VOICE ASSISTANT
CONSUMER ADOPTION
IN HEALTHCARE

OCTOBER 2019

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About Voicebot

Voicebot produces the leading online publication, newsletter and podcast focused on the voice and AI industries. Thousands of entrepreneurs, developers, investors, analysts and other industry leaders look to Voicebot each week for the latest news, data, analysis and insights defining the trajectory of the next great computing platform. At Voicebot, we give voice to a revolution.

Methodology

The survey was conducted at the conclusion of September 2019 and was completed by 1,004 U.S. adults age 18 or older that were representative of the U.S. Census demographic averages. Because we reached only online adults which represent 89% of the population according to Pew Research Center, some totals are adjusted downward to provide device and usage numbers relevant to the entire adult population. Other findings are relative to device ownership and do not require adjustment. The use case and platform analyses were conducted by Voicebot staff through a combination of interviews, first-hand testing, and document reviews.

About Orbita

Orbita offers healthcare's most powerful conversational AI platform for creating and delivering intuitive, dynamic and personalized voice and chatbot virtual solutions. Leading organizations across healthcare sectors rely on Orbita to design, build, and manage HIPAA-compliant, omnichannel virtual health assistants that improve customer service, enhance consumer marketing, and extend patient engagement beyond brick and mortar facilities. Orbita's intuitive low-code and no-code environments, and pre-built healthcare-specific solution frameworks, reduce development time and lower maintenance costs for enterprise-grade virtual health assistants.

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Voice Assistant Consumer Adoption Report for Healthcare 2019

There are over 75 million U.S. adults that own smart speakers and 150 million that have used voice assistants on smartphones. The rise in voice assistant use is leading to new opportunities for organizations to connect with their customers and streamline operations while simultaneously changing consumer expectations.

One industry with a lot of active experimentation of voice assistant use cases is healthcare. Several healthcare providers have rolled out voice-interactive solutions ranging from FAQs to appointment scheduling and post-op patient reporting. While only 1-in-13 consumers say they have used a voice assistant for healthcare use cases to date, this figure is likely to rise. Over 50% of U.S. adults in a recent survey said they would like to use voice assistants for a variety of healthcare needs.

Consumer Interest in Using Voice Assistants for Healthcare

48.1% No

51.9% Yes

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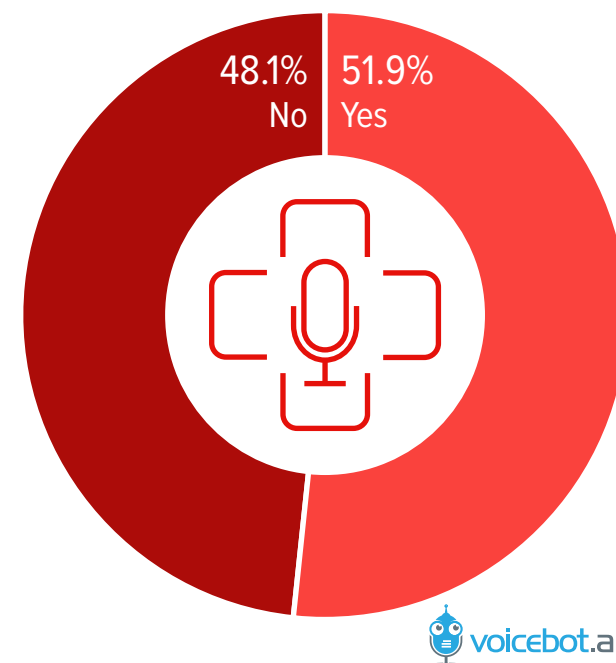
Voice Assistants for Healthcare Still in Early Adopter Phase

Compared to the use of voice assistants for media consumption, calling, navigation, and search, healthcare applications are in their infancy. One method to visualize this is the standard technology adoption lifecycle. From this perspective, healthcare has just recently cracked into the early adopter phase while the more established use cases are already serving the early or late majority consumers. One reason for this is the lack of solutions offered by healthcare providers. Regulations and other factors have slowed this provider-side adoption but there are a growing number of experiments and production solutions and this report reviews ten current examples.
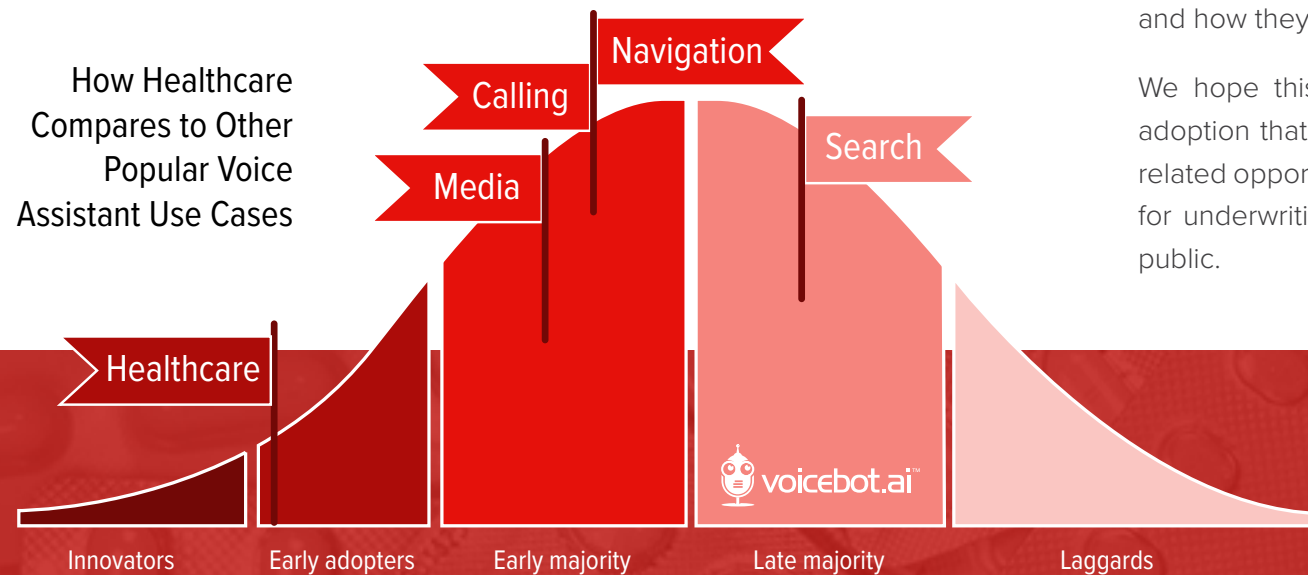
The Rise of Voice in Healthcare

The report is designed to illuminate where voice is being used today in healthcare, how consumer trends around voice assistants may influence adoption, and where we can expect more activity going forward.

This document is segmented into four sections. First, we focus on consumer data around voice assistant use in general and then follow that with specific use and sentiment around applications for healthcare-related needs. Then we outline several current implementations where voice is being used by healthcare providers or other organizations to offer a perspective on what use cases are already in the wild. Finally, we conclude with a brief summary of the leading consumer voice assistant platforms and how they are supporting healthcare use cases today.

We hope this document helps provide a broad perspective of voice assistant adoption that can assist healthcare professionals better analyze voice technology related opportunities and shape their own strategies. A thank you goes out to Orbita for underwriting this research and enabling us to make it widely available to the public.

How Healthcare Compares to Other Popular Voice Assistant Use Cases

Navigation

Calling

Media

Search

Healthcare

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Innovators   Early adopters   Early majority   Late majority   Laggards

CONSUMER ADOPTION
OF VOICE ASSISTANTS

Smartphones - Most Used for Voice Assistant Access

More consumers have tried voice assistants on smartphones than any other surface. In fact, the 153.6 million that have used a voice assistant on a smartphone is almost exactly twice the number that own a smart speaker. In addition, the 87.3 million monthly active users of voice assistants on smartphones also makes it the most widely accessed surface for voice.

