ABSTRACT

Community-Oriented Primary Care in Rural Areas:

A Case Study of Kearny County Hospital

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Social determinants of health have long been established components of patient outcomes, to the extent where occasionally an individual's position on the social gradient proves a greater predictor of health than physical risk factors. Systemic isolation of social and medical services as entirely separate entities often results in gaps of care, while, in contrast, their integration serves to narrow health disparities. In rural communities, these health inequities are far more substantial. This thesis focuses on Kearny County Hospital, located in rural southwest Kansas, as a case study of a hospital's local impact through its identification of needs and initiation of relationships with potential community partners. Based on evidence gathered from a review of existing literature, this thesis also examines how KCH incorporates specific practices and values as well as their impact on community health. Also discussed is the potential of implementing a similar care model throughout other rural communities.

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COMMUNITY-ORIENTED PRIMARY CARE IN RURAL AREAS: A CASE STUDY OF KEARNY COUNTY HOSPITAL

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CHAPTER ONE

Social Determinants of Health and Other Concepts

Introduction

As awareness of the correlation between social determinants and health outcomes grows, the inequities faced by marginalized communities become more evident. Such determinants include income, level of education, work environment, environmental exposures, and more. Minority groups in particular disproportionately suffer health burdens due to the presence of these various risk factors. Residents of rural communities are also a vulnerable patient demographic because of inaccessibility to care due to physician shortage and lack of accessibility. Additionally, rural areas have a higher incidence of chronic diseases and lower average income. Even within rural communities, minority patient populations have a greater rate of illness and on average, earn a smaller income.

Kearny County Hospital operates to serve rural and minority patients in the remote town of Lakin, Kansas and primarily serves marginalized patient groups including those with low-income, immigrants, and political refugees. Hospital leadership prioritizes the health of the community along with the health of its individual patients, and as a result, its administration is responsible for many public health initiatives in the local counties. Through the relationship between the former KCH CEO, Benjamin Anderson, and Baylor University, a yearly internship program was formed. Interns have the opportunity to work with refugee populations, participate in maternal-child research at

University of Kansas School of Medicine, and assist with the community wellness initiatives. Within my nine weeks as an intern in southwest Kansas, I saw the practical capabilities of community-oriented primary care as well as a glimpse of the difficulties specific to healthcare administration in rural areas. This sparked an interest in healthcare entities that worked both inside and outside of the clinic to improve patient care and its residents' quality of life.

The first chapter of this thesis serves as a literature review of the significance of social determinants of health, the challenges pertinent to rural communities, and the potential effectiveness measures which seek to integrate social and religious factors in medical care. Since KCH intentionally incorporates many public health measures to improve the physical, mental, and spiritual health of its residents, it serves as a case study for the possible benefits of community outreach.

This chapter provides background context for the case study of KCH (see Chapter Two) through discussion of key public health concepts including social determinants, various models of health, implications of the socioeconomic gradient in health, the life-course perspective, and more. It also describes healthcare challenges unique to rural communities, particularly those of minority groups. Finally, it examines various strategies to address health disparities, including preventive care and inclusion of religion in healthcare settings. This will provide a foundation of issues that will come into play in Chapter Two.

Social Determinants of Health

That the social environment plays a significant role in the health profile of populations, and of individual health, has long been established in public health. Since Hippocrates hypothesized the force of winds and levels of humidity factor into the contraction of disease, the relationship between an individual's health and their surroundings has been explored (Cassel, 1964). The relevance of this correlation persists today, as the current existing disparities between populations of varying socioeconomic status indicate the presence of other factors of disease outside of their pathophysiological etiology and mechanisms. Accordingly, the need for healthcare professionals with a comprehensive understanding of the interactions between the body's physical and social spheres has long been a topic of discussion.

The recognition of various social determinants of health enables a higher quality of care since it enables delivery of comprehensive treatment, addressing the social-structural barriers that lead to the challenges that respective patients are facing. As long as 60 years ago, for example, Stainbrook (1961) noted a high correlation between social pathology and urbanization, with resultant higher rates of mortality in cities with high rates of immigration and population growth. In order to effectively combat this, medical educators began placing an emphasis on training primary care doctors better versed in both medical and social sciences to best empower patients to maintain their health in a complex social and family environment. This approach was based on recognition that mental and physical wellness are dependent in part on an individual's social and personal circumstances, a substantial shift from the dominant biomedical model of disease etiology and medical care.

Web of Causation Model

These findings align significantly with the principles of the "web of causation" model. This model, which dates to 1960 (Krieger, 1994), was a break from the theory that health outcomes are solely a function of a linear progression of biological events stemming from a single pathogenic agent or condition through independent causal relationships. Instead, it asserts that the relationships and interactions of different causative factors must be accounted for concurrently (Ventriglio et al., 2016). It suggests that the factors that yield the most significant impact on health are the ones most proximate to the individual, but that they in turn are influenced by distal factors. This draws a distinction between determinants that relate to a person's extensive social network, for example, and those that pertain specifically to the individual. Typically, in Western medicine, as practiced in the U.S., the former generally have not been given significant consideration as the predominant sentiment is that each person is ultimately responsible for their own health. In contrast though, in other countries such as the United Kingdom, the effects of social status have been deemed considerable enough to warrant significantly more studies and resources dedicated towards research (Ventriglio et al., 2016).

This model, however, has the potential to prove beneficial in the United States as social factors of health have begun to draw more investigation, since an understanding of the multiple influences enables intervention programs to intercede at multiple levels (Joffe et al., 2012). With recognition of the different factors in the "web" and their varying proximity to the individual, public health doctors, researchers, and policymakers

have a useful theoretical model for accounting for and addressing the myriad factors that elevate health risks. Even a purely theorized model such as the web of causation can yield many tangible benefits for public health. It encourages dialogue to begin with new hypotheses, the opportunity for these hypotheses to be discussed or disproved in a public domain prior to testing, and planning for data collection, statistical analysis, and research objectives (Joffe et al., 2012). Additionally, healthcare workers can gain understanding of how they can better support their patients through advocating for greater attention to structural risk and protective factors.

Shift to the Multiple Causation Model

Support for a more holistic model of care, exemplified by the web of causation model, has been established for many decades. Awareness of this need reflects a shift from the mono-etiological model to the multiple causation model (Cassel, 1964) of disease etiology. The mono-etiological model, derivative of the pervasive germ theory, holds that each disease is caused by a specific agent and that each agent causes a specific disease. In contrast, the multiple causation model, which emerged following World War II, also points to sociocultural, economic, and environmental factors as significant for the health of patients and populations. These larger systems influence the health of people through hypothesized cascades of chains of effects. For example, according to one formulation, the body is subjected to physiological changes from the stress of lower socioeconomic status, and, in turn, these stressors lead to pathology and negative health costs due to chronic stimulation of the sympathetic nervous system (Henry, 1982).

Physiological Impact of Chronic Stress and Allostatic Load

The physiological responses to repeated sympathetic activation may be potent enough to supersede the neuroendocrine feedback controls designed to restore the body to homeostasis. While acute stress can provide beneficial physiological effects, when these pathways are triggered too often it may become harmful. The body's response to stress can be summarized through Hans Selye's general adaptation syndrome (McEwen, 2005). This model dictates that there are three overarching stages that physically occur in response to a stressor: the alarm reaction, resistance, and finally exhaustion. Alarm is characterized by depletion of the body's resources in order to efficiently utilize them and restore homeostasis when faced with a stressor. This is accomplished through the release of epinephrine by the adrenal medulla and the production of glucocorticoids by the adrenal cortex. Resistance follows, maintaining the body's stress response; and exhaustion occurs if the stressor continues, preventing the restoration of homoeostasis (McEwen, 2005). When these systems and stages are functioning ideally and exposed to only transient stressors, the biological response should result in allostasis.

This concept is derived from the related concept of homeostasis and signifies that the body has successfully adapted to the stress. This is evident through the production of hormones from the hypothalamic-pituitary-adrenal axis, catecholamines, and cytokines, such as adrenalin, cortisol, and other chemical messengers (Logan & Barksdale, 2008). However, with continued resistance and maintenance of the defense mechanisms, there is a failure of adaptation. Thus, instead of reaching an eventual homeostasis, an allostatic load manifests, often resulting in pathology as well as chronic illness (Logan & Barksdale, 2008).

Significantly for the present discussion, allostatic load is heightened in individuals of low socioeconomic status compared to those of high socioeconomic status (Szanton et al., 2005). The continual activation of the sympathetic and parasympathetic nervous pathways in the long-term is prevalent among those in lower social positions and causes a decrease in both mental and physical health. These health costs may present as depression, greater risk of infection, diabetes, hypertension, heart attack, stroke, etc.

Socioeconomic Gradient in Health Outcomes

The impact of chronic stress on the body, as well as health disparities between different genders, races, and socioeconomic positions has been extensively documented. The severity of health costs correlates with a "social gradient," such that the disparities become increasingly apparent the lower the socioeconomic standing of an individual or population (Marmot & Wilkinson, 1999). Social inequalities are distributed vertically by income, education, and occupation, and also horizontally by gender, race, ethnicity, and other sociodemographic categories. Additionally, it is important to note the existence of a socioeconomic continuum rather than a 'bipolar" relationship between social status and health. The principle of the socioeconomic gradient implies a continuum, akin to a dose-response relationships, and manifests as a general trend such that, for example, higher level of educational attainment are associated with better health, as opposed to "binary" causation (e.g., the wealthy have better health) (Tarlov & St. Peter, 2000).

