Deloitte.
Insights

What can health systems do to encourage physicians to embrace virtual care?

Deloitte 2018 Survey of US Physicians

Deloitte Consulting's Virtual Health practice helps clients assess the transformative opportunities that can be possible through the use of virtual health, determine which capabilities would best serve their customer or patient populations, and align potential solutions to their strategic imperatives. Our work helps health care organizations build a scalable virtual health program that fits their needs, deploy strategic capabilities, and align capabilities to care delivery pathways. Our practice brings insights from leaders across the industry with experience in strategy, operations, human capital, and technology, and a foundation in clinical and operational experience.

Contents

Executive summary

With changing health care reimbursement models, growing consumer demand, and advances in digital technologies, virtual care is a must-have for health systems. But how can hospitals and health systems gain physician buy-in? It might be easier than you think.

VIRTUAL CARE PROGRAMS will likely become increasingly important to health systems that want to retain and attract customers—consumers, employers, and health insurers—who will likely demand more connected, coordinated, and convenient care. No longer a futuristic idea, virtual care has the potential to transform care delivery by meeting consumers where they are, through multiple channels.

The Deloitte 2018 Surveys of US Health Care Consumers and Physicians have found that consumers and physicians agree on the benefits of virtual care. Consumers point to convenience and access (64 percent) as important benefits. Physicians agree that virtual care supports the goals of patient-centricity. The top three benefits from physicians' perspective are:

- Improved patient access to care (66 percent)

- Improved patient satisfaction (52 percent)

- Staying connected with patients and their caregivers (45 percent)

However, despite seeing eye to eye on the benefits, consumers and physicians diverge in their intent to use virtual care. While only 23 percent of consumers have had video visits, 57 percent of those who have not used them yet are willing to try them in the future. The interest from physicians is much lower: 14 percent of physicians have video visit capability today and only 18 percent of the rest plan to add this capability in the next year or two.

What explains physicians' low interest in virtual care technologies?

Lack of reimbursement, complex licensing requirements,[1] and the high cost of the technologies[2] have contributed to slow adoption. Reliability and security are also issues: We found that physicians are concerned about medical errors (36 percent) and data security and privacy (33 percent).

That said, the market increasingly supports new care models. Our view is that with the changing reimbursement models, growing consumer demand, and advances in digital technologies, virtual care is a must-have for health systems, and they will now need to help physicians adopt virtual care capabilities.

Virtual care typically requires an enterprise approach as part of organizations' overall strategy. Answers to several questions can help organizations articulate their goals and priorities and think through potential challenges:

- What issues can virtual care programs solve that traditional operations cannot?

- What value do these programs generate and how do they affect existing brick-and-mortar revenue?

- What assets are needed?

- Which patient populations should be targeted?

- What are traditional and nontraditional competitors doing around virtual health?

Health systems should act decisively to accelerate the adoption of virtual care, overcoming physicians' reluctance. Despite the current low rates of both adoption and plans for adoption in our study results, answers to other survey questions suggest that gaining frontline physician buy-in may not be as hard as it appears. Physicians with experience of virtual care technologies tend to feel good about them: For each of the seven technologies available to them, large proportions of physicians (58–69 percent) expect to increase their use.

As organizations move from planning to execution, we offer a few tactical considerations in the following areas for helping physicians adopt virtual care:

- Workforce readiness and engagement

- Technology infrastructure and interoperability

- Operations and workflow integration

- Care model design

Introduction

VIRTUAL CARE IS not new. A subset of virtual care—telemedicine and telehealth—refers to the use of telecommunication devices to transmit medical and health information.[3] *Virtual care* is the integration of telehealth into mainstream care delivery to complement or even substitute traditional care delivery. It involves the convergence of digital media, health technology, and mobile devices, and leverages additional modalities—such as text messaging, digital voice assistants, and decision support tools powered by artificial intelligence and augmented/virtual reality—to create a continuous connection between patients, physicians, and other caregivers.

Many believe that widespread adoption of virtual care might not be possible until value-based payment models take hold:[4] By improving care coordination and prevention, virtual care may decrease the use of expensive emergency department and hospital services—a financial benefit under value-based payment models, but not under fee-for-service.

We expect the changing reimbursement environment along with a few other emerging trends to facilitate the adoption of virtual care as a common practice. For instance, growth in consumer demand for virtual care is expected to continue, with younger generations driving expectations of easier access through technology. To add to this, the cost and complexity of virtual care technologies are likely to decline as consumer technology companies (such as Apple, Amazon, and Google) begin to compete with traditional medical technology suppliers, reducing barriers to entry for physicians and health systems. The regulatory environment too appears to grow supportive of virtual care. States increasingly have laws requiring insurance coverage of telehealth services, and many states have passed payment parity laws, requiring the same level of reimbursement for telehealth visits as for in-person visits.[5]

To understand physician perspectives and experience with virtual care, the Deloitte Center for Health Solutions surveyed physicians about the following:

- Current use of and future plans for virtual care technologies

- Benefits and challenges around virtual care technologies

- Potential uses of specific virtual care technologies

The results show that consumers and physicians both agree on the value of virtual care, but while consumers are eager to adopt it, many physicians have reservations. At the same time, our results indicate that getting the buy-in from physicians may not be difficult given the fact that most physicians who have used virtual care tools feel good about them. And a changing reimbursement landscape and advancing technology are also likely to compel wider adoption of virtual care.

