CENTER FOR HEALTH INFORMATION AND ANALYSIS

MANDATED BENEFIT REVIEW OF S.B. 1154 SUBMITTED TO THE 189TH GENERAL COURT: AN ACT RELATIVE TO FULL APPLICATION OF TELEMEDICINE COVERAGE

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Actuarial Assessment



HEALTH BENEFIT PLAN MANDATE OVERVIEW:

S.B. 1154: AN ACT RELATIVE TO FULL APPLICATION OF TELEMEDICINE COVERAGE

HISTORY OF THE BILL

The Joint Committee on Public Health referred Senate Bill (S.B.) 1154, "An Act relative to full application of telemedicine coverage," sponsored by Sen. Gobi of Spencer in the 189th General Court, to the Center for Health Information and Analysis (CHIA) for review. Massachusetts General Laws chapter 3 §38C requires CHIA to review and evaluate the potential fiscal impact of each mandated benefit bill referred to the agency by a legislative committee.

WHAT DOES THE BILL PROPOSE?

Massachusetts General Laws Chapter 175 §47BB requires that, for insurance carriers who cover telemedicine services, such coverage be "consistent with coverage for health care services provided through in-person consultation" and that such coverage apply cost-sharing on the same terms it does for in-person services. It defines "telemedicine" as "the use of interactive audio, video or other electronic media for the purpose of diagnosis, consultation or treatment [excluding] the use of audio-only telephone, facsimile machine or e-mail." It allows a carrier to limit coverage of telemedicine services to providers in a telemedicine network approved by the carrier. The current statute applies only to general indemnity plans; S.B. 1154 would extend the law to the other major types of health insurance (HMOs, Blue Cross/Blue Shield, MassHealth) and to plans sponsored by the Group Insurance Commission.

MEDICAL EFFICACY OF S.B. 1154

Telemedicine is not a medical specialty or a particular service; rather it is a means to provide a healthcare service at a distance. A survey of the literature has found the use of telemedicine effective for a variety of conditions and situations, despite barriers that that have been identified. Evidenced-based guidelines, model policies, and federal and state laws are evolving in response. Despite the identified barriers, the use of telemedicine continues to grow.

CURRENT COVERAGE

Fully-insured carriers governed by Chapter 175 must meet the requirements of 175 §47BB, as described above. In responses to a recent survey of insurance carriers in Massachusetts, all responded that they currently cover telemedicine for a variety of conditions and services. Most carriers indicated that they manage separate telemedicine networks, contract with telemedicine service vendors and/or allow any network provider with the required infrastructure to perform covered telemedicine services. All cost sharing for covered telemedicine services is currently equal to that charged for in-person consultations under their policies, according to all carriers. This includes plans subject to the current law and ones not subject to it. Note that the current law and the proposed bill do not impose restrictions on rates carriers may pay providers for these services.



COST OF IMPLEMENTING THE BILL

Requiring coverage for this benefit by fully-insured health plans would result in an insignificant average annual increase, over five years, to the typical member's monthly health insurance premiums and is estimated to be zero.

The Massachusetts Division of Insurance and the Commonwealth Health Insurance Connector Authority are responsible for determining any potential state liability associated with the proposed mandate under Section 1311 of the Affordable Care Act (ACA).

PLANS AFFECTED BY THE PROPOSED BENEFIT MANDATE

The current statute, in Chapter 175, applies only to general indemnity plans; S.B. 1154 would extend the law to all commercial fully-insured health plans issued pursuant to Massachusetts General Laws, including HMOs and Blue Cross/Blue Shield, and to both fully- and self-insured plans operated by the Group Insurance Commission (GIC) for the benefit of public employees. The proposed bill would apply to members covered under the relevant plans, regardless of whether they reside within the Commonwealth or merely have their principal place of employment in the Commonwealth. Health benefit plan mandates do not apply to plans that cover Massachusetts residents but are issued in other states. The bill as drafted affects Medicaid/MassHealth; however, CHIA's analysis does not estimate the potential effect of the mandate on Medicaid expenditures.

PLANS NOT AFFECTED BY THE PROPOSED BENEFIT MANDATE

Self-insured plans (i.e., where the employer or policyholder retains the risk for medical expenses and uses a third-party administrator or insurance carrier only to provide administrative functions), except for those provided by the GIC, are not subject to state-level health insurance mandates. State mandates do not apply to Medicare and Medicare Advantage plans, the benefits of which are qualified by Medicare. This analysis excludes members of commercial fully-insured plans over 64 years of age. State mandates also do not apply to federally-funded plans including TRICARE (covering military personnel and dependents), the Veterans Administration, and the Federal Employee's Health Benefit Plan.



MEDICAL EFFICACY ASSESSMENT

Massachusetts Senate Bill (S.B.) 1154,² as submitted in the 189th General Court, would extend the scope of the current health insurance benefit statute regarding telemedicine services³ to reach not only general indemnity plans but also the other major types of commercial health insurance (HMOs, Blue Cross/Blue Shield) and plans sponsored by the Group Insurance Commission. The current statute requires that, for insurance carriers who cover telemedicine services, such coverage be "consistent with coverage for health care services provided through in-person consultation" and that such coverage apply cost sharing on the same terms it does for in-person services. It defines "telemedicine" as "the use of interactive audio, video or other electronic media for the purpose of diagnosis, consultation or treatment [excluding] the use of audio-only telephone, facsimile machine or e-mail." It allows a carrier to limit coverage of telemedicine services to providers in a telemedicine network approved by the carrier.

M.G.L. c. 3 §38C charges the Massachusetts Center for Health Information and Analysis (CHIA) with reviewing the medical efficacy of proposed mandated health insurance benefits. Medical efficacy reviews summarize current literature on the effectiveness and use of the mandated treatment or service, and describe the potential impact of a mandated benefit on the quality of patient care and the health status of the population.

TELEMEDICINE

According to the American Telemedicine Association (ATA), telemedicine is "the use of medical information exchanged from one site to another via electronic communications to improve a patient's clinical health status." This definition broadly includes two-way video, email, smart phones, wireless tools and other telecommunications technologies, and encompasses patient video conference consultations, the transmission of still images, patient portals, remote vital sign monitoring, continuing medical education, nursing call centers, and consumer-focused patient wireless applications.

The federal Center for Medicare and Medicaid Services (CMS) defines telemedicine more narrowly as a method "to improve a patient's health by permitting two-way, real time interactive communication between the patient, and the physician or practitioner at the distant site. This electronic communication means the use of interactive telecommunications equipment that includes, at a minimum, audio and video equipment." The CMS definition does not include telephone, facsimile machines, or email, but instead groups these telecommunications methods under the broader definition of telehealth. This definition is consistent with that used in the current and proposed telemedicine health benefit plan mandates in Massachusetts.

While the technological definition is somewhat more narrow than that defined under the broad CMS umbrella of telehealth, the Massachusetts mandate does not limit the use of telemedicine further by type of provider, patient, disease, service, or location of patient or provider, as do Medicare regulations, for example. (See Appendix A.)



Telemedicine is not a distinct specialty, but is instead the use of interactive telecommunication technologies to deliver a variety of healthcare services to treat many different diseases and conditions. The following table is a sample of services, specialties, and diseases involved in studies - conducted or underway—to review the effectiveness of telemedicine for use in specific patient populations.

Services9

- Disease screening¹⁰
- Diagnosis¹¹
- Monitoring/Status assessments12
- Patient education¹³
- Evaluation14
- Consultations¹⁵
- Rehabilitation/Therapy¹⁶
- Behavioral health sessions17
- Medication management¹⁸

Specialties

- Audiology¹⁹
- Cardiology²⁰
- Dentistry^{21,22}
- Dermatology 23
- Endocrinology²⁴
- Neuropsychology²⁵
- Occupational therapy²⁶
- Ophthalmology²⁷
- Pediatrics²⁸
- Pharmacy²⁹
- Physical therapy³⁰
- Primary care³¹
- Psychiatry/Psychology^{32,33}
- Speech-language pathology³⁴
- Surgery (pre- and postoperative)35
- Urgent care³⁶

Diseases

- Chronic illnesses37
 - Asthma³⁸
 - Chronic kidney disease³⁹
 - Chronic wounds⁴⁰
 - Diabetes41
 - Heart disease⁴²
 - Hypertension⁴³
 - Irritable Bowel Syndrome⁴⁴
 - Pain management⁴⁵
 - Smoking cessation⁴⁶
 - Multiple sclerosis47
 - Parkinson's disease48
- Mental health^{49,50}
 - Attention-deficit hyperactivity disorder⁵¹
 - Agoraphobia/panic disorders52
 - Anxiety disorders53
 - Depression⁵⁴
 - Post-traumatic stress disorder⁵⁵
 - Schizophrenia⁵⁶
- Acute conditions
 - Stroke57

Given the large body of evidence that continues to develop across a wide range of topics in telemedicine, many specialty associations, as well as the American Telemedicine Association and the Federation of State Medical Boards, have issued and continue to develop position papers, standards, and guidelines regarding the use of telemedicine for various patients, conditions, or technologies. Appendix B lists examples of these. Some of these are evidence-based guidelines that may be used by clinicians when "feasible and practical...in order to provide quality telehealth care."58



MEDICAL EFFECTIVENESS OF SERVICES DELIVERED THOUGH TELEMEDICINE

The use of telemedicine continues to grow, through both the expansion of the technology to new services, and additional patient-clinician encounters. Many studies and reviews have found the use of telemedicine effective for a variety of conditions and situations, but researchers caution that the evidence itself may be limited, inconsistent, and sometimes contradictory, prompting the need for more rigorous and expansive studies before broad conclusions may be drawn.

