American Hospital Association

ISSUE BRIEF

Telehealth: Helping Hospitals Deliver Cost-Effective Care

Introduction

Telehealth is increasingly viewed as a cost-effective method to deliver patient care and expand access. The growing use of telehealth reflects larger health care trends that place the patient's care and experience at the center of treatment decisions. Telehealth connects patients to vital health care services though videoconferencing, remote monitoring, electronic consults and wireless communications. These links allow patients to access their care team remotely and remove potential barriers to care.

By increasing access to physicians and specialists, telehealth can help ensure patients receive the right care, at the right place, at the right time. However, coverage for telehealth services – especially in Medicare – has not kept pace with technological and care delivery innovations.

Private payers have made more progress in recognizing the benefits of telehealth services through their coverage and reimbursement guidelines, while retail clinics are incorporating telehealth to increase convenience and patient access to doctors. As telehealth technologies evolve, it will be important for policymakers to understand the prospective benefits and embrace a framework that allows patients, providers and payers to incorporate technological innovations in care delivery.

KEY MESSAGES:

1. **Growing evidence indicates that telehealth lowers health care costs, while improving access and quality of care.**
2. **Medicare currently provides limited coverage for telehealth; other payers have more quickly incorporated telehealth coverage for a range of services and geographies.**
3. **Coverage for telehealth should be incorporated into emerging payment models.**
4. **Support for additional research is needed to evaluate how telehealth can best advance care delivery and enhance the patient experience.**

Limited coverage impedes the expansion of telehealth services

Limited coverage for telehealth services is a major obstacle to greater adoption. Among public payers, Medicare offers the most limited coverage of telehealth, paying for a narrow set of services and only in rural areas.[1] CMS has recently allowed for expanded use of telehealth by waiving the geographic and practice setting limitations for providers participating in certain experimental Medicare payment initiatives, such as the Bundled Payments for Care Improvement Initiative (BPCI) and the Next Generation Accountable Care Organization (ACO) model.

Most state Medicaid programs cover some telehealth services, although the criteria for coverage vary from state to state. Private payers have been more willing to embrace telehealth as a covered service for beneficiaries. Many private payers are aligning incentives to ensure that patient quality of care is high – in order to avoid costly readmissions and other adverse outcomes – and financial resources are used wisely in order to control costs.

The Congressional Budget Office (CBO) has long held the view that expanding access to telehealth would increase spending due to higher utilization. Specifically, the CBO states "if rural or urban enrollees would otherwise not have received care because of difficulties in obtaining access to doctors, providing telemedicine might well increase spending on services Medicare covers instead of substituting for services that would have been covered without telemedicine."[2] However, the CBO has significantly overestimated the cost of adopting telehealth in previous

bills that became law. In 2001, Congress authorized the current limited guidelines on telehealth coverage for Medicare; the CBO predicted telemedicine would cost Medicare $150 million in the first five years after the law was passed. In practice, the program has spent only $57 million on telehealth services over 14 years, according to the Center for Telehealth and eHealth Law.[3]

Experts from health plans, which have incentives to ensure patients receive efficient care, have advocated for Medicare and other programs to expand telehealth coverage. Notably, at the February 2016 meeting of the Medicare Payment Advisory Commission (MedPAC), both commissioners representing health plans encouraged MedPAC to recommend that Medicare embrace telehealth in coverage guidelines.[4] The commissioners noted the benefits of telehealth for patients, including less time lost due to travel and greater convenience, and expressed concern that Medicare may be proceeding too cautiously on coverage of telehealth services.