In fact, the impact of social status to health can prove more potent than that of physical factors in some cases. For example, in some population groups, the biggest risk factors for coronary heart disease, rather than cholesterol or smoking, are one's

occupation as well as their level of job security and the amount of social support that they receive. These have been referred to as the "basic causes" (i.e., underlying causes) of variations in health, in contrast to the "surface causes" which include the presumed etiological factors. This is because health disparities are not simply caused by individual statuses or choices, but rather by the social forces which condition them (Tarlov & St. Peter, 2000). These associations and effects must be addressed in intervention efforts.

Rural Healthcare Trends

Rural populations, in particular, illustrate population health disparities that are directly downstream for characteristics of the social environment. Geographically, 97% of the land mass in the U.S. is rural, while only 19.3% of the national population resides in these regions (United States Census Bureau, 2016), an estimated sixty million people. Both socioeconomic and health disparities can be observed between these individuals and urban dwellers.

The average annual income per capita in urban America is $53,903, but $19,636 or 36.43% less in rural populations (United States Department of Agriculture, 2020). This gap in income is more severe for minority groups residing in rural areas (NRHA, n.d.). Non-urban African Americans have the highest poverty rates at 31.6%, followed by non-urban Native Americans and Hispanics at 30.9 and 23.8% respectively, compared to non-urban Whites' poverty rate of 14% (United States Department of Agriculture, 2020).

These chronic-stress-related consequences of these numbers translate into health disparities. The prevalence of diabetes and coronary heart disease are 8.6% and 38.8% higher respectively in rural regions compared to urban regions and directly correlate with

poverty level, as do other risk factors such as obesity and tobacco use (O'Connor & Wellenius, 2012). The special vulnerability of minority populations to such disparities is also demonstrated in these rural data.

Compounding the effects of lower socioeconomic status on the prevalence of chronic diseases, residents of rural areas also have significantly lower access to a physician: 39.8 physicians per 100,000 people, in contrast with urban areas who have 53.3 physicians per 100,000 people (NRHA, n.d.). Rural communities, therefore, are not only more susceptible to excess morbidity due to low socioeconomic status and to minority status, but also are presented with significantly greater barriers to medical care. This further exacerbates disparities in health.

Gauging Patient Vulnerability Based on a Life-Course Perspective

In light of these socially mediated health disparities, an immediate concern is whether interventions designed to ameliorate these factors can be effective. Evaluative research studies have been conducted, for example, of programs utilizing the resources of faith-based organizations to address the detrimental effects of these social deficits on health, and such programs have been largely effective (Idler, 2014). The best of this work draws on what has been termed the life-course perspective (Burton-Jeangros et al., 2015), which emphasizes the compounding effects of social adversity on biological status, such that previous hardships make an individual more susceptible to the next one, and so on. These consequences prove cyclical.

For example, another set of predictors of long-term health are one's social and physical status from the earliest stages of development, including prenatally. Poor growth

and health in early life result in suboptimal development later on, physically and cognitively, and, similarly, one's social environment and exposure to stress in early childhood may shape one's ability to form relationships and develop a necessary support system. This, in turn, can have further detrimental effects. Therefore, a healthcare variable such as the care a mother receives during pregnancy may ultimately impact on decades of life for her child, and perhaps even multiple generations of offspring. Research shows that many of the risk factors for chronic diseases in adulthood are established prenatally and during the first five years of life (Tarlov & St. Peter, 2000).

In order to address these influences, there is a pressing need for social and health policies that prioritize identifying and seeking out at-risk individuals to provide proactive intervention, rather than casting a wide net over the general population or, worse, ignoring the issue altogether. For example, according to epidemiologic studies, unemployment is associated with greater overall morbidity and mortality due in part to the relatively earlier occurrence of job loss—and resultant cascading effects on life—in comparison with those experiencing job stability (Marmot & Wilkinson, 1999). Additional risk factors related to socioeconomic status that have demonstrable impacts on morbidity and mortality include transportation barriers, lack of social support, inaccessibility to food, ethnic minority status, advanced age, and sexual health (Marmot & Wilkinson, 1999).

Value of Social Relationships for Physical Well-Being

Besides social status, social relationships also impact upon states or physical well-being and rates of morbidity. For example, one's level of social integration is strongly

associated with both childhood and adult health, as are greater levels of social support (Tarlov & St. Peter, 2000). This fact can be accommodated by ecological perspectives on systemic health risks, which view people as interconnected beings living in community and working towards common goals, rather than as isolated individuals whose challenges (including health challenges) emerge in a social vacuum. Accordingly, for example, policies targeting maternal and child healthcare might design structured yet flexible programs prioritizing single young mothers most at risk, such as those who have been maltreated, encompassing home visits for special training in child management as well as community-based parent training. This is reminiscent of the principle that "it takes a village" to raise a child (Clinton, 2016).

Other examples exist of health applications utilizing a collective approach drawing on existing social networks. One example is community-based childcare training for parents, as an alternative to traditional patient-education based in medical clinics (Tarlov & St. Peter, 2000). Where people are engaged within community networks, the forces of social integration can be tapped productively, and ideally may lead to reduced stress and allostatic load, and thus improved health outcomes and lower rates of chronic illness.

Relationship between Religion and Physical/Mental Health

The communal dimension of religious experience is another social factor that has been shown to be positively associated with both mental and physical health. Individuals who utilize religious coping methods tend to adjust to health challenges better than those

who do not draw on religious resources. Additionally, religious coping decreases depression and anxiety during periods of grief (Chatters, 2000)

Aside from the value of religiousness for personal health, religious institutions and organizations also have a role to play in community health programs, especially where a health need exists in marginalized and medically underserved communities (Gunderson & Cochrane, 2012). This may be a challenge for public health professionals, as many medical professionals are wary of religion due to a perception that certain traditional religious beliefs and attitudes may conflict with treatment plans (Gunderson & Cochrane, 2012). For example, they may recall instances where such beliefs interfered the delivery of healthcare, such as for HIV in the 1980s or for the COVID-19 vaccine currently. Key "religious health assets" exist that can enable religious and healthcare institutions to form partnerships for promoting health and facilitating access to medical care. One of these is the "boundary leader," a type of servant leader who is an integrated member of a faith community. A primary objective of boundary leadership is to cultivate and nurture a unique ability to understand and advocate for "the interstitial spaces inhabited by so many people—undocumented migrants, refugees, or women in highly constrained patriarchal relations" (Gunderson & Cochrane, 2012).

Health programs located in places of worship or sponsored by religious congregations serve to better reach neglected and underserved populations (Peterson et al., 2002). A review of such programs identified numerous instances in which local health departments have partnered successfully with community faith-based organizations. Such groups are highly trusted in their community and, as described, have a unique ability to reach those who are economically disadvantaged, as well as those with limited English-

speaking capabilities and literacy and those who are isolated economically, socially, and geographically. Tellingly, a majority of the successful faith-based health intervention programs were located in African-American communities (DeHaven et al., 2004).

Such programs have succeeded in moderating the negative health effects of socioeconomic circumstances in at-risk communities. For example, while the African-Americans population has elevated rates of morbidity and mortality in relation to the general population, African Americans actually have lower rates of mental disorders, particularly depression and substance abuse disorders. This difference is credited to two social institutions, the family and the church, with strong ties from an extended family system inside and outside the home contributing to better mental health (Marmot & Wilkinson, 1999).

In summary, the impact of faith-based interventions is twofold. First, they draw on the observed benefit of religious practice for mental and physical health. Second, they benefit marginalized communities where elevated medical costs due to excess risk stemming from lower socioeconomic status proves most severe. Faith-based organizations provide education, social services, rehabilitation of offenders, and other services that help to ameliorate the health effects of socioeconomic disadvantage.

Preventive Care

Social determinants of health, faith-based interventions, and other topics addressed to this point influence the health of individuals and populations through primary prevention. The leading causes of morbidity and mortality in the U.S. in recent decades are largely chronic degenerative diseases (e.g., heart disease, cancer,

cerebrovascular disease, diabetes). Moreover, the majority of hospital visits have been due to complications and exacerbations of preexisting chronic diseases, rather than the onset of acute conditions (Hale et al., 2000).

Nearly half of American adults are afflicted with chronic diseases (Hale et al., 2000). Forgoing medical care until an individual becomes symptomatic typically produces greater health and financial costs compared to addressing an illness at an earlier stage. Therefore, for purposes of early detection there is a need for regular health screenings, including of seemingly healthy individuals. These screenings can be implemented at various locations in a community, and faith-based setting are ideal for reasons previously described. Religious congregations and faith-supported organizations have an important role to play across the spectrum of prevention, which is divided into different tiers.

Primary prevention refers to preventing the development of disease before it becomes symptomatic. The objective of secondary prevention is to slow a contracted illness at its earliest stages. Tertiary prevention is dedicated to reducing the complications of an existing disease. Congregational prevention strategies have addressed chronic diseases, such as cancer and hypertension, as well as vaccinations, fall prevention, screening tests, and advanced directives. Other activities have included promotion of health literacy, doctor-patient communication, and support of the patient's family. These programs have been instrumental in enabling diagnosis of disease, prevention of complications in existing cases, and health maintenance in well populations. The support of a congregation or faith-based group can enhance effectiveness in ways that providing health information alone cannot (Hale et al., 2000).