Voice Assistant Adoption on Smartphones
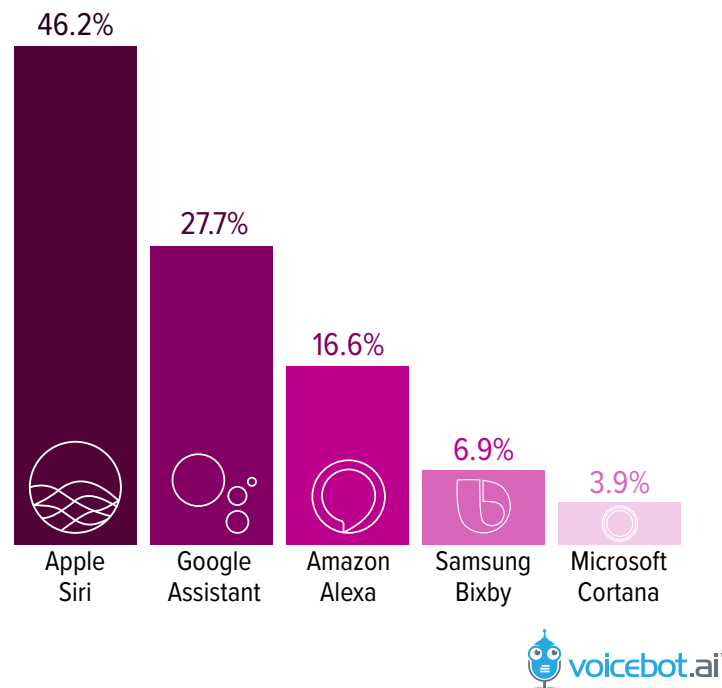
153.6 MILLION
All Users - Have Ever tried

87.3 MILLION
Monthly Active Users

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Voice Assistants Used on Smartphones

46.2%	27.7%	16.6%	6.9%	3.9%
Apple Siri	Google Assistant	Amazon Alexa	Samsung Bixby	Microsoft Cortana

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Siri may not win many head-to-head comparisons for its prowess but the first voice assistant on a smartphone remains the most widely used today. At 46.2% relative market share among voice assistants, Siri easily outpaces Google Assistant at 27.7%, Alexa at 16.6%, Bixby at 6.9%, and Cortana with 3.9%. These figures remain virtually unchanged since 2018.

Smart Speakers - Highest Frequency of Use Surface

Smart speakers continued their rapid adoption by consumers rising 15.2% in the first nine months of 2019 and 32.3% over the trailing 12 months. While total device users are about half of those that have tried voice assistants on smartphones, smart speaker owners use voice with their devices with higher frequency boasting 80.4% monthly active users and nearly 50% as daily active users.
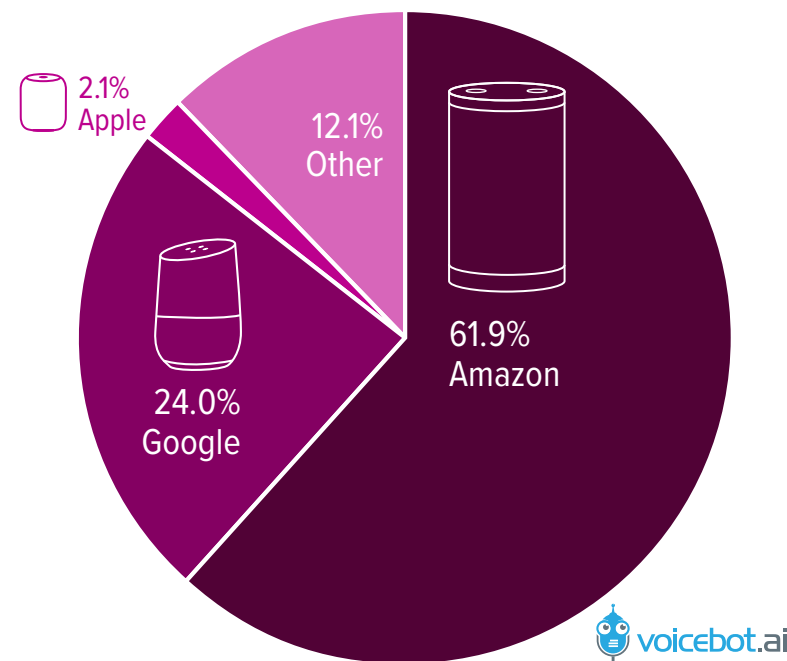
Smart Speaker Market Share

2.1% Apple

12.1% Other

61.9% Amazon

24.0% Google

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Smart Speaker Adoption

76.5 MILLION
All Users - Have Ever Tried

61.5 MILLION
Monthly Active Users

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Amazon continues to maintain a smart speaker market share lead with 61.9% share, up slightly from January 2019. Google has settled in at 24% market share while Apple's share continues to fall and now sits at 2.1%. There was significant growth in Apple share after it first launched in 2018 but HomePod sales haven't kept pace as the overall installed base has grown.

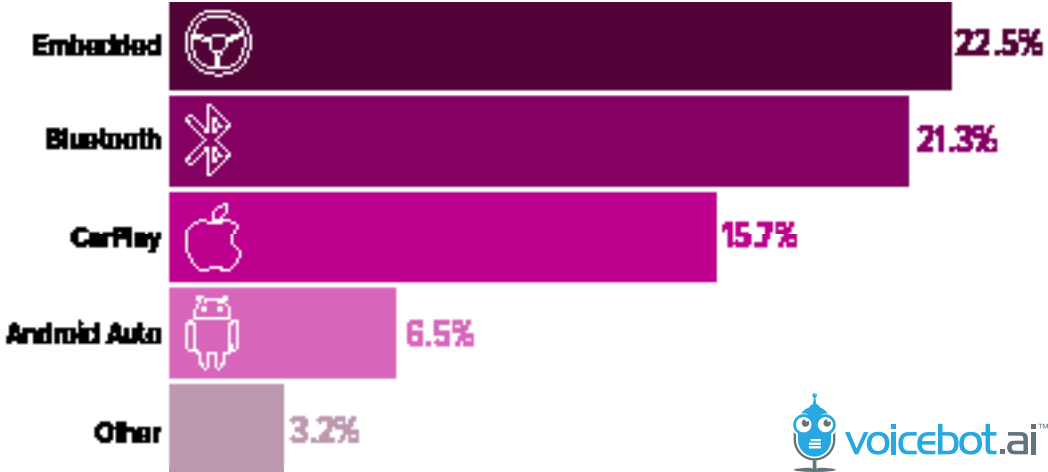# Cars - Another Popular Voice Assistant Access Point

Cars are another popular "device" that consumers use today to access voice assistants that also have higher monthly and overall usage than smart speakers. The total number of U.S. adults that have tried a voice assistant while driving is 118.4 million and 77.9 million of those are monthly active users. Many consumers are interested in locating healthcare facilities, so this device surface may ultimately become an important voice access point for healthcare-related services.

The most popular voice assistant access options for the car are the embedded assistant that comes with the vehicle and using Bluetooth to connect to a favorite smartphone based assistant. Respectively 22.5% and 21.3% of car owners have used assistants with those methods while driving. Another 15.7% have tried Apple CarPlay followed by 6.5% for Android Auto and 3.2% for all other options including Alexa Auto.

In-Car Voice Assistant Adoption

118.4 MILLION
All Users - Have Ever Tried

77.9 MILLION
Monthly Active Users

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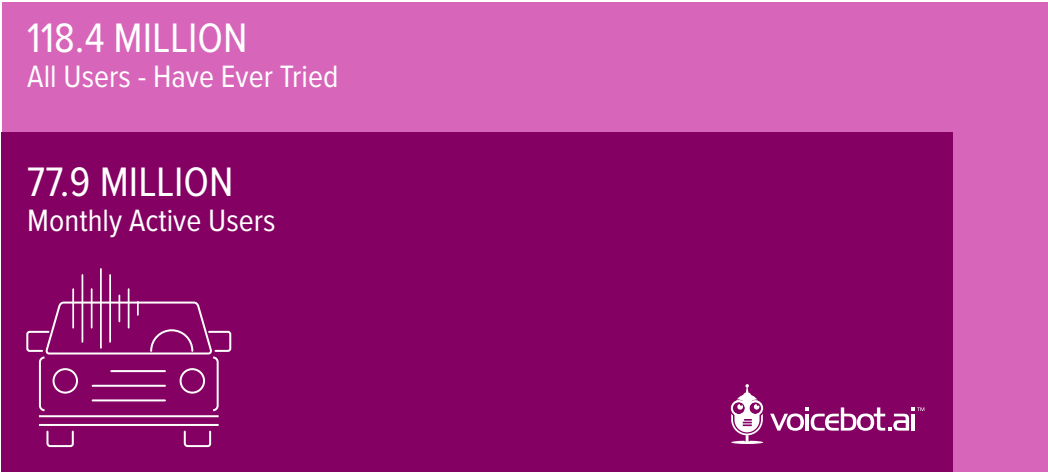
Car Owners That Have Used Voice Assistants While Driving

Embedded	22.5%
Bluetooth	21.3%
CarPlay	15.7%
Android Auto	6.5%
Other	3.2%

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Rapid Expansion of Voice Assistant Surfaces

