Improving Patient-Provider Communication: Key Strategies for VBC Technology Adoption

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In the current rapidly evolving healthcare landscape, the incorporation of technology is crucial for effective patient-oriented care. But the fee-for-service model often prioritizes quantity over the patient-provider relationship's quality, limiting opportunities for meaningful patient-provider interactions. As value-based care progresses, physicians are increasingly using two-way, technology-enabled communication. This enhances information sharing, empowers patients, and creates a more fulfilling healthcare experience.

Bidirectional communication outside of the E&M encounter allows better collaboration between patients and providers to improve treatment plans and outcomes. The integration of technology enables patients to utilize various communication channels to seamlessly connect with their healthcare providers for advice, scheduling appointments, and prescription refills. Simultaneously, it grants providers convenient access to medical records, test results, and treatment plans, enhancing efficiency and improving care.

In this whitepaper, we'll explore the impact of technology enablement and bidirectional communication on healthcare from a physician's perspective. We'll highlight the essential role of data in helping providers understand and meet patients' needs while examining the potential obstacles and benefits that providers may encounter when adopting this technology. By exploring the US healthcare system's status and physicians' role, we'll provide insights to help providers leverage this technological advancement to provide better care, improve patient outcomes, practice top of license, and create personalized care plans.

Data Is Key to Making Patients Feel Understood and Seen

Technology integration has enabled two-way access and revolutionized the way healthcare providers understand their patients' health. Bidirectional communication channels can allow medical information to be securely exchanged between physicians and patients using digital health technologies such as electronic health records (EHRs) and telemedicine platforms.

The concept of "being seen" goes byond physical presence.

Physicians recognize that proactive understanding of a patient's true health status lies in the availability and accessibility of information. What has changed in these last few years is our ability to capture, measure, aggregate, and make sense of previously hard-to-obtain or non-existent behavioral, psychosocial, and biometric data. Combining these new datasets with the existing sciences of epidemiology and clinical medicine allows physicians to accelerate progress in understanding the relationships between external factors and human biology – ultimately resulting in enhanced reengineering of clinical pathways and true personalized care.

Two-way access gives physicians an enhanced view of their patients by providing them with a more comprehensive picture of their medical history, clinical indicators, and barriers to social determinants of health. This not only facilitates informed decision-making and personalized care but also aligns with patient expectations for active participation in their own healthcare journey. Through patient portals, remote monitoring devices, and telehealth consultations, patients are encouraged to take an active role in managing their health, and in doing so, will foster a collaborative partnership with their healthcare providers, leading to more effective and personalized outcomes in a value-based care model.

While technology's potential to transform patient care and improve communication is clear, we need to be mindful of its effect on physician workflow. Over-utilizing technology can inadvertently cause workforce burnout and could compromise patient care. It's critical to find a balance between leveraging the benefits of technology and ensuring it complements rather than inhibits the human aspect of healthcare delivery.

Recent trends see a shift toward charging patients for email and other non-direct communication forms due to the significant amount of time these interactions can occupy in a physician's day. Considering the increasing pressure on the healthcare system to provide more personalized and efficient care, these potential fees can present a challenge. While it's understood that there is resource management involved in patient communications, it's equally important that this shouldn't result in barriers to patient engagement.

The advent of AI and other innovative digital technologies can help ameliorate this situation. By automating routine tasks such as appointment reminders, prescription refills, and patient education materials, the physician's workload can be reduced, freeing up more time for direct interaction with patients. Also, creating structured systems with templates for certain types of interactions, such as sending lab results, interpreting common symptoms, or providing standard advice for conditions like flu or colds, can expedite physician response times, enhance patient experience and potentially minimize or altogether avoid charging for these services.

Moreover, solutions such as patient portals where individuals can access their medical histories, check test results, or ask questions about their treatment plans, while initially costly, have proven to eventually decrease the workload on physicians and front-office staff, effectively increasing patient satisfaction and engagement. It's evident that by adopting and cleverly incorporating these technologies, healthcare providers can enhance their work-efficiency and patient experience, navigating this issue appropriately.

