

2017

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Recommended Citation

Smith, Sarah M. (2017) "Disparities in Emergency and Urgent Care Services in Rural and Urban Communities," *Papers & Publications: Interdisciplinary Journal of Undergraduate Research*: Vol. 6 , Article 9.

Available at: <https://digitalcommons.northgeorgia.edu/papersandpubs/vol6/iss1/9>

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Disparities in Emergency and Urgent Care Services in Rural and Urban Communities

Acknowledgments

Acknowledgment The authors would like to thank their faculty mentors Drs. Marian Tabi, PhD, MPH, RN and Susan Sanders, PhD, APRN, ACNS-BC, CEN for their guidance and support through the research process and writing of the paper. Marian Tabi is a Professor and the Director of Outcomes for the School of Nursing. Susan Sanders is an Assistant Professor in the School of Nursing.

Disparities in Emergency and Urgent Care Services in Rural and Urban Communities

It is well documented that people in rural areas have worse access to health care than those in urban areas (Agency for Healthcare Research & Quality [AHRQ], 2012, 2015; Goodwin & Tobler, 2013; Adler & Rehkopf, 2008). They face many challenges: less than 10% of the health care workforce practice in rural communities (Burrow, Suh, & Hamann, 2012), access to health care is often difficult due to lower income and lower rates of health insurance (Kaufman et al., 2016), and many live farther away from available health care resources (Wilken, Ratnapradipa, Presley, & Wodika, 2014). The isolation of rural areas leaves residents the need to travel farther for health care, and many face difficulties in transportation. For example, 13 percent of rural residents travel more than 30 minutes to routine medical visit with their health care provider compared to 10 percent of urban residents (Wilken et al., 2014). Furthermore, rural residents often travel longer distances for specialty care or surgical procedures; the average distance to the referred specialty care is about 60 miles. Chronic health conditions such as diabetes, cardiovascular disease, stroke, and hypertension are more common among rural residents (Amponsah & Tabi, 2015; Alkadry & Tower, 2010; Parks, Hoegh, & Kuehl, 2015; Adler & Rehkopf, 2008). Access to quality health services remains a top priority in Rural Healthy People 2020 (Bohn & Bellamy, 2012). Rural residents experience more delayed care due to cost and are less likely to use preventive health services. The shortage of primary medical health professionals and specialists is more severe in rural areas than in urban areas (Burrows, Suh, & Hamann). Quality of rural medical primary care is often rated lower compared to urban residents.

About 19.3% of the U.S population lives in rural areas (U.S. Census Bureau, 2010 2016). Health and health care issues affect the lives of rural individuals and families. Rural residents are recognized as a health disparity vulnerable population due to the prevalence of chronic disease and rate of early death, which is higher compared to urban residents living in the United States. Of concern are the persistent resource disparities in rural areas. Though rural residents experience many of the same health issues and challenges as urban residents, rural populations often fare worse on a number of measures due to their limited income, poorer health outcomes, and limited health care access compared with urban populations (Hardie et al., 2015; Chanta, Mayorga, & McLay, 2014; Alkadry & Tower, 2010). The limited service offerings in many rural health care facilities lead some rural residents to use urban health facilities.

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Rural residents face numerous challenges to their rural health delivery system including limited health care access, shortage of health care providers, limited transportation, and greater travel distance. The rural health delivery system includes various health facilities such as hospitals with emergency departments, health clinics, urgent care clinics, community health centers including federally-qualified health centers that provide primary health care services to rural residents (Ellison, 2016). Rural hospitals provide primary, acute, chronic, and long-term care. These hospitals are often smaller and non-profit, and their revenue heavily depends on reimbursement from public programs (Medicaid and Medicare) for their financial ability to continue services (Kaufman et al., 2016). Low reimbursement for services has been a critical challenge for rural hospitals to provide quality services in addition to challenges such as recruitment and retention of skilled health care providers, financial stress, and low and declining occupancy. More than 70 rural hospitals in the U.S. have closed since the 2010 (Ellison, 2016). In 2013, there were approximately 6,400 urgent care centers (UCCs) (Urgent Care Association of American, 2014) and 5,025 emergency departments (EDs) in the U.S. (National Emergency Department Inventory-USA, 2015). Urgent care centers are on the rise and they offer an alternative to waiting for hours for medical care in a hospital Emergency Department.

