



# Florida Report on Telehealth Utilization and Accessibility

December 2016



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## Executive Summary

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Chapter 2016-240, Laws of Florida, was passed during the state's regular 2016 Legislative Session, and was signed by Governor Rick Scott becoming effective on July 1, 2016. The law directs the state's Agency for Health Care Administration (AHCA), the Department of Health (DOH), and the Office of Insurance Regulation (OIR) to collaboratively survey the Florida licensed health care facilities, professionals, and payers of health care services in an effort to determine and document:

- *The types of health care services provided via telehealth in the state*
- *The extent to which telehealth is used by health care practitioners and health care facilities nationally and in the state*
- *The estimated costs and cost savings to health care entities, health care practitioners, and the state associated with using telehealth to provide health care services*
- *Which health care insurers, health maintenance organizations, and managed care organizations cover health care services provided to patients in Florida via telehealth, whether the coverage is restricted or limited, and how such coverage compares to that insurer's coverage for services provided in person*

The law directs AHCA to compile the survey and research findings and submit a report of such findings to the Governor, the President of the Senate, and the Speaker of the House of Representatives on or before December 31, 2016. This report is submitted by the Agency to meet the requirements of Chapter 2016-240; and represents the collaborative efforts across AHCA, DOH, and OIR.

The new telehealth law also creates a Telehealth Advisory Council for the purpose of making recommendations to the Governor and the Legislature. The law designates the Secretary of AHCA as the Council's Chair, and designates the State Surgeon General (or designee) as a member. The Agency's Secretary and the Surgeon General appointed 13 Council members representing specific stakeholder groups. The Council is charged to review the survey and research findings included in this report, and to employ that information to inform recommendations to increase the use and accessibility of services provided via telehealth, including the identification of any barriers to implementing or accessing services provided via telehealth. A report of the Council's recommendations must be submitted to the Governor, the President of the Senate, and the Speaker of the House of Representatives on or before October 31, 2017.

Highlighted findings contained within this initial report include:

- Utilization of telehealth is expanding in Florida and nationally, both in terms of the variety of applications and use cases as well as patient volume and demand.
- Nearly half (44.8%) of Florida hospitals responding to AHCA's telehealth survey indicated that telehealth services are available through their facilities.
- The most frequent use cases of telehealth reported by licensed health care facilities in Florida include: neurology (including stroke care), home health/patient monitoring, primary care, behavioral health, and radiology.
- Nearly half (44%) of home health agencies responding to the Agency's survey indicated using telehealth to assist with remote patient monitoring.
- Benefits reported from health care facilities and professionals offering telehealth services include improved convenience for both patients and providers, improved efficiencies, and improved patient care outcomes.
- Financial barriers are the most frequently reported obstacles among health care facilities and providers during both implementation and ongoing operations of telehealth programs.
- Due to multiple and often conflicting definitions of telehealth at every level (Federal, State, and among private payers and policymakers), there is significant uncertainty across stakeholder groups regarding types of services and activities that may qualify as telehealth for the purposes of coverage and reimbursement.
- Despite great technological advances over time in the field of Health Information Technology, including Electronic Health Records (EHR) systems and Health Information Exchange (HIE) networks, there remain significant challenges with interoperability between providers across the state and nationally, making it difficult for health care professionals to obtain adequate medical history and clinical information at the time they are treating a patient. These gaps in interoperability were cited by survey respondents as a common barrier to the development and implementation of telehealth programs.
- Research and survey findings indicate that few providers have achieved a financial Return on Investment (ROI) attributable to the implementation of telehealth services; although some examples do exist.
- Many providers reported a lack of detailed knowledge about telehealth services, and indicated interest in gaining access to evidence-based best practices, educational resources, or training opportunities associated with telehealth.

This report details these and other findings from survey responses and highlights from a literature review of national telehealth research studies.

# Introduction

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The United States, including Florida, is experiencing a shortage of health care professionals to serve a growing and aging population. Data referenced in the Florida House of Representatives legislative staff analysis for House Bill 7087 (2016) noted that there were 615 federally designated Health Professional Shortage Areas (HPSAs) within the state for primary care, dental care, and mental health therapists as of June 19, 2014. The U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA) Bureau of Health Workforce data indicates that the number of HPSAs in Florida has grown to 623 by December of 2016. Multiple national proposals and recommendations have been developed in recent years to address these shortages, including:

- Creation of new scholarships and residency programs to train more providers
- Expanding the scope of practice for certain health care professionals
- More efficient utilization of the existing workforce through the expanded use of telehealth<sup>1</sup>

Chapter 2016-240, Laws of Florida was enacted by the legislature in 2016 creating a Florida telehealth Advisory Council (Council) charged with reviewing research and survey findings and developing recommendations to support expansion or increased access to health services provided through telehealth in the state. The law requires the Florida Agency for Health Care Administration (AHCA), the Florida Department of Health (DOH), and Florida Office of Insurance Regulation (OIR) to respectively survey licensed health care facilities, licensed health care practitioners, and licensed health care insurers and Health Maintenance Organizations (HMOs), to assess the current Telehealth landscape across the state and to inform the Council's work.

This report presents findings from the surveys as well as research findings compiled from multiple resources representing both Florida and national perspectives. The focus of the surveys and report, as guided by Chapter 2016-240, Laws of Florida, include:

- National and state utilization of telehealth
- Types of healthcare services provided via telehealth
- Costs and cost savings associated with using telehealth to provide health care services
- The extent of insurance coverage for providing health care services via telehealth and how such coverage compares to coverage for in-person services
- Barriers to using or accessing services through telehealth

Survey findings will also be provided to the Telehealth Advisory Council (Council). The Council is, in turn, required to submit a report of recommendations for increasing the use and accessibility of telehealth to the Governor, the President of the Senate, and the Speaker of the House of Representatives by October 31, 2017.

## Florida Telehealth Surveys

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### Survey Methodology – Florida Licensed Health Care Facilities

Florida's Agency for Health Care Administration licenses more than 48,000 health care facilities and businesses in Florida.

Agency staff first identified the facility types most likely to be utilizing telehealth services; then executed a series of direct emails to the facility contact email addresses maintained by the Agency within its facility licensure database for the selected facility types. A personalized email was sent to the executive contact of each facility premise and included brief background information on the authorization and purpose for the survey, instructions on how to complete the survey, the facility's specific AHCA-issued license number and AHCA file number for reference, and information on how to contact Agency staff with questions about the survey. The email then provided a hyperlink to the Agency's electronic health facility survey. The survey link was also published to the Agency's website, on its dedicated Telehealth Advisory Council webpage. The Agency used a variety of approaches to raise awareness of the survey including a press release and electronic provider alerts to subscribed interested parties to notify stakeholders and encourage participation in the survey. The facility survey was launched in August, 2016 and surveys were collected through September 30<sup>th</sup>. Agency staff monitored response rates by facility type, and sent follow-up emails during the month of September to those facility types with relatively low response rates.

Sixteen facilities types, totaling approximately 11,900 individual facilities, were identified as the most probable users of telehealth. The overall response rate from those facilities was 49%. (Figure 1)

**Figure 1. Florida Licensed Facility Telehealth Survey Response Rates**

	Number of Surveys	Total Number of Facilities	Response Rate
AMBULATORY SURGICAL CENTER	342	433	79%
ASSISTED LIVING FACILITY	1,237	2,886	43%
BIRTH CENTER	22	33	67%
CLINICAL LABORATORY	1,523	3,815	40%
CRISIS STABILIZATION UNIT	40	57	70%
END-STAGE RENAL DISEASE	331	428	77%
HOME HEALTH AGENCY	867	1,960	44%
HOME MEDICAL EQUIPMENT PROVIDER	574	966	59%
HOSPICE	23	45	51%
HOSPITALS	239	306	78%
INTERMEDIATE CARE FACILITY FOR THE DEVELOPMENTALLY DISABLED	72	100	72%
NURSING HOME	479	669	72%
PRESCRIBED PEDIATRIC EXTENDED CARE CENTER	53	61	87%
RESIDENTIAL TREATMENT CENTER FOR CHILDREN AND ADOLESCENTS	17	31	55%
RESIDENTIAL TREATMENT FACILITY	43	98	44%
TRANSITIONAL LIVING FACILITY	9	12	75%

## Office of Insurance Regulation Survey Methodology

The Florida Office of Insurance Regulation is responsible for the regulation, compliance, and enforcement of statutes related to the business of insurance in the state. The Office worked closely with the Agency to develop a survey for the state’s licensed health insurance plans and Health Maintenance Organizations (HMOs) that aligned closely with the questions and focus of the health care facility and licensed health care practitioner surveys. The Office leveraged its existing health information systems to create the payer survey in a secure environment.

The Office conducted a direct email distribution of the survey notification to its constituents, including active follow-up with nonresponsive payers periodically throughout the data collection period. The health plan surveys were disseminated in September, and data was collected through the month of October. The Office collected all survey responses and provided a complete dataset of the responses to the Agency for analysis.

Fifty-Four (54) Health Plans offering at least one of six lines of business were surveyed. 100% of the plans surveyed responded.

## Department of Health Survey Methodology

The Department of Health licenses health care practitioners in Florida and is required by Chapter 2016-240, Laws of Florida, to survey practitioners as a condition of licensure renewal. Most health care licensees are required to renew their licenses biennially in order to maintain the right to practice; however, some professions require annual renewal of the license. Due to the condensed time period from the effective date of the law (July 1, 2016) to the required submission date for survey findings to the Governor and the legislature (December 31, 2017), there was a limited number of health care professionals scheduled to renew their licenses during the available data collection period.

DOH added the telehealth practitioner survey to their electronic license renewal application effective July 1, 2016. In an effort to gain as much feedback from the state's licensed health care professionals as possible for this report, a volunteer survey was also offered by AHCA to practitioners. The voluntary electronic survey was posted on the Agency's dedicated telehealth web page. The Department of Health encouraged provider participation through mutual posting of the survey on both its FLHealthSource.gov homepage as well as their dedicated website for clinical laboratories. Despite these efforts, the voluntary survey received relatively limited response. Information provided in this report includes information from practitioners that completed the Department of Health survey for renewal between July 1, 2016 and December 1, 2016. To date the DOH licensure survey has generated a total of 26,579 responses.

Additional information from DOH licensed practitioners will be provided to the Council as it becomes available for consideration in their final recommendations.

