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Leadership Challenges in Ensuring Healthcare Affordability for Rural Communities: An Exploratory Study in the Case of Northern Minnesota

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Abstract

This study examines leadership challenges related to healthcare affordability in rural Northern Minnesota, where chronic disease burden, geographic distances, and financially vulnerable facilities create conditions that affect both patient access and system sustainability. The project employed an exploratory qualitative design grounded in an interpretive paradigm, recognizing that documentary sources represent constructed accounts of organizational and policy realities. The methodology involved secondary documentary analysis of state health reports, hospital finance summaries, rural research center publications, and peer-reviewed scholarship. Rigor was addressed through transparent documentation of search strategies, inclusion criteria, coding procedures, and analytic decision-making. Credibility was supported by triangulation across document types and peer debriefing; dependability was addressed through audit trail maintenance; confirmability was supported by reflexive memoing. There were five interrelated themes. Financial fragility illustrates tight margins, high fixed expenditures, and payment structures that fail to consider rural service provision. A persistent shortage of nurses, primary care clinicians, and behavioral health professionals that not only increases the cost of labor, but also continuity describes workforce instability. Regulatory complexity refers to the compliance and reporting requirements that eat up low administrative capacity and limit the flexibility in service redesign. Geographical obstacles accentuate the scattered populations, weather and transportation woes that both upsurge the delivery expenses and out of pocket expenditure. Strategic adaptation encompasses telehealth, cross staffing, cross sector relationship and movement towards value care albeit restricted by infrastructure gaps. Affordability is brought out as cost of care which also includes travel, lost wages and out of

pocket payments. In general, the problem of affordability is not merely a patient-level problem but also a leadership concern, located within a policy, financing, and rural setting. To maintain the necessary services and minimize unnecessary financial losses, recommendations focus on regional cooperation, enhanced data and analytics to monitor the indicators of affordability, and equity-based interaction with community and tribal partners.

Keywords

Healthcare Affordability, Rural Healthcare Leadership, Northern Minnesota, Documentary Analysis, Health Policy, Financial Fragility

1. Introduction and Context

1.1. Background of the Study

In the United States, the rural population has chronic issues with the inability to afford the required health care and cope with chronic illnesses. According to Jacobson *et al.* [1], rural adults experienced a higher likelihood of having multiple chronic conditions than urban adults, delaying or not seeking the needed care due to costs, and accumulating medical debt that they were unable to pay. The researchers discovered that 26.7% of rural adults indicated three or more chronic conditions in comparison with 18.3% of urban adults and that 13.7% of rural adults reported issues with paying medical expenses in contrast to 11.0% of urban adults [1]. National health analyses of the population reveal that the rural population is more affected by heart disease, diabetes, and other chronic diseases compared to the urban population, thus necessitating frequent access to health care [2]. These trends suggest that a significant number of rural households have to deal with complicated disease management needs in settings where disease and financial burdens are high. Affordability of health care issues is also intertwined with the method through which the US funds health care. According to Shrank *et al.* [3], insurance benefit design, payment reforms, and coverage decisions redistribute financial risk to the patients via deductibles, copayments, and uncovered services. A recent survey by the Commonwealth Fund indicated that a quarter of rural adults experienced serious difficulties in paying medical bills or inability to pay them and that their debts impacted their capacity to afford basic living costs like rent, utilities, and food [4]. Logan and Castaneda [5] suggested that such economic strains are placed on neighborhoods already facing structural marginalization and restricted local resources, which exacerbates the health impact of economic distress. Rural health systems in states such as Minnesota operate under these national pressures while also facing local resource constraints. The Minnesota Department of Health [6] reported that about one quarter of Minnesota residents live in rural areas but that a smaller share of licensed health care providers works in those regions and that rural areas have higher rates of several chronic

conditions than urban regions, which places additional strain on small facilities and communities. Coates *et al.* [7] found that hospital closures and consolidations in rural areas reduce local access and increase travel distances for care, which intensifies the affordability problem for residents who must travel long distances while managing chronic illness.

1.2. Problem Statement Summary

In Northern Minnesota, rural health systems operate with thin or negative financial margins and depend on a small number of hospitals that serve large geographic areas. A recent analysis by the Minnesota Hospital Association [8] reported that 67% of Minnesota hospitals had negative median margins of −2.7% in 2023, which indicates that many facilities have little buffer to absorb cost increases or revenue shortfalls. The Minnesota Department of Health [6] noted that the state has 76 of 127 hospitals designated as critical access hospitals and 90 hospitals located in rural areas, meaning that a few facilities offer the necessary services over expansive areas. Coates *et al.* [7] found that the ecologies of the rural health systems are rearranged by the closure and consolidation of hospitals, which reduces the local access and increases the travel burdens to care. Within such a setting, health care leaders are required to make decisions on how to ensure that services remain financially feasible and adhere to intricate regulations while remaining affordable to the residents with limited resources. The existing literature does not provide empirical data about the perceptions of such affordability pressures among leaders in rural Northern Minnesota and the strategies used to respond to them. This project examines leadership problems that intersect with the financial access of health care to rural populations in Northern Minnesota through a qualitative inquiry into documentary evidence and policy resources in the region.

