

## COMMENTARY

**Student-Run Free Clinics: A Local Solution to Healthcare Disparities**Kavelin Rumalla, M2, Adithi Yeddula Reddy, M2,  
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Socioeconomic disparities affect the structure, function, and welfare of many communities throughout the United States. Low socioeconomic status (SES) correlates with a lack of access to quality healthcare which thereby contributes to higher morbidity and mortality rates.<sup>1,2,3</sup> In actuality, low SES is as large a risk factor for mortality as smoking.<sup>4</sup> We examine how community level solutions, such as student-run clinics (SRCs), can play a part in mitigating the healthcare disparity between the rich and the poor.

Epidemiologically, diseases often are classified by their determinants, incidence, and distribution in their target population.<sup>5</sup> Poor healthcare access is analogous to a disease: low SES serves as a key determinant, increased morbidity and mortality specify the incidence, and the distribution represents the number of people suffering from the outcomes of this “disease”. However, very little money is dedicated to the “treatment” of this healthcare disparity. The National Institute of Health (NIH) spends more money funding research on AIDS and diabetes mellitus than any other disease in the United States.<sup>5</sup> Although these are both burdensome diseases that affect a large portion of the population, they are not as prevalent or damaging as the limited access and availability of healthcare received by those of low SES.

Low SES and poor healthcare contribute to a vicious cycle for many individuals. The cycle is sparked by low SES leading to poor access to healthcare, which consequently leads to increased morbidity and mortality. The latter two factors contribute to the cycle’s persistence by reinforcing low SES through high healthcare costs and economic hardship. In this way, it becomes difficult for an individual to escape the cycle alone. This necessitates the existence of an outside driving force to cease the cycle.

The cycle can be interrupted by either increasing healthcare access of the underserved population through national programs, such as Medicaid, or subsidizing the lack of healthcare access in these populations through community-driven initiatives. Targeting the specific mechanisms of each community’s healthcare access deficiencies allows for the most efficient use of government spending that converts government policies, procedures, and funding into services for the people.<sup>6</sup> The target population includes the uninsured, underinsured, those with government aided public insurance (Medicaid or Medicare), and others having trouble navigating the healthcare delivery

119-124, 1025) such as Community Transformation Grants would not reach individuals without community driven initiatives.<sup>7</sup>

If lack of healthcare access is seen as a disease, one must first identify “interventions” which a potential “treatment” could target. First, understanding the process by which a “treatment” is developed to treat the disease (healthcare access inequality) in Kansas City allows for the use of the same methodology to implement national healthcare policy one community at a time. If this comparison is applied to Kansas City, the counties with the lowest SES will have the poorest access to healthcare and the highest morbidity and mortality rates. Therefore, examining the factors that define SES and healthcare access in Kansas City is the primary step to eradicating the disease in the community.

According to Adler et al.<sup>8</sup>, socioeconomic status is measured by income level (economic), education level (social), and employment and occupation quality (social). To assess different counties, we used data from the KC HealthMatters 2014 database, which includes information on all Greater Kansas City counties in both Kansas and Missouri. Information extracted from the database (e.g., median household income, people aged 25+ with a high school degree or higher, and unemployed workers in civilian labor force) was used as a measure of socioeconomic status. It points to associations behind the healthcare access disparity in Kansas City, specifically economic prosperity, knowledge of the healthcare system, and overall employment rate, respectively.<sup>9</sup> For the purpose of simplicity, data are displayed in Table 1 from the two most socioeconomically disparate counties in the database, Johnson County and Wyandotte County.<sup>9</sup> Johnson County had notably higher socioeconomic measures than Wyandotte County for all three classifications.

**Table 1. Comparison of socioeconomic status in two disparate counties in Kansas City, Kansas.**

	Wyandotte County	Johnson County
<b>Unemployment Rate</b>	7.8%	4.7%
<b>Median Household Income</b>	\$39,163	\$75,139
<b>People 25 and older with a HS diploma or higher</b>	78.6%	95.7%

The Healthcare Foundation of Greater Kansas City (HCF) is solely responsible for the distribution of funding to safety net organizations in an attempt to lessen healthcare disparities in Kansas City.<sup>9</sup> Their report includes county-based statistics for varying health measures including insurance percentages, Medicaid enrollment, primary care provider rate, high school graduation, college education, unemployment, childhood poverty, and single-parent households.<sup>9</sup> Performance of Wyandotte County in all of these categories was poorer than Johnson County.

Striking differences in healthcare access also exist between communities, thus leading to the perpetuation of their socioeconomic disparity.<sup>10</sup> In Kansas City, the disparity in SES between Wyandotte County and Johnson County correlates to the reflected healthcare access gap between the two counties (Table 2). Information extracted from the KC HealthMatters 2014 database regarding “Percent of Adult Population with Health Insurance”, “Number of Preventable Hospital Stays” per 1,000 Medicaid enrollees, and “Number of Primary Care Providers” per 100,000 people in the population allows for comparison between Johnson County and Wyandotte County on the grounds of healthcare access measures.