Nine types of practitioners renewed or began renewing their DOH license between July 1 and December 1, 2016. (Figure 2) These licensees include nursing home administrators, athletic trainers, a segment of registered nurses, consultant pharmacists, and a segment of medical doctors. (Figure 3)

**Figure 2. DOH Licensees with a Renewal Date between July 1 & Dec 31, 2016**

	# of Completed Surveys/Renewals	# Eligible to Renew	Response Rate
Consultant Pharmacist	1,470	3,027	49%
Optician	1,881	3,893	48%
Registered Pharmacy Technician	14,727	42,677	35%



**Figure 3. DOH Licensees with a Renewal Date after Dec 31, 2016**

	# of Completed Surveys/Renewals	# Eligible to Renew	Response Rate
Anesthesiologist Assistants	50	300	17%
Diagnostic Radiological Physicist	37	103	36%
Hearing Aid Specialist	57	1,059	5%
Licensed Clinical Social Worker	5	10,192	0%
Licensed Marriage and Family Therapists	1	2,069	0%
Medical Doctor	10,575	33,058	32%
Medical Health Physicist	12	38	32%
Medical Nuclear Radiological Physicists	25	58	43%
Occupational Therapist	226	8,960	3%
Occupational Therapist Assistant	89	5,446	2%
Optometrist	370	3,408	11%
Pharmacy	44	10,166	0%
Therapeutic Radiological Physicist	144	401	36%

The state’s federally certified Rural Health Clinics (RHCs), Federally Qualified Health Centers (FQHCs), and the Florida Department of Health’s 67 County Health Departments (CHDs) are also entities which may provide telehealth services. A separate version of the Agency’s electronic health professional survey was created, and a link to the survey was distributed to these entities along with a request for voluntary completion. The Florida Association of Community Health Centers (FACHC) assisted the Agency in distributing the voluntary survey to its’ member FQHCs. The voluntary survey was also published on the Agency’s dedicated telehealth website. Data collection from these provider types is on-going; and any information obtained from these entities will be provided to the Council for consideration in their final recommendations to the Governor and Legislature.

## Background

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The term Telemedicine is often used as synonymous with telehealth, although some stakeholders consider telehealth to be a more comprehensive term that encompasses not only direct patient care (diagnosis and treatment), but also educational and administrative processes. There is no universally accepted definition of telehealth. The definition used for the survey is from Segen's Medical Dictionary, which provides a fairly broad definition:

*"Telehealth is a generic term for the remote delivery of health care through the use of electronic information and telecommunications technologies."*<sup>2</sup>

Definitions for telehealth/telemedicine associated with Florida regulations can be found in the Florida Boards of Medicine and Osteopathic Medicine rules 64B8-9.0141, FAC and 64B15-14.0081, FAC respectively.

*"Telemedicine" means the practice of medicine by a licensed Florida physician or physician assistant where patient care, treatment, or services are provided through the use of medical information exchanged from one site to another via electronic communications. Telemedicine shall not include the provision of health care services only through an audio only telephone, email messages, text messages, facsimile transmission, U.S. Mail or other parcel service, or any combination thereof.*<sup>3</sup>

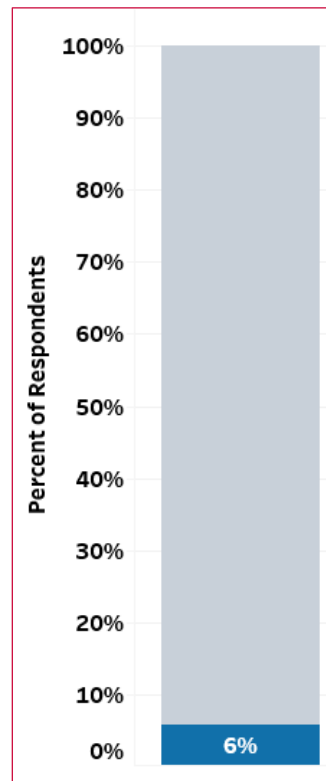
Additionally, the Agency for Health Care Administration defines telehealth for the purpose of fee-for-service reimbursement under the state's Medicaid program, in rule 59G-1.057, FAC.:

*"The practice of health care delivery by a practitioner who is located at a site other than the site where a recipient is located for the purposes of evaluation, diagnosis, or treatment."*<sup>4</sup>

Although telehealth technology in some form has been in use since the 1960s, patient demand for care access has more recently pushed telehealth into the mainstream. National studies show that 74% of consumers use telehealth services; 76% of patients value access to care over the need for human interaction with their health provider; 70% of patients are comfortable talking with their health provider via text, email or video; and 30% of patients are already using computers or mobile devices to check medical or diagnostic information.<sup>5</sup>

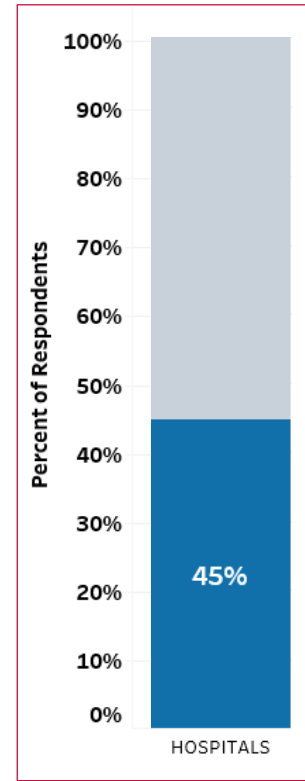
A national survey of health care executives published in 2016 reported 63% of health care practitioners use some type of telehealth platform to provide health services.<sup>6</sup> Only 6% percent of surveyed practitioners in Florida indicate they use telehealth to provide health care services (Figure 4).

**Figure 4. Florida Licensed Health Practitioners Who Completed the Survey, Indicating They Offer Telehealth Services**

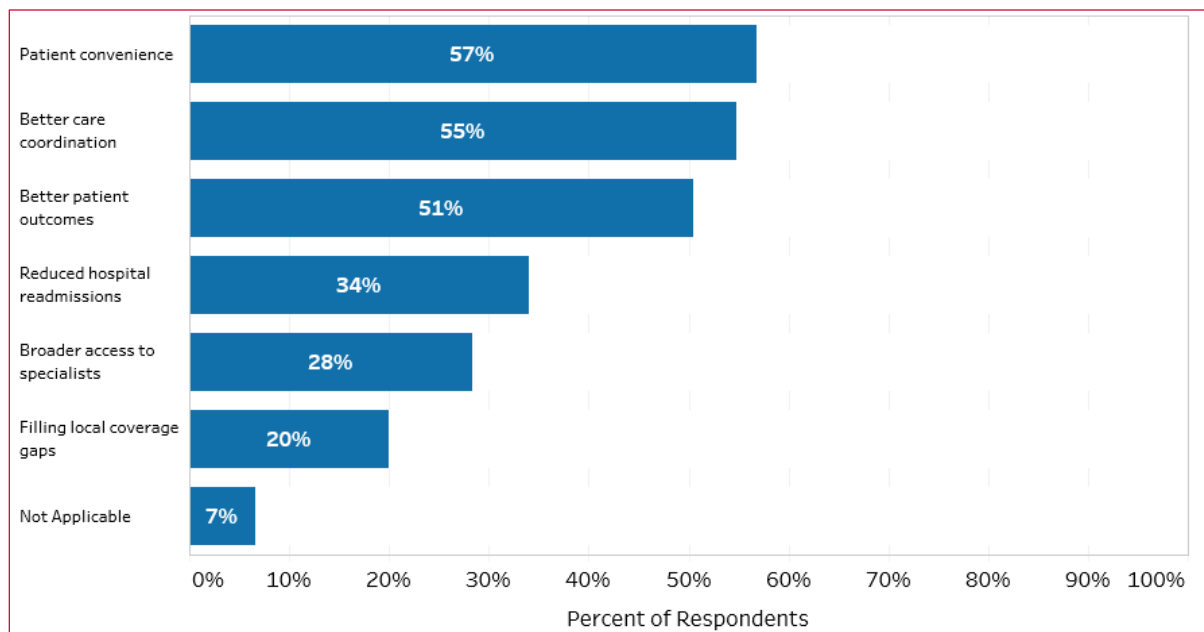


In 2013, 52% of hospitals in the nation utilized telehealth and another 10% were beginning the process.<sup>7</sup> Of Florida hospitals responding to the AHCA statewide survey, 45% indicate they offer health care through some form of telehealth (Figure 5). A majority of the facilities offering telehealth services in Florida indicate the benefits are patient convenience and better coordination of care (Figure 6). Patient interest combined with health practitioner workforce shortages and advancements in technology make telehealth increasingly vital to the health care delivery system.

**Figure 5. Florida Licensed Hospitals That Completed the Survey, Indicating They Offer Telehealth Services**



**Figure 6. Benefits Reported by Facilities Using Telehealth**



## Health Care Services Offered via Telehealth

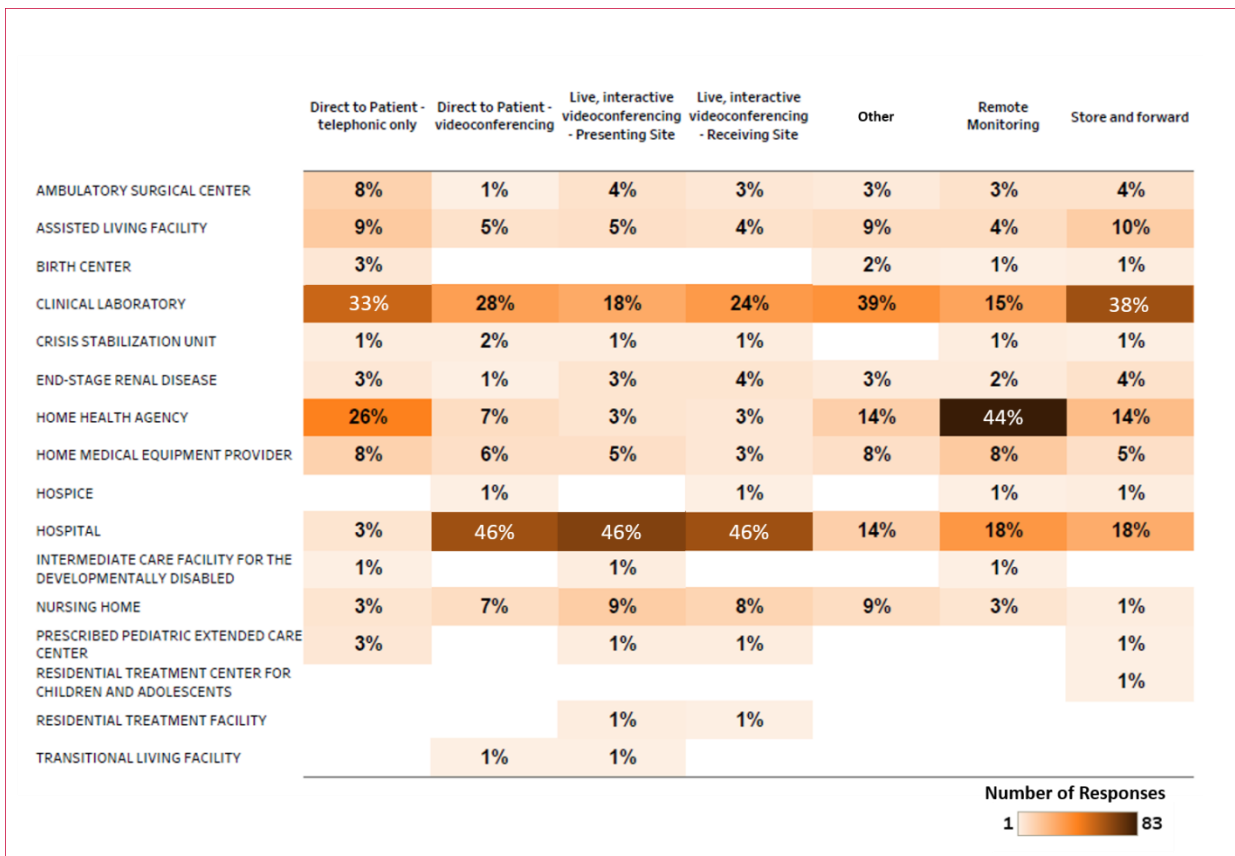
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The United States Department of Health and Human Services notes that telehealth is not a type of health care service; it is a means or method used to deliver health care.<sup>8</sup> The standard of care for providing health services should not alter based on the mode of delivery.<sup>9</sup> Telehealth services can enable real-time (synchronous) communication between patients and care providers through video conferencing; facilitate the storage and forwarding (asynchronous) of clinical data to offsite location for evaluation by specialist teams; and support remote monitoring of patient's chronic conditions via sensors and monitoring equipment. Telehealth technology is evolving into wearable and even implantable devices (mobile health) that detect information such as EKG readings.<sup>10</sup> Under each of the broader categories are various models of use.