1.3. Purpose of the Study

This is an exploratory qualitative study that aims to investigate how health care leadership in rural Northern Minnesota addresses the issue of health care affordability through documentary evidence and policy reports that reflect leadership decisions and priorities. Shrank *et al.* [3] observed that affordability has a wide-policy context because leaders must negotiate cost containment, quality, and access. Coates *et al.* [7] proved that the service line choices and the hospital sustainability in the rural areas could alter the ecologies of the local health systems and modify the place and point of care access among the residents. Coombs *et al.* [9] and Parashar *et al.* [10] found that, in rural locations, collaboration-related leadership practices and community strategies and adaptive planning can influence the organizational responsiveness to access barriers and resource restrictions. The present research will build on these observations by examining how documentary and policy documentations explain leadership reactions to affordability stressors in rural Northern Minnesota and how the documents are reflective of tradeoffs that leaders experience between financial sustainability and equitable access.

1.4. Significance of the Study

Rural residents face more affordability problems, worse health outcomes, and higher rates of chronic disease as compared to urban residents and, therefore, leadership choices in these areas have direct impacts on community health. Jacobson *et al.* [1] found that rural adults were more likely than their urban counterparts to delay or forego the needed care because of the cost and often-cited challenges related to paying medical bills. According to Logan and Castaneda [5], those inequalities have structural roots of marginalization and inadequate local resources and can be enhanced through purposeful leadership and policy attention. Knowledge of how rural leaders respond to the pressures of affordability can inform strategies to reduce healthcare and financial disparity in rural settings that use small local systems. The study is also beneficial to the health care organizations and policy makers in Minnesota. The Minnesota Department of Health [6] explains that many hospitals in the rural areas of the state are small institutions with large geographic coverage and that these facilities must serve scattered populations. Minnesota Hospital Association [8] noted that the negative operating margins were widespread throughout hospitals in Minnesota, which is indicative of the further financial vulnerability of the rural health systems. Coates *et al.* [7] showed that leadership choices to select service lines and merge services may alter the access to services in a vulnerable community leading to closure or consolidation. Parashar *et al.* [10] showed that adaptive planning supports effective rural resource management efforts. By analyzing documentary and policy materials, this capstone can provide evidence that helps leaders and policy makers design affordability strategies that protect access while sustaining financially fragile rural health systems in Northern Minnesota.

2. Problem Statement

For purposes of this analysis, healthcare affordability was operationalized through indicators identifiable in documentary sources: 1) documented evidence of patient cost burden, including medical debt prevalence and reports of care delayed or foregone due to cost; 2) organizational indicators of affordability pressure, including charity care volumes, bad debt percentages, and sliding fee program utilization; 3) policy and reimbursement factors affecting patient out-of-pocket costs, including deductible structures, coverage limitations, and uncovered service categories; and 4) leadership responses explicitly addressing cost barriers, including financial assistance policy changes, telehealth implementation aimed at reducing travel costs, and advocacy regarding reimbursement policy. Rural residents in Northern Minnesota continue to face structural barriers affecting affordability across each of these dimensions, including large geographic areas, extreme weather patterns, declining population rates, and financial constraints that limit both household resources and organizational capacity [11]. Regardless of national reforms, such as the Affordable Care Act (ACA), Medicare reimbursement rules, and rural health clinic (RHC) rules, which are supposed to reduce the disparities,

gaps in affordability exist across Northern Minnesota [11]. The facts of healthcare leaders dealing with such communities are epochal and include the necessity to balance the following three aspects: financial sustainability, adherence to regulations, and equal service provision [12].

However, the leadership-specific obstacles that characterize the affordability outcomes are not sufficiently represented, and that is why the gap in the current academic and professional literature is critical. Rural Northern Minnesota experiences disproportionate health burdens compared to urban areas, with higher rates of chronic disease, mental health needs, substance use issues, and preventable hospitalization [11]. Residents contend with long travel distances, variable insurance coverage, limited specialty care availability, and out-of-pocket costs that consume significant household income [13]. Local health systems operate on thin or negative margins with unpredictable reimbursement flows, creating difficulty in maintaining basic services including emergency care, behavioral health, obstetrics, and chronic disease management. These conditions produce what leaders describe as persistent crisis management rather than strategic planning [14]. Leaders must be able to act concurrently to address recruitment of workforce, financial instability, regulatory pressures, and population-based circumstances of health inequity-circumstances that make affordability a multidimensional and complex leadership issue, rather than a simple economic issue. The structural nature of rural healthcare funding complements this leadership challenge. Rural hospitals tend to depend on Medicare-based schedules of reimbursements, which are not reflective of the real cost of care delivery in low-density regions [15]. As an example, under certain federal designation requirements aimed to enhance affordability and sustainability, Rural Health Clinics (RHCs) and Critical Access Hospitals (CAHs) have been implemented, and with issues, leaders report that compliance costs, capital investment requirements, and administrative burdens tend to reverse the desired financial gains [11]. Regulations by the Minnesota Department of Health, licensing rules, telehealth policies, and Medicaid eligibility rules further contribute to the financial computation of rural care provision [14]. To comprehend the concept of affordability, it is necessary to analyze how leaders maneuver through this complex of legal and regulatory demands, trying to keep care affordable to their communities. Nevertheless, the intersection of affordability, regulation, and rural constraints is rarely the focus of leadership decision-making in academic research [9].