ABOUT THE STUDY

The 2018 Deloitte Survey of US Physicians is a national survey of 624 US primary care and specialty physicians. The survey is representative of the American Medical Association Masterfile with respect to years in practice, gender, geography, practice type, and specialty, so as to reflect the national distribution of US physicians.

The survey asked physicians about seven virtual care technologies:

- Email/patient portal consultations with patients

- Virtual/video-visits, defined as live physician visits conducted via video technology

- Remote patient monitoring at home

- Remote patient monitoring at other facilities, such as ICUs (intensive care units) or SNFs (skilled nursing facilities)

- Remote care management and coaching, defined as regular contact with patients by phone or video technologies to discuss health status and lifestyle behaviors

- Integration of data from patient wearables into patients' medical records (wearables data might include fitness, sleep quality, basic heart rate activity, and other consumer health tracking devices)

- Physician-to-physician electronic consultations, defined as virtual communication tools or portals for physicians to consult with each other about a patient

Physicians and consumers see virtual care benefits, but usage is low

Virtual care can improve patient experience

Our survey results show that nine in 10 physicians see the benefits of virtual care, especially with regard to patient experience: Access to care, patient satisfaction, and improved communication with the care team are the main benefits (see figure 1).

Many consumers echo these views. Multiple studies show improved access to care and high satisfaction among consumers receiving virtual care.[6] In the Deloitte 2018 Survey of US Health Care Consumers, 64 percent of consumers cite convenience and access as important benefits. It is also apparent that consumers not only use virtual care more than physicians offer it, they are also more interested in using it in the future: 23 percent of consumers have used video visits and 57 percent of consumers who have not done so yet are willing to try them out in the future. Consumers from younger generations are likelier than older ones to use and be interested in virtual care: 42 percent of millennials have had video visits and 68 percent of those who have not say they would do so in the future.

However, physician adoption of virtual care technologies is low

Despite the benefits of virtual care technologies, current levels of implementation are low.

Forty-four percent of surveyed physicians have not implemented any of the seven virtual care technologies presented in the survey. The technology implemented most so far is email/patient portal consultations (38 percent), followed by physician-to-physician electronic consultations (17 percent), and virtual/video visits (14 percent). For the remaining four of the seven technologies in the survey—remote care management and coaching, remote patient monitoring at home, remote patient monitoring at other facilities, and integration of wearables—reported adoption is in single digits.

Another finding from our survey is that primary care physicians are likelier to have implemented virtual care technologies than specialists. For instance, 48 percent of primary care physicians implemented portals vs. 34 percent of specialists;
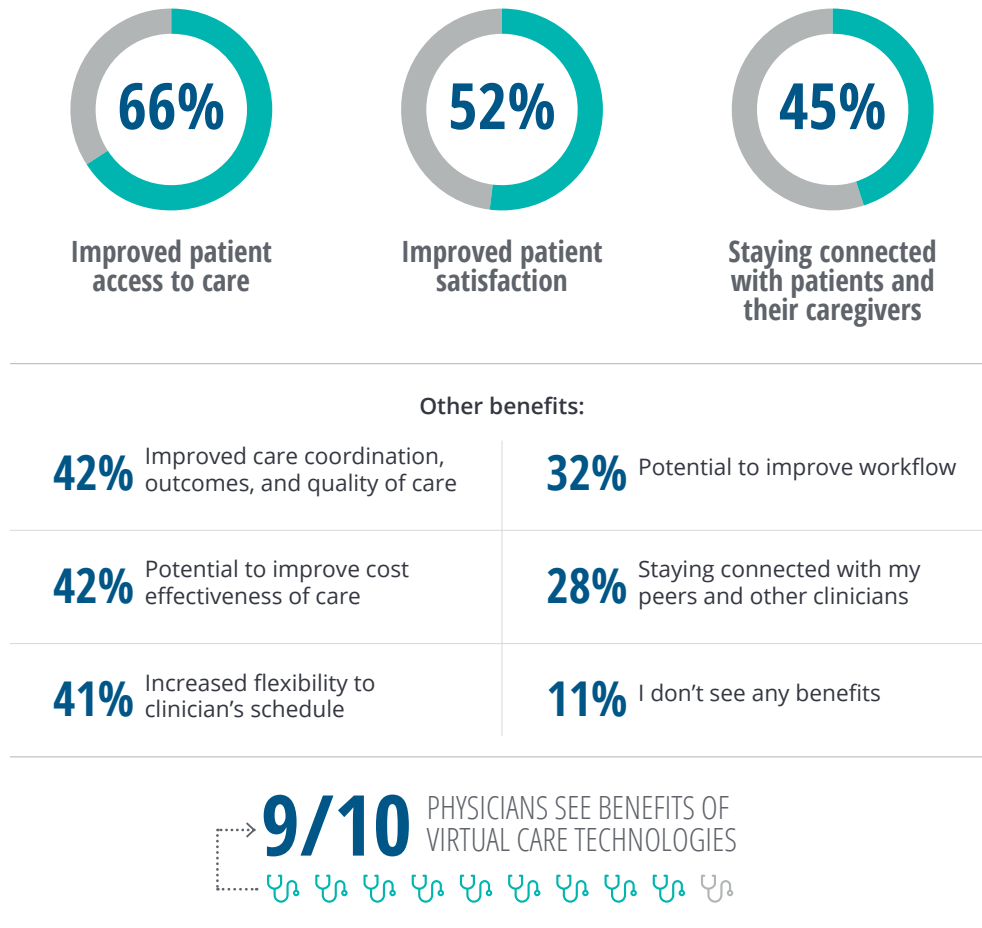
Forty-four percent of surveyed physicians have not implemented any of the seven virtual care technologies presented in the survey.

