



FEATURE

A consumer-centered future of health

Deloitte's 2019 global health care consumer survey finds evidence that the future is now

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Our survey finds people are exhibiting traditional “consumer behaviors” when it comes to health care: They are willing to shop for deals, disagree with their doctor, and use technology to track and maintain their health.

THE IDEA THAT increased consumerism will help change the health care system is not new, nor is it an idea unique to any one region.

From North America to Asia to Europe, digital tools and other technologies are helping consumers take more control of their health, according to results of Deloitte's recent global health care consumer survey.

Twenty years from now, we expect health care to be more consumer-centric. Consumers will likely have access to their own health data in an easy-to-use format and will use it to make decisions that help them improve or maintain their health.

Will people start to act like consumers when it comes to health care? And which countries are in the vanguard of this trend?

Last autumn, Deloitte leaders shared their vision for the Future of Health in 2040—envisioning a world in which technology use accelerates, useful and actionable data flows easily, and the use of tools to maintain well-being will be widespread. This vision of well-being extends beyond physical health to include mental, social, emotional, and spiritual health.

Is this vision realistic? Will people start to act like consumers when it comes to health care? And which countries are in the vanguard of this trend?

The Deloitte 2019 global survey of health care consumers, combined with relevant findings from our [2018 US survey of health care consumers](#),

shows meaningful percentages of people who exhibit traditional “consumer behaviors” when it comes to their health (see sidebar, “Inside the Deloitte surveys of US and global consumers”). The countries we incorporated in the 2019 survey include Australia, Canada, Denmark, Germany, the Netherlands, Singapore, and the United Kingdom. “Consumer behavior” encompasses several attitudes and actions that align with being informed, acting independently, and evaluating choices. Some aspects of this behavior that we captured in our survey include: being proactive about health and using preventive care, willingness to disagree with a clinician, willingness to change doctors or health

plans if unsatisfied with care or customer service, using technology and digital tools to improve/maintain health, willingness to share data if properly incentivized, and using tools/ratings to find the best quality of care and customer service. These are not

comprehensive, but, together, capture some of the important concepts.

For example:

- **Increasing use of technology and willingness to share data:** A growing number of consumers are using technology for measuring fitness, ordering prescription drug refills, and monitoring their health. More than half of consumers (53 percent) in the United Kingdom—and 35 percent in Germany—measure their fitness levels and set health improvement goals. Many consumers are willing to share their health data in various scenarios.

- **Interest in and use of virtual care:**

Consumers appear to be warming up to the idea of virtual health. More than half of those who have seen a care provider virtually report being satisfied and would likely have another virtual visit.

- **High levels of self-efficacy and**

prevention behaviors: People today seem more willing to tell their doctors when they disagree. This is especially true in the Netherlands and in the United States—where 58 percent of consumers said they were “very likely” or “extremely likely” to do this. In addition, one-third or more of consumers surveyed said they followed a healthy diet, exercised, and followed their doctor’s advice for health screenings and vaccinations (though these percentages varied by country).

- **Use of tools to make decisions about prescriptions and care:**

Consumers are interested in using tools to compare pricing and for user reviews. This tends to be highest in countries where consumers have more exposure to out-of-pocket spending. Nearly half of US consumers and 45 percent of consumers in Singapore are interested in these tools.

- **Interest in emerging technologies:**

Between 20 and 35 percent of people expressed interest in technologies leveraging robotics and artificial intelligence (AI) for health care, preventive care, monitoring, and caregiving.

The percentages do vary by country, reflecting the local health system, availability of various technologies, and attitudes. However, we found that countries were more alike rather than different—though they may be at different levels of maturity in consumerism.

In each of the eight countries where we conducted our survey, we found a meaningful group of people who displayed consumer behaviors regarding

INSIDE THE DELOITTE SURVEYS OF US AND GLOBAL CONSUMERS

Since 2008, the Deloitte Center for Health Solutions (DCHS) has surveyed a nationally representative sample of US adults (18 and older) about their experiences and attitudes related to their health, health insurance, and health care in general. The national sample is representative of the US Census with respect to age, gender, race/ethnicity, income, geography, and insurance source. As part of this effort, in February and March 2018, DCHS conducted an online survey of 4,530 US adults.

In 2019, we expanded our survey to adults (18 and older) in seven additional countries: Australia (n=4,079), Canada (n=4,039), Denmark (n=2,023), Germany (n=3,625), the Netherlands (2,014), the United Kingdom (n=4,165), and Singapore (n=2,014).

Some of the questions asked in our global survey were not asked in the US survey, and we have noted this throughout this paper.

health care. Technology is helping us do things faster, less expensively, and more efficiently. Consider how digital tools and technology are changing the restaurant industry. For example, between 2019 and 2022, restaurant delivery is projected to grow at three times the rate of on-premises sales, with the majority going to digital orders. Although this trend does not end the need for physical restaurants, it has pushed the restaurant industry to adapt to new customer preferences.¹ We anticipate a similar trend in health care.

