Waupaca County Medical Transport Location and Cost Disparities

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Project Description

Many rural areas across the United States lack alternative transportation options. When looking through the lens of the Social Determinants of Health, this has various negative impacts on the health of rural patients. Examples of this include affecting one's ability to maintain employment, access to healthy food options, social integration, and what I am focusing on, access to healthcare (Syed, *et al*, 2013). A 2006 study showed that around 5% of federal transit resources went towards public transportation options despite almost 20% of the US population living in rural areas (Gonzales, *et al., 2006)*. Transportation of patients to health facilities through a company is referred to as a Non-Emergency Medical Transport (NEMT).

Waupaca County is found in central Wisconsin with an estimated population in 2019 of roughly 51,000 people. The largest city within the county is New London, Wisconsin with a population of 7,092 (U.S Census Bureau: Waupaca County WI, 2020).

According to a 2019 survey conducted by the East Central Wisconsin Regional Planning Commission, almost half of Waupaca County residents surveyed reported being late, or missing, medical appointments because they did not have reliable transportation. 4 out of 5 of those who responded said they need to use alternative transportation options at least once a month. Along with that, 2 out of 5 reported medical appointments being the number 1 reason they needed to use alternative transportation options. The Wisconsin Department of Health Services stated in 2019 alone, 41,097 Non-Emergency Medical Transport (NEMT) trips were taken in Waupaca County (Wisconsin Department of Health Services, 2019). That is equivalent to 80 people commuting back and forth to work 5 days a week for an entire year.

Objectives/Purpose

The purpose of this research project is to identify NEMT options and costs for Waupaca County, compare populations densities of towns near NEMT organizations and healthcare clinics in Waupaca County, and determine regions of Waupaca County that lack local NEMT options.

Methodology

Surveys were administered to transportation organizations in Waupaca County. Organizations agreed to share their information with the public for future use in a Waupaca County Transportation website. Questions from the survey are shown below.

There are 9 transportation service companies that operate within Waupaca County. All of these services fall under one of the following categories: Non-emergency Medical Transport (NEMT), Taxi, or Other. Out of the nine companies, four were in the NEMT category, three were taxi services, and two fell into the other category.

Survey Questions

1. What is the name/email/phone number/website of your organization?
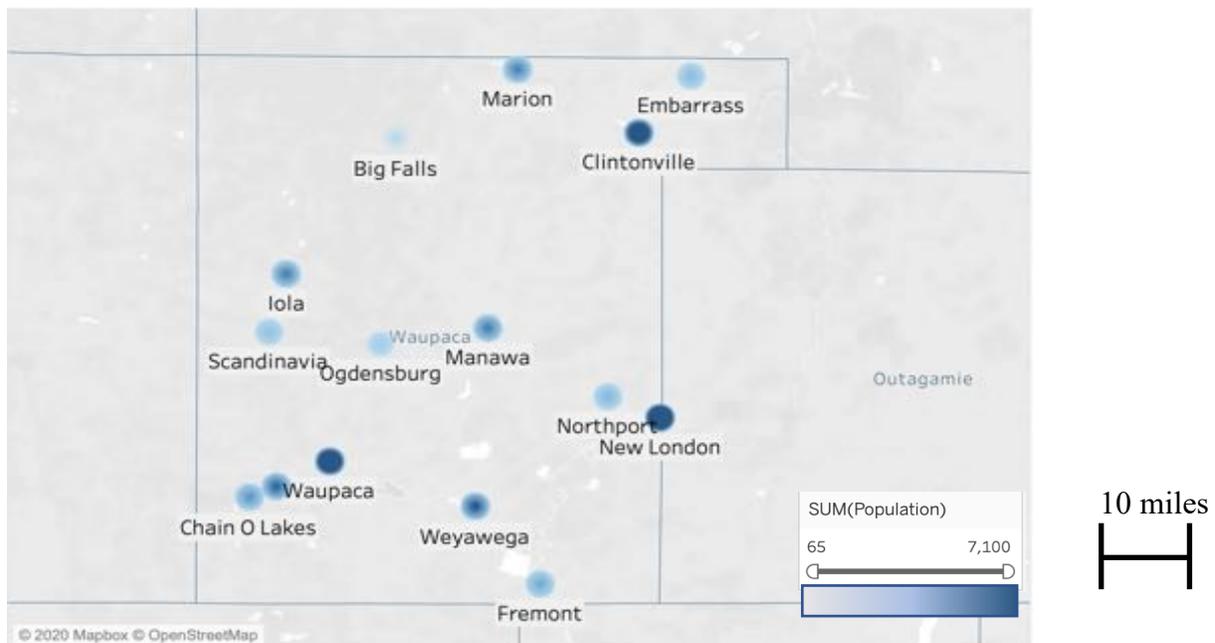
2. What clientele do you serve?