> "I think the technology and our patient expectations are moving far faster than our payment policy is right now… our experience has been [that telehealth] improves access, improves quality and lowers cost at the same time. In fee-for-service, bundled payment models and Medicare Advantage, we should be looking for ways of encouraging and accelerating the application of this set of tools."
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> – Scott Armstrong, MedPAC commissioner and president and CEO, Group Health Cooperative, Seattle.[5]

Telehealth program yields significant savings for Veterans Health Administration

The Veterans Health Administration (VHA) began introducing telehealth programs in the 1990s and has pioneered the use of telehealth in the United States. The VHA uses multiple types of telehealth interventions that provide routine care and targeted care management services to veterans with diabetes, congestive heart failure (CHF), hypertension, chronic obstructive pulmonary disease (COPD), post-traumatic stress disease (PTSD) and depression. The VHA served over 150,000 beneficiaries with telehealth services in 2012.

As the VHA's program matured, it created substantial efficiencies. The annual cost to deploy the telehealth program in 2012 was $1,600 per patient per year, compared to over $13,000 for traditional home-based care and over $77,000 for nursing home care. Telehealth also was associated with a 25 percent reduction in number of bed days of care and a 19 percent reduction in hospital admissions across all VHA patients utilizing telehealth.

For example, the VHA achieved significant reductions in hospitalizations: over 40 percent for mental health patients; 25 to 30 percent for patients with heart failure and hypertension; and around 20 percent for patients with diabetes and COPD. Overall, the VHA estimates average annual savings of $6,500 for each patient that participated in the telehealth program in 2012.[6] This equates to nearly $1 billion in system-wide savings associated with the use of telehealth in 2012. Further savings accrue to patients in the form of travel avoided and fewer lost work-days. For example, in Vermont, savings of $63,804 per patient were created through the use of home-based telehealth and telemonitoring that eliminated expenses related to time and travel expenses during 2013.[8]

The VHA estimates average annual savings of $6,500 for each patient that participates in the telehealth program.[7] This equates to nearly $1 billion in savings for the VHA in 2012 enabled by the use of telehealth.

Growing evidence suggests others are beginning to see savings

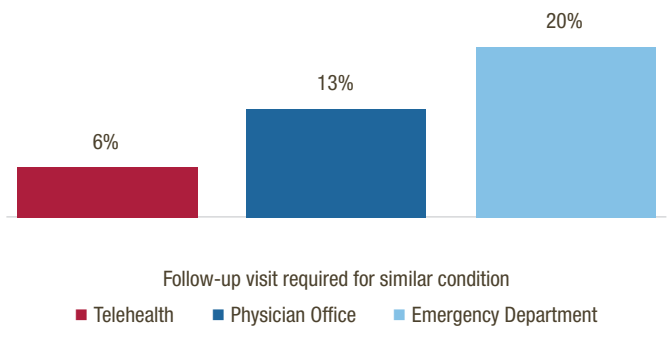
The VHA's successful national deployment of telehealth supports additional investment in telehealth. Unfortunately, it is one of only a few organizations that have utilized telehealth for an extended period of time and for which data about costs and benefits of the telehealth program is publicly available. However, there is a growing body of evidence that reinforces the VHA's experience of savings attributable to telehealth. For example, the Agency for Healthcare Research and Quality (AHRQ) has noted studies that have reinforced the value of telehealth interventions for treatment of stroke, management of chronic conditions and behavioral health, and for counseling and monitoring.[9]

Initial telehealth consultations lead to decreased utilization

A primary concern of policymakers is whether enhanced access to care from telehealth expansion will lead to increased utilization, thus creating additional expense for the Medicare and Medicaid programs. While improved access to care generally is viewed as positive, concerns about the long-term financing of public payer programs has led to increased scrutiny of coverage decisions that could lead to increased costs. However, research suggests these concerns may be unfounded.

Fewer follow-up visits are required after telehealth visits, in comparison to physician offices and EDs.