Community Oriented Primary Care

Along with utilizing religious congregations, community-oriented primary care (COPC) provides a secular practice model for incorporating many of these same principles (e.g., social determinants of health, life-course perspective). COPC represents an integration of primary health care and community medicine (Abramson & Kark, 1983), and reflects a shift from an individual-focused to a communal model of healthcare which acknowledges community responsibility for medical care (Abramson & Kark, 1983). The general consensus states that COPC consists of three components – a primary care practice, a targeted patient demographic, and a systematic approach to identify and address the specific needs of the particular demographic (Nutting, 1990). COPC is comprehensive and multidimensional, and integrates a variety of resources in a team approach to care.

COPC emphasizes primary healthcare for individuals and family units within the community, with a focus on continuous care, as well as an emphasis on the community in its entirety and its subgroups during evaluation of required services and the efficacy of resulting intervention (Abramson & Kark, 1983). The "community" in this context can be defined as an actual sociological community, a neighborhood, a factory, a company, a school, a congregation, or those registered as users of a shared service.

To facilitate COPC, required actions include incorporating both epidemiologic and clinical approaches, defining the targeted community for surveillance and assessment, and identifying community health programs designated for that population's specific needs (Nutting, 1990). These programs may incorporate health promotion,

disease prevention, or curative or rehabilitative care. Additionally, COPC is dependent on involvement of the intended community in promotion of its own health, as citizen engagement is necessary for sustained longevity of service, caregiving, or program. COPC is distinct from community-based intervention through its generation, monitoring, and refinement of interventions specifically for the target community (Nutting, 1990). Finally, COPC requires providing access to care that accommodates potential financial, cultural, and social barriers.

Another feature of an ideal COPC service involves coordination of the various aspects of care, including curative, rehabilitative, and preventive, in order to best promote continuous care. Other ideal features include comprehensive healthcare that addresses physical, mental, and emotional well-being, as well as formation of a multidisciplinary health team that can be mobilized effectively for community outreach and extend services beyond the scope of primary care (Abramson & Kark, 1983).

COPC serves obvious needs in more distressed and underserved communities, and in the developing world. But a need for COPC is particularly evident in more developed countries, where welfare and health services are provided by separate government agencies, oftentimes disconnected from each other with no direct relationship or umbrella agency. This lack of coordination threatens the delivery, continuity, and effectiveness of care. An additional consequence is provision of overlapping services, with associated financial costs. Through COPC, continuity of care is prioritized and the general health of the individual and community are assessed through coordinated efforts that ultimately provide a higher quality of care (Abramson & Kark,

1983). COPC serves to define objectives and necessary components of a system where primary care is effectively integrated with public health.

Key Themes from the Literature Review

To summarize, years of research have demonstrated the drawbacks of a healthcare delivery model that solely consists of treating discrete malfunctions of the physical body in individual patients in traditional medical settings. That dated view reflects the previously popular mono-etiological theory, and neglects half a century of evidence regarding the multiple determinants of health and well-being, including determinants of the health of populations, challenges which call for a more systemic and integrated approach. The old approach also serves to diminish self-worth and self-efficacy, creating dependencies on caregivers who ignore how social-structural factors shape the health of communities. Significantly, such factors, notably socioeconomic status, plays a large role in health, and may be a stronger determinant of morbidity or mortality rates than biological risk factors.

Communities with generally poorer health status and less access to quality healthcare stand to benefit the most from newer models of healthcare delivery, including partnerships with congregations and faith-based organizations. Such an approach is a good fit with existing models of COPC. The resulting integration of social services and primary healthcare, coupled with direct involvement of community organizations, can better promote continuity of care and address the health of individuals, families, and communities. For particularly vulnerable populations, especially marginalized minority

groups and rural communities, the implications of partnering with a community to provide collaborative care are significant.

Significance Within KCH

In Chapter Two, a case study of KCH is presented documenting how the clinic addresses the health needs of its clients through attending to the previously described social determinants of health and other concepts reviewed in the present chapter. The clinic exemplifies a practical application of initiatives designed to integrate social and health factors through approaches drawing on both the multiple causation model and life-course perspective in a practice model that draws on features of COPC. The chapter discusses barriers to rural healthcare and illustrates possible solutions to issues such as physician shortage and obstetric department loss. Finally, the chapter underscores how KCH attests to the value of such an approach for vulnerable patient populations consisting of marginalized groups of people.

CHAPTER TWO

Kearny County Hospital Mission and Initiatives

Introduction

This chapter is a case study of Kearny County Hospital (KCH), located in the remote town of Lakin in rural Southwest Kansas. It describes its designation as a Critical Access Hospital, as well as its mission, values, and leadership. KCH's patient demographic is one of its most distinct traits, so this will be covered. While the majority of rural hospitals in similar regions of Kansas have been on the decline due to the previously described challenges facing these areas, KCH has been steadily growing its staff and reach through its mission-based physician recruitment and pouring of resources into its obstetrics department. It has also been addressing the specific barriers of care found in its region through its community assessments and development of a Patient Care Team (PCT) to form an infrastructure within the hospital to serve patients with low incomes, chronic conditions, and/or mental health difficulties. This chapter explains these measures in further detail and provides a practical example of the unique challenges in delivering rural healthcare.

Kearny County Hospital Background

KCH, a 25-bed Critical Access Hospital, was founded in Lakin, Kansas in 1952. It earned its designation as a Critical Access Hospital through meeting the set conditions of 25 or fewer acute care inpatient beds, a location over 35 miles from another hospital,

an average annual length of stay for acute care patients at 96 hours or less, and provision of 24/7 emergency care services (Rural Health Information Hub, 2019).

Since 1976, Kearny County has owned and operated the hospital, in order to administer both inpatient and outpatient medical care, emergency treatment, and primary care to the neighboring communities. In addition to the main hospital, High Plains Retirement Village, the Kearny County Home for the Aged, was founded in 1983 in order to serve as a nursing facility, providing housing options for seniors as well as services for long-term care. Then in 1990, KCH also began to operate the Family Health Center, with the similar mission to provide primary care to Lakin, Deerfield, and other surrounding areas (Kearny County Hospital, 2020).

Its provided resources include physical therapy, X-ray, an emergency room, cardiac rehabilitation, respiratory rehabilitation, a laboratory, surgery, obstetrics, and specialty outreach services. For its elderly patients in particular, KCH provides an assisted living center, a nursing home, a special care center for residents with memory loss, respite care services, adult daycare services, spiritual care, and a community garden.

KCH serves a particularly remote rural population, as a study recently named Lakin as one of the ten most remote cities in the United States, determined by its distance from metropolitan areas (Rab, 2017). It consists of a population of just 1,780 residents (Census Reporter, n.d.).

Mission and Values

KCH's prioritization to cultivate a patient-focused culture along with the wellness of the community as a whole is evident in its mission statement and vision. Its mission is

described as “provid[ing] quality, compassionate healthcare services for [its] community, to enrich the lives of [its] families, friends and neighbors.” Its vision shares a similar sentiment, stating that “through quality, value and collaboration, Kearny County Hospital will be an exemplary leader in compassionate healthcare and community wellness.” In pursuit of its mission, it places a heavy emphasis on its values of service with compassion, teamwork, respect, integrity, value, excellence, and nursing (Kearny County Hospital, 2020).

Service with compassion refers to the personalized and empathetic care for patients, as well as kindness between coworkers to best foster a positive environment. Teamwork focuses on the relationship between coworkers and emphasizes that regardless of specific occupation, each role is vital and therefore employees must work together to hold each other accountable, while also celebrating both mutual and individual successes. Respect signifies recognizing the dignity of every person and treating them accordingly, by protecting their basic rights to courtesy, privacy, individual expression, and respect for diverse cultures. Integrity ensures that no services are provided outside of the capabilities or scope of the providers and that transparency is maintained to promote accountability to individual patients, the community as a whole, as well as any public institutions that provide financial resources to the hospital. Value commits to mindfulness of a budget through prudent spending, and provides services as cost-effectively and fairly as possible. Excellence states that quality care is a process in which perfection is the goal, and that in order to achieve it, outcomes are monitored, standards are created, and errors are recognized as potential learning opportunities. Finally, nursing refers to the provision of

compassionate healthcare to both patients and their families, through a continuous commitment to education and communication (Kearny County Hospital, 2020).

Leadership

In June, 2013, Benjamin Anderson was hired as the CEO of KCH (Lukens, 2018). His motivation as well as his practices embody the values he set at KCH. Prior to serving there, he began his career path in the Pacific Northwest as a medical staffing consultant for rural hospitals after earning his master's degree in Health Care Delivery Science from Dartmouth College. During this period, he became intrigued by the specific role of a hospital CEO and their impact in the community. He made the goal to become a hospital CEO before he turned forty (Lukens, 2018).

In pursuit of this goal, he made many cold calls to hospital CEOs in rural Kansas, where his wife was originally from, and was hired as CEO at Ashland Health Center in 2009. This marked his first job in a healthcare facility, as well as his first experience living in a rural community. He served at Ashland Health Center for five years until his recruitment as CEO of KCH in June of 2013 (Lukens, 2018) where he worked until November, 2019 (serving now as the Vice President of the Colorado Hospital Association). As CEO, he held religiously steadfast to the mission, vision, and values that he demonstrated to the entirety of his staff.

Anderson's commitment to fostering a culture of partnership in his hospital is evident, as he candidly described a conversation between him and a physician who joked that "CEOs, they can do nothing productive by themselves. Any contribution from them comes through the work of other people, but by themselves, in the absence of

accountability, they can cripple an organization." In response, Anderson described that "[they] chuckled about it, but [they] both knew it was true. 'We' is much better—and more accurate—than 'I.'" He demonstrated his prioritization of the "we" through emphasizing the building of trust between the medical staff and administration, as well as clearly communicating care for the members of his team as well as their families. He and his wife worked actively in the community to accomplish this creating this culture, for example by babysitting a physician's child in order for his wife and him to be able to go out for a date night (Lukens, 2018).

