

Healthcare chatbot diagnosis

Will consumers trust them with their health?





Technology has transformed many things in our day-to-day lives. Just about anything can be accessed via a computer or app, including health and wellness resources and diagnoses.

The healthcare industry has always been closely tied to human interaction; thus it seems counterintuitive that applications such as conversational AI, often referred to as chatbots, are becoming more prevalent. As consumers become more and more comfortable digitally sharing their personal information, accessing medical advice or information via an app may soon become the new normal.

Healthcare, like most life necessities, isn't usually convenient. From finding the right insurance coverage to finding a doctor to getting the right care at the right time, consumers are constantly faced with obstacles. These obstacles can be so daunting that some consumers are starting to forgo seeking treatment altogether—at least until it's urgent.

Generational shifts in attitudes toward personal health, access to new technology, and a willingness to sacrifice some privacy for convenience have opened up possibilities for companies to innovate solutions that help save people a trip to the doctor.

According to a survey by the [Kaiser Family Foundation](#), 45% of Millennials don't have a primary care physician. In an article by *Kaiser Health News*, 23-year-old Calvin Brown suggests one reason why:

"The whole 'going to the doctor' phenomenon is something that's fading away from our generation... it means getting in a car and going to a waiting room."

45%

Surveys show that 45% of Millennials don't have a primary care physician.

- Kaiser Family Foundation



Other options, like visiting an urgent care facility, seem far more convenient and affordable. Brown notes that visiting urgent care is “like speed dating. Services are rendered in a quick manner.”

This trend hasn’t gone unnoticed by the healthcare industry. According to a study conducted by [HIMSS Analytics](#), healthcare providers offering telemedicine options like chatbots has risen to over 71%. If visiting a physician or nurse in person isn’t convenient, the next best thing may be these types of conversational AI interfaces.

To gauge consumers’ satisfaction with the experience of getting a medical diagnosis via a healthcare chatbot, assess the effectiveness of information provided, and track consumer sentiments toward using these types of apps in the future, UserTesting ran a competitive benchmarking study of five healthcare chatbot apps, **Ada, Mediktor, Your.MD, Symptomate, and HealthTap.**

Five hundred consumers evaluated the apps based on five factors—**Ease of use, Speed, Credibility, Aesthetics, and Delight**—which UserTesting has identified as the key customer experience attributes over more than 10 years of helping companies leverage human insights to improve their customer experiences. Participants were given a list of symptoms for the common cold, and for food poisoning, and were asked to use the apps to get a diagnosis. Participants then answered a series of questions about their experience, which resulted in both quantitative data (a [UserTesting “UQ” score](#) on a scale of 0 “negative” to 100 “positive”) and qualitative insights.

Key findings revealed that:

- **Chatbot apps do a poor job of handling complex conditions**
- **Chatbot apps still need to earn consumer trust**
- **Basic usability issues detracted from the experience**

The details on what we learned about the five healthcare chatbot apps are discussed below, followed by the detailed scores for each app.



71%

Healthcare providers offering telemedicine options like chatbots has risen to over 71%.