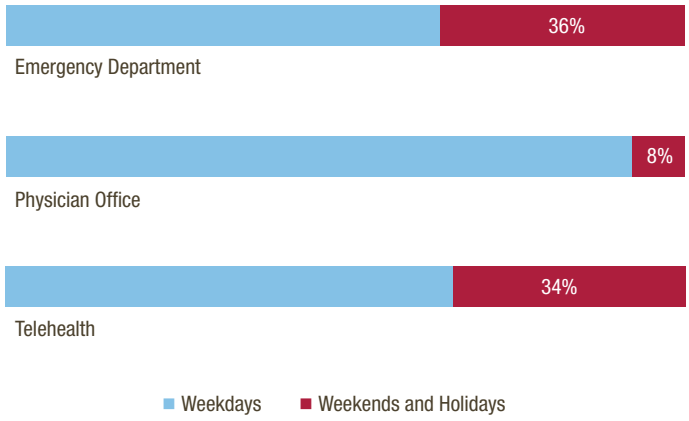
Chart 1: Percentage of telehealth, physician office and emergency department visits where follow-up is required for similar condition, April 2012 - February 2013



Source: Uscher-Pines, Lori, et al. *Analysis of Teledoc Use Seems to Indicate Access to Care for Patients without Prior Connection to a Provider.* Health Affairs. 33:12 (2014).

Access to physician visits through telehealth could substitute for more costly ED visits.

Chart 2: Timing of telehealth, physician office and emergency department visits, April 2012 – February 2013



Source: Uscher-Pines, Lori, et al. *Analysis of Teledoc Use Seems to Indicate Access to Care for Patients without Prior Connection to a Provider.* Health Affairs. 33:12 (2014).

A recent study of enrollees in the California Public Employees Retirement System (CalPERS) evaluated the impact on utilization of providing physician consultations via telehealth through Teledoc, a telehealth provider. The study found that, after a telehealth visit, the patient was less likely to require a follow-up visit in comparison to individuals who received their initial consult for a similar condition in the emergency department (ED) or a physician's office. Six percent of telehealth visits resulted in a follow-up visit, in contrast to 13 percent of office visits and 20 percent of ED visits. Additionally, telehealth utilization increased during weekends and holidays, times when ED utilization typically increases due to limited access to physician offices.[10] The timing of these visits suggests that less expensive telehealth visits are potentially promising substitutes for visits to the ED.

Telehealth can allow patients to receive hospital services at home

Hospitals are exploring how to utilize telehealth for patients who are sick enough to be hospitalized but stable enough to be treated at home. Conditions with defined treatment protocols such as CHF and COPD are well-suited to these "hospital at home" models. When a patient is treated at home, clinical staff travel to the home as needed to provide treatment, while telehealth is used to monitor the patient's condition and enable daily meetings with the physician.[11] Hospital at Home programs have been tested under partnerships with Medicare Advantage plans, private payers and the Veterans Health Administration.[12]

The Hospital at Home program, pioneered by Johns Hopkins Medicine in Baltimore, focuses on elderly patients who refuse to go the hospital or have compromised immune systems that would make them susceptible to healthcare-acquired infections. Results from Johns Hopkins' application of the model showed the total cost of at-home care was 32 percent less than traditional hospital care ($5,081 vs. $7,480), the mean length of stay for patients was shorter by one-third (3.2 days vs. 4.9 days), and the incidence of delirium (among other complications) was dramatically lower (9% vs. 24%).[13] A study of the program also found no difference in rates of subsequent use of medical services or readmissions, and patients and family members' satisfaction was higher in the home setting than among those offered inpatient hospital care.[14]

The Hospital at Home program at Presbyterian Healthcare Services in Albuquerque, N. M., focuses on patients with pneumonia, COPD and CHF, among other conditions. The health system found that patients utilizing the program were more likely to receive care aligning with clinical best practices, such as fewer readmissions and falls, as well as report higher patient satisfaction. Spending on the Hospital at Home population was 19 percent lower than that for a similar patient population. The difference was attributable to shorter length of stay and lower utilization of clinical testing.[15]

Telepsychiatry services allow EDs to serve behavioral health patients effectively