For example, in a review of 80 separate systematic reviews, researchers found that in 21 reviews telemedicine was found to be effective, 19 concluded that telemedicine is promising or has potential but that more research is needed, and 22 found the evidence of effectiveness to be inconclusive or inconsistent. For Another study reviewed 141 randomized control trials (RCTs) analyzing 148 telemedicine interventions for five common chronic diseases (asthma, COPD, diabetes, heart failure, hypertension). Here researchers found the reviewed source articles showed positive effects from telemedicine in 108 of the RCTs, and negative effects in only two, with similar effects across all of the diseases studied. However, the study authors again summarized that the evidence base for the value of telemedicine for managing chronic conditions is "weak and contradictory," citing publication bias and the short-term duration of the studies as reasons for their cautionary conclusion.

While additional research remains to be conducted and an overall conclusion about the effectiveness of telemedicine cannot be broadly drawn, telemedicine has been found to be effective for specific conditions and situations. Specifically, studies have found telemedicine to:

- Improve self-management of chronic conditions for young people in pediatric care.⁶¹
- Enable more timely access to surgical care for patients with head and neck cancer.⁶²
- Reduce geographic barriers to initial oral medical consultation for remote patients, resulting in additional expert clinical examination for the "significant majority of patients."⁶³
- Improve outcomes "in almost all areas in the continuum of cardiovascular disease," including early diagnosis, second consultation, communication between clinicians, rate of follow-up, and secondary prevention efforts.⁶⁴
- Improve quality of life indicators and lead to similar health outcomes as routine care for patients with heart failure.⁶⁵
- Increase delivery of outpatient dermatologic care in "resource-poor primary care settings."
- Improve timely access to neurological expertise, and reduce geographic disparity in the diagnosis and treatment of acute stroke.⁶⁷ Reduce stroke disability and death for rural populations,⁶⁸ and reduce mortality after stroke in a population-wide study.⁶⁹
- Improve relapse duration, disease activity, short-term medication adherence, quality of life measures, disease knowledge, and remote disease management while reducing acute outpatient clinic visits for patients with Irritable Bowel Disease.⁷⁰
- Result in equivalent outcomes between in-person and video-teleconference-based geropsychiatry neurocognitive screenings.⁷¹
- Create a "feasible care delivery strategy in patients with" chronic kidney disease, as health outcomes were comparable to usual care.⁷²



- Significantly decrease the rate of emergency department use for ambulatory care sensitive conditions over one year for older residents residing in senior living communities through the use of high-intensity acute illness telemedicine care.⁷³
- Improve outcomes for adult asthma patients by decreasing the use of short-acting β-agonist (SABA) use, increasing SABA-free days, and improving Asthma Control Test scores for adults previously lacking asthma control.⁷⁴
- Increase the use of pharmacotherapy and patient satisfaction for those in a tobacco-cessation program.⁷⁵
- Address "barriers to care related to both logistics and stigma" for patients provided evidence-based psychotherapy for post-traumatic stress disorder (PTSD) and depression, with outcomes "paralleling those of clinic-based care delivered in person."
- Improve patient and provider satisfaction ratings, resulting in outcomes "equivalent to in-person care", especially for PTSD, depression, and attention-deficit hyperactivity disorders (ADHD), and for underserved ethnic groups, Native American, Hispanic, and Asian populations.⁷⁷
- Improve medication adherence, patient responsiveness, quality of life, and remission rates for patients with depression treated in a Telemedicine-Based Collaborative Care model.⁷⁸
- Improve blood glucose control for patients with diabetes.⁷⁹
- Provide advantages over non-telehealth alternative procedures for providing distance care in a variety of speech-language-hearing science (SLHS) areas related to hearing, speech, language, and swallowing assessments and interventions.⁸⁰

Authors of several studies have cited barriers to the effectiveness of telemedicine, including issues of training, regulation, reimbursement, licensing, technology, business processes, prescription policies, and the acceptance and recognition of benefit by both public and providers. ^{81,82} Moreover, the overall effectiveness of these interventions may depend on a variety of factors, including: the study population, including condition severity and participant disease trajectory; the specific function of the intervention or service provided, and its appropriate provision via telecommunication platforms; and the training, skill, processes, and support of the delivering provider or healthcare system. ⁸³ Other authors have cautioned that telemedicine may increase clinician workload, create duplication, or encourage redundancy or the inefficient use of resources. ⁸⁴ Some models may diminish the quality of care, by limiting patients to one reason per visit, discouraging continuity of care by restricting visits to the same provider, and by relinquishing responsibility for patient outcomes by requiring patients to sign disclaimers and releases prior to their telemedicine encounters. ⁸⁵ Such "telemedicine strategies... fail to meet the professional standards for a clinical encounter [and] jeopardize patient care."

Maintaining the standard of medical care will affect the growth in the utilization of telemedicine. Telemedicine, while "fundamentally different from...a face-to-face encounter" due to the physical separation of clinician and patient, introduces the new parameters and dynamics of a technology platform into the clinician-patient interaction and relationship.⁸⁷ Ideally, these encounters follow the standards of those present during the traditional visit, and include a thorough evaluation, evidence-based recommendations, necessary follow-up and referrals, and documentation.⁸⁸ The technology also creates new opportunities for encounters that may not otherwise be possible due to geography, patient condition or situation, or other factors. Moreover, these technology platforms offer the clinician the unique possibility to evaluate a patient's home environment and risk factors, interact with family members and other caregivers, communicate diagnostic and therapeutic information efficiently, and record visits for future reference, thus enabling the patient to review complex information and recommendations at a future time, such as goals-of-care discussions and self-management techniques.⁸⁹

In an article published in JAMA, the Journal of the American Medical Association, the authors stated that, "In its ideal form, telemedicine meets the standards of traditional encounters...[and] creates opportunities not present during traditional office encounters."⁹⁰



ADDITIONAL CONSIDERATIONS

With the growth of telemedicine services, numerous legal and regulatory considerations have surfaced, including how telemedicine relates to licensing, prescriptive ability, and credentialing. While S.B. 1154 does not address these matters per se, understanding them is useful to understanding in turn the provider's role in delivering telemedicine.

Licensing of telemedicine providers

Providing telemedicine across state lines often presents a challenge if the physician or other provider is not licensed in the state in which the patient is located. In Massachusetts, physician licensing and the practice of medicine is regulated by the Board of Registration in Medicine (the Board). The Board includes telemedicine within its definition of "practice of medicine," defining it as, "the provision of services to a patient by a physician from a distance by electronic communication in order to improve patient care, treatment, or services." Since the practice of medicine occurs where the patient is physically located at the time of the telemedicine encounter, hysicians providing telemedicine services to patients in Massachusetts are required to have a license to practice medicine in Massachusetts. This interpretation is consistent with the model policy of the Federation of State Medical Boards that provides, "[a] physician must be licensed, or under the jurisdiction, of the medical board of the state where the patient is located."

Other states have responded in several ways to the issue of state licensure and practicing telemedicine across state lines. First, at least twelve states have adopted the Interstate Medical Licensure Compact that provides an expedited pathway for physicians seeking to obtain a medical license in an additional state. Second, some states offer special purpose telemedicine or conditional licenses. Third, some states offer reciprocity with bordering states, i.e., they grant physicians licensed in the bordering state the privilege of practicing medicine in the patient's state, under certain conditions and if the bordering state also grants similar privileges to physicians from the patient's state. While Massachusetts does not provide for these alternatives, it does allow for an out-of-state exception for a physician or surgeon resident in another state who is a legal practitioner therein, when in actual consultation with a legal practitioner of the commonwealth... This provision allows for peer-to-peer consultation with a physician licensed in another state.

