Reviving Accessible and Quality Healthcare for Rural Kansans

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Over the last thirty years, Kansas has experienced the greatest decline in healthcare rating out of all American states (The Kansas Health Foundation [KHF] et al., 2021). Geographically, with a few urban exceptions, Kansas is a rural state, and communities of low population density largely contribute to its healthcare decline. In particular, healthcare ratings have decreased in these rural areas due to financial difficulties that plague small hospitals, decreasing the quality of care that they provide or even forcing them to shut down. This damage to healthcare infrastructure is compounded by the fact that these rural populations are quickly growing older, acquiring numerous, serious health conditions. Financially stressed hospitals are less adept at handling complex care, as the COVID-19 pandemic has undeniably demonstrated. This struggle to maintain quality healthcare endangers the long-term viability of the region, while hurting those who currently live in this marginalized community. Many solutions of varying promise have been proposed to help remedy this issue. However, three proposed solutions stand out with great potential to financially revive struggling rural hospitals – the Rural Emergency Hospital Model (REHM), Medicaid expansion in Kansas, and the Global Budget System. A combination of these solutions, with a focus on preventative care, would provide the most sustainable and accessible health care system of quality for rural Kansans.

Financial strain, the result of many compounding factors, endangers the sustainability of quality healthcare in rural Kansas. One easily identified factor for rural hospitals' decreasing revenue is a diminishing population. Current research projects a staggering eighty-five out of one hundred and five Kansas counties decreasing in population over the next sixty years, with seventeen counties estimated to lose over half of their population in that timeframe (KHF et al., 2021). As population declines, fewer individuals are present to receive care at a hospital, and

correspondingly its revenue pool falls. As a result, of the 169 hospitals in Kansas, on average, thirty-seven have less than two patients stay each night (Official USA, 2019; KHF et al.). This problem is compounded by a growing rate of uninsured patients, as over one-quarter-of-a-million Kansans live without health insurance (KHF et al.). Even when rural hospitals provide care, they are less likely to collect payment from uninsured patients, often leading to unpaid services (KHF et al.). Of course, these budgetary challenges could potentially be offset by government subsidization and additional reimbursement, but Kansas is ranked 40th in public health spending (KHF et al.). On average, only $60 is budgeted per Kansan, which pales in comparison to the $281 that the top state spends (KHF et al.). The revenue of many rural hospitals is disappearing because fewer people are around to use a hospital, and even when the hospital is utilized, it often does not receive payment from the large proportion of uninsured individuals. The present state of healthcare in rural Kansas is not sustainable, and rapidly approaches a tipping point. Right now, an astounding 75 rural Kansas hospitals are at risk of closing due to their operating expenses outweighing their financial revenue (KHF et al.). If even a fraction of these hospitals close, the result will be the disappearance of conveniently located medical care for many Kansans.

The proximity of many rural hospitals to closure prompts the question of what the impact of their closure will be on the health of their respective communities. This possibility has undergone extensive study, due to its increasingly common occurrence. First, accessibility to healthcare decreases because extensive transportation becomes required to even travel to the closest hospital (Rural Health Research Gateway, 2017). This can make individuals less likely to visit a health care provider for routine checkups, or even an acute disease, degrading community health (Rural Health Research Gateway). Furthermore, this result disproportionately affects the poor, as they are less likely to have the means to travel a great distance to access healthcare. The

factor of distance becomes especially important when considering transportation to emergency care, where every minute is precious. With the closure of an emergency room, a greater distance must be traveled to obtain proper healthcare, eating away at crucial time that could be spent treating the patient (Wishner et al., 2016). Additionally, hospital closures exacerbate the already growing gap in availability of specialty care in rural communities (Wishner et al.). Complex disorders require the attention of a medical specialist, and due to financial strain rural hospitals cannot afford to provide specialists full-time for their community (Wishner et al.). Rural hospitals can serve as an intermediate to a recurring, visiting specialist, as well as providing diagnostic tests and routine assessments on behalf of the remote physician, but hospital closure expands the distance that patients would need to travel, disproportionally affecting patients with complex diseases. These patients require the most frequent medical visits, and as such they would be impacted most by the increased travel. Most dangerously, extensive travel removes the potential for those without means of transportation to receive any care for their chronic disorder (Wishner et al.). Hospital closure is the most extreme result of financial stress, but even hospitals that manage to stay open provide a lower grade of care due to economic pressure.