Additionally, affordability not only depends on the federal and state legislation but also on the ability of the leadership to be innovative in the face of adversity [9]. Expanding telehealth, forming joint ventures, cross-sector expertise, value-based formulations, and workforce reshaping are some of the strategies used by leaders in Northern Minnesota to alleviate the impact of increased costs [9]. However, many of these innovations harbor their own impediments. Expanding telehealth needs broadband connections and regulatory compliance; networked partnerships need relationship-building competencies, value-based models need ad-

vanced data infrastructure, which most rural systems lack, and workforce redesigning must address professional licensure regulations and union demands [15]. As leaders, it is their responsibility to ensure fiscal accountability and regulatory compliance; promote ethical decision-making and culturally responsive care, whilst being accountable to boards, state regulators, policymakers, and communities they represent [9]. Although the environment is quite harsh, there has not been enough research on the topic of rural health affordability as a leadership issue. A large portion of the available literature concentrates on rural access, financial obstacles, adoption of telehealth, or the effect of health policy; however, not many studies have examined how the leaders themselves feel and respond to affordability barriers [11]. The deficiency of leadership-focused studies also adds up to a considerable gap in the knowledge concerning the leadership behavior formation of affordability or the political decision-making patterns, as well as the strategic priorities and regulatory search [14]. As an example, it is not clear how leaders in Northern Minnesota think of affordability in their strategic planning systems, how they weigh between community demands and financial viability, and what kind of leadership skills are necessary to deal with the issue of affordability in a sustainable manner [9]. Lacking leadership-informed understanding, the rural health systems are doomed to repeat their own cycles of crisis management instead of adopting permanent solutions [15]. This gap is particularly alarming because the affordability of rural healthcare is currently a decisive aspect of population health. When care is unaffordable, patients delay treatment, decline preventive services, attend emergency departments as primary care providers, or decline the use of medications they need [11]. These trends worsen the health disparities and create an increased burden on the local systems. All these are shaped by the leadership choices to invest in the necessary growth or to spend the limited resources, to concentrate on recruitment, or to communicate with policymakers [9]. Therefore, healthcare affordability in Northern Minnesota is not just a financial crisis but a leadership crisis that has immediate impacts on the health of the population and the sustainability of the systems in the long term [16].

The research design is a qualitative, leadership-based study, as the issue is acute, to comprehend the lived experiences, perceptions, and strategies of healthcare administrators in Northern Minnesota, in an attempt to make healthcare affordable to rural populations [9]. The research will fill a critical gap in the literature and help to improve the rural healthcare workforce by investigating the problem of leadership in healthcare affordability in Northern Minnesota [9]. The findings will provide academic and practical importance to the leaders, policymakers, healthcare administrators, and community stakeholders who would desire a long-term remedy to the affordability of rural healthcare. Lastly, the findings will be employed in the development of evidence-based leadership models that can increase the ability of rural health facilities to deliver affordable healthcare services to underserved communities.

2.1. Primary Research Question

1) What leadership challenges do healthcare administrators in rural Northern Minnesota encounter in relation to providing affordable healthcare services to their communities?

2.2. Secondary Research Questions

1) What operational and financial challenges do rural healthcare leaders in Northern Minnesota perceive as influencing healthcare affordability?

2) What role do federal and state regulations play in shaping leadership decisions about affordability in rural healthcare environments?

3) What leadership approaches do rural healthcare leaders perceive as most effective in enhancing affordability?

2.3. Theoretical Framework

This study draws on distributed leadership theory [17] and complexity leadership theory [18] to frame leadership challenges in rural healthcare. Distributed leadership recognizes that leadership functions are shared across formal and informal roles, which aligns with rural settings where small organizations require individuals to assume multiple responsibilities. Complexity leadership theory attends to how leaders enable adaptive responses in systems facing multiple interacting pressures, which corresponds to the conditions documented in rural Northern Minnesota. These frameworks provide a theoretical scaffold for differentiating leadership actions and evaluating how they respond to structural constraints.

3. Literature Review

3.1. Rural Healthcare Affordability

Rural health care affordability in this project refers to the extent to which rural residents can obtain needed services without delaying care or experiencing financial hardship. Jacobson *et al.* [1] found that rural adults were more likely than urban adults to skip or delay care because of cost and that more rural adults reported problems paying medical bills and carrying medical debt. MacDougall *et al.* [19] reported that rural residents had higher levels of health care unaffordability than urban residents across several income groups, which shows that cost barriers affect households beyond those with the very lowest incomes. Jacobson *et al.* [20] showed that medical debt and unaffordable care differed by rurality and region and that rural residents in Midwestern and North Central regions had some of the highest levels of medical debt and forgone care, which is directly relevant for Northern Minnesota. Affordability problems are closely connected to how health care is financed for rural populations. Shrank *et al.* [3] explained that trends in health spending and payment reforms place more financial risk on patients through deductibles, copayments, and uncovered services. Park and Fung [21] found that low income and near low-income Medicare beneficiaries experienced the greatest problems paying for care and that many respondents reported medi-

cal debt even when they were eligible for subsidies. Gunja [4] reported that nearly one quarter of rural adults had serious difficulty paying medical bills and that many respondents said medical debt forced them to reduce spending on basic needs such as housing and food. Aborode [22] described how medical debt contributes to delayed care, psychological stress, and long-term financial harm for individuals and families. State level evidence suggests that affordability remains a concern in Minnesota despite national reforms. The Minnesota Department of Health [6] identified accessible and affordable health care as a priority need for the state and noted that some populations and regions continue to face cost related barriers. Matthews *et al.* [2] stated that the prevalence of chronic disease among rural communities enhances the cumulative care required by residents, and this further amplifies the effects of cost barriers. Combined, these studies imply that rural dwellers, especially in Midwestern and Northern rural areas, contend with continued affordability issues that should be contextualized by leaders in planning and analyzing care services.

