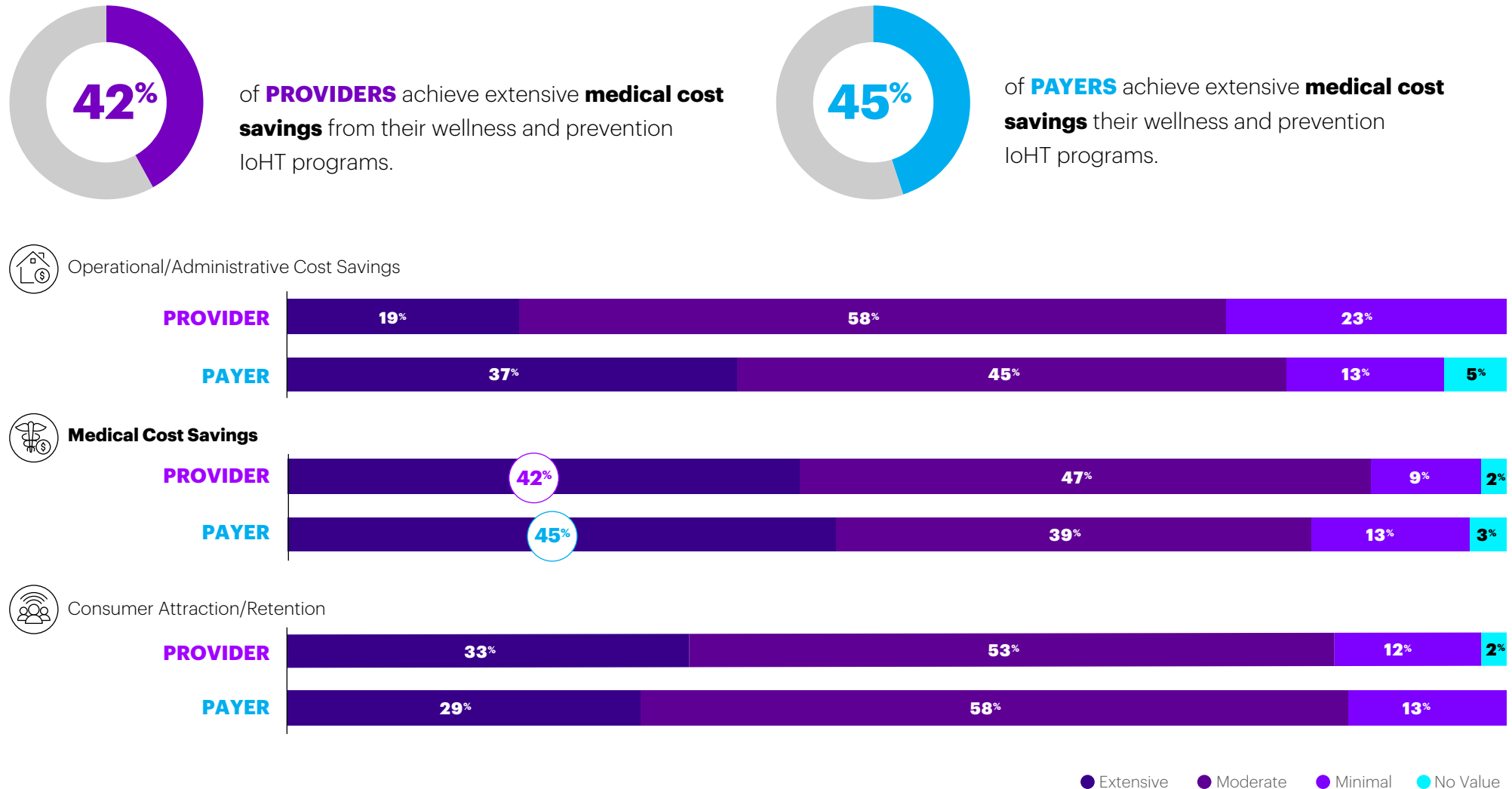
● Extensive ● Moderate ● Minimal ● No Value

Source: Accenture 2017 Internet of Health Things Survey

Wellness and prevention

To what extent are your wellness and prevention IoT solution(s) driving value?

