

CHCI White Paper

DEVELOPING THE NEXT GENERATION OF LATINO LEADERS®

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Unlocking the Power of Telehealth: Increasing Access and Services in Underserved, Urban Areas

By Sara Agate, CHCI-PepsiCo Foundation Health Graduate Fellow

Executive Summary

The term telemedicine literally means "healing at a distance" through the Latin "medicus" and Greek "tele." While there is not one universally accepted definition of telehealth, generally it is the use of technology to deliver healthcare, health information, or health education at a distance. Telehealth has the potential to improve access to quality healthcare and services to underserved populations. As the growing interest of telehealth pervades the healthcare system, policy-makers, associations, healthcare providers, patients, and insurers seek better solutions. These solutions seek to promote and provide increased access, coordinated care, reduce healthcare spending, and improve health outcomes as the system struggles with a provider shortage. Through the increased use of telehealth, more urban, underserved populations can gain access to health services and education to aid in access to mental health services and the prevention of chronic diseases, such as diabetes, obesity, and high blood pressure

Telehealth Background

The United States' (US) ongoing battle to slow healthcare's rising budget and ensure access to services creates urgency to utilize technology now; it is no longer a futuristic ideal. Here, the term telehealth will be used to include telemedicine (clinical services such as, diagnosis and treatment of illness or injury, remote pa-

tient monitoring, and mobile health or mHealth), and eHealth. According to a 2011 World Health Organization (WHO) mHealth report, mHealth is a component of eHealth and no standardized definition of mHealth exists. Geographic disparities in access to care can be addressed partially using technologies that allow for remote audio, visual, and haptic communication between patients, caregivers, or healthcare providers that are not in the same site.

The use of technology in healthcare creates a growing complex industry. Medicine in the 21st century is increasingly dependent on technology.² A Pew Research survey shows that from 2000 to 2015, there has been a 32 percent increase in American adults using the Internet.³ The integration of healthcare with Internet use creates an opportunity for telehealth to improve access to quality healthcare and services to underserved populations in urban areas. It is a tool that should create another access point for all.

Underserved Communities

In this case, the term "underserved" includes, but is not limited to, members of immigrants, ethnic groups, rural residents, urban youth, the unemployed, and the homeless.

The ability to reach the underserved communities in urban areas through telehealth is underdeveloped. Older adults in

urban and suburban areas also face difficulties traveling to their doctors' offices for frequent appointments.⁴

The Pew Research Center Fact Tank article states that Hispanics are projected to grow to be 29% of the U.S. population by 2060, according to the Census Bureau.⁵ Telehealth can offer the growing Latino population another healthcare service opportunity. In this paper, the term Hispanic and Latino are used interchangeably due to varying data sources. In fact, the reader should note that these terminologies have different sociohistorical evolutions.^{6,7} Over 90 percent of Latinos live in ur-ban areas, compared to less than 80 percent of whites.8 The Patient Protection and Af-fordable Care Act (ACA) sought to close the uninsured gap,9 yet many Latinos still lack adequate healthcare insurance, and among those that do have insurance there are obstacles in receiving appropriate services and care. As a result, the rapidly growing popu-lation faces some of the highest health dis-parities. Telehealth could provide another entry point to increase healthcare service access for Latinos across the nation, particularly those in urban, underserved areas.

In a 2012 study examining telemedicine perceptions among Latinos and African Americans titled *How Do Low-Income Urban African Americans and Latinos Feel about Telemedicine?*, Latinos noted several advantages and more positive and enthusiastic about the prospect of tele-

Today's healthcare providers, patients, and populations who are not yet accessing healthcare services have the tools to develop a digital relationship — one that treats health technology as a integrated system to improve quality of care, decrease healthcare spending, and prevent disease.

medicine. ¹⁰ Latinos viewed telemedicine's potential convenience appealing, in terms of location, and suggested that it would result in more jobs for nurses. Telehealth was also seen as a means to address healthcare workforce shortages.

Other barriers much be considered in access to care such as, language and digital literacy, in addition to access and utilization of services. With the increased use of telehealth, more urban, underserved populations can gain access to health services and education to aid in the prevention of chronic diseases, such as diabetes, obesity, and HBP.

