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Looking ahead: Understanding telehealth in Ohio

Ohio is grappling with a number of health challenges. Specifically, Ohio lags behind other states in population health outcomes[1] and ranks 19th in terms of highest per capita health spending.[2] Furthermore, hundreds of thousands of Ohioans live in areas where there are shortages of health care professionals.[3] Strategies that tackle these health care challenges and create sustainable health solutions are in high demand.[4] Telehealth has emerged as one such strategy.

What services are offered through telehealth?

Beginning with the transmission of radiographic images in the 1950s, telehealth programs in the U.S. have undergone rapid expansion and growth.[10] In the 1990s, the development of new technology such as cell phones and the internet, further increased telehealth innovation.[11] As a result, telehealth today encompasses a variety of forms that vary by purpose, and across settings, service areas and delivery modes (see Table 1).

Generally, telehealth services can be divided into two categories: asynchronous and synchronous.[12]

Asynchronous telehealth refers to store-and-forward services, where clinical information and imagery is collected, transmitted and used at a later period of time.[13]

Synchronous telehealth refers to the provision of health services in real time.[14] Notably, these categorizations may be difficult to apply to newer telehealth technologies.[15]

What is telehealth? Does it differ from telemedicine?

While both telehealth and telemedicine are recognized to be subsets of the broader electronic health system ("e-health"),[5] no consistent definition for telehealth or telemedicine has been adopted in literature or practice.[6] Some organizations distinguish between the two, while others use the terms interchangeably. The Centers for Medicare and Medicaid Services (CMS), for example, suggests that telemedicine is embedded within telehealth and defines telemedicine as the "provision of clinical services to patients by practitioners from a distance via electronic communications."[7] The World Health Organization (WHO) has defined telemedicine more broadly as:

"The delivery of health care services, where distance is a critical factor, by all health care professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of health care providers, all in the interests of advancing the health of individuals and their communities."[8]

Distinguishing telehealth from telemedicine, the WHO suggests that telehealth, unlike telemedicine, encompasses "computer-assisted telecommunications to support management, surveillance, literature and access to medical knowledge."[9]

Regardless of the precise definition, telehealth and telemedicine, in general, are intended to increase access to care and improve health outcomes by overcoming geographic barriers to care through the use of information and communications technology (ICT).

For this paper, we use the term "telehealth" as it is generally viewed as being broader in scope than telemedicine. However, the term "telemedicine" will be referenced when necessitated by law or regulation.

Some of the most commonly cited telehealth services include:[16]

- Store-and-forward transmission of x-rays, echocardiograms and other radiographic images between provider sites
- Real time patient consultations via telephone and video
- Remote patient monitoring (e.g. remote monitoring of diagnostic health indicators, such as weight, insulin level, heart rate and blood pressure)
- Mobile phone applications that engage patients in their health care
- Electronic prescribing (e-prescribing)

Table 1. **Dimensions of telehealth**

examples

Setting	Service area	Service purpose	Delivery mode
• Hospital • Outpatient clinic • Prison/ correctional facility • Inpatient mental facility • Outpatient mental facility • Physician's private office • Physician's home • Hospice • Nursing home/ residential • School • Military base • Ship • Ambulance • Call center/ helpline • Indian Health Service • Trauma care center • Other mobile telemedicine • Rural health clinic • Community health clinic • Federally qualified health center	• Anesthesiology • Cardiology • Dentistry • Dermatology • Dialysis • Emergency/triage • Endocrinology • Forensic evaluation • Gastroenterology • General surgery • Home health • Immunology • Infectious disease • Internal medicine • Mental health • Nephrology • Nutrition • Obstetrics and gynecology • Occupational medicine • Oncology • Ophthalmology • Optometry • Orthopedics • Otorhinolaryngology • Pain management • Pathology • Pediatrics • Podiatry • Primary care • Public health • Pulmonary care • Radiology • Rehabilitative therapy • Rheumatology • Speech pathology • Urology	**Non-clinical** • Education • Research • Administration **Clinical** • Telemonitoring • Teleconsultation • Diagnostic exam interpretation • Drug trials • Emergency room triage • Facilitate patient/family visit • Forensic evaluation • Home health • Medical management • Pain management • Rehabilitation • Managing patient condition • Nursing home/assisted living • Physiological monitoring • Hospice care • Medical/surgical follow-up • Patient case review • Specialist clinics • Mobile emergency response • Patient screening • Specialist referrals • Non-surgical treatment • Surgical treatment • Provision of specialty care • Supervision of primary care	**Devices** • Blood pressure monitor • Exam camera • Video camera • Dental scope • Dermascope • Endoscope • Fetal monitor • Laryngoscope • Digital camera • Desktop computers • Laptops • Ultrasound • Vital sign monitor • X-ray scanner • Hand held devices • Video phone • Home care unit • Rollabout unit • Room-based VC unit • Document camera • Stethoscope • Glucometer • Kiosk/health station • Smart phone **Applications** • Interactive video • Interactive audio • Telemetry • Interactive with still images • Store and forward • Audiographic • Text messaging • Real time file transfer • Real time image processing • Web pages • Email • Web forums • Smart phone applications

Note: This figure is not intended to be a comprehensive or exhaustive listing of telehealth settings, service areas, purposes, or delivery modes. **Source:** Tulu, Bengisu, Samir Chatterjee, and Megha Maheshwari. "Telemedicine taxonomy: a classification tool." Telemedicine and e-Health 13, no. 3 (2007): 349-358.

What are the potential benefits of telehealth?

Value

Comprehensive evidence regarding the relative value of telehealth has been slow to develop and difficult to quantify.[17] Economic evaluations of telehealth often are cited as being too narrow in scope, and few studies account for the wide-ranging economic costs and benefits of telehealth use.[18] Issues with small sample sizes and deficient research methodologies also have been cited.[19] Because there are so many differing telehealth modes, and because telehealth programs are developed across a variety of settings with unique goals, clinical focuses, technology requirements and organizational models, comparison of study results across the field can be difficult.[20]

In assessing the economic value of telehealth, researchers may analyze a variety of cost and benefit outcome measures such as costs incurred or savings accrued to the provider or patient and measures of health system performance and population health (See Table 2).

