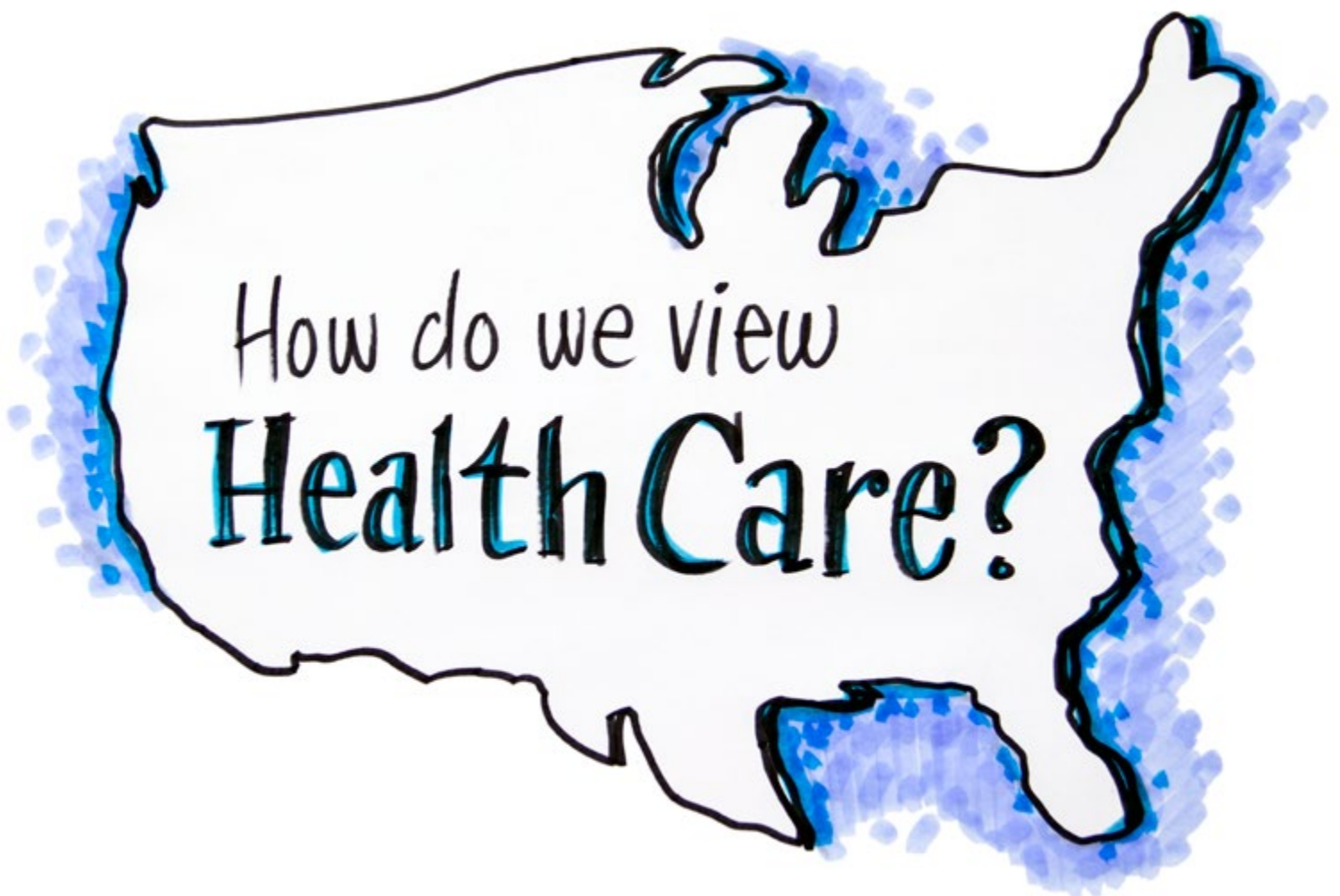


How We View Healthcare in America:

CONSUMER AND PROVIDER PERSPECTIVES 2015

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FOREWORD

“How We View Healthcare in America” is an annual report published by Booz Allen Hamilton and Ipsos Public Affairs that examines how consumers who use healthcare services and the primary care physicians (PCPs), specialists, and hospital and health system administrators who provide those services think and feel about the current state of healthcare and its future. Topics examined in this year’s report were culled from the 2014 inaugural study to focus on consumer and provider views about:

- Current health and healthcare coverage of consumers
- Importance of, satisfaction with, and concerns about factors related to healthcare
- Impacts of the Affordable Care Act (ACA)
- Means of addressing rising healthcare costs
- Impacts of preventive interventions on public health
- Provider practices/organizations (comparisons and current/forward-looking views)
- Integration and use of health-related technologies by consumers and providers

The report identifies the beginnings of trends by comparing this year’s data with last year’s data, and also presents new observations as a baseline for future analysis. The research provides parallel perceptions of the healthcare system, examining the views of consumers and healthcare providers about their own experiences, as well as how they perceive others to have experienced the healthcare system.

Some elements of the report have been refined this year based on the types of data found to be most valuable in the first report and to better focus survey responses and fine-tune datasets for future comparison. Toward that end, changes were made to the phrasing of some survey questions on which report findings are based. It is unknown if, or to what extent, those refinements may have affected responses. Related data or interpretations of those data are noted for the reader in the report.

METHODOLOGY

For the consumer survey, online surveys were conducted among a national sample of 1,003 U.S.-based adults, 18 years of age and older. Employing the Bayesian credibility interval for online polls that utilizes non-probability samples (see https://ipsos-na.com/dl/pdf/research/public-affairs/ipsosPA_CredibilityIntervals.pdf), this consumer survey has a 95 percent credibility interval of ± 3.5 percentage points. The data were weighted according to U.S. Census population statistics by gender, age, region, and household income.

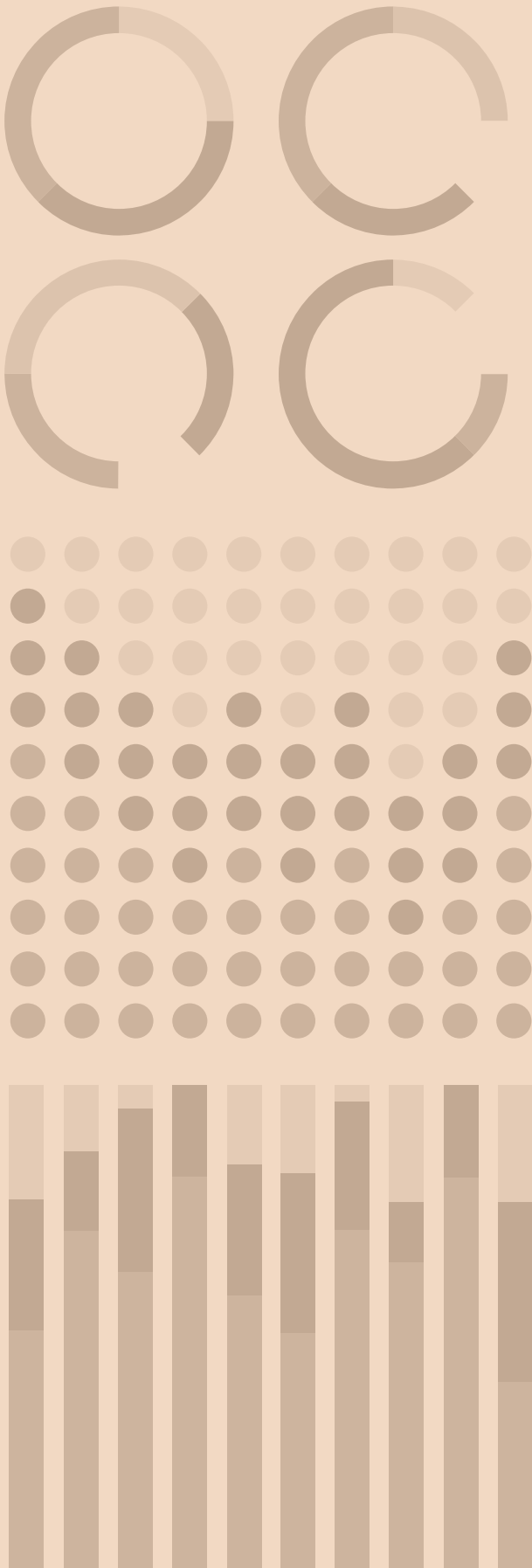
For providers, 401 completed online surveys, including 100 group-based¹ PCPs, 101 group-based specialists, 100 physicians currently seeing most patients in a hospital setting, and 100 health system and hospital administrators. The data from physicians were weighted to reflect the current balance of primary care versus specialist physicians practicing in the U.S. healthcare system.²