17 percent implemented video visits vs. 13 percent of specialists; 11 percent implemented remote care management and coaching vs. 6 percent of specialists; and 9 percent have integrated wearables data vs. 3 percent of specialists.

FIGURE 1

Top three benefits of virtual care relate to patient experience

Survey question: What are some of the benefits of virtual care technologies?

66%
Improved patient access to care

52%
Improved patient satisfaction

45%
Staying connected with patients and their caregivers

Other benefits:

42% Improved care coordination, outcomes, and quality of care

32% Potential to improve workflow

42% Potential to improve cost effectiveness of care

28% Staying connected with my peers and other clinicians

41% Increased flexibility to clinician's schedule

11% I don't see any benefits

9/10 PHYSICIANS SEE BENEFITS OF VIRTUAL CARE TECHNOLOGIES

Base: 624 (all physicians)
Source: Deloitte 2018 Survey of US Physicians.

When it comes to usage, email/patient portal consultations are used most often. Among physicians who have implemented portals, 64 percent use them regularly (once a week or more) (see figure 2). Portal use is higher among primary care physicians (74 percent) than among specialists (57 percent). Two in five physicians (43 percent) with access to electronic consultations with colleagues use them at least once a week, whereas just a third (32 percent) regularly use the video visit technology available to them.
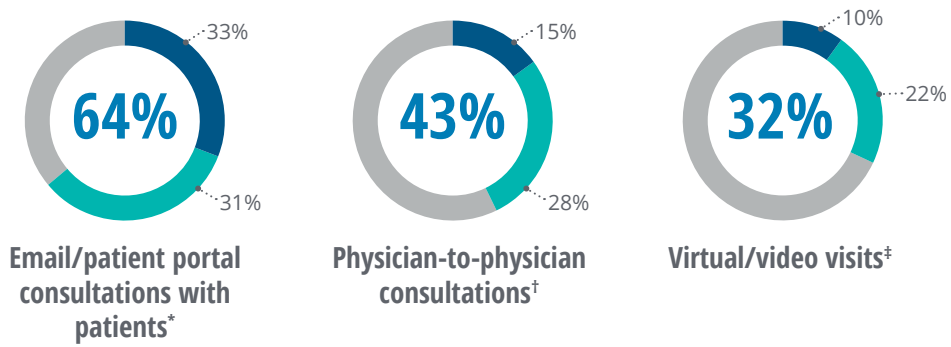
Physicians employed or affiliated with hospitals or health systems (62 percent) are more likely than independent physicians (49 percent) to have implemented at least one of the seven virtual care technologies, according to the survey results. Several factors may explain this difference: capital requirements, different strategic priorities, and a greater proportion of independents being exempt from Meaningful Use requirements.

FIGURE 2

Email/patient portals are the most frequently used technologies, followed by electronic physician-to-physician consultations

Survey question: For the telemedicine and virtual care technologies available at your organization, how frequently do you use them?

■ Every day   ■ Every week

64%

33%

31%

Email/patient portal consultations with patients*

43%

15%

28%

Physician-to-physician consultations[†]

32%

10%

22%

Virtual/video visits[‡]

*Base = 238, [†]Base = 109, [‡]Base = 87
Base: Physicians whose organizations implemented virtual care technologies
Source: Deloitte 2018 Survey of US Physicians.

CHRONIC CONDITION MANAGEMENT—AN UNTAPPED OPPORTUNITY FOR VIRTUAL CARE

Our study results indicate that physicians consider chronic condition management the most promising use of virtual care technologies.

All seven technologies tested in the survey can be useful for the treatment of chronic conditions in physicians' view, particularly remote patient monitoring at home (70 percent), email/patient portal consultations (67 percent), integration of data from wearables (67 percent), and remote care management and coaching (65 percent) (see figure 3). Once again, primary care physicians are more likely than specialists—by a margin of 8–19 percentage points—to consider these four technologies useful in this application.

Additionally, physicians find most of the seven technologies presented in the survey useful for follow-up appointments, specifically email/patient portal consultations (58 percent), virtual/video visits (58 percent), integration of wearables (48 percent), remote care management and coaching (45 percent), and remote patient monitoring at home (42 percent).

Although direct-to-consumer telemedicine companies use video visits primarily for acute nonemergency conditions, physicians in our survey do not consider this the most useful application of video visits. Just 35 percent of physicians support such use.

FIGURE 3

All technologies presented in the survey could be useful for the treatment of chronic conditions

Survey question: In which of the following scenarios would [virtual technology] be most useful?

