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Rural Michigan Farmers' Health Concerns and Experiences: A Focus Group Study

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Abstract

Objectives: Rural residents comprise approximately 15% of the United States population. They face challenges in accessing and using a health care system that is not structured to meet their unique needs. It is important to understand rural residents' perceptions of health and experiences interacting with the health care system to identify gaps in care. **Methods:** Our team conducted focus groups with members of the Michigan Farm Bureau during their 2019 Annual Meeting. Topics explored included resources to manage health, barriers to virtual health care services, and desired changes to localized healthcare delivery. Surveys were used to capture demographic and internet access information. **Results:** Analysis included data from 2 focus groups (n = 14). Participants represented a wide age range and a variety of Michigan counties. The majority were full-time farm owners with most—93% (n = 13)—reporting they had access to the internet in their homes and 86% (n = 12) reporting that their cellphones had internet capabilities. Participants identified challenges and opportunities in 4 categories: formal health care; health and well-being supports; health insurance experiences; and virtual health care. **Conclusion:** The findings from this study provide a useful framework for developing interventions to address the specific needs of rural farming residents. Despite the expressed challenges in access and use of health care services and resources, participants remained hopeful that innovative approaches, such as virtual health platforms, can address existing gaps in care. The study findings should inform the design and evaluation of interventions to address rural health disparities.

Keywords

rural health, focus groups, agriculture, access to care, primary care

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Introduction

Rural residents in the United States struggle to access and use a health care system that does not meet their unique needs. These challenges are noteworthy in Michigan, where 1.8 million people—approximately 18% of the state's population—reside in rural areas.[1] Extensive data show persistent health disparities, including: higher mortality and lower life expectancy,[2] decreased or limited access to care,[3] and increased distances to receive care.

Rural farming communities are especially important to study due to their contributions to local, national, and global economies.[4,5] Despite their societal importance, farming communities are rarely studied by health researchers, which limits the opportunity to tailor health interventions and policy development to address unique and unmet needs. With documented disparities in access, care, and outcomes for rural residents, it is essential to understand their perceptions of health and their lived experiences interacting with the health care system. Unmet health care needs reflect the different social, cultural, and economic factors within rural populations as well as between rural and urban populations.[6]

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In particular, access to primary care services and specialist care have increasingly become areas of concern, often with few feasible and effective solutions.

New solutions are needed to address these unmet needs.[7-10] Through exploratory focus groups, the research team sought to explore the perspectives of Michigan farmers to highlight areas of perceived need and targets for primary care and community health-focused interventions.

Methods

Setting and Participants

Two focus groups were conducted with Michigan Farm Bureau members at their 2019 Annual Meeting. The Michigan Farm Bureau, founded in 1919, is a statewide membership organization of over 46 500 active farmers organized through county-level committees, representing the diversity of farming and agricultural production within Michigan. The Farm Bureau provides education, professional development, and outreach activities, to all of its members and local communties.[11]

Prior to the Annual Meeting, we partnered with Farm Bureau staff to distribute informational flyers to members statewide and invited any interested attendees to participate. The Annual Meeting provided an opportunity to conduct the focus groups when many rural residents from across the state would be assembled in the same location. Focus group inclusion criteria were: over the age of 18, reside in a rural county in Michigan, and participating in the 2019 Michigan Farm Bureau Annual Meeting.

Data Collection and Analysis

Fourteen participants were included in 2 simultaneous focus groups, stratified by geographic region, lasting approximately 1 h with verbal informed consent obtained from each participant. Participation was voluntary and participants could decline to answer any question or leave at any time. Every participant received a $25 gift card for participating. The study received institutional IRB approval.

Participants also completed a paper questionnaire to collect demographic and access to technology data, which were analyzed with descriptive statistics. The focus groups were audio-recorded and transcribed verbatim. One team member reviewed transcripts alongside audio-recordings to ensure accuracy.