Statistical margins of error are not applicable to online polls due to non-response and coverage bias inherent to online panels. All sample surveys and polls may be subject to other sources of error, including, but not limited to, coverage error and measurement error.



¹ Group-based is used broadly to describe when the setting where physicians see most patients is identified as a non-hospital setting. This may include physicians in clinics and a small portion who could be in a variety of different non-hospital settings.

² Hospital-based physicians included 32 physicians who identified themselves as PCPs and 68 self-identified as specialists. As a result, the base size for PCPs is 132 and for specialists is 169.



EXECUTIVE SUMMARY

The goal of any healthcare system is to provide consumers with access to top-quality care at reasonable costs. To evaluate how well that is happening in the U.S., this report assesses the current state of and outlook for healthcare by examining the views of healthcare consumers and providers – PCPs, specialists, and administrators working in and out of hospital settings. This year’s report examines three main topics identified in last year’s study and additionally refined for this year’s report: levels of satisfaction with healthcare and outlook for the future, the role of prevention, and use of technology.

Highlights within these categories include:

Consumers and providers continue to have doubts about the direction of healthcare, though some groups are more optimistic than others.

- While the cost of healthcare remains an important factor for consumers and providers alike, consumers also are concerned about elements of their care, such as their ability to continue seeing their current doctor or having ongoing access to the same levels of care in the future.
- Ninety-two percent of consumers surveyed have healthcare coverage, and the type of coverage they have influences their overall levels of satisfaction with the healthcare system.
- Only minorities of consumers (35 percent) and providers (24 percent among PCPs, 16 percent among specialists, and 43 percent among administrators) think the healthcare system is on the right track.
- Physicians remain concerned about losing autonomy and their ability to continue delivering quality care in the changing healthcare environment. Striking differences are seen between the views of patient-centered medical home (PCMH) physicians (those whose practice or organization is part of a PCMH or in the process of moving toward that model of care) and non-PCMH physicians. PCMH physicians tend to have a more positive outlook that aligns with that of administrators.

Views on prevention and public health vary, depending on age and other factors.

- Consumers and providers alike see aggressive screening for diseases that benefit from early detection and greater coordination of care between healthcare providers as the most promising approaches.
- Administrators and PCMH physicians almost always place higher value on the impact of preventive interventions more than non-PCMH physicians.
- Younger adults, ages 18 to 35, typically place higher value on the impact of preventive interventions much more than adults 36 years of age and older.

Technology use grows among consumers even amid privacy concerns, which provider tech investments heighten.

- The trend toward applying new technologies to improve healthcare delivery continues and is expanding. Many providers use technology and encourage patients to use Internet- and mobile-based applications to monitor and manage their healthcare. Current use among consumers remains low (29 percent), but has increased from the previous year (22 percent), even as concerns about the security of personal health information persist.
- While providers see Internet and mobile applications for health and disease management as promising technologies, they still view them with a similar mix of caution and optimism articulated from a year ago. Overall, non-PCMH physicians are more skeptical, while PCMH physicians and administrators are more optimistic about the utility of these technologies for consumer use.
- Majorities of both administrators and physicians expect their organizations or practices to invest in website and electronic health record (EHR) systems in the next year.

As seen in the 2014 report, administrators often have markedly different and more positive outlooks than PCPs and specialists. Administrators seem to embrace change and see opportunities for their organizations to thrive along with prospects for expanding high-quality care. PCMH physicians, who often are younger and working in larger organizations than non-PCMH physicians, share the views and “sunnier” outlook of administrators on most issues.

MAJOR FINDINGS

This report assesses the current state of and outlook for healthcare by examining the views of healthcare consumers and providers – PCPs, specialists, and administrators working in and out of hospital settings.

In 2015, these groups expressed varying levels of satisfaction (and dissatisfaction) with the healthcare system, and differing outlooks about its future. In some cases, the range of views highlights growing gaps between groups, such as physicians and administrators. For example, 83 percent of physicians believe doctors are rapidly losing autonomy compared with just 51 percent of administrators. There also are divergent views within the physician population. **Those working in a PCMH or moving toward that model of care, for instance, have far more favorable views about the future than non-PCMH physicians, with almost three times as many believing that healthcare is on the right track compared to their non-PCMH counterparts.** On many issues, their optimism aligns closely with that of administrators.

There are several areas of commonality among consumers and providers. For example, both groups view coordination of care between providers as the preventive measure with the greatest potential impact on population health (74 percent of hospital administrators, 71 percent of physicians, and 52 percent of consumers indicate it would have a great or good deal of impact).

Increasing the focus on prevention is still seen as the most promising way to reduce healthcare costs. The emphasis on prevention is supported by an ever-expanding range of technologies – from growing numbers of mobile applications and personalized interactive websites for consumers to EHRs and other investments in organization or practice infrastructure for providers. While there are signs of improvement and promise in many areas of healthcare, there still are numerous challenges and differing viewpoints to address in the ever-changing healthcare landscape.

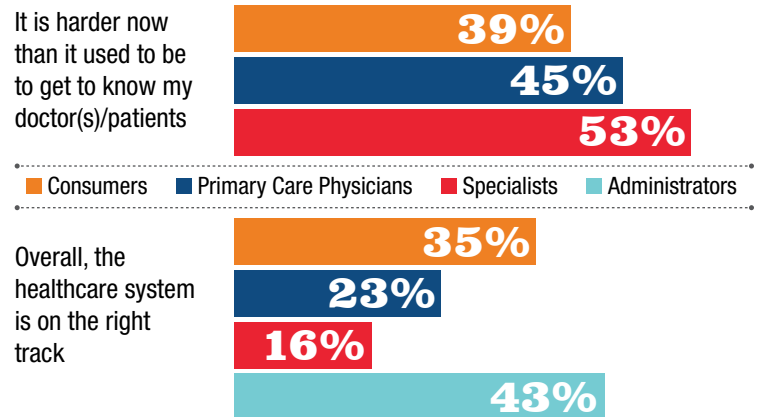
A Mix of Satisfaction and Concern

Healthcare views vary and anxieties persist, but glints of promise appear.

In 2015, anxiety over healthcare and its costs are still in evidence among both consumers and providers, and satisfaction with numerous factors dropped. In fact, the majority of respondents across all groups still believe the U.S. healthcare system is not on the right track. Yet, within several groups, this perception is showing improvement. Thirty-five percent of consumers (up from 33 percent in 2014) believe the healthcare system is headed in the right direction (see Figure 1). Just 23 percent of PCPs share this view (unchanged from 2014), but 16 percent of specialists now feel that way compared to just 10 percent in 2014. Among administrators, 43 percent believe the healthcare system is on the right track compared to 34 percent in 2014. In addition:

- Among consumers, overall satisfaction with one's current healthcare and doctors held steady.
- While physicians as a group remain concerned, many younger physicians and those in certain types of practices or organizations look favorably on the future of healthcare. Those who are part of a PCMH or moving toward that model of care, for instance, generally have more positive outlooks than non-PCMH physicians – a key trend and widening gap that is discussed throughout the report.