How will technology affect stakeholders in the health sector? Today’s industry stakeholders, companies considering entering health care, health financiers, and others should make sure that their future strategies incorporate a meaningful emphasis, not just on improving health but also on enhancing the overall consumer experience.

Key findings

Many consumers around the world use technology and otherwise take charge of their health. Even those who are not using technology for health say that they are interested, suggesting that the right tools haven't been built yet.

Between a third and half of consumers use digital tools to measure their fitness and health, and between 20 and 35 percent of consumers use at-home monitoring devices (figure 1). Consumers in the United States, Denmark, the Netherlands, and the United Kingdom are more likely to use

technology to refill prescription drugs compared to those in other countries. Our global survey found that Singapore and Canada had the highest percentage of fitness tracker usage—with other countries behind by less than 10 percent. In 2018, 42 percent of US consumers said they used tools to measure fitness and to track health improvement goals, up significantly from just 17 percent in 2013.

Among consumers who use devices to track their fitness data, between 28 and 53 percent said they shared the data with their doctor (data not shown).

More than half (53 percent) of US consumers and between 40 and 42 percent of Canadian, Dutch,

FIGURE 1

Consumers are using technology and tools for various health reasons, with fitness and health improvement tools being the most frequently used

Q. In the last 12 months, have you used any technologies including websites, smartphone/tablet apps, personal medical devices, or fitness monitors for any of the following health purposes?

	Australia	United Kingdom	Canada	Denmark	Netherlands	Germany	Singapore	United States
Measure fitness and health improvement goals (e.g., exercise, diet, weight, sleep)	40%	37%	43%	39%	37%	35%	53%	42%
Monitor health issues (e.g., blood sugar, blood pressure, breathing function, mood)	21%	21%	27%	21%	21%	24%	35%	27%
Receive alerts or reminders to take medication	17%	15%	20%	17%	19%	18%	21%	21%
Measure, record, or send data about medication you are taking	13%	11%	15%	16%	19%	13%	21%	20%
Order a repeat prescription supply	18%	38%	29%	49%	36%	22%	16%	48%

Note: Chart shows percentage of respondents who said "yes."

Source: Deloitte Center for Health Solutions: 2019 Global Health Care Consumer Survey and 2018 Health Care Consumer Survey.

Danish, and Singaporean consumers said they shared personal fitness or monitored health data with their doctor. In contrast, just 28 percent of consumers in Germany and the United Kingdom, and a third of Australians shared this information. In most countries, the most common reason consumers said they didn't share personal fitness data was because they didn't think their doctor would be interested. Singapore differed, in that the majority said they didn't have a regular doctor or that they would rather keep this information private.

However, tracking health information doesn't necessarily result in better outcomes. But health information combined with appropriate interventions, leveraging behavioral economics principles, can lead to healthier behaviors.

Case in point: In 2019, about 600 Deloitte employees (from 40 US states) participated in a 36-week randomized clinical trial to determine if a wearable activity tracker—combined with gamification—would increase physical activity among overweight and obese adults.² The STEP UP (Social Incentives to Encourage Physical Activity and Understand Predictors) study aimed to understand which data and science-driven approaches are the most effective to engage patients in physical activity (see sidebar, “The STEP UP study”).³

The same strategies that led to increased activity levels in this study might also be used to encourage people to eat healthier or to improve medication adherence. If organizations and health systems can combine the right types of devices and incentives, they could have a positive impact on health.

THE STEP UP STUDY

The main research question: What is the best way to incorporate social incentives within a behaviorally designed gamification intervention to increase physical activity among overweight and obese adults?

The methodology: The randomized clinical trial included 602 overweight and obese US adults (having a body mass index [BMI] equal to or greater than 25). The participants all wore wearables and tracked their steps. They were divided into four groups:

- Control group: Had no additional intervention beyond tracking steps.
- Support arm: Participants selected a family member/friend who they could email each week and report their progress.
- Collaboration arm: Participants were divided into teams of three people that communicated via email. A team member was randomly selected to represent the team every day. If that team member met his/her goal the previous day, the team kept its points. If the selected member did not meet his or her goal—the team lost points.
- Competition arm: Each week, the three-person teams received an email that ranked all teams by the number of points they had accumulated.

What they found: Those who used gamification had significantly more physical activity than the “control” group or the group that did not use gamification during the 24-week intervention. During the 12-week follow-up, physical activity was lower in all groups, but remained significantly higher among gamification participants than the control group.⁴

Consumers are most willing to share their tracked health information (in apps and medical devices) with doctors, in emergencies, and with family members.