Prescriptive ability

Remote prescribing of medications through telemedicine presents a challenge for providers in some states. In Massachusetts, General Laws Chapter 94C provides that a prescription "shall be issued for a legitimate medical purpose by a practitioner acting in the usual course of his professional practice." The Massachusetts Board of Registration in Medicine has added that the prescription needs to be issued, "within a physician-patient relationship that is for the purpose of maintaining the patient's well-being," and "the physician must conform to certain minimum standards of patient care, such as taking an adequate medical history, doing a physical and/or mental status examination and documenting the finding." Furthermore, the Board provides, "[i]ssuance of a prescription, by any means, including the Internet or other electronic process, that does not meet these requirements is therefore unlawful." Some states have revisited their pharmacy policies to address the growth of telemedicine and allow for remote prescribing. ¹⁰²



Credentialing

Credentialing is the process of obtaining, verifying, and assessing the qualifications of a physician to provide care or services in or for a health care organization. These qualifications, or credentials, are documented evidence of the licensure, education, training, experience, or other qualifications of a licensed medical provider. Each time a physician practices medicine at a new health care organization, the physician's credentials must be verified, a process referred to as "credentialing." Hatter successful completion of credentialing, "privileges" to practice medicine at that health care organization are granted. "Privileging" refers to the authorization of the physician to provide a specific scope and content of services at a healthcare organization. Because credentialing is a time-consuming and burdensome process, the Centers for Medicare & Medicaid Services (CMS) enacted regulations to streamline the process of telemedicine services, upholding the Joint Commission's practice of allowing an originating site (where the patient is located) to use credentialing and privileging information from a distant site (where the provider of services is located) when making privileging decisions for telemedicine providers. 108,109,110,111

Massachusetts has seen some efforts to streamline credentialing. The Massachusetts Physician Credentialing Initiative, sponsored by numerous health care organizations, 112 established a standardized process for physician credentialing through which proof of education, experience, and training from primary sources (the entities issuing the credentials) are verified by a national credentials organization. 113 The CMS approach to credentialing has not been adopted.

CONCLUSION

Telemedicine is growing rapidly as an alternative method for providing diagnosis, consultation, and treatment. It has shown to be efficacious in numerous studies across many disciplines. Several legal and regulatory issues have arisen with its growth. Efforts to address these issues, as well as to streamline the provision and assure the quality of services, are being made through the creation and use of evidenced-based guidelines, model policies, and state and federal laws.



APPENDIX A: MEDICARE RULES REGARDING TELEHEALTH

- (a) Definitions. For the purposes of this section the following definitions apply:
 - (1) Asynchronous store and forward technologies means the transmission of a patient's medical information from an originating site to the physician or practitioner at the distant site. The physician or practitioner at the distant site can review the medical case without the patient being present. An asynchronous telecommunications system in single media format does not include telephone calls, images transmitted via facsimile machines and text messages without visualization of the patient (electronic mail). Photographs visualized by a telecommunications system must be specific to the patient's medical condition and adequate for furnishing or confirming a diagnosis and or treatment plan. Dermatological photographs, for example, a photograph of a skin lesion, may be considered to meet the requirement of a single media format under this provision.
 - (2) Distant site means the site at which the physician or practitioner delivering the service is located at the time the service is provided via a telecommunications system.
 - (3) Interactive telecommunications system means multimedia communications equipment that includes, at a minimum, audio and video equipment permitting two-way, real-time interactive communication between the patient and distant site physician or practitioner. Telephones, facsimile machines, and electronic mail systems do not meet the definition of an interactive telecommunications system.
 - (4) Originating site means the location of an eligible Medicare beneficiary at the time the service being furnished via a telecommunications system occurs. For asynchronous store and forward telecommunications technologies, the only originating sites are Federal telemedicine demonstration programs conducted in Alaska or Hawaii.
- (b) General rule. Medicare Part B pays for office or other outpatient visits, subsequent hospital care services (with the limitation of one telehealth visit every 3 days), subsequent nursing facility care services (not including the Federally-mandated periodic visits under § 483.40(c) and with the limitation of one telehealth visit every 30 days), professional consultations, psychiatric diagnostic interview examinations, neurobehavioral status exams, individual psychotherapy, pharmacologic management, end-stage renal disease-related services included in the monthly capitation payment (except for one "hands on" visit per month to examine the access site), individual and group medical nutrition therapy services, individual and group kidney disease education services, individual and group diabetes self-management (DSMT) training services (except for one hour of in-person services to be furnished in the year following the initial DSMT service to ensure effective injection training), and individual and group health and behavior assessment and intervention services, and smoking cessation services furnished by an interactive telecommunications system if the following conditions are met:
 - (1) The physician or practitioner at the distant site must be licensed to furnish the service under State law. The physician or practitioner at the distant site who is licensed under State law to furnish a covered telehealth service described in this section may bill, and receive payment for, the service when it is delivered via a telecommunications system.

i 42 CFR § 410.78 Telehealth services. Accessed 9 March 2016: https://www.law.cornell.edu/cfr/text/42/410.78.



- (2) The practitioner at the distant site is one of the following:
 - (i) A physician as described in § 410.20.
 - (ii) A physician assistant as described § 410.74.
 - (iii) A nurse practitioner as described in § 410.75.
 - (iv) A clinical nurse specialist as described in § 410.76.
 - (v) A nurse-midwife as described in § 410.77.
 - (vi) A clinical psychologist as described in § 410.71.
 - (vii) A clinical social worker as described in § 410.73.
 - (viii) A registered dietitian or nutrition professional as described in § 410.134.
- (3) The services are furnished to a beneficiary at an originating site, which is one of the following:
 - (i) The office of a physician or practitioner.
 - (ii) A critical access hospital (as described in section 1861(mm)(1) of the Act).
 - (iii) A rural health clinic (as described in section 1861(aa)(2) of the Act).
 - (iv) A Federally qualified health center (as defined in section 1861(aa)(4) of the Act).
 - (v) A hospital (as defined in section 1861(e) of the Act).
 - (vi) A hospital-based or critical access hospital-based renal dialysis center (including satellites).
 - (vii) A skilled nursing facility (as defined in section 1819(a) of the Act).
 - (viii) A community mental health center (as defined in section 1861(ff)(3)(B) of the Act).
 - (4) Originating sites must be located in either a rural health professional shortage area as defined under section 332(a)(1)(A) of the Public Health Service Act (42 U.S.C. 254e(a)(1)(A)) or in a county that is not included in a Metropolitan Statistical Area as defined in section 1886(d)(2)(D) of the Act. Entities participating in a Federal telemedicine demonstration project that have been approved by, or receive funding from, the Secretary as of December 31, 2000 qualify as an eligible originating site regardless of geographic location.
 - (5) The medical examination of the patient is under the control of the physician or practitioner at the distant site.
- (c) Telepresenter not required. A telepresenter is not required as a condition of payment unless a telepresenter is medically necessary as determined by the physician or practitioner at the distant site.
- (d) Exception to the interactive telecommunications system requirement. For Federal telemedicine demonstration programs conducted in Alaska or Hawaii only, Medicare payment is permitted for telehealth when asynchronous store and forward technologies, in single or multimedia formats, are used as a substitute for an interactive telecommunications system.
- (e) Limitations.
 - (1) A clinical psychologist and a clinical social worker may bill and receive payment for individual psychotherapy via a telecommunications system, but may not seek payment for medical evaluation and management services.
 - (2) The physician visits required under § 483.40(c) of this title may not be furnished as telehealth services.
- (f) Process for adding or deleting services. Changes to the list of Medicare telehealth services are made through the annual physician fee schedule rulemaking process.



