

# Tennessee Telehealth Trends

Melissa Quarles - Capstone Project

# What is Telehealth?

The use of digital information and communication technologies, such as computers and mobile devices, to access healthcare services remotely and manage healthcare.

Types:

- Live video/audio
- Remote monitoring
- Store & forward
- Mobile health apps

Sources: [What is Telehealth](#) & [Categories of Telemedicine](#)

# Data Questions

## **How can telehealth best be used to target health challenges in TN?**

1. What kinds usage of trends emerge in telehealth over the last few years, before and after covid?
2. Are there any demographic trends in telehealth usage?
3. Are there any correlations between health outcomes and factors that may be helpful in targeting telehealth initiatives?
4. What other challenges and considerations should be taken into account in implementing telehealth?

# Data Sources

## 1. [Medicare Telehealth Trends](#)

- Telehealth usage rates among Medicare enrollees
- Data collected between January 1, 2020 and September 30, 2023.
- Used to generate the [Medicare Telehealth Trends Report](#).

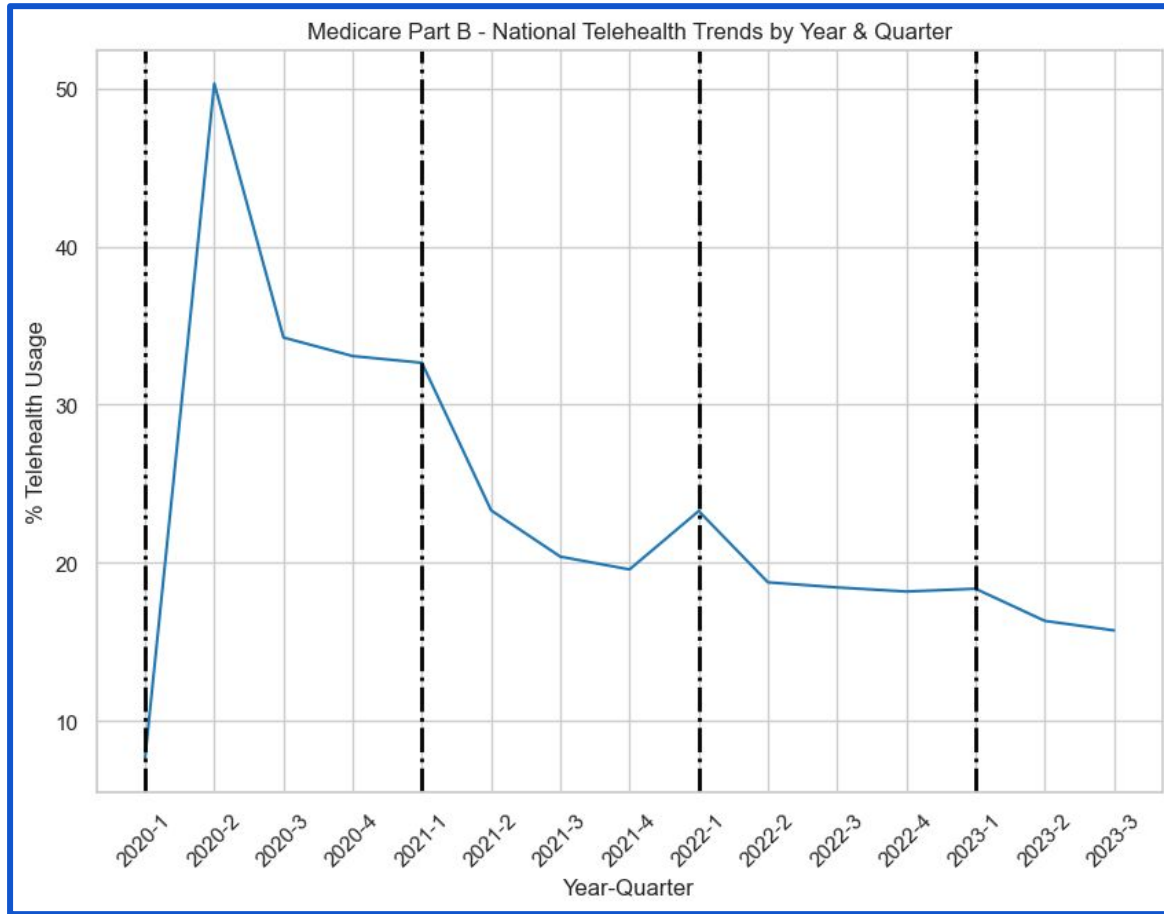
## 2. [Medicaid & CHIP Telehealth Trends](#)

- Telehealth usage by type, with monthly/yearly counts and rates (per 1,000 beneficiaries) of services provided to Medicaid and CHIP beneficiaries
- Data collected between January 2018 and December 2022