Barriers

The acceleration and adoption of telehealth has been slowed by a number of factors including:

- Coverage: lack of coverage and reimbursement, particularly in the Medicare Program;
- Interoperability: lack of data and system/ platform interoperability;
- Cyber-Security: pervasive privacy and security concerns;
- Expertise/Skill: limited training and education of health care providers in the appropriate use of such technologies (hampered by limited number of clinical practice guidelines); and,
- Regulation: onerous regulatory hurdles at the state and federal level.

Conclusion

This paper concludes that, overall, it is worthwhile to remove the geographic and originating site restrictions and other barriers for telehealth services to support underserved, urban communities, patients, and increase telehealth adoption and expansion. Although the implementation

of telemedicine technologies requires initial investments in equipment, telecommunications, and costs of technical and administrative personnel, a variety of cost analyses have found that models of care using telemedicine can result in long-term overall cost savings (30,32–37).¹¹ This belief runs counter to the Congressional Budget Office's (CBO) historic stance that the investment outweighs the cost savings.

Extended Analysis

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A Brief History of Telehealth

The use of telecommunications in health began in the 1950s when the US started to support space stations. As outer space mission trip duration increased over time, the National Aeronautics and Space Administration (NASA) needed to track astronauts' biometric data to learn how their health status changed in space. This created an opportunity for collaboration with the US Department of Health, Education and Welfare, now known as the Department of Health and Human Services, and the Indian Health Service that joined in sponsoring the Space Technology Applied to Rural Papago Health Care.¹²

As a result, it is believed that this project was a necessary step in improving the health of astronauts and could be used to help ordinary Americans. NASA began to experiment with different technologies such as, blood pressure devices and heart monitors to track and manage astronauts'

health. Over time, NASA realized this innovative technology would benefit the Department of Defense (DOD). The increased use of telehealth by the US Army followed, leading to better health access and telecommunication systems where the armed forces could connect with a healthcare provider without the healthcare provider being on site. The DOD has been instrumental in using new technology to improve the delivery of care. The US Department of Veteran's Affairs (VA) has also been leading in telehealth efforts.

Over the past four decades, telemedicine has become an increasingly cost-effective alternative to in-person care and has in some cases been integrated into a 'continuum of care' in hospitals, physicians' offices, patients' homes, and many other settings.15 Telehealth is increasingly becoming an important part of the US medical system that focuses more on quality and integration of care, including highly-integrated models such as patient-centered medical homes and accountable care organizations (ACOs).16 In order to foster acceleration, adoption, and access of telehealth services for underserved, urban populations, a health-tech culture that values telehealth as a supplemental digital relationship to the traditional in-person visit must be created. The optimal model for care would ensure that the patient and communities have access to and know their options to engage in quality, affordable healthcare and education services in-person and remotely.

Access to Healthcare Services

Through the ACA more that 17.6 million Americans gained coverage through late summer in 2015.¹⁷ Even still, Hispanics are more likely to lack health insurance The world will be short of 12.9 million healthcare workers by 2035. The Association of American Medical Colleges (AAMC) predicts that physician shortage will occur in the future, although we are feeling the effects of it now.

than any other racial or ethnic group, and enrollment on the individual health insurance exchanges is disproportionately low among Hispanics — issues that have been well documented. Various factors that make it difficult for enrollment, for instance, a state decision to expand Medicaid eligibility levels. Better access to insurance coverage and services, coupled with the use of telehealth could help lower rates of health disparities amongst Latinos.

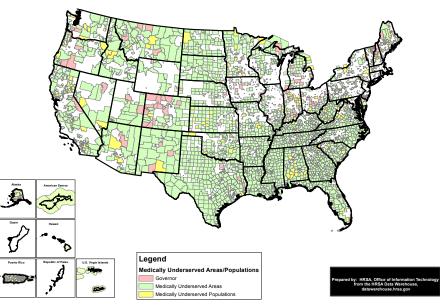
Healthcare Workforce Shortage

Telehealth offers an ideal opportunity to ensure access to services for underserved populations and promote workforce development. The world will be short of 12.9 million healthcare workers by 2035.19 The Association of American Medical Colleges (AAMC) predicts that physician shortage will occur in the future, although we are feeling the effects of it now. If health trends continue to grow as they are in the US, AAMC predicts there will be a shortage of 45,000 primary care doctors in the US, as well as a shortfall of 46,000 specialists by 2020.20 This is particularly troublesome for Latino populations because the Latino physician shortage is worsening.21 This fact combined with the growing number of insured individuals through the ACA, which has provided health coverage to more than 30 million previously uninsured Americans, yields a serious stress on our healthcare system. The more insured Americans will increase demand for primary care services that are already scarce in many areas.21