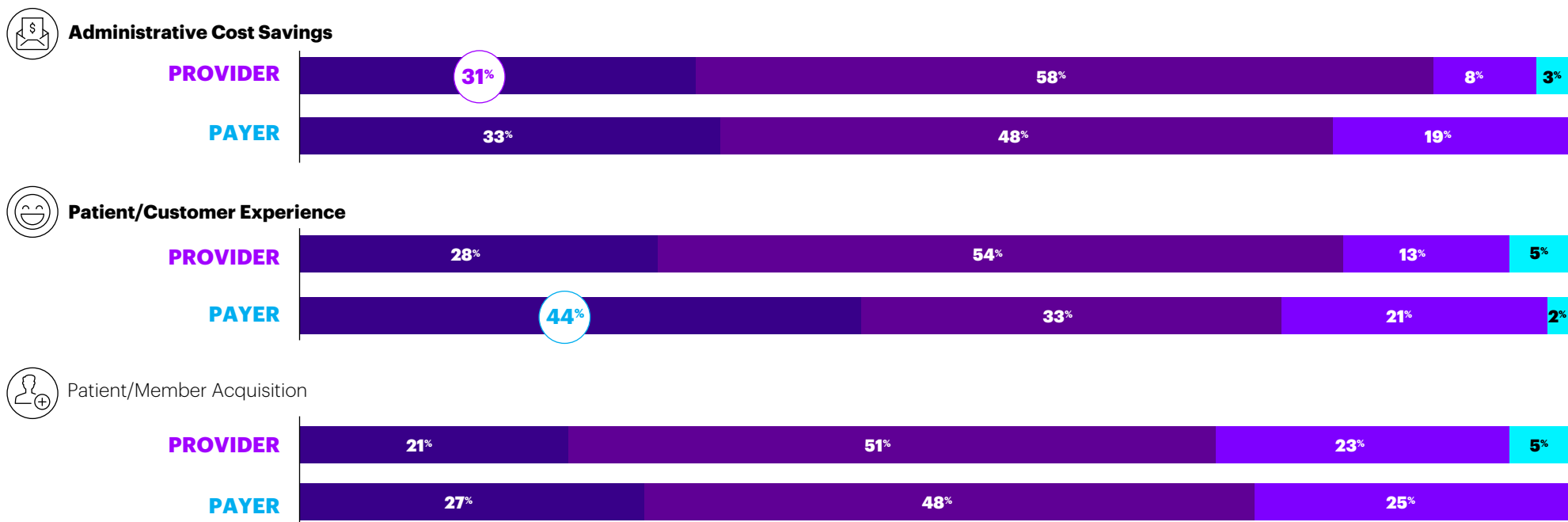
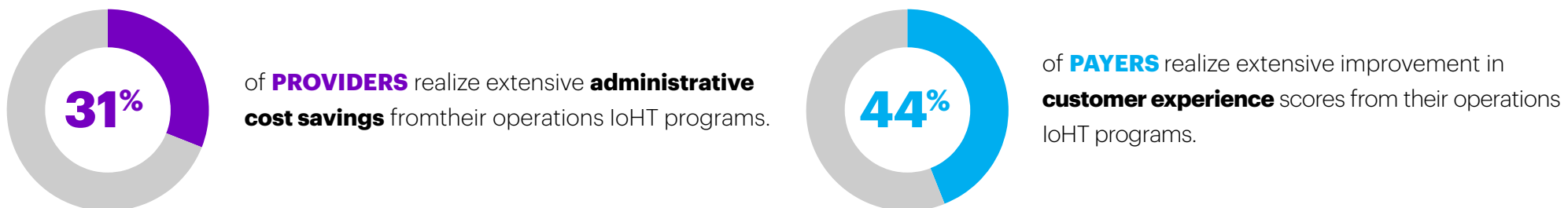
Figure 3b



Operations

To what extent are your operations IoT solution(s) driving value?

Figure 3c



● Extensive ● Moderate ● Minimal ● No Value

But barriers to wider IoHT adoption still exist

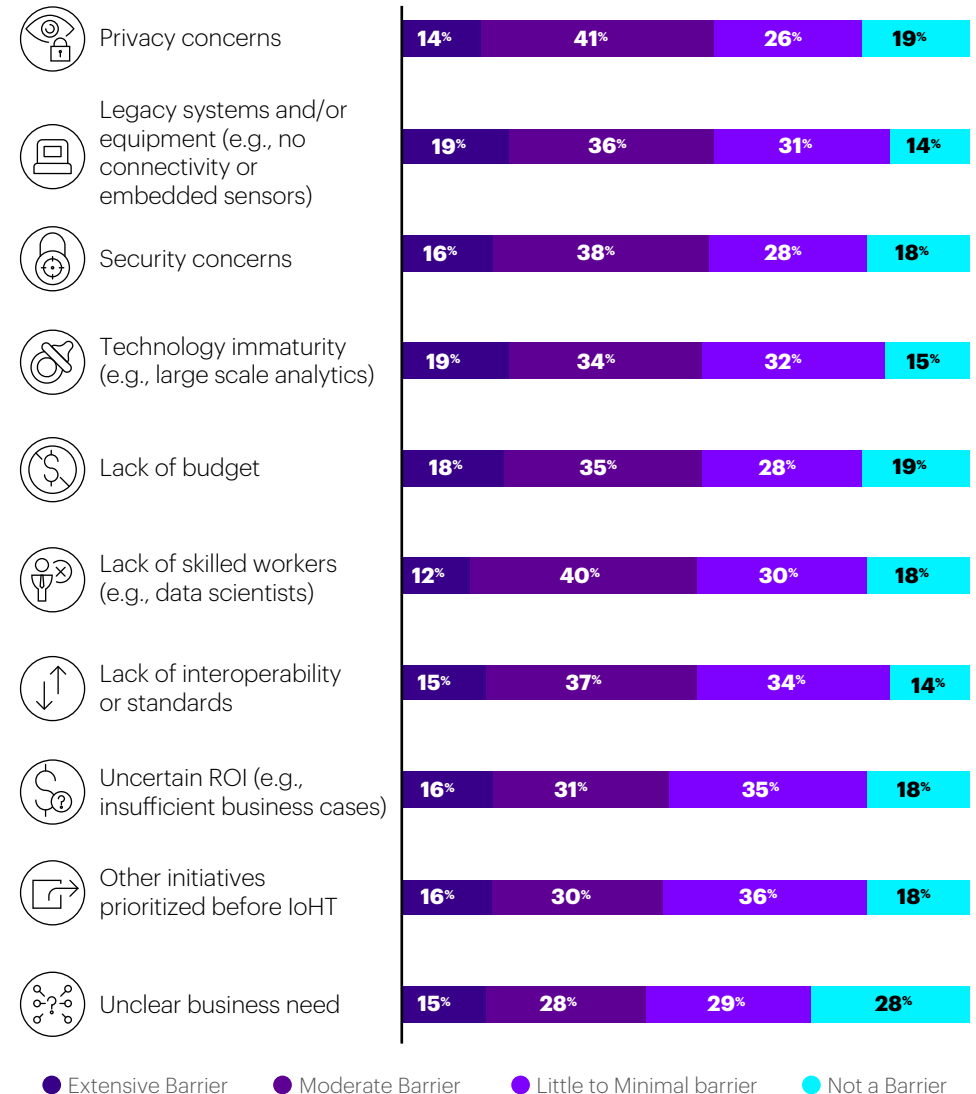
Healthcare executives cite a number of barriers to IoHT uptake, but no single barrier stands out significantly from the others as a particular inhibitor. In fact, executives see the top two barriers—privacy concerns and legacy systems—as equal hindrances. These top two are only slightly ahead of the next three cited barriers: Security concerns, technology immaturity and lack of budget (Figure 4).