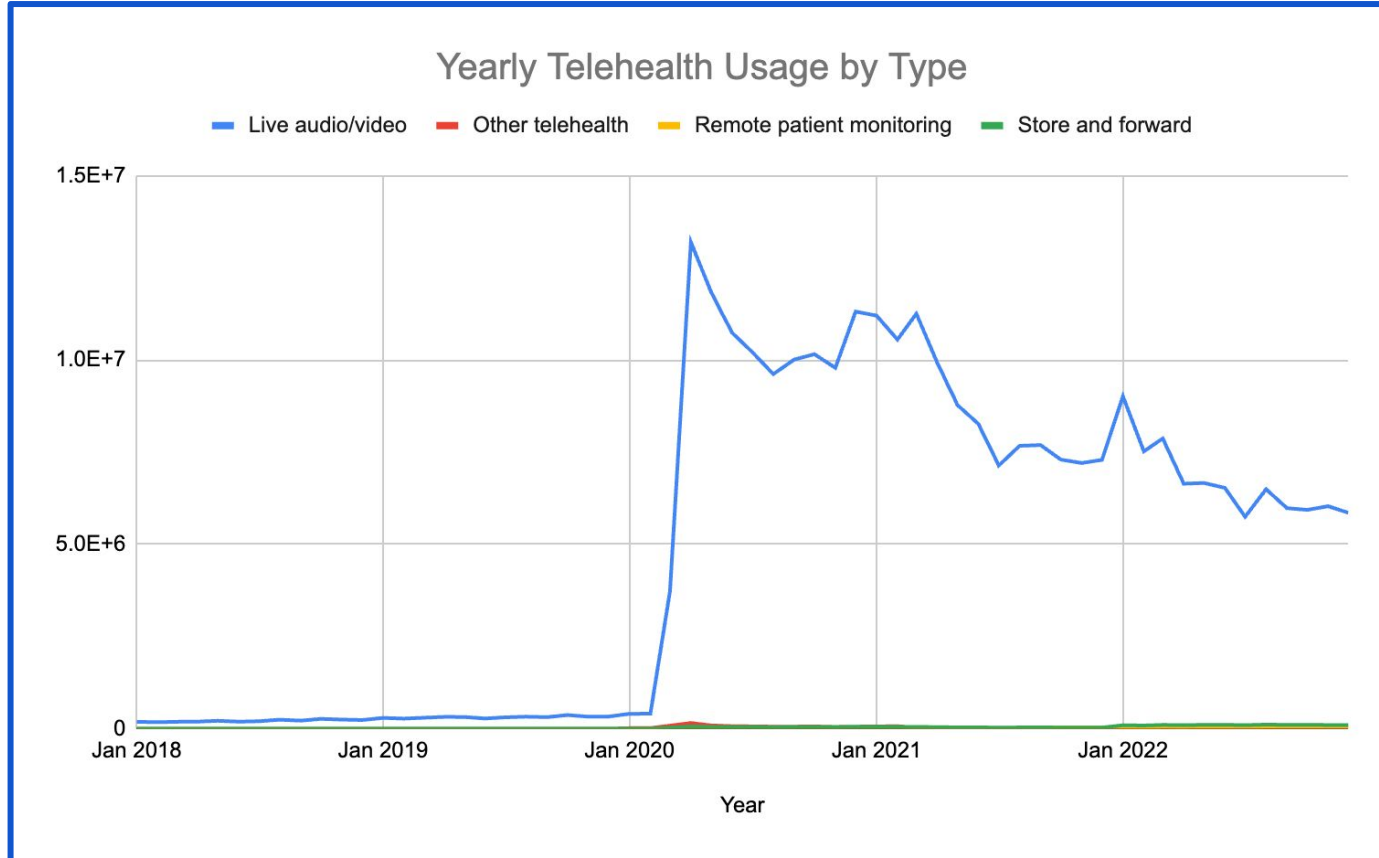
## 3. [TN County Health Rankings and Roadmaps](#)

- The County Health Rankings & Roadmaps (CHRR)
- CHRR is a program of the University of Wisconsin Population Health Institute - dedicated to understanding why there are differences in health within and across communities...provides a snapshot of health by county
- Only looking at 2023 data (since 2024 is incomplete)
- See also: [CHRR Health Model](#)

