

# COVID-19 AND RURAL NUTRITION AND FITNESS 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.



## PREEXISTING CONDITIONS

Rural residents in the United States struggle to live healthy lives due to limited access to nutritious food, low participation in food assistance programs and lack of community design features like recreational facilities, sidewalks and public parks. Such disparities significantly contribute to rural residents suffering 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.<sup>1</sup>

Access to healthy and affordable food options has been a significant challenge for rural residents. Though rural communities are often supported by an agriculture-based economy, many rural areas lack food retailers and are considered food deserts. A food desert is defined as an area with a poverty rate of 20% or greater and at least 500 persons and/or at least 33% of the population living more than 10 miles from a supermarket.<sup>2</sup> The US Department of Agriculture found that five million people in rural areas have to travel at least 10 miles to buy groceries.<sup>3</sup> Transportation and accessibility challenges may require residents to rely on more expensive and less nutritious food available at nearby gas stations, convenience stores and/or dollar stores.

Finding affordable, healthier food often requires traveling long distances to a supermarket or grocery store that stocks fresh produce, milk, eggs and other staples.<sup>4</sup> The [Department of Agriculture Economic Research Service \(USDA-ERS\)](#) reports that food insecurity, or limited or uncertain access to adequate food, is strongly associated with chronic disease and poor health, both of which disproportionately affect rural populations.<sup>5</sup> Long-term food insecurity also affects learning, development, productivity, physical and mental health and family life.<sup>6</sup>

## RECOMMENDATIONS

- Invest in programs that allow for the creation of community-owned grocery stores to bring more fresh food to Illinois' rural communities.
- Increase participation and retention in the Women, Infants and Children (WIC) program by streamlining enrollment and re-certification processes.
- Foster public-private partnerships between governments, hospital systems, community based organizations and private industry to better design and build infrastructure that promotes healthy lifestyles.



## 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

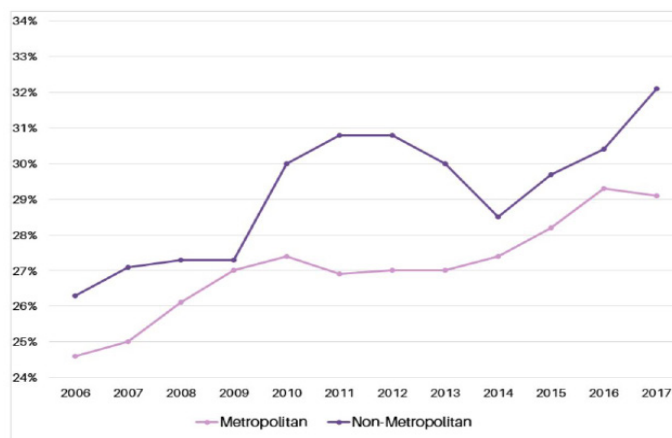


ECONOMIC  
DEVELOPMENT

Many rural areas are seeing an influx of dollar stores, which usually lack the infrastructure for fresh or healthy food options and instead provide access to food with little nutritional value.<sup>7</sup> In many cases, dollar stores profit from food deserts because some larger and/or chain grocery stores deem rural communities unprofitable and will not build in communities with an existing dollar store.<sup>8</sup>

A lack of access to healthy food is detrimental for rural residents. Studies examining urban and rural childhood obesity in the United States have shown that children in rural areas have a 26% greater risk of obesity compared to urban children.<sup>9</sup> Studies have also found that adolescents (aged 10-17 years) in nonmetropolitan areas are 28% more likely to be obese compared with adolescents in metropolitan areas.<sup>10,11</sup> Rural adults face similar disparities. Forty percent of rural adults are obese as compared to 33% of adults in metropolitan areas. Rural Black adults experience higher rates of obesity than urban Black adults.<sup>12</sup> As Figure 1 shows, living in a rural area in Illinois is associated with an increased prevalence of obesity.<sup>13,14,15</sup>

FIGURE 1: Obesity Prevalence in Illinois Metro and Non-Metro Counties



Unhealthy options are magnified in rural communities as residents are not maximizing Federal nutrition programs for which they qualify. The [Special Supplemental Nutrition Program for Women, Infants, and Children \(WIC\)](#) is federally funded and administered by the [Illinois Department of Human Services](#). It is designed to help low-income pregnant women, new mothers, infants and children up to five years old access nutritious food, nutrition education and health care.