Despite the challenges in assessing the value of telehealth, a large body of research suggests that in specific settings and under certain parameters, telehealth can decrease health costs, improve health outcomes and increase access to health care services.[21] For example, some studies have found a decrease in patient waiting time for specialty services after the implementation of telehealth services;[22] improvement in mortality and length of stay after implementation of an eICU;[23] and a reduction in bed days of care and hospital admissions with the use of home telehealth for patients with chronic conditions.[24]

A study by the Center for Information Technology Leadership (CITL) that examined real-time video, store-and-forward and hybrid telehealth program models, found the potential benefits of telehealth outweighed implementation costs.[25] Through a simulation model, the study found that the implementation of hybrid telehealth systems in emergency rooms, prisons, nursing home facilities and physician offices could result in a savings of $4.28 billion per year nationally.[26]

Table 2. **Common cost and outcome measures for telehealth**

Potential costs and savings measures[27]					Outcome measures	
Provider costs	**Purchaser costs**	**Provider savings**	**Patient savings**	**Purchaser savings**	**Health system performance**	**Population health**
Equipment/ facility/ technology costs: • Capital investment in equipment and technology • Equipment maintenance and repair **Organizational and labor costs:** • Staff wages • Staff training • Technology management • Legal and regulatory compliance	• Coverage and payment for telehealth services	**Transportation costs:** • Travel costs for health care workers (mileage, time) • Transportation of patient to provider site	• Patient travel costs (transportation, accommodation, time) • Patient earnings/ productivity • Patient out-of-pocket medical expenses	• Premium and claims costs • Employee productivity	**Utilization:** • Hospitalization • Hospital length of stay (LOS) • Readmissions • Emergency room visits • Physician office visits • Patient transfer/ transports **Access:** • Timely and accurate diagnosis and treatment • Patient waiting time **Patient engagement:** • Patient satisfaction • Medication adherence • Health knowledge/ability for self-care	• Morbidity • Mortality

Note: This figure is not intended to be a comprehensive or exhaustive listing of telehealth costs, savings, and outcome measures. **Source:** Dávalos, María E., Michael T. French, Anne E. Burdick, and Scott C. Simmons. "Economic evaluation of telemedicine: review of the literature and research guidelines for benefit–cost analysis." Telemedicine and e-Health 15, no. 10 (2009): 933-948.

Table 3. **A snapshot of telehealth projects in Ohio**

Organization	Project	Contact
Adena Health System	Telemedicine hub, with services including neonatal telemedicine, telestroke, teleneurology, and burn and wound care	Dr. Sathish Jetty, CMIO Adena Health System
Adena Health System, O'Bleness Health System and Holzer Health System	The Southern Ohio Health Care Network (SOHCN)	Kim Corriher, SOHCN Associate Project Coordinator Field Liaison, Reid Consulting Group Kim@reidconsultinggroup.com
Akron Children's Hospital	Center for Telehealth Service Design Tele-psychiatry service Tele-Early Intervention for Autism Spectrum Disorder (Tele-EI4ASD)	Stefan Agamanolis, PhD, Director Center for Telehealth Service Design Akron Children's Hospital sagamanolis@chmca.org
Cincinnati Children's Hospital Medical Center	Pediatric Trauma PRECEPT program Multi-State Tele-psychiatry program International cancer and blood disease Remote neurology TeleEcho	Jennifer Ruschman, Manager, Business Development Cincinnati Children's Hospital Medical Center Jennifer.ruschman@cchmc.org
Duet Health	Duet Health patient engagement and education	Jeff Harper, CEO/Co-Founder Duet Health jeff.harper@duethealth.com
HealthSpot and Central Ohio Primary Care (COPC)	HealthSpot station pilot at COPC	Caroline Ridgway, Regulatory & Legal Analyst HealthSpot cridgway@healthspot.net J. William Wulf, Corporate Medical Director COPC bwulf@COPCP.com
Nationwide Children's Hospital (NCH)	NCH Distance Medicine Program: App development for patient education & self-Management; consultative services and virtual clinics; image & test review; patient home monitoring	Michael Slaper, Telemedicine Coordinator Nationwide Children's Hospital michael.slaper@nationwidechildrens.org
Ohio Department of Developmental Disabilities	Ohio's Telepsychiatry Project	Pam Berry, Senior Policy Advisor in the Division of Policy and Strategic Direction Ohio Department of Developmental Disabilities Pam.Berry@dodd.ohio.gov
Ohio Department of Mental Health, Akron Children's Hospital, Cincinnati Children's Hospital, Nationwide Children's Hospital, University of Toledo	Pediatric Psychiatry Network	Beth Ferguson, Pediatric Psychiatry Network Manager Ohio Department of Mental Health Beth.Ferguson@mh.ohio.gov
OhioHealth	eICU and OhioHealth Stroke Program Tele homecare remote monitoring	Gretchen Roberts, Director of Telemedicine OhioHealth groberts@ohiohealth.com Paula Meyers, Director of the Stroke Network OhioHealth pmeyers@ohiohealth.com Suzanne Apostolos, Director OhioHealth HomeReach OhioHealth saposto2@ohiohealth.com
Southern Ohio Medical Center	Remote patient monitoring for home health	Amy Montgomery, HomeCare Clinical Coordinator Southern Ohio Medical Center montgoma@somc.org
The Visiting Nurse Association of Mid-Ohio	2012 Health Resources and Services Administration Telehealth Network Grant Program Recipient	Dana Traxler, Executive Director The Visiting Nurse Association of Mid-Ohio dtraxler@vnaohio.org
University Hospitals Rainbow Babies & Children's Hospital	Rainbow Care Connection: After-hours telemedicine hubs; telepsychiatry; home video hotlines; 3-level 24/7 medical support; ED follow-up outreach	Andrew Hertz, Medical Director University Hospitals Rainbow Babies & Children's Hospital Andrew.Hertz@uhHospitals.org
Wexner Medical Center at The Ohio State University	Telestroke Collaborative Teleburn Telepsychiatry TeleICU Ohio Department of Rehabilitation and Correction Telemedicine	Karen Jackson, Director, Regional Technology Applications Wexner Medical Center at The Ohio State University Karen.jackson@osumc.edu

How is telehealth regulated?