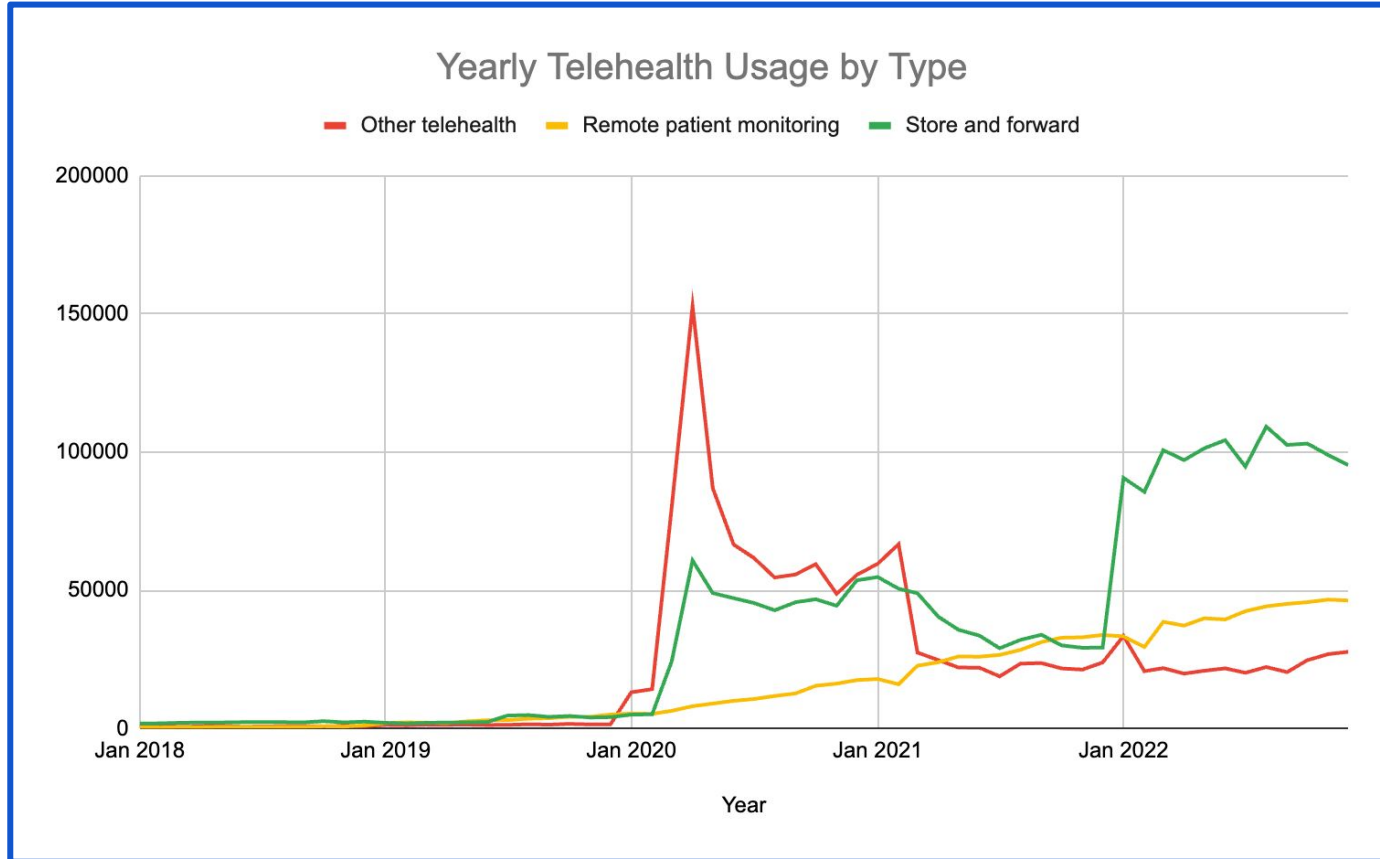
# 2020-2023 Medicare Telehealth Usage Trends



# Medicaid & CHIP Telehealth (Audio/Video)



# Medicaid & CHIP Telehealth (Non-Audio/Video)



# TN Medicare - Demographic Trends

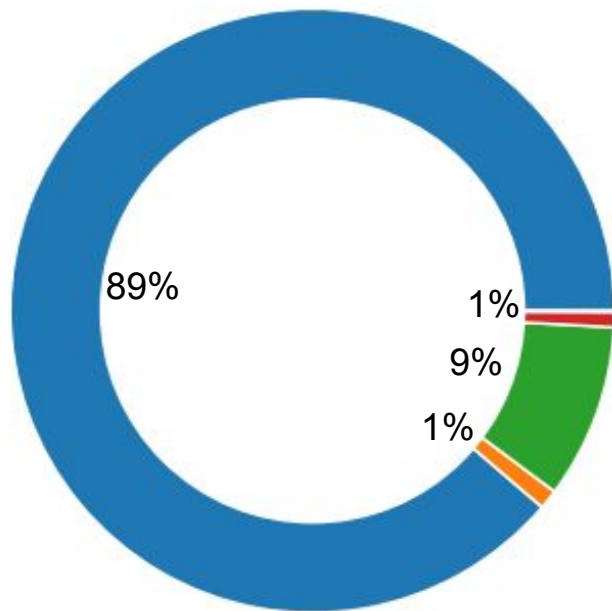
Telehealth trends are broken down by:

- Race
- Gender
- Age Group
- Eligibility
- RUCA Designation

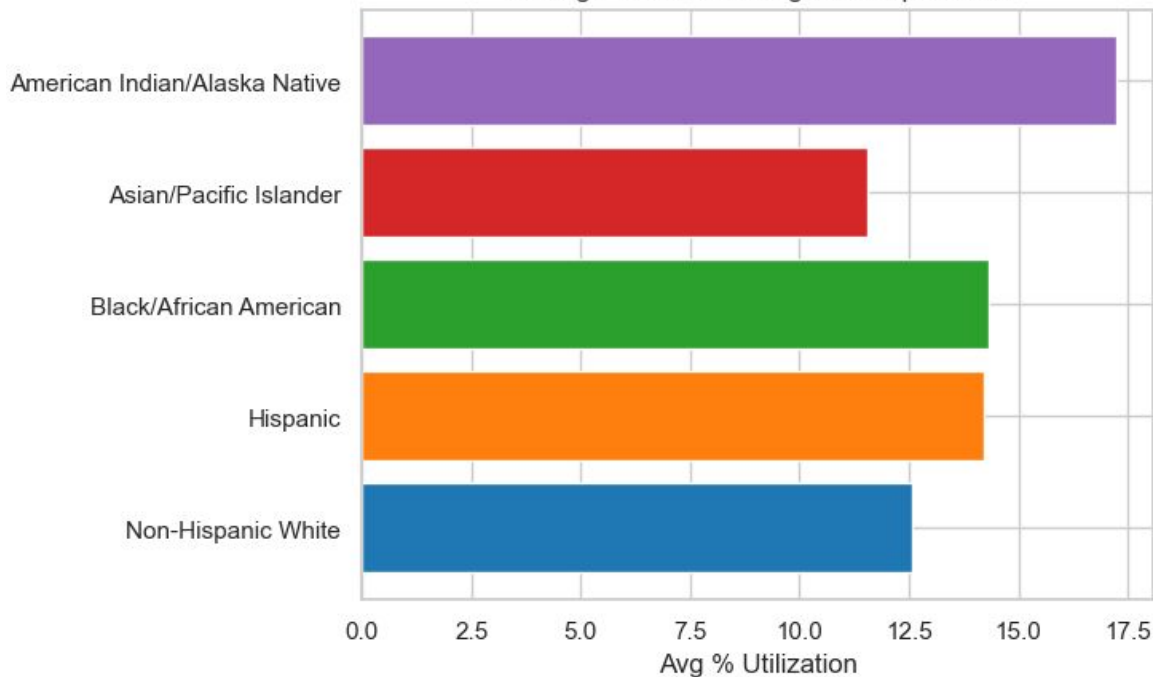


# TN Medicare Demographics - Race

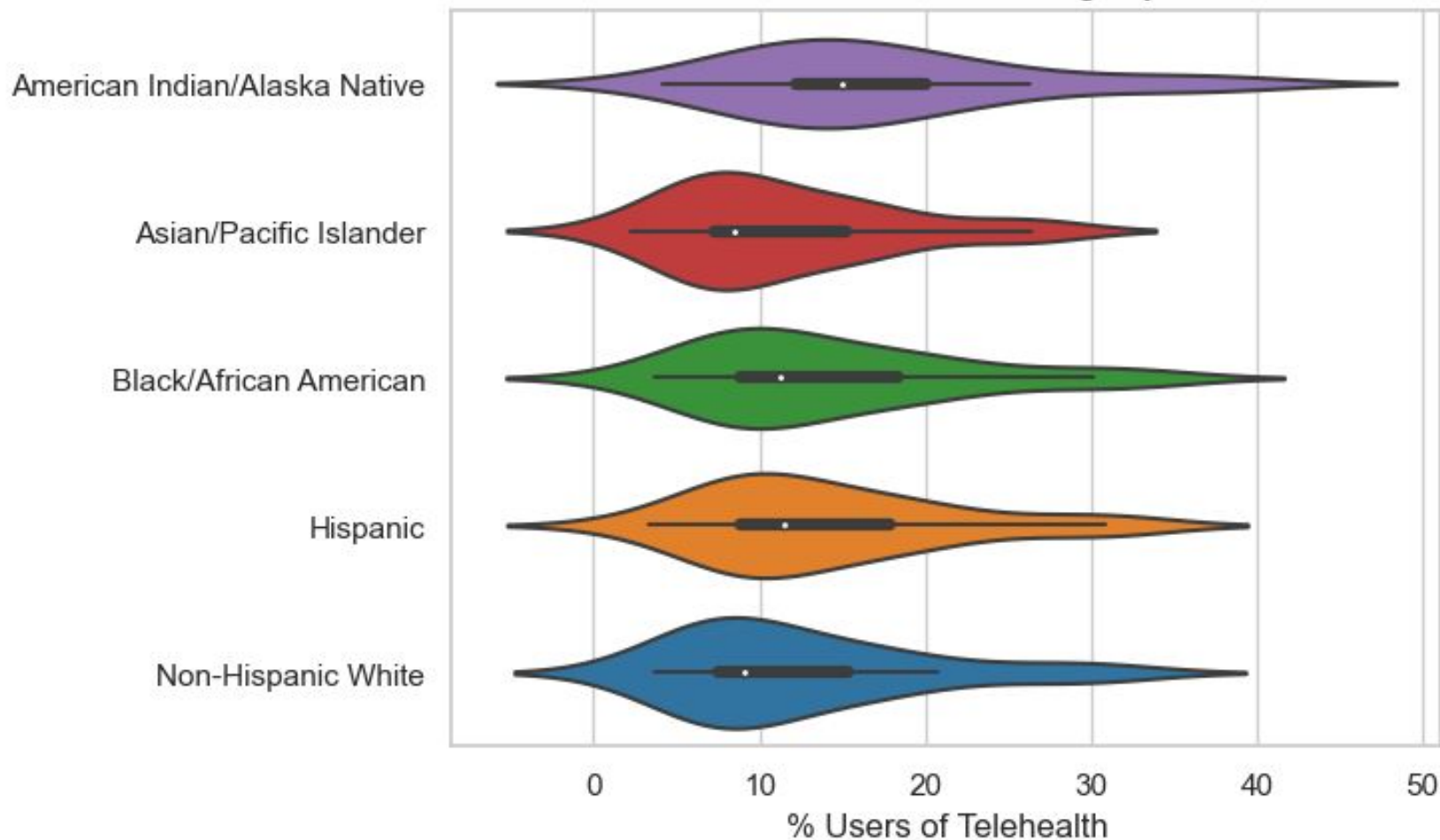