### 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.



The WIC enrollment rate for eligible individuals in Illinois was 47.5% in 2018 compared to 56.9% nationally. The low enrollment rate can be contributed to a lack of understanding of WIC eligibility standards, concerns over stigma and lack of transportation to WIC clinics and/or to stores eligible to redeem WIC benefits.<sup>16,17</sup> Seventy-nine percent of eligible infants are enrolled in WIC, but rates drop as children age: 58% of eligible one-year-olds participate in WIC as compared to 25% of eligible four-year-olds.<sup>18</sup> WIC user retention issues seem to be most apparent around a child's first birthday when 23% fall off enrollment.<sup>19</sup>

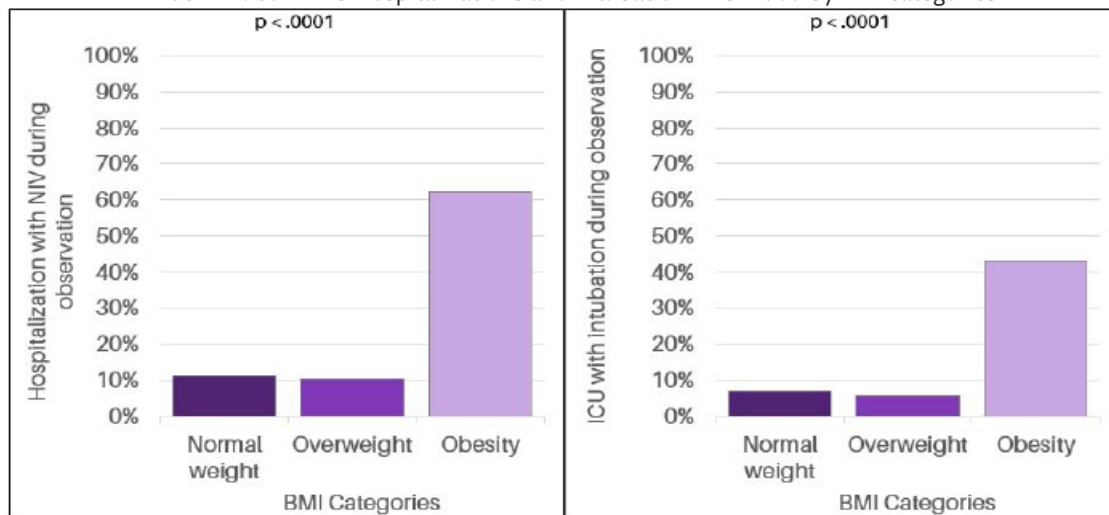
Rural areas also lack physical fitness infrastructures and resources. Despite a preconceived notion that rural residents "live off the land," engage in manual labor and enjoy wide open spaces, the reality is that many rural residents lack transportation options to recreational centers, lack physical activity opportunities, have climate and terrain challenges, cost prohibitions, safety concerns and lack sidewalks and lighting.<sup>20,21,22</sup> Additionally, some rural and remote communities may not have sufficient financial resources to build new or support existing parks, recreational facilities and designated open space.<sup>23</sup>

## THE PANDEMIC'S IMPACT

As of July 2021, COVID-19 infection rates have been higher in Illinois' rural regions compared to metropolitan areas. Obesity is linked to a higher risk for COVID-19 complications.<sup>24</sup> A systematic review of 30 studies with BMI-induced obesity as well as three separate controlled studies found that obesity increases the risk of hospitalization, ICU admission and death among patients with COVID-19.<sup>25</sup> As Figure 2 shows, [Mayo Clinic](#) found a much larger percentage of obese individuals with COVID-19 to be both hospitalized with noninvasive mechanical ventilation and placed in the intensive care unit with intubation.<sup>26</sup> Obesity is associated with numerous underlying risk factors for COVID-19, including hypertension, heart disease, type 2 diabetes and chronic kidney and liver disease.

The pandemic has also limited rural individuals' physical activities and access to healthy food. Economic hardships made at-risk individuals more vulnerable to conditions that can arise from consuming unhealthy foods.

FIGURE 2: COVID-19 Hospitalizations and Intubation Likelihood by BMI Categories



Hunger has long been an issue in rural communities. Of the counties with the highest rates of food insecurity, 87% are considered rural.<sup>27,28</sup> The pandemic exacerbated these struggles. [Feeding America](#) tracks food insecurity across the United States and Figure 3 on the next page shows that food insecurity rates of counties in Illinois increased from 2019 to 2021.<sup>29,30</sup> Additionally, the pandemic caused food insecurity rates to rise in all Illinois counties. Job loss, isolation and lack of access to grocery stores as a result of the COVID-19 pandemic has caused long lines at food pantries across the country.<sup>31</sup> The [Northern Illinois Food Bank](#) reported a 50% increase in need and 300,000 meals served per day in suburban and rural areas of Illinois throughout 2020.<sup>32</sup>