Even if a financially hemorrhaging hospital is able to remain open, financial strain decreases the quality of healthcare, significantly harming the rural population. Many hospitals in this region, due to financial pressures, are unable to provide medical specialist care, even in a rotating/visiting specialist capacity. As a direct result, members of rural communities are more likely to be hospitalized and die from complex, chronic disorders than their urban counterparts (Lagasse, 2020). The aging rural demographic, with increasing frequencies of severe diseases, like diabetes and hypertension, compounds the impact of this problem (Tribble 2020). In fact, rural regions accrue a greater number of potentially avoidable deaths than urban communities

(Centers for Disease Control and Prevention, 2019). In particular, "… rural residents have a 9% greater chance of dying or suffering complications such as heart failure, stroke, and the need for blood transfusions during childbirth compared with non-rural residents" (Tribble, para. 22). Along with the neglect of cares that are standard in urban areas, these factors have culminated in the depression of life expectancy in rural regions in comparison to urban areas (Tribble). Even outside of the major factor of specialist unavailability, financially struggling hospitals are less prepared for generalized care. The COVID-19 pandemic has showcased this fact, exploiting these struggling hospitals and killing rural citizens at a higher rate than individuals in non-rural regions (Miller, 2020). Thus, in addition to economic factors that prevent access to specialists, which are needed to care for complex, chronic diseases, fiscally strained hospitals are less capable of providing even standard, generalized care.

The current quality and accessibility of healthcare in rural Kansas is less than the standard of care that urban individuals receive. Based upon the financial struggles of the hospitals, which coincide with the decrease in the condition of healthcare, rural communities appear destined to an even worse future. There are a few potential solutions, however, which show promise to increase the long-term viability of quality healthcare. Three solutions in particular- the Rural Emergency Hospital Model, Medicaid expansion in Kansas, and the Global Budget System- all may work to increase access to quality health care independently of each other. However, a combination of these approaches, coupled with a focus on preventative medicine, may provide an even greater standard of care.

In the Rural Emergency Hospital Model, critical access hospitals (CAHs) change designation and slim down to decrease overhead expenses to secure greater reimbursement from public insurance. In April 2021, the Kansas House and Senate passed House Bill 2208, which

allows Kansas hospitals to shift to the REHM (Taborda, 2021). This new designation is targeted at replacing some CAHs, which are hospitals in a rural community with a strict bed restriction of no more than 25 patients and receive cost-based Medicare/Medicaid reimbursement (KHF et al., 2021). The REHM focuses on severing unnecessary and superfluous components of rural hospitals to reduce overhead expenses, focusing on providing only the services that its community directly needs (KHF et al.). A REHM hospital will be required to have an emergency room that is always open, and it will not be able to hold any patients in-house overnight (this is considered an "in-patient") (KHF et al.). Thus, any patient that requires greater care than the emergency room can provide must be transported to a larger, regional hospital (KHF et al.). This strict regulation is based upon the fact that at any given moment, the beds in Kansas CAHs are overwhelmingly empty, which contributes to hospital expenses but not revenue (KHF et al.). However, beyond of those two aspects, great flexibility is afforded for communities to decide the services that they need, including, for example, a family medicine clinic, dental care, mental healthcare, rotating medical specialists, and many others (KHF et al.). The drawback of this model is that it essentially accepts the status quo of rural healthcare and aims to maintain it long-term with a few changes. The goal of this model is not to directly increase the quality of CAHs, but rather give them greater economic stability (from which healthcare quality increases). When the alternative is a closed hospital, however, it is a great strength that keeps local hospitals available for rural Kansans.