We asked all respondents to think about future situations where they would be willing to share their tracked health data (in apps and medical

devices), regardless of whether they currently track their health data (figure 2).

The results show that:

- One-third to half of consumers are willing to share their health data in emergency situations

FIGURE 2

Many consumers are willing to share their health data, particularly if it is to be used in an emergency or shared with their doctors to improve care

Q. How willing would you be to share the information tracked in your apps or devices for the following reasons?

	Australia	United Kingdom	Canada	Denmark	Netherlands	Germany	Singapore	United States
Share with my doctor to help him/her provide better care to me	42%	45%	48%	39%	39%	36%	44%	60%
Share with the developer of the device as a blinded/anonymous contribution to improve the device or program	21%	22%	24%	19%	17%	20%	21%	40%
Share with an organization that does health care research as a blinded/anonymous contribution	23%	23%	26%	22%	19%	18%	21%	39%
Share with emergency services if I experienced a rapid elevated heart rate or other sudden emergency situations	44%	45%	44%	32%	35%	35%	45%	53%
Alert myself and share with my family if I'm in danger due to a fall, rapid elevated heart rate, or other emergency situations	42%	41%	43%	23%	25%	40%	50%	53%

Note: Chart shows percentage who answered 4 or 5 on a 5-point scale, where 1 is "not at all willing" and 5 is "extremely willing."

Source: Deloitte Center for Health Solutions: 2019 Global Health Care Consumer Survey and 2018 Health Care Consumer Survey.

(either to alert family members or emergency responders).

- Approximately 20 percent of consumers across the US and global surveys would be willing to share their deidentified (blinded) health data with organizations that do health care research—ranging from 18 percent of Germans to 26 percent of Canadians. In the United States, 39 percent were willing.
- Approximately 20 percent (ranging from 17 percent in the Netherlands to 24 percent in Canada) of global consumers said they would be willing to share their personal health data from a medical device with a device developer. The percentage was higher in the United States, with 40 percent willing to share information with device developers.
- Across the board, chronically ill consumers are more willing than healthy consumers to share their tracked health information (data not shown).

People's willingness to share data is important for developing the interoperable data platforms necessary to drive innovation/discovery. In addition, this data-sharing can help clinicians and consumers become more proactive in the patient's health management. Health systems and clinicians who decide to work with tracked data will need to determine how to organize it so it's interoperable. In clinical trials, as another example, organizations/researchers should ensure they have the right patient education, consent, and support systems in place.

Consumers are most willing to share deidentified information from their medical record for personal analysis and for the

People's willingness to share data is important for developing the interoperable data platforms necessary to drive innovation/discovery. This data-sharing can help clinicians and consumers become more proactive in the patient's health management.

development of therapies to treat patients who have the same condition.

Every time a patient interacts with a hospital/health system, another piece of health data is created and stored in an electronic health/medical record. According to our global survey, if this data is depersonalized, consumers are more willing to share their data—in particular, for personal analysis and for the development of therapies to treat patients who have the same condition (figure 3).

In the US survey, we asked a similar question but with different response options. Despite the differences in the question, the findings were similar: Many consumers are willing to share electronic health record (EHR) data with a health insurance plan or a university-affiliated hospital if their personally identifiable information is protected (46 percent each). Fewer consumers said they were willing to share this information with medical device manufacturers (35 percent), state/public health agencies (34 percent), or pharmaceutical companies (31 percent).

More consumers are using virtual visits/consultations.

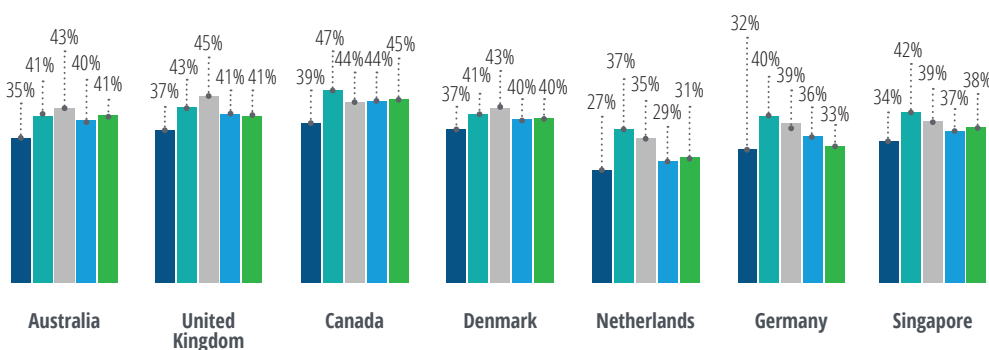
Between 13 and 29 percent of consumers in the seven countries we surveyed have had a virtual

FIGURE 3

Consumers are willing to share depersonalized health data to help health care professionals improve treatment and develop new therapies

Q. If there was an opportunity to share your health information from your medical records, but remove the parts that identify you personally (such as your name, address, etc.), how willing would you be to share your medical information for the following?