APPENDIX B: SAMPLE OF TELEMEDICINE GUIDELINES, STANDARDS, AND POSITION PAPERS

American Telemedicine Association:114

- Practice Guidelines for Live, On Demand Primary and Urgent Care (2014)
- Clinical Guidelines for Telepathology (August 2014)
- Guidelines for TelelCU Operations (May 2014)
- Core Operational Guidelines for Telehealth Services Involving Provider-Patient Interactions (May 2014)
- A Lexicon of Assessment and Outcome Measures for Telemental Health (November 2013)
- Practice Guidelines for Video-Based Online Mental Health Services (May 2013)
- Quick Guide to Store-Forward and Live-Interactive Teledermatology for Referring Providers (April 2012)
- Expert Consensus Recommendations for Videoconferencing-Based Telepresenting (October 2011)
- Telehealth Practice Recommendations for Diabetic Retinopathy (February 2011)
- A Blueprint for Telerehabilitation Guidelines (October 2010)
- Practice Guidelines for Videoconferencing-Based Telemental Health (October 2009)
- Practice Guidelines for Teledermatology (December 2007)
- Home Telehealth Clinical Guidelines (2003)

American Academy of Dermatology Association:

- AAD Position Statement on Teledermatology (May 2015)¹¹⁵
- AAD Position Statement on Telemedicine (November 2013)¹¹⁶

American Academy of Neurology: AAN Legislative Position Statement on Telemedicine 117

American Medical Association: H-480.946 Coverage of and Payment for Telemedicine¹¹⁸

American Occupational Therapy Association: Telehealth Position Paper (November/December 2013)¹¹⁹

American Psychological Association: Guidelines for the Practice of Telepsychology (2013)¹²⁰

Society of American Gastrointestinal and Endoscopic Surgeons: SAGES Guidelines for the Surgical Practice of Telemedicine (2004)¹²¹

Federation of State Medical Boards: Model Policy for the Appropriate Use of Telemedicine Technologies in the Practice of Medicine (April 2014)¹²²



ENDNOTES

- The 189th General Court of the Commonwealth of Massachusetts, Senate Bill 1154, "An Act relative to full application of telemedicine coverage." Accessed 9 March 2016: https://malegislature.gov/Bills/189/Senate/S1154.
- The 189th General Court of the Commonwealth of Massachusetts, Senate Bill 1154, "An Act relative to full application of telemedicine coverage." Accessed 24 April 2016: https://malegislature.gov/Bills/189/Senate/S1154.
- 3 M.G.L. c.175 §47BB.
- ⁴ American Telemedicine Association (ATA). What Is Telemedicine? Accessed 9 March 2016: http://www.americantelemed.org/about-telemedicine/what-is-telemedicine#.VuBh1_krLIV.
- Op. cit. ATA: What Is Telemedicine?
- ⁶ Centers for Medicare and Medicaid Services (CMS), Medicaid.gov. Telemedicine. Accessed 9 March 2016: https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Delivery-Systems/Telemedicine.html.
- ⁷ Op. cit. CMS, Medicaid.gov: Telemedicine.
- U.S. Code: Title 42, The Public Health and Welfare, 42 CFR 410.78 Telehealth services. Accessed 9 March 2016: https://www.law.cornell.edu/cfr/text/42/410.78.
- Flodgren G, Rachas A, Farmer AJ, et. al. Interactive telemedicine: effects on professional practice and health care outcomes. Cochrane Database Syst Rev. 2015 Sep 7;9:CD002098. Accessed 14 March 2016: http://www.cochrane.org/CD002098/EPOC interactive-telemedicine-effects-professional-practice-and-healthcare-outcomes.
- Murchison AP, Friedman DS, Gower EW, et. al. A Multi-Center Diabetes Eye Screening Study in Community Settings: Study Design and Methodology. Ophthalmic Epidemiol. 2016 Mar 7:1-7. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26949832.
- Petruzzi M, De Benedittis M. WhatsApp: a telemedicine platform for facilitating remote oral medicine consultation and improving clinical examinations. Oral Surg Oral Med Oral Pathol Oral Radiol. 2016 Mar;121(3):248-54. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26868466.
- Brunetti ND, Scalvini S, Molinari G. Innovations in telemedicine for cardiovascular care. Expert Rev Cardiovasc Ther. 2016 Mar;14(3):267-80. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26759128.
- Bal MI, Sattoe JN, Roelofs PD, et. al. Exploring effectiveness and effective components of self-management interventions for young people with chronic physical conditions: A systematic review. Patient Educ Couns. 2016 Mar 3. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26954345.
- Lippman JM, Chapman Smith SN, McMurry TL, et. al. Mobile Telestroke During Ambulance Transport Is Feasible in a Rural EMS Setting: The iTREAT Study. Telemed J E Health. 2015 Nov 24. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26600433.
- Beswick DM, Vashi A, Song Y, et. al. Consultation via telemedicine and access to operative care for patients with head and neck cancer in a Veterans Health Administration population. Head Neck. 2016 Feb 21. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26899939.
- Bini SA, Mahajan J. Clinical outcomes of remote asynchronous telerehabilitation are equivalent to traditional therapy following total knee arthroplasty: A randomized control study. J Telemed Telecare. 2016 Mar 3. pii: 1357633X16634518. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26940798.
- Cavalera C, Pagnini F, Rovaris M, et. al. A telemedicine meditation intervention for people with multiple sclerosis and their caregivers: study protocol for a randomized controlled trial. Trials. 2016 Jan 4;17(1):4. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26729330.
- Crowley MJ, Olsen MK, Woolson SL, et. al. Baseline Antihypertensive Drug Count and Patient Response to Hypertension Medication Management. J Clin Hypertens (Greenwich). 2015 Sep 15. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26370918.
- Gladden C, Beck L, Chandler D. Tele-audiology: Expanding Access to Hearing Care and Enhancing Patient Connectivity. J Am Acad Audiol. 2015 Oct;26(9):792-9. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26415973.
- ²⁰ Op. cit. Brunetti ND, Scalvini S, Molinari G, Innovations in telemedicine for cardiovascular care.
- Op. cit. Petruzzi M, De Benedittis M, WhatsApp: a telemedicine platform for facilitating remote oral medicine consultation and improving clinical examinations.
- Glassman P, Helgeson M, Kattlove J. Using telehealth technologies to improve oral health for vulnerable and underserved populations. J Calif Dent Assoc. 2012 Jul;40(7):579-85. Accessed 11 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/22916379.
- Nelson CA, Takeshita J, Wanat KA, et. al. Impact of store-and-forward (SAF) teledermatology on outpatient dermatologic care: A prospective study in an underserved urban primary care setting. J Am Acad Dermatol. 2016 Mar;74(3):484-490.e1. Accessed 10 March 2016: https://www.ncbi.nlm.nih.gov/pubmed/26679528.
- ²⁴ Op. cit. Murchison AP, Friedman DS, Gower EW, et. al., A Multi-Center Diabetes Eye Screening Study in Community Settings: Study Design and Methodology.
- 25 Grosch MC, Weiner MF, Hynan LS, et. al. Video teleconference-based neurocognitive screening in geropsychiatry. Psychiatry Res. 2015 Feb 28;225(3):734-5. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4410696/.