In a nutshell, the proposed shift towards charging patients for email and other communications needs to be balanced by enhancing service quality, improving provider efficiency, and harnessing innovative technical solutions to ensure patient care remains the primary focus.

## Optimizing Workflows for Full Benefit of Technology

Technology in the advancement healthcare consumerism and precision medicine offers great promise, but it must not be integrated as an overlay upon a structurally flawed system. Reaching a tipping point for value-based payment alone is not enough if technology is not also leveraged to support provider and care team workflow automation. Innovation for optimizing bidirectional data exchange and communication can only enhance the patient-provider relationship when automation is in place. By using AI as a tool for workforce productivity, clinical workflows can be streamlined, and newfound torrents of data can be efficiently managed and transformed into actionable insights, allowing healthcare professionals to focus on what truly matters: delivering high-quality, patient-centered care.

At Lumeris, our team has developed a combination of AI and machine learning algorithms, that offer insights into the specific risk drivers behind a patient's stratification, enabling clinicians to focus efforts on essential factors. The results of Lumeris' approach have been remarkable, with improved management of population health, better health outcomes, and reduced costs and utilization. Additionally, we have used process automation to reduce manual effort and yield operational efficiencies in data management. With the recognition that providers are overwhelmed and burned out by practicing medicine in a non-optimized system, we continue to build in-house tech capabilities and leverage automation to propel our physician partners forward in the digital journey.

Improved Outcomes Through Tech-Driven Physician-Led Care

1. **Enhanced Efficiency and Workflow:** By leveraging technology, physicians and physician practices can streamline administrative tasks, automate processes, and reduce paperwork. These workflow improvements allow physicians and clinical staff to focus more on patient care and in turn improved outcomes.

One study published in the *Journal of Telemedicine and Telecare* found that using a secure electronic messaging system for patient-provider communication resulted in a reduction in telephone time and a 16.2% reduction in office visits. Another study published in the *Journal of Medical Internet Research* found that providing patients with access to their electronic health records led to a 6.1% reduction in office visits and a 10.2% reduction in telephone time.

6.1%
Reduction in office visits

10.2%
Reduction in telephone time
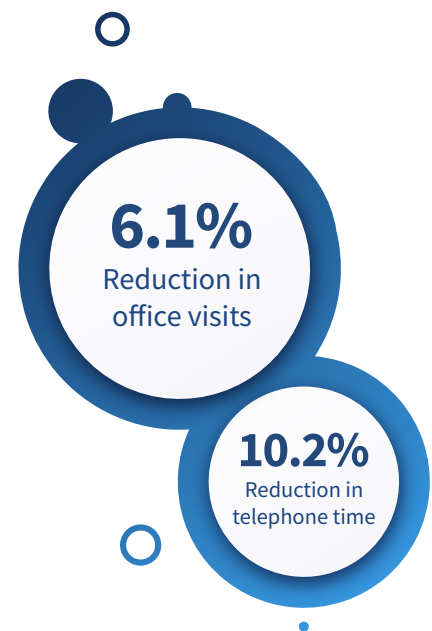
2. Convenience and Accessibility: With two-way access technology, patients can easily access their medical information, communicate with their healthcare providers, and schedule appointments without leaving their homes. And with the senior population estimated to grow to 81 million by 2050[1], the adoption of healthcare technology key to enabling health management from home for those with mobility issues or who live in rural areas with limited access to healthcare services. According to a U.S. News & Report survey[2], 88% of respondents affirm that assistive or health-related technologies have improved their quality of life, with 55% feeling it enhances their independence.

Respondents asserted that assistive or health-related technologies have:

88%
Improved their quality of life

55%
Provided a sense of independence
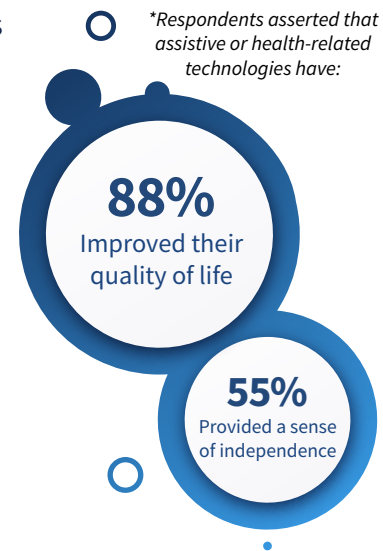
3. Better Medication Adherence: Patient engagement technology can help patients stay on top of their medications by providing medication reminders and enabling them to easily request refills. This can be especially important for seniors who take multiple medications for chronic conditions.

