Breaking Through Barriers to Implement Telehealth and Demonstrate the Value of Virtual Care

Author: Dawn Mitchell

Contributing Author: Bryan T. Arkwright

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Demonstrating and maximizing the value of IT investments in healthcare is hard.

Healthcare continues to struggle to define value as the industry slowly transitions from volume to value. Second, traditional return on investment (ROI) calculations require the ability to estimate financial gain and the total cost of investment. This is not as straight forward in healthcare where there are so many continuous variables, and the goal is to achieve the Triple Aim while not losing sight of the health and wellness of the providers who deliver that care. At the same time, it is often challenging to obtain the data required to analyze costs relative to outcomes.

Telehealth is a variety of technologies that enable the delivery of care virtually and introduces another layer of complexity in demonstrating value. In Telehealth Finance Variables and Successful Business Models [1], the authors identify a clear need for a departure from traditional ways of projecting ROI given the additional complexities of restrictive payer requirements, various business models, and where an organization is in their transition from volume to value. Organizations are successfully implementing, scaling and demonstrating value in their virtual care programs by looking at the bigger picture.

This paper explores how several leading healthcare systems and telehealth vendors are working together to break through barriers to successfully implement telehealth and shares strategies and lessons learned from those who have been able to clearly demonstrate the value of virtual care.

Ensure Alignment with Leadership and Enterprise-Wide Strategy

While adoption of telehealth is steadily increasing and payer reimbursement rules are becoming more favorable, organizations still struggle to centralize and standardize their virtual care programs and ensure alignment with enterprise-wide strategies. University Hospitals (UH) in Cleveland aligns with leadership by focusing on ownership and accountability across the enterprise. Dr. Cynthia Zelis, Vice President of Ambulatory Operations and Telehealth explained, “Digital care is not its own pillar at UH, it is on every department’s agenda for how to do business.” To ensure alignment with UH’s enterprise clinical strategy, the growth and adoption of digital health is under the leadership of Dr. Peter Pronovost, who serves as the Clinical Transformation Officer at UH. Dr. Pronovost is also the clinical lead for population health and high-reliability medicine, with direct responsibility for the UH employee accountable care organization.

Providence St. Joseph Health (PSJH), a 51-hospital health system across seven western states, launched its enterprise telehealth platform in 2018. PSJH was one of the first to launch teleICU on the West Coast and one of the first in the country to implement telestroke in 2008. They now offer more than 40 telehealth services at over 100 sites with expertise in specialties ranging from primary care to critical care and continue to grow. These services are now centralized under the PSJH Virtual Health System - a cohesive virtual care network that standardizes telehealth services and technologies across the entire health system and provides a foundation to scale their programs and continually improve patient care.[2]

Develop a Strong, Interdisciplinary Governance Structure

Inherent to a successful telehealth business model is strong governance with a responsibility and accountability of intentional leadership focused on three key functions: management, prioritization of services, and achieving ROI or value on investment (VOI).[1,3] There are approximately 60 personnel dedicated to the PSJH Virtual Health System, including implementation of the over 60 services currently deployed. Kim Swafford, Group Vice President, Telehealth and Health Technology Strategy, joined PSJH in October 2017 and has responsibility for the growth strategy and planning for virtual health, and the Consumer Access and Consumer Relationship Management (CRM) strategy. Kim and her counterpart who leads operations both report to the Chief Executive of the PSJH Virtual Health System, Dr. Todd Czartoski, who is also a dyad partner. Kim shared, "We are tightly integrated with the clinical institutes through a dyad leadership model and carefully prioritize potential new services." There are multiple groups that focus on regional innovation, and PSJH's centralized governance ensures safety, security and compliance. PSJH Virtual Health governance includes work groups who complete due diligence on new business models. The groups consider many factors to build a business case for a new service; including quality impact, clinical champions, reimbursement, relevance across the organization, and ability to scale.

The digital care governance structure at UH is intentionally matrixed. A Digital Senior Leader Council meets monthly and is responsible for formal strategic plan development. The group has a collaborative matrix with the Physician Advisory Council (PAC). There are telehealth working groups and a formal intake process to prioritize new digital care initiatives. The first step in the process is the completion of a four-page form which serves as the business case. Required inputs include an operational owner who can demonstrate how a new virtual service will integrate with overall care delivery and the metrics that will be used to measure value. There is also an IT approval process for technology. "Our digital care initiatives are focused on operations, not technology," said Dr. Zelis, "however, UH strives to establish long-term strategic partnerships with their telehealth vendors such as MDLive and Cisco, collaborating to continually demonstrate value and improve."