Figure**4**

Healthcare executives cite a number of barriers to Internet of Health Things (IoHT) adoption but no one barrier stands out significantly from the others.

How much of a barrier are these inhibiting adoption of the Internet of Things in your organization?



REMOTE PATIENT MONITORING

Investments in RPM are strong but vary for providers and payers; and what is not invested today, will likely be invested tomorrow.

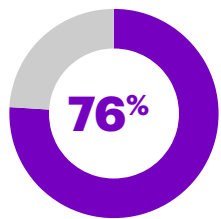
Providers' current investments in RPM IoHT lag behind wellness and prevention, and operations programs today—but are set to take off in the near term. Forty-three percent of providers invest today; 56 percent by 2017. Payers' RPM IoHT investments lead the field at 69 percent today but will reduce to 48 percent by 2017.

The majority of both providers' and payers' RPM IoHT investments are focused on cardiac conditions. Interestingly, in the past, behavioral health has not received investment at similar levels to traditional high-cost areas such as cardiac³, but the spotlight appears to now be shining on this area. Mental health, including behavioral health, is a relatively high priority for both providers (48 percent) and payers (55 percent) (Figure 5).

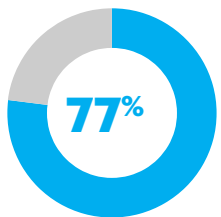
3 Centers for Disease Control and Prevention, Chronic Disease Prevention and Health Promotion, <http://www.cdc.gov/chronicdisease/overview/>

Figure**5**

The majority of remote patient monitoring (RPM) Internet of Health Things (IoHT) investments are focused on cardiac conditions



of **PROVIDERS** are focused on cardiac conditions



of **PAYERS** are focused on cardiac conditions

What are you focused on in your current IoHT investment in remote patient monitoring (RPM)?



Cardiac, including congestive heart failure

PROVIDER

76%

PAYER

77%



Chronic respiratory conditions, including COPD, asthma

PROVIDER

61%

PAYER

49%



Cancer

PROVIDER

52%

PAYER

38%



Mental health, including behavioral health

PROVIDER

48%

PAYER

55%



Diabetes

PROVIDER

45%

PAYER

60%



Obesity

PROVIDER

33%

PAYER

43%



Orthopedic needs

PROVIDER

33%

PAYER

38%

Figure

6

Consumer satisfaction is pinpointed as an important business driver.

Providers and payers indicate a “consumer-first” mind shift. Both identify patient/member satisfaction as an important business driver in offering RPM IoHT solutions (Figure 6).

Patient/member satisfaction is a driver for offering remote patient monitoring (RPM) Internet of Health Things (IoHT) solutions.



Providers

What are the business drivers for offering RPM IoHT solutions?

Figure 6a

82% say patient survey satisfaction scores are important or extremely important.



Emphasis on patient satisfaction survey scores (e.g., HCAHPS - value based incentive payments)

39% 43% 18%



Shift to individualized market; patient demands changing (e.g., expectations that consumers receive innovative medical devices/ individualized services)

33% 43% 21% 3%



Shift to readmission penalties (e.g., additional chronic conditions or other being added to penalties)

36% 40% 18% 6%



Changes in Medicare reimbursement

33% 37% 21% 9%



Shifts to provider driven care management or 'at risk'/pay-for-performance (i.e., new ACO-like models)

