

# COVID-19 AND THE RURAL HEALTH WORKFORCE

## RECOMMENDATIONS TO IMPROVE HEALTH IN ILLINOIS

Rural Illinois is in need of sustained, sweeping change to improve the social, economic and environmental factors which determine health outcomes. Illinois' rural communities suffer from "The Five D's:" Rural communities start at a **DISADVANTAGE** due to experiencing food, healthcare, social service and data **DESERTS**, as well as organizational and technological **DISCONNECTION**. Rural regions experience similar **DISPARITIES** to low-income urban areas but experience even fewer **DEVELOPMENT** opportunities than their urban counterparts. These recommendations aim to improve health equity in rural Illinois.



### PRE-EXISTING CONDITIONS

Rural Illinois residents face significant health provider shortages. The lack of a health workforce, which includes all individuals who deliver or assist in the delivery of health services, help operate health care facilities or work in public health, is a problem throughout rural Illinois as all 62 nonmetropolitan counties face a shortage of primary care, mental health and oral health providers. According to the [Illinois Health and Hospital Association](#), rural counties have 45.5 physicians per 100,000 residents, 47 percent less than urban areas.<sup>1</sup>

As a result, rural residents often wait longer for a provider visit or forego medical or dental care altogether. According to a 2018 survey conducted by Pew Research of 10,000 Americans, rural Americans lived an average of 10.5 miles away from the nearest hospital as compared to 4.4 miles for metropolitan residents. This provider shortage creates a host of issues that can directly affect health. Rural residents suffer from higher rates of the five leading causes of death (heart disease, cancer, unintentional injury, chronic lower respiratory disease and stroke) compared to their urban peers.

The lack of rural physicians is in part a result of medical education and specialty care predominantly concentrated in urban areas. Positions in urban areas often offer better working conditions, including more flexibility in scheduling, decreased workload and shorter shifts as well as job opportunities for spouses. These factors contribute to the maldistribution of the health workforce away from rural settings.<sup>2,3</sup> This issue is compounded by an aging rural physician population. According to an article in the New England Journal of Medicine, the US rural physician population grew only three percent between 2000 and 2017, from 61,000 in 2000 to 62,700 in 2017. However, the number of physicians under the age of 50 decreased 25 percent during the same period. The authors forecast the size of the rural physician

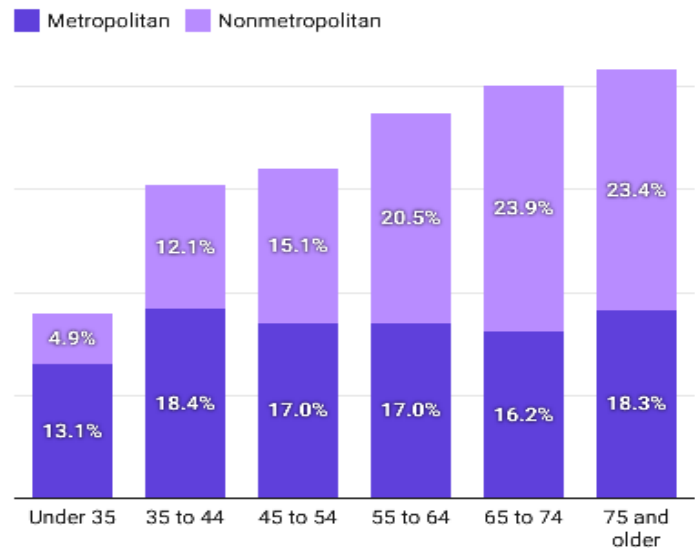
### RECOMMENDATIONS

- Provide incentives and opportunities to maximize, recruit and retain a rural health workforce.
- Build rural community health workforce collaborations between public health and healthcare to enhance service delivery.
- Augment telehealth infrastructure and capacity in rural areas to improve access to medical and behavioral health specialists.



workforce to decline by 23 percent by 2030, from 12.2 physicians per 10,000 people in 2017 to 9.4 physicians per 10,000 people in 2030.<sup>4</sup> Figure 1 shows the distribution of physicians by age in metro and non-metro counties of Illinois.<sup>5</sup>

FIGURE 1: Distribution of physicians by age in metro and non-metro counties, Illinois, 2018.