Allina Health (Allina) has a Telehealth Steering Committee that owns the strategy as well and includes the CIO, two hospital presidents and representatives from each service line. Barbara Andreasen, Director, Telehealth and Regional Development, is working to centralize and standardize telehealth across Allina and to better align programs with the overall digital health strategy. Barbara noted, "We have a physician champion for every telehealth service; however, there is no overall champion at the enterprise level. The challenge is finding someone with the right skill set."

Invest in Change Management

Managing change is hard and there are many aspects of change that need to be considered when implementing a virtual care program including leadership and accountability, engagement and sustainable adoption, operational readiness, communications, and training and education.

Advocate was the first hospital system in the Chicago area to implement Phillip's eCare Manager 15 years ago and has one of the largest teleICU programs in the country with one of the lowest mortality rates of the 45 national systems utilizing this technology.[4] Cindy Welsh, RN, Vice

President System Adult Critical Care, eICU, Virtual Patient Monitoring System (VPMS) and Advocate Intensivist Partners is focusing on standardizing critical care based on evidenced based analysis across AdvocateAuroraHealth, which includes 25 hospitals, 764 beds, 34 ICUs and seven outreach customers. Cindy shared that relationship building is key. "We've learned over time that we need local champions who can influence others. We make face to face meetings at the sites a priority so we can get stakeholder input and better understand what they expect. We also spend a lot of time looking at workflows and educating those who have negative perceptions of teleICU."

At UH "Executive sponsorship and key physician champions are critical to the success of our program," shared Dr. Zelis. "We are focused on improving digital health and changing our culture from healing in the hospital to healing at home. At UH, telehealth is simply the technology that enables digital care. For example, we talk about opportunities to improve the Emergency Department (ED) and if digital care is a viable option to address a gap. We don't talk about telehealth." Also, there are clear operational owners who are responsible for identifying impacts to workflows and ensuring operational readiness.

University of Utah Health (U Health) has provided telehealth services for over ten years to their partners throughout the mountain west. U Health is connected to over 60 facilities throughout a six-state region, providing clinical and educational resources in nearly 20 unique clinical specialty areas.[5] 'TeleStroke' and 'TeleBurn' services were implemented 25 years ago. According to Nate Gladwell, U Health's Clinical Operations Officer, "These programs started the way they all should start – clinician and patient coming together to find a better way." U Health receives tremendous support from partners outside of Utah, which account for 65% of their volume. They have 40 active and engaged affiliate partners with one to five telehealth programs each. In terms of adoption Nate said, "Clinicians will come around if you sit down and have a conversation with them and provide them with data. We also seek out innovators to serve as champions."

EHR Integration is Vital to Long-Term Success

Mr. Gladwell spoke at ATA19 about "Successful Health System Motives in Direct to Consumer." Nate shared the results of a 2017 Patient Engagement Survey from NEJM Catalyst that showed respondents consider cost and lack of EHR integration as the top barriers preventing widespread adoption of patient engagement tools.[6] Nate believes that "EMR integration is the key to the future adoption and organic expansion of telehealth. The best third-party workflow will give way to the worst EMR integration workflow. Why? Because of ease of use." [7]

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>
> *Nate Gladwell, University of Utah Health*

PSJH partners with multiple telehealth vendors to deliver their telehealth services; however, Kim Swafford said, "Our guiding principle is 'Epic first' when it comes to technology." As Epic continues to expand their capabilities and make it easy and sustainable to take advantage of

their telehealth offerings, their clients will look for ways to deliver more virtual services via Epic and achieve bi-directional integration with their third-party telehealth platforms.

In January 2018, Epic announced "One Virtual System Worldwide" including new functionality for 'Working Together' which allows clinicians to work across Epic organizations, and organizations using other EHRs, to improve the care for their patients. 'Working Together' includes 'Telehealth Everywhere' allowing patients to use Epic's self-assessment triage and then self-schedule a televisit with their organization or with another Epic organization if their own is not available.[8] Epic also has an 'Acute TeleConsult' module to bring the virtual provider to the patient's bedside for telestroke, telepsychology and any other specialty workflow that would benefit from the real-time nature of teleconsults. In terms of interoperability, Kip Price who leads telehealth for Epic shared, "We are making it easier for telehealth vendors to integrate with Epic through App Orchard. Eight vendors can integrate with minimal effort today."