Voice assistants are now available through over 2.5 billion devices worldwide. These range from the "big three" (smartphones, cars, and smart speakers) to home appliances, earbuds, computers, game consoles, smart watches, smart TVs, and more. This means that microphones are everywhere and access to voice assistants has become ubiquitous. As voice assistants become more ingrained in consumers' daily lives, it is only natural that they will start asking for assistance with healthcare needs. These use cases may be accessed from home or while on-the-go as we see in the following data about customer usage and interests.
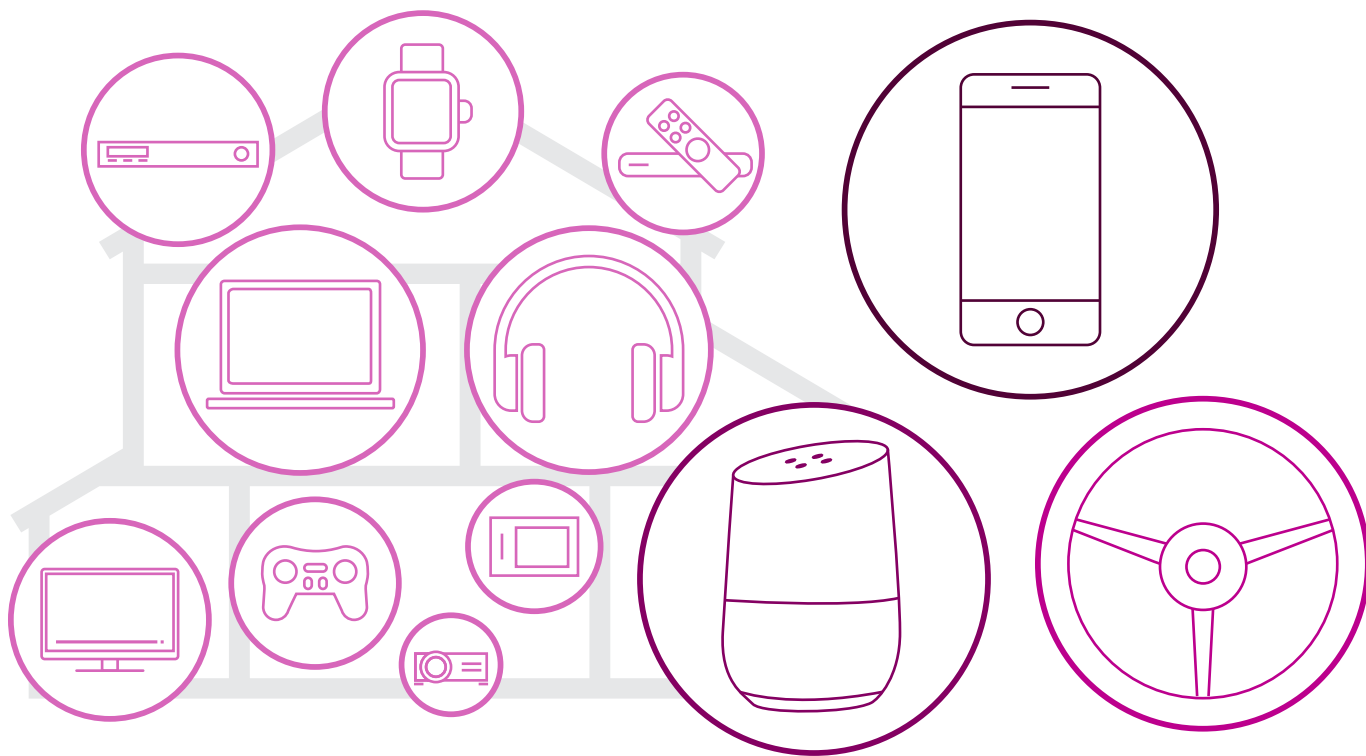
# CONSUMER VOICE ASSISTANT USE IN HEALTHCARE
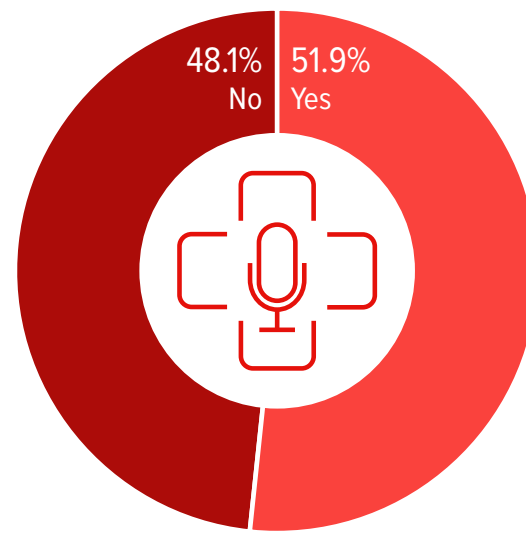
Voice Assistant Use in Healthcare

The survey found that only 7.5% of U.S. consumers have previously used a voice assistant for a healthcare-related inquiry or task. That doesn't indicate widespread adoption yet, but two other factors are important to note. First, very few healthcare providers have enabled voice assistant experiences to date, many because of concerns around HIPAA compliance. Second, the survey also found that 52% of U.S. adults would like to employ voice assistants for at least one healthcare-related use case.

These findings suggest that as providers deploy more solutions that enable consumers to access healthcare services by way of voice assistants, there are many people prepared to start using them. In fact, there is a ready user base that is seven times larger than those that have already employed voice for healthcare services to date.

Have Employed a Voice Assistant for a Healthcare Use Case

92.5%
No

7.5%
Yes
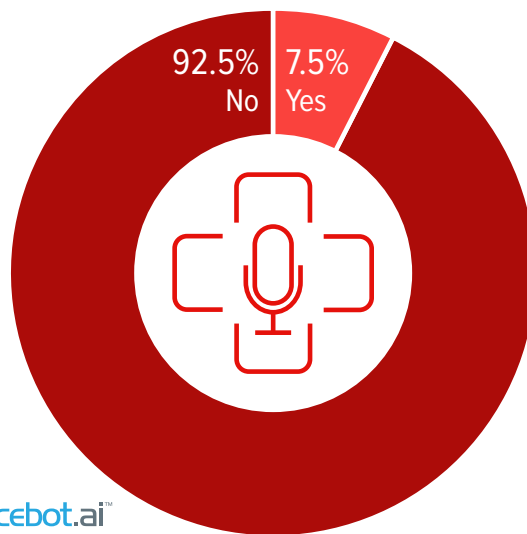
Would Like to Employ a Voice Assistant for a Healthcare Use Case
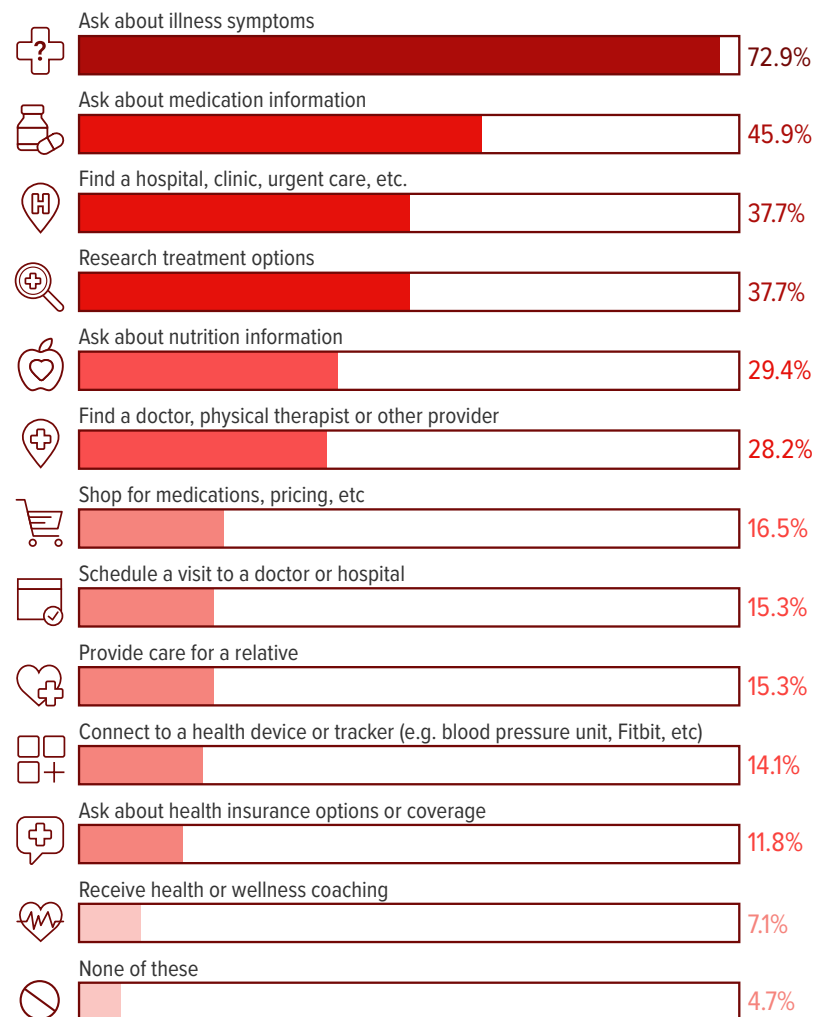
48.1%
No

51.9%
Yes

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Top Voice Assistant Healthcare Use Cases Today