- HIMSS Analytics

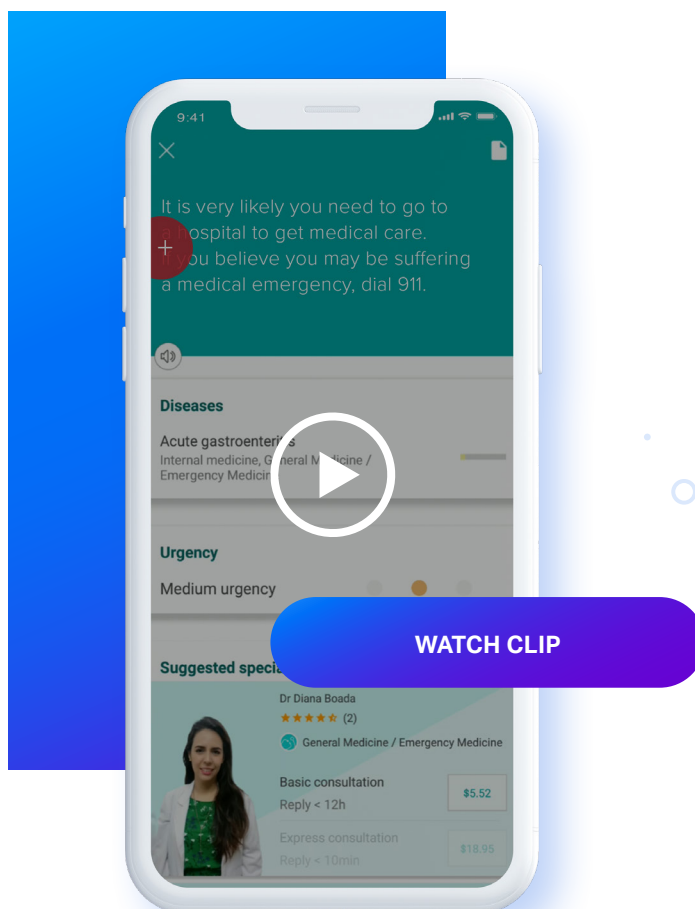


Complex conditions need a check-up

When it came to simple conditions, like a cold or the flu, most of the apps were able to produce a satisfactory diagnosis and/or recommendation for treatment. While this may be a testament to the advancements in conversational AI, most consumers could just as easily search for their symptoms on the web and get similar results.

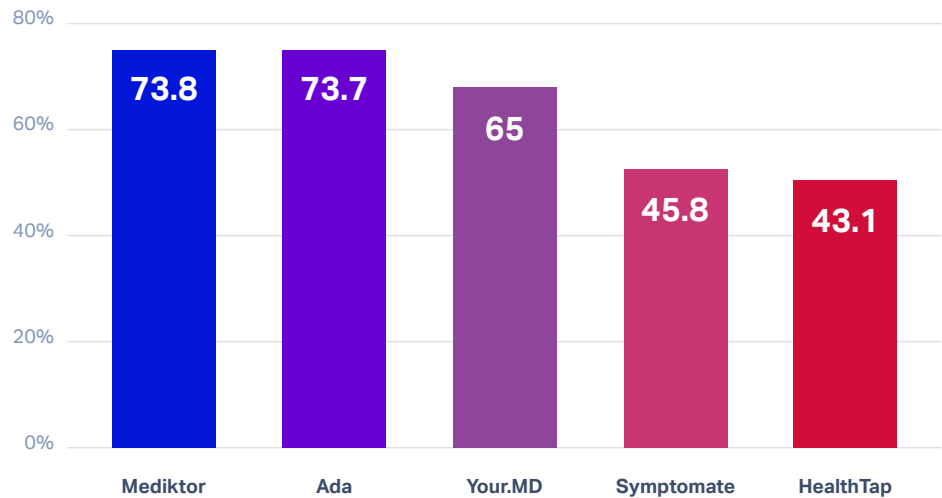
Chatbot apps have the most room for improvement with more complex conditions—the ones that some extra sleep and a cup of hot soup might not remedy. All the apps we looked at suffered a drastic decrease in scores when participants attempted to diagnose more complex symptoms, like those of food poisoning.

The intuitive, conversational interface that many participants enjoyed when diagnosing a simple condition quickly devolved into an overwhelming and sometimes alarming experience that most didn't enjoy.





Complex Diagnosis



It's important to note that because the symptoms participants were asked to seek diagnosis for were hypothetical, their responses could be attributed to how they perceived those symptoms, rather than how they'd actually feel if they had them. Healthcare chatbots would gain even more valuable perspective by conducting similar studies with participants that are experiencing real symptoms to better gauge the effectiveness of more complex diagnosis.

“There is a big difference between acute gastroenteritis and heart failure.”

- Female, 34 years old



Consumer trust needs a second opinion

Earning consumer trust is an important goal for any company, but especially for ones that deal with sensitive information like health and well-being.

