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About The Author

Anton specializes in User Experience Design. Since 2012, he's been leading cross-functioning digital teams, delivering large scale projects for clients like BBC, Nissan, Pfizer and Visit California. He takes pride in making projects enjoyable, productive and successful, while helping clients make decisions based on insight and expertise. Thought Leadership



"Patients who feel like they are being continuously protected and monitored by their healthcare providers through smart technology utilization will not only be amenable to building closer relationships with their providers, they will also benefit from better traditional and holistic patient outcomes."

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Exploring the Changing Nature of the Patient-Healthcare Professional Relationship

The New Reality of Virtual Health, Personalization Technology and Information Coordination

As part of this Appnovation Insights series, we will be exploring the changing patienthealthcare professional relationship and how technology and user experience advances are redefining patient-practitioner interactions. Healthcare technologies will, in fact, continue to influence the entire foundation of the relationship between patients and their health professionals.



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The Current State of Patient Engagement

The patient-healthcare relationship is constantly evolving and improving. Research consistently demonstrates that patients prioritize both the interpersonal attributes of their providers and individual relationships with their providers above almost anything else.¹ Engagement and connection are the keys to improving patienthealthcare relationships. With new technologies emerging every day and infiltrating society, consumers' expectations are changing radically in terms of how they interact and engage with their healthcare providers (HCPs) and the kind of healthcare experience they prefer. Consumers have adopted a more retail-oriented mindset in terms of how they want to be treated along their journey within the healthcare system.² Just as consumers are accustomed to online access, personalization and 'kid-glove treatment' from retailers, they have begun to expect a similar experience with healthcare professionals. This shift in consumer mindset stems from three key trends.

1.https://hbr.org/2015/10/strong-patient-provider-relationships-drive-healthieroutcomes 2.https://www2.deloitte.com/tr/en/pages/life-sciences-and-healthcare/articles/ how-retail-is-changing-consumer-expectations-of-the-health-care-patient-providerrelationship.html

Patients understand they have a choice in health options

The quantity of information being consumed by patients with respect to their health is increasing exponentially. No longer is information only consumed through traditional patient-healthcare interactions like with doctors, nurses, therapists or other professional services. Patients can now access information relating to their health concerns instantly through a number of different channels whether it's through self-diagnosis tools, health tracking technology, or virtual health options. Advances in virtual patient engagement tools such as mobile applications, has made it easier than ever for patients to contact their health providers and explore their many options.³ As evidence of the growing popularity of m-health, 247 million people have downloaded a health app and 40,000 medical

applications are now available for tablets and smartphones.⁴ Then there's the explosion of apps, virtual consults and health chat bots making up the telemedicine market, which is expected to grow to \$64 billion⁵ in the U.S. over the next five years.⁶

The challenge for healthcare providers will now be to engage diplomatically with patients who believe they are well-informed about their health and find innovative ways to maintain relationships with these individuals. The goal is to prevent these patients from becoming alienated from the healthcare system. To do this partly requires HCP's to embrace technology and the information it provides, rather than ignore it.⁷

^{3.}https://www.healthcareitnews.com/news/trends-look-patient-engagement-2020

^{4.}https://www.carecloud.com/continuum/7-best-fda-approved-health-apps/

^{5.}https://www.prnewswire.com/news-releases/telemedicine-market-to-cross-130-5-billion-by-2025-global-market-insights-inc-300813753.html

^{6.}https://hbr.org/2019/10/how-new-health-care-platforms-will-improve-patient-care

^{7.}https://www2.deloitte.com/tr/en/pages/life-sciences-and-healthcare/articles/how-retail-is-changing-consumer-expectations-of-the-health-care-patient-provider-relationship.html

Increasing expectation for healthcare value and cost transparency

The continued steep rise in healthcare costs, particularly in the United States, has prompted consumers to pay more attention to how much healthcare is costing them. Given uncertainties and discrepancies in health insurance, and the gap between costs and coverage, patients now expect a much more detailed breakdown of costs from their healthcare providers. In an industry that is quickly creating hyper choice

8.https://www2.deloitte.com/insights/us/en/industry/ health-care/virtual-health-care-consumer-experiencesurvey.html

for consumer engagement, such knowledge now gives patients more control in whom they choose to engage with.8