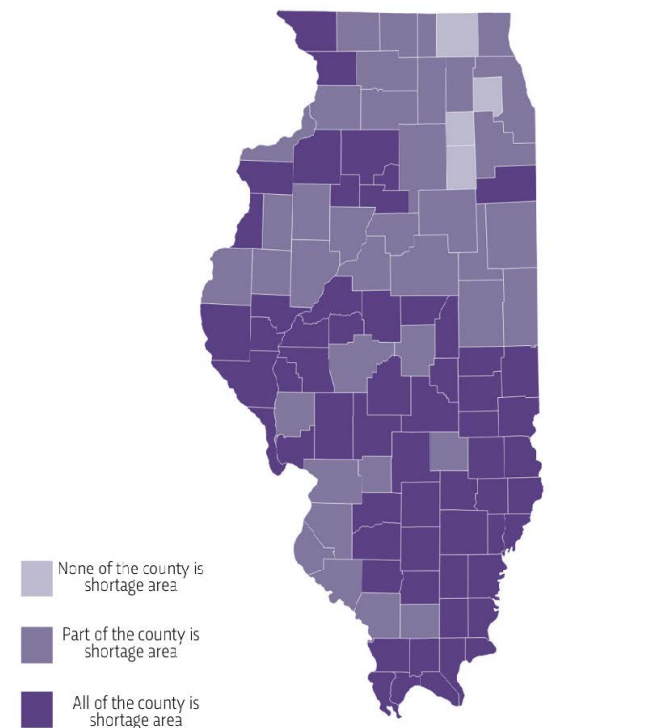


Nurse practitioners and other Advanced Practice Providers (APPs), known as physician extenders, are also in short supply in Illinois. APPs can play an important role in care management by assisting with screening and prevention, diagnosis, disease surveillance and end of life care.<sup>6</sup> Current Illinois legislation limits APPs to practice with a reduced scope, meaning they need career-long, regulated collaborative agreements with another provider.<sup>7</sup> However, Advanced Practice Registered Nurses can apply for full practice authority after 250 hours of continuing education and 4,000 hours of clinical experience under a physician.<sup>8</sup>

The high cost of medical education may also deter young doctors from becoming rural primary care physicians.<sup>9</sup> According to a note published by the [Association of American Medical Colleges](#), the average four-year cost for public medical school in 2019 was \$250,222 and \$330,180 for private medical school with students accumulating a median debt of \$200,000. Seventy-three percent of all graduates reported education debt.<sup>10</sup> This high level of debt could drive students away from primary care to higher paying specialties.<sup>11</sup> As

FIGURE 2: Primary care physician shortage areas by county, July 2021.

fewer medical graduates choose to go into primary care, the gap between supply and demand of primary care physicians is expected to increase in rural regions in the next decade.<sup>12</sup> Figure 2 shows the significant primary care physician shortage in rural areas, especially in southern and southeastern Illinois.<sup>13</sup>



The shortage of health professionals in rural areas is not limited to the primary care physician population. According to June 2021 data by the Health Resources and Services Administration (HRSA), 57.8 percent of national mental health service provider shortage areas and 62.5 of national dental health provider shortage areas are in rural communities.<sup>14</sup> In Illinois, all non-metro counties have a shortage of mental health professionals and 58.8 percent of non-metro counties are designated as dental workforce shortage areas.<sup>15</sup>

Illinois also entered the pandemic with a shortage of nurses. According to the [Illinois Nursing Workforce Center Registered Professional Nurse Survey 2018](#), 52 percent of surveyed nurses were age 55 and older with 27 percent of the surveyed nurses planning

#### DEFINING "RURAL" IN ILLINOIS

Of Illinois' 102 counties, 62 are considered non-metropolitan. 1.5 million Illinois residents reside in nonmetropolitan and/or rural regions. In an effort to be inclusive, this report uses "rural" to describe non-metropolitan counties.