Figure 1. Providers' vs. Consumers' Views



QD1. Please indicate your level of agreement with each of the following statements
Base: All Respondents (n=1,003)

QD1. Please indicate your level of agreement with each of the following statements:
Base: All Respondents (n=401)

Ninety-two percent of consumers surveyed currently have health insurance coverage, with 8 percent having added it in the past two years. In addition, 25 percent of consumers changed their plans in the past two years. Among those, 45 percent obtained better coverage and 39 percent obtained similar coverage, compared to only 16 percent who reported a decline in coverage. Respondents from states with Medicaid expansion show rates of uninsured consumers that are 7 percentage points lower than states without Medicaid expansion, perhaps indicating that Medicaid expansion is having a positive impact on coverage rates. To learn about an insurance plan before selecting it, consumers most often turn to benefits booklets from their employer or union, look up the plan name on the Internet, and ask peers for recommendations. Adults age 35 and younger are more proactive about seeking information about plans than those older than 35, and are more likely to use the Internet and peer recommendations in particular. Government websites that provide quality ratings were consulted by 20 percent of those who changed plans or became insured in the past two years. Nearly all respondents who sought information (97 percent) say they found information that was useful or at least somewhat useful in helping them select the best plan.

- Administrators remain optimistic about the direction healthcare is taking and supportive of many current and emerging solutions, even though they share some of the same concerns as physicians.

Consumers

A majority of consumers (67 percent, which is unchanged from 2014) continue to be satisfied with their healthcare overall, and satisfaction is high for many specific factors, though some show a downward trend. For instance, satisfaction in 2015 declined from 2014 levels in these areas:

- Ability to continue seeing my personal doctor (81 percent satisfied versus 86 percent in 2014)
- Wait time to get an appointment with a healthcare provider (63 percent versus 68 percent in 2014)*
- Amount of paperwork needed to be reimbursed for healthcare expenses (57 percent versus 61 percent in 2014)*

The steepest drops in overall satisfaction with healthcare were found among men, age 36 to 55, and residents of the Northeast and South. Data show that satisfaction levels reflect the type of insurance coverage consumers have, with highest levels of satisfaction among Medicare recipients and those who see a physician and/or visit a specialist frequently. Those with coverage obtained through the Health Insurance Marketplaces (healthcare exchanges), in poor to fair health, age 36 to 55, non-white, and/or who have children express more moderate levels of satisfaction. The lowest satisfaction levels are among those who are uninsured, have no personal doctor, and who have not visited a doctor in the past year.

Satisfaction Levels Reflect Coverage (from most to least satisfied):

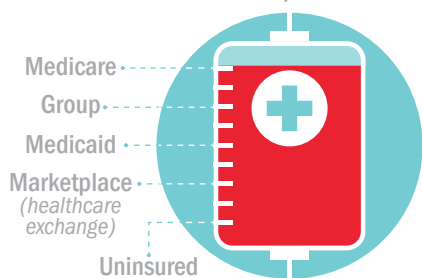
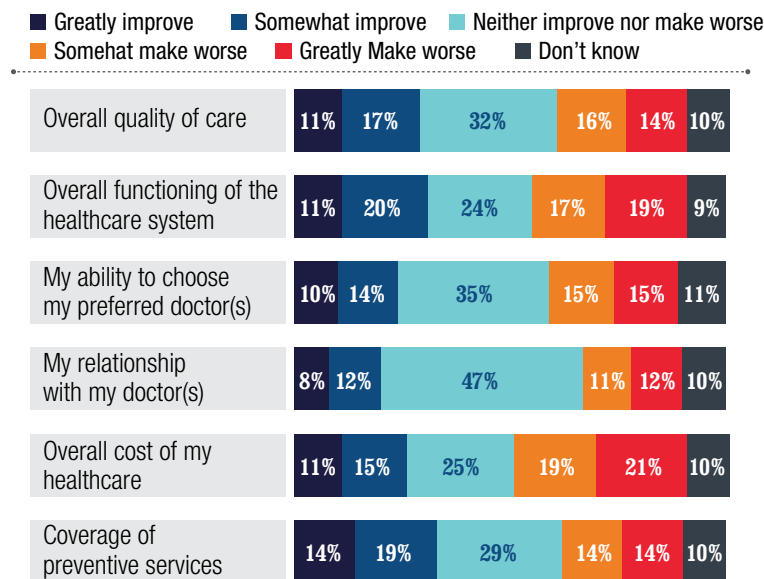


Figure 2. Consumers' Perceptions of ACA's Effect on Healthcare System



QD2. In your opinion, how will the Affordable Care Act (also known as Obamacare) affect the following aspects of the U.S. health care system? Base: All Respondents (n=1,003)

Type of coverage, as well as age, also impacted consumers' perceptions of the ACA. Just 28 percent of consumers believe the ACA will improve the overall quality of healthcare, while 30 percent believe it will make healthcare worse (see Figure 2). The latter data point has decreased from 36 percent in 2014. In fact, across all topics surveyed – including cost of healthcare, functioning of the healthcare system, ability to choose preferred doctors, and other factors – the percentage of consumers believing the ACA would make matters worse declined. These findings perhaps signal growing acceptance of the ACA and lessening fear about its impacts, if not outright belief it will improve healthcare overall. Younger Americans are far more positive about the impact of the ACA on all counts. Consumers with Marketplace and/or Medicaid coverage are also far more positive toward the ACA than others, especially regarding its effect on quality of care, functioning of the healthcare system, and cost of healthcare. Those with Medicare coverage and with group coverage are particularly negative about these latter two attributes, which are the most polarizing aspects of the ACA. It stands to reason that those with coverage ranking lowest in satisfaction would be more optimistic about the ACA, hoping it will offer them positive changes, while those with coverage ranking higher in satisfaction would be concerned about the ACA's changes to the status quo and their existing coverage.

* Changes to wording of the related survey question between 2014 and 2015 could have impacted responses.

Turning from topics of satisfaction to those raising concern, nearly two-thirds (62 percent) of consumers in 2014 expressed worries about the level of healthcare to which they had become accustomed still being available to them in the next five years. In 2015, that level of concern fell to 54 percent.

Expanding use of technology, which is discussed in detail later in this report, fuels skepticism among consumers about the security of their personal health information. More than half (53 percent) of consumers agree with the statement, “I trust that my personal health data are secure,” and less than half (47 percent) agree with the statement, “I trust that the data collected through doctor-recommended mobile or internet applications are secure.” Eighteen- to 35-year old respondents reported significantly higher levels of agreement with these statements than older respondents, indicating greater levels of trust with data security. This age group is also most welcoming of technology overall. A new question on this year’s survey found that 58 percent of consumers welcome their doctors sharing their personal health information to better coordinate and manage their care.

On a related topic, when asked if their healthcare provider(s) works with them to choose a course of care that suits their personal needs, only 62 percent of consumers in the 2015 survey agreed, compared to 72 percent in 2014. While this downward movement could have been influenced by a change in wording of the related survey question, it is notable at a time when care coordination and other models of patient-centered care are expanding and consumers should be experiencing greater synchronization with their providers.