In a small study[3], Labovitz et al randomly assigned ischemic stroke patients to a treatment group or control group. The treatment group received smartphones with an AI app providing medication reminders. The app accurately confirmed pill ingestion and offered automated reminders. The treatment group achieved 100% medication adherence, while the control group had only 50%.

Medication Adherence

100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%

Control Group   Treatment Group
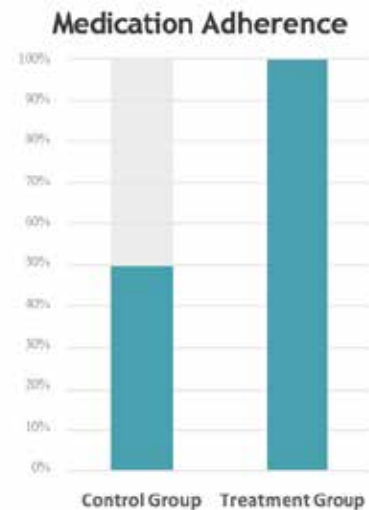
4. Remote Monitoring: Patients with chronic conditions, such as diabetes or heart disease, can benefit from remote monitoring through two-way access technology[4]. Remote monitoring tools can provide real-time data on patient health status and allow for prompt intervention in case of sudden changes, helping improve or maintain the quality of care and health.

While remote monitoring presents a revolutionary approach to healthcare, it is accompanied by a set of formidable challenges.

[1] U.S. Population Projections: 2005-2050. Jeffrey S. Passel and D'Vera Cohn. February 2008.
[2] U.S. News & World Report Aging in Place With Assistive Tech Survey 2023
[3] Using artificial intelligence to reduce the risk of nonadherence in patients on anticoagulation therapy.
[4] Telehealth and Remote Patient Monitoring Use in Medicare and Selected Federal Programs. GAO, 2017.

Management of Data: The sheer volume of raw data generated from RPM devices poses a significant dilemma: where does it all go, who is responsible for storing it, and how can it be securely managed? The influx of massive amounts of patient data lacks clear protocols for storage and handling, raising concerns about liability and cyber security risks. Safeguarding this sensitive information is paramount, as any breach could compromise patient privacy and trust in RPM systems. As the healthcare industry grapples with these complex issues, finding robust solutions for data storage, security, and management emerges as a critical priority for the successful implementation of remote monitoring initiatives.

Physician Time and Compensation: Various models exist for supporting physicians in managing the amount of time required to review remote monitoring results. Some involve centralized interpretation from an outside company that can handle and possibly automate the process, only flagging abnormal results in need of attention. If readings are automated and a crucial diagnosis is missed, however, physicians face heightened malpractice liability risks. Alternatively, physicians may opt to dedicate significant time to meticulously review all the patient data received, such as with 24-hour Holter monitors or GI capsule endoscopy results. However, a critical issue arises regarding compensation for the physician's time. Balancing the financial aspect, physicians may find it more lucrative to focus on in-office patient visits rather than investing time in remote monitoring review. This shift in focus may also undercut the potential of value-based care, which relies on population health surveillance and monitoring facilitated by RPM technologies. Despite the potential benefits, the economic incentives in favor of procedures over remote monitoring efforts pose a significant challenge to fully leveraging the opportunities presented by remote monitoring in a predominantly fee-for-service environment.

