

## PURPOSE OF STUDY

The research team aims to identify specific transportation barriers for patients in rural Eastern Kentucky, which will provide insights on how to combat this barrier and provide better access.

## INTRODUCTION

- > Rural Americans are, on average, older individuals who require more dependence, such as wheelchairs, personal assistance, and travel further at a greater cost than urban Americans<sup>1</sup>.
- > The transportation barrier is complex and multifactorial barrier, including cost of healthcare, time to facilities, and lack of access to pharmacies and grocery stores which affect health outcomes<sup>2</sup>.
- > Patients not only face challenges getting to their appointment, but also must endure long travel times, increasing cost of gas, and environmental obstacles. The relationship between transportation barriers and health severity shows higher transportation barriers are linked to worse patient health and outcomes<sup>3</sup>.

## METHODS

This exploratory cross-sectional study surveyed a convenience sample of patients in rural Eastern Kentucky to determine if transportation and distance from a medical facility corresponded to follow-up care. Surveys were distributed to 6 local family medicine clinics within the UK St. Claire healthcare system accessible by QR code and paper copy (see Figure 4). Results were analyzed using descriptive and crossfit analysis. This study was reviewed and approved by the University of Kentucky IRB (#101434).



Figure 1: Counties (Bath and Elliot) in Which Surveys Were Collected

## RESULTS

Figure 2

Biological Sex	
Males	7
Females	15
No Response	1
Age Range	
20-39	7
40-50	5
51-61	3
62-72	5
>72	3
<b>Total</b>	<b>23</b>

## SUMMARY OF RESULTS

- 91.6% (n=11) of respondents traveling more than 11 miles missed/rescheduled appointments due to transportation.
- 35.8% (n=7) of respondents did not use a personal vehicle. Of this population, 71.4% (n=5) missed an appointment.
- 21.7% (n=5) of respondents indicated cost had a large effect on healthcare
- 17.4% (n=4) of respondents reported transportation had a large effect on healthcare
- Participants who rated cost as a high impact factor were 14 times more likely to face other barriers to healthcare.

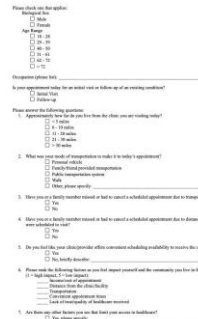


Figure 4: Research Survey

Figure 3

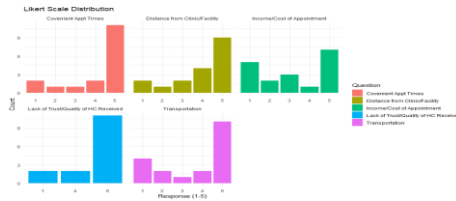
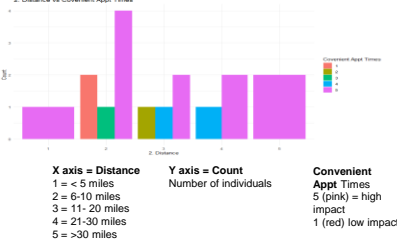


Figure 5

X axis = Impact  
1 = High Impact  
5 = Low Impact

Y axis = Number of Respondents

## DISCUSSION

- >Traveling 11 or more miles to a healthcare facility increases risk of missing an appointment due to transportation issues.
  - o Rural clinics should expand to make healthcare more accessible.
- >Those without personal transportation are more likely to miss appointments, specifically those who use public transport.
- >The results of this study show that cost of healthcare is the largest barrier in rural communities with transportation and distance coming in second and third, respectively.
- > Early identification of patients who have cost barriers could potentially ameliorate secondary barriers to healthcare.

## CONCLUSION

This study found a relationship between transportation and distance from healthcare providers is a barrier in rural communities. Limitations to the study include a small sample size, convenience sampling, and incomplete surveys. Further studies should be done to examine public transportation and its inefficiencies regarding healthcare transportation. Further studies are needed to explore the relationship of missed appointments and patients traveling more than 11 miles.

## REFERENCES

1. Smith ML, Prohaska TR, MacLeod KE, et al. Non-Emergency Medical Transportation Needs of Middle-Aged and Older Adults: A Rural-Urban Comparison in Delaware, USA. *Int J Environ Res Public Health*. 2017;14(2):174. Published 2017 Feb 10. doi:10.3390/ijerph14020174
2. Lee KM, Hurrell J, Roff L, et al. Distance and Transportation Barriers to Colorectal Cancer Screening in a Rural Community. *J Prim Care Community Health*. 2023;14(2):501-519. doi:10.1177/21501319221147126
3. Wallace R, Hughes-Cromwick P, Mull H, Khasnabis S. Access to health care and nonemergency medical transportation: two missing links. *Transp Res Rec*. 2005;1924(1):76-84. doi:10.1177/0361198105192400110