	Remote patient monitoring at home	Email/patient portal consultations	Integration of wearables data	Remote care management and coaching	Virtual/ video visit	Physician- to-physician consultation	Remote patient monitoring at other facilities
Base	404	387	378	403	397	406	408
Ongoing treatments for chronic conditions	*70%*	*67%*	*67%*	*65%*	*58%*	*51%*	*50%*
Follow-up appointments	*42%*	*58%*	*48%*	*45%*	*58%*	27%	24%
Coordination with community or other services	26%	*43%*	20%	*38%*	28%	*40%*	29%
Acute/nonemergency/ non–clinically critical conditions	22%	31%	21%	24%	*35%*	31%	27%
Ongoing treatment for acute conditions	26%	29%	27%	21%	27%	*40%*	*36%*
Behavioral health consultations	23%	23%	11%	*36%*	34%	26%	16%
Initial evaluations and diagnosis	8%	13%	20%	13%	23%	*46%*	14%
ICU/critical care management	10%	3%	14%	8%	9%	28%	*35%*
None of these	9%	7%	11%	8%	5%	3%	16%

Base: Physicians who see benefits of virtual care technologies
Source: Deloitte 2018 Survey of US Physicians.

Barriers to adoption

SEVERAL FACTORS HAVE hampered the widespread adoption of virtual care, and even though the market landscape is becoming increasingly supportive, organizations interested in implementing virtual care programs should pay close attention to reimbursement, licensing and credentialing, and cost of the technology.

Physicians' concerns about virtual care

In the survey, we explored several issues that may present barriers to the adoption of virtual care technologies. We included those that organizations may be able to control, and we excluded external factors such as reimbursement and licensing, covered in depth in other publications.[7]

In our survey, physicians cite pragmatic factors as challenges to adopting virtual care technologies more often than issues that may signal cultural objections. For instance, lack of access to the technology (35 percent) and security and privacy of patient data (33 percent) are bigger barriers than lack of interest from patients (23 percent) and physicians and staff (8 percent) (see figure 4). Nonetheless, organizations should be prepared to address both pragmatic and cultural concerns.

Concerns about medical errors, voiced by 36 percent of physicians, can be a mix of practical and cultural considerations. Certainly, evidence is needed to demonstrate that virtual care is at least on par with traditional care in diagnostic and treatment accuracy. But medical errors could also stem from breakdowns in communication, and in the case of a new technology, physicians are likely to attribute such breakdowns to the unreliability of the technology. Our survey data suggests that experience with new technologies may help overcome some of the skepticism: Physicians who have implemented at least one virtual care technology (33 percent) are somewhat less likely to voice concerns about medical errors than physicians who have not (41 percent).

Our survey data suggests that experience with new technologies may help overcome some of the skepticism.

Some organizations with experience in virtual care technologies have found it important to anticipate and address cultural resistance from frontline staff. Lack of familiarity with the equipment and software, disruptions to the established workflow, skepticism about new approaches, and changing roles and responsibilities may underlie their reluctance to embrace new approaches.
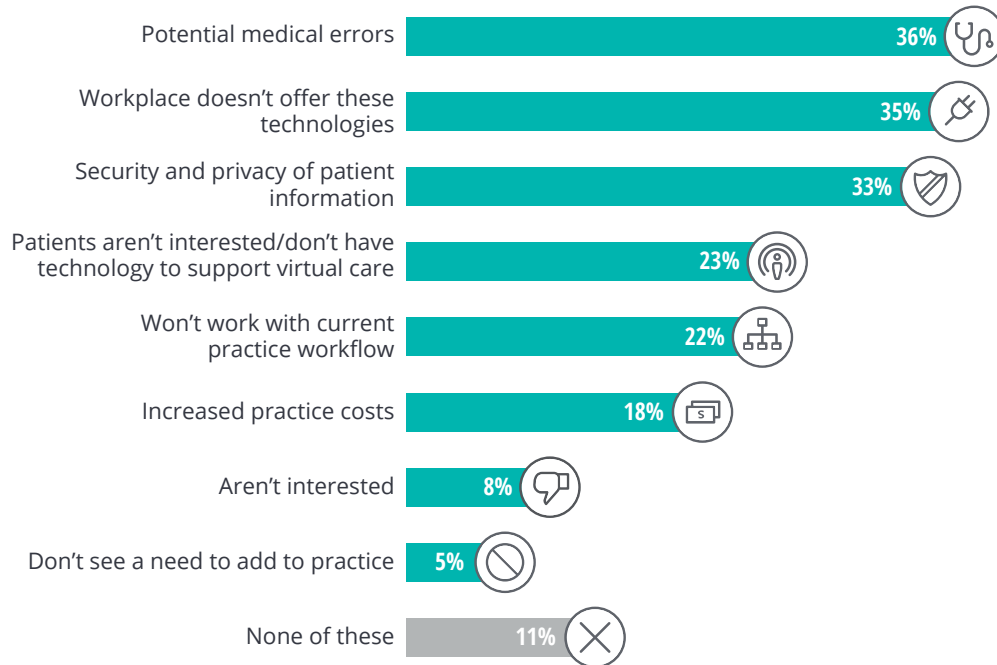
Familiarity breeds comfort

Our survey results suggest that the intent to use technologies in the future is strongly predicated on current adoption. Physicians who have implemented at least one of the seven technologies presented in the survey are also more likely to see benefits to virtual care technologies and to consider them useful in different applications. More than half of the physicians (58–69 percent) whose organizations have adopted virtual care technologies expect to increase use in the next year or two. In contrast, a much smaller proportion of physicians whose organizations have not adopted virtual care technologies plan to begin using them (15–33 percent) (see figure 5).