- Cason J. Telehealth and Occupational Therapy: Integral to the Triple Aim of Health Care Reform. Am J Occup Ther. 2015 Mar-Apr;69(2):6902090010p1-8. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26122676.
- 27 Op. cit. Murchison AP, Friedman DS, Gower EW, et. al., A Multi-Center Diabetes Eye Screening Study in Community Settings: Study Design and Methodology.
- Marcin JP, Shaikh U, Steinhorn RH. Addressing health disparities in rural communities using telehealth. Pediatr Res. 2016 Jan;79(1-2):169-76. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26466080.
- Maxwell LG, McFarland MS, Baker JW, et. al. Evaluation of the Impact of a Pharmacist-Led Telehealth Clinic on Diabetes-Related Goals of Therapy in a Veteran Population. Pharmacotherapy. 2016 Feb 15. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26877253.
- 30 Op. cit. Bini SA, Mahajan J, Clinical outcomes of remote asynchronous telerehabilitation are equivalent to traditional therapy following total knee arthroplasty: A randomized control study.
- Abdullah A, Liew SM, Hanafi NS, et. al. What influences patients' acceptance of a blood pressure telemonitoring service in primary care? A qualitative study. Patient Prefer Adherence. 2016 Jan 27;10:99-106. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26869773.
- Lal S, Dell'Elce J, Tucci N, et. al. Preferences of Young Adults With First-Episode Psychosis for Receiving Specialized Mental Health Services Using Technology: A Survey Study. JMIR Ment Health. 2015 May 20;2(2):e18. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26543922.
- Spaniel F, Novak T, Bankovska Motlova L, et. al. Psychiatrist's adherence: a new factor in relapse prevention of schizophrenia. A randomized controlled study on relapse control through telemedicine system. J Psychiatr Ment Health Nurs. 2015 Dec;22(10):811-20. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26176646.
- Molini-Avejonas DR, Rondon-Melo S, Amato CA, et. al. A systematic review of the use of telehealth in speech, language and hearing sciences. J Telemed Telecare. 2015 Oct;21(7):367-76. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26026181.
- 35 Op. cit. Beswick DM, Vashi A, Song Y, et. al., Consultation via telemedicine and access to operative care for patients with head and neck cancer in a Veterans Health Administration population.
- Shah MN, Wasserman EB, Gillespie SM, et. al. High-Intensity Telemedicine Decreases Emergency Department Use for Ambulatory Care Sensitive Conditions by Older Adult Senior Living Community Residents. J Am Med Dir Assoc. 2015 Dec;16(12):1077-81. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26293419.
- 37 Op. cit. Bal MI, Sattoe JN, Roelofs PD, et. al., Exploring effectiveness and effective components of self-management interventions for young people with chronic physical conditions: A systematic review.
- Merchant RK, Inamdar R, Quade RC. Effectiveness of Population Health Management Using the Propeller Health Asthma Platform: A Randomized Clinical Trial. J Allergy Clin Immunol Pract. 2016 Jan 8. pii: S2213-2198(15)00665-0. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26778246.
- ³⁹ Ishani A, Christopher J, Palmer D, et. al. Telehealth by an Interprofessional Team in Patients With CKD: A Randomized Controlled Trial. Am J Kidney Dis. 2016 Feb 29. pii: S0272-6386(16)00140-2. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26947216.
- Chakraborty C, Gupta B, Ghosh SK, et. al. Telemedicine Supported Chronic Wound Tissue Prediction Using Classification Approaches. J Med Syst. 2016 Mar;40(3):68. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26728394.
- 41 Op. cit. Murchison AP, Friedman DS, Gower EW, et. al., A Multi-Center Diabetes Eye Screening Study in Community Settings: Study Design and Methodology.
- ⁴² Op. cit. Brunetti ND, Scalvini S, Molinari G, Innovations in telemedicine for cardiovascular care.
- ⁴³ Op. cit. Crowley MJ, Olsen MK, Woolson SL, et. al., Baseline Antihypertensive Drug Count and Patient Response to Hypertension Medication Management.
- Jackson BD, Gray K, Knowles SR, et. al. EHealth Technologies in Inflammatory Bowel Disease: A Systematic Review. J Crohns Colitis. 2016 Feb 29. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26928960.
- 45 Carey EP, Frank JW, Kerns RD, et. al. Implementation of telementoring for pain management in Veterans Health Administration: Spatial analysis. J Rehabil Res Dev. 2016;53(1):147-56. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26934696.
- Richter KP, Shireman TI, Ellerbeck EF, et. al. Comparative and cost effectiveness of telemedicine versus telephone counseling for smoking cessation. J Med Internet Res. 2015 May 8;17(5):e113. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/25956257.
- 47 Op. cit. Cavalera C, Pagnini F, Rovaris M, et. al., A telemedicine meditation intervention for people with multiple sclerosis and their caregivers: study protocol for a randomized controlled trial.
- 48 Dorsey ER, Achey MA, Beck CA, et. al. National Randomized Controlled Trial of Virtual House Calls for People with Parkinson's Disease: Interest and Barriers. Telemed J E Health. 2016 Feb 17. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26886406.
- ⁴⁹ Op. cit. Lal S, Dell'Elce J, Tucci N, et. al., Preferences of Young Adults With First-Episode Psychosis for Receiving Specialized Mental Health Services Using Technology: A Survey Study.
- Chan S, Parish M, Yellowlees P. Telepsychiatry Today. Curr Psychiatry Rep. 2015 Nov;17(11):89. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26384338.



- Myers K, Vander Stoep A, Zhou C, et. al. Effectiveness of a telehealth service delivery model for treating attention-deficit/ hyperactivity disorder: a community-based randomized controlled trial. J Am Acad Child Adolesc Psychiatry. 2015 Apr;54(4):263-74. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/25791143.
- Souchard S, Paquin B, Payeur R, et. al. Delivering cognitive-behavior therapy for panic disorder with agoraphobia in videoconference. Telemed J E Health. 2004 Spring;10(1):13-25. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/15104911.
- Johnston L, Titov N, Andrews G, et. al. Comorbidity and internet-delivered transdiagnostic cognitive behavioural therapy for anxiety disorders. Cogn Behav Ther. 2013;42(3):180-92. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/23458319.
- Moreno FA, Chong J, Dumbauld J, et. al. Use of standard Webcam and Internet equipment for telepsychiatry treatment of depression among underserved Hispanics. Psychiatr Serv. 2012 Dec;63(12):1213-7. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/23026854.
- Acierno R, Gros DF, Ruggiero KJ, et. al. Behavioral activation and therapeutic exposure for posttraumatic stress disorder: a noninferiority trial of treatment delivered in person versus home-based telehealth. Depress Anxiety. 2016 Feb 10. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26864655.
- Op. cit. Spaniel F, Novak T, Bankovska Motlova L, et. al., Psychiatrist's adherence: a new factor in relapse prevention of schizophrenia.
- Op. cit. Lippman JM, Chapman Smith SN, McMurry TL, et. al., Mobile Telestroke During Ambulance Transport Is Feasible in a Rural EMS Setting: The iTREAT Study.
- Krupinski EA, Bernard J. Standards and Guidelines in Telemedicine and Telehealth. Healthcare 2014, 2,74-93. Accessed 14 March 2016: http://www.mdpi.com/2227-9032/2/1/74/htm.
- Ekeland AG, Bowes A, Flottorp S. Effectiveness of telemedicine: a systematic review of reviews. Int J Med Inform. 2010 Nov;79(11):736-71. Full article purchased; abstract accessed 14 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/20884286.
- Wootton R. Twenty years of telemedicine in chronic disease management--an evidence synthesis. J Telemed Telecare. 2012 Jun;18(4):211-20. doi: 10.1258/jtt.2012.120219. Accessed 14 March 2016: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3366107/.
- 61 Op. cit. Bal MI, Sattoe JN, Roelofs PD, et. al., Exploring effectiveness and effective components of self-management interventions for young people with chronic physical conditions: A systematic review.
- Beswick DM, Vashi A, Song Y, et. al. Consultation via telemedicine and access to operative care for patients with head and neck cancer in a Veterans Health Administration population. Head Neck. 2016 Feb 21. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26899939.
- 63 Op. cit. Petruzzi M, De Benedittis M, WhatsApp: a telemedicine platform for facilitating remote oral medicine consultation and improving clinical examinations.
- ⁶⁴ Op. cit. Brunetti ND, Scalvini S, Molinari G., Innovations in telemedicine for cardiovascular care.
- 65 Op. cit. Flodgren G, Rachas A, Farmer AJ, et. al., Interactive telemedicine: effects on professional practice and health care outcomes
- 66 Op. cit. Nelson CA, Takeshita J, Wanat KA, et. al., Impact of store-and-forward (SAF) teledermatology on outpatient dermatologic care: A prospective study in an underserved urban primary care setting.
- 67 Op. cit. Lippman JM, Chapman Smith SN, McMurry TL, et. al., Mobile Telestroke During Ambulance Transport Is Feasible in a Rural EMS Setting: The iTREAT Study.
- Samson M, Trivedi T, Heidari K. Telestroke Centers as an Option for Addressing Geographical Disparities in Access to Stroke Care in South Carolina, 2013. Prev Chronic Dis. 2015 Dec 24;12:E227. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26704445.
- Ganesh A, Lindsay P, Fang J, et. al. Integrated systems of stroke care and reduction in 30-day mortality: A retrospective analysis. Neurology. 2016 Mar 8;86(10):898-904. Accessed 10 March 2016: http://www.ncbi.nlm.nih.gov/pubmed/26850979.
- ⁷⁰ Op. cit. Jackson BD, Gray K, Knowles SR, et. al., EHealth Technologies in Inflammatory Bowel Disease: A Systematic Review.
- 71 Op. cit. Grosch MC, Weiner MF, Hynan LS, et. al., Video teleconference-based neurocognitive screening in geropsychiatry.
- Op. cit. Ishani A, Christopher J, Palmer D, et. al., Telehealth by an Interprofessional Team in Patients With CKD: A Randomized Controlled Trial.
- 73 Op. cit. Shah MN, Wasserman EB, Gillespie SM, et. al., High-Intensity Telemedicine Decreases Emergency Department Use for Ambulatory Care Sensitive Conditions by Older Adult Senior Living Community Residents.
- 74 Op. cit. Merchant RK, Inamdar R, Quade RC., Effectiveness of Population Health Management Using the Propeller Health Asthma Platform: A Randomized Clinical Trial.
- Op. cit. Richter KP, Shireman TI, Ellerbeck EF, et. al., Comparative and cost effectiveness of telemedicine versus telephone counseling for smoking cessation.
- Op. cit. Acierno R, Gros DF, Ruggiero KJ, et. al., Behavioral activation and therapeutic exposure for posttraumatic stress disorder: a noninferiority trial of treatment delivered in person versus home-based telehealth.