Anderson's leadership within the actual facility was also countercultural to the archetype of the typical CEO. Every month, he would serve with a different department in the hospital and perform all their duties alongside the staff in that unit, for example in maintenance, housekeeping, or dietary team. I have a distinct memory of such an occasion when I was walking to KCH that morning for work, I saw him ahead of me in baby pink scrubs and later learned that he spent the day with the housekeeping staff, performing each of their tasks as a member of their team (e.g., cleaning, sanitizing, laundry). This was in order to better understand what their workdays consisted of, as well as to build greater trust with all of his staff. He honestly described his experiences and explained the value he saw in these rotations. "I was pitiful while in there, I mean I wasn't very good at it, but I got to build relationships with them." For example, he demonstrated how "in doing that, [he] could intuitively see a laundry cart where its wheels are broken and they duct taped. Materials management has been saying that's not a priority now, but for four hundred bucks [they] could fix that problem. So there was a lot of trust that was established there."

While walking around the hospital, he would check in on each patient and employee he passed, asking about them by name, from the team mowing the lawn to the physicians inside. Through these deliberate interactions, Anderson constantly demonstrated that the distinct role of each employee was equally vital, never perpetuating any sort of hierarchy. The virtues he values the most highly are compassion, a strong work ethic, and teachability. He described that hard work is vital for success in a field and that compassion is necessary for his line of work (specifically rural hospital leadership), but that "the rarest of the three is teachability, which requires humility. It is more than a willingness to accept occasional rebuke and making a conscious effort to improve. It is the conscious act of seeking out wisdom from others; asking for feedback on personal performance, communication, and character; and then making necessary changes with gratitude" (Lukens, 2018). He modeled that directly, for example, at the start of his career through his cold calls to rural Kansas hospital CEOs, by genuinely asking what advice they had for him since he "wanted to be like [them] when [he] grew up" (Lukens, 2018).

Anderson credits his motivation in his employment on two main factors: his Christian faith and his poverty in early life. He was born and raised in the Bay Area in California, in a lower-middle-class neighborhood. As a high schooler, his family was below the poverty line. As a result, he remembers for example, waiting to get medications at a homeless center due to their lack of healthcare. Through financial aid, grants, and scholarships, he was able to attend a private college, Drury University. He promised that if he was to ever make it out of poverty and secure an education and professional influence, he would dedicate those assets towards the common good, in the

pursuit of one of his core values—justice. He explained that"[he] take[s] literally the call to serve the orphan, the widow, the poor, the oppressed, the wounded, and the foreigner. [He] could work in an inner city, or [he] could work in a rural, frontier setting, as long as there is need" (Lukens, 2018). Working in Lakin enabled him to work with demographic groups that thoroughly aligned with his goals to serve the marginalized. Operating from a city of just 1,780 residents, KCH serves an estimated 20,000 patients from over twenty counties in Kansas, Colorado, and Oklahoma.

Patient Demographics

In a 180-mile radius, KCH serves patients of 30 nationalities. A major factor in its abundantly diverse patient population is its proximity to the Tyson Foods plant in Holcomb, Kansas, a half-hour drive away. It is one of the world's largest beef-packing plants, and with 6,000 cattle slaughtered daily, it provides approximately six percent of all the beef processed in the United States (Friend, 2019). The plant attracts an incredibly diverse workforce, many of whom are refugees. Breaks during the day in the lunchroom have been affectionately dubbed the "United Nations meetings." As such a significant portion of the hospital's patients are employed at the meatpacking plant in Holcomb, every interview with a new physician includes a tour of Tyson Foods to best communicate the vast breadth of backgrounds they would be serving (Lukens, 2018). This unique patient demographic ultimately proved extremely instrumental in the recruitment of medical providers to KCH, and thus to the hospital's efficacy and favorable outcomes.

Recruitment of Mission-Minded Providers

From 2014 through 2015, a shortage of medical providers resulted in KCH turning away a minimum of 50 patients on a weekly basis, as the medical staff included only four physicians, one physician's assistant, and two registered nurses. During this period, the clinic was not open to patients from outside of their county, as they were prioritizing keeping up with the residents within Kearny County (Rural Health Information Hub, 2019).

In order to address the provider shortage and resulting lack of access to care within rural communities, the priority was to significantly increase recruitment by appealing to physicians with a passion to serve abroad by describing that they can accomplish many of their goals to care for the marginalized by working with political refugees and immigrants within the United States. Anderson explained to them "It's great if you want to serve in Somalia. Go to Somalia. In fact, I'll go with you, but you can also serve Somalis here. Learn Somali, learn the culture, and build relationships with them" (Lukens, 2018).

To target physicians with similar mission-oriented goals, KCH began recruiting graduates from Via Christi's International Family Medicine Fellowship in Wichita, Kansas. This program is a competitive one-year fellowship that is designed to prepare physicians to care for underserved people groups with limited resources. Coincidentally, this training and skills aligned very closely to KCH's need and proved a valuable resource for the hospital and, in exchange, the extremely diverse immigrant patient population appealed to the physicians (Rural Health Information Hub, 2019). Anderson acted on the suggestions of the director of the International Family Medicine Fellowship, Dr. Todd Stephens, who stated that in order to successfully recruit physicians from his

program to especially target those with a passion to serve internationally and be intentional to hire multiple doctors, since talented new physicians typically do not want to serve by themselves (Rab, 2017).

To further incentivize recruitment of providers with similar values, KCH and its partners offer forgiveness for medical school loans, ten weeks of paid vacation time, a similar mission-driven mentality and policies, the full support of the administration, a mission-minded physician mentor, and a four-day week clinic schedule with limited hours on call to properly accommodate family life (Rural Health Information Hub, 2019).

Of these incentives, the most compelling is the paid vacation time arranged to enable physicians to serve abroad in an international service worker capacity. For example, providers from KCH have thus far worked in Haiti, Ghana, Kenya, Liberia, Rwanda, India, Jordan, Mexico, Zimbabwe, Morocco, Niger, Somaliland, Egypt, and Ecuador. The paid time to work internationally serves a double purpose: it incentivizes new physician recruits, and also better equips them for providing care in rural Kansas (Rural Health Information Hub, 2019). Through exposure to international settings, providers gain new insight to the cultural backgrounds of their patients in the United States. Similarly, through growing familiarity with the experiences shared by many immigrant or political refugee patients, there is a greater awareness and empathy when these doctors travel abroad. Serving in both locations better equips them for the other, since it provides greater training of the skills needed to achieve positive health outcomes even in the straining circumstances of serving the marginalized while working with limited resources. This benefit of paid time to work internationally proves effective as an incentive since KCH administration found that physicians with a desire to work abroad in

underserved countries are also extremely motivated to serve patients in remote areas of the United States with similar health disparities as those from international experiences.

In the process of recruitment, KCH actively sought out three different types of physicians; goers, senders, and bridgers. The goers refer to the providers who commit to serve in the local community for several years, but have the intention to eventually travel abroad to permanently work as full-time international service workers. In contrast, senders aim to settle and work long-term at that specific institution, but use their vacation time to leave for international service in foreign hospitals. Finally, the bridgers refer to those providers who serve in the position temporarily, in order to fill in for the providers who work there full-time (Rural Health Information Hub, 2019).

Value of Full-Spectrum Family Medicine

Anderson primarily focused on employing family medicine physicians who also were trained in obstetrics. This proved to be much more financially feasible than hiring specialists. He explained that family medicine providers are a more financially sensible decision, particularly in such resource-poor rural areas where there is a constrained budget for physicians. In such locations, the goal is to spread the physicians' reach over as many people as possible. In contrast, when obstetrician-gynecologists, internists, and pediatricians, for example, are all employed, the hospital must duly compensate them all financially to share call in a relatively small-volume space, resulting in call rotations consisting of two to three people. This model is difficult to sustain, when in comparison, if the same amount of money were allocated towards full-spectrum family medicine, the call structure could consist of twelve providers capable of equally providing necessary services. Full-spectrum family medicine refers to the practice of the majority of family

physicians' domains, including outpatient, inpatient, emergency, and maternity care, as well as research, education, and procedures (Reitz et al., 2018).

Anderson also often describes the value of full-spectrum family medicine comparatively, explaining that especially in such a small-town rural community, a family medicine physician knows that patient's history inside and out, and often even that of their parents, spouse, siblings, or children. As a result, the care is extremely effective and personal, as it is not a singular patient whose care is handled by a team of specialists asynchronously with the potential for lack of communication and knowledge of the patient's holistic history.

Anderson noted that often to justify employing teams of providers, including obstetrician-gynecologists, over family medicine physicians, hospital administrators often argue that health outcomes of patients benefit from the increased specialized obstetric training. However, KCH exemplifies the efficacy of full-spectrum family medicine, since during an age of increasing maternal mortality rates in the United States, it garnered national attention for drastically improving maternal outcomes. Without employing one obstetrician-gynecologist, its rates of maternal mortality and gestational diabetes decreased, as well as the number of large for gestational age (LGA) babies born to mothers with gestational diabetes. It also had lower rates of Caesarean sections and higher rates of breastfeeding initiation/duration than those of St. Catherine Hospital in nearby Garden City, so Anderson discussed how hospital administrators in the area were unable to justify their decisions against family medicine using maternal health outcomes. As a result of the greater number of favorable patient outcomes, annually over a hundred women were leaving the care offered by St. Catherine Hospital, where there were three

practicing obstetrician-gynecologists, in favor of KCH. The scope of care was similar, and in cases where more specialized physicians were necessary, KCH would transfer patients to a neonatal intensive care unit (NICU) at Ascension Via Christi in Wichita.