3.2. Rural Health Care Context and Leadership Challenge

In rural communities, resources are scarce, thus, social marginalization influences the health outcomes and the interaction with formal care [5]. Coombs *et al.* [9] stated that the rural providers encountered transport-related barriers, stigma concerns, and program design which complicated access to care by the residents. According to Parashar *et al.* [10], rural leaders should collaborate with community partners and policy makers closely while ensuring financial sustainability and fairness to small and dispersed populations. As illustrated by Nowlan *et al.* [23], leaders are also involved in policy advocacy and recruitment to keep a steady workforce in rural settings. The study by Watkins *et al.* [24] established that crises in leadership can lead to fragile organizations and staffing, whereas the study by Malik *et al.* [25] showed that chronic stress and lack of support are a threat to retention and quality of care among rural health workers.

3.3. Leadership, Access, and System Pressures

Leadership of the rural health institutions is directly related to how institutions ensure access regardless of financial and human resource limitations. Coombs *et al.* [9] state that rural providers cited barriers to transport, stigma, and inflexibility of program requirements as impediments to accessing care and a source of frustrations to patients and personnel. These access concerns meant that the local leaders were required to modify programs, restructure hours and work with other community partners to ensure that services were available to residents with long distance concerns and complicated social problems. According to the research by Parashar *et al.* [10], collaboration, community involvement, and dynamic planning were the most significant in maintaining service delivery in times of uncertainty in rural health facilities. According to their findings, leadership practices can reduce or maximize the impact of structural barriers on access. Rural health

systems rely on the workforce and organizational stability decisions made by the leaders. The study by Malik *et al.* [25] showed that stress and burnout were common among rural health care workers and that the absence of support system was a risk to retention and quality care. Nowlan *et al.* [23] identify policy advocacy and recruitment strategies among the measures employed by leaders within the rural settings to staff the hard to fill positions and retain workers. These studies show that leaders ought to balance workforce pressure and equal access to services and fair staffing among the scattered populations. Service line decision making, partnerships and mergers at the system level, affect the ecology of the country wide rural health care. According to Coates *et al.* [7], closures and consolidations can reduce the available access within a neighborhood and increase the commuting distance, especially in areas where small hospitals or clinics are the only care providers. Watkins *et al.* [24] explained that the leaders of rural health services restructured staff functions and service provision during the COVID 19 pandemic to sustain necessary services. Combined, these studies indicate that the decisions and actions of leaders determine how rural systems absorb external shocks and persistent resource demands, which has a direct bearing to the affordability and access ability of health care in communities like Northern Minnesota.

3.4. Identified Gap

In the available literature, researchers have reported issues of health care affordability, accessibility issues, and leadership issues in rural health systems, including Minnesota. Jacobson *et al.* [1] demonstrated that the aspects of delayed care, unaffordable service, and medical debt are more common among rural adults compared to urban adults, indicating that the issue of affordability remains acute in rural communities. According to the Minnesota Department of Health [6], accessible and affordable health care is a priority need and that cost remains a barrier to rural communities despite federal and state reforms. Coates *et al.* [7] highlighted that leadership decisions related to service lines, mergers, and closures can reshape local health system ecologies, alter travel distances, and affect the stability of rural health care organizations. However, there is limited empirical work on how leaders in rural Northern Minnesota interpret the affordability pressures in local context or how policy materials reveal the strategies used to respond. This project addresses that gap by using documentary and policy materials to analyze leadership responses to affordability challenges in rural Northern Minnesota and to generate evidence that can inform practice and policy in similar rural settings.

4. Research Analysis

4.1. Key Concepts for Investigation

4.1.1. Healthcare Affordability

The term healthcare affordability in this project would mean that the rural residents can access the required services without straining their finances or creating a delay. The study by Jacobson *et al.* [1] demonstrated that there are affordability

issues in preventive, acute, and chronic care and that most rural families have medical debt. According to Shrank *et al.* [3], affordability depends on insurance design and payment systems and household income and wealth.

4.1.2. Rural Healthcare Context and Leadership Challenges

As described by Logan and Castaneda [5], in the rural community, there is a lack of resources and social marginalization, which affects the health outcomes and the interest in formal care. According to Coombs *et al.* [9], rural providers were faced with barriers to transportation, stigma, and limitations of the design of programs that complicated access. According to Parashar *et al.* [10] and Nowlan *et al.* [23], when developing relationships with community partners and policy makers, rural leaders have to ensure financial sustainability, stable workforce, and equitable access to small and dispersed populations. Watkins *et al.* [24] and Malik *et al.* [25] demonstrated that even the weak organizations and personnel set-ups are destabilized by crises and persistent stress.

4.2. Data Analysis

This study employed a qualitative documentary analysis design. The approach was selected to examine how leadership challenges related to healthcare affordability are represented in policy documents, organizational reports, and published research concerning rural Northern Minnesota. The design is consistent with exploratory research aims and relies exclusively on secondary sources. The methodology is in line with the qualitative requirements, which are interested in the patterns and are not quantified [15].