Historically, states have asserted their jurisdictional right to monitor and regulate the practice of medicine within state boundaries.[28] As a result, the majority of telehealth regulation occurs at the state level, with each state establishing its own set of telehealth laws.[29] The federal government plays a limited role in regulating telehealth with federal telehealth legislation restricted to a few areas — primarily within Medicare (See Table 4 for more information on federal and national telehealth regulation).

State regulation of telehealth may address a number of issues including public and private payer reimbursement for telehealth services, medication prescribing, provider licensure, medical malpractice, provider scope of practice, patient privacy and patient informed consent. Although telehealth has become a more prominent issue on state policy agendas,[30] many states focus on regulating the general practice of medicine as opposed to creating laws around telehealth. In these states, the private market often dictates specific telehealth policy and practice standards, especially where there is room for legal interpretation. Even within the private sector, policy and practice standards may vary from one organization to another. This variation in law, policy and practice standards creates a number of challenges for telehealth users (see legal and regulatory challenges section on page 6).

Table 4. **National telehealth policies**

Issue	Policy overview	Source
Credentialing	Hospitals may rely upon the credentialing and privileging decisions made by a distant site hospital. However, through written agreement, the hospital must ensure that the distant site hospital providing the telemedicine services: 1. Is a Medicare participating hospital; and holds an internal review of the telemedicine practitioner's performance and sends the information for use in the periodic appraisal of the practitioner 2. The telemedicine practitioner is privileged at the distant-site hospital and holds a license or is recognized by the State in which the hospital is located	Centers for Medicare & Medicaid Services 42 CFR Part 482 and 485
Public payer reimbursement	Under certain conditions, Medicare reimburses for some services provided via interactive audio and video real time communication including: office or other outpatient visits, subsequent hospital care services, subsequent nursing facility care services, professional consultations, psychiatric diagnostic interview examination, neurobehavioral status exam, individual psychotherapy, pharmacologic management, end-stage renal disease-related services, individual and group medical nutrition therapy services, individual and group kidney disease education services, individual and group diabetes self-management (DSMT) training services, and individual and group health and behavior assessment and intervention services. Reimbursement for services may be subject to a number of limitations.	42 CFR 410.78
Private payer reimbursement	There is no federal legislation requiring private payer reimbursement for telehealth services.	
Patient recording, films or other images	Before recordings, images, or films are taken of patients, all those involved not already bound by the hospital's confidentiality policy must sign a confidentiality agreement, unless patient consent to recordings, images or films has already been given.	Joint Commission (JC) Rule Standard RI.01.03.03. (applies to JC accredited hospitals)
Other legislation	The Centers for Medicare & Medicaid define various aspects of telehealth, including but not limited to technologies used to deliver telehealth services, terminology for telehealth legislation, and physicians or practitioners who are allowed to practice and be reimbursed for telehealth services through Medicare.	42 CFR 410.78

Note: This figure provides an overview of policies and regulations around telehealth for informational purposes only as of March 30, 2013. It is not intended to be a comprehensive statement of telehealth law or relied upon as authoritative. Independent verification of the information is recommended as laws and policies may change.

How is telehealth regulated in Ohio?

Ohio defines the "practice of medicine" to include the provision of medical services through the use of any communication; including oral, written or electronic communication.[31] In general, regulation specific to telehealth at the state level is limited. However, Ohio has issued some laws and policies around telehealth practice and use (See Table 5 for more information on Ohio telehealth policies).

Table 5. **Ohio telehealth policies**

Issue	Policy	Source
Medication Prescribing	Providers may prescribe non-controlled substances to remotely located patients if they obtain a history and perform a physical examination using diagnostic medical equipment capable of transmitting patient information in real-time; providers are required to personally physically examine a patient when prescribing controlled substances.	State of Ohio Medical Board Interpretive Guideline on Rule 4731-11-09, Adopted September 13, 2012
Physician Licensure	**Out-of-state physicians** providing telehealth services through the use of any communication, including oral, written, or electronic communication, must obtain either a (1) full certificate to practice or (2) a telemedicine certificate. If the holder of a telemedicine certificate wishes to physically practice in the state, they either need to obtain a full certificate to practice or a special activity license. **In-state physicians** only need a current Ohio medical license.	ORC 4731.296; ORC 4731.294
Patient informed consent	Practitioners providing counseling, social work or marriage and family therapy via electronic service delivery must obtain patient informed consent by providing the patient with information defining electronic service delivery and the potential risks and ethical considerations associated with it.	OAC 4757-5-13
Public Payer Reimbursement	Ohio Medicaid provides limited telemedicine reimbursement to certified community mental health centers for certain services rendered via interactive videoconferencing: • Behavioral health counseling and therapy services • Mental health assessment service • Pharmacological management • Community psychiatric supportive treatment Medicaid also reimburses certified Ohio Department of Alcohol and Drug Addition Services (ODADAS) providers for certain case management, group counseling and individual counseling services rendered through real-time audiovisual communications.[32]	OAC 5101:3-27-02(F)(5); OAC 5122-29-03(F); OAC 5122-29-04(C); OAC 5122-29-05(C); OAC 5122-29-17(J); OAC 4737-17-01(I); OAC 4732-17-01; OAC 3793:2-1-11
Private Payer Reimbursement	Ohio does not require private payer reimbursement for telehealth services.	

Note: This figure provides an overview of policies and regulations around telehealth for informational purposes only as of March 30, 2013. It is not intended to be a comprehensive statement of telehealth law or relied upon as authoritative. Independent verification of the information is recommended as laws and policies may change.

What are the legal and regulatory challenges facing telehealth stakeholders in Ohio and the nation?