- Analyze data to understand what treatments work for different kinds of patients
- Individual analysis to understand which treatments work for you
- Development of new drugs that might work for patients with your condition(s)
- Measure how well doctors or clinicians are following clinical guidelines or public health recommendations
- Data for public health reporting (such as flu activity, outbreaks of infectious diseases, babies with birth defects, lead poisoning)

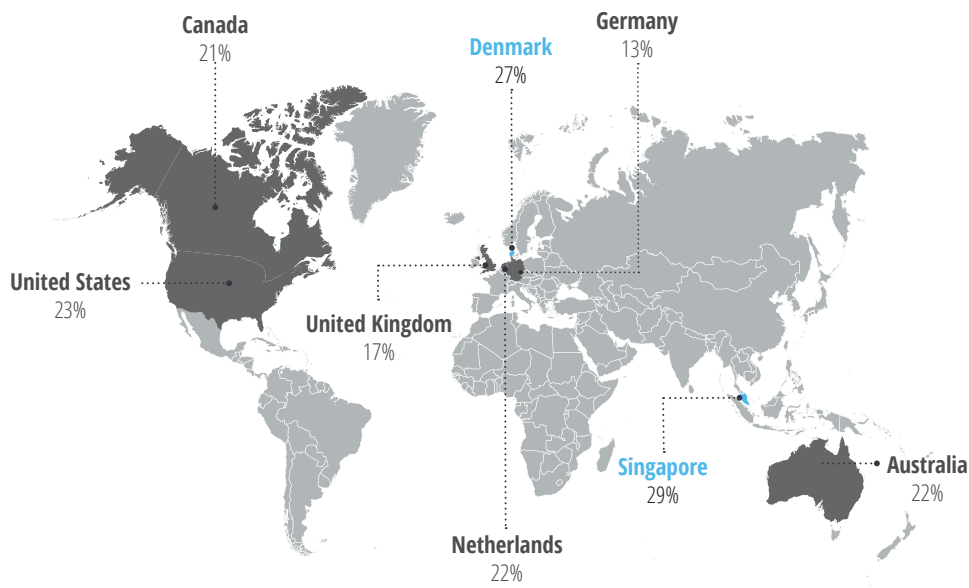


Note: Chart shows percentage who answered 4 or 5 on a 5-point scale, where 1 is “not at all willing” and 5 is “extremely willing”; question not asked in the United States.

Source: Deloitte Center for Health Solutions: 2019 Global Health Care Consumer Survey.

FIGURE 4

Consumers in Singapore and Denmark used virtual consultations the most



Source: Deloitte Center for Health Solutions: 2019 Global Health Care Consumer Survey and 2018 Health Care Consumer Survey.

visit/consultation with a care provider (figure 4). Consumers in Denmark and Singapore have more virtual visits than other countries surveyed. Consumers in Germany were least likely to have a virtual visit.

One reason for the variance could be related to when virtual visits became available in each country, how the visits are reimbursed, and privacy concerns. For example, Denmark has very strict legislation on data privacy, and access to the doctors' system is protected by a government-approved security system. This may be the reason why more Danish consumers feel confident using virtual visits. On the other hand, Germany may have lower virtual visits because the country just introduced a national strategy for reimbursements for virtual visits; prior to this legislation, virtual visit use was low (13 percent). However, we anticipate virtual visits to take off, now that clinicians will be reimbursed for their time on virtual visits. In addition, we anticipate higher pickup in the United Kingdom because of the "National Health Service (NHS) Long Term Plan," where, starting in 2021, every patient in England will have access to online and video consultations—if they choose.⁸ However, it's important to note that

having access is one step, but consumers wanting to make use of the option is another.

In each of the countries we tracked, we found fairly high satisfaction rates among people who have used virtual visits (figure 5). In most countries, "completely/very satisfied" levels hovered between 35 and 46 percent. In the United States, the percentage was higher—at 77 percent—which may reflect the fact that it has offered virtual visits for

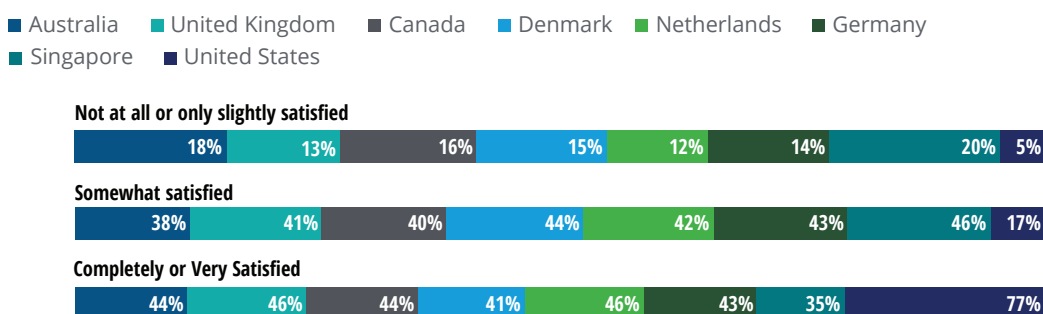
In each of the countries we tracked, we found fairly high satisfaction rates among people who have used virtual visits.