While consumers may be willing to share their information via social networks or with retailers, when it comes to their health, they tend to be more guarded. Many participants noted their unease that the apps didn't seem to comply with HIPAA regulations (Health Insurance Portability and Accountability Act of 1996, which provides data privacy and security for safeguarding patient's medical information.)

"I was hoping to see a notice that this app would comply with HIPAA standards."

- Male, 41 years old

In addition to lacking industry standard privacy assurances, participants were also wary about trusting unfamiliar brands. Some participants expressed their hesitation to trust the apps due to their unfamiliarity with the brand or company. Others noted that they'd like to conduct follow-up research before they could completely trust the diagnosis and information provided.

"I don't know what the credentials are, or how long this app had been around, so not sure of its trustworthiness."

- Female, 49 years old

"I would want to look up more reviews or information before completely trusting this app."

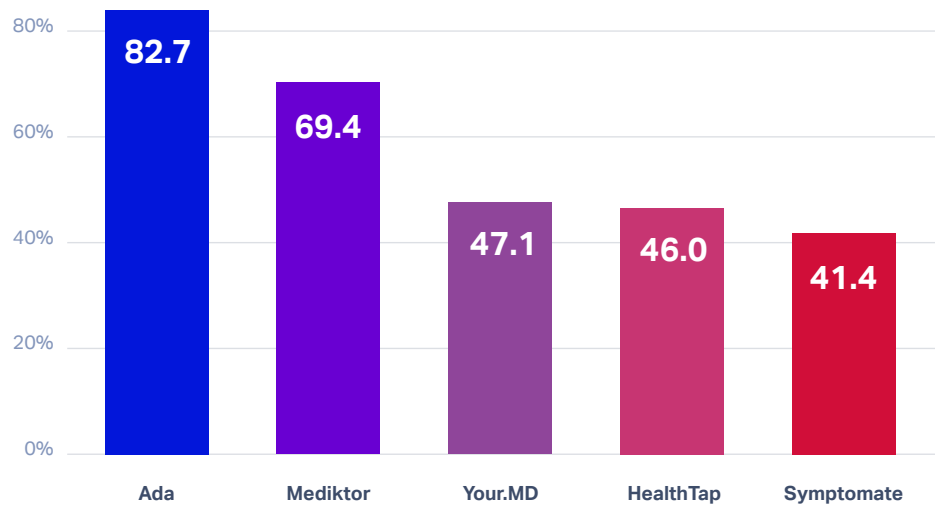
- Male, 31 years old



Oversights in general usability also contributed to lack of trust. Some of the key complaints mentioned spelling errors, and suggested links to providers or content that seemed untrustworthy or fake.

Even Ada, the only app to earn a “good” UQ score, still lost points with participants with respect to trusting the app.

Credibility





Basic usability issues abound

Consumers have high expectations for digital experiences, no matter the company. Once a consumer has an experience with customer-obsessed companies like Netflix or Zappos, they tend to expect that same level of quality with every other digital experience, and chatbots are no exception.

Many of the healthcare chatbot apps may have overlooked basic usability testing in their development process. Loading issues with HealthTap, for example, rendered the app nearly inoperable for some participants, many of whom had to completely exit the app and restart their diagnosis process from the beginning.

While new technology may merit a bit of forgiveness, basic usability issues could be the nail in the coffin for early players in the healthcare chatbot game. According to a survey by New York School of Medicine, 50% of respondents who downloaded a health-related mobile app (like a chatbot) eventually abandoned the app because the experience was too burdensome. This lack of adoption could cost healthcare providers dearly. Accenture estimates that for hospitals that offer chatbot apps, lack of patient adoption could cost each hospital over \$100 million annually.