Purpose and Research Questions

There is little research on the differences in the quality of care and access to urgent care and emergency care on college students who reside in rural and urban areas. There is, however, research on issues such as costs for emergency transportation to the necessary facilities, lack of rural healthcare workers, and the growing number of rural hospitals and emergency departments that are closing. The purpose of this study was to investigate the perception of emergency and urgent care services among college students in rural and urban communities. The research questions addressed were:

1. Is there a perceived difference in urgent

and emergency care services among college students who reside in rural and urban communities?

2. Is there a difference in confidence in hometown ER and UCC to provide quality care among rural and urban residents?

Review of Literature: Access to Emergency Department vs. Urgent Care Clinics

Some rural areas have access to some type of emergency care, but the quality may differ in rural areas versus urban areas. Kinsman et al. (2012) reported that the outcomes of acute myocardial infarctions are far worse in rural areas as compared to urban areas (Kinsman et al., 2012). For many people, getting to non-emergency care and maintenance appointments poses so much difficulty that they do not go; this leads to an emergency visit once the problem becomes more severe (Wilken, Ratnapradipa, Presley, & Wodika, 2014). This creates an even larger need for emergency care that may not be available in their rural community. While it may be possible for people to seek healthcare elsewhere, studies have shown that there are barriers. Wilken et al. (2014) conducted a study in southern Illinois which found that parents had problems with non-emergency transportation. Findings indicated that children transferred to a metropolitan hospital that was few hours away, whose parents did not have transportation and/or the finances, often had longer stays in the hospital. This experience can be traumatic and terrifying for both the child and parents.

Goodwin and Tobler (2013) found that 85% of Americans have access to a level one or level two trauma center one hour away. In rural areas, only 24% of Americans had access to a level one or two trauma centers within an hour distance, meaning that 76% of Americans living in rural areas lacked access to immediate emergency medical care. Hardie et al. (2013) stated that patients, who frequent the emergency room for non-emergency care, increased Medicare costs. Patients that were considered frequent or heavy users of the emergency department had a minimum of four or more annual visits (Hardie et al., 2013). Their study findings indicated that patients that lived within a few miles of the

emergency department were more likely to go to that emergency department, than those that lived farther away from the emergency department even if they had a primary health care provider. The convenience of geographic location coupled with availability of services during off hours may contribute to the frequency of emergency department use for non-emergency medical use. This showed a significant need for urgent care facilities in rural areas that did not have a need for an emergency department but need care right away. Patients who are unable to get timely appointments with a family physician are often referred to the emergency department for care. In addition, patients who encounter problems accessing care outside of normal business hours often use the emergency department to meet their medical needs. The availability of urgent care center services, if affordable, can serve as an alternative use to emergency department for non-medical care.

Parks, Hoegh, and Kuehl (2015) recommended the use of rural clinics as an alternative option to emergency department that required distance travel for rural residents. Their findings supported previous studies that the lack of primary care physicians and untimely appointments were the reasons that patients choose to utilize the emergency department rather than other sites of care. The findings also revealed that only 25.3% of the patients calling a clinic over a four month period received an appointment within 48 hours. Kinsman et al. (2012) studied six hospitals in rural communities that treated acute myocardial infarctions on-site. Their sample included 108 out of 915 patient medical records for thrombolysis. Findings indicated that the outcomes of acute myocardial infarctions were far worse in patients in rural areas compared to urban areas. Kinsman et al. (2012) recommended that there is a need to reduce the evidence-practice gap to improve the emergency treatment of acute myocardial infarction (AMI) in rural emergency departments.