The impact of an established doctor-patient relationship on consumers’ healthcare satisfaction cannot be overstated: nearly three-quarters (73 percent) of consumers who report having a personal doctor are satisfied with their healthcare overall, compared to just one-third (33 percent) of those who do not have a personal doctor. Unfortunately, many physicians, including a majority of specialists, think it is harder now than it used to be to get to know their patients – and four in 10 consumers believe it is harder to get to know their doctors. The good news, though, is that this may be changing. While 43 percent of consumers in 2014 believed it was harder to get to know their doctors, that figure dropped to 39 percent in 2015. In 2014, 57 percent of PCPs thought it was harder to get to know their patients, but only 45 percent felt that way the following year; among specialists, the figure dropped from 58 percent in 2014 to 53 percent in 2015.

Physicians and Administrators

Physicians may be optimistic about getting to know their patients better, but overall they continue to doubt the future of healthcare. They share widespread concern about many developments and trends, and are often wary of the new solutions advanced.

More than four out of five (83 percent) physicians believe doctors are losing autonomy and more than two-thirds (66 percent) see looming doctor shortages as one of the most difficult challenges for the U.S. healthcare system in the next 20 years. Sixty percent of physicians also believe risk-sharing or outcome/total-based compensation systems will inevitably lead to rationing of care.

Looking at consumers’ satisfaction and concerns by age group, those 65 years of age and older are particularly satisfied with their healthcare and providers, but most are concerned the level of care they are used to will not be available in the next five years. They also are least welcoming of communications technology to manage their health. Those age 46 to 64 are less satisfied with their healthcare and current doctors, and more pessimistic about nearly every aspect of their coverage and the healthcare system. Consumers 18 to 35 years old are most comfortable getting care from alternative provider types and most welcoming of technology. (See Figure 9 in the appendix for a demographic breakdown of the satisfaction with factors regarding consumers’ healthcare.)

More than 60 percent of physicians believe:

- Most small and medium-size practices are not prepared to evaluate risk-sharing compensation systems
- Consolidation in the healthcare industry limits doctors' ability to deliver appropriate care
- Their organization or practice faces an increasingly competitive market and puts strong emphasis on attracting and retaining new patients

One-third or fewer physicians agree on the following:

- Overall, the healthcare system is on the right track
- Insurance companies have a positive impact on healthcare delivery
- Fee-for-service must be abandoned to significantly reduce healthcare costs
- Accountable care organizations (ACOs) represent the future for the U.S. healthcare system
- Being part of a larger healthcare organization will enable career advancement
- Allowing physician assistants, nurse practitioners, and pharmacists to provide the same services as physicians will help address physician shortages

Often, dramatic differences in how physicians view the healthcare system emerged when comparing those who are part of a PCMH or moving toward that model of care with non-PCMH physicians.

The PCMH model seeks to ensure patients receive care when and where they need it by creating an active partnership between each patient, his or her family, and the healthcare provider team. The team coordinates care across the healthcare system by leading a team of medical professionals who are dedicated to providing proactive, preventive, and persistent care throughout a patient's life.

Of the physicians surveyed for this report, one-third indicated they were either part of a PCMH (16 percent) or moving toward a PCMH model of care delivery (16 percent). As a group, these PCMH physicians are distinct in many ways. Most striking is the relative size of their organizations. Among non-PCMH physicians, 73 percent are in practices

with five or fewer physicians. This is more than double the 35 percent who are part of a PCMH³ with five or fewer physicians.

This difference can be expected because:

- While a PCMH is a primary care model, it requires coordination of care across hospitals and specialist groups and is well-suited for larger, vertically integrated health systems
- A PCMH is often bundled with alternative risk-sharing payment models, which larger organizations are more comfortable accepting
- A PCMH benefits from information technology (IT) infrastructure in which small practices may not have the capacity or willingness to invest

Not surprisingly, PCMH physicians are significantly more likely to be in an organization that is owned by or affiliated with an integrated health system or hospital chain (64 percent versus 31 percent for non-PCMH physicians) and part of an ACO (61 percent versus 23 percent for non-PCMH physicians).

Physicians who are part of a PCMH or moving toward that model are measurably younger than non-PCMH providers, with 20 percent younger than 35 compared to just 9 percent of non-PCMH physicians. Being younger and typically part of a larger organization may contribute to this group having more positive outlooks about healthcare than their non-PCMH counterparts. For instance, PCMH physicians are more likely to think the healthcare system is on the right track than are non-PCMH physicians (33 percent versus 12 percent). PCMH physicians also are more likely than non-PCMH physicians to agree that:

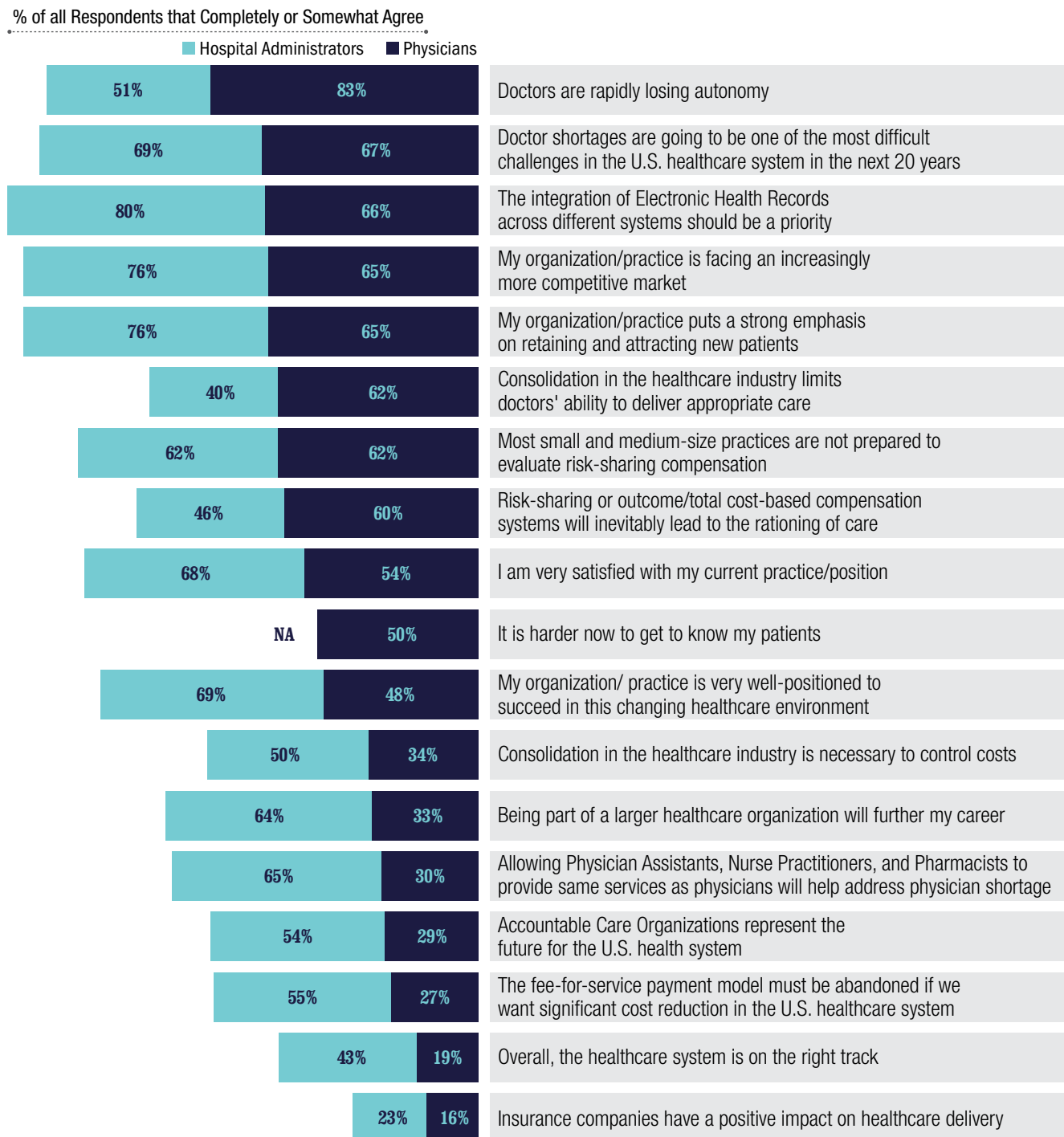
- They are very satisfied with their current practice/position (60 percent versus 50 percent)
- Being part of a large organization will further their careers (50 percent versus 26 percent)
- Their organization/practice is very well-positioned to succeed in the changing healthcare environment (59 percent versus 43 percent)
- ACOs represent the future for the U.S. healthcare system (38 percent versus 25 percent)
- Fee-for-service must be abandoned to control healthcare costs (40 percent versus 22 percent)