Regulation of health care typically centers on conventional medicine, delivered via face-to-face visits.[33] While interest in, and use of, telehealth continues to grow, the legal and regulatory framework around telehealth has not evolved at the same rate. Accordingly, medical practice laws are generally not fashioned to "transcend state lines" or address the issues that may arise with the remote practice of health care by a remote provider or to a remote patient.[34] As a result, telehealth faces a set of unique legal barriers that have constrained the implementation of telehealth both in Ohio and across the United States. The following section provides an overview of the common legal and regulatory challenges facing telehealth.

Other challenges facing telehealth

A number of other challenges have emerged with the spread of telehealth, including:[35]

- Ensuring patient medical information garnered during a telehealth consultation is embedded in a patient's medical record
- Maintaining care coordination activities for a patient
- Medical malpractice coverage and medical malpractice liability for telehealth providers
- Preventing fraud and abuse
- Ensuring compliance with antitrust laws
- Variation in telehealth organizational policy and practice standards

Table 6. **Telehealth legal and regulatory challenges at a glance**

Issue	Current Ohio policy source	Description
Public payer reimbursement	• Centers for Medicare and Medicaid services (CMS) • Ohio Medicaid • Ohio Medicaid managed care plans	**National:** Medicare has limited reimbursement for telehealth services. **Ohio:** • Medicaid provides limited reimbursement to certified community mental health centers for certain services rendered via interactive videoconferencing. Medicaid also reimburses certified ODADAS providers for case management, group counseling and individual counseling services rendered through real-time audiovisual communications. • Medicaid managed care plans have implemented some telehealth pilot projects but have not committed to wider scale telehealth reimbursement.
Private payer reimbursement	Private sector	**National:** Private payers nationally provide limited telehealth reimbursement. **Ohio:** Private payers have implemented some telehealth pilot projects but have not committed to wider scale telehealth reimbursement.
Provider licensure	Ohio licensing boards	**National:** Providers are required to be licensed in the state they are working and may also be required to be licensed in the state in which they provide services. Variation in state licensure laws can increase the compliance burden on providers wanting to participate in interstate telehealth, increase provider risk for medical malpractice claims and result in additional provider practice costs. **Ohio: Out-of-state physicians** providing telehealth services through the use of any communication, including oral, written, or electronic communication, must obtain either a (1) full certificate to practice or (2) a telemedicine certificate. If the holder of a telemedicine certificate wishes to physically practice in the state, they either need to obtain a full certificate to practice or a special activity license. **In-state physicians** only need a current Ohio medical license.
Scope of practice	• Ohio licensing boards • Ohio medical practice acts	**National:** Scope of practice refers to the duties and functions a health care practitioner can lawfully perform in a state. Variation in state laws and lack of guidance from states on the application of telehealth can lead practitioners to perform outside of their scope of practice or prevent practitioners from fully performing all the lawful functions and duties outlined in their scope of practice. **Ohio:** Has a series of medical practice laws that outline the roles and responsibilities of health care practitioners in the state. Guidance specific to the application of telehealth is minimal.
Patient informed consent	• Ohio laws • Private and public organizational policies	**National:** Some states require telehealth practitioners to obtain additional informed consent from their patients prior to providing telehealth services. **Ohio:** Practitioners providing counseling, social work or marriage and family therapy via electronic service delivery must obtain patient informed consent by providing the patient with information defining electronic service delivery and the potential risks and ethical considerations associated with it.
Credentialing and privileging	• CMS • Joint commission (JC) • Other accrediting bodies	Telehealth providers must have a clear credentialing and privileging process that is in compliance with standards set out by CMS, JC and other applicable accrediting bodies. Navigating the standards and ensuring compliance can be burdensome for providers.
Patient privacy and security	Health Insurance Portability and Accountability Act (HIPAA)	Telehealth is more susceptible to patient privacy and security breaches due to the increase in individuals that may have access to patient records and the increased transmission of patient information over communication lines.

Note: This figure provides an overview of policies and regulations around telehealth for informational purposes only as of March 30, 2013. It is not intended to be a comprehensive statement of telehealth law or relied upon as authoritative. Independent verification of the information is recommended as laws and policies may change.

Reimbursement

The exclusion of telehealth services from reimbursement policies is perceived to be the greatest barrier to telehealth implementation nationally.

Medicare

Currently, federal law only provides for limited reimbursement of telehealth through Medicare. Reimbursement is limited to certain services (See Table 4 on page 5 for more information on specific services) provided via real-time interactive audio and video communications to a Medicare beneficiary located in a rural Health Professional Shortage Area or in a county outside of a Metropolitan Statistical Area. Further, to receive reimbursement, a Medicare patient must be at an "eligible site" at the time of service. Eligible sites are limited to the following:

- Provider's office
- Hospital
- Critical access hospital (CAH)
- Rural health clinic (RHC)
- Federally qualified health center (FQHC)
- Hospital-based or CAH-based renal dialysis center (including satellite facilities),
- Skilled nursing facility (SNF)
- Community mental health center (CMHC)[36]

Reimbursement in Ohio

- **Ohio Medicaid**: Provides limited reimbursement to certified community mental health centers for certain services rendered via interactive videoconferencing. Medicaid also reimburses certified ODADAS providers for case management, group counseling and individual counseling services rendered through real-time audiovisual communications.
- **Ohio Medicaid managed care plans and private payers**: Some plans have implemented telehealth pilot projects but have not committed to wider scale telehealth reimbursement
  (See table 5 on Ohio telehealth policy landscape on page 6).

See box on **proposed telehealth reimbursement legislation** on page 10.

Medicare reimbursement for telehealth services is on par with what Medicare would pay for a "face to face" visit. Notably, although telehealth use for home health has shown promising results, Medicare currently does not reimburse for telehealth services provided to a Medicare patient in their home.[37]

Medicaid

There is no federal law around Medicaid or private payer coverage of telehealth services (See Box on proposed telehealth legislation on page 10). As a result, reimbursement laws for Medicaid and private payers are generated at the state level. Because there are no widely accepted guidelines around telehealth reimbursement, laws vary greatly from state to state.

