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POLICY FORUM

Telemedicine: Innovation Has Outpaced Policy

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Digital-age technology offers great promise for improving access to and quality of health care via transformational care delivery mechanisms. Demand for innovative solutions has been driven by an aging population, high rates of chronic illness, geographic and sociodemographic disparities in access to care, and increasing numbers of insured Americans seeking care in the face of health professional workforce shortages; the AAMC recently projected an estimated shortage of 46,000 primary care clinicians and 45,000 specialists by 2020 [1]. Telemedicine or “connected care,” facilitated by a range of digital technologies and broadband communications services, can help address many of the above challenges.

Telemedicine is an exceptional tool for improving access, care quality, and population health. The field is advancing because of technological innovation, broadband expansion, professional engagement, strong evidence of its effectiveness, and consumer demand, but, for it to be properly integrated into everyday care in the twenty-first century, we must advance beyond twentieth-century public policy.

What is Telemedicine?

Defined as the practice of medicine using electronic communications services that connect a clinician in one location with a patient in another location, telemedicine services can be provided live, via high-definition interactive videoconferencing, or asynchronously, using store-and-forward technologies, mobile health tools, or remote patient monitoring. Its uses range from screening for diabetic retinopathy and management of chronic conditions such as diabetes to remote diagnosis and treatment of stroke, wound management aided by store-and-forward image programs, and collaborative management of malignancies by physicians in various locations.

Telemedicine has been adapted to fit diverse models of health care delivery. Opportunities for hospitals and medical practices to adopt telemedicine are extensive, varying with the needs of the institution, the credentials of the medical professional, and the model they wish to deploy. Primary care and specialty clinicians can connect to their patients or to one another through live interactive videoconferencing, offer clinical services using store-and-forward technologies, serve on panels for telemedicine services companies, or keep track of patients’ progress with monitoring programs in their homes. Hospitals may choose to collaborate using telemedicine technologies to address gaps in services, to improve triage, or to reduce readmissions.

Telemedicine services companies offer direct-to-consumer care delivery and specialty care services to hospitals and clinics. Some provide contractual services to hospitals, correctional facilities, and other entities. Others contract with payers or patients and offer services in homes, workplaces, and travel destinations.

Advancements

Telehealth improves patient triage, reduces the burden of travel for care, fosters more timely access to care, and provides tools that support patient engagement and self-management. Extensive evidence published in the peer-reviewed literature demonstrates that telemedicine improves clinical outcomes and lowers the cost of care in a host of clinical specialties [2-15]. Patient satisfaction rates are high, and consumer demand for telehealth services is growing, in part because the convenience of receiving care locally—in retail clinic settings, the workplace, or the home—reduces the burden and cost of transportation for care [16-20].

Credentialing and privileging for telehealth care. Credentialing and privileging are important elements of telehealth practice, just as they are in face-to-face practice. Credentialing is the process by which hospitals verify the qualifications of practitioners. Privileging, which occurs at hiring and at regular intervals thereafter, is the granting to clinicians of authority to practice at a health care facility within the scope of their qualifications. The process of credentialing and privileging a practitioner is time-consuming and can be costly and impractical when large numbers of clinicians seek to provide telehealth-facilitated services in multiple hospitals.

Telehealth was incorporated into the Joint Commission Standards for Credentialing and Privileging beginning in 2000 and in its revised standards in 2004. In 2011, the Centers for Medicare and Medicaid Services (CMS) published new regulations in its hospital Conditions of Participation standards that include proxy credentialing and privileging arrangements as a viable option to further facilitate the delivery of telemedicine services across the nation [21]. Through an agreement between hospitals, these standards allow the originating site to accept the distant practitioner's credentials and privileges and to exchange quality data with distant site hospitals. These new regulations, which were developed in alignment with the Joint Commission Telehealth Standards, have streamlined the process of developing telehealth collaborations between hospitals.

Standards and practice guidelines. In conjunction with the relevant specialty societies, the American Telemedicine Association has developed standards and practice guidelines for telehealth in a number of specialties. Further adoption will occur when additional specialties develop appropriate guidelines and inform boards of medicine and the payer community [22]. Guidelines to address direct-to-consumer telemedicine for urgent care and primary care are currently in development by the American Telemedicine Association, since concern has been raised about the risks of

care fragmentation and overprescribing of antibiotics in these telehealth specialties [23].

The Federation of State Medical Boards (FSMB) and the American Medical Association have issued recent policy documents and guiding principles to ensure patient safety and choice, quality of care, licensure, and privacy of patient information [24, 25]. In particular, the FSMB model policy clearly states that prescribing as a result of a telemedicine encounter should follow all current standards of practice in terms of indications, appropriateness, and safety considerations. It also establishes that, in accordance with the guidelines, a virtual visit can establish a bona fide doctor-patient relationship [24].

Barriers to Adoption

Despite multibillion-dollar investments in telemedicine, broadband expansion, and innovations in health information technology, twentieth-century statutes and regulations have led to continued uncertainty that limits adoption.

Lack of coordination at the federal level. Even in the face of significant increases in the use of telemedicine nationwide, continued balkanization of the legal and regulatory framework that underpins the use of telehealth technologies adversely impacts integration into mainstream care. Currently, 26 different federal agencies report engagement in telehealth, be it in research or other grant funding opportunities, the establishment of broadband communications networks, clinical service delivery, device development, or regulation. The Fed-Tel working group effort to coordinate telehealth policy has made some progress, but a serious lack of coordination of practical policies across these agencies remains, in part because of statutory barriers [26]. As an example, Medicare's definition of "rural" for the purposes of reimbursement conflicts with the definition used by the US Department of Agriculture for its telemedicine grant program, and neither of these definitions aligns fully with that which the Federal Communications Commission uses for broadband communications discounts in the Rural Health Care Program. Inconsistent state policies and regulations create additional barriers for otherwise willing clinicians seeking to integrate telemedicine technologies into care delivery models. These policies pose significant challenges for large health care systems and are virtually insurmountable for small medical practices.