**Table 2. Comparison of healthcare access in two disparate counties in Kansas City, Kansas.**

	Wyandotte County	Johnson County
<b>Adults with Health Insurance</b>	69.2%	88.4%
<b>Preventable Hospital Stays (per 1000)</b>	66	55
<b>Primary Care Providers (per 100,000)</b>	61	104

The percentage of adults with health insurance remains a very important measure of healthcare access as it contributes directly to healthcare outcomes.<sup>11,12</sup> This goes hand in hand with the number of “preventable” hospital stays, defined by the KC HealthMatters database as a stay for an ambulatory care sensitive condition. Although regarded as a last resort for insured patients, the emergency room often is overused as a form of primary care by uninsured and underinsured patients with poor access to outpatient care facilities.<sup>13-16</sup> Furthermore, for people who lack health insurance, typically controllable conditions such as diabetes and hypertension often present as medical emergencies.<sup>13-15</sup> Consequently, the uninsured are more likely to seek emergency attention for acute problems because they have a more limited access to primary care medicine services that prevent chronic problems from becoming acute and life-threatening.<sup>20,21</sup> Early detection of diseases through preventive care measures leads to better prognoses for patients while simultaneously reducing medical expenditures.<sup>22,23</sup> For instance, blood pressure screening and dispensary of antihypertensive medications to the appropriate patients is far more advantageous than waiting for the condition to become a hypertensive crisis before treatment. Although this type of care is not complex, nor does it require advanced training, it is nonetheless an essential part of an individual’s healthcare.

The primary care provider rate (providers per 100,000 people)

is another important measure of healthcare access, because people with access to routine checkups and screenings can prevent many more severe health issues associated with hospital stays and emergency situations.<sup>9,24,25</sup> Therefore, this measure is related inversely to the number of preventable hospital stays.<sup>25-29</sup> Although it is difficult to hire a large number of nurses and doctors to provide care in underserved areas, this is not the only way to give these populations the basic health services they need.

In summary, based on these three quality measures of healthcare access, the Kansas City county with the lowest SES (Wyandotte County) had poorer access to healthcare services compared to the county with the highest SES (Johnson County), which has been associated with disparities in morbidity and mortality. This information supports previous studies which show a strong correlation between poor SES and greater mortality.<sup>2,30</sup>

With reference to morbidity and mortality, the KC HealthMatters 2014 database presents the county-to-county comparison on a discrete ranking scale rather than normal continuous data. According to this scale, the lower the number, the healthier the population is in terms of morbidity or mortality rate. When examining Wyandotte and Johnson Counties, the two most disparate in the Greater Kansas City area, Wyandotte County was ranked 96 for morbidity and 89 for mortality.<sup>9</sup> On the other hand, Johnson County was ranked 14 for morbidity and 1 for mortality.<sup>9</sup> In this example, only morbidity and mortality were examined to represent healthcare outcomes. However, lower SES is associated with many other health problems, including increased asthma in children, greater unintentional pregnancies, and increased cancer in adults.<sup>1</sup>

Kansas City’s method of dealing with national healthcare system shortcomings is the safety net, a well-functioning group of organizations dedicated to providing healthcare to all individuals regardless of their ability to pay, that acts as a valuable source of care for the homeless and underserved.<sup>9</sup> There are a total of 40 organizations in Kansas City that comprise the safety net system, all of which receive funding from a variety of local, state, and federal sources.<sup>9</sup> Here, Kansas City, Kansas is used as an example, but other similar systems have been implemented nationwide as well.<sup>31-37</sup>

The Sojourner Health Clinic is one specific example of a community-level solution used to mitigate the health care disparities between individuals of high and low socioeconomic status. Sojourner is a free, student-run safety net clinic operating under the University of Missouri-Kansas City School of Medicine (UMKC SOM) that provides outpatient care to underprivileged populations in downtown Kansas City. These underserved patients reside primarily in counties (including Wyandotte County) consisting of many individuals of lower socioeconomic status.<sup>38</sup> Through primary care screenings and treatment, Sojourner and similar free clinics provide preventive medicine often lacking in the uninsured and underinsured populations.<sup>20,32,35,38</sup> This prevention, in turn, is correlated with a decreased number of expensive

in turn, is correlated with a decreased number of expensive emergency department visits.<sup>25-29</sup>

Student-run clinics are a cost-effective option due to their high-yield use of funding and decreased expenditures due to volunteerism.<sup>32,39</sup> Compared to other institutions receiving safety net funds, such as emergency departments, free clinics are the most cost-effective option because they work towards primary preventive care rather than more costly treatment of acute issues.<sup>28-31</sup> Furthermore, the money that student-run clinics receive in the form of private grants or government subsidies is utilized in an ideal manner on medical supplies and not on employment, as they are staffed entirely by volunteers.<sup>28,40-43</sup>

Sojourner volunteers' line of service is to subsidize underserved populations of the Greater Kansas City area with medical services such as health education, disease management, diagnoses, immunizations, screenings, and medications free of charge, augmenting the number of primary care providers and serving even those without health insurance.<sup>38</sup> Many student-run clinics around the country are established as valuable providers of patient care.<sup>32,35,44-50</sup> In fact, patients report equal trust and quality of care conducted by medical students, in comparison to physicians, in free clinics.<sup>41,51,52</sup> Furthermore, the benefit is not one-sided. As volunteers, medical students in free clinics gain direct clinical experience working with patients and alongside attending physicians to create treatment and prevention plans.

In addition to being an invaluable enrichment to medical education, student-run medical organizations can improve outcomes, such as the number of emergency room admissions, morbidity rate, and mortality rate.<sup>20,32,35</sup> The next step is to assess the effectiveness of individual student-run clinics by examining how specific health management services improve patient general health.

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