While 7.5% of U.S. adults may not seem like a large number, that translates into 19.1 million people. So, what are all of these people doing with their voice assistants? For the most part, they are asking for healthcare-related information or how to locate care facilities and providers.
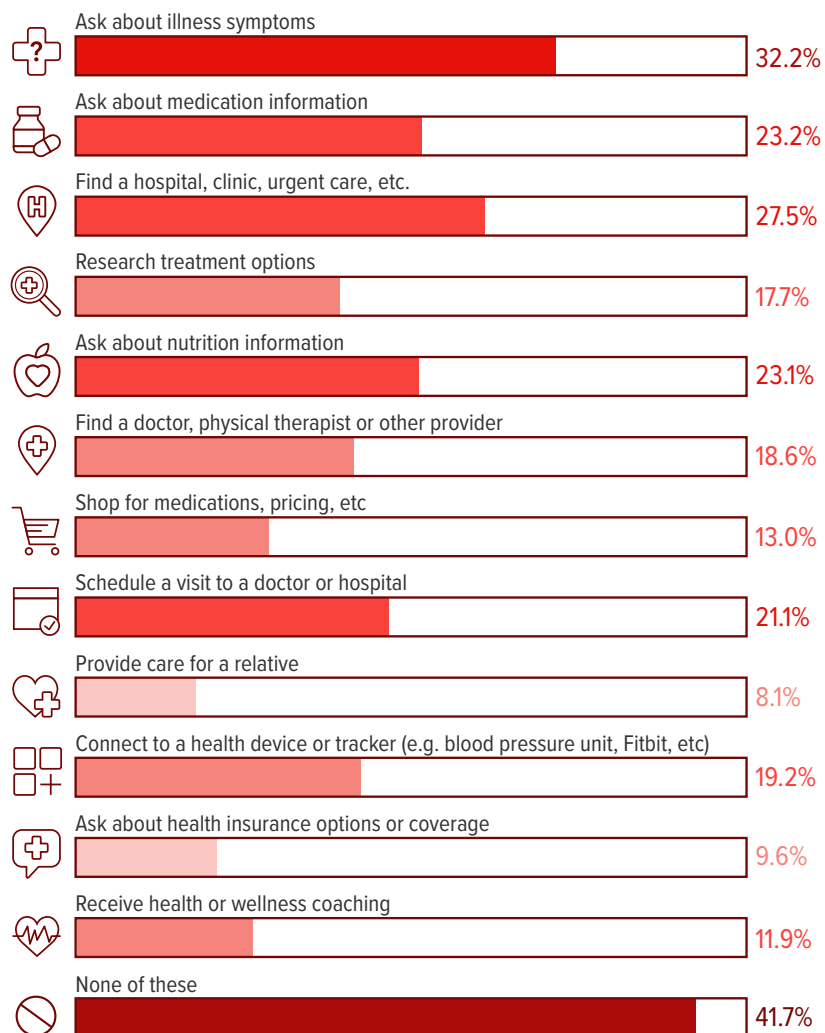
The top use case by a wide margin and selected by nearly 73% of respondents is asking voice assistants about illness symptoms. That is followed by asking about medication information at 45.9%. Finding a hospital, clinic, or urgent care center tied for third with researching treatment options at 37.7%. Rounding out the top six responses at 29.4% and 28.2% respectively are asking about nutrition information and finding a doctor or other care provider.

Transactions related to healthcare services are either not yet available or have only recently become available through voice assistants. However, shopping for medications and scheduling a doctor's appointment were the seventh and eighth most used healthcare services through voice assistants and suggest transactions could become popular use cases with consumers.

Consumer Experience with Healthcare Use Cases on Voice Assistants - Sept 2019

Use Case	Percentage
Ask about illness symptoms	72.9%
Ask about medication information	45.9%
Find a hospital, clinic, urgent care, etc.	37.7%
Research treatment options	37.7%
Ask about nutrition information	29.4%
Find a doctor, physical therapist or other provider	28.2%
Shop for medications, pricing, etc	16.5%
Schedule a visit to a doctor or hospital	15.3%
Provide care for a relative	15.3%
Connect to a health device or tracker (e.g. blood pressure unit, Fitbit, etc)	14.1%
Ask about health insurance options or coverage	11.8%
Receive health or wellness coaching	7.1%
None of these	4.7%

Consumer Interest in Healthcare Use Cases on Voice Assistants

Ask about illness symptoms — 32.2%

Ask about medication information — 23.2%

Find a hospital, clinic, urgent care, etc. — 27.5%

Research treatment options — 17.7%

Ask about nutrition information — 23.1%

Find a doctor, physical therapist or other provider — 18.6%

Shop for medications, pricing, etc — 13.0%

Schedule a visit to a doctor or hospital — 21.1%

Provide care for a relative — 8.1%

Connect to a health device or tracker (e.g. blood pressure unit, Fitbit, etc) — 19.2%

Ask about health insurance options or coverage — 9.6%

Receive health or wellness coaching — 11.9%

None of these — 41.7%

Top Voice-Interactive Healthcare Uses Cases that Interest Consumers

When it comes to the voice-interactive healthcare use cases that consumers would like to use but have not yet tried, we see far less contrast. This may be due to the fact that many use cases that are desired have not been tried because so few healthcare providers offer them as options.

Asking about illness symptoms (32.2%) remains the top use case in the desired category while finding a hospital, clinic, or urgent care center (27.5%) moves up into a close second. Asking about medication (23.2%) and nutrition information (23.1%) were next in line followed by scheduling a doctor's visit (21.1%).

Another significant jump between the "have used" and "desired" category was to connect to a health device such as Fitbit or blood pressure unit. The figure represents about two-thirds of consumers that own a wearable device of some sort according to data from Morning Consult.
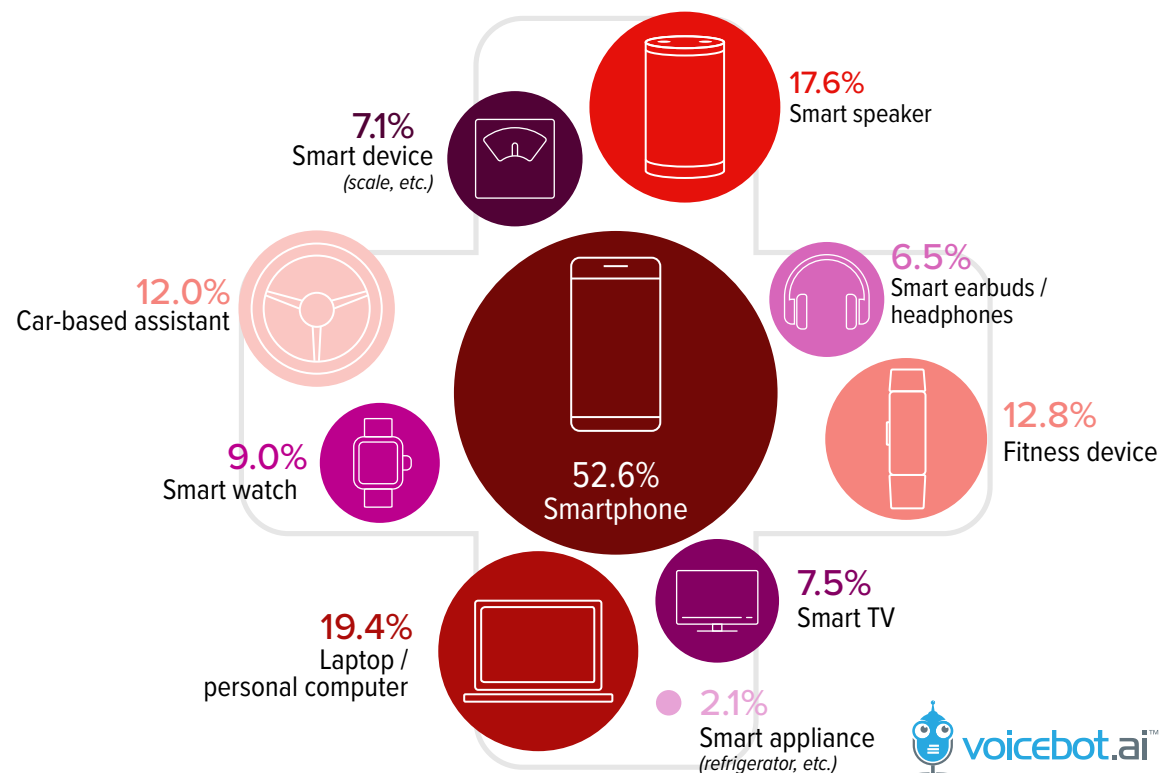
Preferred Devices

Over half (52.6%) of online U.S. adults say they would use the voice assistant on their smartphone for their healthcare related activities. Well behind this figure in second and third position are personal computers (19.4%) and smart speakers (17.6%).

Interestingly, smart watches and fitness trackers, only received 9.0% and 12.8% responses respectively. Apple and Fitbit have heavily marketed their watches and fitness trackers as ideal health monitoring companions. Consumers as a whole are not seeing the need today to integrate those devices with a voice assistant.

However, these figures are influenced by device ownership. Smart watch owners overwhelmingly want this capability. NPD group data from 2019 pegs smart watch ownership at 16% of the population. That means over two-thirds of smart watch owners want to have voice integration for healthcare-related services.

Voice-Interactive Devices Consumers Prefer for Healthcare Use Cases

7.1%
Smart device
(scale, etc.)