Focus group guide sample

- Community resources available to maintain healthy lives
  - *What sources do you use to manage your health?*
  - *How easy is it to access these sources/services?*
- Formal use of health care services
  - *How do you access primary care and/or specialists?*
  - *What would you like to see changed about health care delivery in your community?*
- Use of broadband for health
  - *Can you describe your experience using the internet to access health care?*
  - *What barriers exist to using the internet for health care purposes?*

Two researchers carried out deductive analysis of the focus group data, independently categorizing data based on the focus group interview guide. These two reviewers then met to compare analyses and come to a consensus about data categorization. All the data were then reorganized based on this agreed upon categorization. Data from each main category were then grouped into subcategories to help structure the subsequent result reporting. Data were organized into 4 categories: formal health care, health and well-being supports, health insurance experiences, and virtual health care.

Results

Participant Characteristics

Participant characteristics are shown in Table 1. Most participants reported farming as their primary occupation representing a wide range of ages. All participants reported owning a mobile phone, with the majority having internet access both on their phones and at home. Half of participants reported having had a virtual health care visit in the past year.

As the findings below will demonstrate, the major concerns expressed by the rural farmer focus group participants centered on access to quality and affordable care that recognizes and addresses barriers, such as travel time and distance to appointments as well as the declining number of providers practicing in rural areas. These concerns emerged from farmers' desires for health care services that are accessible (both geographically and financially), flexible, satisfying, and reliable. These concerns and expectations fall into 4 categories: formal health care, well-being and health supports, experience with health insurance, and virtual health care (See Table 2 for additional detail).

Formal Health Care

Accessing formal health care services poses notable challenges and is perceived as low priority. A major source of frustration was the lack of access to consistent primary care providers. Several participants expressed concern that their long-time primary care provider had retired or had left their area,

Table 1. Focus Group Participant Demographics and Internet Access and Usage (n = 14).

Demographics	
Age	Range: 38 to 70 years Average age: 56.5 years
Gender	Man: 57% (n = 8) Woman: 43% (n = 6) Non-binary: 0%
Occupation	79% reported farming as primary job (n = 11) 7% reported farming part-time (n = 1) 14% reported being retired farmers (n = 2)
Residency	10 different cities/towns represented
Internet access and usage	
Internet access	93% reported having internet access inside their house (n = 13)
Cell phone access	100% reported owning a cellphone: • 86% owned a smartphone/use phone to access internet (n = 12) • 7% had calling and texting capabilities (n = 1) • 7% had solely call capability (n = 1)
Virtual health access	50% reported using the internet to interact with a health care provider in the past year (n = 7)

changing affiliation to larger health systems often based in larger urban areas.

As providers change, a lack of available appointments at nearby facilities made scheduling and attending necessary appointments difficult. One participant described the new challenges:

> *"We went through a transition where doctors. . .retired, and then it was hard. You had new nurse practitioners and [physician assistants] come in. . .It was a revolving door for a while, and it was hard to get appointments."*

Not only is the decline of primary care providers an issue but specialist shortages also presented many challenges. Participants expressed a desire for improved access to pediatricians, gynecologists, and psychiatrists. One participant lamented the lack of pediatric options available:

> *"There's really one pediatrician facility. . . they had four doctors. Two of them have left. So, now there's two. . .normally you can get in the same day if you call and schedule. . .but. . . you don't really have a lot of choices if you're not totally satisfied with the care."*

Another challenge was expressed through participants' frustration with the inability to build lasting relationships with providers who are familiar with their health history:

> *"And that's the same way with specialists. . .They'll be there for 5, 10 years and they move on, and you've gotta find somebody new, so. . .for me that's kind of a concern.*

Additionally, participants provided numerous examples where they avoided formal health care services entirely, or until absolutely necessary, distinguishing what defined "emergencies" as the standard for utilizing health care services, maintaining that a laceration requiring a few stitches was minor and didn't require attention but *"cut[ting] your finger off or something"* constitutes an emergency. Participants reported that other concerns, such as mental health, were less often addressed. As 1 participant stated, *"I don't think [mental health] gets talked about a lot in the places where we all live. . .I think people keep that to themselves."*

Not all reactions were negative, however. Several participants expressed a sense of satisfaction with their providers and the different facilities available to them in their county, citing access to dentists, opticians, and a *"very good hospital"* that is *"accessed on an as-needed basis."*

Positive perspectives were expressed when considering potential access to care problems for rural residents. One participant offered a positive opinion of their experiences while acknowledging that they have the ability to drive to utilize facilities in urban areas while others may not:

> *"I've never felt a lack, that I couldn't get care. . .'Cause it was too far away. . . if I didn't have a car, or the ability to buy gas for the car to drive. . .then that would be a different story."*

Well-being and Health Supports

Maintaining one's health and well-being, primarily through diet and exercise, depended on factors specific to participants' rural lifestyle. Several participants expressed how their unique experiences as farmers have shaped their and their families' approach to well-being, especially exercise, as work on the farm is perceived to be exercise itself. As one

Table 2. Classification of Rural Health Focus Group Data.