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>
> *Kip Price, Epic*

For example, through Epic's App Orchard, the American Well telehealth app will allow providers to embed video visits into their existing clinical workflows and launch an American Well-powered video consultation from the patient chart with one click.[9] Tyto Care also joined the Epic App Orchard marketplace this past May.[10] Tyto Care's all-in-one digital diagnostics kit is now available at Best Buy. Through a partnership with American Well, users of the TytoHome kit (if they live outside of Minnesota or the Dakotas) can use the device to perform a medical exam at home and send the information to a physician for a diagnosis any time of the day or night.[11] Epic clients such as Louisiana's Ochsner Health System and Sioux Falls, South Dakota-based Sanford Health, one of the largest rural health systems in the United States, are two entities partnering with Tyto Care and benefiting from seamless EHR integration.[12] Other leading vendors such as MDLive integrate with EHRs today using standard HL7 interfaces or APIs to ensure continuity of care and will soon have a more seamless bidirectional integration through Epic's App Orchard.

Reimbursement Does Not Have to be a Barrier

While telehealth reimbursement policies continue to trend in the right direction, navigating reimbursement policies and regulations across payers and states and ensuring compliance is one of the top challenges for virtual care programs. Policies continue to vary from state-to-state, with no two states alike in how telehealth is defined, reimbursed or regulated.[13] For example, Allina, whose primary payment model is Fee for Service (FFS), provides telehealth services to five states with varying reimbursement laws. Barbara Andreasen explained, "The services we can offer are limited by reimbursement rules and there are a lot of one-offs you have to have in place to ensure billing compliance. Medicaid will not reimburse for Q3014 (telehealth facility fee) in Minnesota. On the other hand, in the region, Minnesota and Nebraska have state parity laws whereas other states like Wisconsin, lag behind."

U Health is also somewhat limited by reimbursement policies and regulations across the 19 regional partners they serve. "At the local level, we remain extremely targeted on use cases where Medicaid provides full coverage", said Nate Gladwell. UH receives payment for their services from regional hospitals and in turn those hospitals can bill on behalf of the provider and/or collect a facility fee, so the cost of the program is covered. Similarly, vendors and providers who are contracted in to provide telehealth services are typically not saddled with reimbursement restrictions since they are paid based on their contract, which often licenses and credentials their providers so that the hospital can bill professional services on their behalf. For example, DotCom Therapy, based in Madison, contracts with schools, private clients, and health providers to provide teletherapy services and they often work with niche patients with special needs. Their services are paid by the school district, by the parent, or by the health provider who bills insurers and patients on their behalf.

In Maximizing Your Telehealth Return on Investment (ROI): Five Best Practices to Increase Billing and Reimbursement,[14] the authors share best practices that can be adopted to help organizations create compliant, sustainable workflows that meet requirements for coverage, coding, and documentation, while increasing reimbursement and overall program revenue.

Look Beyond Traditional ROI to Demonstrate Value

Dr. Michael Ries, Medical Director AdvocateAuroraHealth Critical Care and Intensivist Partners and Medical Director AdvocateAuroraHealth teleICU says, "We are asked to justify the cost of teleICU more and more because the technology is expensive." While this has been a big hurdle, the team has been able to achieve and demonstrate significant clinical and financial benefits through their teleICU program, largely due to their focus on collaborating with the bedside and using the data to show the benefits able to be achieved. Acquiring reliable, risk-adjusted data helps to enable AdvocateAuroraHealth in demonstrating the value of teleICU. They have a homegrown, interdisciplinary database that tracks patients and unit secretaries can input data. They agree with W. Edward Deming when it comes to data – "In God we trust; all others bring data."; "Without data, you're just another person with an opinion."; and "If you can't describe what you are doing as a process, you don't know what you're doing." Between 2015 and 2018, 1,790 lives were saved (116% increase); 33,084 ICU days were saved (45% increase) and patients saw 7,480 fewer vent days (up 30.8%). Since implementing an improved clinical workflow at the bedside supported by teleICU technology, mortality rates are far lower than predicted based on the acuity of the patient and there has been over a million dollars in cost avoided with the reduction in ICU/vent days. In addition, through their collaborative program with the Emergency Department (ED), Cindy Welsh shared that since they implemented this program, 36% of patients were downgraded to a lower level of acute care resulting in significant avoided expense.[15] "We use data to focus on the bottlenecks and help the ED monitor and step-down patients whenever possible and improve the overall flow of patients.", explained Cindy.

