A Visualization of Tarrant County Public Transportation and Medical Services

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Background

- Areas that do not have access to sufficient medical clinics and treatment services are labeled "service deserts."
- Across the US, opioid use disorder (OUD) treatment programs are highly concentrated in the Northeast and sparsely available throughout central and western regions of the country (Mitchell et al., 2022).
- Previous literature has cited travel time and access to transportation as barriers preventing individuals from seeking treatment at clinics treating OUD, HIV, and a variety of other needs (Hewell et al., 2017). Lack of access to public transportation for these individuals could lead to lower levels of treatment retention and usage of necessary medications.
- Tarrant County is a large county with a population of over 2 million individuals. In order to efficiently meet demand for transportation services, public transit routes are designed to be at maximum efficiency where population and employment opportunities are highly concentrated (Fort Worth TMP, 2019).
- Downtown areas of the county have public transit bus and train routes every 10 minutes while less concentrated communities, such as single family and mixed neighborhoods, have bus routes running every hour at minimum (Fort Worth TMP, 2019).
- The study aims to overlay maps of available mental health clinics, addiction and substance use clinics, and women's health clinics to address what regions of Tarrant County should be considered treatment deserts.

Methods

- A list of substance use and addiction clinics, mental and behavioral health clinics, and women's health clinics was gathered from an internet search. Facilities in Tarrant County were included in the final data set.
- Clinics were imported on a map of Tarrant County using ArcGIS software. This geospatial mapping software allows the user to overlay multiple layers of information. In the current study, a map of the Tarrant County bus lines is overlaid with the clinics.

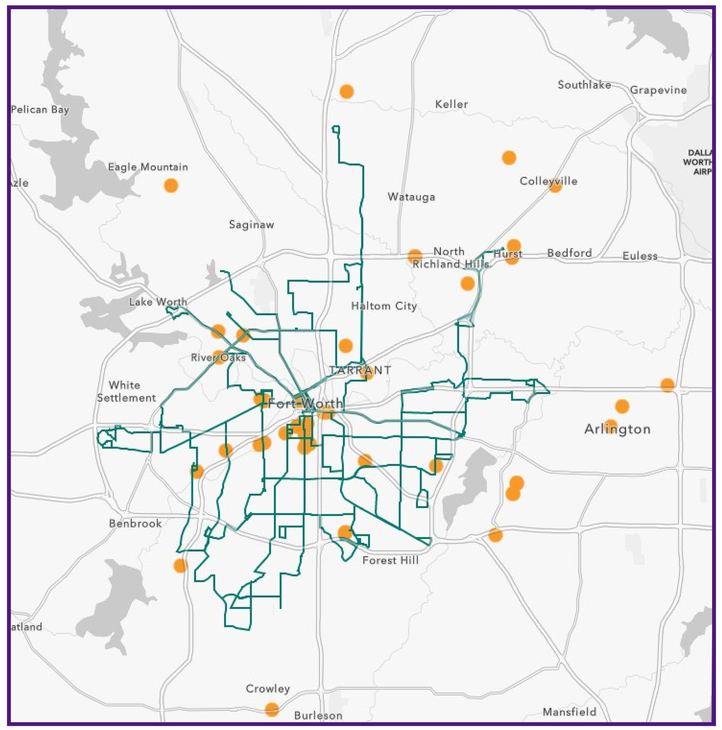
Clinic Demographics

Mental and Behavioral Health Clinics (N = 53)	
Arlington	9
Azle	1
Colleyville	2
Crowley	1
Fort Worth	35
Hurst	2
Richland Hills	1
River Oaks	1
Saginaw	1

