

## CASE STUDY

# Machine learning and VOC answer key research questions regarding the future of telehealth



### THE CHALLENGE

The COVID-19 crisis has radically changed how medical care is delivered. A significant percentage of physician's visits that would have once happened in-person are now conducted virtually. With vaccination underway and the pandemic beginning to ebb, the demand for telemedicine will no longer be driven by the urgency of avoiding face-to-face interaction. Will providers assume that telemedicine will become a relic of a bygone era? Or will they accept that many patients will demand that it be a part of their care and choose their providers based in part on the experience? And if so, how can providers provide a differentiating service and therefore win the competition for patients?

### WHAT WE DID

To answer these questions, in the second half of 2020, Applied Marketing Science (AMS) conducted a Voice of the Customer (VOC) study of US patients' attitudes toward the use of telemedicine. Our team began with 15 interviews with U.S. patients who recently had a telemedicine appointment. We also analyzed online patient comments with our Automated Content Evaluator™ (ACE™) tool, a natural-language processing algorithm that uses machine learning to identify customer needs in user-generated content (UGC). From this, we identified a comprehensive list of patient needs relating to all aspects of the telemedicine experience. Once our list of needs was complete, we followed with a survey of 400 U.S. patients who had participated in a telemedicine appointment. Survey respondents evaluated their telemedicine experience on several dimensions, including their motivations for seeking telemedicine services, frequency and purpose of appointments, and general comfort with telemedicine. We used maximum-difference scaling (MaxDiff), to measure the relative importance of patient needs. Further, we asked patients to evaluate how well their telemedicine experience satisfied those same needs, as well as their telemedicine experience overall to uncover what the most impactful opportunities for telehealth innovation are.

### THE OUTCOME

In summary, our data suggest that telehealth usage will subside somewhat after the pandemic, as patients who are more concerned with avoiding germs and illness become more comfortable visiting doctors in person again. On the other hand, the significant segment of patients who have grown accustomed to the convenience of telehealth—especially avoiding the pain of traveling to a physician's office and waiting to be seen—will expect to keep using it for routine care like consultations and prescription renewals. To avoid losing these patients, providers must ensure they have a telehealth strategy that thinks past the pandemic, when telehealth is no longer effectively forced on patients but where it becomes a differentiating benefit. Perhaps most importantly, providers must develop systems and processes that limit the amount of redundant contact with patients, such as minimizing the need for patients to see a provider both online and in the office and ensuring that all information from both office and telehealth visits are fully integrated in the patients' electronic medical record. Providers might also consider additional flexibility in their schedules, so that patients can maximize the convenience of telehealth visits by scheduling them outside of traditional office hours. And, providers can streamline their booking and virtual waiting room experience, allowing patients to self-schedule appointments that work for them and continue with their lives while they wait to be "seen" online. The practice that makes the telehealth experience even better than an already great in-office experience will win the future of patient care.

#### CLIENT

Internal Project

#### INDUSTRY

Medical Products and  
Pharmaceuticals

#### SERVICES

Voice of the Customer  
Machine Learning/AI

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APPLIED MARKETING SCIENCE  
(781) 250.6300 | inquiry@ams-inc.com  
www.ams-insights.com