Anderson explained that despite the push for specialization in medicine, there is currently a greater number of full-spectrum family medicine physician positions being trained than secure positions available, as there is a narrow pool of positions where such practice is sustainable. From Anderson's view, a significant factor in the shortage of family medicine positions is due to pushback, particularly from obstetrician-gynecologists in urban areas. Said obstetrician-gynecologists are gravitating away from obstetric services and towards general surgeries (such as tubal ligations, for example) that provide a more stable work schedule. The current precedent and obstetrician-gynecologist preference is for the remaining obstetric work (for example, natural vaginal deliveries) to be delegated to nurse practitioners and nurse midwives, as opposed to family medicine physicians who are capable of providing 70 to 80% of the same services, but at lower cost to the hospital. A potential shift to full-scale family medicine providers as opposed to support from nurse practitioners and midwives would signify the obstetrician-gynecologists' loss of surgeries, such as Caesarean sections and tubal ligations, which are their most profitable services.

As a result, in general family medicine positions prove to be sustainable mainly in rural areas. Despite the current norm in medical care for doctors to specialize, with only twelve percent of physicians pursuing family medicine and another two percent deciding on general practice (American Medical Association, 2008), the countercultural decision

to focus on the provision of full-spectrum family medicine care was an effective decision for the small rural hospital.

Recruitment Yield

The unique rural recruitment model proved successful and yielded a significant increase of providers at KCH. Through the incentives provided, KCH recruited three additional providers in 2018 and another three in 2019, leading to a total of 15 employed medical providers. They consisted of seven family medicine physicians, four family medicine physician assistants, one family medicine advanced practice nurse, one ENT (ears, nose, and throat) physician, one ENT physician assistant, and one ENT advanced practice nurse (Rural Health Information Hub, 2019).

Presently in 2021, there are five family medicine physicians, four family medicine physician assistants, one women's health nurse practitioner, one ENT physician, one ENT physician assistant, and one ENT advanced practice nurse. Since KCH was able to address the medical provider shortage, it was able to open its doors and services again to patients from outside of Kearny County. This led to an increase of over 5,000 new patients between 2015 and 2019 (Rural Health Information Hub, 2019).

The applications to KCH now exceed the number of its available positions. It no longer employs locum tenens physicians (also earlier referred to as the "bridgers") in order to fill in for the emergency room. From 2015 to 2019, the visits to the clinic and the emergency room increased by 59% and 29% respectively, and the number of surgeries by 103%. The gross revenue during this time period increased by 35% (Rural Health Information Hub, 2019). In addition to increasing the number of providers through more

aggressive recruitment strategies, KCH also benefited financially and in regards to its ranking and demand of care through its prioritization of its maternal health services.

Expansion of the Obstetrics Department

At the period of Anderson's arrival, KCH was losing $100,000 annually in its maternity ward. Rural hospitals throughout the country had been sharing similar difficulties and provided a grim outlook. At this point, 83 hospitals in rural American communities had closed down within a period of eight years. The precedent set for rural hospitals in similar predicaments was to shut down their labor and delivery units (Rab, 2017). As a result, according to Michael Kennedy, associate dean for rural health education at the University of Kansas School of Medicine, over 50% of the rural hospitals in the United States do not have an obstetrics unit. Kennedy continued to explain that nine rural hospitals also closed their labor and delivery units between 2007 and 2017, and that as of 2017 an additional six rural hospitals were considering doing the same (Rab, 2017).

Anderson explained why rural Kansas hospitals in financial jeopardy specifically choose to close their labor and delivery units to cut back on expenses. As a Critical Access hospital working with the financially underserved, KCH receives access to greater benefits from Medicare due to its designation. In return, Critical Access hospitals are expected to provide cost analysis of the patients and services provided, for example what percentage of its patients are on Medicare and proportion of shared services. Since Medicare is generally available for individuals who are 65 years old or older, for the most part there is no overlap between patients covered by Medicare and obstetrics patients. Therefore, the greater proportion of obstetrics patients a hospital serves, the smaller the

percentage of patients on Medicare becomes, and finally the smaller the financial contribution from the government towards the provided shared services. Anderson describes how this policy essentially "double disincentivizes" rural Critical Access hospitals from maintaining their labor and delivery units, since obstetric care is not reimbursed very well, and in addition, the larger the percentage of a hospital's medical care that is related to obstetrics means the greater the percentage that is not reimbursed by the share services provided through Medicare. He explains that since "rural hospitals are currently penalized financially for offering maternity care," it essentially results in systemic discrimination against women in rural communities, since hospitals are forced to either stop providing crucial maternal services or to close down as a result of their continued provision.

Obstetrics is a particularly resource-consumptive department, since it requires, for example, 24/7 access to anesthesia, surgical capacity, operating rooms, delivery rooms, breastfeeding resources, and wraparound services. It also demands full-spectrum family medicine physicians with training in obstetrics rather than outpatient-only family doctors. The employment of the former is considerably more expensive for a hospital as well. None of these listed requirements are reimbursed in rural hospitals. "Ironically, the bigger OB grows in a rural hospital, the more the rural hospital loses," since the hospitals are reimbursed at cost and the total Medicare patient population would decrease.

However despite the established drawbacks of operating a labor and delivery unit, KCH adopted an unorthodox strategy considering its neighboring rural hospitals' responses, and instead opted to pour significantly more resources into the maternity ward. Through successful recruitment of mission-minded physicians, KCH was able to grow its

surgical service lines as a result. This proved profitable as operations of patients covered by Medicare increased. The greater number of surgeries resulted in greater reimbursement that contributed towards the necessary costs of operating a labor and delivery unit.

Anderson described that in order to successfully maintain an obstetrics department, there had to be a certain amount of deliveries as well so that it would be feasible. “If you’re going to do OB, it’s morally imperative that it’s done well. And if it’s going to be done well, it needs to be done often.” He explained that when he joined KCH in 2013, there were approximately 180 deliveries a year, already a significant amount for a town of fewer than 2,000 residents. He realized though that 300 deliveries was the critical mass needed annually to be able to dedicate nurses to specifically obstetrics and maintain their skills. Additionally, in order to be capable of 300 deliveries annually, there needed to be an adequate number of family medicine physicians trained in obstetrics. With enough of such doctors, they could all perform caesarean sections and natural deliveries to share an equal call schedule, where each provider would be on-call for obstetrics every seventh day.

Anderson credited reaching this goal on the recruitment of excellent full-scope family doctors in a sustainable manner, where administration is intentional to support the physicians on board. This was accomplished at KCH through four critical principles. First, KCH standardized roles, meaning that it would not recruit a provider who was unable to practice full-scale family medicine. Each provider was required to be able to serve in surgical obstetrics, as well as be on-call for in-patient and out-patient care, the emergency room, and the nursing home. Second, each provider would be on-call at KCH

an equal amount, regardless of the duration of their employment at the hospital. Call schedules were sent out at the beginning of each year with equal shifts for each provider. Third, KCH was intentional to provide a fair and just compensation structure, "not exorbitant money, but if they're going to do 70th percentile work from a quality or volume standpoint, then they need to be paid 70th percentile pay." Finally, KCH provided a "mission-driven culture that allowed them [the providers] to tie their personal sense of purpose to the organization, which included international mission work" as described briefly from the recruitment model. Once recruitment and support through these four components proved successful and KCH was able to provide a stable call rotation, more physicians made calls wanting to become a part of the team. This increase allowed the obstetrics department to be sustainable.

Upgrades of the Obstetrics Department

After addressing the provider shortage and with the assistance of Dr. Lisette Jacobson, an associate professor at the University of Kansas School of Medicine-Wichita, Anderson applied for grants specifically to upgrade KCH's equipment. Dr. Jacobson assessed the specific needs of the communities served by KCH and determined that the majority of women with complicated pregnancies were obese, overweight, or had family members with heart disease or diabetes (Rab, 2017). Dr. Jacobson explained that these trends, as previously examined, are prevalent in rural areas particularly, where there are higher rates of smoking, drinking, and obesity, as well as reduced access to healthcare and healthy groceries. Additionally, many of said patients with complicated pregnancies suffered from gestational diabetes, which disproportionately affects Latino women. As

the majority of KCH's obstetric patients are Latino, its rate of gestational diabetes was double the United States' average.

With Dr. Jacobson's help in advocating for the community's needs, the Children's Miracle Network granted Kearny County $250,000, the largest individual equipment grant they awarded to a hospital in Kansas (Rab, 2017). Enabled by the different grants provided, KCH was able to install new obstetric equipment, including, for example, a newborn security system, birthing beds, bili lights and biliblankets (treatment options for infants diagnosed with jaundice), hearing testing equipment, and blanket warmers. Through the donations of the local community, KCH was also able to raise $70,000 to buy a 4-D ultrasound machine in 2015 (Rab, 2017).