4.2.1. Document Corpus

Documents were identified through systematic searches of publicly accessible repositories including the Minnesota Department of Health website, the University of Minnesota Rural Health Research Center publications database, the Minnesota Hospital Association reports archive, and PubMed/MEDLINE for peer-reviewed literature. Search terms included combinations of "rural health," "Minnesota," "healthcare affordability," "leadership," "hospital finance," and "workforce." Inclusion criteria required: 1) publication between 2019 and 2025, 2) focus on Minnesota or Northern Minnesota specifically, 3) relevance to healthcare delivery, financing, or leadership, and 4) availability in English. Exclusion criteria eliminated documents addressing only urban settings, those lacking geographic specificity, and opinion pieces without empirical or policy grounding. The final corpus comprised 47 documents: 12 state agency reports, 8 hospital association publications, 15 peer-reviewed articles, 7 rural research center briefs, and 5 community health needs assessments from Northern Minnesota health systems.

4.2.2. Coding Procedures

Coding proceeded through three cycles. First cycle coding involved open coding of all documents, with codes assigned to passages describing leadership condi-

tions, decisions, or constraints related to affordability. A codebook was developed iteratively, with codes defined and refined as analysis progressed. Second cycle coding applied pattern coding to group related first-cycle codes into categories. Third cycle coding involved thematic analysis to identify broader themes across categories. Figure 1 visualizes the development of themes from initial codes.

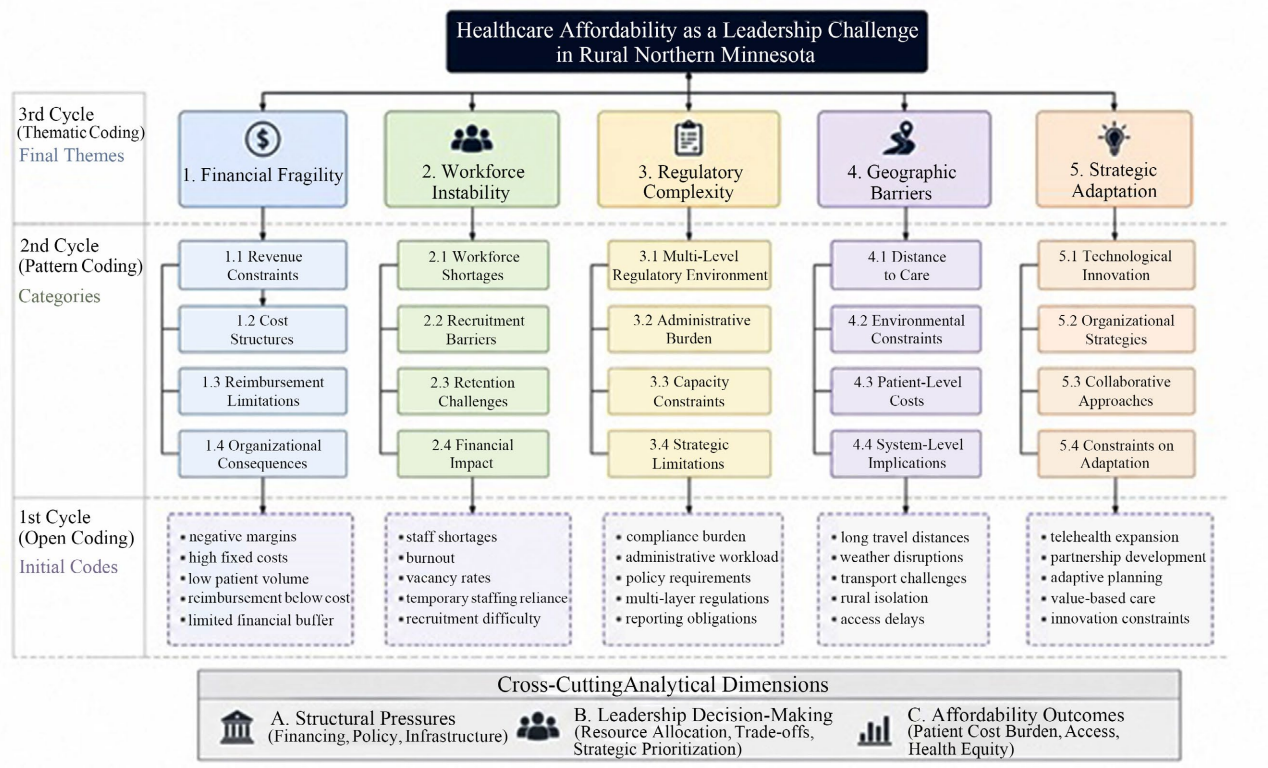

Figure 1. Coding tree diagram demonstrating the development of themes from initial codes.

4.2.3. Trustworthiness Measures

An audit trail documented coding decisions, including memos recording rationales for code creation, merging, or deletion. Peer debriefing occurred through discussion of preliminary themes with two colleagues familiar with rural health research but not involved in the study. Reflexive memoing documented the researcher's positioning and assumptions throughout analysis. Themes were identified through an inductive approach, allowing patterns to emerge from the documents rather than applying predetermined categories. Analysis proceeded until thematic saturation was reached, defined as the point at which additional documents yielded no new codes or themes and existing categories adequately captured the range of content across the corpus.

4.2.4. Triangulation

Triangulation was conducted by comparing findings across document types (state reports, association publications, peer-reviewed research, community assessments) and source organizations (government agencies, research centers, health systems). Patterns that appeared consistently across multiple source types were considered

stronger evidence than those appearing in only one category. Discrepancies between document types were noted and examined for possible explanations, including differing author perspectives, time periods, or analytic purposes. During the process of analysis, five key themes were identified, which were financial fragility, workforce instability, regulatory complexity, geographic barriers, and strategic adaptation. The relationships between these themes point to the fact that structural conditions affect the choices of leadership in a way that defines the consequences of affordability.