Unlike the REHM proposal, Medicaid expansion benefits rural Kansas without an apparent tradeoff. While the proposed expansion of Medicaid aims to provide wide reaching public insurance coverage, rural hospitals would uniquely benefit from expansion in Kansas. Even before the Affordable Care Act (ACA), the federal government subsidized some of states'

Medicaid coverage. However, when the ACA passed, the federal government agreed to reimburse states up to 90% of their costs, if they expanded Medicaid coverage to make a greater population eligible for public health insurance (Slusky, 2021). Additional federal incentives have since been added, and Kansas specifically, even when considering the costs that the state would incur, would receive federal funding that would outweigh all expansion costs by an astounding two-hundred-fifty million dollars (Slusky). If passed today, over the next ten years Medicaid expansion would bring an influx of 7.3 billion federal dollars to Kansas (Norris, 2021). Thus, when viewed with a purely economic paradigm, Medicaid expansion could support financially stressed rural hospitals by creating significant funds that can be allocated for them. However, the real impact of expansion comes from increased access to healthcare that results from expanded public health insurance coverage. Medicaid expansion would provide public insurance to an estimated 150,000 currently uninsured Kansans (Norris). It naturally follows that rural healthcare would greatly benefit from this expansion. Many of the uninsured patients live in rural communities that would be added to public health insurance by expansion. This, in turn, would increase their likelihood of visiting a hospital for routine and preventative care appointments. Additionally, expansion would alleviate some of the financial strain rural hospitals experience by decreasing the number of uninsured patients they treat, in turn increasing their reimbursement for services provided. This logical progression is supported through research as well, as it is estimated that Medicaid expansion in Kansas will save seventy-two lives each year (Slusky). Other researchers have found that expansion will help to prevent rural hospitals from closing (Norris). All-in-all, this potential solution will multidimensionally increase the sustainability and subsequent quality of rural Kansas healthcare. Not only will it provide an influx of federal money, but it will also increase health insurance coverage, both working to increase health care

quality and life expectancy. A great advantage to this plan is its ability to work alongside and even augment other proposed solutions.

The most extreme, yet most promising, solution is the Global Budget System, as implemented in Maryland and Pennsylvania. In this system, both private and public insurance providers work together to set an annual budget for each hospital for a set number of years (Fried et al., 2020). The budget maintains each hospital economically and is calculated based upon the amount of care that the hospital has traditionally provided and the population that it serves, not its profitability (Fried et al.). This model provides greater financial stability for hospitals, which often go through phases of relatively higher and lower revenue, by allowing for better planning and establishing an adequate operating budget (Fried et al.). Additionally, hospitals in this model are required to place greater emphasis on low-cost but high-impact preventative care. In the Pennsylvania model, hospitals must be able to show their efforts to improve the long term, preventative aspect of healthcare to maintain their status (Global Health Payment, 2018). The preliminary results are promising, even though this system is incredibly young (Global Health Payment). The Maryland model places greater emphasis on the financial health of the hospitals and metrics that gauge the effectiveness of treatment (e.g. rates of patients readmitted to the hospital and hospital acquired infection rates). After just three years of global budgets, Maryland alone reported a healthcare savings of $429 million, compared to the $110 million that the average non-global budgeted state saved over the same interval (The Commonwealth Fund, 2017). This figure is already in excess of the five-year targets for global budget hospitals, showing their incredible effectiveness (Global Health Payment). Together, both states with global budgets have used this system for rural hospitals, and in both states metrics measuring patient care have improved, while hospital spending has decreased (Fried et al.). Although this

empirical data suggests the great benefit of its implementation in Kansas, there are critics to this model.

One major deficit of global budgets' effectiveness is their inability to accurately calculate an operating budget for regions of hyper population density, where there is great overlap between the communities that each hospital treats (Fried et al.). However, this drawback would not affect rural Kansas due to its low population density and large distance between hospitals. Additionally, although there would be many positive impacts when utilizing global budgets for rural Kansas, this system drastically changes the health care payment model, namely how hospitals are reimbursed for their services. As such, this solution has great inherent and structural barriers: the attitude of Kansans and the existing hospital reimbursement framework. However, the flexibility that the model provides, especially in the ability to include only certain hospitals, could allow for initial implementation at a small scale. Inevitably, if this model fulfils the great potential that it presents, it will certainly be able to overcome its obstacles.