Theme	Description	Concepts	*Example Quote*
Formal health care	Challenges and successes experienced when accessing and utilizing health care services	Lack of access to consistent PCPs Lack of availability of appointments Specialist shortages Avoiding formal health care services Only accessed for "emergencies"	*"Your personal physician that you've worked with has changed, and they're affiliated with hospitals and somebody's health system, and that choice has dictated what we have to do now."* *"But. . .you don't really have a lot of choices if you're not totally satisfied with the care."* *"But I think it's somewhat questionable whether a little hospital like we have is gonna be viable going forward"* *"I don't think [mental health] gets talked about a lot in the places where we all live. . .I think people keep that to themselves."* *"I don't think farmers would ever be labeled as hypochondriacs. We're probably on the other end [of] the spectrum."*
Well-being and health supports	Access, or lack thereof, to additional resources that support one's ability to live and maintain a healthy lifestyle	Work on farm as form of exercise Compounded by aspects of farm life—isolation, time management, lack of positive peer influence Diet and access to healthy food Safe practices and injury prevention	*"We work for health, for fun, and for health"* *"Our kids have never done that type of thing. Never joined a health club or gone to a fitness center, or really anything. . .They're outside working. . .I mean, it's physical labor, ya know. So, it's tough."* *"It truly is cheaper to buy [food] in the store than it is to raise it."* *"And really the prevention of farm injury and basic first aid, is probably way more important than healthcare because any one of these things would then cost lifetime problems that have to be treated."*
Health insurance experiences	Facilitators and barriers to health care related to insurance cost and coverage	Cumbersome and inefficient Perspective as both employer and customer Privileged access for certain members of farming community Insurance affordability Access to free clinics and urgent care clinics	*"I was the person responsible for buying health insurance for the employees. It's always been extremely expensive. And even for myself, who I felt like I could financially afford it, I never felt like I was getting my money's worth out of it. . ."* *"The biggest issue is just the cost of all this. . .and we're looking at, you know, $1,500, $2,000 a month is not unique for a family, you know, medical plan now."* *"I feel badly for our employees who are not as fortunate as I am to have that, because even though I've retired I still have the health insurance benefits."*
Virtual health care	Benefits and challenges of utilizing virtual health platforms to address barriers to accessing health care	Concerns over availability and quality of internet access Potential to mitigate rural-specific issues—remote location, shortage of providers, wait times, travel distance Reduced costs of care	*"What you're gonna hear, I guarantee you. . .is. . .we'd love to do a video. . . Cause it's two hours to the doctor, and I'd love to do a video chat, but because it's two hours to a doctor, I don't have high speed internet either."* *"All I really need is to have some FaceTime to confirm symptoms and have somebody write a script. . .right now, to do that process, there's a 20-minute drive to town, probably a half hour wait at urgent care. . .So, the barrier is that time and distance"* *"So much of this [virtual health] stuff is simple, you know, where they can do it that way and it would save everybody a lot [of] time and money. I hope it goes to that."* *"[Virtual health] would be tremendous for rural Michigan. We'd probably be healthier cause we'd probably get treated now, as opposed to just ignor[ing] it."*

participant offered, *"There's enough exercise on the farm."*

This informal approach to well-being is reportedly compounded by geographic isolation, time constraints, and less peer or co-worker support for not incorporating lifestyle interventions, as one participant summarized: *"We can be fat farmers and we're okay with it."* Finding the time and effort to drive to an exercise facility was seen as *"just not practical."* Some members did voice that there were gyms and other fitness centers available, for free or for a nominal fee, but that accessing these amenities was a choice based on daily routines.

