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Interoperability is Key to Achieving Sustainable Virtual Care

Success in telehealth platforms lies in well-integrated and secure systems embracing a single view of the patient

FROST & SULLIVAN EXECUTIVE BRIEF

Introduction

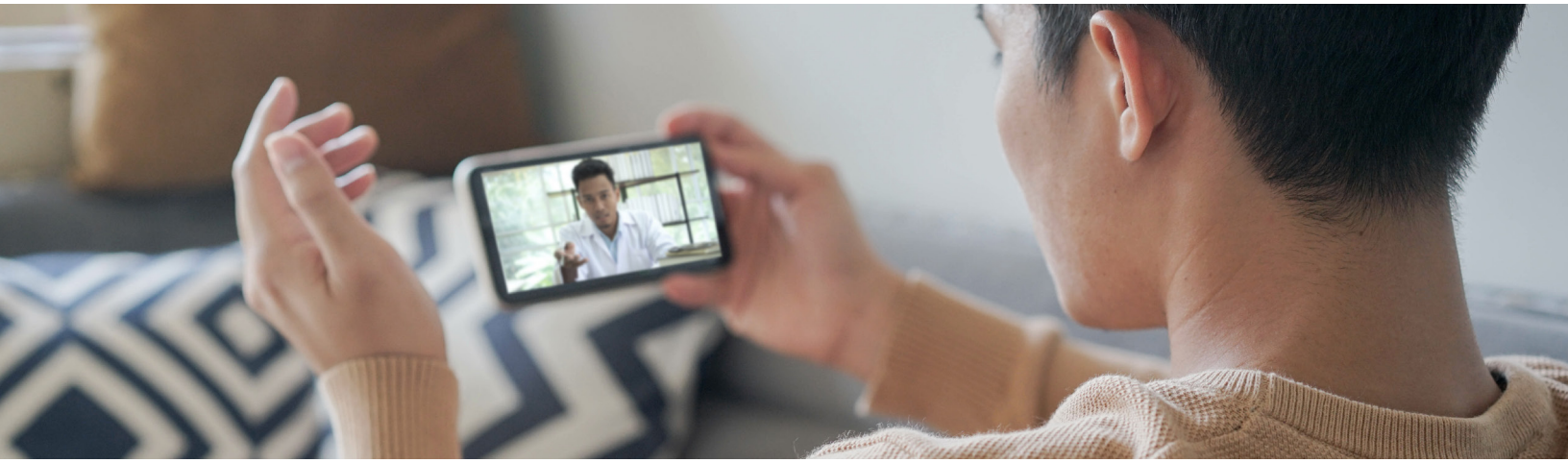
The COVID-19 pandemic catalyzed the growth and expansion of digital approaches to enable effective care delivery and accelerate innovation during challenging times. The use of telehealth technology, solutions, and services was an important aspect of this time of change, allowing patients and providers alike to experience the benefits of virtual and remote care approaches. Provider organizations also saw direct value from the ability to digitally exchange healthcare information (e.g., records, data, medical images) within and across healthcare enterprises and understand a single view of the patient record leveraging diverse data sources, as "the need for information sharing, collaboration, and rapid system development took on new urgency."[1] As stated by the World Health Organization, an important lesson was "the critical role that the digital transformation of the health sector can play in mitigating the risks from such health emergencies."[2]

Even though pre-pandemic **62%** of patients in one study reported the quality of virtual visits was **no different from that of an in-person office visit**,[3] in 2019 only **11% of US consumers reported using telehealth**. During the height of the pandemic, providers were rapidly upscaling and handling 50 to 175 times the number of telehealth visits than pre-COVID-19. In the post-pandemic period, **telehealth utilization has now stabilized at levels 38 times higher than 2019**. [4]

Moving forward post-pandemic, Frost & Sullivan's view is that patients can expect a greater mix of virtual and in-person healthcare approaches as they seek and receive care, as well as move in their care journey throughout the continuum of care (e.g., hospital, home, clinic, pharmacy, emergency department). In a July 2022 Health Care Insights Study, provider research revealed that the addition of virtual care options for patients led to an increase in patient visits.[5] Over the longer term, 50% of healthcare executives believe one-quarter of outpatient, preventative, and long-term care will become virtual by 2040.[3]

Key Challenges Related to Telehealth's Expanded Utilization

Telehealth should be an integrated part of overall organizational digital transformation initiatives and roadmaps, as solving challenges such as those related to interoperability, optimal utility from health data, better serving needs of populations, and addressing cybersecurity are aligned.



Interoperability and Workflow

Health data accessibility and interoperability, both within healthcare organizations and between healthcare systems, must become a priority to enable ongoing virtual healthcare growth, breaking down silos and facilitating data use throughout the market. At the same time, data must be relevant, quality, curated, and allocated in the right ways to facilitate not only clinical practice but also operations, revenue cycle, and data storage.

Connected technologies such as remote vital signs equipment, weight monitoring, blood glucose monitoring, and electrocardiograms are abundant; however, healthcare systems are still struggling to integrate their data into usable workflows for clinicians. Aside from those clinical-grade sources, the broader patient context from other patient-generated, wearable, and social determinants data can also provide, when combined with enterprise health IT data, a more complete picture on the patient. As telehealth becomes further integrated into mainstream healthcare, a key challenge providers face is the lack of appropriate integration of the full patient view into their workflow.

Disparity of Care

Today, half the world's population does not have access to essential healthcare services, and there are still barriers to help solve and more easily distribute care. Disparities in health experiences of people in different populations, regions, and countries include social, economic, and environmental disadvantages such as aspects of payment/insurance, quality of care, and access to care.[6]

> Location and workforce density are central factors in determining whether consumers can access and receive the care they need and are not issues only centric to developing markets.