17.6%
Smart speaker

12.0%
Car-based assistant

6.5%
Smart earbuds /
headphones

52.6%
Smartphone

12.8%
Fitness device

9.0%
Smart watch

7.5%
Smart TV

19.4%
Laptop /
personal computer

2.1%
Smart appliance
(refrigerator, etc.)

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# Lower Income Households Slightly Overindex for Use

Interest in using voice assistants for healthcare use cases is nearly identical across household income levels. However, the data show that online consumers with household income of below $50,000 were more likely to have already used a voice assistant for healthcare than consumers with incomes over $100,000 annually.

The reason for this disparity is not precisely known. However, one explanation could be that lower income consumers often have less access to certain types of healthcare services than their higher income neighbors.

When it comes to use cases, lower income consumers that have employed voice assistants for healthcare needs were about twice as likely to have used them for asking about health insurance options or coverage, providing care to a relative, or receiving health or wellness coaching.

Low income consumers overall, most of which have not used voice assistants for healthcare previously, have similar interests but the differences are less pronounced. They are 57% more likely to want to use voice assistants to learn about health insurance options, 43% more likely to want to use the services to provide care for relatives and 33% more likely to employ them for finding a doctor or local care provider.

Have Used Voice Assistant for Healthcare Use Cases by Income

|			
10.7%	7.2%	6.6%	6.1%
< $50K	$50K - $100K	$100K - $200K	> $200K

7.5% Average
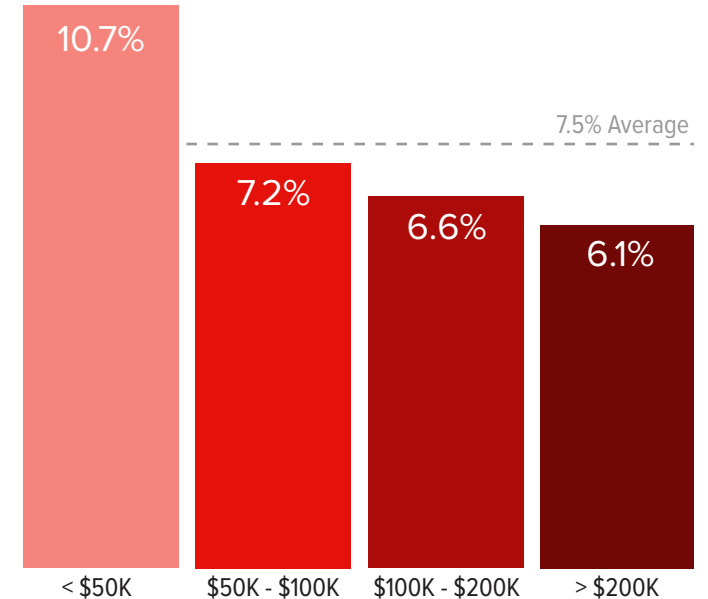
# Gender, Smartphone & Smart Speaker Ownership Influences

Women are slightly more likely to have used a voice assistant already for a healthcare-related need as were Android smartphone owners. This latter finding may be surprising given how much Apple plays up the healthcare-related features of its devices. However, the finding likely reflects the more limited capabilities of Siri today compared to Google Assistant.

Predictably, smart speaker owners were more likely than those without the devices to have already used voice interaction for healthcare-related services. However, data also show that Google Home (Nest) device owners were significantly more likely than Amazon Echo owners to have used voice for healthcare. Google Assistant appears to have an edge over rivals on multiple surfaces for current healthcare usage despite not having a HIPAA-compliant offering.

Have Used Voice Assistant for Healthcare Use Cases by Gender and Smartphone Ownership

Female	Male	Android	iPhone
8.1%	6.7%	9.7%	6.8%

7.5% Average
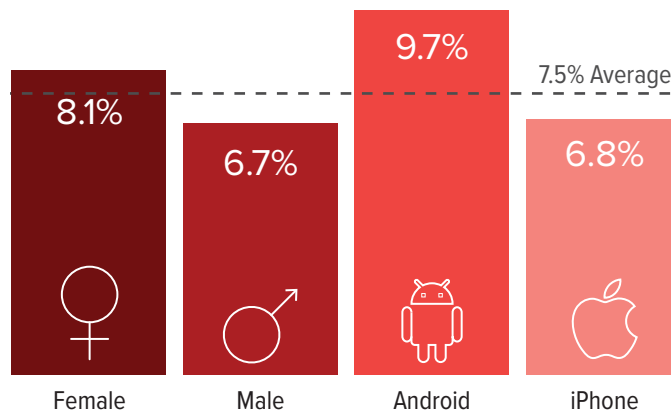
Have Used Voice Assistant for Healthcare Use Cases by Smart Speaker Ownership

Smart Speaker Owners	No Smart Speaker	Google Home (Nest)	Amazon Echo
11.2%	5.5%	13.6%	8.0%

7.5% Average
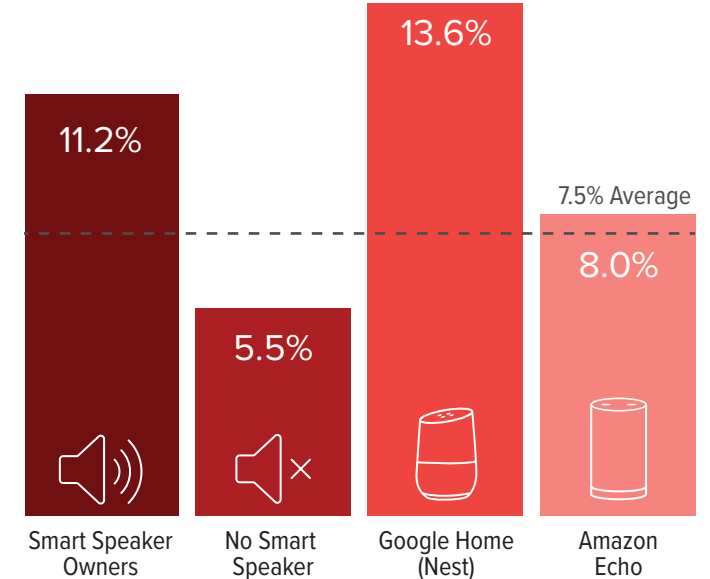
Voice Assistant Interest and Use Influenced by Age

Few people will be surprised that the 18-29 demographic was about 50% more likely to have used a voice assistant for healthcare-related services than the over 60 year old cohort. However, that disparity narrows for these age groups to only 15% for consumers expressing interest in combining voice assistants with healthcare. All age groups expressed significant interest regardless of their past voice assistant experience.

While the 18-29 years olds are most likely to have used a voice assistant for healthcare, they are not the group expressing the most interest among the total population. When it comes to interest, the most enthusiastic group are the 45-60 year olds. This result may reflect the group's relative tech savviness combined with a rising need for age-related healthcare services.

Consumer Interest in Voice Assistants for Healthcare Use Cases by Age

Age	Have Used	Interested
18 - 29	9.1%	52.8%
30 - 45	8.2%	50.6%
45 - 60	7.1%	54.5%
61+	6.1%	46.0%

7.5% AVERAGE HAVE USED   HAVE USED   INTERESTED   51.9% AVERAGE INTERESTED

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Healthcare Voice Assistant Users Are Tech Forward

Current voice assistant healthcare users tend to be more likely to have incorporated voice assistant use into other parts of their lives. For example, consumers that use voice assistants through wireless earbuds at least weekly are three times more likely to have used voice for a healthcare related need. Similarly, weekly voice assistant users on smartphones are more than twice as likely to have tried a healthcare use case while smart speaker owners are about 50% more likely.

This bias of tech-forward consumers also shows up in those expressing interest in using voice assistants for healthcare. However, the difference is much less pronounced because so many average consumers also express a desire to employ voice assistants for healthcare-related services. For example, about 47% of consumers without smart speakers would like to use voice assistants for healthcare compared to 60% of people with at least one of these devices.

Privacy Concerns Present a Risk to Voice Adoption in Healthcare

The survey data show that consumers are interested in using voice assistants for healthcare needs and they have some specific use cases in mind. We noted earlier that lack of solutions from healthcare providers due to HIPAA compliance concerns in the U.S. could hold up market adoption. Amazon has deployed a HIPAA certified solution for select Alexa skills, but beyond that providers need to create their own assistant to comply.

Another risk factor is privacy concerns. Between April and August 2019 there were news stories about Amazon, Apple, Google, Facebook, Microsoft, and LINE all using third-party contractors that shared recordings with the media of interactions between consumers and voice assistants. In each of these cases some private consumer data was inadvertantly revealed. Since the beginning of the year, consumer concern has risen. There are about 3.6% more U.S. adults that are "very concerned" about voice assistants and privacy and the "not concerned" category fell by 6%.