FIGURE 4

Concerns about potential medical errors, patient privacy, and access to technology are the main barriers to adopting virtual care technologies

Survey question: Assuming satisfactory reimbursement and no regulatory and licensing barriers for telemedicine and virtual care, what are some of the reasons you would not use these technologies?

Category	Percentage
Potential medical errors	36%
Workplace doesn't offer these technologies	35%
Security and privacy of patient information	33%
Patients aren't interested/don't have technology to support virtual care	23%
Won't work with current practice workflow	22%
Increased practice costs	18%
Aren't interested	8%
Don't see a need to add to practice	5%
None of these	11%

Base: 624 (all physicians)
Source: Deloitte 2018 Survey of US Physicians.

FIGURE 5

Most physicians whose organizations have implemented virtual care technologies expect to increase their use

Survey question: Do you expect to increase your use of the following telemedicine or virtual care technologies in the next 12–24 months at your organization?

	Not implemented	Implemented
Physician-to-physician electronic consultations	33%	61%
Email/patient portal consultations	27%	64%
Data from patient wearables	20%	69%
Virtual/video visits	18%	64%
Remote patient monitoring at home	15%	58%

Source: Deloitte 2018 Survey of US Physicians.

Virtual care is a must-have for physicians

OUR VIEW IS that with a changing landscape that favors value-based payment models, growing consumer demand, and advances in digital technologies, virtual care is no longer just a nice-to-have but a must-have for physicians. And the time for health systems to consider developing virtual care strategies is now.

The ability to offer virtual care can be a competitive advantage: It could help retain and grow the patient base, as physicians who deliver high-quality patient-centered care will likely be in demand. In efforts to optimize networks for improved patient access and reduced costs, insurers and employers may also favor health systems and physician organizations with virtual care capabilities. And value-based reimbursement models (such as global capitation or bundling) could encourage providers to select the site of care based on clinical needs and the best interests of the patient—often, this is the patient's home.[8]

Virtual health technologies can transform the journey of care for patients. Health systems should consider a comprehensive approach.

It might help to think of virtual care more broadly than just interactions between patients and clinicians facilitated by technology. A comprehensive virtual health approach can enable organizations to engage with patients and customers virtually throughout their journey of health. This encompasses virtual care interactions (such as video visits, remote monitoring, or virtual consultations with peers); wellness, preventive services, and care coordination with patients; as well as encounters with prospective customers.

Accelerating physician adoption of virtual care

As organizations consider their virtual care options, we recommend an enterprisewide approach that begins with asking the right questions (see figure 6).

In answering these questions, organizations should consider engaging clinical and business leaders and frontline clinicians, define short- and medium-term goals, plan for the requisite infrastructure, and redesign care models. As they move from planning to execution, we offer a few tactical considerations on overcoming physician reservations about virtual care.

WORKFORCE READINESS AND ENGAGEMENT

Align clinicians and staff across the organization to support and advance virtual care offerings with a focus on improving quality, patient experience, and cost-effectiveness.

Communicating the need for adopting virtual care and getting clinicians on board should happen early. Clinical champions can play a key role and serve as liaisons between frontline clinicians and

FIGURE 6

An enterprisewide approach begins with asking the right questions

Questions	Illustrative virtual health approaches
• What issues can virtual health programs solve that traditional operations cannot? • What value do these programs generate and how do they affect existing brick-and-mortar revenue? Consider multiple dimensions of value, such as clinical care quality, patient experience, clinician experience, cost reduction, and revenue growth.	Classic examples include tele-stroke and tele-ICU programs at rural and critical access hospitals that do not have enough specialists on staff to ensure the necessary coverage. Such programs not only improve care quality but also help preserve service lines and patient volume.[9]
• Which patient populations should be targeted? • What assets and resources are needed? • How will the new program integrate with existing programs?	Initially, organizations may choose to focus on complex high-cost patients for whom they take risk; for instance, Medicaid and dual eligibles. Hospitals often lose money on Medicaid inpatient stays. In such instances, it may make sense to set up a complex care management program that leverages virtual care technologies, or engage with home health services or post-acute care facilities.[10]
• How can virtual health improve the capacity to keep up with population dynamics, patient access, and market demand? • What are traditional and nontraditional competitors doing around virtual health? Should we consider a preemptive or defensive approach?	For organizations in growth markets or those looking to expand their patient base, on-demand video visit capability can be a natural extension of their retail care strategy, as they target young commercially insured patients who do not yet have a relationship with a health care system.

Source: Deloitte Center for Health Solutions analysis.

business and clinical leaders.[11] Organizations have found that real patient stories about the time and effort virtual care can save patients and caregivers, or behavior changes resulting from observations that could only be captured during a virtual encounter, can be more powerful than raw data alone.[12] Adding such stories could help build a compelling business case for clinicians on the frontlines and in leadership.

Experience with virtual care to date suggests that it requires different skills than traditional patient encounters; some refer to them as a "webside" manner. Even the idea of a new medical specialty—the medical virtualist—has been proposed.[13] This points to the need for clinicians to relearn to deliver care using new modalities.[14] Fifty-one percent of physicians in our survey admit that training on a new technology is necessary to support its adoption (see figure 7).