longer than most of the other surveyed countries. Most countries' (Australia, Canada, Denmark, Germany, the Netherlands, and the United Kingdom) respondents were similar, with between 41 (Denmark) and 46 percent (Netherlands) "completely/very satisfied." Interestingly, Singapore had the highest use of virtual visits; however, the country had the lowest rate of people that said they were "completely/very satisfied" with their visit (35 percent).

FIGURE 5

Satisfaction rates among consumers who had a virtual visit are fairly high in all the countries surveyed

Q. Overall, how satisfied were you with the care you received on your virtual visit/consultation?



Source: Deloitte Center for Health Solutions: 2019 Global Health Care Consumer Survey and 2018 Health Care Consumer Survey.

Between 62 and 75 percent of people who had a virtual visit said they would consider doing it again. The most common reasons people would *not* consider another virtual visit (across all countries) were:

- I did not feel the quality of care was as good as an in-person visit with my own doctor/clinician.
- I was not able to connect with the clinician the same way I would in person.
- I had to go to another health care clinician in person after the virtual visit anyway.

These findings suggest areas for hospitals and physician practices offering virtual visits to work on improving. One area we found is in training clinicians to conduct high-quality virtual visits. As

more physician-patient interactions happen virtually, physicians and health systems might need to determine how to ensure an appropriate *web-side manner*. This could include how to focus on the patient during the virtual visit, conveying empathy and compassion, and communicating with the patient even while not making eye contact and glancing at data or notes.⁹

Consumers are no longer passive participants in the health system. They demand transparency, convenience, and access. They are also willing to disagree with their doctors and are more likely to engage in preventive behaviors than in the past.

By 2040, we expect health to be defined holistically as an overall state of well-being encompassing

HOW CAN ORGANIZATIONS MAKE CONSUMERS FEEL MORE COMFORTABLE ABOUT SHARING THEIR DATA?

Organizations should build trust to make consumers feel comfortable sharing their personal health data. One way to do so is to let consumers own their data. Today, data resides in multiple medical records across different providers and various tracking devices. This makes a complete picture of people's health unavailable to doctors, researchers, and individuals. It can lead to redundancy in care, missed connections and insights, and a lack of coordination, and makes it difficult for consumers to get appropriate care when they need it most.

Some organizations are working to help pull together data from electronic records and make it available to consumers. For example, in the United States, Apple recently released a feature on their smartphones that can store an individual's collated medical records.⁵ Apple worked with the health care community to take a consumer-friendly approach, creating health records based on Fast Healthcare Interoperability Resources (FHIR), a standard for transferring electronic medical records. In addition, in England, the NHS is offering a new app that allows patients access to their own health data from their primary (GP) records and lets them set data-sharing preferences.⁶ Another app/service in the United Kingdom, Patients Know Best, allows patients to own their own health data (medical records and connected devices) and decide what data to share and with whom to share it.⁷

These organizations, governments, and developers are working together to give consumers one-stop access to their medical information and control over how data is shared. But this will require interoperability between the various organizations that currently *own* or store the data. This development could help move the industry closer to centralized records and interoperability.

mental, social, emotional, physical, and spiritual health. Not only will consumers likely have access to detailed information about their own health, they will own their health data and play a central role in making decisions about their health and well-being.

Our survey findings support this vision. A high percentage of consumers said they follow a healthy diet, exercise regularly, and follow their doctor's recommendations on prevention (figure 6).

We also found that many consumers are willing to disagree with their doctors (figure 7)—this appears to be most common among consumers in the Netherlands, the United States, and Denmark—and



FIGURE 6

A high percentage of consumers follow a healthy diet, exercise regularly, and follow doctors' recommendations

Q. Which of the following, if any, have you done in the last 12 months?

	Australia	United Kingdom	Canada	Denmark	Netherlands	Germany	Singapore	United States
Followed a healthy diet (eating a variety of foods that includes vegetables, fruits, whole grains, and a limited amount of processed foods)	52%	52%	49%	35%	39%	55%	42%	55%
Exercised according to recommendations from your doctor or other health guidelines	41%	37%	39%	37%	42%	35%	37%	47%
Practiced meditation	16%	14%	16%	11%	12%	10%	20%	23%
Followed my doctor's recommendations on health screenings (such as mammograms, blood pressure, colonoscopies, etc.)	52%	47%	52%	46%	34%	39%	35%	61%

Note: Chart shows percentage who answered 4 or 5 on a 5-point scale, where 1 is "never" and 5 is "always."