³ While a PCMH is generally a group PCP model of care, many specialists and hospital-based providers also indicated that they were "part of a patient centered medical home." This is likely due to their organization embracing the PCMH concept and actively cooperating with one or more PCP groups that have implemented a PCMH model.

Physicians who are part of a PCMH or moving toward that model are far less likely to believe that consolidation in the healthcare industry will limit doctors' ability to deliver appropriate care (51 percent compared to 68 percent of non-PCMH providers).

Physicians and health system or hospital administrators agree the healthcare environment is growing more competitive (see Figure 3). However, administrators are more likely than physicians to believe their organizations are well prepared to face the future (69 percent versus 48 percent). The outlook of administrators is far less bleak than that of physicians on several topics.

Figure 3. How Administrators' Perceptions Differ from Physicians'



QD1. Please indicate your level of agreement with each of the following statements: Base: All Respondents (n=401)

For example, while more than four out of five (83 percent) of physicians think doctors are rapidly losing autonomy, slightly more than half (51 percent) of administrators share that view. Sixty-two percent of doctors believe consolidation in the healthcare industry will limit their ability to deliver appropriate care, yet only 40 percent of administrators express this view.

Administrators also feel very strongly (often at close to or more than twice the rate of physicians) that being part of a large healthcare organization will further one's career; that the fee-for-service payment model must be abandoned; and that doctor shortages can be addressed by allowing physician assistants, nurse practitioners, and pharmacists to provide the same services as physicians. Other solutions to healthcare challenges, including consolidation, risk sharing, and ACOs, also generate far more enthusiasm among administrators than physicians.

With the strength of large and growing organizations behind them, and younger physicians sharing their views, administrators may have the momentum needed to carry through many of these healthcare changes – but at what cost to older physicians and those in solo or small to medium practices? Understandably, older physicians with established methods for running their practices and meeting patient needs, and fewer working years ahead in which to re-tool, are less interested than younger physicians and administrators in the long-term promise of dramatic change. Nonetheless, change is underway and expanding, and administrators are increasingly in the driver's seat when it comes to the future of healthcare. As business people, their motivations align with those of larger medical practices and healthcare organizations, including hospital chains, which must run as successful companies while still delivering quality care. Physicians have far less bargaining power with these groups than administrators who are working to cut costs and streamline delivery of care. Administrators, as a result, are likely to continue pursuing every new and emerging option for care available to them, even as the widening gap between their priorities and those of physicians looms as a potential management versus Labor-style rift down the road.

As in 2014, specialists perceive the impacts of the ACA negatively, while PCPs' views align more with those of consumers who see a balance of both positive and negative effects. Administrators now view the ACA more positively than consumers on every outcome.

Care Coordination

The federal government's National Quality Strategy (NQS) sets forth three aims and six priorities to achieve better health and healthcare. One of those priorities is promoting effective communication and coordination of care (a related priority is ensuring that each person and their family are engaged as partners in their care). The Agency for Healthcare Research and Quality describes that, "Care coordination involves deliberately organizing patient care activities and sharing information among all of the participants concerned with a patient's care to achieve safer and more effective care. This means that the patient's needs and preferences are known ahead of time and communicated at the right time to the right people, and that this information is used to provide safe, appropriate, and effective care to the patient."⁴ Nearly three-quarters of physicians (71 percent) and hospital administrators (74 percent), and a majority (52 percent) of consumers agree that greater coordination of care between multiple providers can have a significant impact on healthcare.

⁴ <http://www.ahrq.gov/professionals/prevention-chronic-care/improve/coordination/index.html>

Prevention and Public Health

Prevention continues as a priority, though views about approaches differ.

In 1980, healthcare expenses in the U.S. were \$1,106 per person (\$255 billion overall) and accounted for 9 percent of the gross domestic product (GDP).⁵ By 2013, U.S. healthcare spending had reached \$9,255 per person (\$2.9 trillion overall) and accounted for 17.4 percent of GDP.⁶ Reducing healthcare costs has long been a goal in the U.S. and is often cited as vital for maintaining the future strength of the healthcare system. In last year's report, prevention activities were seen as promising tactics in addressing that goal. While reducing costs remains an essential healthcare priority, and prevention continues to be a critical component, the focus of prevention this year is more about care than costs.

Consumers

To understand where they stand currently, consumers were asked to rate their overall health. More than half (52 percent) self-classified as being in "excellent" or "very good" health, while nearly one-fifth (17 percent) rated their health as "fair" or "poor." Among numerous preventive interventions designed to improve the health of consumers, those perceived by majorities of consumers as having a notable impact on public health are: aggressive screening for diseases that benefit from early detection (56 percent); greater coordination of care between healthcare providers (52 percent); and increasing patient access to important medical information, including lab results and X-rays (51 percent). Consumers see public education campaigns, mandating restaurants to post nutritional information, and personalized medicine as the least effective interventions.

Younger adults, age 18 to 35, place greater value on the impact of every preventive intervention on the survey more than adults 36 years and older do, with significantly higher rates on 12 of 15 interventions. Some notable areas where at least half the younger adults surveyed see impact and where their views differ from groups of older adults by more than 10 percentage points include:

- Requiring restaurants to post nutritional information (20 point difference)
- Providing incentives to consumers to reduce intake of high calorie food and drinks (20 points)
- Public education campaigns (19 points)
- Offering patients free or reduced-price gym memberships (18 points)
- Tailoring individual care based on the results of genetic testing (18 points)
- Increasing patient access to and coverage of nutritional counseling (17 points)
- Use of mobile technology to monitor patient conditions, such as heart rate, blood pressure, blood sugar, and sleep patterns (17 points)
- Use of mobile technology to help increase adherence to medication/treatment (13 points)
- School-based wellness education and programs (12 points)

In three categories, however, those 65 and older rated the following preventive interventions as more promising:

- More aggressive screening for diseases (where 64 percent of the older age group saw a great or good deal of impact compared to 57 percent of 18- to 35-year olds)
- Greater coordination of care between healthcare providers (61 percent and 53 percent, respectively)
- Expanding access to primary care (54 percent and 52 percent, respectively)

⁵ <http://archive.ahrq.gov/research/findings/factsheets/costs/expriach/>

⁶ <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.html>

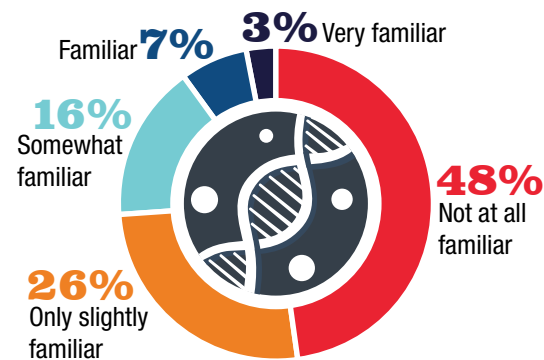
Those age 46 to 64 are the least optimistic about the promise of preventive interventions, providing significantly lower scores when rating 14 of the 15 preventive interventions included in the survey.