> "I canvassed nine CEOs across the country, and their focus is on clinical outcomes. Their top priority is patient safety and quality of care, which will hopefully lower costs."
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> *Michael Ries, M.D., AdvocateAuroraHealth*

AdvocateAuroraHealth focuses on the value on investment (VOI) versus the ROI and tracks over two dozen teleICU benefits that are not financial, such as increased mobility, improved nutrition, patient/family satisfaction, nurse satisfaction, and decreased clinical burnout. Dr. Ries shared, "I canvassed nine CEOs across the country, and their focus is on clinical outcomes. Their top priority is patient safety and quality of care, which will hopefully lower costs." While the teleICU program at AdvocateAuroraHealth has already demonstrated outstanding value, Dr. Ries and Cindy use risk-adjusted data to identify opportunities to continually improve.

Nate Gladwell agrees that too often we get wrapped up in traditional ROI and lose sight of strategy and goals. "Value on Investment (VOI) is a big factor – which use cases will drive the most value versus the best commercial or marketing plan?" U Health tests new modalities of virtual care and tracks outcome using distinctive metrics to inform their growth plans. For example, six or seven states depend on U Health for major burns. The average burn patient requires a year of follow-up care and without 'TeleBurn', the care dropout rate is 80% because of the distance to therapy. U Health currently performs more than 400 video consultations each year, reaching more than 80 sites in the mountain west.

Research shows that patients who are treated in verified burn centers have better outcomes and higher survival rates. 'TeleBurn' makes it possible for burn survivors to connect instantly with University of Utah Health's Burn Center, the only verified burn center in a five-state region.[16] Multiple intangible benefits are also tracked at the local level, including miles traveled/saved, parking spots saved and growth in the region.

UH focuses on how to best operationalize telehealth across the enterprise to improve clinical outcomes, access, patient experience and provider satisfaction. UH Virtual Visit, powered by MDLive, is available 24/7 to all patients and employees and is critical to improving access. Overall, there has been an 25% increase in utilization of virtual visits by employees since 2018, which has resulted in a savings of over $42,000 in the first six months of 2019. Additionally, UH is leveraging MDLive for asynchronous teledermatology and an extensive post-operative visit program, where they have seen improvement in both patient experience and provider satisfaction.

At PSJH, Kim Swafford shared:

> "At the enterprise level, leadership is focused on doing the right thing versus short term ROI. However, we are held to a lot of scrutiny with our clients. We track costs very carefully and continually look for ways to reduce them. Fortunately, we have been able to quickly demonstrate downstream impact. For example, telestroke has grown tremendously in the Los Angeles area and the program has realized significant savings in provider contracting alone."
>
> *Kim Swafford, PSJH*

PSJH Virtual Health tracks multiple measures for each program and collects patient stories. Kim said their motto is "No data without stories and no stories without data." For example, ten years ago The Providence Newberg Medical Center, a forty-bed hospital located about thirty minutes outside of Portland, was not able to treat stroke patients 24x7 and for patients the facility was able to treat, their clinical data still showed room for improvement. They implemented the PSJH Telestroke Solution in 2010 and immediately had 24x7 coverage, standard and proven protocols and workflows, routine quality management and more. By 2015, they had radically improved their clinical outcomes for ischemic stroke patients:

- 35% decrease in DTN times to an average of 53 minutes (well within national guidelines);
- 7.69% IV Alteplase treatment rate, exceeding the national average of 5.2% in 2015; and
- Significantly reduced transfer rates.

For service providers such as DotCom Therapy, the focus is on increasing access to therapy while improving the cost and quality of care. There is a national shortage of certified therapists, and an increasing need for specialized services such as Autism Spectrum Disorder (ASD) Speech Therapy. *The Individuals with Disabilities in Education Act* mandates schools to provide speech, occupational and mental health therapy for students with communication disorders in order to ensure their educational success (United States Department of Education, 2017). Dr. Sanaz Cordes, CEO, DotCom Therapy explained, "We are filling a big gap in school districts to complete assessments, provide therapy, provide staff training, and work with parents." Simultaneous to addressing shortages and removing logistical barriers, DotCom Therapy helps school districts mitigate the risk of litigation. School districts across the United States spend over $90 million annually in conflict resolution.[17]

Conclusions

There are many barriers to success when implementing a virtual care program; however, by leveraging lessons learned from leading organizations and industry best practices, many benefits can be achieved, and value demonstrated.