24% 46% 21% 9%



Increase in chronic disease and complex patient/population mix

24% 46% 30%

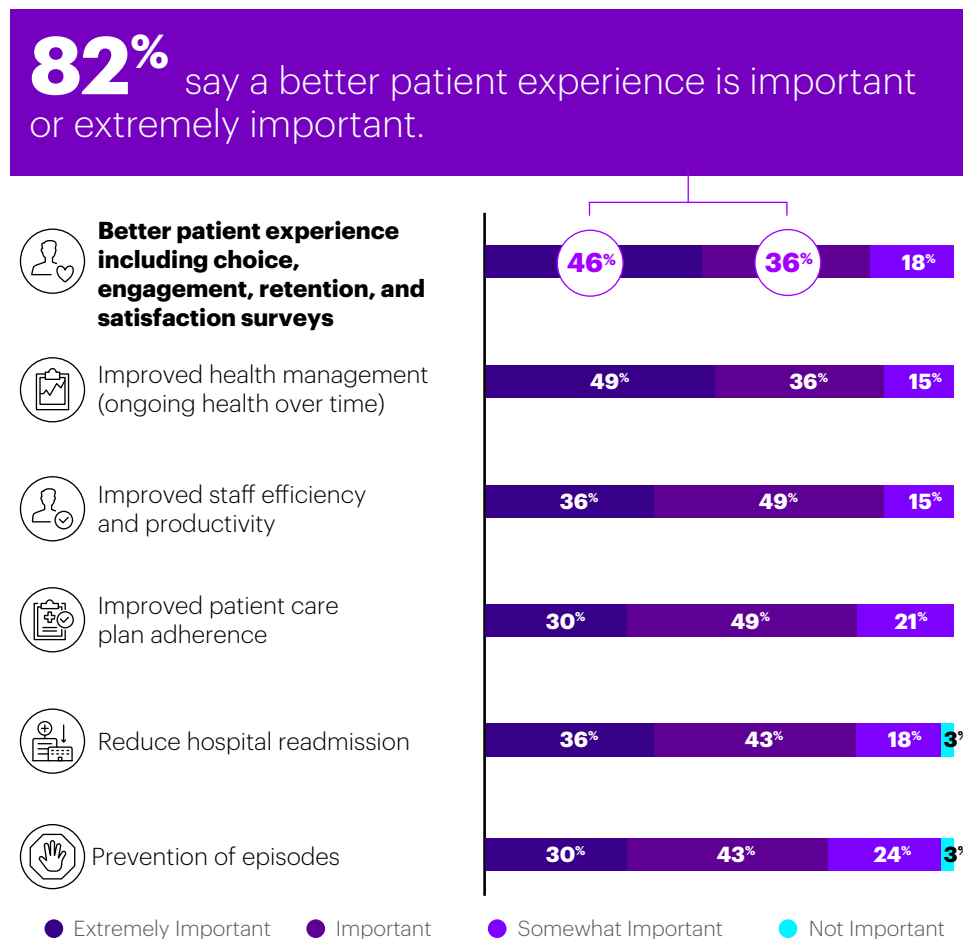
● Extremely Important ● Important ● Somewhat Important ● Not Important

Source: Accenture 2017 Internet of Health Things Survey

Providers

How important are the following benefits in driving your business to adopt this RPM IoHT solution?

Figure 6b

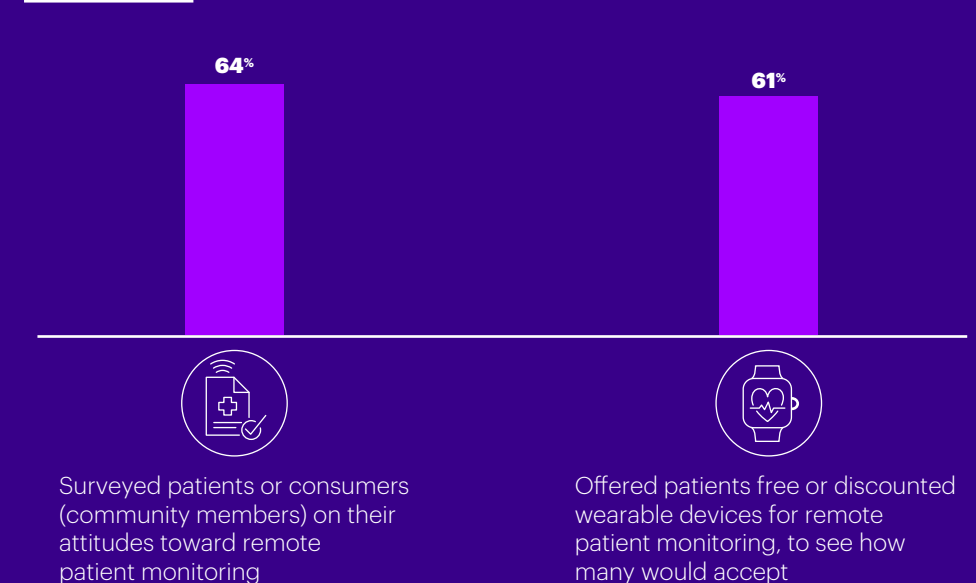


Source: Accenture 2017 Internet of Health Things Survey

Providers

What actions have you taken to better understand whether patients or consumers would adopt this type of solution?