For example, in France, 30% of the population does not have adequate access to health services and "GP ratios range from 125+/100,000 people to less than half that in rural France or deprived suburbs."[7] In the United Kingdom, the density of medical doctors is below the regional average per 10,000 people as compared to all WHO European Region countries.[8] In South Korea, over 90% of physicians are in urban areas,[9] while 18% of the population resides outside of city centers.[10] In South America, Argentina (4 doctors per 1,000 population) is the only country with higher average density of doctors versus OECD countries.[11] In ASEAN countries, Singapore has 2.3 doctors per 1,000 people, while in Indonesia there is only 0.5.[12]

Cybersecurity and Data Privacy Compliance

The number of hacking incidents on patient information jumped 42% in 2020 and continues to rise each year. This severe increase is attributed to more staff working remotely, strained resources from COVID-19, and soaring telehealth utilization. Many of these attacks were in the form of phishing and ransomware, which can cost health systems millions of dollars in ransom payments, lost revenue, fines, and downtime, and can even result in patient harm as systems go offline.[13]

Despite these warnings, one study revealed that the average healthcare organization allocates about 5% of its IT spending to cybersecurity.[14] In Frost & Sullivan's view, cybersecurity is something that is foundational in terms of health system digital transformation and use of IT-oriented technologies and services such as telehealth. With the current progressions in terms of use of telehealth, it is expected that cybercriminals will try to attack telehealth services, and the number of services used as bait will only increase.[15]

Important Provider Imperatives Tied to Telehealth

As healthcare providers focus on achieving the quadruple aim in healthcare,[16] ensuring greater efficiency in processes via digitization and interoperability, reducing burden on the staff by using intuitive digital interfaces, improving engagement with patients, and delivering a quality patient experience using advanced tools while ensuring that healthcare outcomes are not compromised are of critical importance.

In a paradigm shift, organizations are launching hybrid care delivery systems in which patients do not always have to meet a physician face to face but also have access to them via virtual systems. Providers themselves are also addressing staff strategy, with a mix of both remote and on-site personnel as part of hybrid work and care delivery models. This staff approach is also a part of approaches to help improve provider staff engagement and satisfaction.

Requirements centric to patient engagement and the digital front door are expanding further in the market as patients expect convenient and seamless digital experiences akin to the hybrid online and in-person approaches seen in other industry verticals.[17] A better care experience and outcomes through consistent, seamless, omnichannel digital engagement has become a requirement to ensure patient retention.

Providers increasingly want to use the right technology and tools for precision medicine for accurate diagnosis and treatment – to achieve superior healthcare outcomes in a patient-centric way. This requires timely access to a central repository of patient data from a variety of sources in a well-integrated network in a user-friendly environment.

While the digital transformation needs of every healthcare institution vary, a key aspect is leveraging greater IT investments that are platform- and enterprise-oriented. Strategies can include best-of-suite vendor sourcing approaches or looking for telehealth solutions that easily enable integration and interoperability with other systems already installed, seamlessly providing and using available data.

Moving Toward Platform-enabled Solutions

Platform-enabled solutions offer significant value as supporting and enabling many provider imperatives today. A vendor-neutral platform can promote cross-departmental and cross-institutional interoperability for clinical and operational efficiency. Once the data is integrated, innovative AI-powered software and applications can translate data into actionable insights for providers to deliver optimal care at the right place and the right time. This approach breaks down fragmentation and silos, allowing for seamless exchange of information, yielding better use of data and better clinical decision-making, including a complete longitudinal patient record for a complete view of the patient. Only when the framework is set and data is connected and provided in workflow, including accessibility of patient health data in real time from other digital technologies, can providers make full use of telehealth solutions placing the patient in the center while making their jobs easier.

Setting up a telehealth strategy on top of existing EHRs and associated IT ecosystems is an undertaking that must be approached with care and consideration aligned with overall institutional digital transformation efforts. This tactic enables application, data management, storage, and infrastructure to best align in the technology stack related to telehealth, addressing needs such as accessibility, operational and clinical workflows, security, and data transparency.

Siemens Healthineers—Enabling Connected Care to Drive Collaborative Outcomes

Siemens Healthineers provides platform-enabled telehealth offerings and experience to support provider organizations, across multiple global regions. Siemens Healthineers' solutions, including **eHealth Virtual Visit** and **teamplay Images**, allow the company to be a strong partner in a healthcare provider's virtual health and digital transformation strategy.

eHealth Virtual Visit offers secure virtual visit encounters between providers and patients, thereby expanding patient reach and access, supporting revenue components (e.g., patient volume/throughput, scheduling, expanding reach), and addressing staffing flexibility in terms of work settings and approaches to deliver care.[18]

teamplay Images allows for collaboration on imaging studies regardless of provider staff location.[19] Providers can communicate about case studies across multiple form factors in a secure environment created for the needs of the medical community.

The solutions are cloud-based, bringing important strengths in terms of agility, scalability, and security; HIPAA and GDPR compliant, ensuring privacy and adherence to regulations; and vendor-neutral. Data stored from each patient interaction is available, which helps in ensuring that virtual care delivery is integrated as a care model and clinical decision-making is not compromised. Given the solutions are platform-enabled, if providers want to extend their digital offerings and connect and automate processes within the hospital value chain, this can be facilitated readily.

Siemens Healthineers is addressing the needs of healthcare provider organizations to succeed in today's dynamic environment, including solving provider organization pain points and meeting imperatives such as access to and the disparity of care, interoperability and information exchange, security, engagement, and supporting the greater use of telehealth in care delivery strategy formats with their solutions.

Endnotes

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