3. What are your hours of service?

4. What is your cost of service?

5. How many vehicles do you have and what kind?

6. Are your vehicles handicap accessible? (Do they have lifts or ramps?)

7. Do you have a detailed service area?

8. What payment methods do you accept

9. Does clientele need any certification or forms for service?

10. Do you have any limitations to your services?

Applicant's role in project

Matthew Waldrop was the primary investigator of the research project. He designed the project, submitted to the IRB, and gathered the data used in the research. Matthew reached out to ThedaCare and Lutheran Social Services to help gather information for data collection and to work in collaboration with them. He contacted the NEMT organizations of Waupaca county via phone and administered the surveys verbally. He created the poster and maps used to present this research project.
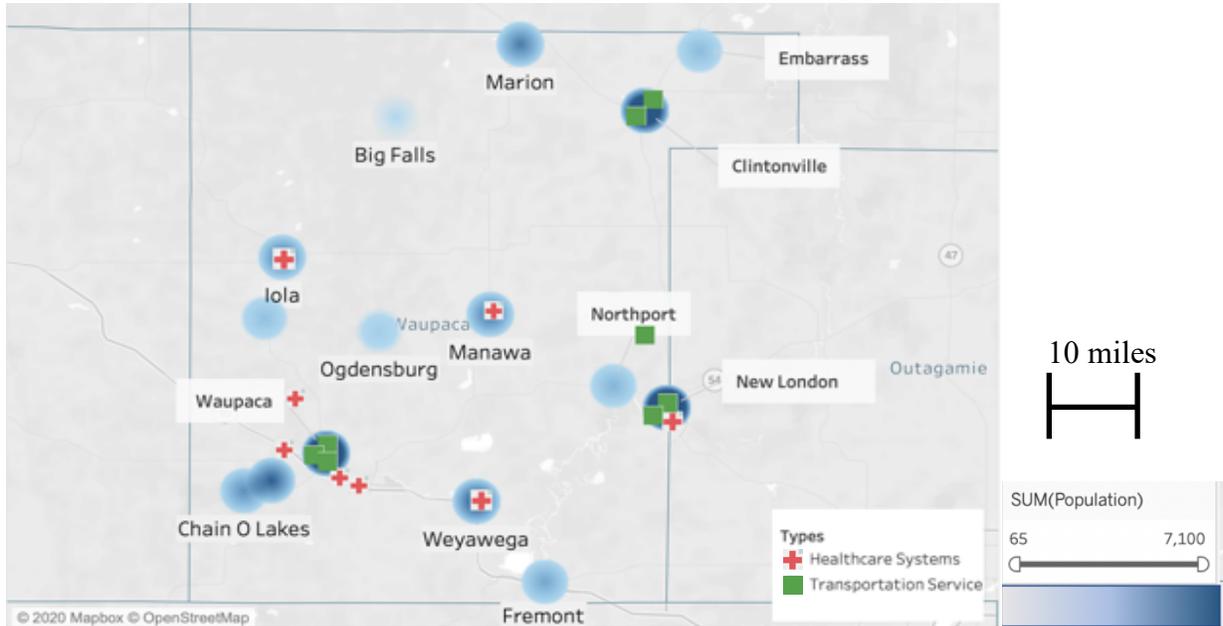
Results