Figure 6c



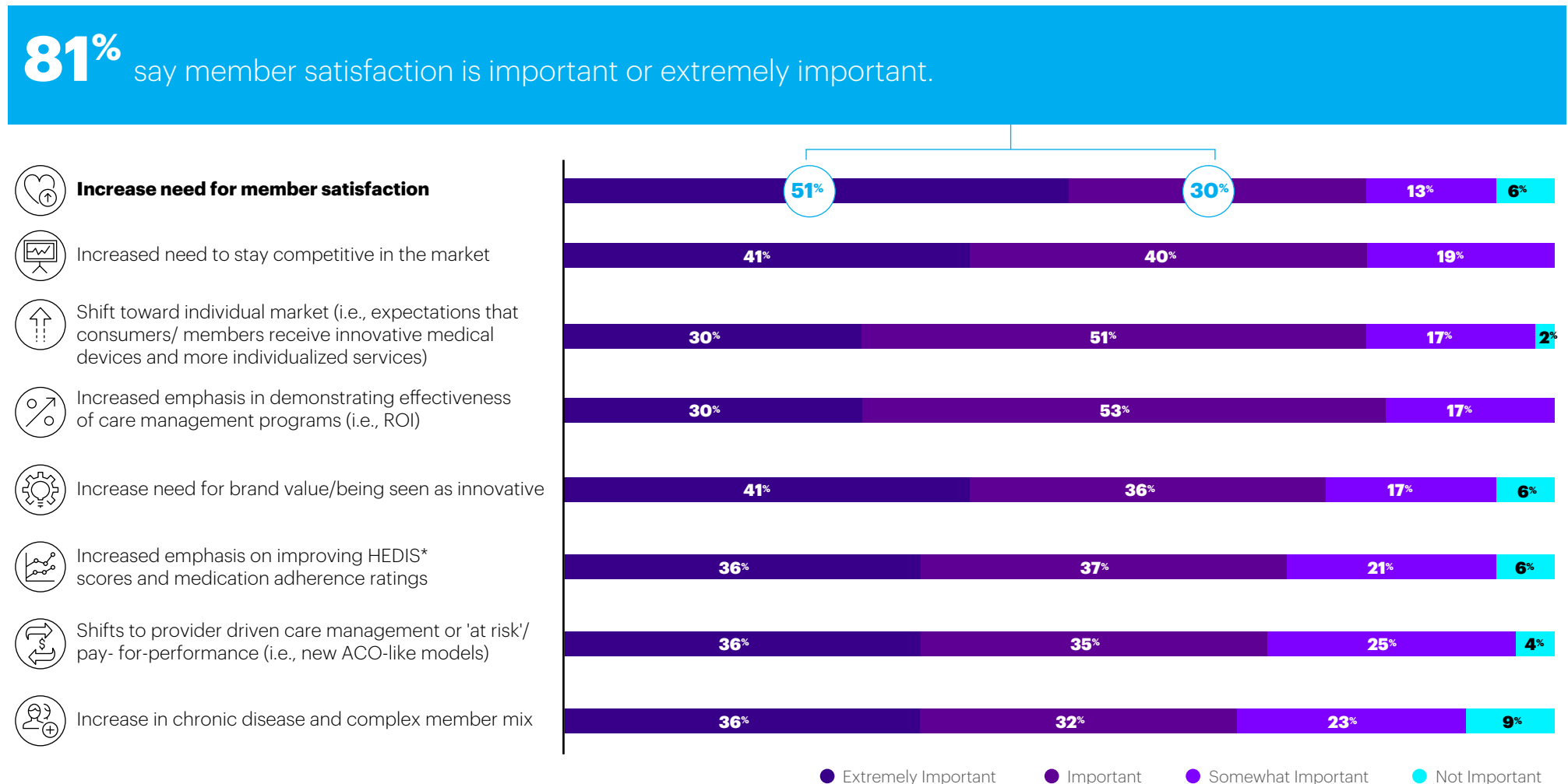
88% of providers **have** taken action to understand patient attitudes towards RMP IoHT solutions.

12% of providers **have not** taken any action.

Source: Accenture 2017 Internet of Health Things Survey

What are the business drivers for offering RPM IoHT solutions?

Figure 6d



*The Healthcare Effectiveness Data and Information Set (HEDIS) is a tool used by more than 90 percent of America's health plans to measure performance on important dimensions of care and service. Altogether, HEDIS consists of 81 measures across 5 domains of care.

Source: Accenture 2017 Internet of Health Things Survey

WELLNESS AND PREVENTION

Wearables receive a vote of confidence from both providers and payers.

Both providers and payers agree about the essential role wearables play in their wellness and prevention IoT solutions (Figure 7). And they are not shy about offering incentives for patients and consumers to use such devices—79 percent of providers offer incentives to wellness and prevention IoT users and a vast majority (95 percent) of payers offer incentives.



Figure

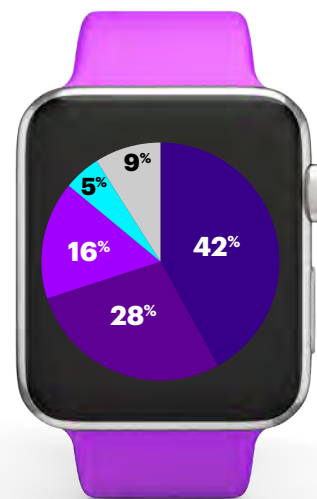
7

Almost all providers and payers say wearables are a component of their wellness and prevention Internet of Health Things (IoHT) investments.

Are wearables a component of your wellness and prevention IoHT solutions?

PROVIDERS

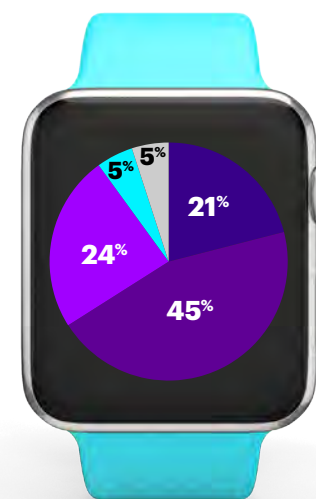
91% YES



- Yes, providing to patients
- Yes, providing at subsidized cost for patient
- Yes, but patients are fully responsible for cost
- Yes, but Health Plan(s) are providing wearables
- No

PAYERS

95% YES



- Yes, providing to members
- Yes, providing at subsidized cost for members
- Yes, but members are fully responsible for cost
- Yes, but Health System is providing wearables
- No

Consumer satisfaction is top of the list as a driver for wellness and prevention IoHT solutions.

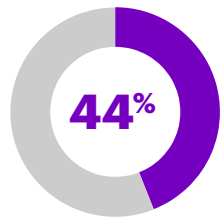
Close to one-half of healthcare providers ranked patient satisfaction survey scores—such as Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS)⁴ value-based incentive payments—as an extremely important business driver of wellness and prevention IoHT solutions. An identical percentage was chosen by payers with respect to a need to increase member satisfaction (Figure 8).



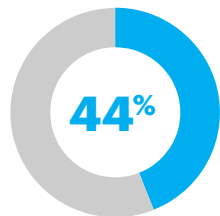
⁴ The Centers for Medicare and Medicaid (CMS) HCAHPS initiative provides a standardized survey instrument and data collection methodology for measuring patients' perspectives on hospital care.