While health and wellness, and proactive interventions to improve and maintain both, are seen as valuable to younger Americans, most interventions on the survey were seen as impactful by fewer than half of adults age 36 and older.

While this gap illustrates generational differences between what is perceived as effective, it might also signal whom consumers view as most responsible for their preventive health. The only interventions for which at least half of older consumers see impact, for example, are those for which providers are responsible – aggressive screening for disease and increased care coordination. Younger adults see the value of those interventions, but roughly half of younger adults also see the impact of activities for which the individual is responsible.

Personalized medicine (sometimes known as precision medicine) is an emerging practice that uses an individual's genetic profile to guide decisions about the prevention, diagnosis, and treatment of disease. Knowing a patient's genetic profile can help doctors select and administer the proper medication or therapy in the proper dose or regimen. Overall, just one-quarter (26 percent) of consumers are at least somewhat familiar with what personalized medicine is, though rates are significantly higher (38 percent) among younger consumers ages 18 to 35 (see Figure 4).

Figure 4. Consumers' Familiarity with the Concept of Personalized Medicine



QD0. How familiar are you with the concept of personalized medicine, an approach that tailors treatments of patients based on results of genetic testing? Base: All Respondents (n=1,003)

Examples include using mobile technology to monitor their health or utilizing a free or reduced-price gym membership. While this could indicate younger adults will be more proactive about their own preventive health, it should be noted the survey question asks about interventions with the greatest impact on public health. Respondents may have rated what they think is most impactful for the larger population and not necessarily for themselves.

Physicians and Administrators

Providers' views about prevention interventions generally mirror those of consumers, especially when it comes to the rank order of what they see as having impact. **Physicians see even greater impact than consumers in the top-ranking interventions, such as care coordination and disease screening.**

When physicians are segmented, notable differences between those in PCMHs and non-PCMH environments emerge (see Figure 5). PCMH physicians are consistently more optimistic about preventive interventions than non-PCMH physicians, including expanding access to primary care (e.g., after-hours services), increasing patient engagement between visits, and empowering patients with knowledge (such as important medical and nutritional information, and information available through mobile apps).

Administrators believe these approaches will improve public health. Their rank order of interventions is similar to that of physicians, but administrators are more enthusiastic than physicians – even PCMH physicians – about nearly all interventions on the survey. The handful of areas where fewer administrators see impact are: increasing and improving school-based wellness education programs, providing incentives to reduce intake of high-calorie food and drinks, and offering patients free or reduced-price gym memberships. The differences are very small, but in contrast to the large differences with other interventions, it could signal that administrators see less value in preventive interventions outside their direct control.

The survey included more than a dozen different preventive interventions – a mix of both high-touch and high-tech approaches – and it will be interesting to see in future reports how consumers and providers view the relative impact of each one and how rank order may change. New interventions will undoubtedly emerge, perhaps through expanded use of mobile and online technologies and face-to-face patient-provider interventions, such as care coordination.

Figure 5. Different Views on Impact of Preventive Interventions on Public Health Between PCMH and Non-PCMH Physicians



QD1. Please indicate your level of agreement with each of the following statements: Base: All Respondents (n=401)

Technology Use Continues to Expand

Functionalities, deployment, and data safeguards require ongoing scrutiny.

The 2014 report concluded that technology offers promise for better healthcare outcomes as consumers and providers alike increase their use of electronic devices, apps, and websites for health and disease management, and organizations and practices increase their investments in technology. This trend is clearly continuing, though providers still view technology with a mix of caution and optimism, and consumers continue to express concerns (though less so than a year ago) about security of personal health information.

Consumers

Among consumers, availability of technology remains high. Seventy-nine percent of consumers surveyed have a smart phone or tablet (up from 71 percent in 2014), yet less than one-third of consumers (29 percent; up from 22 percent in 2014) use a mobile app or personalized interactive website to monitor or manage their health (see Figure 6). Of those who do, a majority uses them for exercise monitoring, general health reference, and weight loss/calorie counting, and just less than half (49 percent) use them for nutritional reference. Consumers access general health references more often through personal interactive websites, but

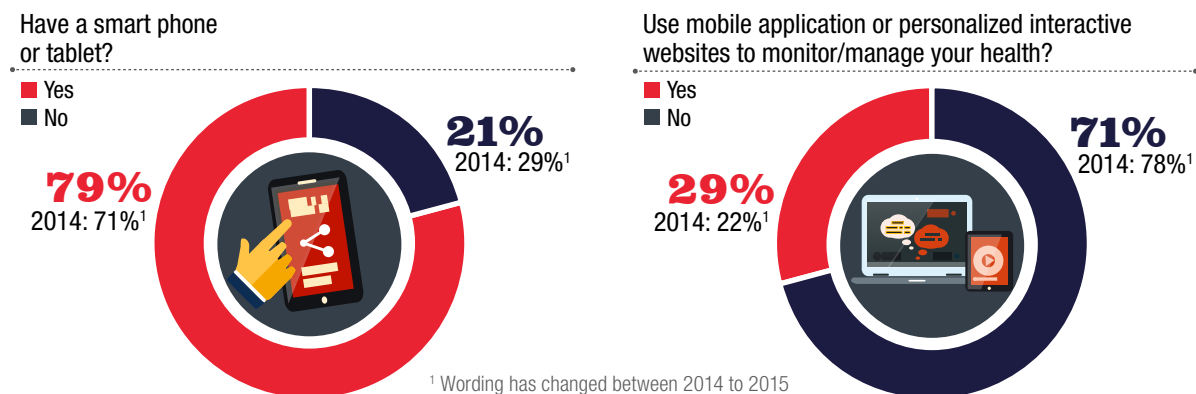
more frequently access the other resources mentioned through mobile applications. All other uses surveyed, including prescription drug reference, finding a doctor and making an appointment, and contacting a provider with questions about care or seeking real-time medical advice, occur most often via personalized interactive websites rather than mobile apps.



Not surprisingly, younger consumers almost always use these technologies more frequently than older consumers, with two notable exceptions: all consumers access general health references at roughly the same rates, but those who are 65 or older use the technologies to access prescription drug references far more often (59 percent) than other age groups (40 percent).

In addition to this technology generation gap, there also is an unexpected gender gap. Men are more likely than women to use apps or interactive websites to access nearly every kind of health information asked about in the survey. There also is a geographic divide, with consumers in the Northeast and West using technology for many health-related reasons more frequently than those in the Midwest and South. Among the top purposes – exercise monitoring, general health reference, weight loss/calorie counting, and nutritional reference – use is evenly balanced across all geographic regions.

Figure 6. Consumers' Smart Phone Ownership and Use of Mobile Apps/ Personalized Interactive Websites to Manage One's Health



QF3. Do you have a smart phone or tablet (iPhone, Android, Microsoft, etc.) that can be used to read emails, download/load applications, or participate in social media? Base: All Respondents (n=1,003)

QF4. In the past 6 months have you used any mobile application or personalized interactive (account/ login required) websites to monitor/manage your health? Base: All Respondents (n=1,003)

Consumers tend to find the most commonly used health apps on their own or through peers, but get referrals for more specialized applications from their insurance companies (such as apps for smoking cessation) or their doctor/provider (such as those to contact the provider or make an appointment) (see Figure 7). Thirty-five percent of consumers who use health apps or websites also use those technologies to manage their health insurance and related activities, including finding a doctor (most often via mobile app); checking claim status (as often via mobile app as on a website); and checking health savings account balances, managing and paying bills, and checking prices of medications (all done more often on an interactive website than mobile app).