All in all, remote monitoring does hold significant promise in advancing value-based care through early disease detection and effective management of chronic conditions. By enabling continuous remote tracking of patient health metrics and facilitating timely interventions, remote monitoring can promote proactive, personalized care delivery. It is particularly helpful in the care for underserved populations, reducing the need for in-person visits and improving access to care. ***If health systems and physician practices can effectively manage associated challenges with remote monitoring, there is a great opportunity to leverage real-time clinical data for improving both outcomes and value in healthcare delivery.***

Reduce HbA1c levels by 0.55

A meta-analysis found that RPM programs reduce HbA1c levels by 0.55 compared with usual care.

38% reported reductions in hospital admissions

A survey of 25 health care organizations deploying RPM programs for a variety of use cases, including diabetes care, found that 38% reported reductions in hospital admissions and 25% reported reductions in readmissions and ER visits, respectively.

5. Improved Care Coordination: Patients, especially seniors, may receive healthcare services from multiple providers, including primary care physicians, specialists, and caregivers. *Researchers* have shown that the portion of Medicare beneficiaries seeing five or more physicians annually increased from 18% to 30% from 2000 and 2019, and the mean number of specialist visits increased by 20%. Moreover, they found that the average number of physicians with which a primary care provider needs to coordinate increased from 52 to 95 physicians from 2000 to 2019 —an 83% increase. Two-way access technology can help coordinate care between providers, leading to better care and improved patient outcomes. The adoption of two-way access technology can help further facilitate patient-physician communication.

In one NIH Meta-analysis[5], there is a 19% lower risk of treatment plan nonadherence among patients where good communication exists with their physicians.

6. Personalized Care: The concept of "precision health" is often thought about in terms of genomics-driven care, but it really comes down to personalizing today's healthcare system to the specific requirements of individuals, with trust and communication at the center. Two-way access technology can enable patients to be more actively engaged in their healthcare by allowing them to contribute to their care plan and communicate their preferences to their providers. This can help create a more personalized healthcare experience that meets patients' unique needs. Through technology-enabled, bidirectional communication, providers will acquire more contextual knowledge about a person's behaviors, environment, genomics and more to drive population health.

Precision health at the individual level serves as the invaluable counterpart to community health at the group level. By embracing the intricacies of personalization, we unlock the full potential of value-based care, ensuring that healthcare evolves from a one-size-fits-all approach to a tailored, holistic experience that empowers individuals and uplifts communities.

[5] Physician Communication and Patient Adherence to Treatment: A Meta-analysis. Kelly B. Haskard Zolnierek and M. Robin DiMatteo. National Institutes of Health, August 2010.

7. Population Health Management Enabled by Data-Driven Insights and AI:

The availability of patient data through two-way access empowers physicians to aggregate and analyze social determinants of health data, population health trends, as well as identify high-risk patients and implement preventive measures. Data-driven insights facilitate proactive healthcare interventions, leading to improved health outcomes at both the individual and population levels. Using diabetes management as an example, AI-driven predictive modeling can provide data that[6]:

Population Level

Identifies diabetes populations with the highest risks of avoidable complications that often result in unnecessary emergency department visits, admissions, and readmissions.

Patient Level

Enables physicians to identify their highest-risk diabetes patients and trigger automated next steps in care including getting screenings scheduled for timely diagnosis.

Data-driven insights and predictive modeling in diabetes management results in dramatic improvement in clinical outcomes. Research has found that for patients with Type 2 Diabetes, a 1% reduction in HbA1c was associated with a 13% reduction in diabetes-related total healthcare costs.

> *We are at the intersection of both AI and enhanced accessibility of data. This will ultimately change the trajectory of chronic disease in our country."*
>
> **Jean-Claude Saghbini**
> **President & Chief Technology Officer, Lumeris Value-Based Care Enablement**

[6] Transforming Diabetes Care Through Artificial Intelligence: The Future is Here. Dankwa-Mullan et al. Liebert Publishing, May 2019.

Guardrails to Consider

While two-way access technology can improve the overall healthcare experience and help physicians deliver better patient care, it's important to be aware of the potential pitfalls and address them proactively to ensure successful adoption. This may involve investing in staff training, addressing data security concerns, and finding ways to promote patient engagement with the technology.