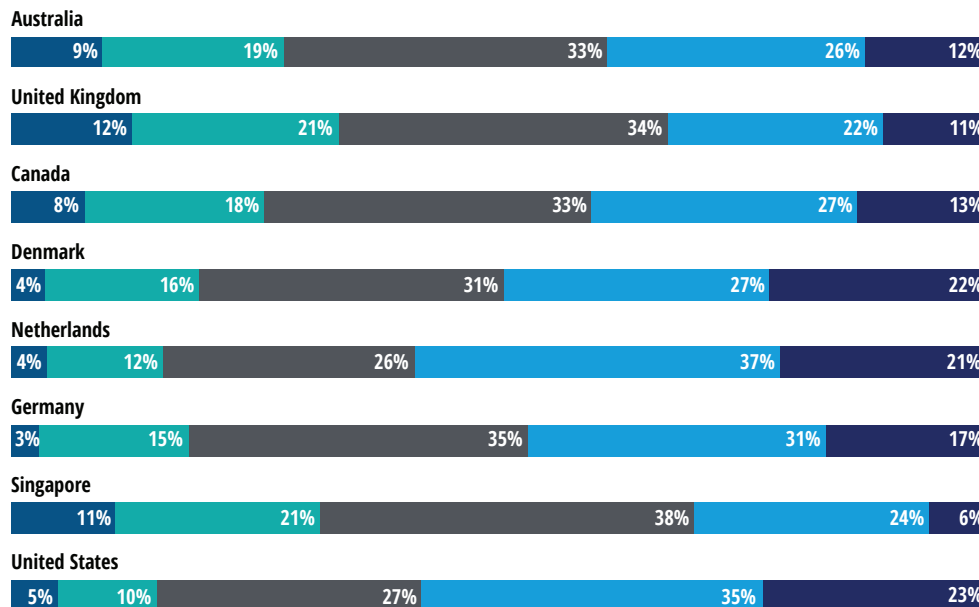
Source: Deloitte Center for Health Solutions: 2019 Global Health Care Consumer Survey and 2018 Health Care Consumer Survey.

FIGURE 7

Many consumers are willing to disagree with their doctors

Q. How likely are you to tell your doctor when you disagree with him or her?

■ Not at all likely ■ Slightly likely ■ Somewhat likely ■ Very likely ■ Extremely likely



Note: Chart sorted by highest to lowest in very likely/extremely likely categories. Percentages may not total 100 percent due to rounding.

Source: Deloitte Center for Health Solutions: 2019 Global Health Care Consumer Survey and 2018 Health Care Consumer Survey.

least common in Singapore and the United Kingdom.

Consumers have access to (and use) tools to compare quality and pricing for health care and services.



Many consumers are interested in using tools to compare pricing and read user reviews (figure 8). The level of interest tends to be highest when consumers have more exposure to out-of-pocket spending. Nearly half (49 percent) of US consumers and 45 percent of those in Singapore said they are interested in using such tools. In addition, consumers in the United States, Canada, and Singapore were more likely than consumers in other countries to use websites to:

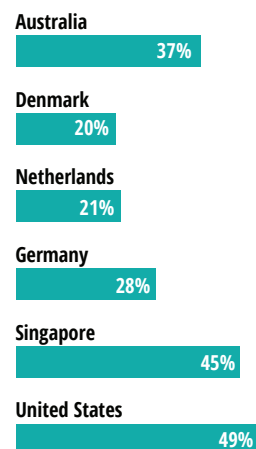
- Look up quality and satisfaction ratings for doctors and hospitals
- Look up user reviews, safety information, and effectiveness ratings

FIGURE 8

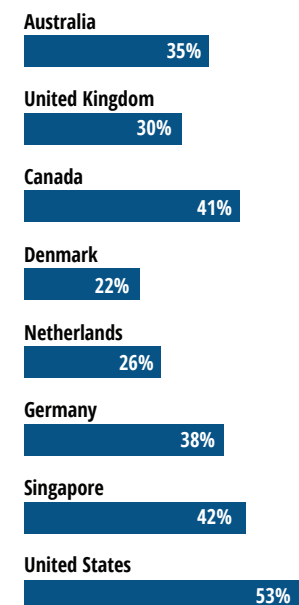
Many consumers are interested in using price comparison tools and patient reviews