Hospitals have grappled in recent years with how best to provide services to patients with behavioral health needs, particularly as state financial support for psychiatric services has declined. States cut $5 billion in mental health services from 2009 to 2012, and nearly 10 percent of the total supply of public psychiatric hospital beds was eliminated.[16] As a result, many patients turn to the ED when they have behavioral health needs. However, the ED is not typically well-equipped to meet these patients' needs. In practice, an attending physician will evaluate and treat any physical issues that may be contributing to the patient's condition, and then the patient may be forced to wait an extended time before a psychiatrist is able to see him/her.[17]

Telehealth can help EDs effectively assist this patient population. Telepsychiatry services have allowed Dignity Health, a health system based in San Francisco, to provide appropriate care quickly and cost effectively. For patients who do not pose an immediate threat to themselves or to others and who may not be candidates for discharge, the hospital typically connects the patient to a psychiatrist through telehealth within 90 minutes from arrival at the ED. This reduction in elapsed time between arrival at the ED and interaction with a specialist is essential, as behavioral conditions can deteriorate during the time that a patient waits to see a psychiatrist. The psychiatrist is then able to recommend whether the patient should be discharged, transferred, or further observed, and any needed follow-up care. This process has helped Dignity reduce the number of behavioral health patient admissions and, more importantly, provide care to patients quickly.[18]

Tele-emergency specialty consults improve outcomes and reduce need for transfers

In many community hospitals, there is not sufficient patient volume to support physician specialists on an around-the-clock basis in the ED. For some conditions, timely assessment of a patient is essential to ensuring the patient is able to recover from their ailment and prevent disability. For example, for some stroke patients, administration of tissue plasminogen activator (tPa) can help dissolve a blood clot and prevent further brain damage. However, a neurologist is best positioned to know which patients would benefit from tPa and many hospitals are unable to offer a 24/7 on-site specialist. In stroke specialty facilities, tPa is administered to over 20 percent of stroke patients, while the standard rate for many hospitals is 2-5 percent. Telehealth extends the reach of experts by allowing access to an on-call neurologist for an immediate consult, enabling improved outcomes and minimizing potential future disability due to stroke.[19]

In other situations, a patient's condition may normally require a transfer to another hospital in order to see a specialist. In these cases, telehealth services can provide a live audio and visual consultation from the needed specialist to the ED or hospital where the patient is physically receiving care. The virtual consultation can provide the expertise of a specialist in situations where a physician might otherwise transfer a patient to another hospital to obtain a consultation. In addition to reducing patient burden, avoiding transfers creates savings by alleviating the need for a hospitalization at a second facility. At Avera Health, a health system based in Sioux Falls, S. D., deployment of tele-emergency resulted in reduced total emergency care costs by keeping patients in their original hospitals.[20]

Telehealth physician visits reduce admissions from nursing homes

A similar concept can be found in nursing homes, where 24/7 on-site physician coverage is not required. Nursing homes may be able to substitute a telehealth physician for on-call physicians in some instances, which allows patients to receive a consult quickly and potentially avoid a hospital admission. A recent study indicated that hospitalizations among nursing home patients decreased by 4.4 percentage points when telehealth was utilized. Applying this savings rate to an average size nursing home (106 beds in 2013)[21] indicates that regular use of telehealth in nursing homes could save the Medicare program about $151,000 in annual savings per nursing home due to reduced inpatient admissions. However, a barrier to increased adoption is that the nursing home must invest in the technology required to offer telehealth services – estimated at $30,000 per facility – while almost all savings would accrue to Medicare.[22]

Mercy Virtual Care programs improve outcomes, reduce spending

Mercy Health, based in St. Louis, has prioritized investment in telehealth over the last decade. In 2015, Mercy opened their Virtual Care Center, a "hospital without beds" that has over 300 physicians and staff members entirely dedicated to the delivery of telehealth services. The Virtual Care Center and Mercy's preceding telehealth and telemonitoring programs have created notable results: expected inpatient length of stay and mortality rates have declined by 40 percent, while the average cost of care has significantly declined as fewer patients require a hospital stay.