The Health Resources and Services Administration (HRSA) provides data on Medically Underserved Areas (MUAs) that may be a whole county or a group of contiguous counties, a group of county or

Figure 1: Medically Underserved Areas and Populations, 2016





civil divisions or a group of urban census tracts in which residents have a shortage of personal health services. Also, HRSA accounts for Medically Underserved Populations (MUPs) that may include groups of persons who face economic, cultural or linguistic barriers to health care. The plight of MUAs and MUPs offers an opportunity to grow our workforce and leverage telehealth technologies to reach all areas in need.

Yet, the Bureau of Labor Statistics (BLS) project healthcare employment to grow by 26 percent between 2012 and 2022, an increase of about 4.1 million jobs. BLS states that a growing population, more people who are older, chronic conditions, medical advances, and health insurance reform will lead to this employment increase.²² The medical advances include improvements in medicine and technology. Further, primary care capacity can

be greatly increased without many more clinicians:

- by empowering licensed personnel, including registered nurses and pharmacists, to provide more care;
- by creating standing orders for nonlicensed health personnel, such as medical assistants, to function as panel managers and health coaches to address many preventive and chronic care needs;
- by increasing the potential for more patient self-care; and
- by harnessing technology to add capacity.²³

Physicians believe that telehealth improves access to care for patients.²⁴ Telehealth could promote the rise of the healthcare workforce by training CHWs, health educators, midwives, nurses, physicians, and industry technology specialists to engage in telecommunications with patients and populations.

Although Latinos may use the same technologies as non-Hispanic Whites, they tend to use them differently, with greater importance placed on cultural and linguistic factors.³⁴

Latino Health Disparities

The Centers for Disease Control and Prevention (CDC) has found that Hispanics suffer disproportionately from cancers, diabetes, asthma, chronic obstructive pulmonary disease, HIV/AIDS, obesity, and liver disease, many of which can be either prevented or controlled by early detection and treatment.25 Preventable diseases such as diabetes, obesity, and HBP are on the rise. The Study of Latinos found that the prevalence of diabetes in Hispanic/Latino groups was roughly 16.9 percent for both men and women, compared to 10.2 percent for non-Hispanic whites.²⁶ Obesity is a common, growing issue that is swelling the pocketbook of our healthcare system. Estimates show that among Hispanic, black, and white adults age 20 and older overweight and obesity affect more than 3 in 4 Hispanics (78.8 percent) and blacks (76.7 percent).27 The estimated annual medical cost of obesity in the U.S. was \$147 billion in 2008 U.S. dollars; the average medical costs for people who are obese were \$1,429 higher than those of normal weight.²⁷ Another leading preventable disease is HBP. For such cases, telehealth tools could be incorporated into an individual's lifestyle, particularly those that are at risk for developing a chronic disease. For other cases, telehealth can promote chronic disease management and wellness. Successful implementation of health IT in underserved communities must incorporate technology as one element of a broader initiative. The technology should target known problems that burden institutions, patients, and communities.²⁸

Latino Technology Use

Latinos have the potential to unlock the power of telehealth. Latinos are now more than 17 percent of the US population. As of 2015, the group's growing purchasing power was estimated to reach \$1.5 trillion. This population growth and purchasing power, and need to make healthcare coverage and services more accessible to all, posits Latinos as benefactors.

Broadband Access

Critics claim the Digital Divide, access and adoption of fixed broadband connection, inhibits their economic investment in basic technology, like the Internet. In 2011, among Internet users, Hispanics were less likely to have home (a fixed connection) broadband (69 percent) than are whites (84 percent) or blacks (78 percent).²⁹ In a 2015 Pew Report, 50 percent of Latinos have a home broadband connection.30 Instead, a Nielsen report highlights Hispanic dependence on mobile devices for Internet connectivity.31 Smartphones are widely used for navigating numerous important life activities, from researching a health condition to accessing educational resources.³²

According to the Office of the National Coordinator for Health Information Technology (ONC), the overall proportion of Americans using health information technology (HIT) (defined as texting or emailing healthcare providers, using health apps, and accessing online test results) has been increasing for the last several years, though it is still under 50 percent. Not surprisingly, people who most use HIT are the wealthiest and most highly-educated. African Americans and Hispanics use it the least, while Whites and Asians use it the most.33 Looking ahead, with the ever-increasing population growth among the Latino community, this group is poised to become a major trendsetter with new forms of technology and early adoption of media use.34 Biometric data collected through wearable devices, Smartphones, or computers could

lead to more interactive, healthy and behavioral lifestyle changes, and the prevention of chronic diseases.