- Op. cit. Chan S, Parish M, Yellowlees P, Telepsychiatry Today.
- V.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration (SAMHSA), National Registry of Evidence-Based Programs and Practices (NREPP). Telemedicine-Based Collaborative Care. Accessed 14 March 2016: http://legacy.nreppadmin.net/ViewIntervention.aspx?id=127.
- Op. cit. Flodgren G, Rachas A, Farmer AJ, et. al., Interactive telemedicine: effects on professional practice and health care outcomes.
- 80 Op. cit. Molini-Avejonas DR, Rondon-Melo S, Amato CA, et. al., A systematic review of the use of telehealth in speech, language and hearing sciences.
- 81 Op. cit. Molini-Avejonas DR, Rondon-Melo S, Amato CA, et. al., A systematic review of the use of telehealth in speech, language and hearing sciences.
- Op. cit. Chan S, Parish M, Yellowlees P, Telepsychiatry Today.
- Flodgren G, Rachas A, Farmer AJ, et. al. Interactive telemedicine: Effects on professional practice and health care outcomes. Cochrane Database Syst Rev. 2015 Sep 7;9:CD002098. Accessed 14 March 2016: http://www.cochrane.org/CD002098/EPOC_interactive-telemedicine-effects-professional-practice-and-healthcare-outcomes.
- BeJong C, Lucey CR, Dudley RA. Incorporating a New Technology While Doing No Harm, Virtually. JAMA. 2015 Dec 8;314(22):2351-2. Accessed 14 March 2016; http://jama.jamanetwork.com/article.aspx?articleid=2474431.
- 85 Op. cit. DeJong C, Lucey CR, Dudley RA, Incorporating a New Technology While Doing No Harm, Virtually.
- ⁸⁶ Op. cit. DeJong C, Lucey CR, Dudley RA, Incorporating a New Technology While Doing No Harm, Virtually.
- 87 Op. cit. DeJong C, Lucey CR, Dudley RA, Incorporating a New Technology While Doing No Harm, Virtually.
- Op. cit. DeJong C, Lucey CR, Dudley RA, Incorporating a New Technology While Doing No Harm, Virtually.
- Op. cit. DeJong C, Lucey CR, Dudley RA, Incorporating a New Technology While Doing No Harm, Virtually.
- DeJong C, Lucey CR, Dudley RA, Incorporating a New Technology While Doing No Harm, Virtually.
- 91 243 C.M.R 2.00: Board of Registration in Medicine, Licensing and the Practice of Medicine. Accessed 26 April 2016: http://www.mass.gov/eohhs/docs/borim/reg-243-cmr-2.pdf.
- ⁹² 243 C.M.R 2.01(4): Scope and Construction. Accessed 26 April 2016: http://www.mass.gov/eohhs/docs/borim/reg-243-cmr-2.pdf.
- This is referred to as the "originating site" by Medicare and is defined as "the location of an eligible Medicare beneficiary at the time the service furnished via a telecommunications system occurs." Department of Health and Human Services Centers for Medicare & Medicaid Services. Telehealth Services; Accessed 29 April 2016: https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/telehealthsrvcsfctsht.pdf.
- Federation of State Medical Boards. Model Policy for the Appropriate Use of Telemedicine Technologies in the Practice of Medicine. Accessed 2 May 2016: https://www.fsmb.org/Media/Default/PDF/FSMB/Advocacy/FSMB_Telemedicine_Policy.pdf.
- 95 Interstate Medical Licensure Compact. About the Compact. Accessed 27 April 2016: http://www.licenseportability.org/.
- Merican Telemedicine Association. State Telemedicine Gaps Analysis. Published May 2015. Accessed 27 April 2016: http://www.americantelemed.org/docs/default-source/policy/50-state-telemedicine-gaps-analysis--physician-practice-standards-licensure.pdf?sfvrsn=14.
- mHealth Intelligence. On Telehealth License Portability, Each State Follows its Own Path. Updated January 28, 2016. Accessed 27 April 2016: http://mhealthintelligence.com/news/on-telehealth-license-portability-each-state-follows-its-own-path.
- 98 M.G.L. c.112 §7. Accessed 27 April 2016: https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXVI/Chapter112/Section7.
- 99 M.G.L. c.94C §19(a) Accessed 28 April 2016: https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXV/Chapter94C/Section19.
- Commonwealth of Massachusetts Board of Registration in Medicine. Prescribing Practices and Guidelines. Policy 15-05; Adopted October 8, 2015. Accessed 28 April 2016. http://www.mass.gov/eohhs/docs/borim/policies-guidelines/policy-15-05.pdf.
- Op. cit. Commonwealth of Massachusetts Board of Registration in Medicine, Prescribing Practices and Guidelines, Policy 15-05.
- Boston Bar Association. Health Law Reporter. Telemedicine in Massachusetts: What Providers Need to Know. Accessed 2 May 2016: http://healthlawreporter.bbablogs.org/2015/03/05/telemedicine-in-massachusetts-what-providers-need-to-know/.
- 103 The Joint Commission Accreditation: Ambulatory Care. Ambulatory Care Program:
 The Who, What, When, and Where's of Credentialing and Privileging. Accessed 29 April 2016: http://www.jointcommission.org/assets/1/6/AHC who what when and where credentialing booklet.pdf.
- Op. cit. The Joint Commission Accreditation: Ambulatory Care, Ambulatory Care Program: The Who, What, When, and Where's of Credentialing and Privileging.
- 105 42 C.F.R 482.12 Condition of participation: Governing Body, 42 CFR 482.22 Condition of participation: Medical Staff.
- Op. cit. The Joint Commission Accreditation: Ambulatory Care, Ambulatory Care Program: The Who, What, When, and Where's of Credentialing and Privileging.



- The Joint Commission is an independent, not-for-profit organization that accredits and certifies nearly 21,000 health care organizations and programs in the United States. Joint Commission accreditation and certification is recognized nationwide as a symbol of quality that reflects an organization's commitment to meeting certain performance standards. The Joint Commission. About the Joint Commission. Accessed 5 May 2016: http://www.jointcommission.org/about_us/about_the_joint_commission_main.aspx.
- The Joint Commission. Accepted: Final Revisions to Telemedicine Standards. Accessed 29 April 2016: http://www.jointcommission.org/assets/1/6/Revisions-telemedicine-standards.pdf.
- ¹⁰⁹ 42 C.F.R. §482.12, 482.22, §485.616, §485.635, §485.641.42.
- The Joint Commission. Telemedicine Requirements. Hospital Accreditation Program. Standard L.D.04.03.09. Accessed 29 April 2016: http://www.jointcommission.org/assets/1/6/Pre-Pub Telemedicine HAP.pdf.
- The Joint Commission. Telemedicine Requirements. Hospital Accreditation Program. Standard MS.13.01.01. Accessed 29 April 2016: http://www.jointcommission.org/assets/1/6/Pre-Pub Telemedicine HAP.pdf.
- The Massachusetts Physician Credentialing Initiative is sponsored by the Massachusetts Association of Health Plans, Blue Cross Blue Shield of Massachusetts, the Massachusetts Hospital Association and the Massachusetts Medical Society, while initial participants include Harvard Pilgrim Health Care, Fallon Community Health Plan, Health New England, Tufts Health Plan, Neighborhood Health Plan, Network Health, Connecticare, Harvard Vanguard Medical Associates, Massachusetts General Hospital, Massachusetts General Physician's Organization, NEMSO-Beverly Hospital, Brigham & Women's Hospital, and Brigham & Women's Physician Organization, Northeast PHO, Heywood Hospital, Melrose Wakefield IPA, Inc., Emerson PHO IPA, Emerson Hospital, Hallmark Health System, North Shore Health System, North Shore Medical Center, Shaughnessy-Kaplan Rehabilitation Hospital, Lawrence Memorial IPA, Harrington PHO and Mary Lane Hospital. Massachusetts Medical Society. Massachusetts Uniform Credential Applications. Accessed 5 May 2016: http://www.massmed.org/Physicians/Practice-Management/Practice-Ownership-and-Operations/Massachusetts-Uniform-Credential-Applications/#.VytEXYQrK03.
- Massachusetts Medical Society. Massachusetts Credential Applications. Published June 4, 2013. Accessed 2 May 2016: http://www.massmed.org/Physicians/Practice-Management/Practice-Ownership-and-Operations/Massachusetts-Uniform-Credential-Applications/#.Vydi9vkrK01.
- American Telemedicine Association (ATA). Telemedicine Practice Guidelines. Accessed 9 March 2016: http://www.americantelemed.org/resources/telemedicine-practice-guidelines#.VuBs9PkrLIV.
- American Academy of Dermatology and AAD Association (AAD). Position Paper on Teledermatology. Amended 16 May 2015; accessed 9 March 2016; https://www.aad.org/forms/policies/uploads/ps/ps-teledermatology.pdf.
- AAD: Position Paper on Telemedicine. Amended 9 November 2013; accessed 9 March 2016: https://www.aad.org/forms/policies/uploads/ps/ps%20-telemedicine.pdf.
- American Academy of Neurology. AAN Legislative Position Statement on Telemedicine. Accessed 14 March 2016: https://www.aan.com/uploadedFiles/Website_Library_Assets/Documents/6.Public_Policy/1.Stay_Informed/2.Position_Statements/3.PDFs_of_all_Position_Statements/FinalTelemedicineLegislativePositionStatement.pdf.
- American Medical Association. H-480.946 Coverage of and Payment for Telemedicine. Accessed 14 March 2016: http://www.ama-assn.org/ama/pub/news/news/2014/2014-06-11-policy-coverage-reimbursement-for-telemedicine.page.
- The American Journal of Occupational Therapy. Telehealth. Am J Occup Ther. 2013 Nov-Dec;67(2):67s69ps69-s90. Accessed 11 March 2016: http://ajot.aota.org/article.aspx?articleid=1853066.
- American Psychological Association. Guidelines for the Practice of Telepsychology. Accessed 9 March 2016: http://www.apa.org/practice/guidelines/telepsychology.aspx.
- Society of American Gastrointestinal and Endoscopic Surgeons (SAGES). Guidelines for the Surgical Practice of Telemedicine. Accessed 9 March 2016: http://www.sages.org/publications/guidelines/guidelines-for-the-surgical-practice-of-telemedicine/.
- Federation of State Medical Boards. Model Policy for the Appropriate Use of Telemedicine Technologies in the Practice of Medicine: Report of the State Medical Boards' Appropriate Regulation of Telemedicine (SMART) Workgroup. Published April 2014; accessed 9 March 2016: https://www.fsmb.org/Media/Default/PDF/FSMB/Advocacy/FSMB_Telemedicine_Policy.pdf.



