



**Personal Connected
Health Alliance**

Patient Satisfaction: An Important Measure in Connected Health

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A HIMSS ORGANIZATION

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Introduction

Patient satisfaction is an important healthcare outcome as a goal of patient-centered care, in the same way customer satisfaction is an important measure of success in retail. The achievement of patient satisfaction in healthcare may facilitate meaningful improvements in outcomes by creating opportunities for engagement.

Connected health aims to put patients at the center of care delivery and engage them with providers, coaches, personalized education and feedback to support better health and an improved healthcare experience.

With a mission to make health and wellness an effortless part of daily life through the use of personal health technologies, the HIMSS Personal Connected Health Alliance promotes satisfaction as a significant measurement in connected care delivery, and supports its adoption by providers, technology vendors and payers, whose 'end users' — or customers — are patients.

Patient Satisfaction: An Important Measure in Connected Health

A Meaningful Data Point

Patient satisfaction was assigned infamously low importance in healthcare historically. Today, improving the patient experience of care is one of the 'quadruple aims' published by the Institute for Healthcare Improvement, alongside provider satisfaction, population health improvement and reducing the per capital costs of healthcare. Additionally, the Centers for Medicare and Medicaid and Agency for Healthcare Research and Quality have adopted patient satisfaction scores for hospitals via CAHPS (Consumer Assessment of Healthcare Providers and Systems) surveys linked to reimbursement. A May 2017 article in Patient EngagementHIT addresses the importance of improving scores and highlights key areas tied to patient satisfaction, including those that can be influenced by implementing connected health technologies: patient-provider communication; being attentive; reducing unnecessary discomfort; and streamlining discharge and follow up.

Connected health, with its fundamental focus on patient-centricity, can be credited in part for the increasing value placed on patient satisfaction, as part of the entire patient experience, but is also a remedy for low patient satisfaction. Leading provider organizations and connected health vendors incorporated patient and provider satisfaction as key measures from the early days of connected health.

Connected Health: A Key and a Window of Opportunity

Connected technologies — devices, apps and wearables — have demonstrated capability to improve patient satisfaction when deployed in a clinical context (in a hospital or in the patient's home at recommendation of a provider), and it appears patient satisfaction with such programs can be a proxy for factors that can impact upon outcomes, such as engagement, inclusive and appropriate communication with providers, understanding of care plans and self-care, frequent monitoring, and/or efficient care coordination. An article in NEJM Catalyst ("What Is Value-Based Healthcare?", January 1, 2017) even used the term interchangeably with the concept of patient engagement. NEJM also reported that when providers focus on value rather than volume, patient satisfaction goes up. Notably, value-based care is also a major driver for adoption of connected health.

Providers are still in the early stages of integrating wearables and apps fully into clinical practice, but some cases exist that demonstrate achievement of both patient satisfaction and clinical improvements with the use of these tools. Adoption of remote patient monitoring (RPM) by providers is commonplace and a strong body of evidence exists that RPM is effective and contributes to high patient satisfaction. A 2014 study published in the journal *Arrhythmia & Electrophysiology Review* states:

“Several randomized clinical trials and registries have demonstrated that RM may reduce number of hospital visits, time required for patient follow-up, physician and nurse time, hospital and social costs. Furthermore, patient retention and adherence to follow-up schedule are significantly improved by RM. Continuous wireless monitoring of data stored in the device memory with automatic alerts allows early detection of device malfunctions and of events requiring clinical reaction, such as atrial fibrillation, ventricular arrhythmias and heart failure. Early reaction may improve patient outcome. RM is easy to use and patients show a high level of acceptance and satisfaction.”