Figure 8

Consumer satisfaction is an extremely important driver of offering wellness and prevention Internet of Health Things (IoHT) solutions.



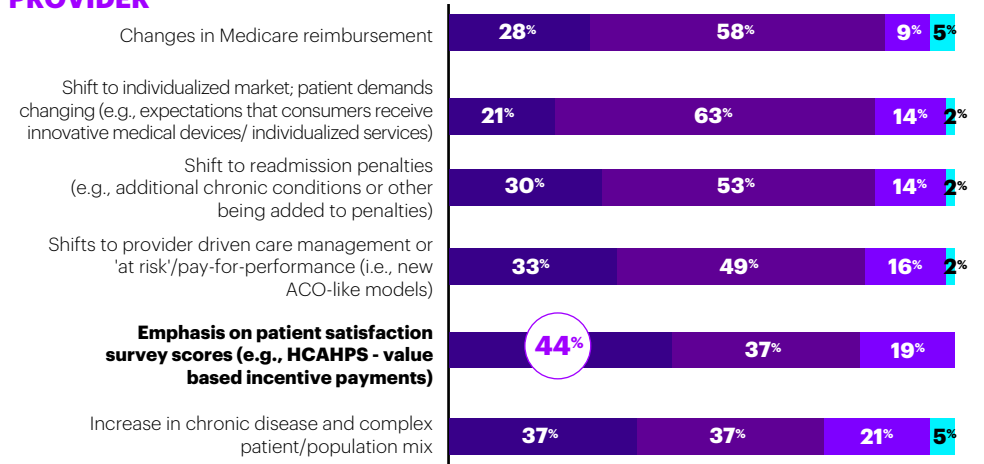
of **PROVIDERS** ranked patient satisfaction as extremely important.



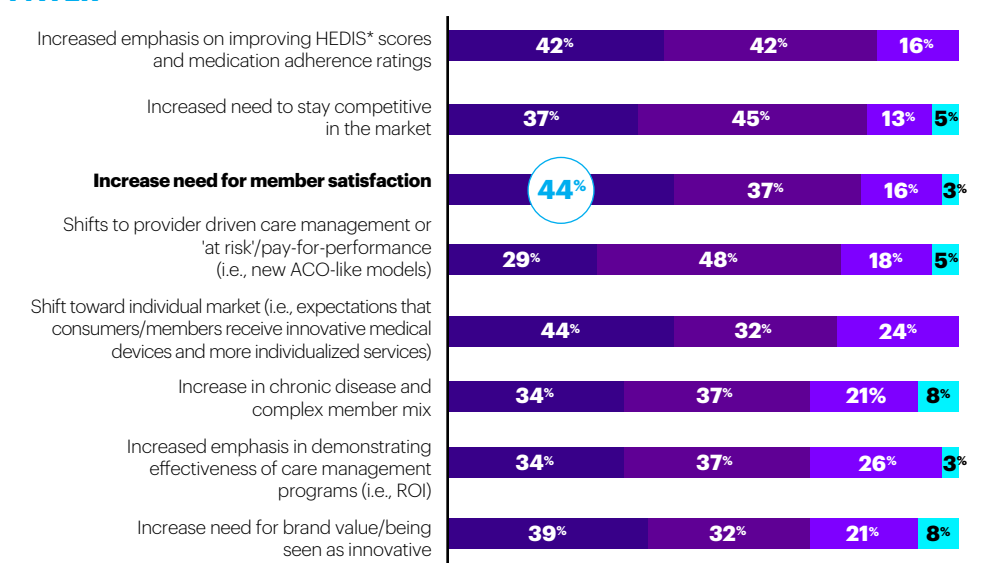
of **PAYERS** ranked increase member satisfaction as extremely important.

What are the business drivers for offering wellness and prevention IoHT solutions?

PROVIDER



PAYER



● Extremely Important ● Important ● Somewhat Important ● Not Important

*The Healthcare Effectiveness Data and Information Set (HEDIS) is a tool used by more than 90 percent of America's health plans to measure performance on important dimensions of care and service. Altogether, HEDIS consists of 81 measures across 5 domains of care.

OPERATIONS

Executives not only apply operations IoT initiatives to manage inventory of medical supplies, but also expect to improve the consumer experience.

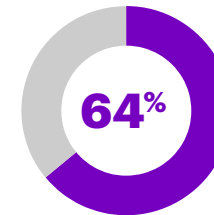
Fundamental operations investments to manage the inventory of medical supplies, such as drugs and gowns, is still a priority for 67 percent of providers. But in addition, almost two-thirds of providers identify patient experience as the beneficiary of operations' IoT programs. Almost three-quarters of payers agree and expect their current IoT investments to pay off in terms of better member service (Figure 9).

Figure

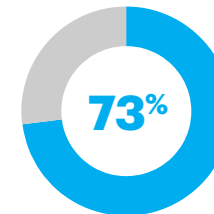
9

Consumer experience is a vital beneficiary of provider and payer operations IoHT programs.