With this purchase, the hospital was able to attract Dr. Michael Wolfe, a specialist from Via Christi Health in Wichita. With the grants, KCH began to fly him into Lakin to serve women with high-risk pregnancies, thus providing the only maternal-fetal clinic between Denver and Wichita, helping address the severe lack of accessibility in the region (Rab, 2017). For example, I accompanied Dr. Jackson Sobbing, an obstetrician-gynecologist, in a Piper Cherokee for such a trip that had been made possible by the provided grant. We traveled from Wichita to Lakin (a four-hour drive typically) departing at six in the morning, and reaching in time for Dr. Sobbing to have a full work-day. He described how he appreciated the opportunity to work with rural women facing high maternal risks while also having the flexibility to live and work in a larger city with his family.

As a result of these measures, KCH was able to appeal to the aforementioned immigrant population in Garden City as well as more wealthy patients from outside

Kearny County through its high-quality and comfortable birthing suites, each complete with a private bathroom and Jacuzzi tub, and its highly competent physicians (Rab, 2017). With the influx of new obstetrics patients, KCH's financial outcomes significantly benefited. Between 2015 and 2019, the obstetrics volume increased by 67% and, in fact, the number of deliveries in southwest Kansas has more than doubled since 2002. Of these increased births, KCH delivers on average a baby a day, with 327 deliveries in 2018 compared to its 98 in 2006 (Rural Health Information Hub, 2019).

Resulting Health and Financial Outcomes

According to KCH's Community Report, in regards to maternal-fetal health, KCH averaged 8.3% higher than the national average of vaginal births after Caesarean-section (VBACs) and an 11% decrease of fetal macrosomia (LGA cases) since 2015. Through grants from private, state, and federal organizations, KCH was awarded over $2 million allocated towards population health measures and increasing accessibility to the care initiatives implemented as well as $1.5 million to upgrade the surgical suites and clinic. Through KCH's partnership with local pharmacies, an additional five participate in the federal 340B Drug Discount program.

The 340B program allows pharmaceutical manufacturers that participate in Medicaid to provide outpatient medication at a significantly lower cost to entities under the 340B coverage (Health Resources & Services Administration, 2020). With the increase of partnered pharmacies, KCH increased access to prescription drugs within the community, especially for its lower-income patients. Since 2015, there has been a 59.7% increase in clinic visits and an 114.1% increase in new patients. Since 2017, there have been 67.7% more surgeries, and 41.6% more deliveries since 2015. Additionally, the

profit margin increased from -7.61% in Fiscal Year 2014 to 3.10% in Fiscal Year 2017. Just between 2016 and 2017, Kearny County moved up from 83 to 33 out of 102 Kansas counties in the County Health Ranking (Rural Health Information Hub, 2019).

Outreach to Immigrant and Refugee Communities

While dramatically improving health outcomes within the clinic, KCH was also intentional in its community outreach initiatives, particularly targeting its immigrant and refugee patients. A significant portion of this work was accomplished through Kendal Carswell, a Program Director at KCH and Assistant Professor and Field Director at Fort Hays State University. Carswell had existing relationships within the community due to his work at the University of Kansas School of Social Welfare, especially through his connections at the African Shop, a store for Somali goods that also served as a community center for the immigrant population. Carswell's relationship with the African Shop primarily began when its owner, Adan Keynan, and his niece, Halima Farah, called KCH to learn about the hospital and health insurance. They had many questions about how health insurance worked in the United States and wanted clarification on premiums, deductibles, etc., so Carswell and an insurance agent went to the African Shop to explain. The community there knew they had Blue Cross Blue Shield insurance from their employment at Tyson Foods plant, since the money to pay for it was being taken out of their paychecks, however they did not know how to access the coverage they were paying for. This was a key example for Carswell that even if a resource exists and is available, if information about it isn't accessible in an individual's native language, then it is essentially absent for that person. This sentiment motivated him to help improve the drivers' license curriculum in various languages in the community.

Increasing Accessibility to Drivers' Licenses

Through Anderson's suggestions, an agreement was made with the Kansas Department of Revenue to launch a pilot program in Garden City that allowed immigrants free translators during their driver's license exam, starting June 21, 2017. These services were offered at no cost to the state since the translators consisted entirely of volunteers. The languages offered expanded upon the English and Spanish accommodations and also included Ethiopian, Tagalog, Burmese, Somali, Sudanese, Arabic, and Swahili. Anderson explained that for the immigrants and refugees accommodated through this program, "it represents independence and, for many of them, it represents a sense of identity—a feeling that 'I belong here'" (INQUIRER.net, 2017). He also expressed that through increased means of acquiring a driver's license, ultimately Kansas' roads would be safer since more people would drive legally. Additionally, there would be fewer instances of attaining a license in Colorado or Texas to use in Kansas (INQUIRER.net, 2017).

Carswell described the large demand for a Somali drivers' curriculum in particular, since a significant portion of Somali examinees in Garden City had been failing their drivers' license tests. This limitation of mobility had obvious repercussions on these individuals' ability to find and maintain employment, form relationships within the community, pursue an education, attend religious services, access groceries, and so on. In contrast, the local Burmese-speaking and Tigrinya-speaking populations had high passing-rates for the exam, averaging between 85 and 90%. Their passing rates were so high that the Kansas Department of Revenue reached out to Carswell expressing concerns of cheating, stating that the translators during the tests were spending too much time

speaking during translation of the questions, to which Carswell continued to advocate for the community, explaining that different languages do not serve as exact word-for-word code.

In reality, the success was due to the highly effective programs for these two languages. For example, before one of the volunteer Burmese translators assisted in administering the exam, he required three meetings with the examinee to review the material, helping prepare them beforehand. During my nine weeks in southwest Kansas, the other three Baylor interns and I contacted the primary organizers of the Burmese and Tigrinya programs in order to learn the practical aspects behind their success and work to implement a similar curriculum for the Somali community, identifying potential pillars in the community to serve as volunteers and possible schedules for the lessons.

Currently, Carswell is assisting a translator from Eritrea to start a driving school and connected him with Finney County Economic Development (based in Garden City), who helped him develop a business plan to equip him to meet with his bank and insurance carrier for their services. The translator acquired a car from Wichita Driving School and plans to not only prepare for the knowledge-based portion of the license exam, but also teach his future students to drive safely. Their goal is to employ other multilingual instructors to best serve the diverse immigrant population in Garden City.

Increasing Civic Engagement

In addition to providing accommodations in different languages to increase access to drivers' licenses, Anderson and Carswell also agreed that lack of political education through accessible means in native languages produced a subsequent lack of local engagement. Their initiatives to address this began when Wichita created a Civic

Engagement Academy in 2018 (Trout, 2020). While a Citizens' Academy designed to teach community members regarding the infrastructure of their local and state government was not uncommon, Wichita took unique measures to apply for a grant from the Kansas Health Foundation, which recognized the high correlation between poor health status and lower levels of engagement. More specifically, according to the 2016 Kansas Civic Health Index, "Kansas groups that are the least politically engaged also experience the poorest health outcomes." Wichita asserted that by empowering underrepresented populations with poor health outcomes with the education and capacity to participate in their local government, they could advocate for themselves through civic means (Trout, 2020).

The Kansas Health Foundation recognized the merit of the grant application and awarded Wichita $50,000 with the additional express intent to engage a more diverse population, as Wichita had stated in its application its desire to "concentrate on finding those who have not previously 'been at the table' of civic engagement" regarding recruitment (Trout, 2020). Similarly, Kearny County Hospital had been awarded a non-partisan grant through Integrated Voter Engagement, designed to increase voter registration and political participation, while also improving health outcomes particularly of its vulnerable immigrant population.

Drawn by Wichita's objectives, Carswell contacted the Civic Engagement Academy leaders through the Integrated Voter Engagement grant to inquire about starting a similar project for the refugee and immigrant population in Kearny and Finney counties. The leaders proposed to share the entire curriculum with Carswell and permit him to launch a pilot program in Garden City, contingent on him providing a report about

how it was used, the number of participants, and similar information. Currently, he is in the process of translating the curriculum and preparing to roll it out with the collaboration of elders and leaders in the community who have promised their support and assistance in translation, circulation, promotion, and more.

KCH is also continuing to work through the Integrated Voter Engagement (IVE) grant. For example, while there in 2019, Carswell, the other Baylor interns, and I were responsible for distributing flyers to promote Senator Roger Marshall's visit to the African Shop, who wanted to initiate a direct dialogue with his diverse immigrant constituents to determine their specific needs. Carswell explained the IVE grant's goal to not only increase local voter turnout through registration assistance, but to also provide education of political parties and candidates so the participants felt confident as informed citizens when voting (Aust, 2019).

The realization of this greater need in education began when a constituent approached Carswell in his office after a voter registration drive. She expressed her appreciation in learning registration information, polling locations, and ballot descriptions, but explained that she likely would still not vote because she was not familiar with the candidates or the issues and as a result, didn't want to risk voting against her best interest. Carswell described how, "that was a big aha for me [...] it was something that had never even occurred to me. That's why it's important to get Roger Marshall in front of them so they can ask questions, that's why it's important for city and county commissioners [to be available] for [the constituents so they are] able to hear them, listen to them, ask them questions," such as "what issues are important? Why are they important right now? And where do you stand on them? And how is it going to

affect me?" "And then [they] can make the decision of how [they're] going to vote." Carswell explained that an unexpected "godsend" during the COVID-19 pandemic has been greater accessibility to such discussions, since the majority of these meetings are taking place online.

The first event Carswell organized to accomplish this goal was Marshall's visit, where dozens of community members attended, with many expressing disbelief to have such a direct pipeline to elected officials at the federal level, since many of the immigrants in particular described that this would not have been possible in their different countries of origin. Carswell explained that in the year prior to the event in 2018, their work focused on identifying potential voters and assisting with registration since it was an election year. But more recently, their focus has expanded to also include educating constituents of various political platforms and issues, while also determining the specific barriers faced that prevented civic engagement (Aust, 2019).