Enrollees by Race



Average Telehealth Usage Rates per Race

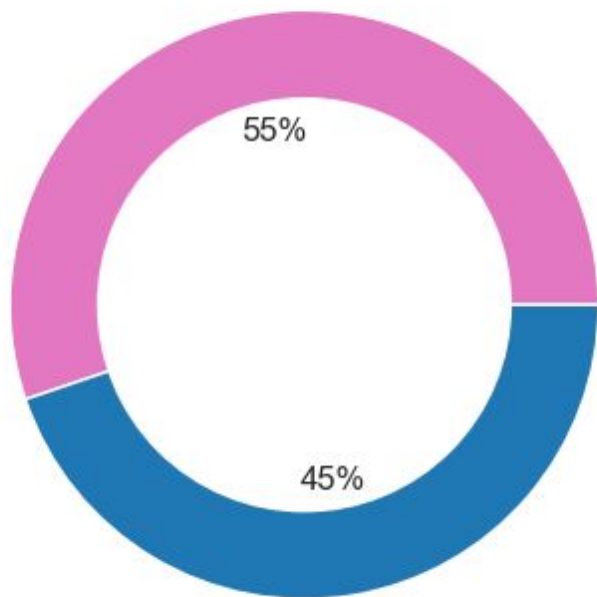


Distribution of Telehealth Usage by Race