Medicaid allows, but does not require, states to cover telehealth services, indicating that telehealth can be viewed as a cost-effective alternative to the provision of medical care through face-to-face visits.[38]

A total of 45 state Medicaid programs reimburse for at least some telehealth services. However, coverage and billing requirements often differ. For example, some Medicaid programs will restrict telehealth reimbursement to certain health services, types of providers or underserved populations and regions in the state. Only five states and the District of Columbia do not offer any form of telehealth coverage for their public or private payers.[39]

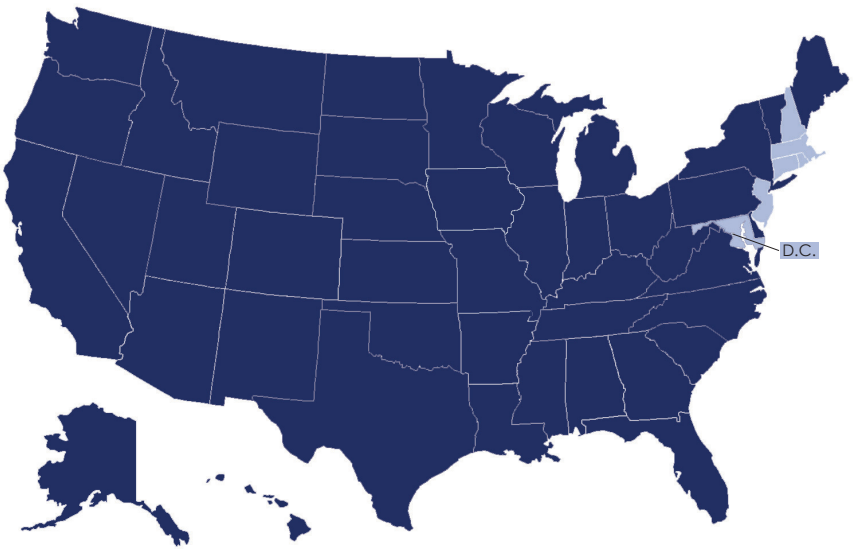
Why are payers reluctant to cover telehealth services?

Payers may be reticent to cover telehealth services for fear that coverage will result in an increased utilization of services.[40] Further, because of the challenges facing telehealth, namely lack of reimbursement, a number of telehealth programs are funded through public or private grants or are launched as pilot projects. As a result, there has not been an effective development or communication of the long-term business strategies that can support sustainable telehealth programs for all stakeholders involved.[41] Notably, where evidence has shown telehealth to be a cost-effective way to provide patient care, some payers have suggested that reimbursement of telehealth services should be lower rather than on par with face-to-face visits because telehealth renders greater efficiencies.[42]

Figure 1.

State laws for telehealth reimbursement

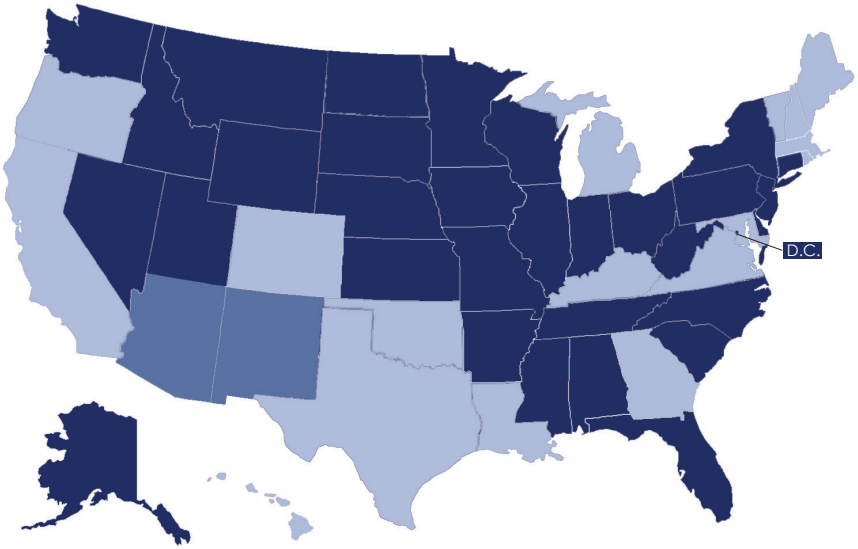
Medicaid



State Medicaid program does not require reimbursement for telehealth services.

State Medicaid program reimburses for telehealth services. Reimbursement for telehealth services may be limited to certain approved services, providers, populations or service areas.

Private Payer



State law or regulation provides that insurers are required to cover or pay for telehealth services. Some states may place additional restrictions on telehealth coverage including subjecting telehealth coverage to contract terms and conditions.

State law or regulation provides that insurers are not mandated, but are rather authorized or allowed to provide coverage or pay for telehealth services.

No state law or regulation requires insurers to cover or pay for telehealth services.

Source: Center for Connected Health Policy. "State Telehealth Laws and Reimbursement Policies: A comprehensive scan of the 50 states and the District of Columbia" (February 2013) available at http://www.cchpca.org/sites/default/files/State%20Telehealth%20Laws%20and%20Reimbursement%20Policies.pdf; See also National Conference of State Legislatures. "State coverage for telehealth services." Accessed March 25, 2013 available at http://www.ncsl.org/issues-research/health/state-coverage-for-telehealth-services.aspx.

Private payer

A survey of HPIO's multi-sector telehealth stakeholder group, conducted in November of 2012, found that 100% of respondent stakeholders identified public and private payer reimbursement to be the most important policy issue facing telehealth in Ohio.

The national landscape around telehealth reimbursement is constantly changing as states continually introduce and pass telehealth reimbursement legislation. Currently, as seen in Figure 1, only 14 states require private payer coverage of telehealth services. While some states require reimbursement that is on par with a face to face consultation, other states do not. Two more states, Arizona and New Mexico, have statutory language that authorizes or encourages but does not mandate private payer coverage of telehealth services.[43]

Proposed telehealth reimbursement legislation

Ohio

Two bills regarding telehealth reimbursement were introduced in the 129th General Assembly and are expected to be introduced in some iteration in the current 130th General Assembly.