Q. How likely would you be to use websites that offer the following?

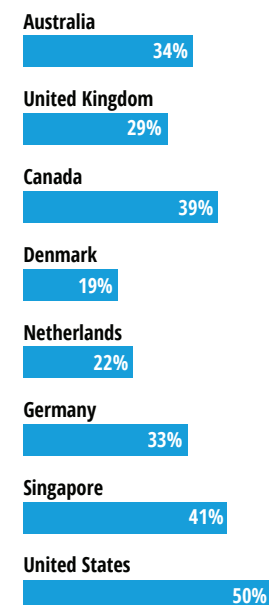
A pricing tool that could help you to compare prices for services and treatments offered by specific doctors and hospitals



Quality rankings, satisfaction ratings, and patient reviews for specific doctors and hospitals



User reviews, effectiveness ratings, and safety information for specific health care products, medications, and medical devices



Note: Chart shows percentage who answered 8, 9, or 10 on a 10-point scale, where 1 is “not at all likely” and 10 is “extremely likely”; pricing tool question not asked in the United Kingdom and Canada.

Source: Deloitte Center for Health Solutions: 2019 Global Health Care Consumer Survey and 2018 Health Care Consumer Survey.

From our US consumer study, we know that consumers’ use of these pricing and quality tools is increasing. For example, the percentage of consumers who look up cost information for health services has nearly doubled over the last three years from 14 percent to 27 percent. As consumers increasingly use these tools, they may be more willing to switch doctors, devices, or hospitals because they have more information on who and what tools provide the best prices and the highest quality.

Apps and at-home self-diagnostic and genetic tests are becoming popular among consumers.

At-home tests, mobile devices, and related technologies are enabling new ways to diagnose, monitor, and manage patients and their treatment.

At-home tests, mobile devices, and related technologies are enabling new ways to diagnose, monitor, and manage patients and their treatment. Companies are developing these tests and apps

FIGURE 9

Many consumers are comfortable using at-home tests and apps to track health parameters

Q. Some companies are now offering tests that you can take by yourself at home to diagnose various conditions, measure overall health, and identify genetic risks. How comfortable are you with potentially using the following?

	Australia	United Kingdom	Canada	Denmark	Netherlands	Germany	Singapore	United States
Using an at-home genetic test to identify current or future health risks	33%	31%	34%	22%	24%	21%	30%	44%
Using an at-home blood test that connects to an app to track overall health trends	35%	35%	37%	29%	31%	30%	30%	45%
Using an at-home test to diagnose infections before going to the doctor for treatment	35%	39%	39%	30%	30%	28%	31%	51%
Sending/mailling a stool sample to a laboratory service that can identify the bacteria in your gut	33%	34%	34%	36%	31%	28%	26%	41%
Using an app to track changes in your heart rate, blood pressure, and/or heart rhythm (ECG) to determine whether you might be at risk for a heart attack or arrhythmia	36%	36%	38%	28%	29%	27%	38%	47%

Note: Chart shows percentage who answered 4 or 5 on a 5-point scale, where 1 is "not at all comfortable" and 5 is "extremely comfortable."

Source: Deloitte Center for Health Solutions: 2019 Global Health Care Consumer Survey and 2018 Health Care Consumer Survey.

along a continuum of wellness and prevention strategies—ranging from acute diagnosis and chronic disease management to identifying future risks of illness.

We found that between 20 and 33 percent of consumers are "very" or "extremely interested" in using apps for engaging with virtual assistants and

health coaches, and apps that help them identify health issues (data not shown).

Between a third to half of consumers surveyed are comfortable using at-home diagnostics for various reasons (figure 9). Compared with other at-home tests, fewer consumers said they are comfortable with at-home genetic testing, ranging from

FIGURE 10

Consumers are willing to try out emerging technologies such as robotics, AI, drones, and sensors to manage health conditions

Q. Technology is changing the way health care is delivered. Imagine you found yourself in each of the following situations. How willing would you be to try the following?

You need a surgical procedure. How willing would you be to use a surgeon who is assisted by a surgical robot in the operating room?

Australia	United Kingdom	Canada	Denmark	Netherlands	Germany	Singapore
33%	35%	34%	39%	38%	33%	30%

You are having symptoms that might be related to a serious condition, such as Parkinson's disease. How willing would you be to use a virtual nurse assistant (for example, Alexa or Siri) in your home that uses AI to diagnose the type of illness you have and suggest what next treatment or doctor's visit should be next? This would save you a visit to the doctor.

Australia	United Kingdom	Canada	Denmark	Netherlands	Germany	Singapore
25%	26%	30%	24%	25%	22%	35%

You are a caregiver. How willing would you be to use robots to help monitor an older adult or close relative who was having difficulty staying at home because of a health condition?

Australia	United Kingdom	Canada	Denmark	Netherlands	Germany	Singapore
31%	31%	34%	30%	30%	32%	41%

You are taking daily medications. How willing would you be to use voice assistants (such as Alexa or Siri) to offer medication reminders?