Consumer Sentiment Toward Voice Assistant Privacy

SEPT 2019
JAN 2019

Outer ring (SEPT 2019): 8.2%, 18.8%, 21.5%, 24.9%, 18.5%, 29.6%
Inner ring (JAN 2019): 11.8%, 26.0%, 20.8%, 19.9%

Legend:
- Very Concerned
- Moderately Concerned
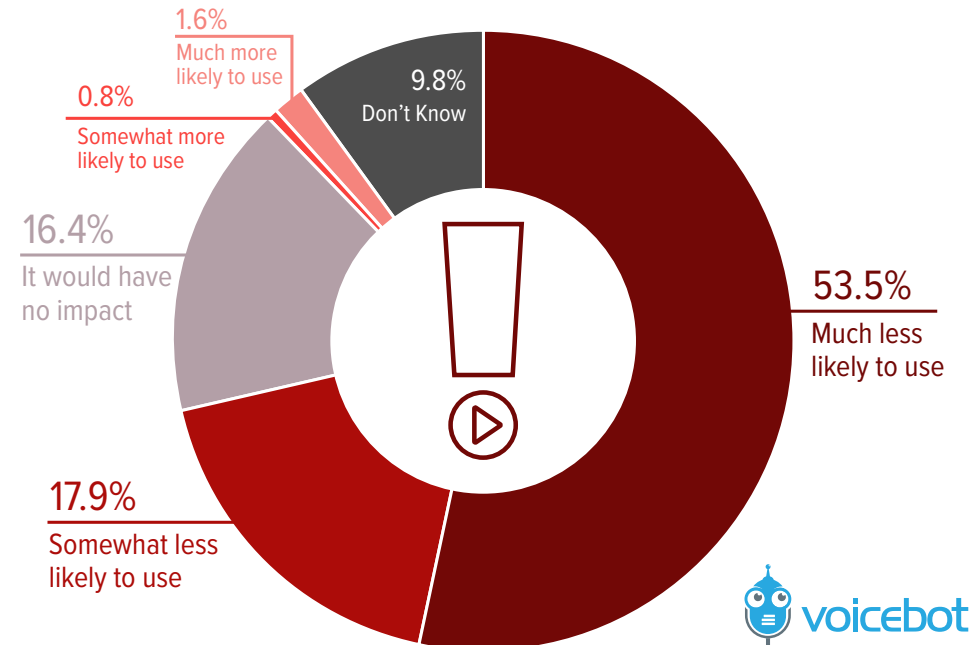- Mildly Concerned
- Not Concerned
- Don't Know

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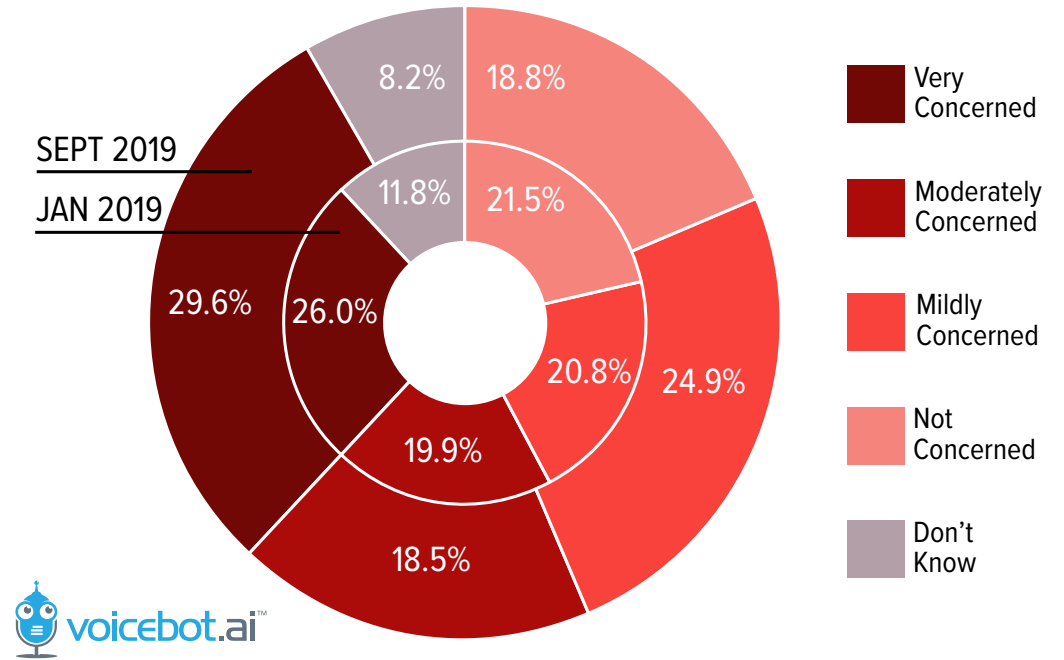
Consumers Don't Want Contractors Listening

However, the fall in the "unconcerned" and slight rise in the "very concerned" may be concealing a bigger potential issue. Consumers could know of the existence of privacy concerns related to voice assistants, but may not be aware that contractors are being employed to listen to user recordings as part of the voice assistant platforms' quality improvement efforts.

Over 53% of consumers say they would be "much less likely to use" a voice assistant if they knew contractors of the voice platforms may be listening. Only Apple has announced they are discontinuing the use of contractors in their quality improvement programs and will bring those functions in-house. Amazon and Google both allow users to opt-out or have opt-out as a default, but they still intend to use contractors for these services. That may prove to be an unwise risk if contractors leak additional private user data to the media and consumers start avoiding that assistant.

Consumer Reaction to Contractor Review of Voice Assistant Interactions

- 1.6% Much more likely to use
- 0.8% Somewhat more likely to use
- 9.8% Don't Know
- 16.4% It would have no impact
- 53.5% Much less likely to use
- 17.9% Somewhat less likely to use

VOICE TECHNOLOGY USE CASES IN HEALTHCARE

Healthcare Voice Interactive Use Cases On the Rise

Relatively few healthcare providers offer services through voice assistants today, but there are several that have taken the leap to a voice-first or at least a voice-supported future. We have profiled ten in the following pages of this report. The most common type of voice app is focused on sharing information and is offered through either Amazon Alexa or Google Assistant, but there are some more adventurous solutions that enable complex features such as appointment booking or are independent from these leading consumer platforms.

A notable barrier to adoption for healthcare providers is the challenge of HIPAA compliance in the U.S. If private healthcare data may be shared by a user through an interaction with a voice assistant, the options for providers are limited to receiving access to Amazon's HIPAA-compliant solution for Alexa or creating their own assistant. As a result, few solutions today offer features that require HIPAA compliance.

USE CASE EXAMPLES

1. Mayo Clinic

2. Boston Chldren's Hospital

3. Atrium Health

4. University of Chicago Medical Center

5. Libertana

6. Deloitte

7. American Red Cross

8. Zyrtec

9. LifePod

10. Pillo / Priya

Mayo Clinic

Mayo Clinic introduced an Alexa skill for first-aid in September 2017. This was the organization's first voice initiative and it was followed by others such as a pilot in the Dermatology Center for post-hospital treatment care. Using that solution, patients that had returned home could ask Alexa how to care for wounds and pose questions about treatment as well as changing conditions such as swelling or discoloration.

"Voice-enabled experience is a new and growing channel for reaching people and delivering information they are seeking, whether or not they have an existing relationship with Mayo Clinic," commented Sandhya Pruthi, M.D. who is both an internal medicine physician and an associate medical director of the Global Business Solutions division. Mayo's commitment to voice and global reputation also led to Amazon setting the organization's content as default answers for many healthcare related questions in 2018, displacing another data source.