Senate Bill (SB) 28

Sen. Charleta Tavares of the 15th district, current Ranking Minority Member of the Ways & Means Committee and the Workforce & Economic Development Committee, introduced SB 28. The proposed bill prohibited health insurers from excluding coverage for telemedicine services solely because the service was not provided through a face-to-face consultation.[44] SB 28 defines telemedicine as a "a medical service delivered by a person authorized under Ohio law to practice medicine and surgery or osteopathic medicine and surgery, including a person licensed as a physician in another state and certified under Ohio law to provide telemedicine services, through the use of any communication, including oral, written, or electronic communication."[45] The bill also required that copays, deductibles, or coinsurance for telemedicine services not exceed the amounts required for a face-to-face consultation.[46]

House Bill (HB) 609

Rep. Anne Gonzales of the 19th district, current Chair of the Health & Human Services Subcommittee and Vice Chair of the Health & Aging Committee, and Rep. Lynn Wachtmann of the 81st district, current Chair of the Health & Aging Committee, introduced House Bill (HB) 609 requiring Medicaid and authorizing private health insurers to reimburse for telehealth services.[47] The bill also required health insurer coverage of telehealth services to be equivalent to coverage provided for an in person patient visit.[48]

Federal

Telehealth Promotion Act of 2012

At the end of the 112th Congress, Rep. Mike Thompson (D-CA) introduced H.R. 6719, the Telehealth Promotion Act of 2012, "to promote and expand the application of telehealth under Medicare and other Federal health care programs, and for other purposes."[49] The proposed bill ensures that telehealth services are reimbursable under Medicare, Medicaid, CHIP, federal employee health, dental, and vision benefit programs, TRICARE, and the Department of Veterans Affairs.[50] The bill also calls for the establishment of national licensing standards, whereby physicians licensed in their state of practice would be able to provide telehealth services to eligible patients nationwide.

Other changes proposed in the bill include:

- Increased flexibility for accountable care organization coverage of telehealth
- Adjustments in Medicare home health payments to account for the use of remote patient monitoring (RPM)
- Inclusion of telehealth and RPM as interventions under the Medicare Community-Based Care Transitions program
- Recognition of telehealth services and RPM in the national pilot program on payment bundling[51]

Carla McGarvey, congressional staffer for Rep. Thompson, has indicated that a revised version of the bill is likely to be introduced in the summer of 2013.

Provider licensure

There is no federal law governing provider licensure requirements.[52] Provider licensure laws are set on a state-by-state basis and are typically left to the authority of state licensing boards (e.g. state medical and nursing boards). Some states have separate licensure laws specific to telehealth, while others do not. State laws also set out different license and registration processes (including required fees and forms) and can differ in regards to their definition of telehealth and what constitutes lawful versus unlawful practice of medicine.[53] The variation in state licensure law is arguably the greatest regulatory challenge to interstate telehealth practice or the practice of telehealth across state lines.[54]

Licensure in Ohio

- **Out-of-state physicians** providing telehealth services through the use of any communication, including oral, written or electronic communication, must obtain either a (1) full certificate to practice or (2) a telemedicine certificate. If the holder of a telemedicine certificate wishes to physically practice in the state, he or she either needs to obtain a full certificate to practice or a special activity license. **In-state physicians** only need a current Ohio medical license.[62]
- **Both out-of-state and in-state nurses** need an Ohio nursing license to provide care via telehealth technology to a patient located in Ohio.[63]

State laws around provider licensure are aimed at ensuring a standard of care for patients; preserving a state's right to regulate and adjudicate the practice of medicine within its territory; and protecting state health care markets from outside competition.[55] Providers are required to be licensed in the state they are working, though many states also require that a provider be licensed in the state in which they provide services or where the patient is located.[56]

The variation in state licensure laws can increase the compliance burden on providers wanting to participate in interstate telehealth. Specifically, there is concern regarding increased provider risk for medical malpractice claims and additional costs to providers.[57] Further, the requirement for providers to obtain licensure in the state in which they provide services or where the patient is located can deter provider entry into a state's health care market.[58] As a result, patients in states with more stringent licensure laws may not be able to reap the potential benefits of interstate telehealth such as increased access to specialists and other providers,[59] increased patient satisfaction and lower health care costs.[60]

In response to this challenge, a number of organizations such as the Federation of State Medical Boards and the American Telemedicine Association have put forth recommendations for provider licensure. Some of these recommendations include creating uniformity among state provider licensure laws, federal preemption of state licensure laws, a regional or collaborative approach to provider licensure or a state licensure reciprocity system[61] (See Table 7 for more information).

Table 7. **Provider licensure models**

Licensure Model	Description
Full state licensure	Provider is required to obtain a full state license in order to consult, diagnose or treat a patient within the state.
Consultation exception	A provider that is not licensed in the state may practice medicine in consultation with a referring fully licensed in-state provider.
Limited or special purpose licensure	To practice telehealth, provider must apply for a limited or special purpose license. Typically, this license allows the provider to practice via telehealth in the state and subjects the provider to the laws and regulations of the state.
Endorsement	Provider is given an unrestricted license to practice medicine in the state given that the provider holds a valid and unrestricted license in another state.
Uniform application and expedited license	Providers who already hold a valid and unrestricted license in a state are offered expedited licensure in other states if they meet a number of requirements such as: being free of disciplinary history, license restrictions or pending investigations, passage of an acceptable licensing exam, and graduation from an accredited provider school.
Interstate collaboration, mutual recognition or compact	States enter into collaborative agreements or compacts to create a system of licensure portability.
National licensure	A standardized set of criteria for provider licensure is adopted nationally.

Source: Hoffmann, Diane, and Virginia Rowthorn. "Legal Impediments to the Diffusion of Telemedicine." J. Health Care L. & Pol'y 14 (2011): 1.