Examples of Hospital-Based Telehealth Platforms	
Service Type	Description
Telestroke	Remote evaluations, diagnoses and treatment recommendations are transmitted from neurologists to emergency medicine physicians treating stroke patients at other sites
Teleradiology	Radiology images and associated data are transmitted between locations for the purpose of primary interpretation or consult and clinical review
Tele-ICU	Networks of audiovisual communication and computer systems are linked with critical care physicians and nurses to ICUs in other, often remote hospitals
Telemental Health	Mental health and substance abuse services are provided from a distance using videoconferencing and other advanced communication technologies
Telepathology	The practice of pathology is performed at a remote location by means of video cameras, monitors, and a remote controlled microscope
Remote Clinical Monitoring	Disease management of patients using continuous or frequent periodic remote clinical monitoring via advanced communication technologies (EKG, glucose testing, etc.)
Telepharmacy	Pharmaceutical care for patients (or supervision to technicians) is provided at a distance using advanced telecommunications technology
Cybersurgery	Surgeons use surgical techniques with a telecommunication conduit connected to a robotic instrument to operate on a remote patient

Telehealth is currently used in a broad array of applications. The use of telehealth crosses most health service disciplines including, but not limited to, primary medical care, specialty care, chronic disease management, behavioral counseling, physical therapy, speech therapy, pharmacy, and home health (Figure 7). One of the most prevalent forms of hospital-based telemedicine is radiological services, which use an asynchronous platform which allows radiologists to perform their work in distant locations. Over 5 million patients have had diagnostic radiology tests read by an off-site specialist<sup>11</sup>, according to the American Telehealth Association. In the late 1990s and early 2000s, there were initiatives by some radiology groups to locate physicians in Europe and Australia in order to leverage the benefits of time zone differences with the United States. For example, a physician working during the daytime hours in Australia could cover the night shift in the United States.<sup>12</sup>

**Figure 7. Florida Licensed Facilities Reporting Telehealth Utilization, by Facility Type and Service Type.**

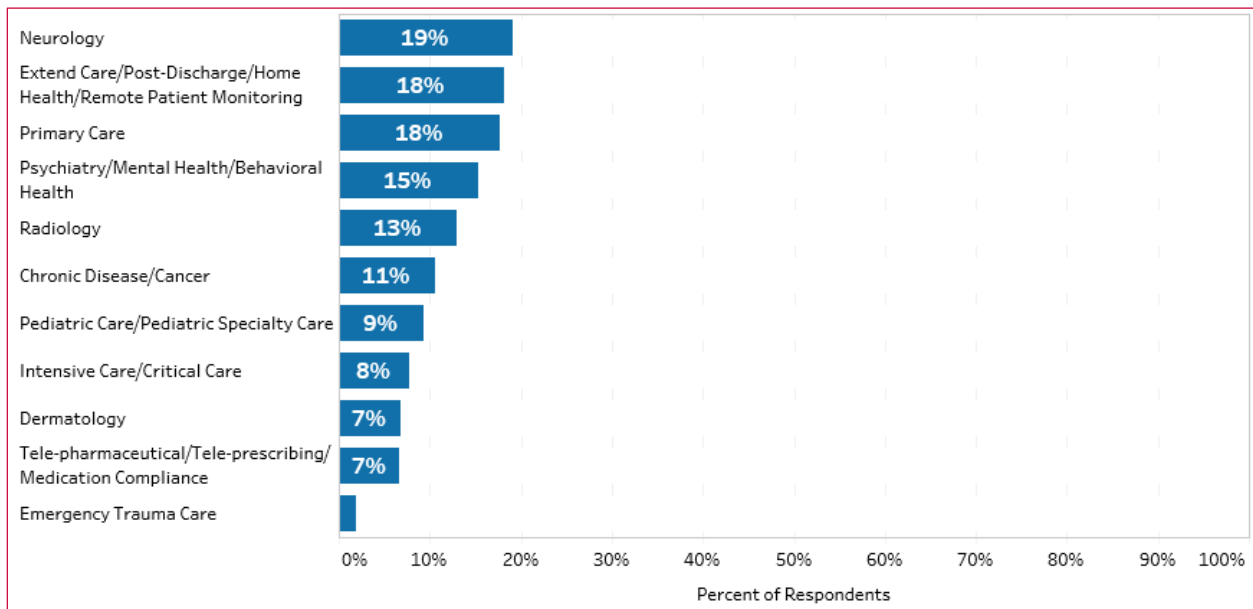


Despite a vast number of potential applications and use cases; current telehealth industry utilization can be categorized into four major classifications of health care services<sup>13</sup>:

- **Patient care**, including the sharing of audio, video, and medical data between the patient and health care practitioner; specialist consultation; and diagnostic image review for the purpose of treatment and diagnosis
- **Remote patient monitoring**, including the collection and transmission of patient health data to monitoring stations (i.e. electrocardiogram, glucose levels, blood pressure readings, etc.)
- **Medical education and mentoring** of health care practitioners on special topics or procedures
- **Consumer medical and health information** which can assist in improving life style changes for improved health

Findings from the Agency’s survey of Florida licensed health care facilities demonstrates varied usage of telehealth modalities across provider types, with the most use and variation occurring among hospitals. Teleneurology is one of the most prevalent services offered from facilities who utilize telehealth in Florida (Figure 8).

**Figure 8. Types of Health Care Services Offered by Hospitals Completing the Survey That Currently Use Telehealth**



## Telehealth Service Examples

### Study on Veterans Affairs Use of Tele-rehabilitation

The United States Department of Veterans Affairs (VA) introduced its telehealth program in 1990 and is considered a pioneer in this industry. During calendar year 2012, the VA served more than 485,000 patients and completed approximately 1.4 million telehealth consultations.<sup>14</sup> One study examined the VA's use of telehealth on a group of 26 veterans living in rural areas who received physical therapy via in-home video or tele-rehabilitation. All of the participants in the tele-rehabilitation study showed significant improvement and reported satisfaction with their experience. In addition to positive results, the use of tele-rehabilitation in this case was associated with minimizing time, expense, and inconvenience of receiving in-person care.<sup>15</sup>

### Study on Impact of Virtual Physician Use in Skilled Nursing Facility

Cobble Hill Health Center, a 360 bed Skilled Nursing Facility in New York, participated in one-year study that looked at the impact of using "virtual physicians" (video conferencing) outside of regular primary care physician hours. According to the study 60%-70% of nursing facility to hospital transfers, when viewed in retrospect, should not occur. Additionally, these transfers often lead this senior population to increased confusion, fall risk, risk of skin ulcers, and exposure to hospital acquired infections. During the one-year study, 91 patients avoided unnecessary hospitalizations. Of those, 63% were long term care residents and 37% were short term patients.<sup>16</sup>

### Mayo Clinic Tele-Stroke Network Program

Real-time applications of telehealth can allow for instantaneous assistance through a live video conferencing "hub and spoke" model. These real-time applications are often used for specialist consultation. One example is for tele-neurology, when a patient is experiencing a stroke and a neurologist is hours away. The Mayo Clinic has implemented a model to assist smaller and underserved hospitals with less extensive neurology services in providing stroke care. The study notes improved patient functional outcomes – with a higher percentage reporting no significant disability, higher overall self-reported health, and improved neurological status within 24 hours and after 90 days.<sup>17</sup>

### United Kingdom Department of Health's Whole System Demonstrator Program

The United Kingdom's study on remote patient monitoring is the largest known randomized control trial of telehealth. The study involved 6,191 patients, including 3,030 patients who had one of three conditions: diabetes, chronic heart failure (CHF), or Chronic Obstructive Pulmonary Disease (COPD). The patients were remotely monitored by 238 general practitioners. Study

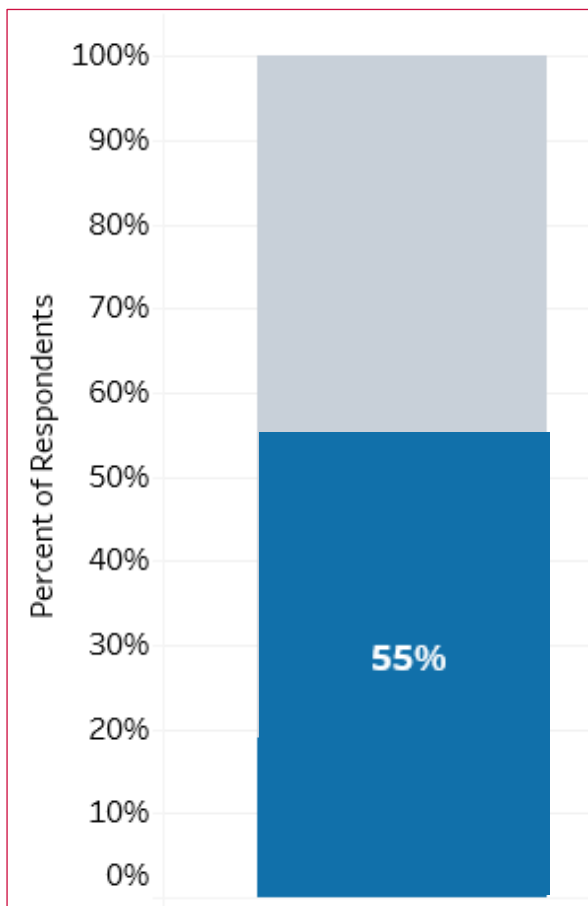
results published in 2012 indicated a 45% reduction in mortality rates and 20% reduction in emergency department admissions among the study population.<sup>18</sup>