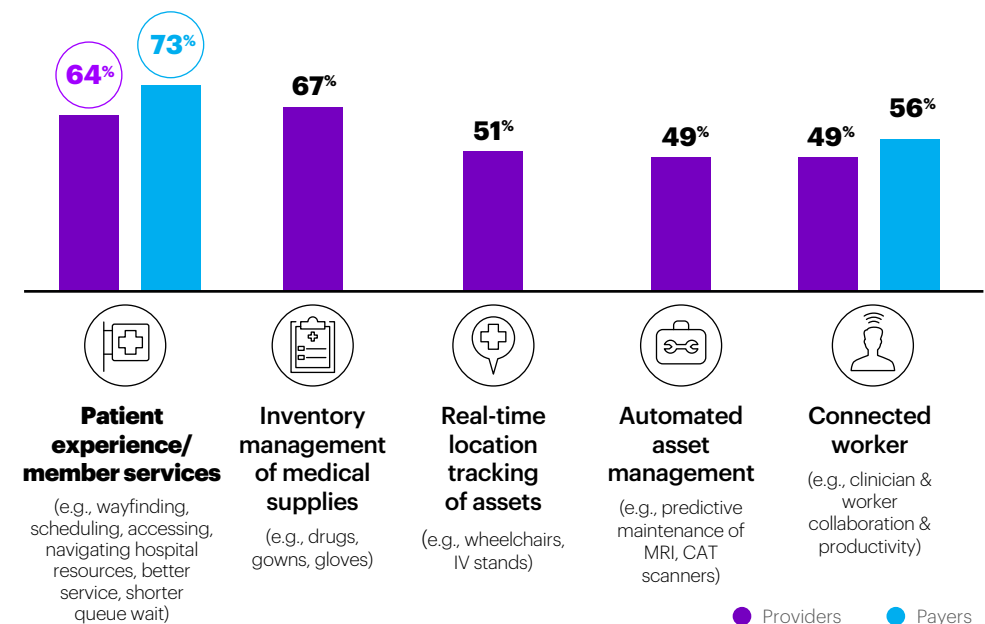
What is your focus with your current IoHT investment to benefit operations?



of **PROVIDERS** focus IoHT investments on the patient experience.



of **PAYERS** focus IoHT investments on the member services.



Providers' investments in operations IoT solutions appear to be paying dividends in better patient experience scores (Figure 3c), while health payers are not only gaining in terms of member acquisition and administrative cost savings, but also improving customer service scores (Figure 3c). Improving patient or consumers' experiences, including engagement, retention and satisfaction surveys, is an important outcome for both providers and payers (Figure 10).

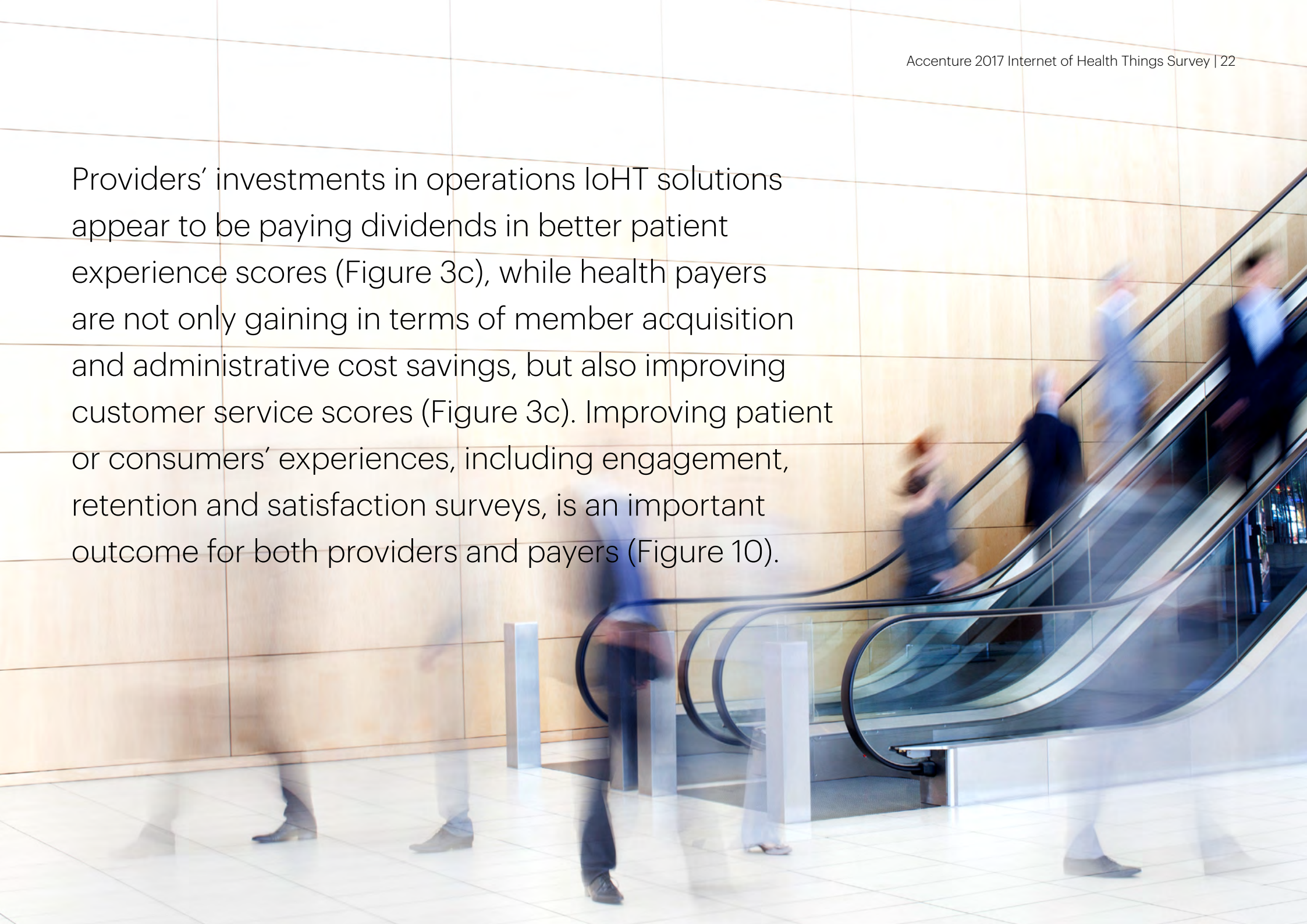
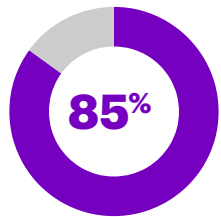
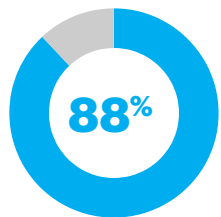


Figure 10

Providers and payers agree about the importance of consumer benefits of operations Internet of Health Things (IoHT) solutions.



of **PROVIDERS** say that a better patient experience is important or extremely important.