The ability of expert care providers to offer consultations is essential to minimizing variation in care across settings, which improves quality and creates savings. Further, the centralization of data and the ability to analyze patient potential risk indicators is valuable, as each local hospital does not have the capacity to capture information to the same extent as the Virtual Care Center.

Another important source of reduced costs, according to Thomas Hale, M.D., executive medical director of the Virtual Care Center, is the enhanced access to data concerning patient health status. Dr. Hale said, "Today, the patient is the decision support tool. However, tele-health and telemonitoring can allow providers to be proactive so they know the patient needs to see a doctor or a specialist." Enhanced access to the patient helps to promote medication adherence and helps the patient avoid high-cost care settings, such as the ED.

Private plans and retail clinics making investments in telehealth

Policymakers and regulators also can look to the private sector for evidence that at-risk plans and publicly traded companies see the value of telehealth through their coverage and deployment strategies. Private insurers, like Aetna, Anthem and United Healthcare, are rapidly incorporating telehealth into their Medicare Advantage, commercial and individual benefit packages, including physician telehealth visits in both urban and rural areas. Most other major commercial insurers and self-insured employers are incorporating some type of telehealth benefit into their coverage.[23]

In 2015, CVS Health engaged three telehealth companies to expand patient access to doctors for online or over the phone consultations in six states. Prior to this official rollout, CVS conducted an 18-month pilot program in California and Texas. Of 1,700 patients who were surveyed in the pilot program, 95 percent were highly satisfied with the quality of care they received, the ease of using the technology and the timeliness and convenience of the care. In addition, one-third of patients indicated they preferred a telehealth visit to a visit with a clinician in the same room.[24] Telehealth visits provided in this manner alleviate the need for patients to wait in-person at an urgent care clinic, an important differentiator as consumers increasingly cite convenience as a key driver in their health care treatment decisions.[25]

Conclusion and Recommendations

A growing body of evidence shows that telehealth can not only expand access to services but also create cost savings. For many patients, telehealth increases the ability to access timely care while reducing the potential inconvenience of travelling long distances or being transferred to another health care facility.

However, additional research into telehealth, using larger samples sizes, diverse geographies and a broader range of conditions and services, can help policymakers better understand the full range of benefits that telehealth can yield in providing care in more efficient and cost-effective ways. The AHRQ Telehealth Evidence Map states that "future research should help providers and health systems differentiate the value of telehealth services as an addition to traditional in-person care, and the value of telehealth as a replacement for in-person care."[26] Additionally, the inclusion of telehealth in value-based payment models can help assess the value of telehealth in situations where financial incentives promote quality improvement and cost savings. Finally, geographic limitations on telehealth use should be lifted, as patients regardless of care setting or physical location can benefit from increased access to expert physicians that can promote adherence to treatment plans that reflect the latest clinical best practices.

Research and experience under the Medicare program suggest that policymakers' concerns about increased access to telehealth leading to increased spending may be overstated, particularly when weighed against the potential benefits in quality, patient experience and efficiency. In fact, when the right types of services are utilized at higher levels – such as in the case of tPa administration for stroke patients or the Hospital at Home program – cost is significantly reduced. By modernizing Medicare coverage of telehealth, including telehealth services in innovative payment models and committing additional resources to understanding the patient and cost benefits of telehealth, policymakers can advance the delivery of care and benefit patients.

For more information on telehealth, visit www.aha.org/telehealth.

Endnotes

[1] Medicare provides coverage for telehealth services only in regions designated as a Health Professional Shortage Area (HPSA) and in a county that is outside of any Metropolitan Statistical Area (MSA), defined by the Health Resources and Services Administration (HRSA) and the Census Bureau, respectively.

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[13] http://www.commonwealthfund.org/publications/newsletters/quality-matters/2011/august-september-2011/in-focus#/#4

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