## The Extent of Telehealth Use by Health Care Practitioner and Facility

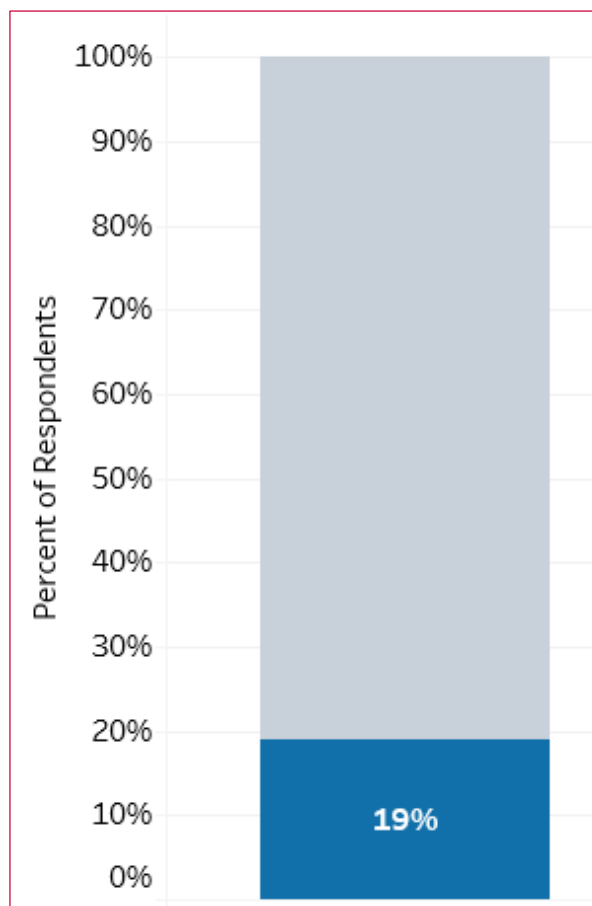
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The use of telehealth technologies to provide health care services is growing at a significant rate. Among Florida facilities and practitioners that completed the survey and who indicated they use telehealth, a majority have recently begun providing telehealth services. 55% of practitioners and 19% of facilities indicate they began offering telehealth services for the first time within the last year (Figures 9 & 10). Major factors driving the adoption of telehealth include advancing technologies, an aging population, health practitioner shortage, and greater acceptance of innovative treatment by patients. Although telehealth capabilities have been available for many years, recent advancements in technology and greater accessibility to those technologies are catalysts for growth.

**Figure 9. Percent of Practitioners Who Reported Using Telehealth for Less Than 1 Year.**



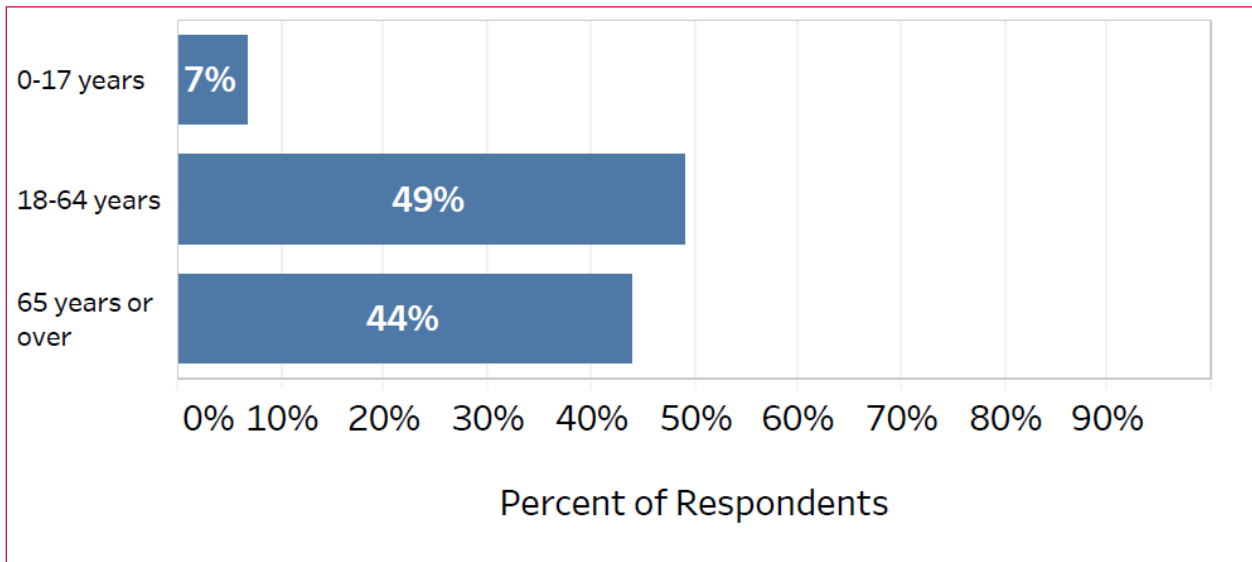
**Figure 10. Percent of Facilities That Have Been Using Telehealth for Less Than 1 Year.**





Florida is especially impacted by a senior population that is growing faster than the national rate. Persons aged 65 years and older comprised 12.4% of the United States population in 2000, but are expected to grow to be 19% of the population by 2030.<sup>19</sup> As of July 2015, Florida's seniors made up 19.4% of Florida's population.<sup>20</sup> Our nation's senior population is known to have higher rates of chronic disease including congestive heart failure (CHF), chronic obstructive pulmonary disease (COPD), diabetes, hypertension (high blood pressure), and end stage renal disease than persons under the age of 65. This growing population with complex care needs is largely responsible for rising health care costs nationally and presents an urgent need for innovative care delivery. Furthermore, while the senior population is increasing, the health practitioner population is decreasing. The Association of American Medical Colleges anticipates a shortfall of more than 130,000 physicians nationally by 2025.<sup>21</sup> Patients are also becoming more proactive in their health care delivery choices - with utilization of telehealth services expected to increase nationally from an estimated 250,000 patients in 2013 to an estimated 3.2 million patients in 2018.<sup>22</sup> Based on survey responses, a majority of Florida patients using telehealth services offered through licensed facilities are between the ages of 18-64. Close behind, 44 % of persons receiving health care via telehealth technology are seniors (Figure 11).

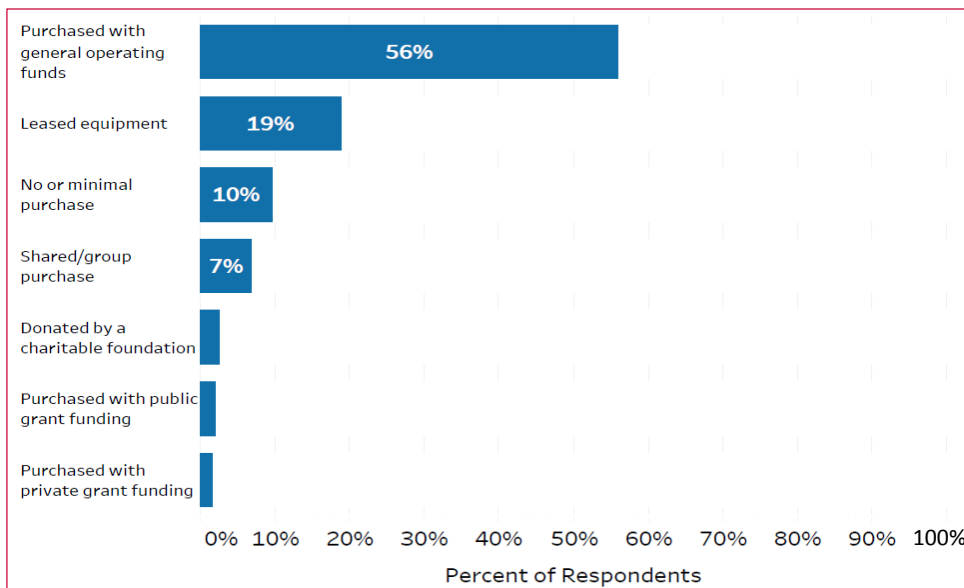
**Figure 11. Reported Age Categories of Floridians Using Telehealth Services**



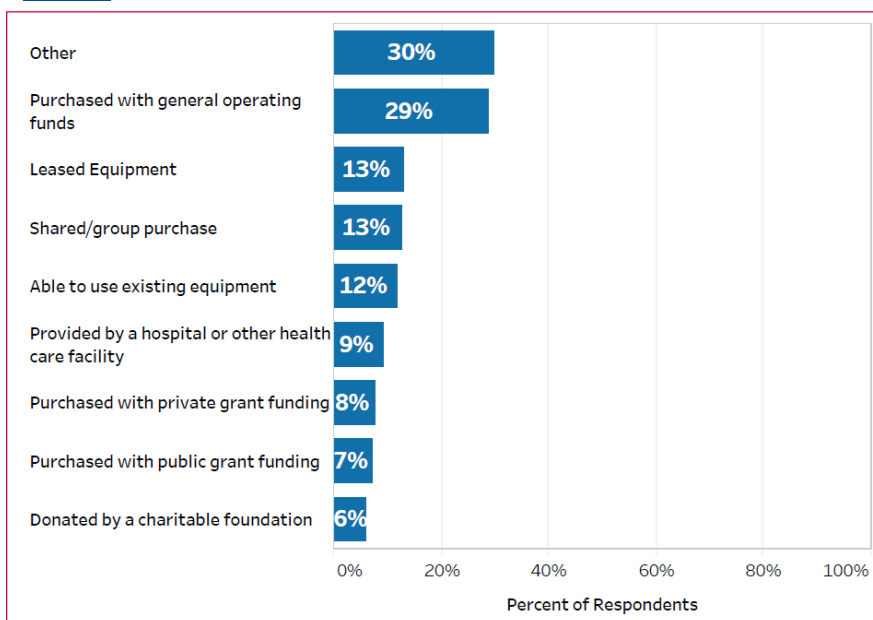
# Costs and Cost Savings

There are a number of different and varying costs associated with the development and operation of telehealth services. Costs vary by delivery model and are a product of project establishment and equipment investments, maintenance fees, communications fees, and staffing expenses.<sup>23</sup> Health care providers typically absorb the cost for implementation of telehealth services.<sup>24</sup> Florida facilities and practitioners are not immune to these costs, indicating that equipment and on-going costs needed to provide telehealth services were purchased using general operating funds (Figures 12 & 13).