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Actuarial Assessment of Senate Bill 1154 Submitted to the 189th General Court: "An Act relative to full application of telemedicine coverage"

Prepared for
Commonwealth of Massachusetts
Center for Health Information and Analysis

October 2016

Prepared by Compass Health Analytics, Inc.



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This report was pr Elwood, FSA, MAA			

Actuarial Assessment of Senate Bill 1154 Submitted to the 189th General Court: "An Act relative to full application of telemedicine coverage"

Executive Summary

Massachusetts Senate Bill (S.B.) 1154, as submitted in the 189th General Court, would extend the current health benefit plan mandate regarding telemedicine to apply to all commercial fully-insured policies. The proposed mandate would require insurance carriers that cover telemedicine services to do so under terms consistent with coverage for in-person consultations, including any applicable cost sharing. A carrier may limit coverage to providers in a telemedicine network it defines.

Massachusetts General Laws (M.G.L.) c.3 §38C charges the Massachusetts Center for Health Information and Analysis (CHIA) with, among other duties, reviewing the potential impact of proposed mandated health care insurance benefits on the premiums paid by businesses and consumers. CHIA has engaged Compass Health Analytics, Inc. (Compass) to provide an actuarial estimate of the effect enactment of the bill would have on the cost of health insurance in Massachusetts.

Background

Current Massachusetts law requires, for insurance carriers licensed under Chapter 175 (accident and sickness insurance policies), that coverage for telemedicine be provided under terms "consistent with coverage for health care services provided through in-person consultation." Cost sharing for such services may not exceed that charged for in-person consultations, and the "insurer may limit coverage of telemedicine services to those health care providers in a telemedicine network approved by the insurer." Telemedicine is specifically defined as "the use of interactive audio, video or other electronic media for the purpose of diagnosis, consultation or treatment," and does not include audio-only telephone, facsimile machine, or e-mail. The proposed health benefit plan mandate extends these requirements to additional insurance license types.

Telemedicine

Telemedicine is "the use of medical information exchanged from one site to another via electronic communications to improve a patient's clinical health status." Telemedicine is not a distinct medical specialty or particular service, but is instead the use of interactive telecommunication technologies to deliver a variety of healthcare services to treat many different diseases and conditions. Ideally, telemedicine encounters follow the care standards applicable during the traditional visit, and include a thorough evaluation, evidence-based recommendations, necessary follow-up and referrals, and documentation.vii

The use of telemedicine continues to grow, through both the expansion of the technology to new services, and additional patient-clinician encounters. Many studies and reviews have found the use of telemedicine effective for a variety of conditions and situations, but researchers caution that the evidence itself may be limited, inconsistent, and sometimes contradictory, prompting the need for more rigorous and expansive studies before broad conclusions may be drawn. With its growth, numerous legal and regulatory considerations have surfaced, including issues related to licensing, prescriptive ability, and credentialing. In response, evidenced-based guidelines, model policies, and federal and state laws continue to evolve to manage the use of telemedicine to streamline provision of services and assure quality.

Existing laws regarding telemedicine

The current Massachusetts telemedicine statute already applies to policies regulated by Chapter 175, which governs accident and sickness policies. No current federal mandates related to the specific subject matter of this bill are applicable.

Analysis

The proposed legislation does not mandate coverage for telemedicine services, but does require that terms of coverage and cost-sharing amounts be equivalent to those for in-person consultations. According to responses to a survey of Massachusetts commercial health insurance carriers, all – even those not subject to the current statute – indicate these provisions are already in place for all of their policies that cover telemedicine services. And in explicitly granting carriers the right to limit coverage to providers within their approved telemedicine networks, the bill allows carriers to retain significant control of potential telemedicine costs. Note that the current law and the proposed mandate do not impose restrictions on rates carriers may pay providers for these services.

Summary results

Based on the carrier survey responses and corroborative data from the All Payer Claim Database (MA APCD), the incremental effect of S.B. 1154 on average commercial fully-insured medical expense and premiums over the time period 2017 to 2021 is estimated to be insignificant and assumed to be zero.

Executive Summary Endnotes

¹ The 189th General Court of the Commonwealth of Massachusetts, Senate Bill 1154, "An Act relative to full application of telemedicine coverage." Accessed 4 May 2016: https://malegislature.gov/Bills/189/Senate/S1154.

ⁱⁱ M.G.L. c.175 §47BB.

ⁱⁱⁱ M.G.L. c.175 §47BB.

iv M.G.L. c.175 §47BB.

^v M.G.L. c.175 §47BB.

vi American Telemedicine Association (ATA). What Is Telemedicine? Accessed 9 March 2016: http://www.americantelemed.org/about-telemedicine/what-is-telemedicine#.VuBh1 krLIV.

vii DeJong C, Lucey CR, Dudley RA. Incorporating a New Technology While Doing No Harm, Virtually. JAMA. 2015 Dec 8;314(22):2351-2. Accessed 14 March 2016: http://jama.jamanetwork.com/article.aspx?articleid=2474431.

Actuarial Assessment of Senate Bill 1154 Submitted to the 189th General Court: "An Act relative to full application of telemedicine coverage"

1. Introduction

Massachusetts Senate Bill (S.B.) 1154,¹ as submitted in the 189th General Court, would extend the current health benefit plan mandate regarding telemedicine² to apply to all commercial fully-insured policies. The proposed mandate would require insurance carriers that cover telemedicine services to do so under terms consistent with coverage for in-person consultations, including any applicable cost sharing. A carrier may limit coverage to providers in a telemedicine network it defines.

Massachusetts General Laws (M.G.L.) c.3 §38C charges the Massachusetts Center for Health Information and Analysis (CHIA) with, among other duties, reviewing the potential impact of proposed health benefit plan mandates on the premiums paid by businesses and consumers. CHIA has engaged Compass Health Analytics, Inc. (Compass) to provide an actuarial estimate of the effect enactment of the bill would have on the cost of health insurance in Massachusetts.

Assessing the impact of the proposed mandate on premiums entails analyzing its incremental effect on spending by insurance plans. This in turn requires comparing spending under the provisions of the bill to spending under current statutes and current benefit plans for the relevant services.