Australia	United Kingdom	Canada	Denmark	Netherlands	Germany	Singapore
34%	37%	37%	34%	31%	33%	41%

You need to get medication. How willing would you be to use a service that utilizes a drone (an unmanned aerial vehicle) to deliver prescription medication to your home from a pharmacy?

Australia	United Kingdom	Canada	Denmark	Netherlands	Germany	Singapore
31%	31%	34%	30%	30%	32%	41%

You are taking daily medications. How willing would you be to use facial recognition on a smartphone or tablet to help you track that you took your medication as prescribed?

Australia	United Kingdom	Canada	Denmark	Netherlands	Germany	Singapore
30%	32%	32%	32%	26%	23%	37%

You are a healthy, active adult but have a family history of heart disease. How willing would you be to wear a sensor the size of a paper clip in one of your arteries that would warn you when you are at risk of a heart attack or a stroke?

Australia	United Kingdom	Canada	Denmark	Netherlands	Germany	Singapore
37%	41%	39%	44%	32%	34%	37%

Note: Chart shows percentage who answered 4 or 5 on a 5-point scale, where 1 is "not at all willing" and 5 is "extremely willing"; question not asked in the United States.

Source: Deloitte Center for Health Solutions: 2019 Global Health Care Consumer Survey.



22 percent (Denmark) to 44 percent (United States), and microbiome/gut testing via a stool sample, ranging from 26 percent (Singapore) to 41 percent (United States). Consumers in Australia, the United Kingdom, and Canada have similar comfort levels in each of the categories we surveyed.

As these tests become more widespread, consumers will need actionable information, including medical advice from a physician or a genetic counselor. As consumer interest rises, we expect the development of at-home tests for many other diseases and prevention efforts. The use of these tests also has the potential to help with provider efficiency and making sure the patient is getting the right level of care when needed.

Consumers are open to using emerging technologies.

We found a meaningful number (ranging from 22 to 44 percent) of consumers who are “very” or “extremely” willing to use emerging technologies

such as drones, robots, sensors, and virtual assistants (figure 10). And as these technologies advance, we can be reasonably certain consumers will grow more comfortable with these technologies. Digital transformation—enabled by radically interoperable data, AI, and open, secure platforms—is likely to continue to help more and more consumers embrace these technologies.

Conclusion and implications for industry and government stakeholders

By 2040, we expect the consumer to be at the center of the health model. According to our survey results, a meaningful share of consumers are engaging in what we call “consumeristic behavior.”

If one-third of consumers are engaging in 2019, imagine where we might be by 2040?

Stakeholders should prepare now for an increasingly demanding and sophisticated consumer. Engaging the consumer holds profound potential benefits for health care and the future of health. New digital tools can play an important role in the future of care—from monitoring a person’s health to helping individuals get access to more convenient care, to giving caregivers peace of mind and helping older adults remain in their homes rather than move to institutional care. These tools also have the potential to increase consumer satisfaction, improve medication adherence, and help consumers track and monitor their health (including signs and symptoms that may alert them to the need for care).

To meet consumer needs, organizations should provide easy-to-use platforms, high-quality care through these newer channels, and security and privacy of health and personal information.

Endnotes

1. Andrew M. Charles, *Dining in is the new dining out*, Cowen and Co, March 20, 2018.
2. Greg Schwartz, "STEP UP: When paired with gamification and a science-based engagement program, wearables can boost (and sustain) activity levels," Deloitte blog, September 9, 2019.
3. Ibid.
4. Ibid.
5. *A consumer-centered future of health: Deloitte's 2019 global health care consumer survey finds evidence that the future is now* by the Deloitte Center for Health Solutions is an independent publication and has not been authorized, sponsored, or otherwise approved by Apple Inc. Apple is a registered trademark of Apple Inc.
6. Leontina Postelnicu, "A quick look at the UK's new National Health Service app," MobiHealthNews, October 2, 2018.
7. Patients Know Best, "Features and benefits," accessed November 4, 2019.
8. Joe Gammie, "Virtual GP service allowed to expand out of London despite criticism from doctors," *Independent*, February 14, 2019.
9. Dr. Ken Abrams and Casey Korba, *Consumers are on board with virtual health options: Can the health care system deliver?*, Deloitte Insights, August 28, 2018.

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The health industry is on the cusp of a major transformation that will affect all stakeholders. Incumbent players can either lead this transformation as innovative and well-connected market leaders or they can try to resist this inevitable change. A wide range of companies—from inside and outside of the health care sector—are already making strategic investments that could form the foundation for a future of health that is defined by radically interoperable data, open and secure platforms, and consumer-driven care. Contact the authors for more information or read more on [Deloitte.com](https://www.deloitte.com).

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