- ***Ensure alignment with leadership and enterprise-wide strategy.*** Be thoughtful about your reporting structure, make certain there is clinical ownership and accountability, and consider consolidating and standardizing your virtual care programs.
- ***Develop a strong, interdisciplinary governance structure.*** Good governance facilitates efficient, effective, and entrepreneurial management that can deliver value over the longer term. If ignored, the consequences may be vulnerability or poor performance.[3] Be very thoughtful about what problem you're trying to solve, and which telehealth use cases can best address gaps and achieve benefits, then prioritize accordingly.

- ***Invest in change management.*** Cultural alignment, clinical champions, engagement and adoption, operational readiness, training and education, and communications are all critical to success.
- ***EHR integration is no longer a luxury, it's a necessity.*** To ensure continuity and quality of care and efficiency, seamless integration of data and clinical workflows is required.
- ***Reimbursement does not have to be a barrier.*** While payers are catching up, stay up to date on regulations, prioritize services that are reimbursed, and implement best practices to ensure compliance and maximize revenue.
- ***Look beyond traditional ROI to demonstrate value.*** Identify tangible and intangible benefits and distinctive metrics; insure clear ownership of outcomes and access to data. Use your data to prioritize use cases, justify your budget, build momentum and increase engagement and adoption.

> "We want to create a clinical and operational ecosystem of services so it's not just the cardiologist that sees the patient during the video visit, but also the social worker, nutritionist and other consultants so the patient can see all the specialists in one visit."[18]
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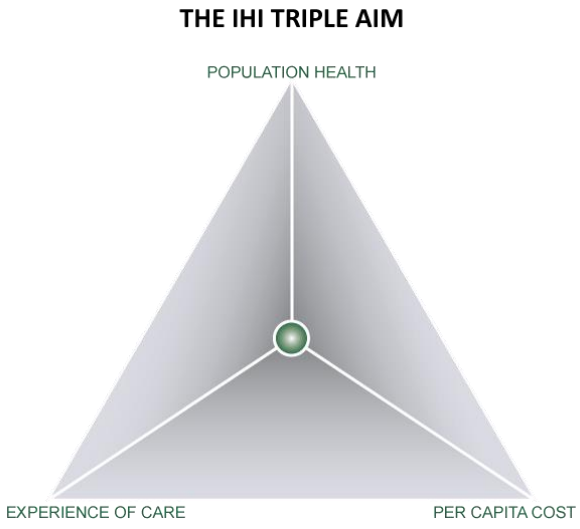
> *Daniel Barchi, CIO*
> *New York-Presbyterian*

Ultimately, the value of virtual care will be undeniable and necessary to achieve the Triple Aim.



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ABOUT THE AUTHORS

Managing Director and Advisor, Cromford Health
Lead Author

312.925.9272

dawn@cromfordhealth.com

@DigitalCareDawn

Dawn provides research and strategic and operational leadership to Cromford Health, while collaborating with clients and the Cromford Health team to design and deliver high quality solutions that leverage telehealth and other digital technologies efficiently and effectively, informed by thought leadership and extensive experience and research. Dawn has extensive experience working with leadership teams to develop their IT strategy and optimize the value of IT investments. Throughout her career she has focused on collaborating with stakeholders at all levels to maximize the value of technology based on organizations' unique and complex needs.

Chief Research Officer, Advisor and Founder, Cromford Health
Co-Author

419.565.8008

bryan@cromfordhealth.com

@StateOfTheArk

Bryan is a trusted thought leader, researcher, and advisor in the telehealth and digital health industry. Bryan is Co-Founder and Chief Research Officer of Cromford Health, Adjunct Faculty with Wake Forest University School of Law, Director with Schumacher Clinical Partners, and on the Editorial Board for the peer reviewed digital journal Telehealth and Medicine Today. Bryan advises large hospitals and health systems regarding telehealth, sometimes serving as interim executive leadership. In addition to his hospital and health system work, Bryan advises healthcare startups and does international pro-bono work with telehealth.

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Cromford Health is dedicated to digital health and passionate about growing the collective knowledge of digital care and telehealth in the United States and Internationally through research and collaboration. Cromford leverages research, knowledge and expertise to provide digital health and telehealth advisory services throughout the healthcare ecosystem, with a focus on improving the quality of care, reducing costs, and increasing patient, family and provider satisfaction.

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