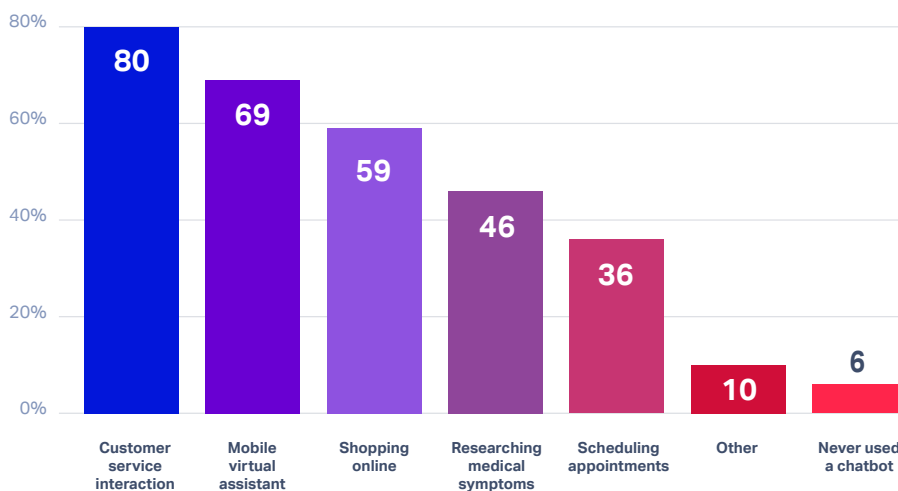
\$100M

Hospitals that offer chatbot apps could lose an estimated \$100 million annually due to lack of patient adoption.

- Accenture



Chatbot Usage Prior to Study

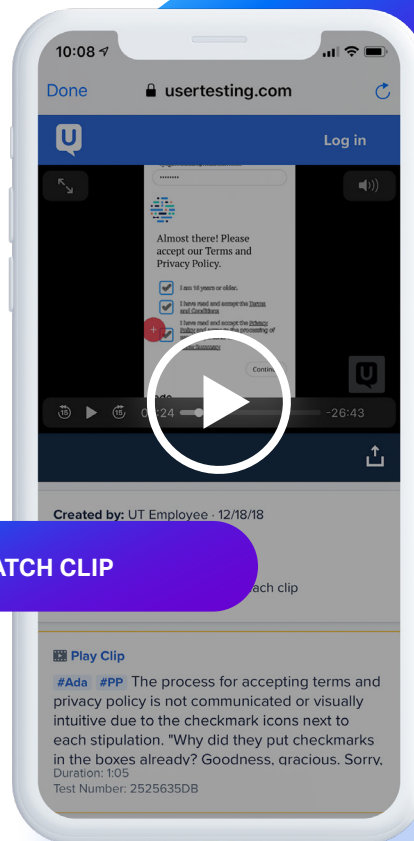
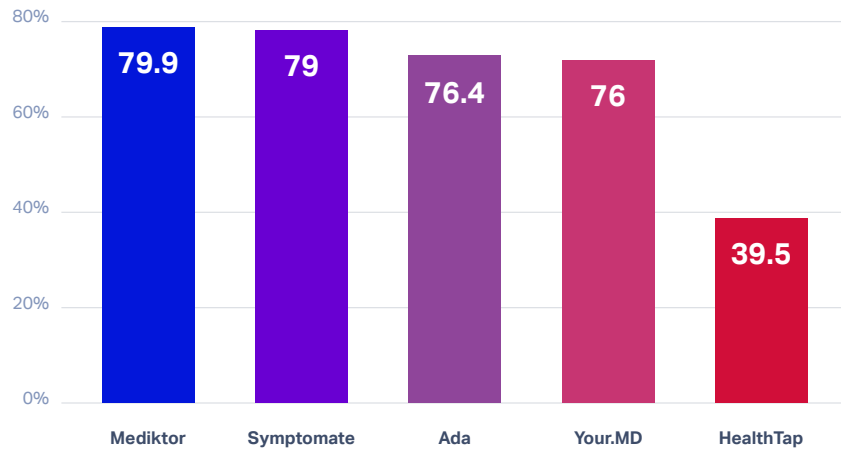


Although healthcare chatbots may be a newer application of conversational AI, consumers are already well acquainted with the technology. Over 94% of the participants in this study had previous experience using a chatbot-style interface, 46% whom specifically used them to research medical symptoms.