**Figure 12. Sources of Funding for Telehealth Equipment Among Facilities Offering Telehealth Services**



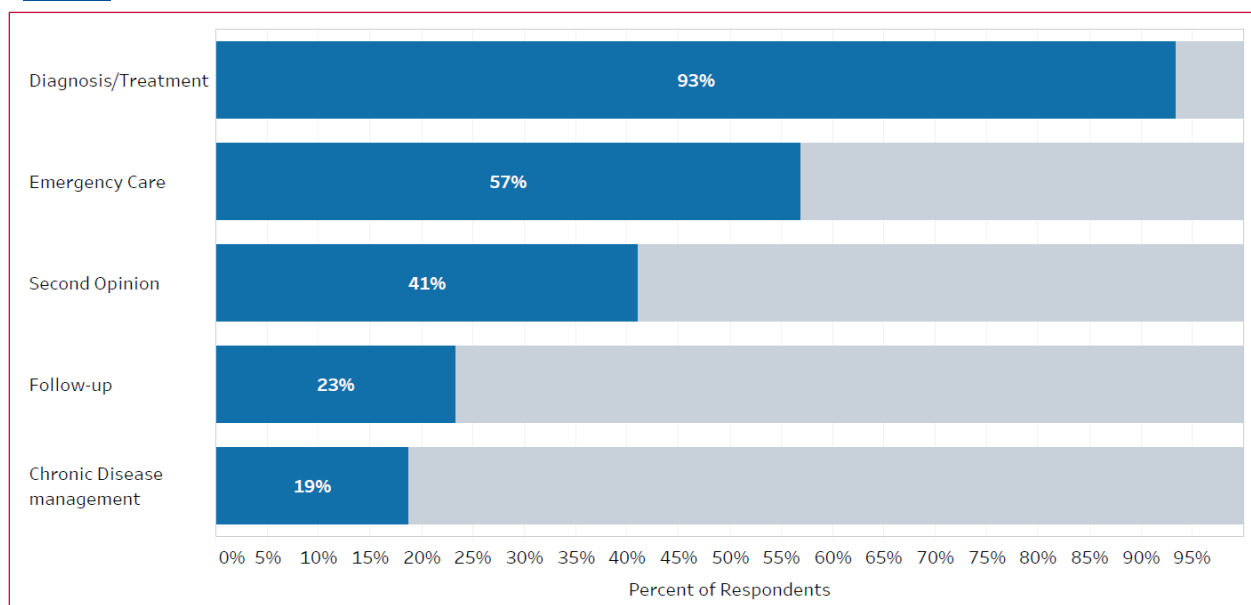
**Figure 13. Sources of Funding for Telehealth Equipment Among Health Care Professionals Offering Telehealth Services**



Operational cost savings derived from employing telehealth services are typically denoted from a Health System perspective rather than an individual provider perspective. The American Hospital Association notes that direct return on investment for health care providers is limited; particularly when there is limited coverage and reimbursement by health plans for the services offered by telehealth.<sup>25</sup> Florida health facilities and practitioners identify costs, reimbursement, and inability to determine a Return on Investment (ROI) as challenges in providing telehealth services (Figures 15, 16, and 17).

From a national perspective, some studies have determined that telehealth can help achieve the Institute for Healthcare Improvement’s (IHI) *Triple Aim* goals of improving the patient experience of care, improving population health, and lowering health care costs by improving access to appropriate, lower-cost services such as timely primary or specialty care, or through lower-cost settings such as clinics, homes or workplaces.<sup>26</sup> The U.S. Centers for Medicare and Medicaid Services (CMS) view telehealth as a cost-effective alternative to traditional service delivery.<sup>27</sup> Florida health providers corroborate this theory by identifying diagnosis/treatment and emergency care as top uses for telehealth (Figure 14).

**Figure 14. Telehealth Use by Facilities**



In terms of telehealth cost effectiveness related to clinical outcomes, some stakeholders believe additional research is needed.<sup>28</sup> A stakeholder group brought together by the Center for Connected Health Policy found that additional controlled studies need to be done in this area.<sup>29</sup> The studies in this field are each limited to different telehealth modalities, settings, diseases or conditions, or patient groups. This diversity makes it difficult to generalize cost effectiveness as a whole.<sup>30</sup>

Figure 15. Barriers to Implementation Among Facilities Offering Telehealth

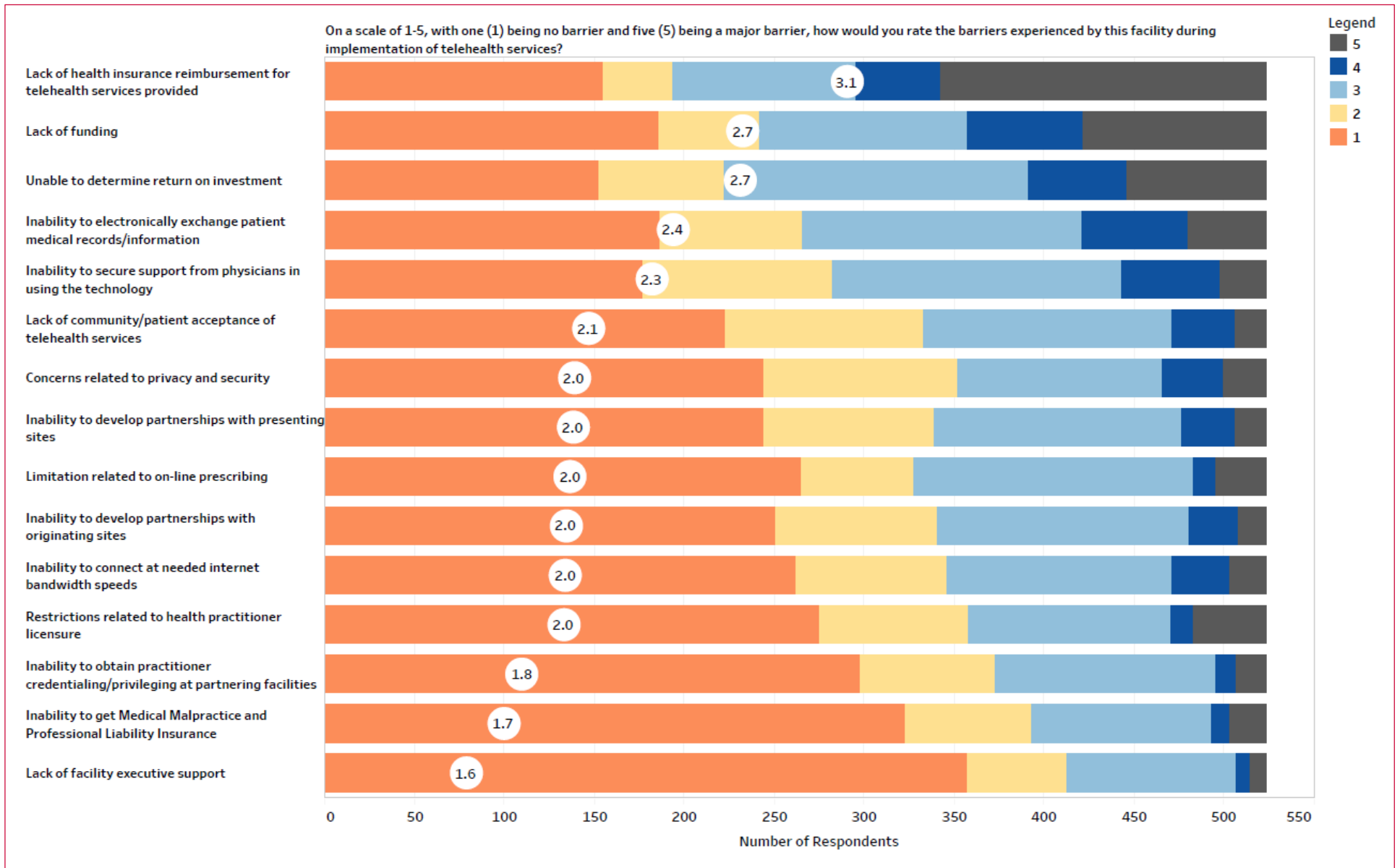


Figure 16. Barriers to Implementation Among Facilities Attempting to Offer Telehealth Services