This growing focus on value-based and outcome-based care also brings the prospect of a more personalized approach to medicine, focused on preventative care. The end result could be fewer hospital readmissions. fewer care costs associated

9.https://hbr.org/2019/10/how-new-health-care-

platforms-will-improve-patient-care

sizable reduction in overall cost of care.9 What's even better is that while health technologies such as automation, artificial intelligence, decision-support tools, and digitizing informationintensive processes can improve the patient experience, they could also reduce costs by up to 90% and significantly improve turnaround times. 10

with chronic conditions, and a

can-reduce-healthcare-costs

Stronger desire for collaborative healthcare relationships

The foundation of the doctor-patient relationship have changed drastically from one of dependence to one of mutual cooperation. Better access to information has empowered patients and evened the playing field with their doctors. Your average patient may even care

11.https://www2.deloitte.com/tr/en/pages/life-sciences-and-healthcare/articles/how-retail-ischanging-consumer-expectations-of-the-health-care patient-provider-relationship.html

more about being treated better than getting good treatment. This type of service is common in other digital-enabled industries such as retail and manufacturing, and is slowly shifting the landscape in the healthcare sector. Just like savvy retailers and other consumer service providers are finding ways to optimize the user experience, so are successful healthcare providers beginning to look at innovative, intuitive new strategies to collaboratively engage with, listen to, and treat their patients. 11



How can healthcare providers adopt a patient-first model?

To adapt to the changing landscape in the healthcare industry, and the patient-first approach that has been accelerated by virtualization, personalization and information coordination, healthcare providers have many options to improve their relationship with patients. Any type of meaningful change to the traditional healthcare model must focus first and foremost on patient outcomes. Some strategies that healthcare providers could consider in their quest to improve the end-to-end customer experience could include using the latest health technologies to:

Institute more seamless coordination and customization of services, and a better use of technology applications and platforms;¹²

Make better health decisions using data insights, analytics and decision-support tools¹³

Embrace proven virtual and mobile health systems, applications, platforms, and personalization tools

12. https://hbr.org/2019/10/how-new-health-care-platforms-will-improve-patient-care 13. https://www.appnovation.com/blog/using-data-analytics-better-health-decisions



Making the move towards full digital transformation can enable healthcare professionals to provide better, faster and more efficient value-added care, while at the same time minimizing the costs associated with everything from claims processing to staffing, to diagnosis and treatment, to patient retention and acquisition. In other words, better use of technology allows healthcare providers to focus more on engaging patients and delivering better health outcomes.

Virtual Health Options

Virtual health options are re-shaping the way we look at the traditional patient – healthcare provider relationship. It enables continuous, connected care via digital means. Virtual health can complement, or in some cases replace, traditional health interactions and provide healthcare organization with increased access, improved quality and value in care, and establish a differentiating factor versus other organizations. Virtual health options can include, but are not limited to, patient facing solutions such as virtual visits and remote monitoring. They can also include provider-facing solutions such as virtual consults and virtual second opinions.¹⁴

Fully 77% of consumers have never tried a virtual visit but over half would be willing to try. ¹⁵ That should be proof enough that virtual health is here to stay. Adopting virtual health can enhance patient outcomes in many ways. This may be in the form of decreased waiting times, lower transaction costs, easier to access care, or all three. All this translates into better patient experiences. Virtual health can also improve medication adherence and patient accountability, which positively impacts traditional health outcomes. Studies have also shown that virtual health strategies can lead to a 14% reduction in length of hospital stays, and remote monitoring of patients can cut hospital readmission rates substantially.¹⁶

Whie virtual health options and holistic patient outcomes are traditionally associated with younger generations, there is an opportunity to target seniors who are comfortable using technology. This segment of the population is increasing dramatically, and seniors are the generation that interacts the most with health care providers. Today's baby boomers and even older individuals who are proactive with their healthcare are more likely than their counterparts to be comfortable interacting with healthcare providers using technology. An example of this may be using wearables that monitor health issues, measure fitness and other health related goals, or provide reminders to take medications.

16.https://www2.deloitte.com/insights/us/en/industry/health-care/virtual-health-care-consumerexperience-survey.html

14.https://www2.deloitte.com/insights/us/en/industry/health-care/virtual-health-care-consumer-experience-survey.html

15.https://www2.deloitte.com/insights/us/en/industry/health-care/virtual-health-care-consumerexperience-survey.html

Seniors who use technology for other reasons are more interested in using tech for future health care needs

Survey question: How interested would you be in using technologies in the future?