> "Creating this first-aid skill is another way Mayo Clinic can provide relevant information to consumers where and when it's needed."
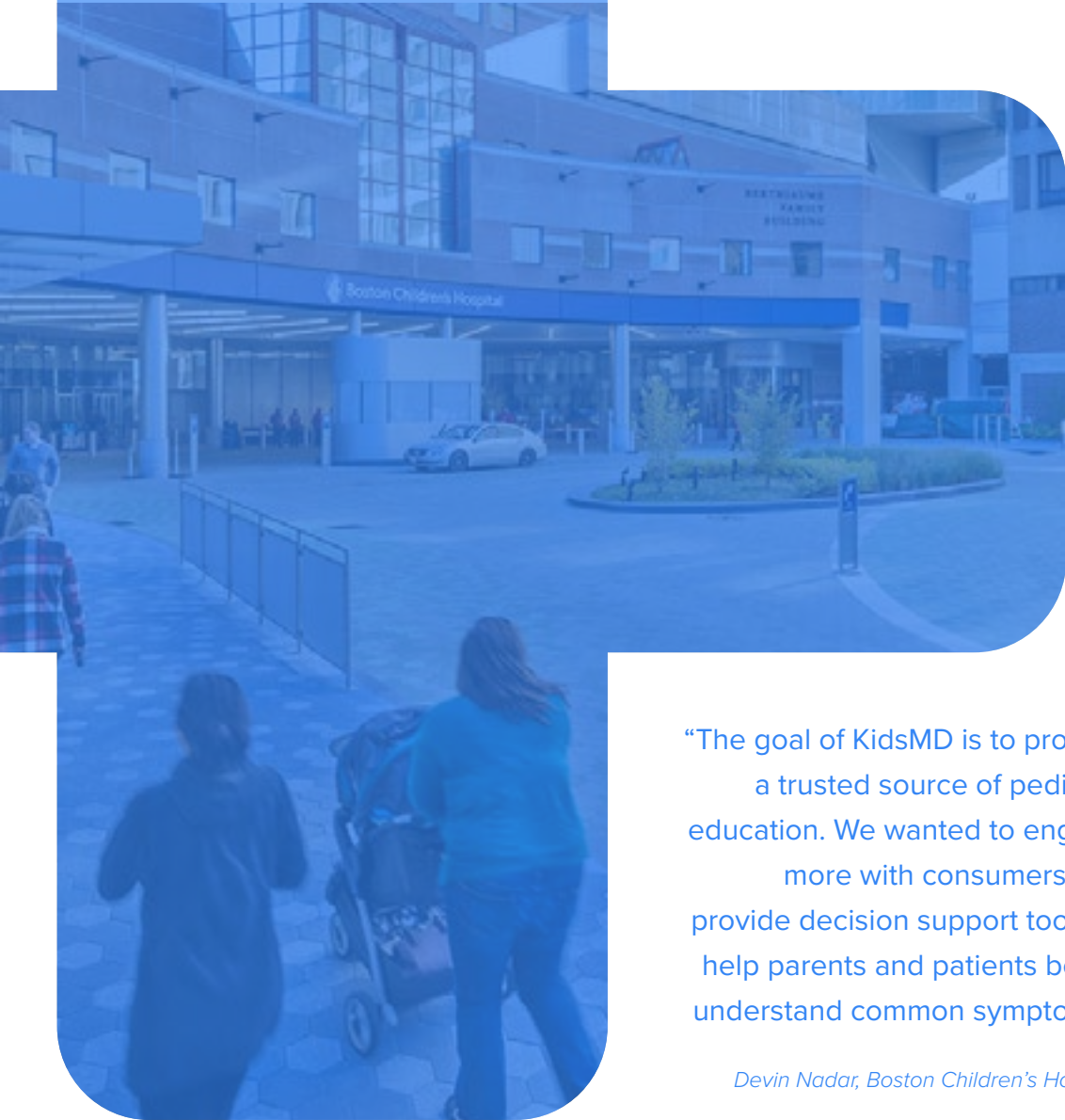>
> *Sandhya Pruthi, M.D.*
> *Mayo Clinic*

Boston Children's Hospital

Boston Children's Hospital launched the KidsMD Alexa skill in early 2016 making it a pioneer among healthcare providers experimenting with voice assistants. This was followed by a collaboration between Boston Children's and Seattle Children's Hospitals in September 2018 for a new skill called Flu Doctor. This skill was designed to answer questions about flu symptoms, treatments, and risks and the content was reviewed by the CDC and the American Academy of Pediatrics before launching.

When Amazon launched its HIPAA compliant Alexa skill service, Boston Children's was there again with a new healthcare skill based on the hospital's program for Enhanced Recovery After Surgery (ERAS). The skill is called My Children's and enables parents and caregivers of children in the ERAS program to provide their care teams with updates on recovery progress and receive information regarding their post-op appointments.

"The goal of KidsMD is to provide a trusted source of pediatric education. We wanted to engage more with consumers and provide decision support tools to help parents and patients better understand common symptoms."

Devin Nadar, Boston Children's Hospital

Atrium Health

Atrium Health launched one of the six inaugural HIPAA compliant Alexa skills. Many people do not realize that simply scheduling a medical appointment contains HIPAA protected data. When Amazon made a HIPAA compliant solution available to healthcare providers, Atrium stepped in to offer the option for patients to search for the nearest emergency department or urgent care center and reserve an appointment slot as well.

Rasu Shrestha, M.D., MBA, EVP and Chief Strategy Officer at Atrium Health, commented that Alexa skills are "the perfect marriage of voice that we are used to as well as the convenience factor that we at Atrium Health really care about." The Alexa skill connects patients to 40 hospitals, 31 urgent care centers, and 900 other care locations throughout Georgia, North and South Carolina.

"Voice is an interactive technology that our patients are already using in many aspects of their lives. The use of this exciting technology is part of our commitment at Atrium Health to provide access to care in a way that is most convenient for them."

Rasu Shrestha, M.D., Atrium Health.

University of Chicago Medical Center

The University of Chicago Medical Center has a long-term research goal to identify technology tools that can encourage long-term mobility and social engagement among frail, older adults and delay or reverse negative physiologic and psychological effects of frailty and social isolation. The hospital partnered with Orbita to develop a solution that integrated a web browser, mobile app, and smart speaker to assist both the patient and caregiver.

Patients use an Echo Show and Amazon Fire Tablet while caregivers use a Fire Tablet. Accessing voice-interactive video through Echo Show, the patients follow audio and visual instructions for daily structured exercise programs, receive encouragement, and connect with family and friends. Through a web browser and mobile app, caregivers can remotely follow the patient's individualized care program and their daily activity.

"The integration of voice-activated technology using a smart speaker as the primary mode of interface with the older adult has overcome many technology-use hurdles for even the frailest older adults."

Megan Huisingh-Scheetz, MD, MPH, Assistant Professor of Medicine, University of Chicago

Libertana

"Voice assistants overcome challenges for individuals who, due to physical limitations, cannot use a keyboard or touch screen. They also improve patient satisfaction with more natural, engaging experiences. The client is able to use the voice-activated device at their discretion, offering companionship and support on a requested basis."

Debra Harrison, RN,
Libertana's public subsidized housing manager.

Libertana Home Health employed an Amazon Alexa smart speaker and Orbita solution to assist residents in a community-based housing complex that included regular professional medical care. The residents were prompted to take medications and "to take more active roles in managing their daily schedules, self-care tasks, and medications."

Home care professionals are alerted when care is needed by a resident or when there is need for transportation. Residents also use the smart speakers to "report vital data, such as weight, blood pressure or blood sugar levels" while also receiving reminders to take medication and exercise. In addition, residents can use the assistant to request information about social and recreational activities. Libertana's Debra Harrison indicated that in addition to improved care and quality of life, the solution can reduce cost "by keeping patients at home and away from more costly institutional care settings."

Deloitte Assist

Consultancy Deloitte partnered with ServiceNow to create Deloitte Assist, an "AI enabled patient communication solution enabling patients to request assistance without the need to press a button." Patients can speak their request and nurses are alerted to their need. The AI interprets the request and then prioritizes the requests and routes them to an appropriate care provide that can best fulfill the need. For example, a fall would receive higher priority than a request for help with the TV.

An internal study found that Deloitte Assist reduced response times and increased time for care. In addition to nursing assistance, the solution enables patients to access entertainment services and control elements of the hospital rooms such as smart lights and blinds. The solution was tested in Prince of Wales Hospital in Sydney, Australia and employed Amazon Echo Dot smart speakers with backend software for nurses that was accessible via the web or mobile apps.

"There are too many examples in healthcare where we've rolled out a system that actually makes it more complicated for us to have to care for patients. This is immediately an example that has made our staff's life easier and our patient's life easier."

Tobi Wilson, General Manager
Prince of Wales Hospital

American Red Cross

Three Alexa skills were launched by the American Red Cross in 2019. The most sophisticated is The Red Cross Blood Scheduling skill which assists users in scheduling a blood donation appointment and provides information on nearby blood drives. The skill is also equipped with a notifications feature to remind users of upcoming appointments. Executives in the organization believe voice assistants represent a new channel to help it connect with blood donors and fulfill its core mission of maintaining an adequate national blood supply.

Red Cross First Aid offers advice tips on preparing for emergency situations and also includes a first aid quiz where users can test their knowledge. The Hurricane Alerts skill is designed for people that live in areas commonly beset by, you guessed it, hurricanes. It can send notifications when a hurricane watch or warning is issued by weather services and offers steps on how to prepare.

> "Supporting the nation's blood supply and helping keep people safe are among our top priorities and we are constantly looking to make it easier to share this lifesaving information. Now, we're using innovation and voice technology to reach a broader group of Americans with these new skills for Alexa."
>
> *Gail McGovern,*
> *President & CEO of the Red Cross*

Zyrtec

In Spring 2017, just in time for allergy season, allergy medicine company Zyrtec launched an Alexa skill that shares the daily pollen count for a user's location. A year later the brand extended the voice experience to Google Assistant. Over time the Zyrtec AllergyCast skill can tell users which forms of pollen they are most sensitive to. The skill does this by asking how the person is feeling each day and records which pollen counts were high at that time. Eventually, the voice app can provide a list of which pollens have the largest impact on a user's well-being.

Using the voice skill makes it easy for users to record their symptoms and it offers unique value beyond the core product. It also enables the company to provide personalized experiences for consumers. The awareness of pollen susceptibility creates an obvious opportunity to promote Zyrtec's products, but it also could enable consumers to use those products more effectively.

"Voice is about doing, whereas if you're searching or on a website, you're about knowing. Weather is also a top five query typically—the behavior is already there so extending that into an allergy impact for consumers where it's relevant can be a real asset to them."