## ABOUT THE RURAL HEALTH SUMMIT

Southern Illinois University (SIU) Medicine Department of Population Science and Policy, SIU Paul Simon Public Policy Institute, SIU Medicine Center for Rural Health and Social Service Development and University of Illinois Chicago School of Public Health continued the work of the 2018 Illinois Rural Health Summit and convened rural stakeholders for 11 discussion forums in late 2020 to better understand and address the COVID-19 pandemic in rural Illinois. Using the [2019 report on the most pressing issues facing rural Illinois](#) as a foundation, 80 leaders from 55 organizations in diverse fields such as public health, health care, academia, industry and government met virtually to discuss how the pandemic is creating new challenges and fostering new innovation. Forums focused on rural economic development, health workforce, children's growth and development, nutrition and fitness, mental health, opioids, public health systems, caring for an aging population and healthy housing. Discussion forums participants were also invited to an additional, overarching session to identify common challenges and synthesize impactful solutions. The information, anecdotes and issues raised in this report come from those conversations.



AN AGING POPULATION



MENTAL HEALTH



PUBLIC HEALTH SYSTEMS



NUTRITION & FITNESS



CHILDREN'S GROWTH & DEVELOPMENT



RURAL HEALTH WORKFORCE



OPIOIDS



HEALTHY HOUSING



ECONOMIC DEVELOPMENT

to retire in one to five years.<sup>16</sup> This has resulted in a rapid growth in demand for nurses. According to a note published by [Illinois Economic Policy Institute and Project for Middle Class Renewal](#) it is estimated that Illinois needs up to 19,100 additional registered nurses (RNs), indicating a growth in demand of 15 percent over the next ten years.<sup>17</sup>

Finally, Illinois' rural communities have historically faced a public health workforce shortage. The Illinois government public health workforce, specifically, saw a significant decrease in employee volume in local health departments from 2016-2020. A workforce development assessment from the [Illinois Public Health Association](#) in conjunction with [Public Health is Stronger Together \(PHIST\)](#) identified that 70 percent of local health departments had 30 or fewer employees as part of their public health workforce.<sup>18</sup> Illinois only employed 2.8 local public health employees per 10,000 residents in 2019 compared to the national average of 4.1 per 10,000 residents.<sup>19</sup> Although the public health workforce was augmented to address the COVID-19 pandemic, many of these positions were hired on a temporary basis.

## THE PANDEMIC'S IMPACT

The decline of rural health recruitment and retention has been exacerbated by the pandemic. Rural hospitals and healthcare systems have reduced services or closed, health workers have left the workforce and rural communities continue to struggle to attract new talent.<sup>20</sup>

Stay-at-home orders were implemented in Illinois to prevent the spread of COVID-19 and manage hospital capacity. While the shutdown helped avert a hospital capacity crisis, it also resulted in increased financial difficulties for rural health systems as hospitals faced revenue challenges as well as increased costs of personal protective equipment like masks and gloves. The financial impact of COVID-19 left rural hospitals across the country with a median of 33 days of cash on hand for much of 2020.<sup>21</sup> As a result of existing and pandemic-related financial challenges, more than 260 hospitals have had to furlough or lay off workers.<sup>22</sup> Financial stress is exacerbated by rising costs in hiring healthcare workers, especially nurses, to respond to the greater demand caused by the pandemic. The rise in demand and salaries for travel nurses has grown during the pandemic, with travel nurse recruiter Aya Healthcare reporting more than 40,000 unfilled jobs listed on its website.<sup>23</sup> The pandemic has also exacerbated healthcare workers' stress, burnout and death. According to a 2020 survey by professional liability insurance firm Berxi, 84 percent of health workers reported feeling at least mild burnout. Additionally, 48 percent reported worse mental health and