Use technology for other reasons Do not use technology for other reasons



Note: Figure shows respondents who are interested in using the technology, where "interested" is defined as answering 2 or 3 on a three-point scale in which 1 is "not at all interested" and is "very interested." Source: Deloitte 2018 Survey of US Health Care Consumers.



Virtual health options provide the benefits of easier access and 24/7 care for patients. This is the type of service that patients desire as they focus more on health outcomes. The traditional healthcare patient relationship would end after a professional interaction, but this does not take into account the need for support and comfort which can be enabled through virtual options.



Personalized Technology for Healthcare

Along with providing virtual health options, the patient-healthcare relationship can be further enhanced through the use of personalized technology. As health data gathering makes advances in the next decade, innovative options to utilize that data in a more personalized, meaningful and streamlined way (both for patients and providers) will expand exponentially. Wearable technologies, implanted devices, and smartphone applications that allow for continuous monitoring will grow in popularity. And a personalized, 24/7 picture of a patient's health, which can be accessed and analyzed in real-time, anywhere, will become the norm. ¹⁷ While the shift is slowly occurring in healthcare through the use of personalized technology, consumers are already there. Their experience in other industries means they have come to expect personalization as a 'given'. This is creating a larger pressure on the healthcare industry.

Some companies, however, have mastered personalization technology. One example of innovation in this space is a company called CrowdMed. This service allows individuals to submit information on a condition that is concerning

17.https://hbr.org/2015/06/personalized-technology-will-upend-the-doctor-patient-relationship

them. A collective group of professionals and medical students then prescribes a potential diagnosis and recommended next steps.¹⁸ While this type of engagement does not follow the traditional relationship structure, it does reflect the trend of patients having more access to larger sets of information and taking proactive control of their health. HCP's need to understand this type of patient, and be able to provide the appropriate type of engagement, whether it be through innovative preventive practices or offering different types of virtual support.

The use of personalized technology to enhance the patient-provider relationship can also occur within the traditional healthcare setting. One example of this type of innovation is a technology that monitors the light emitted from a patient's skin within a hospital room that can show a deterioration in a patient's condition through blood flow.¹⁹ This technology arose as a result of patients expecting technological innovation, fast, value-added care and better outcomes when in hospital.

18.https://www2.deloitte.com/tr/en/pages/life-sciences-and-healthcare/articles/ how-retail-is-changing-consumer-expectations-of-the-health-care-patient-providerrelationship.html

19. https://www.rit.edu/showcase/index.php?id=350

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Conclusion: Health Technology Innovations Must Be Supported By Better Data Integration

Virtual health and personalized technology provide the tools to improve the patienthealthcare provider relationship, but the real value for patients will come from better coordination of services and better integration of information. Better and more streamlined access to information for patients and professionals will improve decision-making, boost the effectiveness of diagnosis and treatment, and ultimately improve the end-to-end consumer experience. The fact that the patient-healthcare paradigm is beginning to mimic those kinds of consumer relationships prevalent with retailers and other service providers may make healthcare professionals uncomfortable, but acceptance is inevitable. Patients want a seamless coordination of services and experiences. The healthcare professionals who can deliver this, supported by technology, will benefit not only from greater patient loyalty and satisfaction, but also in a more efficient and effective operating model.

Regulation and complexity in the healthcare industry makes the coordination of services more difficult, but it IS necessary. The numbers show that patients experience much better outcomes when data can be more easily shared throughout the health care system. Siloed platforms and systems are not conducive to better monitoring and preventive measures for patients. When health information is accompanied by a shift in focus from traditional interactions to a 24/7 relationship, patient experience is the benefactor . Patients who feel like they are being continuously protected and monitored by their healthcare providers through smart technology utilization will not only be amenable to building closer relationships with their providers, they will also benefit from better traditional and holistic patient outcomes.

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Who We Are

We help businesses advance and inspire, create positive transformation, and champion digital innovation. Our expertise and knowledge is your expertise and knowledge: At Appnovation, we seamlessly integrate strategy, user experience, development, deployment, training and support.

We create breakthrough digital solutions by engaging and collaborating with our clients to understand the unique challenges and goals for every initiative. Embracing the power of technology, our global team delivers digital transformation that drives innovation, growth and ultimately business value.

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