However, to fully embrace the benefits of telehealth, there must be both Smartphone and home Internet connections for successful engagement with healthcare systems and technologies. Recognizing the home broadband challenges particularly among Latinos and African Americans nationwide places emphasis on the need for broadband access and adoption. Federal, state, and private entities are working to develop a telecommunications infrastructure.

Digital Literacy

Although Latinos may use the same technologies as non-Hispanic Whites, they tend to use them differently, with greater importance placed on cultural and linguistic factors.35 Innovators and healthcare providers should be aware of digital literacy opportunities and barriers. Technologies will need to be culturally and linguistically relevant to Latinos. Increased consumer education; consumer designed telehealth devices that take into account human factors, such as language; along with culturally sensitive healthcare professionals could mitigate the digital literacy barriers that may prevent some Latinos from engaging with telehealth.

The use of CHWs to support capacity-building for Latino engagement with could further alleviate some of the digital literacy, cultural, and linguistic barriers. The use of telehealth could create more access for English language learners by making appropriate translation and interpretation services or softwares readily available. With a need to increase and diversify the healthcare workforce world-

In a study that reviewed pre-telemedicine perceptions among Latino and African Americans, the main advantages were: reduced waiting time, immediate feedback on diagnosis and action steps, increased access to specialists, and increased access to multiple medical opinions.¹⁰

wide, telehealth could offer workforce development opportunities; meanwhile allowing the existing workforce another access point to care for urban, underserved populations and patients.

Telehealth Perceptions

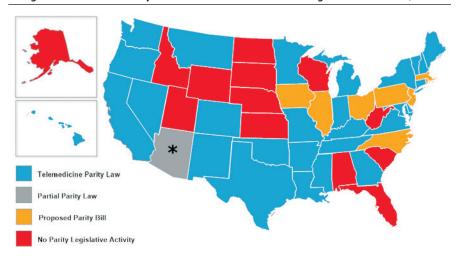
In a study that reviewed pre-telemedicine perceptions among Latino and African Americans, the main advantages were: reduced waiting time, immediate feedback on diagnosis and action steps, increased access to specialists, and increased access to multiple medical opinions.10 This has yet to be a reality for many groups, but with the use of telehealth within underserved, urban Latino populations, a positive change in primary care and preventive health service utilization is opportune. With these Smart technologies in the hands of many underserved populations, the challenge is ensuring we leverage these efficient modes of connectivity and telecommunication to engage with populations who are at risk and suffer from health disparities in order to improve health outcomes and cut costs. Given the many benefits, some advocates caution against healthcare provider fraud and abuse. Patient advocates caution that patient's data and rights should be protected.

Barriers to Widespread Adoption

Coverage

The Centers for Medicare and Medicaid Services (CMS) has been hampered by both statutory restrictions on telehealth coverage as well as a reluctance to exercise its discretions to expand coverage in the context of Medicaid-Medicare Dual-Eligibles, The Center for Medicare/Medicaid Innovation grantees, and the Medicare Shared Savings Programs.

Figure 2: States with Parity Laws for Private Insurance Coverage of Telemedicine, 2016



Under CMS' Fee-For-Service Program, reimbursement for telehealth services is conditional on the originating site being located in a non-metro county or in a primary care or mental health geographic Health Professional Shortage Area located in a rural Census Tract of a metropolitan county. In addition, there are restrictions on store and forward technologies and home-based telehealth. Despite this limitation, there are federal, academic, and private initiatives encouraging the expansion of telehealth. Private health insurers are paving the way for telehealth acceleration and adoption, by recognizing the value and cost-savings it provides to patients, healthcare providers, and population health. There are 29 states and counting that have telemedicine parity laws for private insurance.