Providing the necessary formal training to teams and departments can help them to get comfortable with new technologies and a modified workflow; to teach them to build rapport with patients in virtual interactions; and to ensure that risks are minimized with regard to diagnosing, prescribing, and handling of patient data. Some early adopters also

Experience with virtual care to date suggests that it requires different skills than traditional patient encounters.

recommend less formal approaches such as having technologically sophisticated physicians provide hands-on training and mentoring to their hesitant colleagues or having superusers available at each site.[15]

Additionally, changes may be needed to help ensure that the existing compensation models do not penalize physicians for using virtual care instead of in-person visits. For instance, some organizations have replaced relative-value units with a panel-size approach for primary care physicians and have added new consultations as a performance metric for specialists.[16] Treating virtual care encounters as equivalent to in-person ones and having the necessary staff support (IT, nursing) can reinforce the notion that virtual care is not just another fad or administrative requirement but a new way of operating.

TECHNOLOGY INFRASTRUCTURE AND INTEROPERABILITY

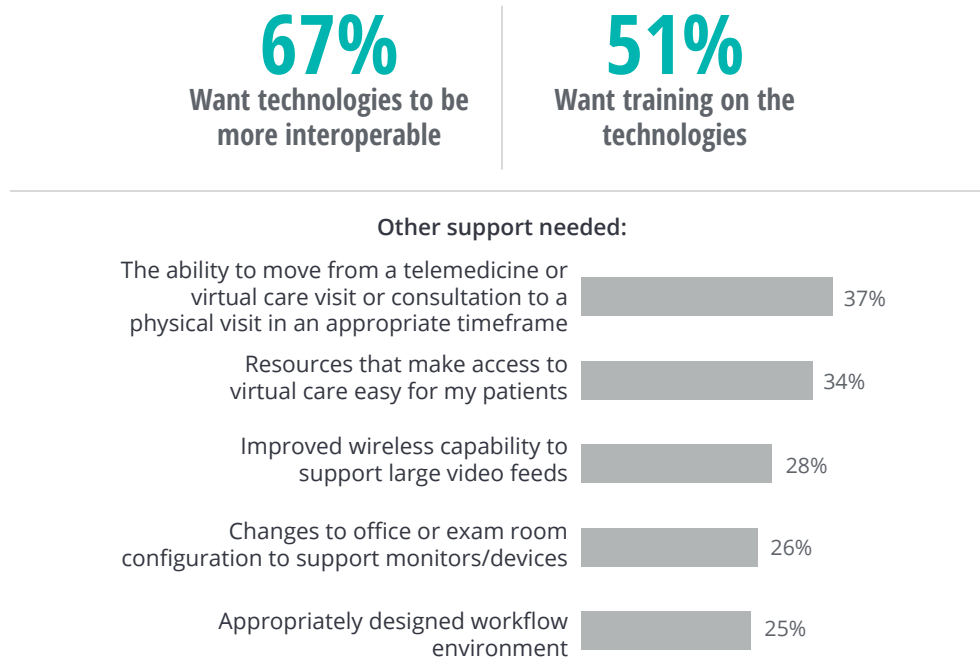***Create the infrastructure to support the vision.*** Building upon lessons from EHR implementation, many organizations realize that integrated systems, processes, and technology infrastructure should be in place to support the requirements and vision for a virtual health program. In our survey, interoperability of virtual care technologies (67 percent) is the number one requirement for increased adoption (see figure 7). Considering recent EHR experience, physicians' patience is growing thin for new technologies that overpromise and underdeliver, leaving little room for execution errors.

Furthermore, organizations may find that they need an entirely new system to support virtual care. For instance, Advocate Health Care realized that its existing EHR systems did not enable longitudinal data collection and analysis for its tele-ICU program.[17] They chose to build a new system in house. For organizations today, options include buy,

FIGURE 7

Interoperability and training on virtual care technology could facilitate adoption

Survey question: Assuming satisfactory reimbursement and no regulatory and licensing barriers, what other support is needed to increase the adoption of virtual care and telemedicine technologies?

67%
Want technologies to be more interoperable

51%
Want training on the technologies

Other support needed:

The ability to move from a telemedicine or virtual care visit or consultation to a physical visit in an appropriate timeframe	37%
Resources that make access to virtual care easy for my patients	34%
Improved wireless capability to support large video feeds	28%
Changes to office or exam room configuration to support monitors/devices	26%
Appropriately designed workflow environment	25%

Base: 556 (physicians who see benefits in virtual care)
Source: Deloitte 2018 Survey of US Physicians.

rent, build, or hybrid, and each of these paths can have important future implications and risks involving system compatibility and obsolescence, cybersecurity, or dependence on a vendor.

OPERATIONS AND WORKFLOW INTEGRATION

Enable workflow, clinical process design, and integration. Organizations can achieve this by having clinical experts weigh in on clinical process design, workflow, and overall program integration to derive the most seamless integration of and benefits from a virtual care program.

While workflow may not be the most obvious barrier to adoption, it can be a barrier to usage. Early adopters stress that the workflow and the technology interface should be simple and save clinicians time rather than create more work.[18]

Early adopters stress that the workflow and the technology interface should be simple and save clinicians time rather than create more work.

In our survey, none of the four workflow-related items rise to the top of surveyed physicians' recommendations for necessary support, in part because specific workflow conditions vary across organizations. The ability to move from a virtual visit to a physical visit in a timely fashion is the most desired workflow feature (37 percent), followed by improved wireless capability (28 percent), a conducive workspace configuration (26 percent), and a general recommendation for appropriately designed workflow (25 percent) (see figure 7).