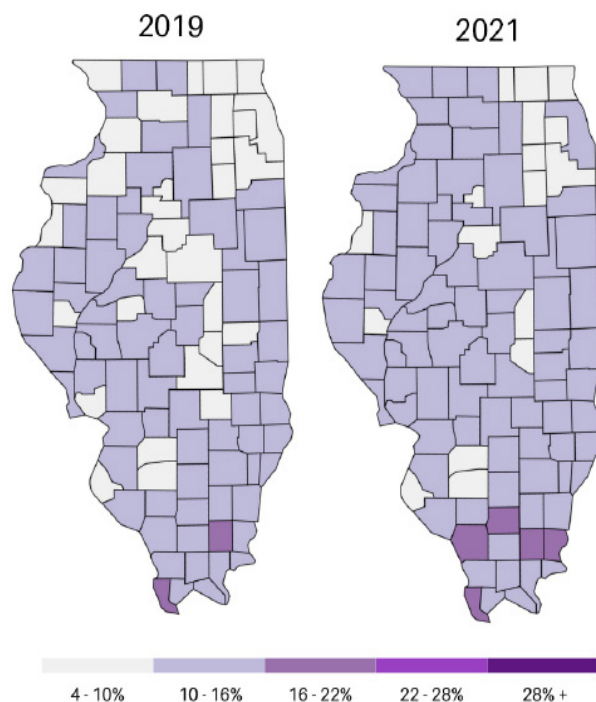
The pandemic has also forced the USDA to incorporate innovative ideas to expand WIC availability and utilization. Unfortunately, from March 2020 to March 2021, more than 13,000 people dropped off the



WIC program in Illinois (from 168,000 to 155,000), a 7.8% decrease in participation.<sup>33</sup> This drop occurred despite the USDA issuing waiver extensions to allow remote issuance of benefits, flexibility in food package requirements and additional pick up options for food packages.<sup>34</sup> Further research is needed to understand the enrollment drop in Illinois.

The 2020 Illinois Rural Health Summit discussion forum on rural nutrition and fitness echoed many of the above points: transportation challenges, a lack of healthy options and the importance of early intervention to improve children’s nutrition. Guidelines around social distancing affected the ability of many rural Illinoisans to carpool or utilize public transportation. School closures forced districts to put together shelf-friendly meals rather than providing fresh options for students. Multiple discussion forum participants detailed the importance of school districts and administrators serving healthy and nutritious foods that students will want to eat.

FIGURE 3: Feeding America Food Insecurity Map



## 2021 RURAL HEALTH SUMMIT RECOMMENDATIONS:



**Invest in programs that allow for the creation of community-owned grocery stores to bring more fresh food to Illinois’ rural communities.**

Rural communities need improved access to fresh, healthy foods. Some small towns have solved that issue by joining together to build community-run grocery stores offering fresh fruits and vegetables. As an example, the Winchester Civic Group gathered community investors to open the Great Scott! Community Market, pictured in Figure 4, in 2018 to replace the town’s only grocery store which closed in 2016.<sup>35</sup> These types of community grocery stores encourage community engagement and investment. The healthy options at these markets help to combat the influx of frozen and processed foods that stock the shelves of many dollar store or convenience store chains.

Many of these co-op grocery stores are dependent on community funding to get started. Since every community

FIGURE 4: Great Scott! Community Market



Image credit: <https://bit.ly/2Wci9l4>

may not have the ability to raise the needed funding to start a co-op grocery store, the State of Illinois should consider following in the footsteps of Alabama, Michigan and Oklahoma by providing low-interest state loans or grants for fresh food retailers in underserved rural communities.<sup>36</sup>

Alabama awarded seven Healthy Food Financing grants in 2018 to communities with limited access to healthy food at retail.<sup>37</sup> Oklahoma passed the Healthy Food Financing Act to set aside funds (federal and private) for loans or grants to construct grocery stores, expand local farmers markets and help corner store owners buy refrigerators to allow them to offer fresh foods.<sup>38</sup> In Michigan, the [Michigan Good Food Fund \(MGFF\)](#) was created, a \$30 million



public-private partnership to help underserved Michigan communities improve healthy food access.<sup>39</sup> These models could serve as roadmaps for Illinois to create the necessary investment to provide healthy food options for rural communities.