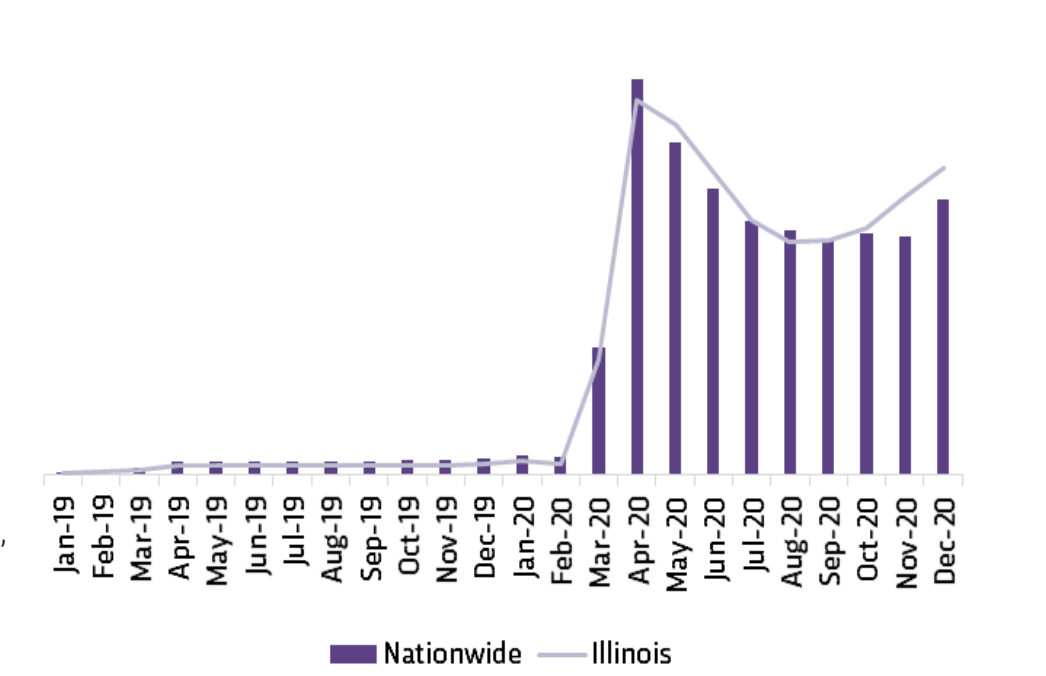
half of survey participants considered retiring, quitting or changing their careers entirely.<sup>24</sup> COVID-19 vaccine mandates for health workers have also added to the challenges of retaining healthcare talent.<sup>25</sup>

The unprecedented nature of the pandemic led to a substantial expansion in the public health workforce. In September of 2020, Illinois invested \$16.6 million for recovery-related temporary jobs to help mitigate COVID-19 in communities. However, stress and burnout is causing the United States to experience the most significant departure of public health leaders in history. More than 180 higher-level state and local public health department officials have taken leave since April 1, 2020.

One silver lining is that workforce challenges have accelerated new innovations in patient care, especially in the delivery and accessibility of digital modalities such as telehealth. According to an analysis of claims data of half of all private health insurers of the United States between January 2019 and December 2020, the [COVID-19 Healthcare Coalition](#) found that telemedicine use peaked in April 2020 with 49.4 percent of all claims and has since plateaued to approximately 24 percent as of December 2020.<sup>26</sup> Despite the plateau, telemedicine-based visits are still substantially greater than pre-pandemic levels.<sup>27</sup> Figure 3 shows the national and Illinois trends in telehealth claims. Illinois followed the national trend with a sharp increase in April 2020 with a subsequent plateau by year's end.<sup>28</sup>

FIGURE 3: Number of Telehealth Claims, January 2019 to December 2020, Nationwide and Illinois.

The pandemic has spurred significant action by the Biden administration to address rural health workforce challenges with increased financial support for lost compensation, enhanced training and an advancement of digital care modalities. In August 2021, the Biden administration announced a \$350 million initiative to provide rural hospitals and local communities with the funds to increase COVID-19 vaccines and testing supplies, telehealth and renovation of rural health facilities.<sup>29</sup> These funds could be used to compensate for lost revenue or staffing expenses.



The Biden administration announced \$52 million in funding to train healthcare workers to fill the demand created by the pandemic. Additionally, U.S. Centers for Medicare and Medicaid Services is working to enhance behavioral health care by announcing a rule which will allow for Medicare to pay for mental health care delivered via telehealth if the care was administered in Rural Health Clinics (RHCs) and Federally Qualified Health Centers (FQHCs).<sup>30</sup> The U.S. Department of Veterans Affairs is also involved, as the agency is expected to launch the Rural Interprofessional Faculty Development Initiative (RIFDI) to train and develop skills for clinicians in rural settings before the end of 2021.<sup>31</sup>

Illinois has also developed significant initiatives to address the challenges to the health workforce. In April 2021, Governor J.B. Pritzker signed the [Illinois Health Care and Human Service Reform Act](#) which, amongst other objectives, aims to create a university-led consortium of partners to create a more diverse behavioral health workforce in Illinois. The law also creates a certification for community health workers to act as a liaison between communities, health care and social services, as well as creating



training programs for mental health care for staff working in senior care facilities.<sup>32</sup> Additionally, Governor Pritzker signed [HB 3308](#) into law, which permanently created reimbursement parity for virtual mental health and substance use disorder services while authorizing all other telehealth to be covered through 2027.<sup>33</sup>