*Chad Mizee, Director of Digital for Self Care
Johnson & Johnson Consumer Inc.*

Lifepod

Lifepod is focused on helping homebound individuals with regular medical and well-being needs and the caregivers that support them. The company offers a custom smart speaker operated by software designed specifically for caregiving use cases. It is targeted at helping aging adults or others living in social isolation maintain their care routines and stay in more regular contact with their caregivers.

The company differentiates its offering based on what it calls "proactive voice." This is the ability of the smart speaker to engage with a user proactively. With Alexa or Google, the user must wake up the device and request something. That eliminates features that require the device to audibly notify the user of an upcoming task such as taking medication or engaging in daily personal care. LifePod enables a caregiver to schedule interactions between the device and patient and then monitor the interactions. The service was added to the Massachusetts healthcare plan in 2019.

"Our special sauce is the power of proactive voice. The iHome device has special firmware capable of supporting proactive interactions...Aging people will be healthier and will be able to stick to [care plans] as though their caregivers were always there."
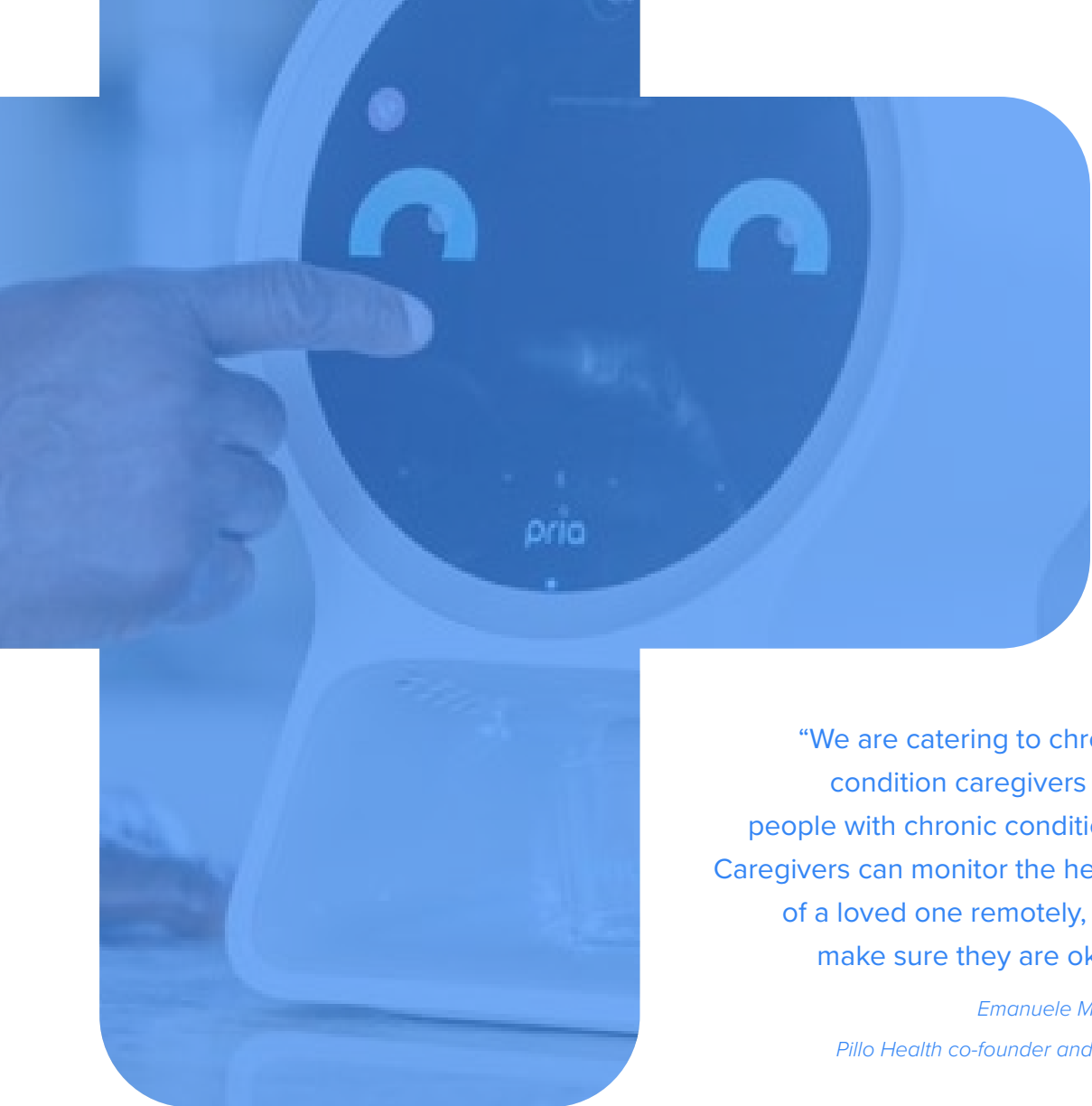
Stuart Patterson, CEO & Cofounder, Lifepod

Pillo / Pria

Pillo Health and Stanley, Black & Decker have collaborated on a voice-activated robot-like companion called Pria. The device is designed to help those with chronic conditions maintain their medication schedule and health using a built-in voice assistant to communicate with patients and caregivers.

The voice assistant built into Pria can also answer other questions for the user. While not a comprehensive database like Amazon Alexa or Google Assistant, Pria can still answer questions about things like measurements and can inform the user about the weather. At its core, the Pria device is essentially a smart display with a pill dispenser. Using an associated mobile app, Pria can schedule up to 28 doses of medication, remind the user when it's time to take the meds and dispense the correct amount of each medication. It also updates caregivers on the health of its owner, for instance letting the caregivers know if the owner has taken their medicine.

"We are catering to chronic condition caregivers and people with chronic conditions. Caregivers can monitor the health of a loved one remotely, and make sure they are okay."

Emanuele Musini,
Pillo Health co-founder and CEO

HEALTHCARE FOCUS OF LEADING VOICE PLATFORMS

The Consumer Voice Assistants

We expect to see more healthcare providers to eventually build their own voice assistants to create new forms of engagement and extend patient and caregiver services. Companies such as Nuance and IPSoft are anxious to assist healthcare providers in these efforts. And, startups such as Pillo Health and LifePod are demonstrating how new entrants can offer healthcare-related services with a customized solution.

However, today, the focus of healthcare providers is reaching a general population by leveraging the channels that popular consumer voice assistants have already established. That means Alexa and Google Assistant are the most commonly employed right now as they have the largest user bases for voice engagement with consumers. Apple's Siri and Samsung's Bixby could eventually take on those roles as well as their large potential user bases represent valuable channels to reach consumers.

AMAZON ALEXA

Amazon Alexa offers a large user base in smart speakers and easy method for healthcare providers to publish voice apps that offer general purpose healthcare information. It is also the only platform with a HIPAA compliant offering that enables providers to offer services that may include private medical information.

GOOGLE ASSISTANT

Google Assistant offers a large user base on smartphones and smart speakers with an easy method for healthcare providers to publish voice apps that offer general purpose healthcare information. Google has provided no indication on future plans to support HIPAA compliance or meet other needs unique to the healthcare industry.

APPLE SIRI

Apple Siri offers a large user base on smartphones with a focus on personal health monitoring through Apple Watch. There has been no significant engagement with healthcare providers to date and there is no easy way to bring Siri into healthcare-related consumer engagement. However, leaked documents suggest Apple has plans for new functionality related to healthcare slated for release in 2021.

SAMSUNG BIXBY

Samsung Bixby offers a large smartphone user base but no focus to date on healthcare use cases. It does, however, provide an easy method for healthcare providers to publish voice-first and multimodal apps that could offer general purpose information.

Conclusion

Voice assistant adoption in healthcare is still in its early phase among both consumers and providers. However, there are indications that it is poised to grow steadily in the coming years. Consumer data show that voice assistant use in general is rising across multiple device surfaces. And, over 50% of consumers are interested in using voice assistants for a wide variety of healthcare related use cases.

At the same time, innovative healthcare service providers are experimenting with a number of different solutions ranging from blood donation and doctor's visit appointment scheduling to hospital room patient services and home care features for the infirm and their caregivers. The expansion of healthcare provider solutions and consumer interest are the type of combination you look for when forecasting growth for a new technology in an industry.

Additional Resources

Data and Insights to Drive Your Voice Strategy

Voicebot has launched a new service, Voicebot Research, that will extend our voice and AI industry analysis even further. While we still intend to publish a limited number of publicly available reports, it is clear we can provide much greater depth and scope of analysis through a subscription research service.

Our first reports restricted to subscribers will include the Voice Assistant Consumer Adoption Report 2019, the Voice Industry Pulse providing insight from developers and other professionals building for voice today, and two analyses of the leading consumer voice assistant platforms. We intend to extend our reputation for providing the most comprehensive analysis of voice AI to help you refine your strategies, make better decisions, avoid pitfalls, and act quickly to take advantage of new opportunities.

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