MITIGATING SECURITY AND PRIVACY RISKS

Due to the number of components and systems involved—such as mobile devices, cloud-based applications, and video systems—securing the virtual care environment end to end can be challenging. Many of these components may not be under the control of the organization delivering virtual care. However, with the integration of security and privacy requirements upfront as part of the virtual care technology design, risks can be mitigated. Key considerations include:

- Establishing a data security governance capability for the identification of risks and integration of security and privacy as part of the design, implementation, and operation of the virtual care platform

- Enabling practical security solutions with the right balance of preventative controls (for example, identity verification), detective controls (for example, behavioral monitoring analytics to uncover misuse or fraud), and resilience controls (for example, keeping the service available despite planned or unplanned disruptions), without impacting the user experience

- Anticipating security and privacy impacts like consent management and understanding the flow of personal health information to and from the devices that transmit the data (for instance, medical devices or patient wearables)

- Demonstrating and documenting compliance to meet relevant regulations (for example, HIPAA security and privacy requirements) in the virtual health care ecosystem

- Targeting awareness campaigns to virtual care technology users to remind them of ways in which they can protect their data

CARE MODEL DESIGN

Routinize virtual care. The goal is to integrate virtual care into mainstream care delivery and achieve a seamless delivery process with coordinated care across services and settings. Over time, virtual care interactions should replace traditional encounters. Change management initiatives should help this transition, ensuring clinicians' acceptance of virtual care approaches and new workflows, and creating new habits.[19]

Conclusion

A S IN OTHER aspects of our lives, technology is becoming an integral part of the practice of medicine. Virtual care capabilities can help physicians meet ever-increasing demands on their time and skill: caring for more patients, dealing with rising clinical complexity, and supporting patients in playing a greater role in their own care.

Organizations committed to delivering connected, coordinated care are unlikely to achieve this without developing virtual health capabilities. If they fail to act now, they may risk losing significant market share as customers seek other solutions to meet their health care needs.

Starting with an end in mind can help ensure that the chosen virtual health approaches and capabilities align with long-term vision and fiscal goals. By focusing on return on investment and value of investment, organizations can develop a comprehensive vision, define goals, prioritize and sequence virtual care investments, and decide how to measure success.

Starting with an end in mind can help ensure that the chosen virtual health approaches and capabilities align with long-term vision and fiscal goals.

Experience from organizations with virtual care programs only reinforces the fact that without executive sponsorship, a clinical champion, and alignment with the mission, success is likely not possible.[20]

Endnotes

1. Jennifer Bresnick, "What is limiting the widespread adoption of telehealth?" *mHealthIntelligenc*e, February 13, 2015; National Organization of State Offices of Rural Health, *Telehealth policy barriers*, August 2016; Cynthia LeRouge and Monica J. Garfield, "Crossing the telemedicine chasm: Have the U.S. barriers to widespread adoption of telemedicine been significantly reduced?" *International Journal of Environmental Research and Public Health,* 10, no.12 (2013): p. 6472, DOI:10.3390/ijerph10126472.

2. Rachel Z. Arndt, "Chief information officers roundtable: As technology drives consumerism, consumerism drives technology," *Modern Healthcare*, March 17, 2018.

3. Federal Communications Commission, "Telehealth, telemedicine and telecare: What's what?," accessed June 1, 2018.

4. Lenovo Health, "Virtual care: Primed to solve healthcare's cost and quality challenges," October 18, 2017.

5. American Telemedicine Association, "State policy resource center," accessed June 1, 2018.

6. Sara Heath, "Telehealth boosts patient care access, but not cost savings," *PatientEngagementHIT*, March 08, 2017; Polinski Jennifer M. et al. "Patients' satisfaction with and preference for telehealth visits," *Journal of General Internal Medicine* 31, no.3 (2016): pp. 269–75, DOI:10.1007/s11606-015-3489-x.

7. Clemens et al., "Evaluating barriers to adopting telemedicine worldwide: A systematic review," *Journal of Telemedicine and Telecare* 24, no. 1 (2018): pp. 4–12, DOI:10.1177/1357633X16674087; Jennifer Bresnick, "What is limiting the widespread adoption of telehealth?"

8. The Alliance for Home Health Quality and Innovation, *The future of home health care project*, May 2014; The Joint Commission, *Home – The best place for health care: A positioning statement from The Joint Commission on the state of the home care industry*, accessed June 1, 2018; AARP, *Home and community preferences of the 45+ population,* 2011.

9. Melinda Beck, "How telemedicine is transforming health care: The revolution is finally here—raising a host of questions for regulators, providers, insurers and patients," *Wall Street Journal*, June 26, 2016; Northwest Regional Telehealth Resource Center, "The benefits of telehealth," accessed June 1, 2018; Bryan Coffey, "Guest Commentary: Telemedicine a necessary investment for rural hospitals," *Modern Healthcare*, July 22, 2014.

10. Ken Abrams et al., *Viewing post-acute care in a new light: Strategies to drive value*, Deloitte Center for Health Solutions, accessed June 1, 2018; Arundhati Parmar, "What Banner Health and Philips learned from an outpatient telehealth program," *MedCityNews*, November 30, 2016.