A study by Wilken, Ratnapradipa, Presley, and Wodika (2014) investigated the effects of non-emergency medical transportation (NEMT) in rural areas. Data included health care facilities in 34 counties in southern Illinois.

Findings revealed that as a result of insufficient non-urgent medical transportation, patients and medical staff faced issues such as missed appointments, lack of timely health care services, reduced effectiveness of patient care, and medical staff distress. People who needed non-emergency transportation included patients in non-critical situations who had a hard time getting to and from a health care facility on their own. These individuals needed emergency transportation assistance to make it to their appointments and pharmacies to avoid serious health complications.

Kaufman et al. (2015) investigated reasons for the closures of rural hospitals between 2010 and 2014 and how these closures impacted the surrounding rural communities. Critical access hospitals that closed from 2010 through 2014 generally had five things in common: low levels of liquidity, profitability, equity, patient volume, and staffing (Kaufman et al., 2015). Half of the closed hospitals ceased providing health-care services completely and the other half were converted to an alternative healthcare delivery mode, such as urgent care centers (Kaufman et al., 2015). Unfortunately, hospital closure rates show no sign of slowing down. The impact of rural hospital closures is of particular concern because residents of rural communities are typically older and poorer, more dependent on public insurance programs, and often in worse health than in urban areas. Some of the major challenges that rural hospitals continue to face and impact their closing include aging facilities, poor financial health, low occupancy rates, difficulty recruiting and retaining health care professionals, fewer medical services, and a small proportion of outpatient revenue (Kaufman et al., 2015).

Methods

This research project was a quantitative study. Data were obtained from 176 college students at a regional southeast university with approval from Institutional Review Board at the investigators' institution. All ethical standards were followed to meet protection of human subjects. Data were collected using a 20-question survey from convenience sample of participants in

various core classes with permission from professors. The survey took about 15 minutes to complete; questions focused on participant’s use and perception of the quality of emergency care and urgent care services in their hometown. Participants were informed of their rights including voluntary participation, refusal and withdrawal from the study at any time, confidentiality and anonymity of data, inclusion criteria for participation, and passive consent. To be included in the study, participant had to be 18 years of age or older. Data were analyzed using IBM SPSS 22 software program.

Results

Of the 176 participants, demographic profile of participants (Table 1) were as follows: 65.3% self-reported as urban residents compared to 34.7% who identified as rural residents and 56.2% travelled less than 30 minutes to the nearest health care facility to receive medical treatment. Comparative differences among participants in rural and urban communities are displayed in Table 2. Findings indicate disparities in the number of urgent care centers and emergency departments in rural and urban areas. Among the 34.7% rural residents, only 22.2% self-reported UCCs and 31.8% EDs in their respective

hometowns compared to 63.1% EDs and UCCs by urban residents. While 56.3% of urban residents reported their hometown had the health facilities including equipment and resources to provide satisfactory medical treatment, only 15.3% of rural residents indicated likewise.

Disparities exist in perceived confidence in utilization of hometown hospital medical care among rural and urban residents. Findings in Table 3 show 56.3% of urban residents compared to 15.9% of rural residents had a perceived confidence in their hometown hospital to provide quality medical care. A Chi-square test of independence ((2) = 38.208, p = .000) found a significant difference among rural and urban participants’ confidence in hometown hospital care. Rural residents had less confidence in their hometown hospital care and they were more likely to seek medical treatment outside of their hometown.

Discussion

Findings of this study support previous literature that disparities exist in health services in rural and urban areas. Improving the health of all people regardless of geographic location is necessary to is to reduce health disparities and achieve the target goals of Healthy People 2020.