This further underscores the urgency for apps in this space to bring the experiences they're offering up to the standard that their customers expect. While some participants in the study were a bit more forgiving of the usability issues they encountered, not a single app scored well when it came to delighting consumers.



Delight



WATCH CLIP



Healthcare chatbot apps have potential—but a long way to go to win over consumers

The idea of reducing—or even eliminating—consumers' need to visit a physician in person may seem like the stuff of science fiction, but consumer trends indicate that's exactly what's happening. For example, some progressive healthcare providers are now allowing common medical conditions to be diagnosed virtually via a phone chat with an advice nurse or simply by sending a photo of the problem area via an app or email to the doctor to get the condition diagnosed and the medicine prescribed. Changes in how consumers receive treatment (outside of the typical in-clinic experience) are definitely taking place.

Healthcare chatbots have enormous potential. According to findings from Juniper Research, chatbot interactions are expected to exceed 2.8 billion, representing a potential cost savings to providers of \$3.8 billion annually, by 2023. The combined benefit to both consumers and healthcare providers indicates that it's likely consumers will begin to see conversational interfaces more and more as providers rely on them to better service patients.



\$2.8B

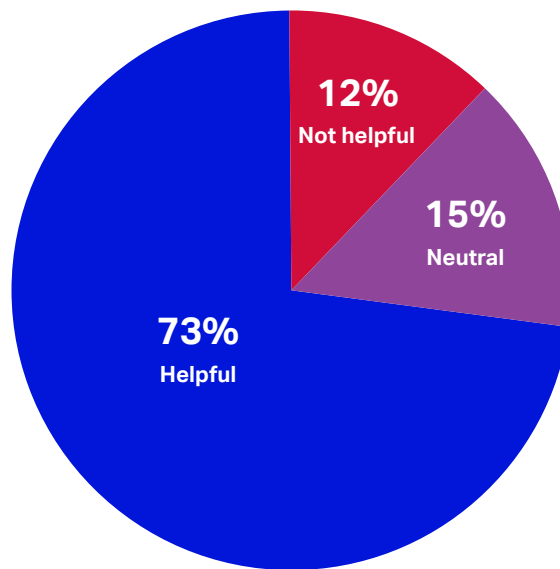
Chatbot interactions are expected to exceed \$2.8 billion.

- Juniper Research



The convenience and built-in empathy these apps can provide are priming consumers for global adoption. Despite the fact that no apps in this study scored a positive rating in the Delight category, partially due to numerous technical and usability issues, the wide majority of participants still felt that the apps were helpful.

Helpfulness Rating of Chatbots Following Study



It's a rare scenario when the markets are ready and waiting for innovation, rather than having to adapt to it. Companies in the healthcare space have a unique opportunity to win the loyalty of customers well before chatbots become mainstream.



While it's not surprising that younger generations were more forgiving of the apps' shortcomings, it's important to note that older generations weren't far behind. Considering the fact that older generations rely far more on regular checkups and interactions with their physicians, and that they're already comfortable using chatbot technology, apps in this space have a massive opportunity to establish themselves as a market leader in a budding industry.

Healthcare chatbots have the potential to disrupt the healthcare system as we know it. If done correctly, these apps could save patients and healthcare providers valuable time, resources, and money. Michael Lerner of Juniper Research expands on this potential:

"Chatbots have the potential to transform the way in which patients engage with their healthcare systems and go some way to take the pressure off overstretched staff. But if deployments are not backed up by investment in record keeping, then financial and time savings will evaporate."