## 2021 RURAL HEALTH SUMMIT POLICY RECOMMENDATIONS



### **Provide incentives and opportunities to maximize, recruit and retain a rural health workforce.**

Illinois is already a leader in pursuing innovative strategies to maintain a rural health workforce. However, challenges remain and the outlook looks exceedingly grim. Therefore, Illinois must continue to pursue a comprehensive, multi-pronged strategy that combines a shared workforce strategy, more financial aid and training to incentivize, retain and maximize health workforce capabilities.

In the short-term, Illinois must adhere to a shared workforce strategy to maximize current health workforce capabilities. The formation of interdisciplinary care teams, which include Advanced Practice Providers (APPs), can help offset the challenges of physician shortages, especially in primary care, in rural Illinois. Eighty-five percent of advanced practice practitioners, such as nurse practitioners, physician's assistants, certified nursing midwives and certified registered nurse anesthetists, are trained in primary care.<sup>34,35</sup> Typically, APPs hold master's or higher degrees and can help physicians take patient histories, conduct physical exams, deliver babies, provide pre- and post-operative care and make referrals to other specialties.<sup>36</sup>

A United Health Group report found that allowing advanced practice clinicians to practice to the full extent of their education, advanced clinical training and national certification would result in a 65 percent reduction in the number of rural residents living in a county with a primary care shortage.<sup>37</sup> A RAND Corporation study of Massachusetts found that visits to nurse practitioners and physician assistants cost 20 percent less than visits to a physician.<sup>38</sup>

Illinois' Center for Rural Health is a national leader in providing financial assistance to recruit individuals to the state's rural communities. According to the 2016 [National Health Service Corp \(NHSC\)](#) survey, 88 percent of NHSC's Loan Repayment Program participants remained in their practice site for up to a year after the end of contractual obligations while 43 percent declared an intention to stay for five years.<sup>39</sup> Illinois has the [National Health Service Corps State Loan Repayment Program](#), which provides a maximum of \$50,000 (\$25,000 per year for two years) to repay education loans of physicians, nurse practitioners, physician assistants, nurse midwives, dentists and psychiatrists who agree to serve full-time or half-time in federally designated health professional shortage areas in Illinois without regard for their ability to pay. Illinois also has the [Underserved Physician Workforce Program](#), which provides up to \$50,000 in education loan repayment assistance for a minimum two year commitment. The state also sponsors unique visa programs and provides scholarships for [medical education](#), [nursing education](#) and [podiatric medicine](#). Yet, more financial aid for longer periods is needed to increase recruitment and retain a rural health workforce. Minnesota provides a great example of financial aid support. [Minnesota's Rural Physician Loan Forgiveness Program](#) is available to residents in pediatrics, family medicine, internal medicine, psychiatric or OB/GYN programs who serve a minimum of three years in rural areas. The repayment program is \$29,000 per year with a total loan forgiveness amount not exceeding \$116,000 for four years.<sup>40</sup>

Providing hands-on learning experiences in rural communities is another proven strategy to retain medical and behavioral health talent in rural areas. Illinois needs to invest in more training programs to give students experience in rural communities. Rural mentoring and preceptorship opportunities help students develop rural-specific clinical decision making, critical thinking and observation of the mentor's practice of medicine, as evidenced by the [Rockford Rural Medical Education \(RMED\) Program](#) run by University of Illinois College of Medicine. According to a study analyzing the impact of the RMED Program between 1997 and 2007, students who participated in the RMED program were 17.2 times more likely to be practicing in rural locations and 12.8 times more likely to be practicing in primary care shortage zip codes.<sup>41</sup> More than 271 medical students have participated in the RMED program since 1993. Eighty percent chose primary care residencies and around 68 percent of all program graduates remained in Illinois.<sup>42</sup> Another newly created program





attracting rural physicians is [SIU School of Medicine's Lincoln Scholars Program](#).