### **Increase participation and retention in the Women, Infants and Children (WIC) program by streamlining enrollment and re-certification processes.**

WIC's enrollment and re-certification processes should be streamlined to maximize the program's efficacy. Illinois can increase enrollment and recertification with the following changes to the current system: 1) check for eligibility by determining if the individual participates in other low-income assistance programs like Medicaid or Supplemental Nutrition Assistance Program (SNAP), 2) improve outreach and promotion on the WIC program's eligibility standards, 3) improve coordination between health professionals, hospitals and WIC clinics to refer eligible patients and 4) utilize technology to prepare applicants and participants for appointments with reminders and the ability to upload documents prior to an appointment.<sup>40</sup>

There are currently 12 certification streamlining projects across the country in states such as California, Arizona, Colorado, Idaho, Minnesota, Michigan, Iowa, Oklahoma, Vermont and Maryland. These states have had success at reducing the duration of certification appointments by using a mobile app to collect information, utilizing video appointments to increase food benefit sign-ups and decreasing appointment cancellations by allowing scheduled phone appointments.<sup>41</sup>

In Maricopa County, Arizona, 26% of WIC applicants were issued temporary certifications because they did not submit all the required documents. To combat this issue, Arizona changed its rules to allow staff to view and receive documents electronically. Within 13 months, only two percent of WIC certifications were temporary.<sup>42</sup> Greater Baden Medical Services in Maryland simplified the certification process by using a mobile app to collect information and documents before appointments.<sup>43</sup> Vermont piloted mid-certification appointments by phone, resulting in 80% of scheduled appointments being completed as compared to half of in-person appointments. Finally, Community Medical Centers in California found that food benefits were issued more often (4.5% more per month) among participants offered video appointments.<sup>44</sup> These pilot programs, along with the temporary waivers to offer WIC services remotely in the Families First Coronavirus Response Act, show the benefits and efficacy of streamlining enrollment and re-certification processes. Illinois could similarly pilot these program to increase participation and retention across all communities.

Studies have shown that WIC benefits mothers, infants and children through better pre- and post-natal outcomes. These better health outcomes are due to improved nutrition, access to prenatal care for expecting mothers, access to health care for children, increased immunization rates and opportunities to enhance children's cognitive development and academic outcomes.<sup>45</sup> Additionally, the US General Accounting Office determined that for every dollar that is spent on WIC, \$1.77 to \$3.13 was saved in Medicaid costs for newborns and mothers in the first 60 days after birth.<sup>46</sup>



### **Foster public-private partnerships between governments, hospital systems, community based organizations and private industry to better design and build infrastructure that promotes healthy lifestyles.**

The State of Illinois, local government, health systems and private industry should focus on [transforming rural community infrastructure](#) to promote healthy lifestyles. Rural communities need new parks, enhanced spaces for recreational activities and community health centers with dedicated fitness and wellness facilities. These investments could help offset health care costs as well as have positive



impact on mental health and social cohesion in the community.

Across the country, health systems and insurance payers are aiding in population health through investments in affordable housing, telehealth kiosks and additional programs with the goal of finding solutions to improve the health of communities as a whole. Creating a culture of health is important to foster healthy behaviors and improve the lower rates of exercise found in America's rural communities.<sup>47</sup> An abundance of evidence shows that improving access to places for physical activity increases and improves wellness.<sup>48,49,50,51</sup>

Rural communities in Illinois may not have the population density to warrant a community recreation center but often have incredible natural resources. Illinois should take advantage of rural regions' existing natural resources and available outdoor recreation like hiking and biking trails, fishing, kayaking and more. This solution will require stakeholders from government, business, tourism and healthcare to create a culture of health and wellness in these communities. The return on investment will come in the form of reduced healthcare costs for both individuals and hospitals and increased economic activity through community development.<sup>52,53,54</sup>

Various rural towns in Illinois have utilized the downtown revitalization strategy to revive their communities. Nineteen commercial districts in Illinois, many of which are rural, have worked with [Illinois Main Street](#) to foster economic development and revitalize their towns. Mount Sterling, Illinois, pictured in Figure 5, started a "Long-Range Strategic Plan & Redevelopment Blueprint" in 2011 to revitalize the Uptown District and adjacent areas. An opportunity exists post-COVID to reframe rural communities and aspects of rural life to promote resiliency, livability and healthy lifestyles. Efforts are being made throughout Illinois' rural communities and small cities to promote regionalism, build capacity, encourage cooperation and make collective impact towards healthier community design. [SI NOW](#) in southern Illinois, the [Lower Illinois River Valley Rural Prosperity Initiative](#) in western Illinois and [AltonForward](#) and [AltonWorks](#) in the Metro East are examples of these innovative ideas in practice. With more intentional effort, Illinois can actively engage in transformative placemaking to design communities that promote healthier behaviors for rural residents.

FIGURE 5: Mt. Sterling, Illinois



Image credit: <https://bit.ly/2Uxsojx>



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