Safe practices on the farm are integral to physical well-being and thus proper injury prevention and first aid training is vital. Nearly all participants recalled a catastrophic accident or death on the farm. Many participants expressed satisfaction with the current training opportunities available but acknowledged the need for ongoing training. According to one participant, safety on the farm was *"not a matter of training, it's a matter of compliance."* Working with farm equipment and animals puts workers in many situations in which safety is paramount. Yet, even with proper safety measures in place participants discussed the need for increased training. Further focus must be put on even more effective safety and first aid training programs to ensure farmers' safety and well-being.

Health Insurance Experiences

Insurance coverage and cost presented challenges, specifically as to where and when to seek formal health care. Many participants reported that health insurance plans available to farmers were cumbersome and inefficient. It was illustrated by one individual, *"like a spider web, once you're in, it's hard to ever get out."* Another participant expressed their experiences saying, *"I don't have any idea. I'm still running, and I'm blind."*

As both farm owners and as local employers, participants offered a unique perspective on the cost of insurance and interactions with insurance companies citing the differences in costs and coverage between themselves and their employees. Participants recognized that their respective positions provided them access and options that are not necessarily afforded to others in their community.

Many attendees raised the affordability of insurance and the availability of covered services in relation to the specific populations that live and work in rural Michigan's farming communities. As one participant explained:

> *"I also live in an area where there is a lot of seasonal migrant labor comes in. . . I think the ones that do qualify for Medicaid can go [to a local care provider] and they seem to be able to get their. . .health, dental, and eye care taken care of there."*

Participants also identified free clinics and urgent care clinics as options for residents with financial instability, lack of insurance, or limited coverage, described as being *"accessible to anyone."*

Virtual Health Care

Virtual health capabilities offer promising solutions to recognized barriers to care. A few of the participants had previously used virtual appointments and many expressed their opinions on what it meant for health care in the future. They expressed the hope that virtual health could help mitigate costs, ease time constraints, and facilitate broader access to providers that may be based several hours away.

While participants were open to virtual visits, a frequently repeated concern was the availability, speed, and reliability of internet access. A secondary concern was availability and affordability of smart phones. While most participants had internet access and all participants owned a cell phone (See Table 1), they were cognizant this was a luxury that many rural residents may not have. One participant articulated this awareness:

> *"[Virtual health is] probably connected to. . .your access to technology. . .we all have phones. . .But we don't all have high speed internet. . .So, that video conferencing thing can be somewhat limited. . .so that can be a barrier. . .what you're gonna hear. . . is. . .I'd love to do a video chat, but because it's two hours to a doctor, I don't have high speed internet either."*

Despite these barriers, virtual health visits were viewed as having the potential to mitigate issues extending from remote rural locations and a shortage of providers by reducing physical distance barriers and shortening wait times. As one participant opined:

> *"The barrier is miles. . . .All I really need is to have some face time to confirm symptoms and have somebody write a script. . . right now, to do that process, there's a 20-minute drive to town, probably a half hour wait at urgent care. . .So, the barrier is that time and distance"*

Reduced costs of care was raised as a benefit to virtual health visits. One attendee described how virtual visits ease costs and improve efficiency:

> *"It was the freakiest thing. You go online, you pick which doctor you'd like to talk to. . .they have a bunch of doctors available. . .and you pick the doctor and then within like 5 minute you get hooked up to a doctor. And it was $45, which is a whole lot cheaper than going to the doctor."*

Participants weighed the current barriers that exist to virtual health access with the potential benefits they saw for themselves and for rural communities at large. It was

evident, however, that improving the access, speed, and reliability of internet service is essential to broader use of virtual health care.

Discussion

This exploratory study provides important context about the challenges that rural farmers face when accessing health care and related services, across 4 key areas: formal health care service access and quality; supporting overall health and well-being; health insurance experiences; and receipt of health services virtually. The first-hand accounts of farmers reported herein, coupled with available statistical data and the extant literature on rural health care challenges,[12-16] underscore important gaps in primary health and community care that require changes to clinical practice and health policy: reducing geographic and structural barriers, novel strategies to address provider shortages, health insurance mechanisms that meet farmers' needs, widespread and reliable technology access, and accounting for individual preferences. These firsthand, experiential accounts prioritize opportunities for additional descriptive study, intervention testing, and policy development and highlight promising strategies for broader implementation.