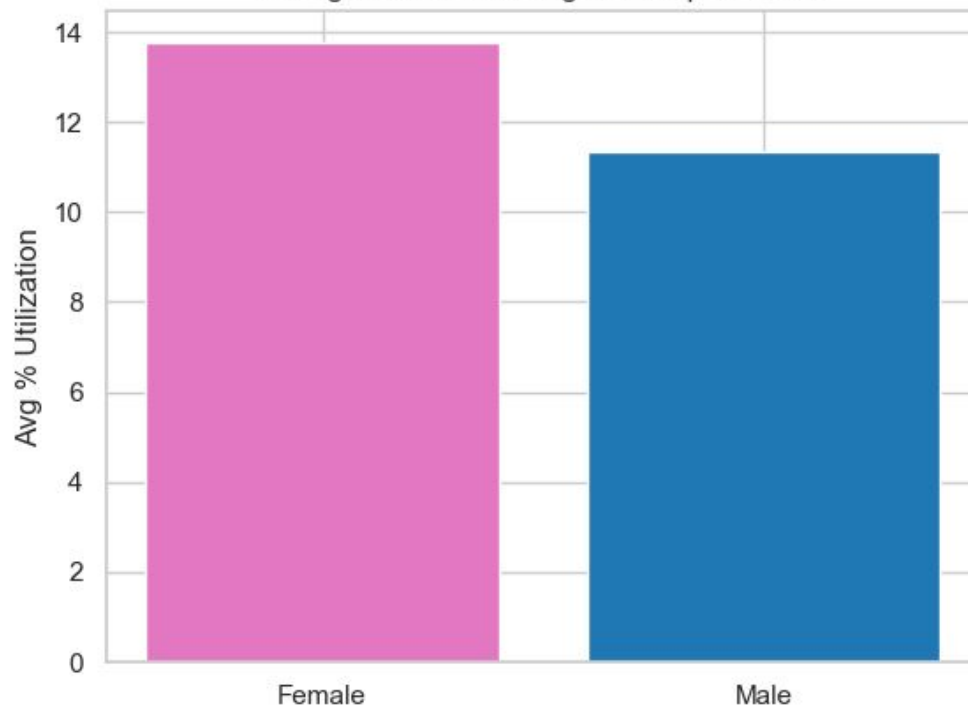


# TN Medicare Demographics - Gender

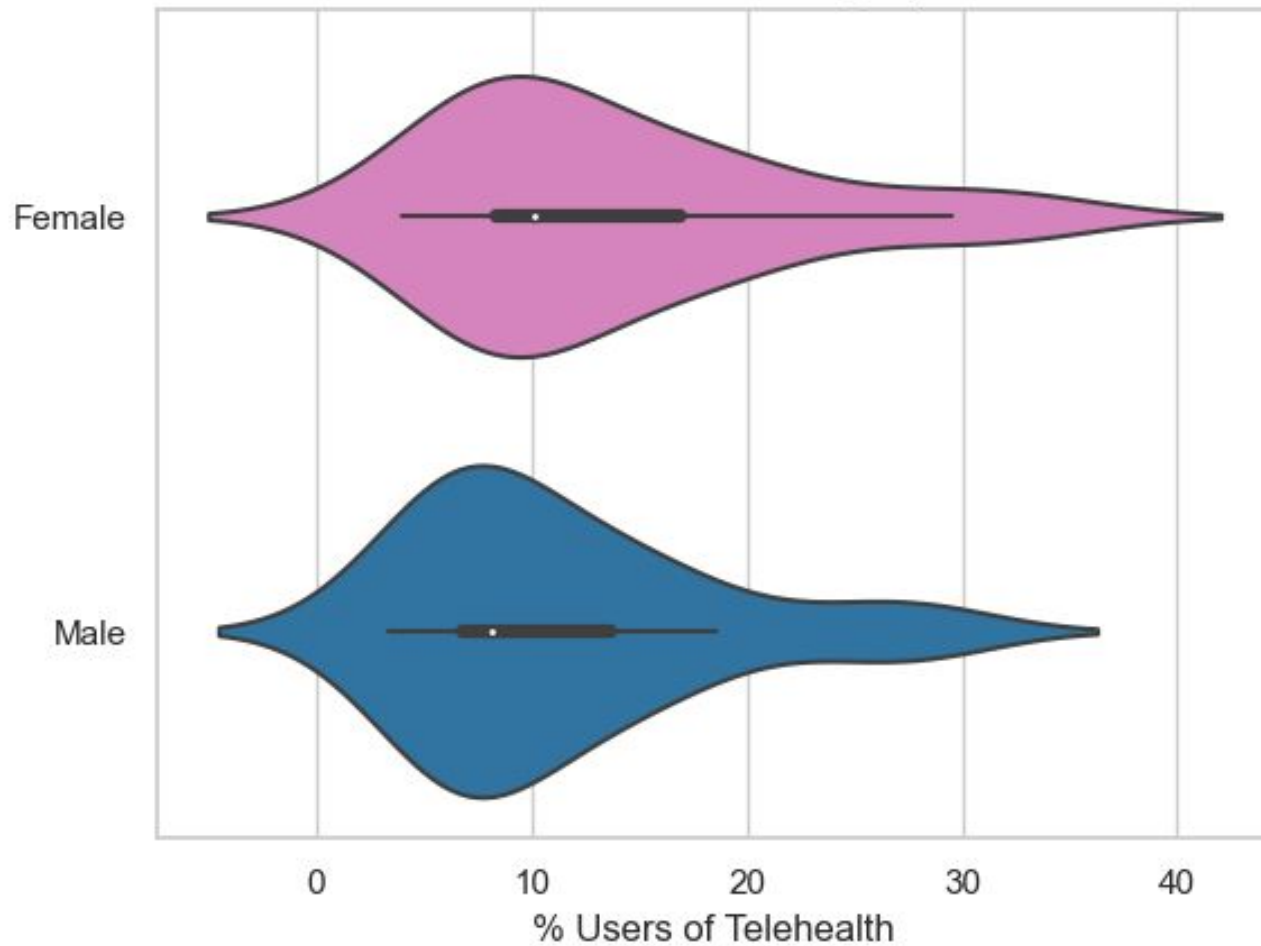
Enrollees by Gender



Average Telehealth Usage Rates per Gender