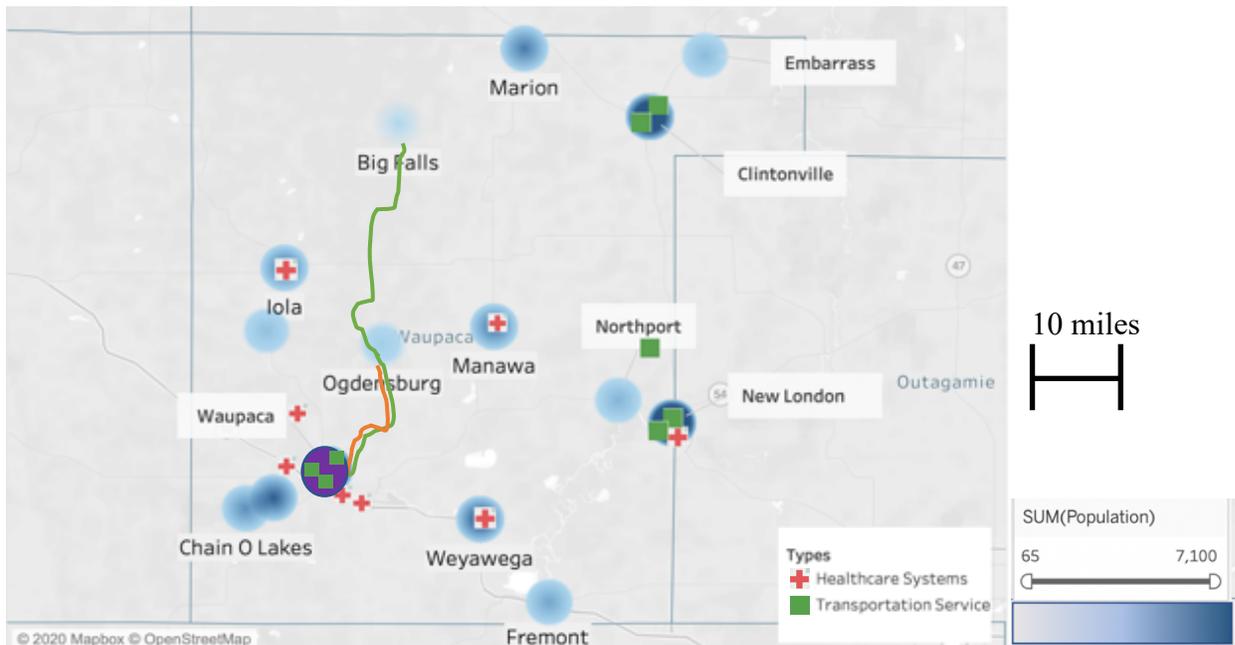Density Map of Towns and Villages in Waupaca County

The map above depicts the population density of the largest towns and villages found in Waupaca County. The larger and darker the blue density circle, the higher the population. The three most populous towns are Waupaca, New London, and Clintonville.

Locations of Healthcare Systems and Transportation Services in Waupaca County, WI

The image above shows a density map overlayed with the locations of all healthcare systems and transportation service companies found within Waupaca County. The darker the blue density circle means there is a higher population in that specific city.

Routes from NEMT to Healthcare Clinics for 3 Waupaca County Towns

The green squares represent a single transportation service company location. The white square with a red plus sign symbolizes the healthcare system clinic or hospital locations in Waupaca

County. The purple circle and colored line show examples based on most likely transportation service utilized for a 1-hour appointment at the main Waupaca clinic. Waupaca has the most inclusive clinic in Waupaca County: Within Waupaca (purple) - $22.50, Ogdensburg to Waupaca (orange) - $42.50, Big Falls to Waupaca (green) - $96.00

Discussion

In Waupaca County, NEMT organizations are located near the 3 towns with largest population densities (New London, Waupaca, and Clintonville). Healthcare systems on the other hand are found to be more widespread than NEMT organizations. The maps display roughly one healthcare facility per each major town. It can be concluded from the research that Waupaca has the most inclusive clinic in Waupaca County.

This study was conducted in collaboration with ThedaCare Health System and Lutheran Social Service's–Making the Ride Happen. The transportation organizations that were contacted was a combination of previously collected contact information from Lutheran Social Services, as well as any transportation organization we were able to find by internet search or word of mouth. The data collected from this study was compiled into a user friendly excel sheet that was shared with Lutheran Social Service's Making the Ride Happen to be used going forward as a data base of transportation options in Waupaca County that can be updated as needed.

The ultimate goal for this project is to do something similar to what Winnebago County did with their Catch-a-ride Program in 2018 (Winnebago Catch-a-ride, 2020). They plan on creating a website and phone app for residents of Waupaca County to use that has these transportation options and further information such as cost, handicap accessibility, specific service areas, etc. They also plan on hiring a mobility manager to handle upkeep of the website, take phone calls, and be in charge of coordinating this public transportation in the county (Godavarthy, R, 2019).

In June 2016, the East Central Wisconsin Regional Planning Commission conducted a study and found gaps in transportation at that time. This study helps to directly address a "lack of knowledge/marketing of existing transportation services" by providing that knowledge and opportunities for marketing (Musson, *et al*., 2016). Furthermore, in 2018 they listed identification and acquisition of more transportation options for rural areas as their top priority going forward (Waupaca County Facilitation, 2018).

In that same mobility management feasibility study, they listed necessary improvements to the current system. This study helps to provide a foundation for Lutheran Social Services and Waupaca County to act on these two points through their future plans to create a website and hire a mobility manager (Musson, *et al*., 2016).

Much of rural Waupaca County is greater than 15 miles or more from the nearest NEMT organization. Transportation services work by patients being charged per mile traveled. Thus, the patients who live in the most rural parts from transportation organization and healthcare system have to pay the most in order to receive care.

There are no areas in Waupaca County which completely lack options for NEMT, however cost is substantially increased for residents in regions further from NEMT organizations and

healthcare clinics. This research project has shown a need for increased for access to affordable transportation services.

References

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