Although each of these potential solutions merit individual implementation, the possibility of combining all three solutions into one would likely produce the greatest effect on rural Kansas healthcare. Each solution is better situated to solve at least one specific barricade to rural hospital success. For example, the REHM works to secure a high floor (or baseline) of potential for the combined plans. In even the worst-case scenario, which is the current state of rural medicine, this plan helps CAHs slim down to stay open. This is vital because even the barest hospital provides immensely greater care than no hospital. Additionally, Medicaid expansion plays a two-fold purpose, as it reduces the number of uninsured Kansans and consequently increases the revenue that hospitals bring in. Finally, the Global Budget System provides the highest ceiling of potential for this combined plan, as it both provides financial

stability to rural hospitals and ensures that they practice quality, forward-sighted preventative care. These two results will have the greatest impact on the sustainability of quality healthcare, as the Global Budget System prevents hospitals from focusing on medically short-sighted goals and frees them from financial stress. Since the Global Budget System is intrinsically different from current reimbursement models, some detractors worry about its compatibility with the two other models. While the hesitancy to change is an understandable sentiment, global budgets would work in tandem with the other two models outlined, augmenting their impacts. The priority of the Rural Emergency Hospital Model is to slim down rural hospitals to decrease expenses. This goes hand in hand with one of the contract goals of global budgets, which is to meet a standard amount of savings during each contract, while still providing the healthcare services that its community needs.

Since global budgets are set in agreement with both public and private insurers, a potential drawback is that policy makers and actuaries who set the budget for each hospital might have difficulty deciding how to account for uninsured patients (Long & Marquis, 1994). The magnitude of this is mitigated by the combination of the three plans; however, as Medicaid expansion significantly decreases the uninsured population, making it easier to develop an accurate and comprehensive budget. Thus, the combination of these plans works in complementary fashion to improve rural healthcare outcomes. Even in the worst possible outcome, one option (REHM) is set at keep struggling CAHs from closing their doors, which is a positive outcome. But the combination approach would enable each community to reach its fullest potential, drastically altering the financial status of rural hospitals and increasing rural healthcare's sustainability. With financial sustainability secured, this combination model's greatest advantage is its focus on high-impact preventative medicine.

The component of preventive medicine, required by global budgets, has a long lasting, beneficial impact that can change the health demographics of rural Kansas. A CDC study found a great discrepancy between the percentage of deaths in rural communities that are preventable to those in urban areas (2019). In 2010, of the deaths resulting from chronic lower respiratory diseases, 54.3% were potentially preventable, in comparison to 23.4% in urban communities (CDC). This is a telling statistic in that the rural healthcare system could be doing a better job at preventative medicine, and it is not working near as well as urban areas are. Preventative medicine places an emphasis on treating a medical disorder before it becomes a true problem. For rural regions in particular, preventative medicine could take the form of controlling blood pressure, early detection of pre-cancerous cells, education on the need for physical activity and proper nutrition, and recommending smoking cessation for patients before these behaviors become a complex and chronic condition. The impacts of preventative care are not just theoretical. Due to global budgets' emphasis on precautionary medicine, "After 30 months, Maryland has seen a 48 percent reduction in potentially preventable complications…" (Kozhimannil et al., 2019, as cited in The Commonwealth Fund, 2017, para. 6 below "Background"). This statistic could describe rural Kansas in the future if greater emphasis were placed on preventative care. Currently, rural Kansas's population has a high frequency of complex diseases, and it is likely that early and ongoing precautionary care would reduce this frequency (Wishner et al., 2016). Thus, the forward-sighted, preventative care that a combination of these plans necessitates is a specific mechanism by which a greater quality of healthcare is secured for rural Kansas.

Rural Kansans are victims of a healthcare system that is becoming less accessible, less sustainable, and of a lesser quality. Research shows that individuals in rural communities die

younger and from preventable deaths at higher rates than their urban counterparts. This is one result of the financial strain and potential closure that many rural hospitals face as communities see a growing number of uninsured patients, dwindling populations, and lack of governmental subsidization. Although many solutions have been proposed, the REHM provides the least risky option, opting to slim CAHs in order to prevent closure. The expansion of Medicaid in Kansas would shrink the number of uninsured Kansans, while netting the state a large sum of federal funding. The most radical proposal with the greatest potential impact is the Global Budget Model, which would provide an adequate budget for each hospital based upon their financial history and community demographics, while emphasizing financial savings and preventative care. While each solution has its benefits, the complementary nature of all three may have the greatest impact by providing financial stability upon which preventative care can drastically improve rural health. Even though the current situation and outlook of quality and accessible healthcare in Kansas is bleak, many options exist that will create a healthier future for rural Kansans.

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