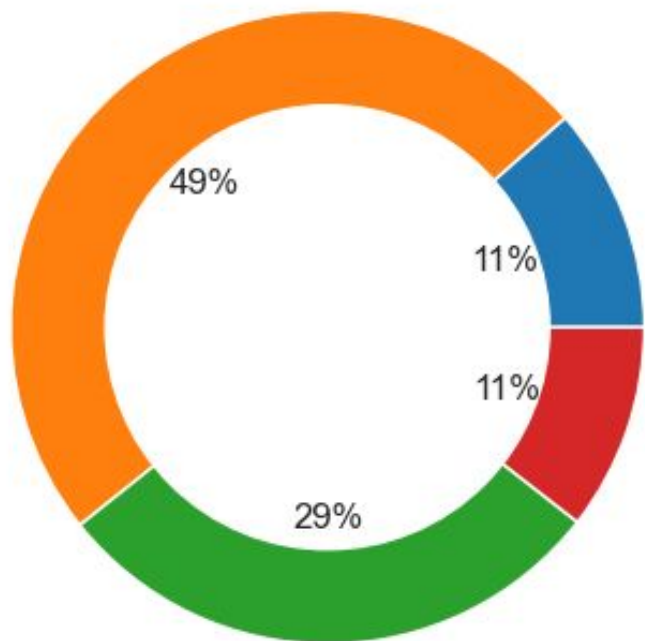


Distribution of Telehealth Usage by Gender

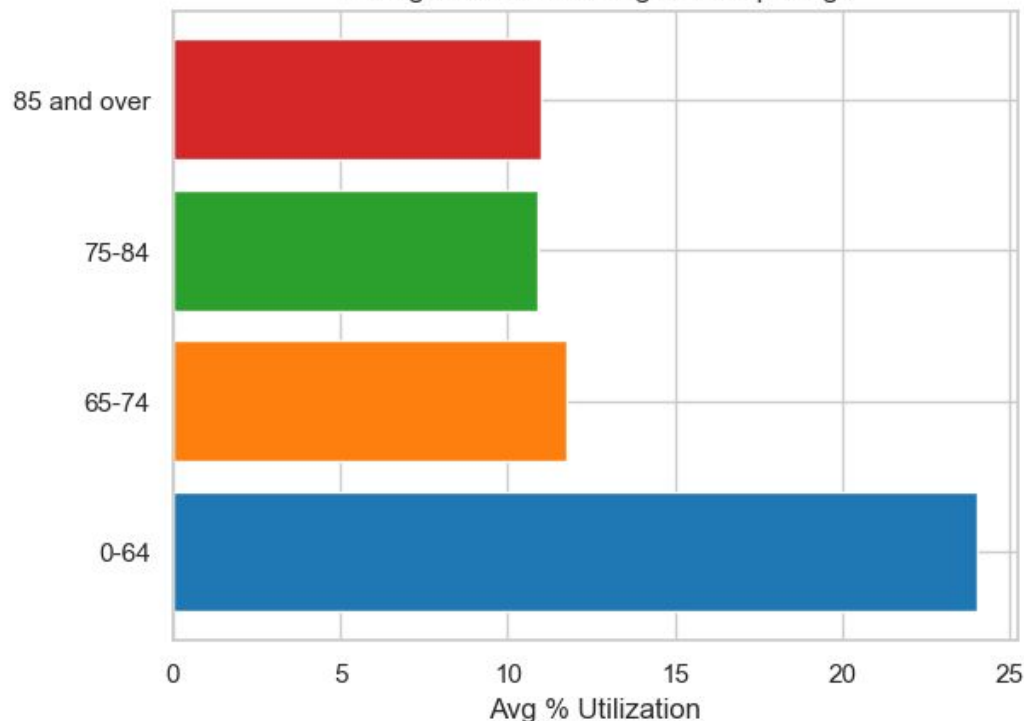


# TN Medicare Demographics - Age Group