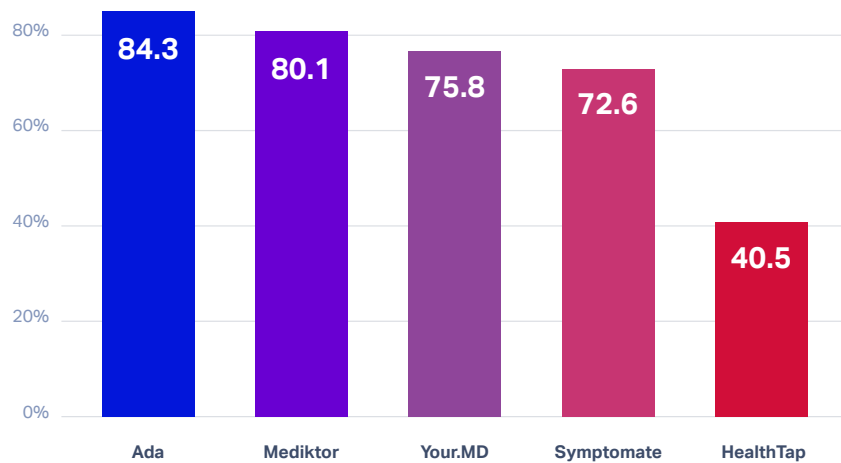
The healthcare industry is on the verge of change, with both consumers and providers anticipating solutions to meet their ever-changing needs and high expectations. As with any experience, tapping into human insights at every stage of development is critical. As our study revealed, consumers welcomed the idea of healthcare chatbots, but stopped short of committing to actually using them. These apps and others in their space are in a great position to immediately start infusing customer insights into every decision they make. The difference between those that succeed and those that fail will be the reliance on human insights.



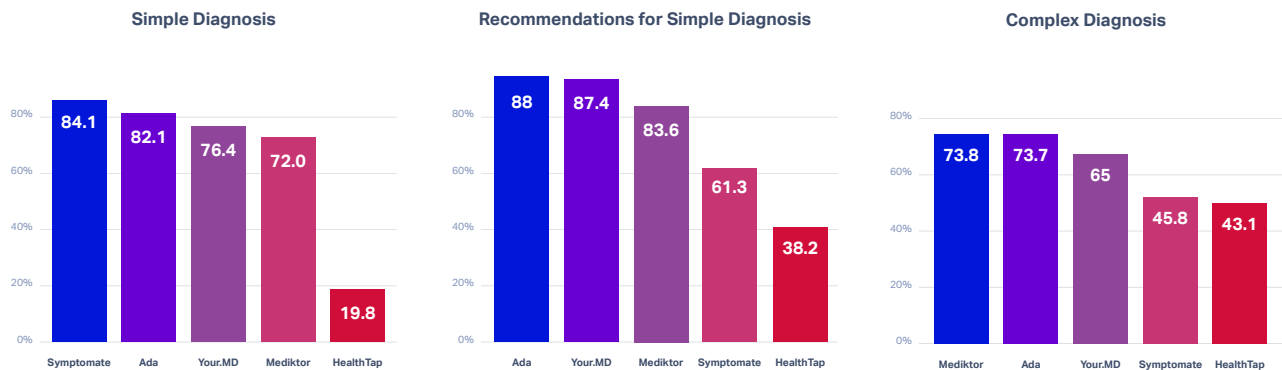
Appendix - UQ scores

UQ is UserTesting's unique and proprietary algorithm, which generates a score that quantifies the user experience of digital properties. The score is accompanied by quotes and video clips highlighting real users' reactions. UQ is a powerful combination of quantitative and qualitative data in an easy-to-consume report.