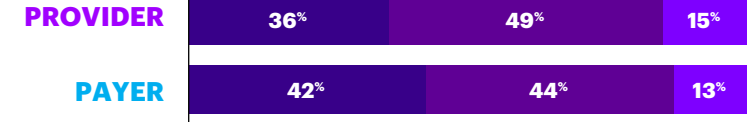


of **PAYERS** say that a better member experience is important or extremely important.

How important are the following benefits of operations IoHT solutions?



Achieved greater operational efficiency



Improved communication and collaboration among staff/employees



Improved brand awareness



Better patient/member experience including choice, engagement, retention, and satisfaction surveys



● Extremely Important
 ● Important
 ● Somewhat Important
 ● Not Important

Four takeaways for providers and payers

1) THE TIME IS NOW.

Despite challenges with security and privacy, inaction is not an option. There are players outside of traditional healthcare organizations looking at these same industry challenges and considering ways to capture the opportunity⁵. If providers and payers do not invest in demonstrating IoHT value now, they risk losing out to non-traditional players. Going forward, providers and payers must identify parts of the business where IoHT solutions may be applied to do things differently—and do different things to grow in the long-term.

2) MEASURE AND BUILD ON SUCCESSES.

Providers and payers have already demonstrated value through IoHT—but they need to continue investments to better understand where programs are successful

to prepare for future scaling. They need to measure effectiveness beyond the technology and then build on those areas of effectiveness quickly to offer value across the business. By demonstrating the benefits and best practices, providers and payers can strengthen business cases, encourage adoption and drive interoperability.

3) PUT CONSUMERS FIRST.

Providers and payers must continue to incorporate IoHT solutions that drive better experiences and healthier patient outcomes, along with key medical and administrative cost savings initiatives. IoHT solutions offer the seamless collection of patient-generated health data, enabling providers and payers to provide more convenient, personalized and effective care. They must train their workforces to make IoHT a part of the “new normal.”

4) FORM NIMBLE PARTNERSHIPS.

Technology and innovation partners can help payers and providers quickly test and learn how IoHT can drive business value to inform future scaling requirements. Strategy and change management partners can help to integrate these new technologies into their workflow, culture and training.

⁵ Healthcare's Big Bang Disruption, April 2016, Accenture. <https://www.accenture.com/us-en/insight-healthcare-bigbang-disruption>



Definitions

Remote patient monitoring:

Uses wearables, mobile and connected devices to help manage conditions outside of a health facility.

Connected wellness and prevention:

Sharing connected health devices that capture biometric data and using incentives and discounts to encourage healthy behaviors.

Operations at a health facility:

Enhanced through networked sensors and other technologies to improve the patient experience, the productivity of staff and overall workflow efficiency.

Operations at a health plan:

Enhanced through modern technologies to support a more efficient operation, accelerate new business models, member enrollment and achieve compliance.

For more information

Brian P. Kalis

brian.p.kalis@accenture.com

Ronan Wisdom

ronan.wisdom@accenture.com

Contributors

Kathy M. Andrews

kathy.m.andrews@accenture.com

Peggy Hsii

peggy.hsii@accenture.com

Alyssa Porritt

alyssa.r.porritt@accenture.com

Connect with us



[@AccentureHealth](https://twitter.com/AccentureHealth)



[Accenture Health](https://www.linkedin.com/company/AccentureHealth)

Accenture 2017 Internet of Health Things survey

Accenture commissioned an online survey of 77 healthcare payers and 77 healthcare providers in the United States. The survey aimed to understand the current position of respondents with respect to the use of Internet of Health Things technologies and tools and find out what investments they were making and where. Organizations included in the survey had annual revenues of more than US\$50 million and sample job titles were C-suite, mainly CEO and CIO. The overall margin is +/- 8 percentage points at the 95 percent confidence level. The survey was conducted by McGuire Research between January 29 and February 19, 2016.

About Accenture Insight Driven Health

Insight driven health is the foundation of more effective, efficient and affordable healthcare. That's why the world's leading healthcare providers and health plans choose Accenture for a wide range of insight driven health services that help them use knowledge in new ways—from the back office to the doctor's office. Our committed professionals combine real-world experience, business and clinical insights and innovative technologies to deliver the power of insight driven health. For more information, visit: www.accenture.com/insightdrivenhealth.

About Accenture

Accenture is a leading global professional services company, providing a broad range of services and solutions in strategy, consulting, digital, technology and operations. Combining unmatched experience and specialized skills across more than 40 industries and all business functions—underpinned by the world's largest delivery network—Accenture works at the intersection of business and technology to help clients improve their performance and create sustainable value for their stakeholders. With approximately 384,000 people serving clients in more than 120 countries, Accenture drives innovation to improve the way the world works and lives. Visit us at www.accenture.com.