4.3. Theme 1: Financial Fragility

Documents consistently described financial fragility as a foundational condition affecting all other aspects of rural healthcare leadership. The Minnesota Hospital Association [8] reported that "67% of Minnesota hospitals operated with negative median margins of −2.7% in 2023," noting that "rural facilities face particular challenges due to low patient volumes and high fixed costs." This financial pressure was attributed to several factors across the document corpus. Reimbursement structures appeared as a primary concern. Rural Health Research Centers [11] documented that "Medicare and Medicaid reimbursement rates often fall below the actual cost of care delivery in rural settings, particularly for Critical Access Hospitals that serve low-volume populations." Jacobson *et al.* [20] found that "organizational financial instability worsens patient-level affordability because limited resources constrain leaders' ability to expand preventive programs, offer financial assistance, or invest in cost-saving innovations." The documents suggested that financial fragility operates as both cause and consequence. Thin margins leave little buffer for unexpected expenses, while unavoidable costs such as regulatory compliance or emergency facility maintenance further erode the resources available for patient care subsidies or community benefit programs.

4.4. Theme 2: Workforce Instability

Workforce instability emerged as a theme with measurable dimensions and documented consequences. Abelsen *et al.* [26] identified factors contributing to workforce instability: "Geographic isolation, limited professional networking opportunities, and compensation differentials with urban employers combine to create chronic shortages across multiple clinical categories." The documents indicated that these shortages produce cascading effects. When positions remain unfilled, remaining staff experience increased workload and burnout risk, which further threatens retention. Leaders must then allocate scarce resources to temporary staffing or incentive payments, diverting funds from other affordability-related investments. MacDougall *et al.* [27] reported that "rural health professionals in Minnesota experience longer vacancy durations for nursing and primary care positions compared to urban counterparts, with temporary staffing costs consuming an increasing share of operating budgets." Quantitative indicators from their study showed that rural Minnesota hospitals experienced vacancy rates for regis-

tered nurses averaging 12.4% compared to 7.8% in urban facilities. Temporary nursing costs as a percentage of total labor expense were 8.2% in rural facilities versus 4.1% in urban counterparts.

4.5. Theme 3: Regulatory Complexity

Regulatory complexity appeared in documents as a multilayered phenomenon affecting leadership capacity and flexibility. Documents referenced multiple regulatory layers affecting rural leadership decisions. Federal regulations included Medicare Conditions of Participation, Critical Access Hospital designation requirements, telehealth reimbursement rules, and Emergency Medical Treatment and Labor Act (EMTALA) obligations. State regulations included Minnesota Department of Health licensing requirements, certificate of need processes for certain service changes, and Medicaid administrative rules. Institutional policies included health system affiliation agreements and board-level financial oversight requirements. O'Hanlon *et al.* [14] observed that "affiliation with larger health systems did not consistently reduce administrative burden for rural hospitals, and compliance requirements continued to consume staff time that might otherwise be directed to patient care." The Minnesota Department of Health [6] noted that "administrative requirements use resources that might be directed at patient care or cost-reduction initiatives, particularly in smaller facilities where staff must fulfill multiple compliance roles without dedicated regulatory personnel." Documents suggested that the cumulative effect of these layers, rather than any single requirement, produced the complexity that leaders found challenging. Each requirement individually might be manageable, but their combination with limited administrative capacity created conditions where compliance consumed disproportionate attention.

4.6. Theme 4: Geographic Barriers

Documents described geographic barriers using several indicators. The Minnesota Department of Health [6] noted that rural residents in Northern Minnesota traveled an average of 32 miles for primary care and 67 miles for specialty care, compared to 7 and 15 miles respectively for urban residents. These distances carry direct and indirect costs for patients, including fuel expenses, time away from work, and vehicle maintenance. Coates *et al.* [7] reported that "hospital closures in rural areas increase travel distances for specialized care, with patients in the most remote locations facing round trips exceeding 100 miles for certain services." Their analysis found that following rural hospital closures, affected communities faced travel distance increases averaging 21 miles for emergency care. The study also noted that "weather conditions affect travel reliability, with rural roads in some Northern Minnesota counties closed an average of 18 days per winter season." For healthcare leaders, geographic barriers affect both service feasibility and patient access. Documents indicated that decisions about which services to maintain locally require balancing population density, travel burdens, and the fixed

costs of facility operation. Coates *et al.* [7] concluded that "leaders must weigh affordability against accessibility, making decisions that may require service consolidation or partnership development even when community preferences favor local retention."

4.7. Theme 5: Strategic Adaptation

Strategic adaptation emerged as a theme capturing leadership responses to the pressures documented above. Coombs *et al.* [9] reported that "rural providers described telehealth as essential for maintaining access during the pandemic, but noted that broadband limitations and reimbursement uncertainty constrained sustained implementation." The study found that while telehealth expanded rapidly during emergency declarations, its long-term viability remained uncertain due to infrastructure gaps and policy instability. Parashar *et al.* [10] documented collaboration strategies: "Partnership formation, community engagement, and adaptive planning emerged as significant factors in maintaining service delivery during periods of uncertainty in rural health facilities." Their findings suggested that leadership practices could either reduce or amplify the impact of structural barriers on access and affordability. Documents were examined for evidence regarding effectiveness, scalability, and failure conditions of strategic adaptations. Telehealth implementation showed variable effectiveness, with some studies reporting improved access metrics while others noted that broadband gaps limited reach to the most remote populations. Partnership formation appeared scalable in principle, but documents noted that relationship-building required sustained investment that grant-dependent programs could not always maintain. Value-based care pilots showed mixed results, with some rural participants struggling to achieve the patient volumes needed for meaningful risk adjustment. The effects of the five themes above on affordability are summarized in **Table 1**.