1. Data Privacy and Security: Concerns arise with health information technology, as sensitive patient information is shared electronically. Healthcare systems often prioritize extreme security measures, resulting in a lack of patient engagement. Technology that enables SMS text messaging, although not strictly secure, allows for wider adoption and patient acceptance. The key is empowering patients to understand and control the level of security they desire. For less sensitive matters like discussing the flu, simpler methods like text messaging may suffice, while more secure methods can be chosen for serious or sensitive discussions.

2. Technology Integration and Training: Adopting two-way access technology requires healthcare systems to integrate new software or hardware into their existing technologies, which can be a complicated process. Additionally, training staff to use new technology can be time-consuming and costly due to uncompensated time and effort. Reimbursement methods for patient portal communications vary based on healthcare systems, practices, countries, and regulations. These reimbursement options include:

⟳	**Fee-for-service**	Physicians can bill for patient portal communications as part of regular office visits or other services. The specific billing codes used may vary depending on the complexity of the communication.
🗎	**CPT Codes**	Current Procedural Terminology (CPT) codes can be utilized to bill for specific patient portal-related services, such as secure messaging and online consultations.
♥	**Remote Patient Monitoring (RPM)**	If patient portal communication involves remotely monitoring patients, such as reviewing and responding to patient-generated health data, physicians may employ RPM codes for billing.
🧑‍⚕️	**Chronic Care Management (CCM)**	To manage patients with chronic conditions through the patient portal, physicians can employ CCM codes for billing.
💵	**Direct Pay or Subscription Model**	Some practices may offer patient portal communication as a separate service that patients pay for directly or subscribe to through a membership plan.

3. Burnout: Technology integration has the potential to streamline patient communication, but it can also lead to increased workload and contribute to physician burnout. Automation of standard communications and workflows using AI can help reduce burnout in this context. However, practices should also maximize the utilization of their staff to minimize physician workload and involve physicians only in tasks that truly require their expertise. By adopting healthcare technology and leveraging staff effectively, practices can effectively address burnout concerns[7].

4. Lack of Patient Engagement: Two-way access technology relies on patients to be proactive in engaging with healthcare providers and using online tools. Some patients may not be comfortable or familiar with using technology, which could create communication barriers.

5. Cost: Implementing technology can be costly for small physician practices or healthcare systems, not just upfront but also due to ongoing maintenance and upgrades. However, by partnering with a network that can help distribute and manage these costs more affordably, economies of scale can be achieved. This collaborative approach enables physicians to leverage shared resources and stay up to date with the latest technology advancements without overwhelming their budgets.

With the Right Guardrails in Place, the Benefits Outweigh Pitfalls

Physicians and physician practices play a vital role in leveraging technology to transform patient care. Through two-way access and the utilization of healthcare IT, they can enhance efficiency, improve patient safety, ensure care coordination, and gain valuable insights for population health management. While challenges exist, embracing these solutions can help physicians lead the way in delivering patient-centered care that is driven by technology, ultimately improving the health and well-being of their patients.

In the present healthcare environment, understanding a patient's health status indeed relies on data availability and accessibility. This understanding is key to an improved, sustainable healthcare system for all. With technology, data-driven insights, and two-way access capabilities, the phrase "The doctor will see you now" gains new meaning.

Take the next step in your value-based care transition—Lumeris' innovative Technology Suite offers access to data and AI-driven care orchestration, patient engagement engine, clinical insights, and analytics on both population and patient levels.

[7] Digital Health Research. American Medical Association. September 2022.

MEET THE AUTHORS

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Dr. Christopher Windham is a seasoned Senior Physician Executive and Surgical Oncologist who partners with health systems and health plans to excel in Medicare Advantage, value- based care, and population health. As a leader at Lumeris, a pioneering population health management and value-based care delivery operator, he drives transformative initiatives to improve health outcomes, patient experience, care provider engagement, and cost efficiency. With a wealth of experience in academic and private practice settings, Dr. Windham has a proven track record in physician alignment, value-based payment arrangements, and strategic healthcare management. As VP CMO of Population Health at Catholic Health Services of Long Island, he oversaw thousands of physicians enrolled in multiple value-based plans, achieving remarkable success even amid the challenges of the COVID-19 pandemic.

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