Non-Emergent ER Visits Data

In addition to voter registration, Carswell has also worked to pinpoint and address similar systemic obstacles in healthcare, through initiating and directing the Pioneer Care Advocacy Team (PCAT) at KCH (now dubbed the Patient Care Team). In 2012, Anderson reached out to Carswell to manage and facilitate grants from multiple sources, including the Blue Cross Blue Shield Association and the United Methodist Health Foundation, that were intended to reduce non-emergent visits to the emergency room.

To determine the primary causes of these visits, Carswell created a survey to learn which patients were using the ER in this manner. With his training, nurses worked with Carswell to administer the survey for 24 hours a day for 45 days. An ad hoc group in

Kearny County was in support of such an assessment, since they wanted to see greater access to care in their community. When Carswell met with them, they expressed confidence that the patients arriving in the ER for non-emergent reasons were likely to be the elderly on Medicare/Medicaid, non-county residents, and noncitizens (specifically undocumented Hispanic immigrants).

Yet the results of his survey refuted these claims, as it showed that 80% of those using the ER in this way listed English as their primary language and that over 90% of them were Kearny County residents, a majority of whom were uninsured. In fact, most non-resident patients were insured and had the financial means to travel to KCH for care. In response to these results, a member of the ad hoc group agreed he had misjudged the situation and that he wanted to publish the findings in local media in order to publicly address the misconception in the community that non-residents had been traveling to the hospital to use the ER in situations where they did not require emergency treatment.

Patient Care Team Mission

As its program director, Carswell established the PCT at KCH in order to specifically address social health determinants of its patients, in turn also reducing non-emergent ER visits. In the fall of 2015, he hired the first social worker and the team has continued to expand since. Their focus is on patients with multiple chronic illnesses, for example diabetes, hypertension, and high cholesterol, since these patients have a greater demand for healthcare services (KDHE, 2017-2018).

In May, 2018, Tyson Foods awarded KCH one of six $100,000 grants designated for partnerships with local healthcare organizations to improve the health of the community. With the grant money, Tyson Foods enabled KCH to expand the scope of its

population health measures to surrounding areas including Garden City and Holcomb. The grant also allowed the PCT to increase their capacity of provided services as well as increased resource acquisition. Additionally, through the funds, the PCT was able to distribute educational material regarding different illnesses in different languages, as well as pay a few coordinators to spend two to three days a week at the Tyson Foods plant. Practically, the PCT serves to treat the vulnerable and reduce non-emergent ER use through increasing access to medication as well as by providing patients with a means of transport (Minton, 2018). Carswell explains that the next priority for the PCT is further expansion into behavioral health services in order to address mental health problems and substance abuse in the community. After establishing the PCT, Carswell's next objective was to conduct a community asset assessment.

Community Assessment of Health Services and Subsequent Grants

Anderson introduced Carswell to Judy Johnston, a research instructor at the University of Kansas School of Medicine, and together they worked to design a survey to determine how local residents defined their health, what services in the major sectors of their lives did they believe existed to help them live healthier lives, what services truly existed, and what services did the residents consider most underrepresented and important to them. Through the efforts of 2018's team of Baylor interns, they achieved an 85% household response rate within the community, credited to the relationships developed particularly with pivotal "connectors," who persuaded their friends to follow suit and complete the survey.

The responses were separated by ethnicity, categorized as either white or Hispanic. The findings showed that in nearly every healthcare sector, white residents

were more aware of services than their Hispanic counterparts. Yet, in all but three healthcare sectors (including mental health services and support for caregivers), Hispanic people in the community desired more services than their white counterparts. These data reaffirmed Anderson's conclusion that "if an existing service is not available in a language you understand, or a location you can get to, or at a time when you can access it, or at a price you can afford, it might as well not exist." With these results, Carswell applied for additional grant funds.

The first grant he attained was $500,000 from the Blue Cross Blue Shield Association, centered around three primary pillars: access to healthy foods, reducing tobacco use, and healthier lifestyles. With this funding, Carswell was able to assess and improve access to sidewalks in Lakin and Deerfield. He began a program allowing residents to check out bicycles to commute, in preparation for a walking/biking trail. Additionally, greenhouses were erected in Lakin and Deerfield that were open for use by the community. For example, such a greenhouse in Deerfield is in a local school where children are taught in classes how to grow vegetables and another is for the High Plains Retirement Village at KCH. Carswell advocated for these changes to residents and county commissioners by explaining that through grant funding, the improvements were coming at no cost to the city.

Money from the grant was also available to restaurants, grocery stores, and the hospital if they made certain changes to apply for the funds. With these strategic partnerships, changes in the community began, for example KCH started to list calorie counts of all of their food items and moved towards healthier foods, disposing of their deep fat fryer in favor of a new convection oven instead. Similarly, the grocery stores

purchased a new cooler for their fruits and vegetables and the restaurants began listing their healthier menu items first and including calorie counts for the foods offered.

Carswell described that even within KCH, there were healthcare workers who questioned the hospital's involvement in these community outreach efforts since they felt it was outside of their scope of patient care and ultimately not their responsibility. However, the merit of these initiatives was recognized through the provision of grants and local fundraising, and as a result, members of the community gained access to a more holistically improved quality of life.

Summary

Through Anderson and Carswell's joint efforts, KCH has been able to use its unique patient demographic and mission-minded work environment to attract more healthcare providers than they can employ. Its prioritization of its obstetrics department despite its costliness proved successful in improving the bottom line and creating greater access to care in a very remote region. Its partnership with local entities, including Tyson Foods, the African Shop, the DMV, and grocery stores showcase the potential of intentional community outreach by a hospital and the integration of social and health determinants of individuals. Community members' testimonies describing the inclusion they received through the hospital's initiatives demonstrate the value of deliberate efforts to work collaboratively with patients rather than prescriptively, and ensure that resources are available to individuals from all backgrounds.

CHAPTER THREE

Implications for Rural Health

Introduction

Chapter One outlined how health inequities disproportionately affect minority populations, and made the case for practice and interventions models that accounts for social determinants outside of the clinic. Chapter Two provided a case study of KCH in Lakin, Kansas. This final chapter reflects on the measures taken by KCH, evaluation their application in light of the concepts described in the Chapter One's literature review. Additionally, this chapter describes the implications for similar rural communities and explores policies and programs that could broaden the scope of healthcare delivery, and thus improve health outcomes, throughout different populations.

Mission-Based Recruitment in Response to Physician Shortage

As described, a major obstacle to healthcare in rural areas is the lack of physicians in comparison to urban regions. Rural communities average approximately 25.3% fewer physicians per capita (NRHA, n.d.). Thus, especially in particularly remote cities, healthcare administrators face the challenge of recruiting providers to address this shortage. KCH's innovative strategy to appeal to mission-based physicians through an emphasis on its immigrant and political refugee patients proved very effective in this regard.

While at first glance, this approach may appear exclusively ideal to the unique location of KCH, where its proximity to one of the country's largest meatpacking plants

makes it incredibly conducive to immigration. However, the common belief that rural populations are generally homogenous is a misconception. Defined as the number of ethnic groups in an area and the equality of the proportion (Hook & Lee, 2017), diversity has increased in an estimated 98% of American metropolitan regions since 1980. This trend is also apparent in 97% of smaller cities in the United States during the same time period. Further, 90% of rural areas also have exhibited significant increase in diversity between 1990 and 2010 (Hook & Lee, 2017). Recently, immigrants in particular have heavily contributed to rural communities and economies. The population growth of an estimated 20% of growing rural areas is composed of immigrants. Additionally, in rural communities with declining populations, increased immigration has assisted to alleviate the decline (Ajilore & Willingham, 2019).

Based on the demonstrated upward trend of immigrant and minority group patients in rural areas, an increased emphasis on the opportunity to serve marginalized communities would likely help to appeal to providers with shared missional goals. KCH, while unique in its surroundings and rich cultural backgrounds, is not an isolated opportunity to work with the underserved. Other opportunities for likeminded programs exist throughout the country. Therefore, appealing to physicians with a similar passion to serve globally in some scope and apply that knowledge domestically as well, would likely yield a greater number of providers. Employing the same strategy to grant vacation days designated for medical missions would also increase the number and satisfaction of interested doctors.

Protective Measures for Minority Populations

The increasing proportion of minority populations in rural areas is also relevant to the earlier descriptions of health inequities and their exacerbation in rural communities. The existing health disparities between racial minority groups and their white counterparts are even more significant in non-metropolitan areas. KCH administration and social workers recognized that even with services available to the general public, if measures are not taken to ensure that different groups have equal awareness and access, then the provided healthcare is not and cannot be equitable.

To mitigate the susceptibility of vulnerable patient demographics, KCH was intentional in, first, determining the baseline of its community through administering population surveys. These surveys served to identify the different expectations of healthcare between different patient demographics and the extent to which these groups were aware of existing services. The results conveyed a clear dissatisfaction among minority groups, particularly KCH's Hispanic patients. The answers also revealed that without increasing initiatives to equally promote services to community members with different cultural backgrounds, KCH had been unintentionally excluding the most vulnerable patients from the health services they needed and desired. Through learning of the disparities that were occurring within its own local counties, KCH was able to address them through increasing employment of social workers and deliberate efforts to include additional languages in official communications.