11. David Kushan, "How to identify key stakeholders for a healthcare IT project," *Healthcare IS*, October 19, 2017.

12. Robert Pearl, "Engaging physicians in telehealth," *NEJM Catalyst*, July 10, 2017; Neil Versel, "Mississippi telehealth, remote monitoring pays dividends for diabetics," *MedCityNews*, September 13, 2016.

13. Michael Nochomovitz and Rahul Sharma, "Is it time for a new medical specialty? The medical virtualist," *JAMA* 319, no. 5: 437–8, DOI:10.1001/jama.2017.17094.

14. Melinda Beck, "How telemedicine is transforming health care."

15. Robert Pearl, "Engaging physicians in telehealth."

16. *Ibid*; Brian Flannigan and Natasha Elsner, *Six physician alignment strategies health systems can consider*, Deloitte Center for Health Solutions, 2018, accessed June 1, 2018.

17. Michael Ries and Cindy Welsh, "Clinical and financial benefits of tele-ICU at Advocate," webinar at Scottsdale Institute, May 2, 2018.

18. Robert Pearl, "Engaging physicians in telehealth."

19. Ken Abrams et al., *Physicians in the driver's seat: Activating the physician workforce in driving balanced clinical and financial success*, Deloitte, 2017.

20. Michael Ries and Cindy Welsh, "Clinical and financial benefits of tele-ICU at Advocate."

About the authors

DR. KEN ABRAMS, Deloitte Consulting LLP, is a managing director in Deloitte's Strategy practice and is Deloitte's Life Science and Health Care national physician executive. An anesthesiologist with more than 25 years of experience as a practicing physician and physician executive in academic medical centers and integrated delivery systems, Abrams leads Deloitte's Virtual Health Market offering. He has market eminence as a physician leader and as a thought leader in clinical strategy, performance improvement, and clinical integration.

STEVE BURRILL, a partner with Deloitte LLP, is the vice chairman and national sector leader for Deloitte's Health Care Providers practice. He leads a multidisciplinary team serving clients through consulting, advisory, audit, and tax services. Burrill also leads the overall strategic direction and market eminence of the health care providers sector. With more than 33 years of experience, he has served clients across the health care spectrum and has led large transformational projects involving acute care hospitals, ambulatory operations, and physician practices.

NATASHA ELSNER, Deloitte Services LP, is a research manager with the Deloitte Center for Health Solutions. She has spent more than 10 years in market research serving health care clients. With extensive experience in research methodology and data analysis, Elsner conducts cross-sector research at the Center. She holds a master's degree in survey research and methodology.

Contacts

Ken Abrams, MD, MBA
Managing director
Deloitte Consulting LLP
Email: kabrams@deloitte.com

Steve Burrill
Vice chairman
US Health Care Providers leader
Deloitte LLP
sburrill@deloitte.com

Natasha Elsner
Manager
Deloitte Center for Health Solutions
Deloitte Services LP
nelsner@deloitte.com

Sarah Thomas, MS
Managing director
Deloitte Center for Health Solutions
Deloitte Services LP
sarthomas@deloitte.com

Acknowledgments

About the Deloitte Center for Health Solutions

The source for fresh perspectives in health care, the Deloitte Center for Health Solutions (DCHS), part of Deloitte LLP's Life Sciences and Health Care practice, looks deeper at the biggest industry issues and provides new thinking around complex challenges. Cutting-edge research and thought-provoking analysis give our clients the insights they need to see things differently and address the changing landscape. To learn more about the DCHS and our research, please visit www.deloitte.com/centerforhealthsolutions.

Deloitte.
Insights

Sign up for Deloitte Insights updates at www.deloitte.com/insights.

Follow @DeloitteInsight

Deloitte Insights contributors
Editorial: Ramani Moses, Blythe Hurley, Preetha Devan, and Rupesh Bhat
Creative: Emily Moreano and Molly Woodworth
Promotion: Alexandra Kawecki
Cover artwork: Gwen Keraval

About Deloitte Insights

Deloitte Insights publishes original articles, reports and periodicals that provide insights for businesses, the public sector and NGOs. Our goal is to draw upon research and experience from throughout our professional services organization, and that of coauthors in academia and business, to advance the conversation on a broad spectrum of topics of interest to executives and government leaders.

Deloitte Insights is an imprint of Deloitte Development LLC.

About this publication

This publication contains general information only, and none of Deloitte Touche Tohmatsu Limited, its member firms, or its and their affiliates are, by means of this publication, rendering accounting, business, financial, investment, legal, tax, or other profes-sional advice or services. This publication is not a substitute for such professional advice or services, nor should it be used as a basis for any decision or action that may affect your finances or your business. Before making any decision or taking any action that may affect your finances or your business, you should consult a qualified professional adviser.

None of Deloitte Touche Tohmatsu Limited, its member firms, or its and their respective affiliates shall be responsible for any loss whatsoever sustained by any person who relies on this publication.

About Deloitte

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee ("DTTL"), its network of member firms, and their related entities. DTTL and each of its member firms are legally separate and independent entities. DTTL (also referred to as "Deloitte Global") does not provide services to clients. In the United States, Deloitte refers to one or more of the US member firms of DTTL, their related entities that operate using the "Deloitte" name in the United States and their respective affiliates. Certain services may not be available to attest clients under the rules and regulations of public accounting. Please see www.deloitte.com/about to learn more about our global network of member firms.