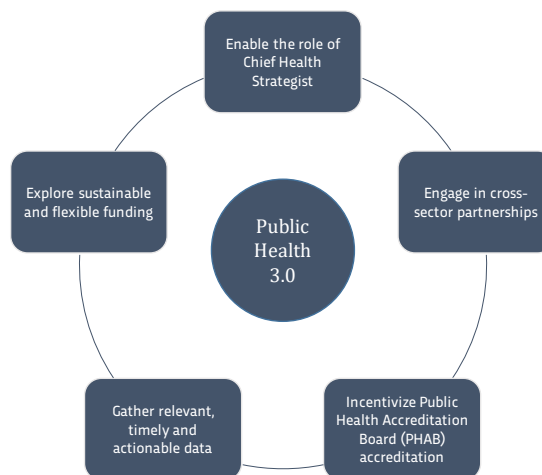
It is also critical to provide opportunities for behavioral health workers to train in rural communities. Illinois needs to invest in more programs such as [Behavioral Health Workforce Education and Training Program \(BHWET\)](#) and the [Illinois Behavioral Health Workforce Education, Learning & Leadership \(BHWELL\) HRSA Scholars Program](#). The BHWET program at [Southern Illinois University Edwardsville](#) works with community partners such as [Casa de Salud](#), [Chestnut Health](#), [Centerstone](#), [Southern Illinois Health Foundation](#), [Macoupin County Health Department](#) and the [SIUE WE CARE Clinic](#) to provide interprofessional training opportunities for Master of Social Work (MSW) and Psychiatric Mental Health Nurse Practitioner (PMHNP) students.<sup>43</sup> The BHWELL at [University of Illinois Urbana-Champaign's School of Social Work](#) provides 29 MSW and iMSW students the opportunity to obtain specialized training and receive a \$10,000 stipend during a two-semester field placement. As of June 2021, the university had 85 BHWELL-approved School Of Social Work field sites located in HRSA-designated Health Provider Shortage Areas throughout the state, including rural, small urban and urban underserved communities.<sup>44</sup> In 2021, HRSA awarded the BHWET program with a \$1.8 million grant and the BHWELL program with a \$1.9 million grant.<sup>45,46</sup>



### **Build rural community health workforce collaborations between public health and healthcare to enhance service delivery.**

The pandemic has highlighted severe gaps in the country's public health system and reemphasized the importance of cross sector partnerships. These partnerships are a key function in a modern, reimagined public health system. Launched by the US Department of Health and Human Services, the initiative titled '[Public Health 3.0](#)' proposes the role of public health departments as 'Chief Health Strategists' in their community. The model, shown in Figure 4, places the public health department in the role of a coordinator. The public health department partners across multiple sectors, leveraging data and resources to address the social, environmental and economic conditions that affect health.<sup>47</sup>

FIGURE 4: Public Health 3.0



Illinois' rural communities often lack the personnel, resources and infrastructure for health departments to serve in a chief health strategist role. Public health departments often need healthcare entities to partner with them to understand community need and capacity and then deploy the right resources for action. Partnerships could grow by creating a greater incentive to link the Community Health Needs Assessments conducted by not-for-profit hospitals every three years with the Illinois Projects for Local Assessment of Need (IPLANs) conducted by local public health departments every five years. A shared mechanism for action would allow public health departments and local hospitals to work together to assess community needs and formulate implementation plans with the appropriate workforce necessary to improve health outcomes.

Partnerships between hospital and public health departments are growing. One example is the work of [Genesis Health Systems](#) and [Mercer County Health Department](#), in which a hospital and a public health department are actively working together to create community health strategies. Another partnership exists with the [Healthy Southern Illinois Delta Network](#) where Southern Illinois Healthcare, Southern Illinois University School of Medicine Center for Rural Health and Social Service Development and University of Illinois extension partner with the Jackson County, Franklin-Williamson Bi-County, Southern Seven, Perry County, Hamilton County and Egyptian Health Departments to coordinate strategies on community health issues in southern Illinois.



Illinois could use these existing partnerships to pilot national programs similar to the Maryland Primary Care Program (MDPCP). The Maryland Total Cost of Care Model contract, which was launched in 2019 between the Center for Medicare and Medicaid Services and the State of Maryland constructed an interrelated system of cross-sector primary care.<sup>48</sup> The MDPCP model uses a three-pronged approach to provide funds and technical assistance to practices working to increase access to care, facilitates a space for public health experts and leaders to support primary care clinicians and ensures funds and technical assistance are provided to practices working to expand health services. With efforts already underway through the [Illinois Health Care and Human Services Reform Act](#) to design certification programs for community health workers, an Illinois Primary Care Program could create avenues for community health workers to enhance the workforce necessary to achieve shared health care and public health rural community health strategies.