Several participants' perspectives align with broader awareness of specific social and economic circumstances for their employees, especially migrant workers, and other underserved members in their communities. Such populations face greater risk of premature death in large part due to social and structural health determinants and institutionalized racism.[17] Addressing these inequities, racialized vulnerabilities, and barriers to health care is vital to any systematic efforts aimed at improving health outcomes for the US's diverse rural populations.[18]

Solutions are needed to address the perceived and documented shortage of locally accessible and consistent health care providers. A 2021 report by the Health Resources and Services Administration projected notably increased demand for primary care providers, especially geriatric physicians. The same report suggests Michigan faces a projected shortage of 300 primary care providers by 2030.[19] Many strategies have attempted to close these gaps and increasing the number of clinicians who work in rural regions is integral to improved access to care. Such strategies include expanding providers' scope and clinical autonomy to entice rural community practice and targeting medical school admissions for students with rural upbringing or an interest in rural practice.[20-24]

Other novel strategies show promise in improving access to care in rural agricultural settings. In 1 study, a novel partnership between primary care practices and emergency departments successfully identified social health needs and rendered requisite support by optimizing emergency care, providing emergent acute care, and addressing rural social determinants of health for patients as well as reducing competition for resources and achieving financial solvency for rural health care facilities.[25] Relatedly, a novel community-based para-medicine program delivered to patients with chronic disease by specially-trained teams resulted in fewer emergency department visits.[26]

Virtual health is another important strategy to mitigate challenges of distance, wait times, and provider shortages. Yet virtual health must be distributed reliably and equitably to achieve improved population health outcomes. Not all areas have sufficient high-speed internet capabilities.[27,28] Rural residents may also lack the economic means to afford high-speed internet access or smartphones to take advantage of these options.

Uneven reimbursement for virtual health, especially among Medicaid recipients, is a pervasive structural inequity.[7] While reimbursement for virtual care has expanded, the duration of this coverage is unclear, prerequisites vary, and telephone-only care remains unaddressed. Moreover, the rapid shift to virtual health during the COVID-19 pandemic highlighted technology, equipment, and provider training gaps.[29,30] Targeted and ongoing funding to provide high-quality equipment, maintenance, and staff training would improve the ability of health care providers to meet the needs of rural residents.[31]

As seen in the existing literature, primary care settings are an optimal starting point for introducing these necessary changes. With the need for more available provider options, a reduction in distances to see providers in clinic, and more equitable technological access, basic and necessary health care services can be more evenly distributed. These key findings, coupled with the current literature, demonstrate the urgent need to expand innovative and flexible models of health care delivery to assure equitable, high-quality health care in rural settings. In the fast-paced, unpredictable health care sector, policymakers, payers, and health system leaders can develop and test new strategies that address rural residents' unmet needs and promote health equity.

Limitations

Farmers as a group are wealthier than the median American and the median rural Michigander.[32] Since this study is a purposive sample of Michigan farmers, all of whom are current or retired farm owners, the diversity of perspectives is limited and their views will differ greatly from other rural residents, including farm employees, migrant farm workers, and those not employed in agriculture, all of whose access to care may be even more limited. Focused efforts to collect data from these communities are essential to fully understand prevailing health concerns in rural areas. Additionally, given the project's regional focus, the barriers and facilitators expressed by study participants

may not be generalizable to wider rural populations. There is much to learn from region-specific studies to appreciate local context, coupled with larger, more generalizable studies. These limitations are presented alongside rich contextual details from respondents that appreciate the personal impacts of rural health care gaps.

Conclusion

The key findings presented here—coupled with national reports—highlight uneven access to health care and identify the opportunity to develop and test novel interventions to promote health and safety among rural residents. With careful attention to promoting equitable, reliable, and affordable health care and related services, rural residents are receptive to innovation, such as virtual health care platforms. Policymakers and health system leaders should consider the experiences identified here to design and test novel interventions to deliver accessible, equitable, and high-quality care to rural Americans.

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