Table 1. Thematic summary table of leadership pressures affecting affordability in rural northern minnesota.

Theme	Description	Supporting Sources
Financial Fragility	Rural hospitals operate with minimal margins and high fixed costs.	MHA [8]; Jacobson *et al.* [20]
Workforce Instability	Staffing shortages elevate expenses and destabilize operations.	Abelsen *et al.* [26]; MacDougall *et al.* [27]
Regulatory Complexity	Policies impose compliance burdens and limit flexibility.	O'Hanlon *et al.* [14]; MDH [6]
Geographic Barriers	Distance and low density increase delivery costs.	Coates *et al.* [7]
Strategic Adaptation	Leaders use innovation to offset pressures.	Coombs *et al.* [9]; Parashar *et al.* [10]

In general, the results indicate that affordability in rural Northern Minnesota is not determined by individual organizational actions but by structural pressures that are interconnected. These pressures have to be overcome by leaders who are trying to maintain access to the services and organizational sustainability. Thematic patterns are always used to show that affordability is limited by forces that are outside the control of individual leadership, but leadership is necessary in de-

veloping adaptive responses. The interplay between these concepts is illustrated in Figure 2.

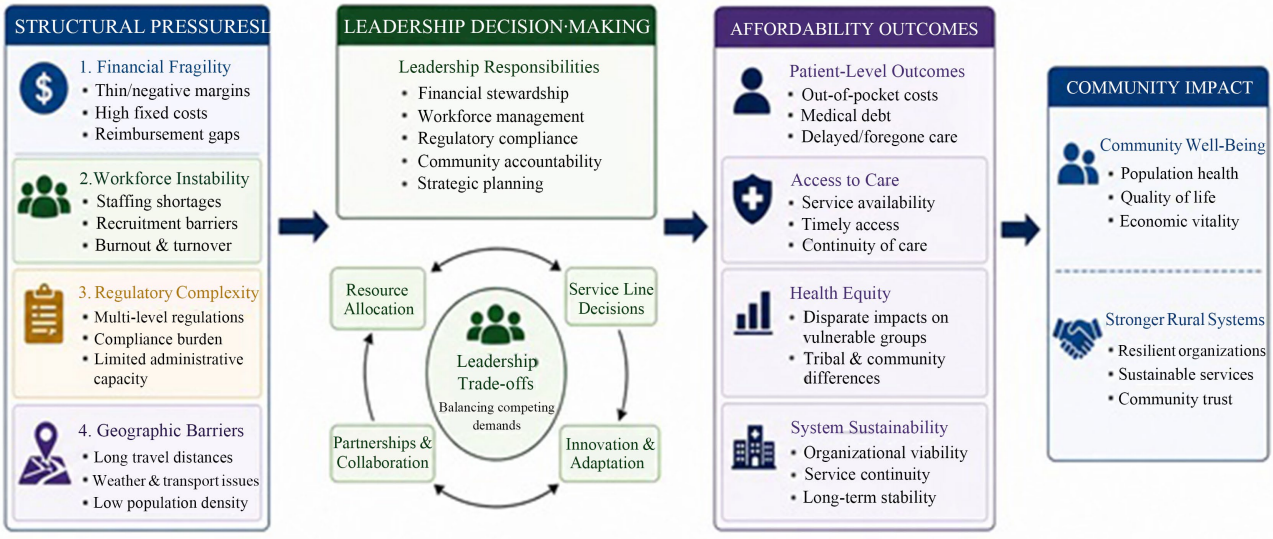

Figure 2. Conceptual framework illustrating the influence of structural pressures on leadership decision-making and affordability outcomes.

4.8. Key Concepts

During analysis, documents suggesting contrary patterns were actively sought. For example, while most documents emphasized workforce shortages, some described successful recruitment initiatives [27] that maintained stable staffing in particular communities. These cases typically involved organizations with strong community ties, creative use of telehealth to extend limited specialist capacity, or targeted state funding for rural pipeline programs. While most documents emphasized regulatory burden, some noted that certain requirements prompted beneficial practice changes. Quality reporting mandates, for instance, were associated in some documents with improved documentation and care coordination, though the same documents noted that the administrative costs of compliance remained significant. While geographic barriers were consistently described as constraints, some documents noted that certain communities had developed transportation solutions or lodging assistance programs that partially mitigated access burdens. These contradictory cases were coded and incorporated into theme development, resulting in more nuanced characterizations than would have emerged from confirming evidence alone.

5. Concerns and Considerations

The research procedure posed a number of problems that influence the interpretation. First, the research is based on secondary qualitative data, thus restricting the possibility of obtaining firsthand information about the rural leaders. Even though the published literature and policy documents provide valuable insights,

they might not be as representative of the complexity of individual decision-making or the contextual subtleties of rural practice [15]. Future studies involving interviews or focus groups may enhance the knowledge about leadership experiences. Second, the rural healthcare systems are not homogeneous and differ in size, resources, population aspects, and community needs. Results might thus not be applicable in all environments in rural Northern Minnesota. Furthermore, the literature may be biased in terms of the focus of publication, whereby it concentrates on the challenges rather than the effective methods, and this may result in the interpretation of the literature being biased towards the challenges rather than an objective analysis. Ethical concerns in the area of affordability are also present. Jacobson *et al.* [20] mention that affordability is a barrier that is disproportionately affecting low-income and marginalized rural residents, leading to equity and justice problems. The leaders must be in a position to balance between financial sustainability and the ethical need to be available. Lastly, the policy environment, particularly the telehealth reimbursement and rural funding programs, can become less relevant to the findings in the long term due to its dynamism. These points emphasize the need to conduct continuous evaluation and new research.