Inclusion of such measures through community assessment in other rural hospitals would enable development of policies unique to specific patient demographics. This approach incorporates the desires of constituents and works towards these goals in a collaborative manner rather than prescriptively. This collaborative approach can prove

successful in providing more effective preventive care. For example, KCH administration and researchers at the University of Kansas Medical Center specifically asked for the input of local mothers in order to develop intervention programs for gestational diabetes and as a result saw a dramatic decrease in gestational diabetes cases and related conditions (Jacobson et al., 2020).

As minority groups tend to report lower ratings for quality of life and greater dissatisfaction, KCH's initiatives for intervention in facets outside of clinical health are significant. While hospitals are not often associated with drivers' education assistance, increased voter engagement, or remerchandising of a struggling local Somali convenience store, for example, these actions demonstrated an active investment in the overall well-being of the immigrant and refugee populations. Additionally, they increased the self-efficacy of such community members through empowering them as minority populations, which ultimately lends itself to improved physical, mental, and spiritual health.

As stated previously, while Lakin and Garden City are unique in their sheer number of national origins, the general trend in rural communities is towards an increasingly diverse population. As cultural backgrounds and proportions of minority populations increase within non-metropolitan cities, the protective and reparative measures taken by KCH can be emulated in other rural areas. Through collaboration with its social workers, a hospital can assess the specific needs of its patients to determine areas within the community where marginalized groups are facing systemic barriers and then partner with these local entities to develop programs specific to the needs of the particular region. This allows the opportunity for input from the most vulnerable groups

who can best understand the areas their local healthcare organizations are lacking. With the formulation of a plan uniquely developed for the betterment of a certain city or town, a hospital is able to more effectively generate support and funding through fundraising or grants.

Resources for Low-Income Patients

Lower income and wealth within rural cities were also another major disparity explored in the literature review. Through its community assessments and research, KCH learned more about the different health costs associated with a low income, such as lack of access to medication, or use of the emergency room for non-emergent reasons in lieu of scheduled appointments. Since the average income per capita in rural areas is 36.43% less than that of urban regions (United States Department of Agriculture, 2020), protective measures specifically addressing the needs of lower-income patients are especially necessary in rural communities. KCH first conducted community-wide assessments to determine the specific healthcare needs within their county and neighboring regions, and learned that it was their residents with lower incomes and lack of insurance who primarily utilized the emergency room without any emergent symptoms.

Through the baseline assessment, KCH determined the barriers to adequate healthcare faced by many low-income individuals in its community, such as lack of transportation, inability to purchase expensive medication, incompatible working hours, and difficulties with maintaining chronic conditions. Its creation of the PCT addressed these various factors through the employment of social workers to help coordinate transportation and provide mental health services. The PCT's partnership with other

healthcare workers allows for longer hours of availability to accommodate lower-income patients with various work schedules or those unable to take time off during traditional hours of operation. It also allows for more regular and cost-efficient visits in order to manage chronic illnesses, so the patient does not have the additional burden to schedule many costly appointments with their primary care physician when they are uninsured. From the diagnostic surveys I helped administer regarding the program, I heard personal accounts of the high patient satisfaction the PCT provided, particularly for its patients without insurance.

KCH was also able to assist with the cost of medication through its partnership with local pharmacies and its utilization of the federal 340B Drug Discount program. Sole community hospitals, rural referral centers, and critical access hospitals all fall under the coverage of the 340B program and are particularly relevant to rural communities, where the remote location of hospitals often qualifies them within these specific classifications (340B Health, 2021). KCH serves as a critical access hospital, so its partnership with nearby pharmacies enabled the coverage of the 340B program. If a certain facility satisfies the necessary conditions of a "covered entity," it is able to apply for 340B program participation, and upon approval, benefit from the available discounted outpatient drugs. Since the described classifications are fairly characteristic of rural areas, this is a measure that can be achieved in other similar communities.

The disparities between incomes of residents of rural and urban areas is only more apparent within minority populations. Therefore, a lack of protective factors disproportionately affects these vulnerable communities and becomes an issue of health inequities, as well. As described in the literature review, the chronic stress stemming

from a low income results in significant mental and physical toll, often manifesting in long-term illnesses. Thus, the PCT's specific initiatives towards the management of chronic diseases is especially relevant for its targeted patient demographic. Its mental health measures are also particularly valuable for mitigating the discussed allostatic load of susceptible populations. With assessments determining the risk of a specific community, this can be replicated in other areas through grant applications and intentional employment of social workers. These measures would help effectively address the challenges faced by low-income patients that are exacerbated in rural regions.

Previous Efforts to Expand Medicaid in Kansas

A critical factor to consider when discussing various health determinants in rural Southwest Kansas and similar rural regions is the lack of insurance coverage. Since the Affordable Care Act was enacted in 2010, Kansas remains one of the twelve states to not have approved expansion of Medicaid (Bernard, 2021). In past years, there have been legislative efforts to increase coverage, however they have not proven successful.

In 2017, a bill set to expand Medicaid was passed by both the Kansas House of Representatives and the Kansas Senate by large margins. However, the governor at the time, Sam Brownback, vetoed the bill. His reasons included his belief that Medicaid reform should be budget neutral for Kansas (though the federal government would be primarily responsible for the funding). He also argued that the bill should have required employment for able-bodied adults and reduced funding for Planned Parenthood. Then in March, 2019, a similar measure was passed by the Kansas House, but did not reach a floor vote in the Senate. In 2020, Medicaid expansion was once again considered, but the

bipartisan bill ultimately failed during the peak of the COVID-19 pandemic, leaving many recently unemployed Kansans without health coverage (Norris, 2020).

Call for Medicaid Expansion in Kansas

The lack of coverage in Kansas also disproportionately affects rural areas. The regions with the highest rate of uninsured individuals are frontier counties, where there are fewer than six people per square mile. 12.9% of these areas' residents between the ages of 0 and 64 are uninsured. Specifically for KCH, their region of the state (in the Southwest) is also particularly vulnerable, as its counties tend to have the highest rates of uninsured individuals age 19 to 64. Similarly, the 21 Kansas counties with the highest rates are all located in the western half of the state (Steiner et. al, 2020).

With the expansion of Medicaid in Kansas in the form of KanCare in January of 2022, 126,000 Kansans (approximately 88,000 adults and 39,000 children) are estimated to have enrolled (Steiner et al., 2020). Many of these newly eligible Kansas residents consist of individuals who reside in the coverage gap, where they do not have the financial means to afford quality healthcare insurance despite being employed (often with multiple jobs), but their income is high enough to disqualify them from current KanCare eligibility conditions (Alliance for a Healthy Kansas, 2021). This estimated additional enrollment represents an approximate 31% increase from current KanCare enrollment, while only increasing the state's total spending by an average 2.7% per year over the course of ten years. The expansion of Medicaid could also serve to mitigate the financial hardships stemming from the COVID-19 pandemic (Steiner et al., 2021). Additional benefits include economic growth, as the expansion of KanCare would provide thousands of much-needed jobs and stimulate the local economy. It would also assist in providing

protection of healthcare access, especially in particularly vulnerable rural areas (Alliance for a Healthy Kansas, 2021). For example, many of the rural hospitals described in the previous chapter may not have been forced into shutting down their obstetrics department with this extra support.

On February 1, 2021, Governor Laura Kelly announced legislative efforts to expand Medicaid through KanCare, describing the restorative benefits to an economy severely harmed by the COVID-19 pandemic through the provision of billions of dollars and thousands of jobs. She also cited the statistic of providing 165,000 Kansans with health insurance, while serving to protect rural hospitals. Governor Kelly also included a measure to legalize medical marijuana in Kansas within the Medicaid bill, explaining that the resulting revenue would be utilized towards the expansion (Kansas Office of the Governor, 2021).

Summary

While the level of diversity found at KCH and in its neighboring counties is unique to the hospital, recognizing the increasing trend of minority populations in rural areas enables health entities to recruit mission-minded providers with a desire to serve marginalized communities. Intentionality of drawing in similar physicians through relevant benefits (such as vacation time for international missions) has proven effective in attracting many talented healthcare professionals to a very remote town, and can be replicated even without the proximity to one of the world's largest beef packing plants.

Similarly, community assessment through administering surveys and leveraging relationships with key leaders provides insight to the specific region and its unique needs. With these baseline results determined, healthcare administrators, providers, and social

workers can work collaboratively to identify the most vulnerable members of their community and develop an infrastructure with protective characteristics. Programs such as the PCT are particularly valuable because they address multiple health determinants, through reducing the financial costs for its low income patients, providing transportation, and managing long-term illness and stress. With deliberate consideration of the specific needs of a certain area and funding either from the community or via grants or federal funds (dependent on the Medicaid expansion legislation), other rural hospitals could attempt to determine if the same measures would prove beneficial. In the case of extremely resource-poor hospitals, where such measures initially seem daunting or implausible due to lack of funding or support, collaborative community outreach is an excellent first step. For example, at KCH, the initiative for healthcare providers to tour Tyson Foods and directly speak with the employees about their greatest health concerns requires intentionality rather than large grants. Similarly, the decision of just the few KCH administrators to regularly frequent the African Shop and gradually learn its customers' needs illuminated their unique challenges well before grants were issued.

Still, a significant factor behind the shutting down and scarcity of many rural hospitals is lack of funding and revenue. With the legislation to expand Medicaid, while also providing a clear plan of funding the expansion through the legalization of medical marijuana, rural hospitals in Kansas would be significantly more protected at the state-level. The macro protective factors coupled with the individual changes made by each healthcare entity to cater to its community would significantly increase not only access to care, but also patients' quality of life.

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