Overall Scores



Overall Scores by Task

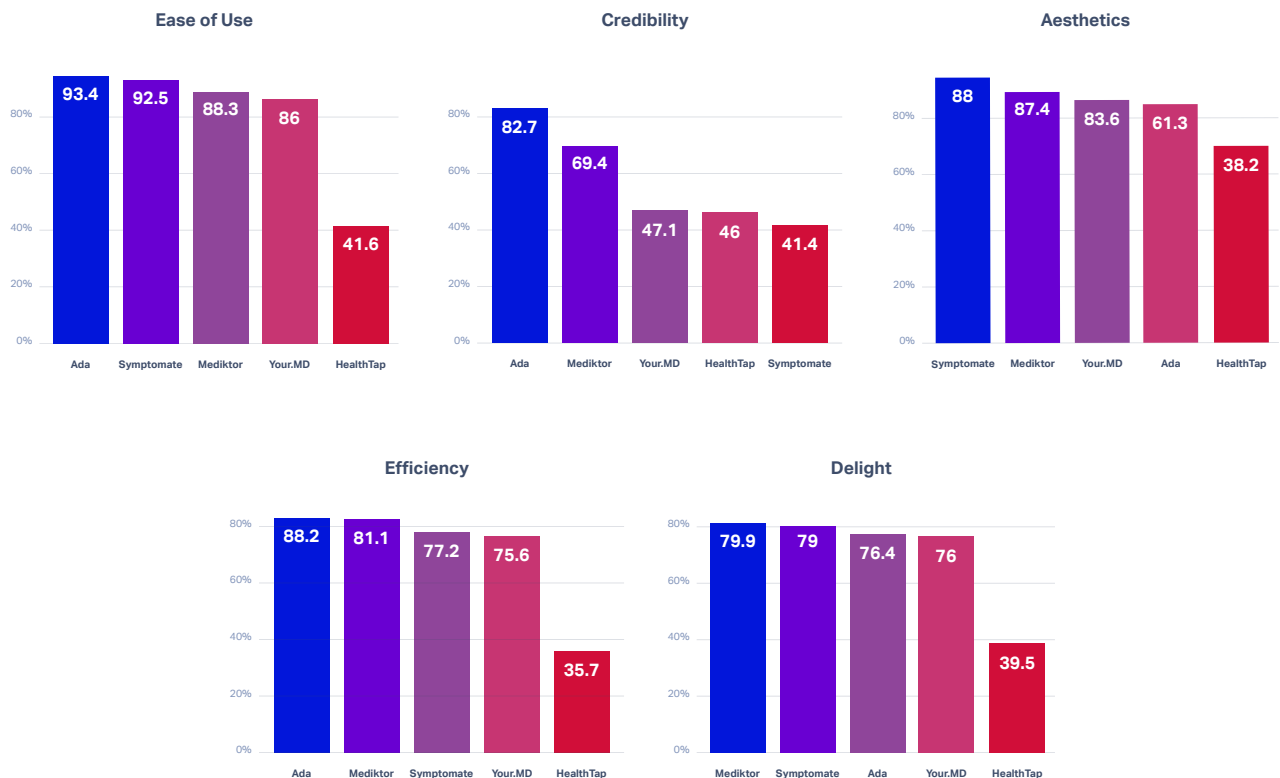




Detailed scores

Detailed scores representing key CX factors—Ease of use, Credibility, Aesthetics, Efficiency, and Delight—were calculated by asking participants to rate their agreement (on a scale of 1=strongly disagree to 5=strongly agree) with the following questions after they had interacted with the apps:

- **Ease of use:** “This app was exceptionally easy to use.”
- **Credibility:** “Based on my experience today, I am sure this company can be trusted.”
- **Aesthetics:** “The colors, images, and style of this app are pleasing to the eye.”
- **Efficiency:** “The app enabled me to quickly get things done.”
- **Delight:** “Consider your expectations of this app prior to beginning this session. Did the app disappoint or delight you?”



About UserTesting

UserTesting enables every organization to deliver the best customer experience powered by human insight. With UserTesting's on-demand Human Insight Platform, companies across industries make accurate customer-first decisions at every level, at the speed business demands. With UserTesting, product teams, marketers, digital and customer experience executives confidently and quickly create the right experiences for all target audiences, increasing brand loyalty and revenue. UserTesting has over 1,200 subscription customers including 48 of the top 100 brands in the world, and has delivered human insights to over 35,000 companies to-date. Backed by Accel and OpenView, UserTesting is headquartered in San Francisco, CA. To learn more, visit www.usertesting.com.



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