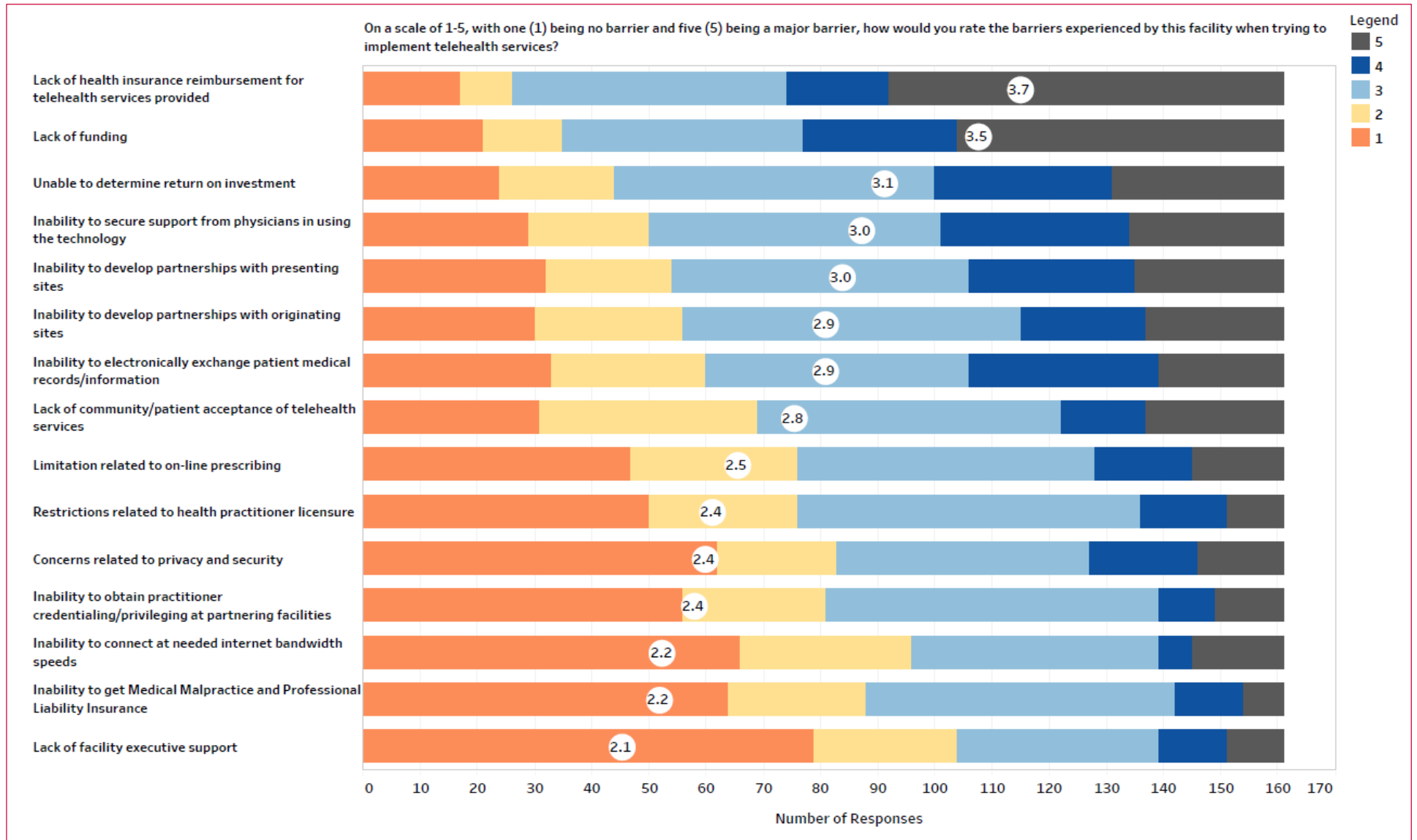
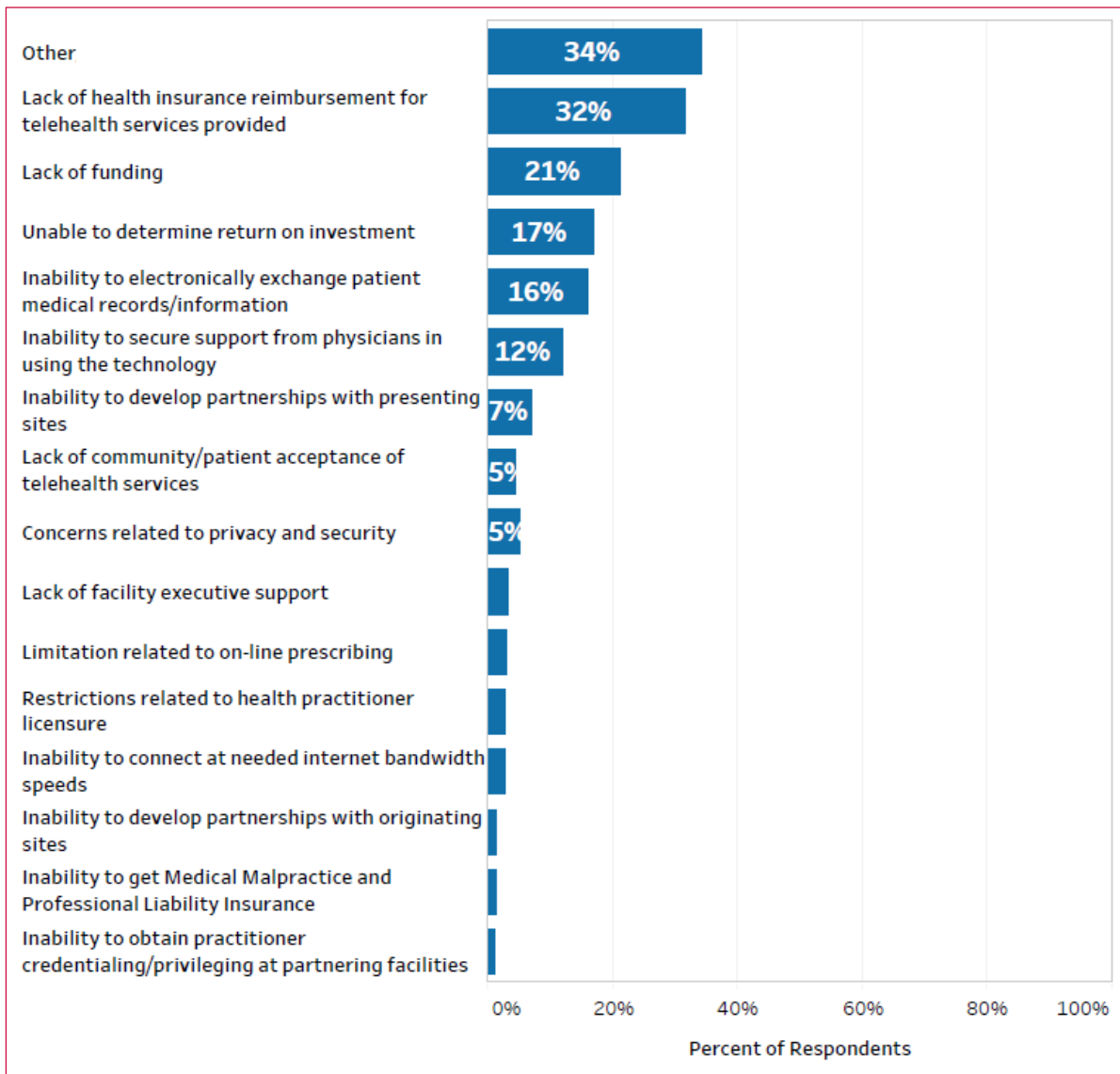


Figure 17. Barriers for Implementing Telehealth Among Practitioners' Private Offices or Group Practices



## Studies Related to Telehealth Costs and Savings

Some studies related to cost effectiveness in telehealth have found comparable costs or cost savings compared to traditional care delivery. In a legislatively mandated report, Maryland's Department of Health and Hygiene found that Medicaid expenditures using a live video conferencing model could increase costs to the state by increasing services provided.<sup>31</sup> The report also noted that the costs could potentially be off-set by reductions in emergency department visits and transportation expenses. A separate study by Dale Yamamoto found potential savings of \$126 per acute care visit for private payers. This study also estimates Medicare could save approximately \$45 per telehealth visit when compared to the average estimated cost of \$156 for in-person care.<sup>32</sup>

## United States is the Department of Veteran Affairs

One of the largest users of telehealth in the United States is the Department of Veteran Affairs (VA). The VA has reported that home telehealth services reduced bed days associated with inpatient hospital care by 59% and overall hospital admissions by 35% in 2013. Additionally, clinical video telehealth services reduced bed days of care for mental health care patients by 38%. The VA identified cost savings of approximately \$2,000 per person per year for home telehealth; \$34.45 per consult for clinical video telehealth, and \$38.81 in travel costs per consult for store-and-forward telehealth.<sup>33</sup>

## United States Department of Justice

A report from the US Department of Justice in 1999 identified potential for cost savings in the prison system. The initial demonstration included installing a telemedicine network and interoperable health data exchange capabilities. The report demonstrated that telehealth could play an important role in delivering quality health care in correctional systems at a cost savings to most institutions. Based on the data from the study, the cost-benefit analysis concluded a telehealth consultation would cost an average of \$71, compared with \$173 for an in-person consultation. A follow up report in 2002 provided guidance to correctional institutions on conducting a cost benefit analysis for determining the most appropriate technologies and implementations.<sup>34</sup>

## Study on Impact of Virtual Physician Use in Skilled Nursing Facility

The Cobble Hill study, which used virtual physicians during “off” hours to supplement in-person care, was able to identify a project “net system savings” of over \$1.1 million. However, the study noted a projected increase in spending of over 137,000 for the New York Medicaid program.<sup>35</sup>

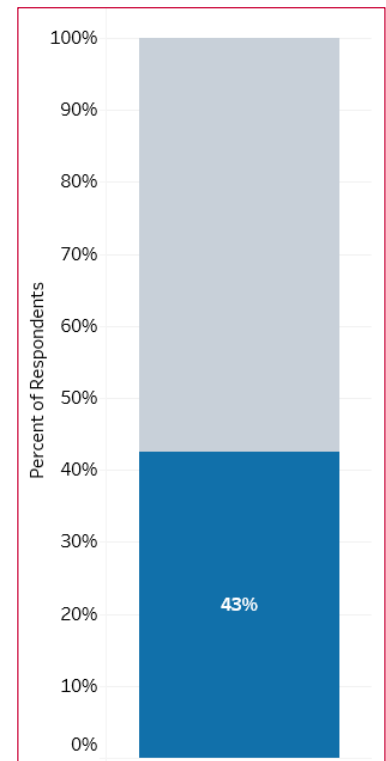
## Mayo Clinic Telestroke Network Program

A telestroke network program implemented by Mayo Clinic reported a net savings to hospitals for Medicare patients. This savings takes into consideration initial hospitalization recurrent stroke, nursing home and rehabilitation costs. Additionally, Mayo identifies that Medicare expenditures decrease overall when considering inpatient, recurrent stroke and rehabilitation reimbursements. This is determined by the offset expenditures from decreasing recurrent stroke and rehabilitation care.<sup>36</sup>

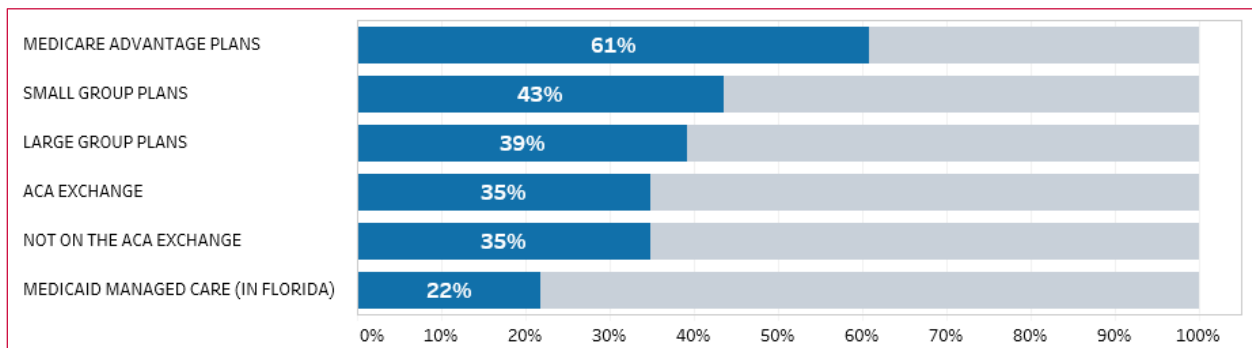
# Coverage and Reimbursement for Telehealth Services

Reimbursement levels and allowances for telehealth services vary from state to state and from entity to entity. Some public and private payers limit reimbursement for health services offered through telehealth technology by the type of telehealth service offered and/or by the locations where care is provided and received. 43% of Florida health insurers indicate that they cover some form of telehealth services (Figure 18). Companies who offer Medicare Advantage plans were shown as having the largest percentage of plans offering reimbursement to health care providers for service provided through telehealth technologies (Figure 19). Coverage typically is limited to certain delivery types and requires special coding (Figure 20). A majority of health insurers indicate very limited coverage. Florida health care provider and practitioner survey responses (Figures 15 & 16) concur with health insurer responses by citing a lack of reimbursement as a barrier to implementation