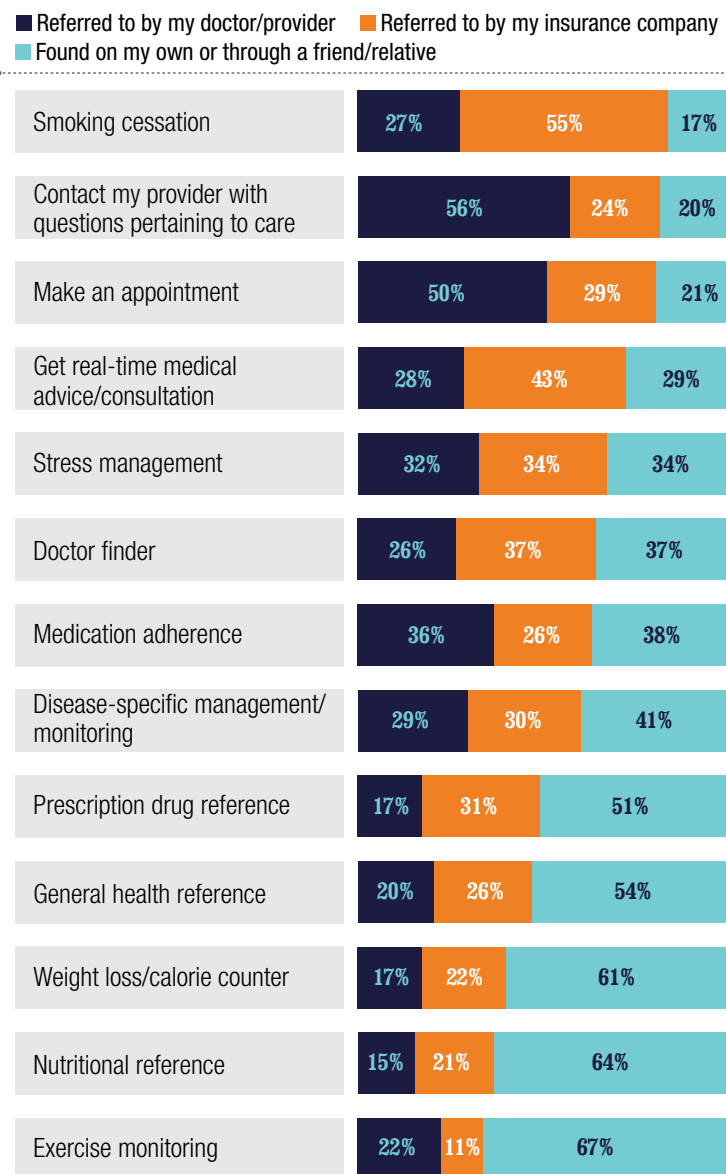
Even with their increasing use of technology, consumers continue to be concerned about the security of their personal health information, which may partially account for the generally low use (29 percent) of health-related apps and websites by consumers. When asked if they trust that their personal health data are secure, for instance, more than half of consumers (53 percent) agreed. When asked if they trust the security of doctor-recommended mobile or Internet applications, less than half (47 percent) agreed.

Providers and Administrators

Many providers offer electronic functionalities to their patients, most often for accessing medical records, appointment scheduling, and secure messaging. All functionalities are far more likely to be offered on a website than as a mobile application. When providers offer Internet or mobile apps for health or disease management, they cover a range of conditions, most often including general health management (not disease specific), weight loss, smoking cessation, and diabetes. Many of the applications offered for health and disease management track or share data with the provider to help improve clinical outcomes. In fact, of the providers who offer these applications, 71 percent track data on one or more applications for:

- General health management (not disease specific; offered by 57 percent of providers who offer the applications)
- Diabetes (51 percent)
- Weight loss (49 percent)
- Smoking cessation (48 percent)

Figure 7. Consumers: Mobile Applications and Personalized Interactive Websites Referral



QF6. Were you referred to these mobile applications or personalized interactive websites by your doctor/provider, your insurance company or did you find them on your own? Base: Have Used App to Manage Health in Past 6 Months (n varies from 55 to 160 depending on app)

In their practices or organizations, physicians most often use mobile devices for medical references (81 percent), displaying photos (66 percent), and for diagnostic/clinical tools (61 percent).

PCMH physicians are significantly more likely to provide online and mobile services to their patients and often do so at nearly twice the rate of non-PCMH physicians in every category of application.

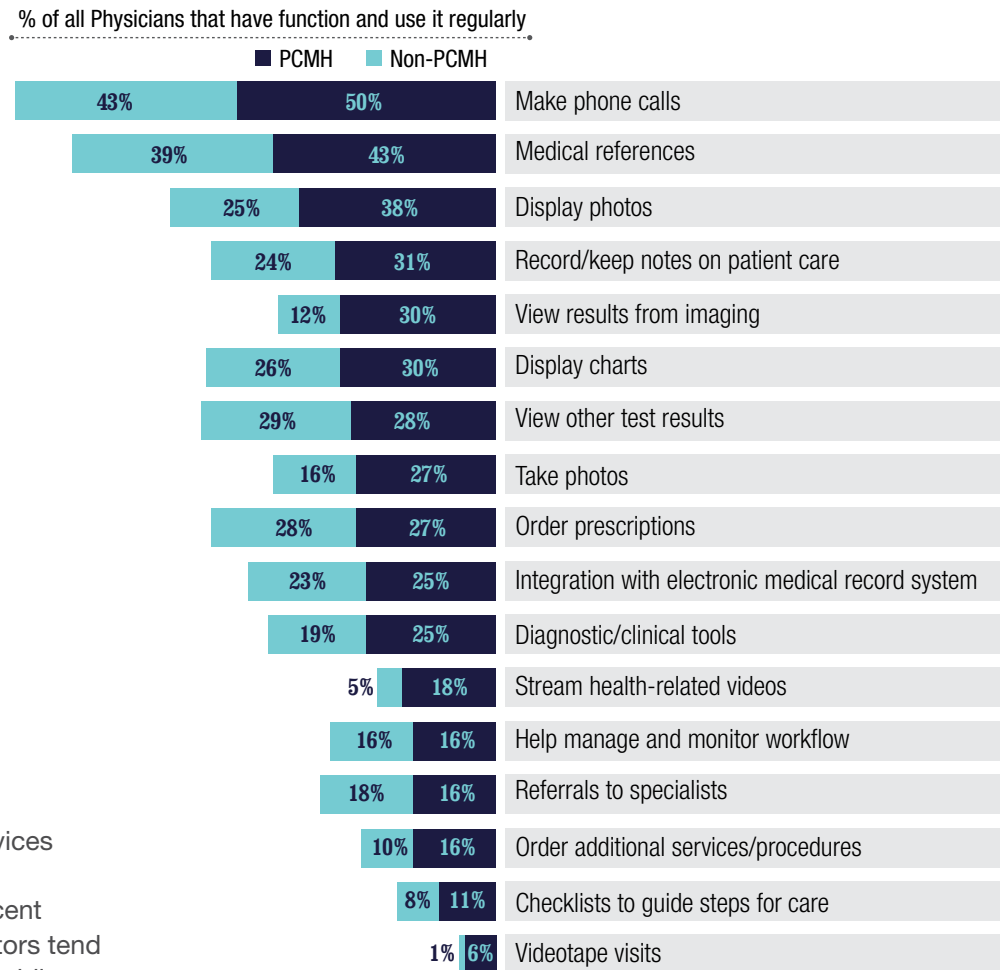
Administrators report much higher use of all devices and applications among physicians in their organizations than do physicians surveyed.