Licensure

Regulatory barriers that have been cited included state-based licensure and state medical practice laws. According to the American Telemedicine Association, there are 70 state medical and osteopathic li-

censing boards in the US and territories.³⁶ While some telehealth stakeholders have promoted federal licensure or upholding unrestricted licenses to practice anywhere, the American Medical Association (AMA) and the Federation of State Medical Boards along with other telehealth stakeholders have offered an alternative to streamline the burdensome licensure process: the Federation of State Medical Boards Interstate Compact which is on pace to be adopted in 26 states by the end of 2017.

Licensure portability, for healthcare providers to practice out-of-state, remains in debate. The Federation of State Medical Boards³⁷ recognizes the autonomy of each state medical board and offers uniform application for physician state licensure and guideline recommendations on practice standards.³⁸ In addition, the jury is still out as to whether states will require telemedicine to reach urban populations.³⁹ Parity laws vary across states; twentyeight states and the District of Columbia have enacted full parity laws.⁴⁰

While the support of agencies is beneficial, long-term investments to create sustainability for communities are crucial.

Coding

The AMA formulated a Telehealth Services Workgroup in June 2015 to recommend updates and changes to the Current Procedural Terminology (CPT®) code set to medical services related to telehealth technology.⁴¹

Federal Agency Initiatives

There are several initiatives that promote and provide assistance to research and expand telehealth. While the support of agencies is beneficial, long-term investments to create sustainability for communities are crucial. Some of the largest investments are made by HHS' through CMS' Medicare, Medicaid, and Indian Health Service payment mechanisms. There are several other divisions within HHS that invest in telehealth such as HRSA that offers funding opportunities for states, the Substance Abuse and Mental Health Services Administration. CDC, Agency for Healthcare Research and Quality, and the National Institutes of Health. ONC's 2015-2020 Federal Health Information Technology Strategic Plan collaborates with many of the initiatives.⁴² In addition, the US Department of Agriculture continues to issue rural telehealth development grants.64 Lastly, a major bill called the 2009 American Recovery and Reinvestment Act (ARRA) allocated \$417 million to the Federal Communications Commission (FCC) Rural Health Care Pilot Program. These agencies' and others involvements in telehealth are worthwhile, but arguably many of the activities focus on rural population telehealth development. According to Dr. Nina Solenski, "Our big cities have the same issues as our rural areas...access to care."

Recent Federal Telehealth Legislation

In the 114th Congress, there have been several pieces of legislation introduced relating to the term "telehealth." In February 2016, the Creating Opportunities Now for Necessary and Effective Care Technologies (CONNECT) for Health Act (S. 2484/H.R.4442) was released and seeks to eliminate Medicare's geographic and originating site reimbursement restrictions and encourages the use of telehealth in alternative payment models (APMs) through the Medicare Access and CHIP Reauthorization Act (MACRA) through demonstration waivers.⁴⁴

The Comprehensive Behavioral Health Reform and Recovery Act of 2016 (H.R. 4435)⁴⁵ has 15 related bills in the House and Senate. The bill seeks to improve access to mental health and substance use disorder prevention, treatment, crisis, and recovery services. The bill includes telehealth as a service to make these improvements by allowing the Secretary to offer grant money to eligible states who submit an application to the Secretary.

The Telehealth Innovation and Improvement Act of 2015 (S. 2343/H.R. 4155)⁴⁶ would direct the Centers for Medicare and Medicaid (CMS) to provide coverage and payment for expanded telehealth and remote monitoring services. The bill would create an opportunity for ACOs to incorporate telehealth services in bundled payments and coordinated care models.

The Rural Veterans Improvement Act of 2015 (S. 2265)⁴⁷ seeks to ensure that Veterans in rural areas have access to mental healthcare even when telehealth mental health services are unavailable.

An Act Making Appropriations to Stop Regulatory Excess and for Other Purposes of 2016 (S. 2132)⁴⁸ focuses on rural health Medicare funds to make available grant money for the implementation of telehealth services, which includes pilots and demonstration for quality improvement and adoption of health information technology.

From January to August 2015, there were 27 bills introduced.⁴⁹ For instance, The Mental Health Reform Act of 2015 (S.1945)⁵⁰ seeks to develop an online database and communication mechanisms, including telehealth, to facilitate consultation support to pediatric practices. Another bill is the Medicare Telehealth Parity Act of 2015 (H.R. 2948)⁵¹ that would amend Title XVIII of the Social Security Act to provide an incremental expansion of telehealth coverage under the Medicare program.