6. Summary, Conclusion, and Recommendations

6.1. Summary

This exploratory study investigated leadership challenges in providing affordable healthcare to rural Northern Minnesota through documentary analysis of 47 state reports, association publications, peer-reviewed articles, research center briefs, and community health needs assessments. The analysis identified five interrelated pressures affecting leadership decisions: financial fragility, workforce instability, regulatory complexity, geographic barriers, and strategic adaptation. Documents consistently defined affordability as encompassing not only direct medical costs but also transportation expenses, lost work time, and out-of-pocket payments. These findings align with national research documenting persistent gaps in rural health infrastructure [28] while providing region-specific evidence for Northern Minnesota. Three patterns emerged across the document corpus. First, affordability issues are structurally embedded in reimbursement rates, payment programs, and county budget constraints that individual organizations cannot control. Second, leaders face persistent tension between financial viability and service accessibility, particularly when serving populations covered by Medicare, Medicaid, or lacking insurance. Third, affordability is shaped by social determinants including seasonal employment, housing stability, and broadband access that affect both cares purchasing capacity and telehealth utilization. The documents also revealed that affordability barriers differentially affect subgroups including low-income older adults, Indigenous communities, and immigrant agricultural workers, indicating that strategies must be tailored to local demographics and cultural contexts.

6.2. Conclusion

This study yields four conclusions with implications for policy, practice, and research. First, affordability in rural healthcare is fundamentally a structural leadership challenge rather than solely a patient-level cost problem. The five identified pressures operate as interconnected system conditions that constrain leadership options. Financial fragility limits investment in preventive services; workforce instability drives labor costs that are passed to patients; regulatory complexity consumes administrative capacity needed for strategic planning; geographic barriers raise delivery expenses and patient travel burdens. Leaders exercise discretion within these constraints, but their decisions are shaped by conditions largely outside organizational control. The implication for policymakers is that addressing affordability requires attention to reimbursement structures, regulatory burden, and infrastructure investment, not merely individual patient assistance programs. Second, strategic adaptation represents both possibility and limitation. Documents showed leaders deploying telehealth, partnerships, shared staffing, and value-based care models to offset pressures. However, these adaptations showed variable effectiveness: telehealth expanded access where broadband existed but failed in the most remote areas; partnerships required sustained investment that grant funding could not maintain; value-based care pilots struggled with insufficient patient volumes for meaningful risk adjustment. The implication for practitioners is that innovation must be evaluated against local implementation conditions, and failure should be analyzed as systematically as success to inform future efforts. Third, affordability is experienced differentially across population subgroups, requiring targeted rather than uniform responses. Documentary evidence indicated that low-income older adults, Indigenous communities, and immigrant agricultural workers face distinct barriers related to coverage eligibility, language access, and institutional trust. The implication for health systems is that affordability strategies must be developed in partnership with affected communities rather than imposed from administrative offices. Tribal health organizations and community assessments emphasized that interventions designed without community input often miss critical contextual factors. Fourth, documentary analysis as a methodology revealed patterns that primary data collection alone might miss. The systematic examination of state reports, association publications, and community assessments provided access to aggregated data and policy perspectives that individual leader interviews could not capture. However, this approach also meant that undocumented decisions and informal knowledge remained inaccessible. The implication for researchers is that documentary methods are valuable for understanding structural and policy dimensions of affordability but should be complemented by primary data collection when the research questions require accessing lived experience.

6.3. Recommendations

The following recommendations are derived from the thematic analysis and

mapped to specific findings. Recommendation 1: Establish Regional Collaborative Planning Structures. This recommendation addresses financial fragility and geographic barriers. Documents showed individual facilities lack resources to maintain comprehensive services independently while travel distances create access burdens. Regional collaboration enables shared resource allocation, reduces service duplication, and supports transportation solutions. Policymakers and health system leaders should incentivize collaborative planning through grant funding and regulatory flexibility. Recommendation 2: Invest in Data and Analytics Infrastructure. This recommendation responds to financial fragility and regulatory complexity. Documents indicated leaders struggle to track affordability indicators with current systems. Improved data capacity enables earlier identification of financial distress, more precise targeting of assistance resources, and stronger evidence for advocacy. State agencies and health systems should prioritize analytics investments despite upfront costs. Recommendation 3: Incorporate Community Voice Through Formal Advisory Structures. This recommendation addresses differential subgroup impacts. Documents from tribal organizations and community assessments emphasized that interventions designed without community input often fail. Structured engagement with community members, tribal governments, and local organizations produces interventions aligned with actual needs. Health systems should establish and resource formal advisory structures. Recommendation 4: Develop Rural-Focused Leadership Education Pathways. This recommendation addresses workforce instability. Documents noted leaders trained without rural-specific preparation often leave within short timeframes. Educational partnerships between universities and rural health systems should design curricula addressing rural financing, regulatory navigation, and community engagement to build a prepared leadership pipeline.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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