Scope of practice

State medical practice acts outline the duties and functions that a health care practitioner can lawfully perform. These duties and functions are aligned generally with the practitioner's level of health care training, education, competence and experience. Due to the relatively new nature of telehealth, there is often little or no guidance from states on the application of telehealth to scope of practice laws. This, coupled with the variation in state law, increases the compliance burden on health care organizations and providers involved in telehealth. As a result, health care organizations and providers are often left to interpret the laws themselves leading to a number of challenges including:

- Inconsistent organizational practices regarding the use of practitioners in providing telehealth services
- Prevention of health care practitioners from fully performing the functions outlined within their scope of practice
- Unclear delineation of responsibilities resulting in practitioners performing outside of their scope of practice

Patient informed consent

The increase in telehealth use has prompted some states to create laws or policies that heighten patient care requirements and standards. For example, a number of states have implemented some form of informed consent legislation or policy that requires providers to obtain informed consent or permission from a patient prior to delivering telehealth services (See Figure 2). Like many of the other legal and regulatory issues facing telehealth, navigating the variation in state laws can be challenging for interstate telehealth providers. Further, some laws may require telehealth providers to obtain informed consent from patients prior to providing telehealth services, when they may have relied on other providers or their employing organization to do so.

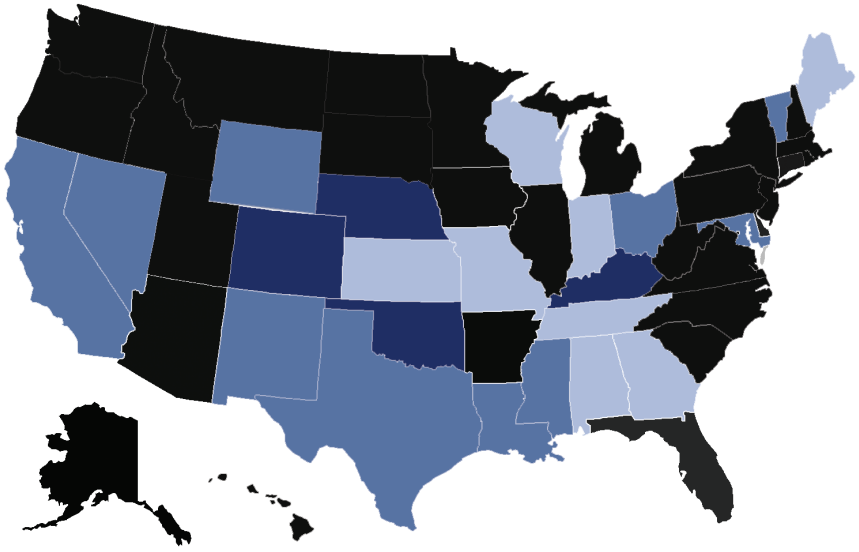
Patient informed consent in Ohio

Practitioners providing counseling, social work or marriage and family therapy via electronic service delivery must obtain patient informed consent by providing the patient with information defining electronic service delivery and the potential risks and ethical considerations associated with it.[64]

The definition or practice standard around what constitutes "informed consent" can vary on a state by state basis. The term is generally understood to mean that the patient understands the pertinent medical facts and information as well as the risks involved with the use of telehealth.[65] However, a number of states have restricted their informed consent regulations to specific telehealth services or certain groups of providers.[66]

Figure 2.

National landscape: Telehealth informed consent laws and policies



State has a telehealth statutory requirement for informed consent

State has a telehealth Medicaid policy for informed consent

State has both a telehealth statutory requirement and Medicaid policy for informed consent.

No telehealth informed consent policies in statute or in Medicaid.

Note: This map provides an overview of policies and regulations around telehealth informed consent for informational purposes only. It is not intended to be a comprehensive statement of telehealth policy or relied upon as authoritative. Some states have restricted their informed consent regulations to specific telehealth services or certain groups of providers. Independent verification of the information is recommended as state laws and policies may change. **Source:** Center for Connected Health Policy. "State Telehealth Laws and Reimbursement Policies: A comprehensive scan of the 50 states and the District of Columbia" (February 2013) available at http://www.cchpca.org/sites/default/files/State%20Telehealth%20Laws%20and%20Reimbursement%20Policies.pdf

Credentialing and privileging

Health care organizations are required to undergo a process to determine that a health care practitioner is qualified to practice and provide patient care at their site. This process is referred to as provider credentialing and privileging – whereby a health care facility obtains, reviews and confirms a practitioner's professional credentials, documentation and performance and qualifies them to provide patient care services.[67] Credentialing determines whether a provider is qualified to practice under the auspices of a health care organization while privileging determines the scope and content of patient care services the provider is authorized to deliver.[68]

Previous regulations issued by the Centers for Medicare & Medicaid Services (CMS) required hospital governing bodies to undergo a burdensome credentialing and privileging process for practitioners[69] — regardless of whether the practitioner was providing telehealth services to the hospital's patients from a distant site or facility at which they were already credentialed. These rules were in conflict with Joint Commission (JC) hospital accreditation standards which allowed for "credentialing by proxy" or relying on the decisions of other JC accredited sites in making credentialing and privileging decisions for telehealth practitioners. The amount of time, resources and the financial hardship the CMS regulations created on hospitals led CMS to revise their rule to allow for more flexibility.[70]

In May 2011, CMS issued a new rule[71] regarding telemedicine and credentialing that relaxed previous regulations on credentialing and allowed a hospital, through a required written agreement between the hospital and a distant site, to rely on a distant site's credentialing and privileging decisions regarding a practicioner. The JC revised its standards to align with the new CMS policy.