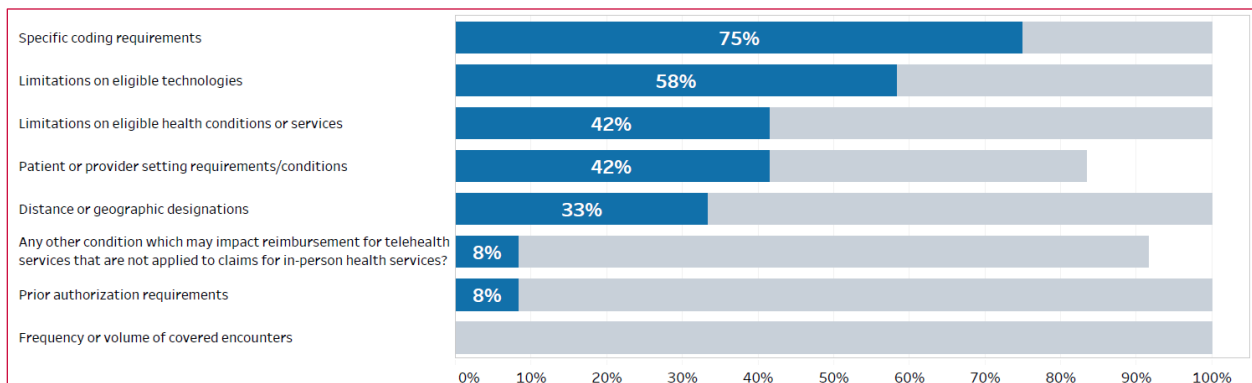
**Figure 18. Percentage of Health Plans That Reimburse for Telehealth**



**Figure 19. Percentage of Health Plans That Reimburse for Telehealth by Coverage Type**



**Figure 20. Percentage of Health Plans Reporting Required Conditions for Reimbursement**

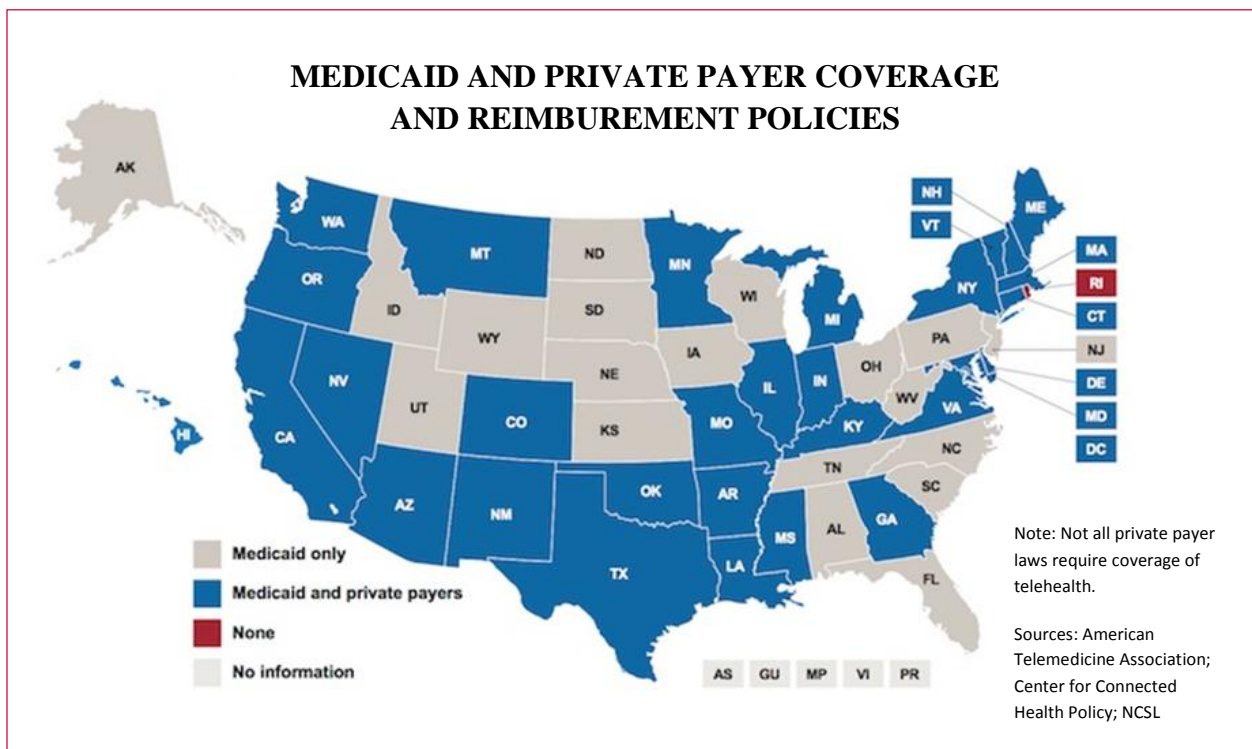




# Private and Commercial Insurance Coverage and Reimbursement

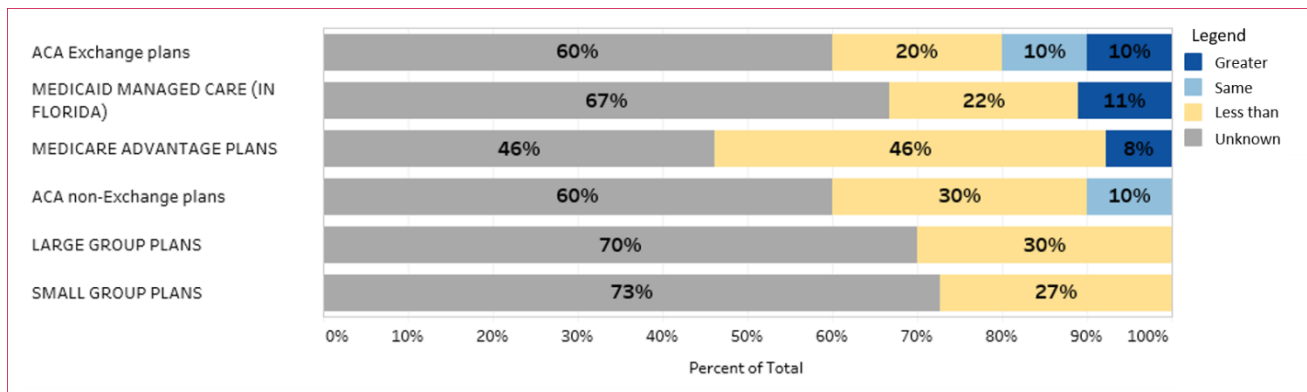
As of December 2016, 29 states, including the District of Columbia, have active parity laws which require private payer coverage and payment for telehealth services to be equitable with coverage and reimbursements for face-to-face health services. Additional states have passed similar parity laws that will become effective in 2017. Of this latter group, Massachusetts is the only state that has regulations exclusively requiring private insurance companies to reimburse for services provided through telehealth.<sup>37</sup> The definition of telehealth in each of these states varies, and some state definitions may include limitations on the telehealth modalities encompassed in required coverage and payment models. (Figure 21)

Figure 21. States with Specific Telehealth Coverage and Reimbursement Regulations



Notable differences in the state regulations include whether telehealth services must be reimbursed at the same rate as in-person services; or whether the state only requires that the same services be covered but allow for variable rates of reimbursement.<sup>38</sup> Florida does not currently have any statutory requirements related to private payer parity for telehealth services. Some private payers in the state have voluntarily opted to provide coverage and reimbursement for telehealth services (Figure 22).

**Figure 22. Percentage of Health Plans Providing Coverage and Reimbursement for Telehealth**

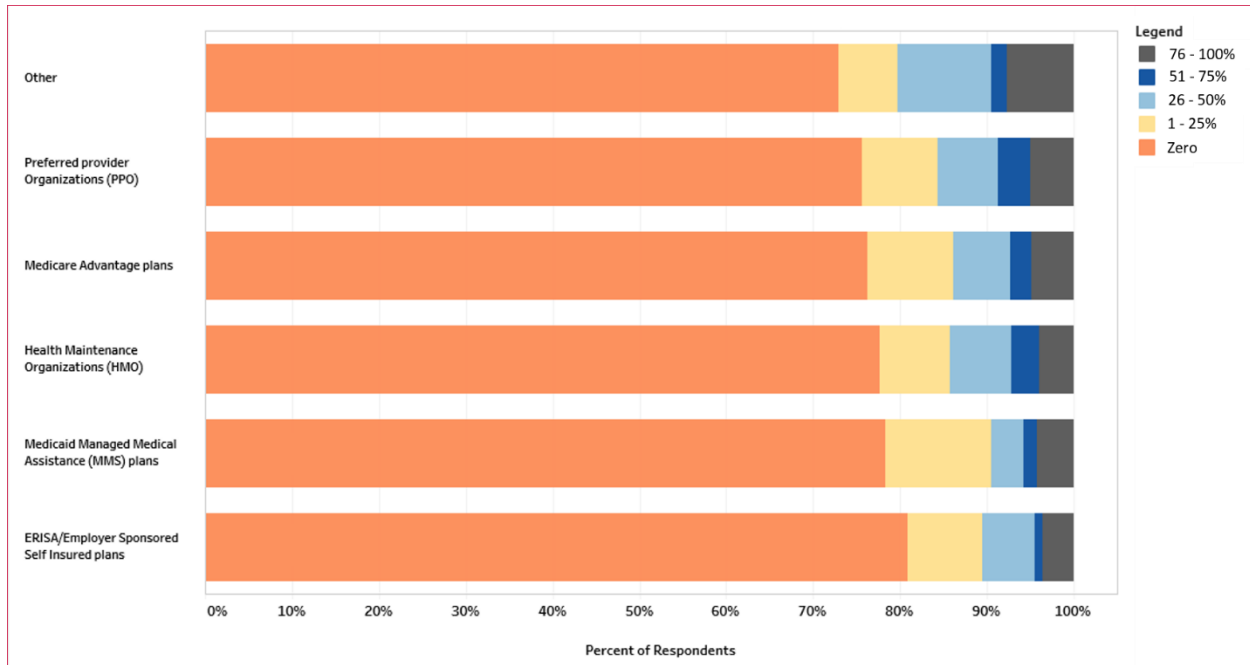


## Medicare and Medicaid Coverage and Reimbursement

Medicare offers coverage for specific telehealth services delivered at designated sites covered under Medicare. The U.S. Centers for Medicare and Medicaid Services (CMS) requires both a distant site and a separate originating site (hub and spoke model) within its definition of allowable telehealth services. Asynchronous (store and forward) activities are only reimbursed by Medicare in federal demonstration projects in Hawaii and Alaska. To qualify for Medicare reimbursement, the originating site must be located in a federally defined rural county, designated rural, or identified as a participant in a federal telemedicine demonstration project as of December 21, 2000.<sup>39</sup> Additionally, the originating site is limited to specific designated locations including a practitioner’s office, a Critical Access Hospital (CAH) or other hospital, a federally certified Rural Health Clinic (RHC); a Federally Qualified Health Center (FQHC), renal dialysis centers associated with a hospital or CAH, skilled nursing facility, or community mental health center.

In addition to the 28 states that require parity coverage for telehealth services, there are currently 18 states that provide Medicaid coverage and reimbursement for telehealth services. At least 17 states have some reimbursement for remote patient monitoring; and nine states reimburse for store and forward services under their Medicaid program.<sup>40</sup> Within each of these reimbursement models, there are variances in the types of services, specialties, providers, and locations that are covered.