The 21st Century Cures Act (H.R. 6)⁵² has 43 related bills. In regards to telehealth, the bill seeks to establish CMS reporting requirements for telehealth services under the Medicare program and requires a report from the Medicare Payment Advisory Commission (MEDPAC) to submit a report to Congress on telehealth, and generally recognizes that expansion of telemedicine is the delivery of safe, effective, quality healthcare services, by a healthcare provider, using technology as a mode of care delivery.⁵³

Lastly, The Telehealth Enhancement Act of 2015 (H.R. 2066)⁵⁴ would remove originating sites barriers for telehealth access. The bill proposes to promote and expand telehealth applications under Medicare and Medicaid. Additionally, it grants ACOs coverage to use telehealth and remote patient monitoring services as supplemental health care benefits.

The great potential of growing telehealth usage to underserved communities such as Hispanic and Latino populations is a widely-accepted concept. The global telemedicine technologies market was valued at \$17.8 billion in 2014.⁶²

The passage of any one of these proposed legislations will allow for the increase of adoption and expansion of telehealth services. 55 While the passage of telehealth legislation is difficult during a presidential election year, continuing advocacy efforts remains critical.

Telehealth Economics

According to Peyton Taylor, Jr., MD from the University of Virginia Center Health System, "Finding local partnerships is key to the future of telemedicine." Developing partnerships with existing literacy programs at the local level is crucial to telehealth utilization. For example, the Center for Information Technology Leadership estimates that widespread use of telehealth systems to promote preventive care, early intervention and effective information sharing could save the US \$3.61 billion annually.

A 2010 report by the FCC estimated that remote patient monitoring for heart disease, diabetes, pulmonary disease and skin disease could save \$197 billion nationwide over 25 years. ⁵⁸ Currently, Medicaid provides supportive services that can help connect individuals to care, such as transportation and case management. ⁵⁹ The use of provider-to-provider telehealth technologies could save \$537 million per year in transportation costs. ⁶⁰

Recommendations

The following recommendations focus on Congressional and Federal actions.

Congress should enact the CONNECT for Health Act (S. 2484/H.R.4442). In July 2015, the CBO signaled that it has not changed its assessment on expanding Medicare coverage for telehealth services because it would likely increase Medicare spending.⁶¹ Previous efforts to expand Medicare reimbursement for telehealth and remote patient monitoring services have failed partly because the CBO has reported that it will result in higher spending by facilitating enrollees' access to health-care services. Despite CBO's approach, a bipartisan and bicameral effort 62 introduced the CONNECT for Health Act, a bill that would establish reimbursement and models to expand telehealth and remote patient monitoring. The bill has been endorsed by more than 50 industry organizations.63

- Federal agencies should begin telehealth pilot programs in urban spaces that would be an incremental approach to telehealth expansion. Specifically, federal agencies should expand the population eligibility criterion and remove the requirement of "rural" population eligibility. To increase efficiency and strengthen efforts, rural models should be adopted and tailored toward specific program initiatives that account for geographical differences. These models should include a component on digital and language literacy development. According to Peyton Taylor, Jr., MD from the University of Virginia Center Health System, "Finding local partnerships is key to the future of telemedicine." Developing partnerships with existing literacy programs at the local level is crucial to telehealth utilization. Efforts to incorporate urban telehealth growth could provide necessary services for underserved populations and grant more patient to provider consultation
- CMS should remove the geographic

and originating site limitations on reimbursement. Further, CMS should reimburse for remote patient monitoring. Lastly, there should be increased collaboration among medical and health associations to align the vision and practice of telehealth services and appropriate payment mechanisms for healthcare providers, all the while upholding the highest patient protections.

Conclusion

The great potential of growing telehealth usage to underserved communities such as Hispanic and Latino populations is a widely-accepted concept. The global telemedicine technologies market was valued at \$17.8 billion in 2014.64 The widespread use telehealth is causing changes in the coverage and payment system, with more insurers seeking options to provide proper payment to providers and add value to patients. Innovative telehealth programs for patients with chronic conditions, such as the University of Virginia Health System and the University of Mississippi Medical Center, have demonstrated very compelling results. Many of the Centers are reporting significant improvements in patients managing chronic disease. These Centers and Health Systems work can be used as models to promote growth and improvement for future urban telehealth developments. The US healthcare system must move forward with telehealth technologies to meet the dynamic needs of our nation's urban health.

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