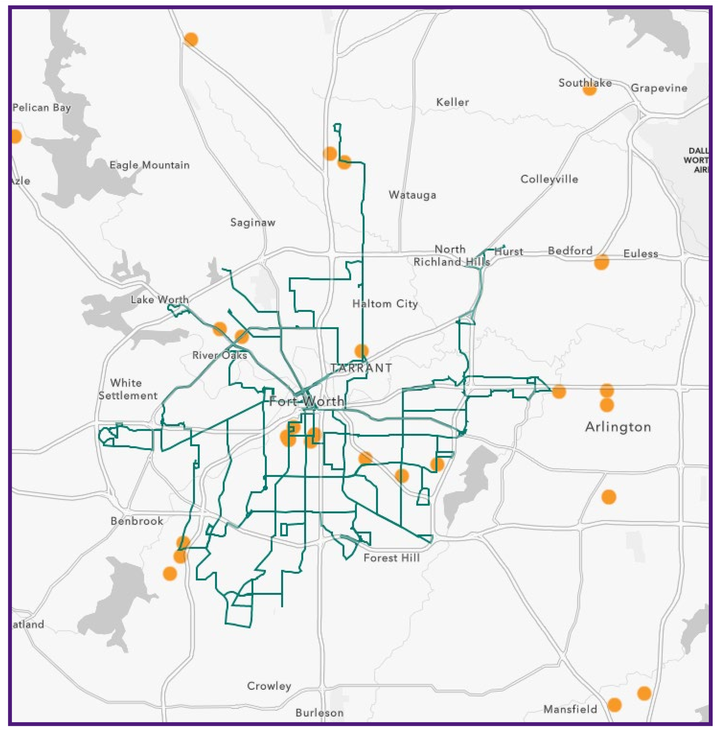
Women's Health Clinics (N = 30)	
Arlington	5
Azle	1
Euless	2
Fort Worth	18
Haslet	1
Mansfield	2
Southlake	1

Substance Use and Addiction Clinics (N = 47)	
Arlington	7
Fort Worth	32
Grapevine	1
Haltom City	1
Hurst	3
Mansfield	2
Southlake	1

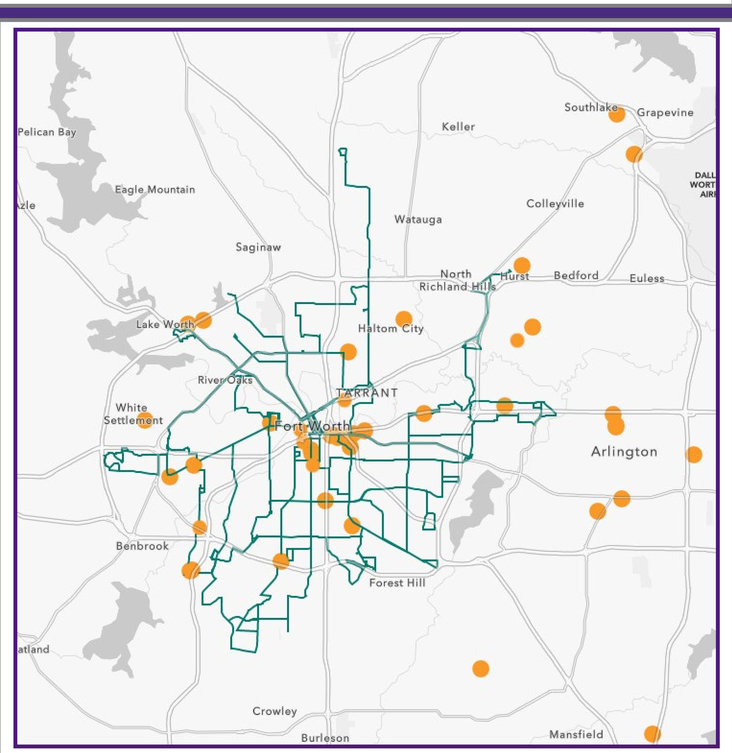
Mental and Behavioral Health Clinics



Women's Health Clinics



Substance Use and Addiction Clinics



Discussion

- Public transportation is not as widely available in certain parts of Tarrant County that are not densely populated. In such areas where clinics are available, but public transportation is not, clinics should look into providing alternative transportation services.
- These results have significant public health implications. This data can be shared with elected officials and city planners of Tarrant County to address the lack of treatment facilities in certain quadrants of the county.
- Some limitations of this study include that this is a qualitative assessment; we do not have exact numbers or percentages.
- This study could be expanded to include transportation upon request options offered by the public transportation agency.
- Future studies could quantify the overlap between public transportation and available clinics in the county.
- Future geographical analyses of treatment deserts could look at the correlation between availability of OUD treatment facilities and geo-tagged opioid use deaths in a certain area.

References

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