This may suggest continued overestimation on the part of administrators, but also could be driven by a broader range of departments and practices within an administrator's large organization – physicians in certain areas of the organization may have different technology at their disposal than a single physician randomly selected from within the organization. Overall, 83 percent of physicians and 77 percent of specialists report using a computer or mobile device during patient visits, while administrators report that almost all (96 percent) of their physicians do so. Among administrators, 85 percent estimate use of mobile devices for ordering additional services and procedures. At the same time, physicians surveyed report 35 percent use. Other areas where administrators tend to overestimate physician use of mobile devices is in viewing test results and viewing results of imaging.

PCMH physicians typically use technology more than their non-PCMH counterparts (see Figure 8). Where just 12 percent of non-PCMH physicians with mobile devices use them to view imaging results, 30 percent of PCMH physicians report doing so. The two groups are on par in using devices to view other test results, order prescriptions, and integrate with EHRs, but PCMH physicians use devices much more frequently than their counterparts to take and display photos and stream health-related videos.

PCMH physicians also are significantly more likely to agree that mobile disease management technology would be helpful to report adverse events and can provide important data that should be incorporated into EHRs. These doctors also are more likely to trust patients to submit accurate data into EHRs.

Figure 8. PCMH vs. Non-PCMH Physicians' Usage of Mobile Device Functions as Part of Clinical Practice



QF6. Which of these functionalities do you have on your mobile device and use as part of your clinical practice? Base: Physicians Who Use Mobile Devices During Patient Visits (n=92)

¹Wording has changed between 2014 to 2015

Majorities of both administrators and providers expect their organizations or practices will invest in website and EHR systems in the next 12 months. Two-thirds of all physicians (66 percent) and 80 percent of administrators believe that integration of EHRs across different systems should be a priority.



Majorities of administrators also expect investment in mobile technology for care delivery and in mobile apps for care management and engaging/monitoring patient between visits. PCMH physicians are much more likely than non-PCMH physicians to report anticipated technological investment in all categories. This is led by investment in their organization website (anticipated by 73 percent of PCMH providers, but only 52 percent of non-PCMH providers), purchase or upgrade of EHR systems (62 percent PCMH versus 54 percent non-PCMH providers), and purchase of mobile technology for providers to use in managing care delivery (60 percent PCMH versus 36 percent non-PCMH providers).

While anticipated investment in and use of Internet and mobile applications for health and disease management is considerable, providers continue to view these technologies with a mix of caution and optimism. For example, 68 percent of providers (down slightly from 70 percent in 2014) believe these are promising technologies to help patients better manage their health, but 71 percent believe they have a long way to go before their value is fully realized. Furthermore, 79 percent (down from 86 percent in 2014) still think the technologies need to be scrutinized carefully to ensure they are providing accurate and easy-to-understand information. PCMH physicians are more positive than non-PCMH physicians about mobile technologies, though nearly three-quarters of both groups agree they have a long way to go before their value is fully realized. Nevertheless, 73 percent of PCMH physicians believe mobile technologies provide important data that should be incorporated into a patient's EHR compared to 54 percent of non-PCMH physicians.

CONCLUSION

Providing consumers with access to top-quality care at reasonable cost may be the overarching goal of the U.S. healthcare system, but the primary care physicians, specialists, and administrators involved in making that a reality see the future differently and often have their own priorities to address within that larger context.

Consumers want the ability to see doctors they choose in a timely manner; receive medications, diagnostic testing, and preventive interventions they need; and maintain the privacy and security of their personal health information – all at reasonable cost and with reasonable amounts of paperwork. Physicians want to deliver high-quality, holistic care to their patients in cooperation with other medical professionals, as needed, but while maintaining autonomy and growing a thriving practice or advancing within a larger medical organization. Administrators want to satisfy consumers and physicians, but are also tasked with finding new and innovative ways of reducing costs – a key component to their own advancement within their organizations. Balancing these competing objectives and interests is an ongoing challenge.

We will revisit the topics in the report – as well as emerging issues and perceptions among consumers and providers – in future studies. Improving healthcare, reducing costs, and doing both with expanded focus on prevention and the role of technology will continue to be among key

healthcare priorities for many years. We will study and report on the evolving views of consumers and providers to understand the challenges and opportunities all of us face with our healthcare system.

It will be important, for instance, to follow the ongoing development and expansion of care coordination, its impact on consumer satisfaction, and how physicians of different ages and within different types of organizations adapt to and adopt this trending approach to care. How will care coordination affect the growing gaps between physicians and administrators, and those participating in new models of care such as PCMHs? Future studies will continue to monitor consumer satisfaction with different types of healthcare coverage, as well as the degree to which consumers move between types of coverage seeking the best mix of costs and care. The range of current and emerging preventive interventions also will be tracked – which ones will be accepted most fully and make the greatest impact on cost and quality of care? How will technology and expanded investments by organizations improve healthcare's bottom line, improve delivery of services, and keep consumers healthier and feeling secure about their personal privacy?

As healthcare advances and evolves, we will continue to monitor the ways that consumers and providers think and feel about it.

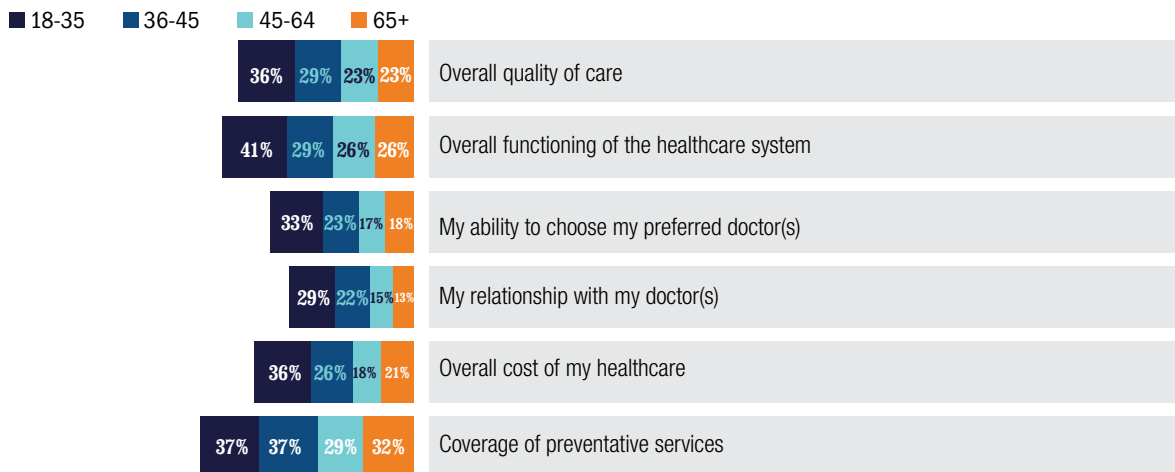
APPENDIX

Figure 9. Satisfaction with Factors Relative to One's Own Healthcare (by age group)



Continued

Figure 9. Satisfaction with Factors Relative to One's Own Healthcare (by age group)



QB2. How satisfied are you with each of the following regarding your health care. Scale: Very satisfied, Satisfied, Neither satisfied nor dissatisfied, Dissatisfied, Very dissatisfied. Stat testing displayed vs. previous year score and is performed at the 95% confidence level. Base: All Respondents (n=1,003); *Those who have a personal doctor [yes at QA2] (n=856)

QD1. Please indicate your level of agreement with each of the following statements: Stat testing displayed vs. previous year score and is performed at the 95% confidence Level. Base: All Respondents (n=1,003) *Wording has changed between 2014 to 2015

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