Section 2 of this analysis outlines the provisions of the bill. Section 3 summarizes the methodology used for the estimate, and section 4 summarizes the results.

2. Interpretation of S.B. 1154

Current Massachusetts law requires, for insurance carriers governed under Chapter 175 (accident and sickness insurance policies), that coverage for telemedicine be provided under terms "consistent with coverage for health care services provided through in-person consultation." Cost sharing for such services may not exceed that charged for in-person consultations, and the "insurer may limit coverage of telemedicine services to those health care providers in a telemedicine network approved by the insurer." Telemedicine is specifically defined as "the use of interactive audio, video or other electronic media for the purpose of diagnosis, consultation or treatment," and does not include audio-only telephone, facsimile machine, or e-mail. The proposed mandate extends these requirements to additional insurance license types, as outlined in the next section.

2.1. Plans affected by the proposed health benefit plan mandate

The bill extends existing statutes that regulate health care insurance carriers in Massachusetts to additional carrier types. It includes six sections, each of which addresses statutes dealing with a particular type of health insurance plan:

- Section 1: Plans sponsored by the Group Insurance Commission (GIC) (inserting M.G.L. c. 32A, §170)
- Section 2: MassHealth (inserting M.G.L. c. 118E, §10I)
- Section 3: Contracts with non-profit hospital service corporations (inserting M.G.L. c. 176A, §8JJ)
- Section 4: Certificates under medical service agreements (inserting M.G.L. c. 176B, §4JJ)
- Section 5: Health maintenance contracts (inserting M.G.L. 176G, §4AA)
- Section 6: Preferred provider arrangements (inserting M.G.L. 176I, §12)

The bill requires coverage for members under the relevant Massachusetts-licensed commercial plans regardless of whether they reside within the Commonwealth or merely have their principal place of employment in the Commonwealth. Health benefit plan mandates do not apply to plans that cover Massachusetts residents but are issued in other states.

Self-insured plans, except for those managed by the GIC, are not subject to state-level health benefit plan mandates. State mandates do not apply to Medicare or Medicare Advantage plans, the benefits of which are qualified by Medicare; this analysis excludes members of fully-insured commercial plans over 64 years of age and does not address any potential effect on Medicare supplement plans even to the extent they are regulated by state law. Section 2 of the bill (creating M.G.L. c. 118E, § 10I) affects Medicaid and related programs managed by the Division of Medical Assistance. While the bill might affect Medicaid spending, depending on current coverage, this analysis does not include any impact on MassHealth expenditures.

2.2. Covered services

According to the American Telemedicine Association (ATA), telemedicine is "the use of medical information exchanged from one site to another via electronic communications to improve a patient's clinical health status." Telemedicine is not a distinct medical specialty or a particular service, but is instead the use of interactive telecommunication technologies to deliver a variety of healthcare services to treat many different diseases and conditions.

Telemedicine, while "fundamentally different from…a face-to-face encounter" due to the physical separation of clinician and patient, introduces the new parameters and dynamics of a technology platform into the clinician-patient interaction and relationship.⁶ Ideally, these encounters follow the care standards applicable during the traditional visit, and include a thorough evaluation, evidence-based recommendations, necessary follow-up and referrals, and documentation.⁷

The use of telemedicine continues to grow, through both the expansion of the technology to new services and additional patient-clinician encounters. Many studies and reviews have found the use of telemedicine effective for a variety of conditions and situations, but researchers caution that the evidence itself may be limited, inconsistent, and sometimes contradictory, prompting the need for more rigorous and expansive studies before broad conclusions may be drawn. With its growth, numerous legal and regulatory considerations have surfaced, including issues related to licensing, prescriptive ability, and credentialing. In response, evidenced-based guidelines, model policies, and federal and state laws continue to evolve to manage the use of telemedicine to streamline provision of services and assure quality.

2.3. Existing laws affecting the cost of S.B. 1154

This analysis must estimate the incremental effect of S.B. 1154, given existing statutes. As noted, the current Massachusetts telemedicine statute already applies to policies regulated by Chapter 175, which governs accident and sickness policies. No current federal mandates related to the specific subject matter of this bill are applicable.

2.4. Current coverage

Neither the current statute nor the proposed extension to other types of insurance requires coverage for telemedicine services, but directs that any coverage must be consistent with coverage for services provided in-person. In a recent survey of the largest insurance carriers in Massachusetts, all responded that they currently cover telemedicine for a variety of conditions and services. Most carriers indicated that they manage separate telemedicine networks, contract with telemedicine service vendors, and/or allow any network provider with the required infrastructure to perform covered telemedicine services. All cost sharing for covered telemedicine services is currently equal to that charged for in-person consultations under their policies, according to all carriers. Note that the current law and the proposed mandate do not impose restrictions on rates carriers may pay providers for these services.

3. Methodology

3.1. Effect of expanding mandate to additional carriers

As described, the provisions of S.B. 1154 already apply to accident and sickness insurance policies governed by Chapter 175. This analysis estimates the incremental cost to the Massachusetts fully-insured commercial health care market of extending these provisions to the additional carriers listed in S.B. 1154.

The proposed legislation does not mandate coverage for telemedicine services, but does require that terms of coverage and cost-sharing amounts be equivalent to those for in-person consultations. All carriers in the state indicate that these provisions are already in place for all of their insurance policies that cover telemedicine services. And in explicitly granting carriers the right to limit

coverage for telemedicine services to providers within approved telemedicine networks, the bill allows carriers to retain significant control of potential telemedicine costs.

3.2. Data sources

The primary data source used in the analysis was information from responses to a survey of commercial health insurance carriers in Massachusetts, including descriptions of current coverage. In addition, limited corroboration was available from the Massachusetts All Payer Claim Database (MA APCD).

4. Results

A review of data from the MA APCD confirms that most carriers paid claims in 2014 for telemedicine services. However, the volume and cost of services in that period were very low; the technology and its adoption continue to evolve and are expected to grow rapidly, though not as a result of this health benefit plan mandate. In an analysis of the MA APCD claims for 2014 services for which there was any reimbursement for telemedicine delivery of care (meaning services with no telemedicine delivery – for example, suturing – were completely excluded from the analysis), the proportion of the number of services delivered via telemedicine was less than 0.01 percent; the rest were delivered in-person. However, the adoption and acceptance of telemedicine delivery of services has been growing rapidly, and is anticipated to continue to do so. One study estimated the number of U.S. patients using telemedicine services at 250,000 in 2013, and projects this to rise to 3.2 million patients by 2018, or 66.5 percent annually.8

All carriers, even those not subject to the current statute, report in their responses to survey questions that they abide by the current statute's terms regarding cost sharing. Constrained by the very low volume of services delivered via telemedicine in 2014 MA APCD data, an analysis on a service-by-service basis found no evidence that cost sharing for telemedicine services was higher than for the corresponding traditionally-delivered in-person version of the same services.

Based on the carrier survey responses and corroborative data from the MA APCD, the incremental effect of S.B. 1154 on average commercial fully-insured medical expense and premiums over the time period 2017 to 2021 is estimated to be insignificant and assumed to be zero.

The proposed mandate would apply to fully-insured and self-insured plans operated for state and local employees by the Group Insurance Commission (GIC). Because the benefit offerings of GIC plans are similar to most other commercial plans in Massachusetts, the effect of the proposed mandate on GIC medical expense is estimated to be insignificant.

Endnotes

¹ The 189th General Court of the Commonwealth of Massachusetts, Senate Bill 1154, "An Act relative to full application of telemedicine coverage." Accessed 4 May 2016: https://malegislature.gov/Bills/189/Senate/S1154.

² M.G.L. c.175 §47BB.

³ M.G.L. c.175 §47BB.

⁴ M.G.L. c.175 §47BB.

⁵ American Telemedicine Association (ATA). What Is Telemedicine? Accessed 9 March 2016: http://www.americantelemed.org/about-telemedicine/what-is-telemedicine#.VuBh1 krLIV.

⁶ DeJong C, Lucey CR, Dudley RA. Incorporating a New Technology While Doing No Harm, Virtually. JAMA. 2015 Dec 8;314(22):2351-2. Accessed 14 March 2016: http://jama.jamanetwork.com/article.aspx?articleid=2474431.

⁷ Op. cit. DeJong C, Lucey CR, Dudley RA.

⁸ Japsen B. ObamaCare, Doctor Shortage To Spur \$2 Billion Telehealth Market. Published 22 December 2013; accessed 10 May 2016: http://www.forbes.com/sites/brucejapsen/2013/12/22/obamacare-doctor-shortage-to-spur-2-billion-telehealth-market/#1f7f2c2e15fa.