### **Augment telehealth infrastructure and capacity in rural areas to improve access to medical and behavioral health specialists.**

The pandemic accelerated the use of connected technologies and innovative care modalities such as telehealth. Healthcare systems across the country deployed telehealth services to provide care when residents were encouraged and often required to maintain social distancing or refrain from leaving their home. However, this new healthcare reality created an important and unique opportunity. The next and appropriate step is to augment telehealth's use to offset the capacity constraints of Illinois' rural and underserved areas.

Low and declining population levels in rural Illinois make it difficult to support medical and behavioral subspecialists. According to a 2019 study published in Health Affairs, the supply of specialists was 31 percent lower in rural areas compared to metropolitan areas.<sup>49</sup> This lack of specialty care is associated with a 40 percent higher preventable hospitalization rate and a 23 percent higher mortality rate as compared to urban residents.<sup>50</sup> The study also found that having one or more specialist visit is associated with a 15.9 percent lower preventable hospitalization rate and 16.6 percent lower mortality rate for people with chronic conditions.<sup>51</sup>

A more widespread use of interventions based on connected technologies, such as telehealth and virtual care, can help address the medical and behavioral specialist gap, specifically targeting the transportation and time barriers that limit access.<sup>52</sup> A number of states have already begun leveraging telehealth to improve access to specialists in rural communities. The [University of Virginia Health System](#) uses telehealth to provide specialty care to rural areas for behavioral health, diabetes and obstetrics care.<sup>53</sup> Their telemedicine program resulted in a 30 percent increase in patient satisfaction for patients in rural areas and saved patients 8.9 million miles of travel to see a health specialist.<sup>54</sup> Additionally, the [Children's Hospital and Medical Center](#) in Omaha, Nebraska, implemented a telehealth pediatric psychiatry program. This unique program resulted in a 50 percent reduction in psychiatry follow-up no show rates.<sup>55</sup> It also saved 26 hours in travel time for physicians on a weekly basis.<sup>56</sup>

The use of telehealth can close the specialist access gap. However, to enable widespread use of telehealth in rural areas, hospitals and clinics will need support for technical infrastructure such as enhanced community access to high speed internet, imaging technology and peripherals, as well as access to technical staff and informational specialists.<sup>57</sup> Additionally, patients will need to be trained, making it the responsibility of the clinic, hospital and community to create the digital literacy necessary for residents to receive and participate in appropriate telehealth care.

Illinois has already begun investing in the right types of strategies to spur telehealth innovation. The [2019 Rebuild Illinois infrastructure program](#) resulted in the [Connect Illinois](#) broadband investment of \$400 million appropriated for competitive broadband grants. Many of Illinois rural communities are beginning to benefit from this unique program. Additionally, the passage of [HB 3308](#) and its creation of insurance reimbursement parity for telehealth services until 2027 decreases the concerns of many providers who would likely forego telehealth services based on disparities in reimbursement.<sup>58</sup> According to



recent data from McKinsey, 58 percent of physicians view telehealth more favorably now than they did before the pandemic. Yet, this study also found that 54 percent of physicians would not offer virtual care if it resulted even in a 15 percent decrease in payment compared to in-person care.<sup>59</sup> HB 3308 will allow more providers to stay invested in using telehealth.

With efforts being made by Illinois to enhance high speed broadband access and maintain reimbursement parity, now is the time to fully incorporate telehealth services in rural areas to decrease the specialist gap. Programs like Connect Illinois need to actively work with healthcare systems and engage communities to build concentrated programs and tools that will promote digital literacy, adoption and inclusion while leveraging the right types of community partnerships to create advances in telehealth. Additionally, mechanisms like the [Department of Healthcare and Family Services Healthcare Transformation Collaboratives](#) can create unique opportunities for rural healthcare systems to invest in virtual modalities that improve and transform medical and behavioral specialist access to care. Population challenges may remain in rural Illinois but innovations in telehealth spurred today can improve access to care for our rural residents now and for generations to come.

## ENDNOTES

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