**Figure 23. Percentage of Reimbursement to Health Facilities by Health Plan**

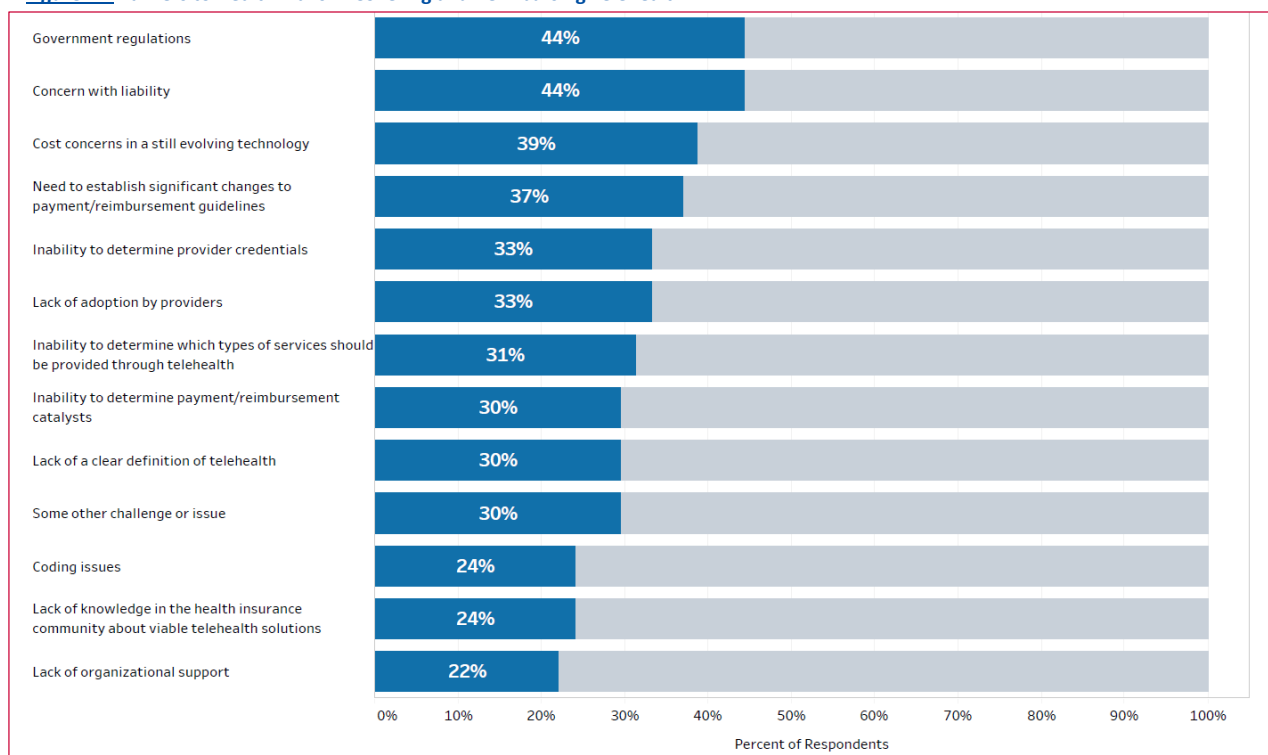


The Florida Medicaid fee-for-service rules were updated in June, 2016 to expand telehealth payments to a broader array of practitioners. Similar to Medicare, Medicaid coverage in Florida is limited to live video conferencing, and pays the practitioner that provides the diagnosis only.<sup>41</sup> With the vast majority of Florida Medicaid beneficiaries enrolled in managed care, Florida’s Medicaid Managed Care plans are authorized to cover telehealth services with greater flexibility; however, there is no mandate for coverage. Based on survey responses by Florida health plans, coverage for telehealth is greatest for Medicaid Managed Care and Affordable Care Act Exchange Plans (Figure 22). Florida health care providers indicate very little reimbursement for telehealth services no matter the plan type (Figure 23).

## Barriers to Telehealth

Although telehealth adoption and expansion are on the rise, stakeholders consistently acknowledge there are challenges. The primary issues related to telehealth often cited are financial, interoperability, and licensure.<sup>42</sup> Florida providers and practitioners noted financial issues and lack of interoperability as top barriers and challenges for implementing and continuing to offer telehealth services. (Figures 15 & 17) Health plans indicate regulations and liability concerns as barrier to providing coverage and reimbursement. (Figure 24)

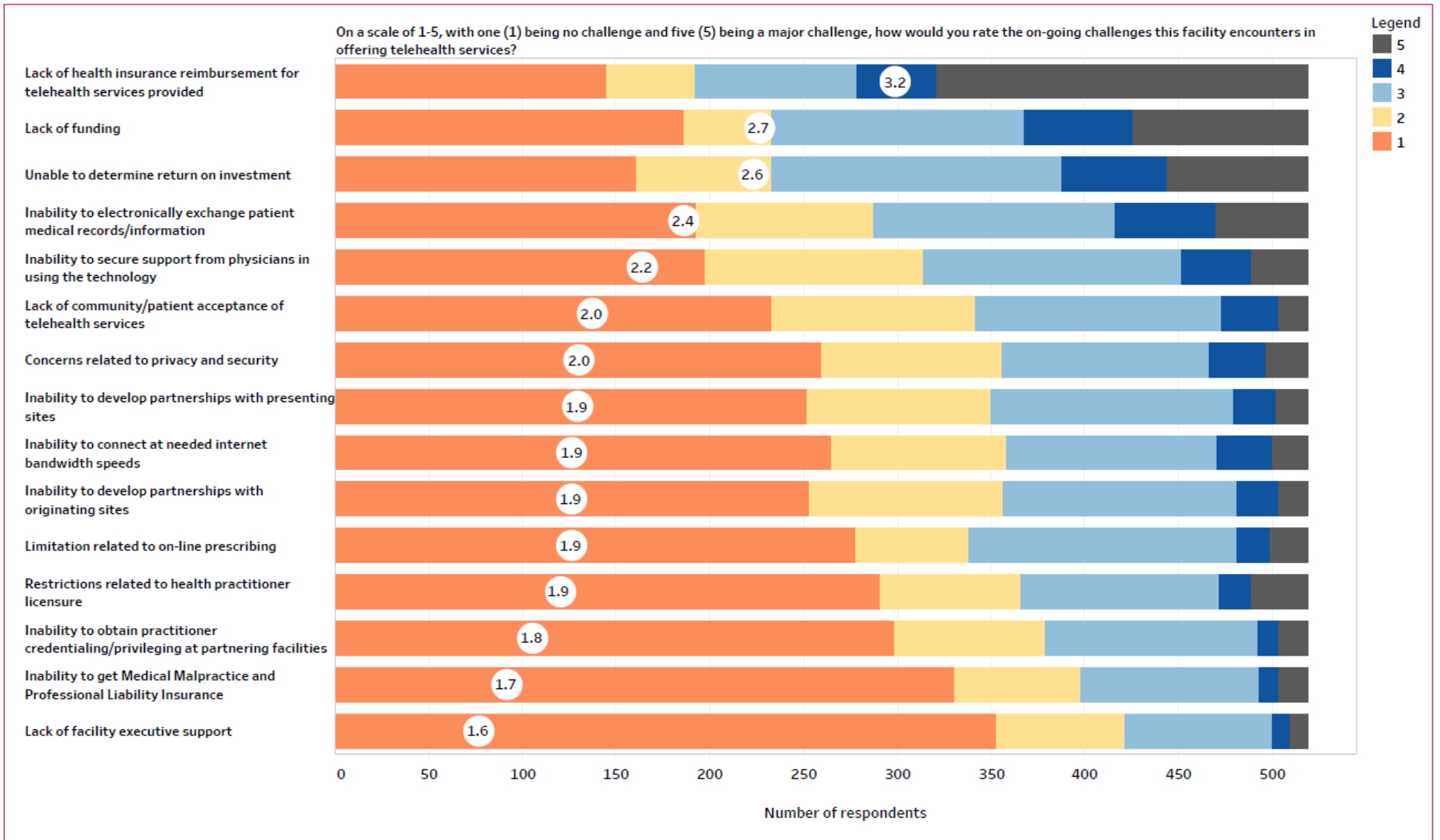
**Figure 24. Barriers to Health Plans in Covering and Reimbursing Telehealth**



## Financial

Florida facility and practitioner licensees who responded to the survey indicated the top three barriers to implementing telehealth involve finances: inadequate reimbursement from payers, insufficient funding capital, and the inability to determine return on investment. These were also ongoing challenges for facilities in maintaining their programs. The same top three barriers were identified by organizations that had tried to implement telehealth in the past, but had discontinued their telehealth programs prior to responding to the survey. (Figures 15, 16, 17) Although not the most frequently reported concern from payers, costs were identified among the top three on-going challenges related to reimbursement for telehealth services.

**Figure 25. On-Going Challenges for Facilities Offering Telehealth**



## Interoperability

Florida facility and practitioner licensees offering telehealth point to the lack of interoperability between providers as a significant barrier to implementing telehealth. (Figures 15, 16, and 17).

Survey respondents for Florida facilities point to the lack of interoperability between providers as a significant barrier to implementing telehealth. A bipartisan focus group brought together by Health Affairs and the Bipartisan Policy Center also identified the lack of interoperability between electronic health record systems and medical devices as a barrier to telehealth expansion. They noted that the lack of interoperability is both a technical and human issue. In some instances, the technical capability in place limits sharing of data; however, in some cases technology vendors, individual practitioners, or health facilities express an unwillingness to share information with other health care providers.<sup>43</sup>

In addition to interoperability between health care provider data systems, there is also a lack of interoperability between telehealth technology and electronic health record (EHR) platforms. Recently, Cerner (EHR vendor) and American Well began a partnership to merge their capabilities.<sup>44</sup> Allscripts (EHR vendor) began working with the University of South Florida Health (USF Health) on a telehealth - EHR integration project in 2012.<sup>45</sup> USF Health partnered with The Villages Health system to provide telehealth services to the United States' largest over-55 community.<sup>46</sup>

## Regulation and Liability

44% of health plans surveyed noted government regulations and liability as barriers for covering telehealth services. The issue of interstate practice and reimbursement is among the legal issues health plans must consider. Licensure of health care practitioner is the responsibility of each state. Practitioners must be licensed in the state where the patient resides. Health plans must ensure they are reimbursing health providers that are appropriately licensed in the jurisdiction where they are treating patients.<sup>47</sup>

## Knowledge

All facilities who completed the survey were provided an opportunity to express their opinion on “what would assist [them] in implementing, sustaining, or expanding telehealth services”. The responses varied greatly, however, there was a noted interest in additional information about telehealth in general and specific research data. The types of services and activities that fall under the auspice of telehealth were also an area of interest. Other respondents added the need for resources to assist them in determining using if telehealth would be appropriate for their facility.

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