Reimbursement challenges and progress. Payment coverage restrictions remain a major impediment to clinicians' adoption of telehealth services.

The Balanced Budget Amendment of 1997 and the 2000 Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act (BIPA) authorized reimbursement for telemedicine services provided to rural Medicare beneficiaries for a broad range of diagnostic and treatment services. Section 223(d) of the act directed HHS to study and report on opportunities to expand coverage for telehealth services within two years [27]. Fourteen years later, no such report has been produced. Moreover, the current Medicare telehealth provisions in section 1834(m) of the Social Security Act

restrict eligibility for reimbursement to “originating sites” (sites at which a patient receives telehealth services) located in nonmetropolitan areas or areas that are part of federal telehealth demonstration projects [28].

The Affordable Care Act (ACA) of 2010 did not expand eligible originating sites within the traditional Medicare program in part because the Congressional Budget Office had overestimated the cost of telemedicine services to Medicare when BIPA was passed in 2000 [29]. Although pilot programs have been launched through the Center for Medicare and Medicaid Innovation, the regulations for accountable care organizations still require that the originating site conform to the regulations set forth in Section 1834(m) of the Social Security Act [28]. In its 2014 physician payment schedule, CMS expanded its operating definition of “rural,” from nonmetropolitan counties only to regions defined as rural by the Office of Rural Health Policy.

These statutory barriers placed on telehealth programs are borne out by the meager CMS reimbursements for telemedicine services. In 2013, CMS reported fewer than \$12 million in reimbursements for “allowable charges” nationwide for both originating sites (the location of the patient) and distant sites (the location of the clinician or telemedicine provider) [29]. That figure pales by comparison to the CMS’s National Health Expenditure Data, which reported that Medicare spent \$572.5 billion in 2012 [30]. Moreover, the current Medicare originating site payment is insufficient to cover the costs of establishing and maintaining a telemedicine service and facilitating the encounter [29].

Currently 47 state Medicaid programs provide some form of reimbursement for the delivery of telehealth-facilitated care to Medicaid beneficiaries, but there is no consistency in coverage across those programs. Most Medicaid programs pay for patients’ transportation to care, and yet, in many states, there are still considerable limitations on coverage for telehealth services. A consistent federal-state approach to Medicaid payment for telehealth services would provide cost savings not only by reducing transportation but also by improving access to care and models of care delivery.

As of 2014, 21 states plus the District of Columbia have passed parity reimbursement legislation; in 29 states, however, there is no requirement that private insurance cover telehealth services [31]. Some commercial payers support coverage of telemedicine services even in the absence of a state mandate, and others have developed or adopted direct-to-consumer home or workplace telehealth programs, as either a benefit to members or an additional payment option, to reduce unnecessary emergency room and office visits [23].

Inconsistent state medical board regulations. Inconsistent state medical board regulations remain a significant barrier to the expansion of telemedicine services. For example, some states require an in-person visit prior to the provision of any telehealth service. In general, telehealth practitioners must be fully licensed in the state in which the patient is located. Obtaining these licenses is a cumbersome and

expensive process for physicians. The April 2014 report of the FSMB's Appropriate Regulation of Telemedicine (SMART) workgroup, "Model Policy for Appropriate Use of Telemedicine Technologies in the Practice of Medicine," which proposes a common framework and language for adoption by states, is promising [24]. By providing a model policy for use by state medical boards, the FSMB proposes to reduce regulatory barriers to more widespread adoption of telemedicine technology, all the while ensuring its appropriate use.

Lack of investment in broadband connectivity. Another continuing obstacle to the wider integration of telehealth care is a lack of broadband availability and affordable connectivity, particularly in rural areas. Following passage of the Telecommunications Act of 1996, the establishment of the Rural Health Care Program (RHCP) of the Federal Communications Commission's (FCC) Universal Service Fund has promoted expansion of broadband services for eligible health care facilities in rural areas by providing discounts for ongoing connectivity [32]. But challenges within this program remain. A number of types of entities, such as emergency medical services providers, skilled nursing facilities, and for-profit hospitals and clinics are deemed ineligible for RHCP support altogether [27]. Secondly, even for those who are eligible, the application process is very complex. The FCC has made efforts within their statutory authority to broaden the use of the Rural Health Care Program, but the onerous application process still creates disincentives even for eligible entities. As a result, the Rural Health Care Program has disbursed considerably less than the \$400 million authorized by the Federal Communications Commission [33, 34].

In 2010, the health care chapter of the FCC's *Connecting America: The National Broadband Plan* identified a number of the federal agency challenges articulated earlier that inhibit adoption of telehealth and recommended substantive changes to the RHCP to integrate broadband communications services into sustainable models of health care delivery [35]. Many of those federal agency challenges remain in 2014.

Conclusion

Telehealth care is an essential tool to address our nation's significant challenges in access to high-quality care and clinician shortages. However, technological innovation has far outpaced advancements in policy, and the layering of innovative models over an outdated and inconsistent legal, administrative, and regulatory framework risks limiting the promise of telehealth. Thus, it is imperative to modernize federal and state telehealth policies to foster certainty, transparency, high quality, security, access, affordability, sustainability, and the adoption of twenty-first-century models of care.

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Disclosure

Christine Shanahan is a co-owner of DermUtopia, a mobile teledermatology company.

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