In the wearables category, Philips' wearable biosensor, for continual monitoring of vital signs, heart rate, respiratory rate, skin temperature, body posture, ambulation and fall detection, provides one example. Data from the biosensor feeds into a clinical information system to assist providers in triage, tracking patient progress and clinical decision making. The biosensor represents a clinical improvement, helping clinicians in identifying patient deterioration via monitoring patients continuously and alerting providers of critical changes in respiration. A small study of its use in 56 emergency room patients achieved high patient acceptance with the wearable in terms of comfort, sense of being cared for and belief that the biosensor is an innovative care tool. This is a standalone achievement, but additionally can be viewed as an opportunity to engage patients to learn about and better manage their condition toward better outcomes. Providers that choose to capitalize on patient satisfaction have the opportunity to deliver significant improvements in the patient's total experience of care, including improved outcomes.

Satisfaction is Only the Beginning

The concept of deliberately moving patients from satisfaction to engagement is addressed in a [2015 article published by Cadient](#), “The Next Healthcare Revolution: Moving from Patient Satisfaction to Patient Engagement.” Author Chris Mycek points out the logic in this approach:

“But why does patient engagement deserve our attention when many hospitals are struggling just to achieve patient satisfaction? Because, simply put, the healthcare industry is one of the few — if not the only — industries in the world where the ultimate goal is to prevent repeat customers. This means that although patient satisfaction is critical in terms of the actual care experience, the real long-term measure of healthcare success revolves around whether or not patients will adhere to their regimes after discharge, which hinges on patient engagement.” Mycek goes on to point out the enormous opportunity for engagement afforded by digital technologies.

Brigham and Women’s Hospital is using wearables in its [‘hospital at home’ program](#), which provides acute care at home for patients who would otherwise be admitted, reported Healthcare Informatics in July of 2017. The program uses a patch to monitor heart rate, respiration, single lead telemetry, steps, sleep and falls, with data sent to the on-site provider team. In a pilot of 20 patients, researchers found the program achieved the same safety and quality of care with improved patient experience and reduced costs.

Consumer Acceptance of Connected Health Tools

Consumers have indicated they are ready and willing to give connected health tools a try. A [study by Accenture](#) that surveyed over 7,800 consumers age 18+, in seven countries, showed that in 2016, 21% of people already used a wearable for health tracking, a number which doubled in just two years, and both consumers (77%) and doctors (85%) agreed that using wearables helps patients engage in their health. Further, 78% of consumers either reported that they wore, or were willing to wear, technology to track their lifestyle and/or vital signs and 75% of patients asked by a doctor to use a wearable technology, did so. A full 90% of consumers are willing to share wearable or app data with a doctor (40% had already done so).

Sustaining the Value

Even so, questions remain about how to get patients to use connected health tools over the long term. Providers may hold the key, says Dr. Joseph C. Kvedar, Vice President, Connected Health, Partners HealthCare, in his book [The Internet of Healthy Things](#):

“Patients tell us that they stay engaged with our chronic illness tracking programs largely because they know that someone in their doctor’s office is watching the data. In fact, we showed early on that the more our practitioners log into the system to look at the dashboard view of these patient-generated vital signs, the better patients do.”

However, Kvedar explains that this phenomenon, known as the Sentinel Effect, will create engagement in many but not all patients. Kvedar believes that the key to increasing engagement is improving understanding of the individual.

“The ‘last mile’ of patient or consumer engagement is about personalization down the individual level, or *hyperpersonalization*.”

A plethora of studies and articles support Kvedar’s view and illustrate the difficulty of achieving both the provider oversight and personalization necessary to sustain engagement in clinical populations. Healthcare organizations are expected to increase focus on engagement in the meantime.

Conclusion

Patient satisfaction has gained new status in provider organizations that is only likely to increase. Fortunately, it’s a measure that has meaning in the context of patient-centric care and further, can lead to a transformative healthcare experience by facilitating opportunities for sustained engagement through the use of connected health technologies. As providers, behaviorists, designers and technologists work to solve the problem of long-term patient engagement, the importance of patient satisfaction remains.

Make health and wellness an effortless part of daily life.



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