Although the new CMS rule helped streamline credentialing and privileging for telemedicine, the ability to comply with the new regulations has still been a challenge for some health care organizations. Specifically, telehealth organizations continue to face a number of challenges with credentialing and privileging, including:

- Navigating the differences in credentialing and privileging processes for Medicare participating and non-Medicare participating hospitals
- Executing a proper written agreement that specifies the responsibility of the distant site and its ability to meet CMS credentialing and privileging condition of participation requirements
- Conducting ongoing communication between the distant site and the originating site for the purpose of sharing internal reviews of the provider's performance, documenting adverse events and patient complaints
- Ensuring compliance with state law or other accrediting bodies, which may not be aligned with CMS policy and Joint Commission standards or may be silent on the issue

HIPAA and patient privacy

The Health Insurance Portability and Accountability Act (HIPAA) was enacted by Congress in 1996. Title II of the Act, requires the establishment of national standards for electronic health transactions, mandates the adoption of privacy and security standards to ensure the confidentiality of patient records, and calls for the creation of national identifiers for patients, providers, health insurance plans, and employers when used in electronic data exchange.[72] The issues that arise with privacy and confidentiality under HIPAA are the same for both conventional medicine and telehealth. However, telehealth is more susceptible to patient privacy and security breaches due to the increased number of individuals that may have access to patient records and the increased transmission of patient information over communication lines.[73]

A number of other challenges that may arise with telehealth and HIPAA include:

- Accounting for or preventing "unseen" individuals present during video communications
- The loss of documented or recorded patient information and data
- Implementation of entity and technology specific business associate agreements to ensure patient confidentiality and privacy
- Education of providers and patients on the application of HIPAA policies and procedures to telehealth[74]

While organizations can undertake legal and administrative measures to ensure that they are HIPAA compliant with telehealth, ensuring compliance can be a very time and resource intensive process. Further, the continuing evolution of telehealth can result in new or unforeseen patient privacy and security issues. As a result, health care organizations must be in constant review of their policies and procedures to ensure HIPAA compliance and prevent future privacy and security breaches as new telehealth technologies emerge.

What trends are impacting the future of telehealth?

There are a number of factors that are likely to contribute to the growth of telehealth in Ohio and the rest of the country. These factors include:

- Projected provider shortages due to expanded health insurance coverage, an increase in chronic diseases, and an aging population
- A consumer population that is more engaged in electronic based communications
- New and emerging information communications technology (ICT)[75]

As telehealth technology develops and the various legal and regulatory barriers to telehealth are removed, we can expect to see continued expansion in the use of telehealth.

Current and expected trends in the development of telehealth technology capacity and its implementation will likely impact policy decisions for the foreseeable future. Examples of new and continuing trends in telehealth include:

- Integration of new technology into standard/routine delivery of care[76]
- Introduction of new technology and care delivery methods in medical schools and other health care education programs[77]
- Increased patient demand for "technology-enabled interactions"[78, 79]
- Increased need to provide access to and deliver quality care to rural populations[80]
- Integration of telehealth into payment reform models, including ACOs, bundled payments and PMCHs[81] (see box on "Integration of telehealth into payment reform")
- Improvements in data flow, transfers, sharing, and data collection[82]
- Continued evaluation of new technology and practices[83]
- The use of telehealth to export U.S. medical expertise to other countries.[84]

Integration of telehealth into payment reform

Improvements in clinical quality, health outcomes, and efficiency are the cornerstones of health reform.[85] The current fee-for-service payment model in health care has exacerbated the cost and quality concerns facing Ohioans by incentivizing volume of services provided to patients without incentivizing higher quality care, efficiency, or better health outcomes.

Notably, the movement towards payment reform and aligning payments with health outcomes may facilitate greater adoption of telehealth.

As a result, under the auspices of health reform, health care organizations are moving away from fee-for-service and towards aligning payments with health outcomes through the formation of patient centered medical homes (PCMH), accountable care organizations (ACO), and payment bundling. Under these models, provider payments or bonuses are contingent upon the provider meeting set cost and quality outcome metrics. Under these new payment models, providers may be incentivized to use telehealth where it is evidenced to be a more cost-effective solution to providing health services and improving patient outcomes. Notably, the movement towards payment reform and aligning payments with health outcomes may facilitate greater adoption of telehealth.

While payment reform holds promise for greater use of telehealth, the pace of reform itself has been a slow process. Further, the use of telehealth in new payment models may still be a challenge under current laws and the remaining fee for service system.

The Health Policy Institute of Ohio (HPIO) and telehealth

Telehealth is highly relevant to two of HPIO's strategic objectives — ensuring access to care for all Ohioans and aligning public and private payments with better health outcomes. HPIO hosted a forum in July of 2012 to explore the potential value of telehealth and the existing challenges as well as opportunities for increasing the broader adoption of telehealth within Ohio. The forum was one of the first large-scale telehealth meetings in Ohio, bringing together more than 150 stakeholders across the state from diverse backgrounds to discuss telehealth.

From July 2012 to March 2013, HPIO also hosted a series of three small stakeholder meetings around telehealth policy development. Participants included the State Medical Board of Ohio, the Ohio Board of Nursing, providers, payers, technology developers and state agency representatives. The convening of this multi-stakeholder group and HPIO's work around telehealth policy has helped inform and mobilize telehealth stakeholders to engage in and expedite policy decisions around telehealth at the state level. For more information on HPIO's telehealth work, please contact Reem Aly at raly@healthpolicyohio.org.

Telehealth Resources

American Telemedicine Association	http://www.americantelemed.org/
Center for Connected Health Policy: State Telehealth Laws and Reimbursement Policies	http://www.cchpca.org/sites/default/files/State%20Telehealth%20Laws%20and%20Reimbursement%20Policies.pdf
Federation of state medical boards	http://www.fsmb.org/grpol_telemedicine.html
Health Resources and Services Administration: Telehealth	http://www.hrsa.gov/ruralhealth/about/telehealth/
Medicaid and telehealth	http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Delivery-Systems/Telemedicine.html
Medicare and telehealth	http://www.cms.gov/Medicare/Medicare-General-Information/Telehealth/index.html?redirect=/telehealth/
National Conference of State Legislatures: State Coverage for Telehealth Services	http://www.ncsl.org/issues-research/health/state-coverage-for-telehealth-services.aspx
National Rural Health Association	http://www.ruralhealthweb.org/
Primary Care and Rural Health Ohio Department of Health	http://www.odh.ohio.gov/odhprograms/chss/pcrh_programs/pcrh1.aspx
Telehealth Resource Centers	http://www.telehealthresourcecenter.org/
Upper Midwest Telehealth Resource Center	http://www.umtrc.org/
VHA Office of Telehealth Services	http://www.telehealth.va.gov/

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