Table 1: Sample Demographic Characteristics

Item Description	Frequency (N)	Percentage (%)
Hometown of Residence		
Rural	61	34.7
Urban	115	65.3
Preference for Medical Treatment outside of Hometown		
Yes	81	46.0
No	95	54.0
Travel Time to the Nearest Hospital to Receive Treatment		
< 10 minutes	29	16.5
10 – 29 minutes	70	39.7
30 – 60 minutes	30	17.1
> 60 minutes	10	5.7

Table 2: Cross-Tabulation of Perceived Differences Among Rural and Urban Residents

Item Description	Rural (N=61)		Urban (N=115)		Total (N=176)	
Is there an urgent care center (UCC) in your hometown?						
Yes	39	22.2%	111	63.1%	150	85.3%
No	22	12.5%	4	2.3%	26	14.8%
Is there an Emergency Department (ED) in your hometown?						
Yes	56	31.8%	111	63.1%	167	94.9%
No	5	2.8%	4	2.3%	9	5.1%
Does your hometown ED/UCC have the equipment and the resources to provide quality medical treatment						
Yes	27	15.3%	99	56.3%	126	71.6%
No	34	19.3%	16	9.1%	50	28.4%

Table 3: Perceived Confidence in Hometown Hospital Medical Care Among Rural and Urban Residents

	Yes		No		Total	
Do you think your hometown hospital can take care of you?						
Rural Residents	28	15.9%	33	18.8%	61	34.7%
Urban Residents	99	56.3%	16	9.1%	115	65.3%
% of Total	127	72.2%	49	27.8%	176	100%

($\chi^2(1) = 38.208, p = .000 < 0.001$)

The health of rural people should not be marginalized. The health of rural residents is equally as important as urban residents. Implementation of policy interventions and elimination of geographic disparities is necessary to improve rural health outcomes.

Strengths and Limitations

The strength of this study is that it adds college-aged students’ perspectives to the literature on health disparities in rural and urban areas. The study was an attempt to gain insight into the perceived differences in medical care services among urban and rural residents. Several limitations exist. Data collection was cross-sectional; while the findings are sound, caution should be used in generalizing beyond participants in this study. Data collection methods may have influenced the selection. The views of participants in the study may not reflect those of the

general population in rural and urban areas. The voluntary participation of participants may have been influenced by personal interest. Participants’ perception of their home town’s hospital emergency and/or urgent care services may be different from others in the same geographic location. Data collection may also have been influenced by differences in unequal sample size. Only 61 of 176 college-age participants were rural residents. Demographic variables were not collected on age, class standing, race and ethnicity, and these may have skewed the findings. Misreading and misinterpretation of survey questions by participants are well noted. For example, one of the survey questions asked about the time (in minutes) it took for participants to travel from home to an ED or UCC for medical care. However, it is likely participants misread and misinterpreted the question to read how long it took for them drive there, waiting

time before taken to an assigned room, seeing a provider, and time to spent before sent home. Another misread question was that participants filled in “USA” for county of residence.

Conclusion

This study investigated the perceived differences in emergency department and urgent care services among college students residing in rural and urban communities. Findings in this study supported health disparities that exist in rural and urban areas. Rural college residents had less confidence in the ability of their hometown ED and UCCs to provide quality care compared to urban residents. The lack of confidence in medical care treatment among rural residents implied lesser use of these services in their hometowns. Thus travel time, cost, inconvenience, are additional burdens for those who choose to seek quality medical care services outside their medically underserved communities. Regardless of geographically location, access to quality health care should be available to all people in urban and rural communities. The need to reduce health disparities in rural communities and improve health for all cannot be overlooked.

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Acknowledgements

The authors would like to thank their faculty mentors Drs. Marian Tabi, PhD, MPH, RN and Susan Sanders, PhD, APRN, ACNS-BC, CEN for their guidance and support through the research process and writing of the paper. Tabi is a Professor and the Director of Outcomes for the School of Nursing. Sanders is an Assistant Professor in the School of Nursing.