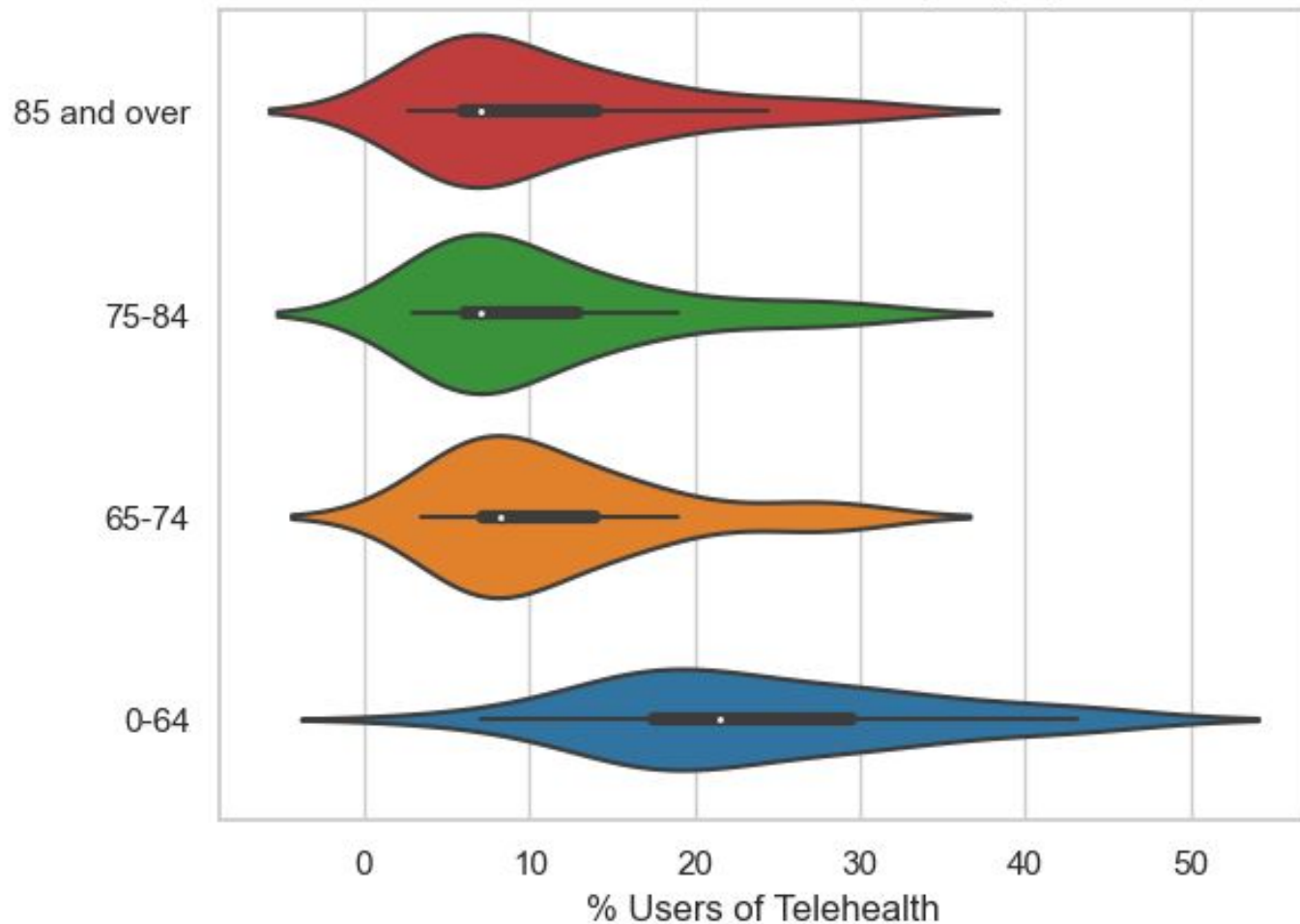
Enrollees by Age



Average Telehealth Usage Rates per Age

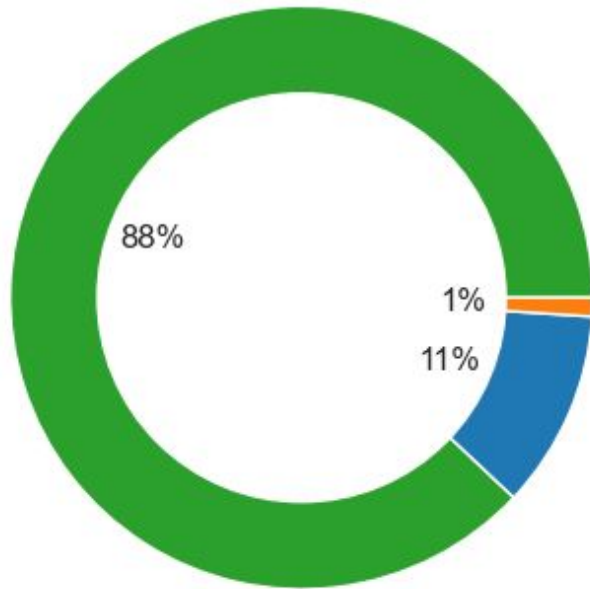


Distribution of Telehealth Usage by Age

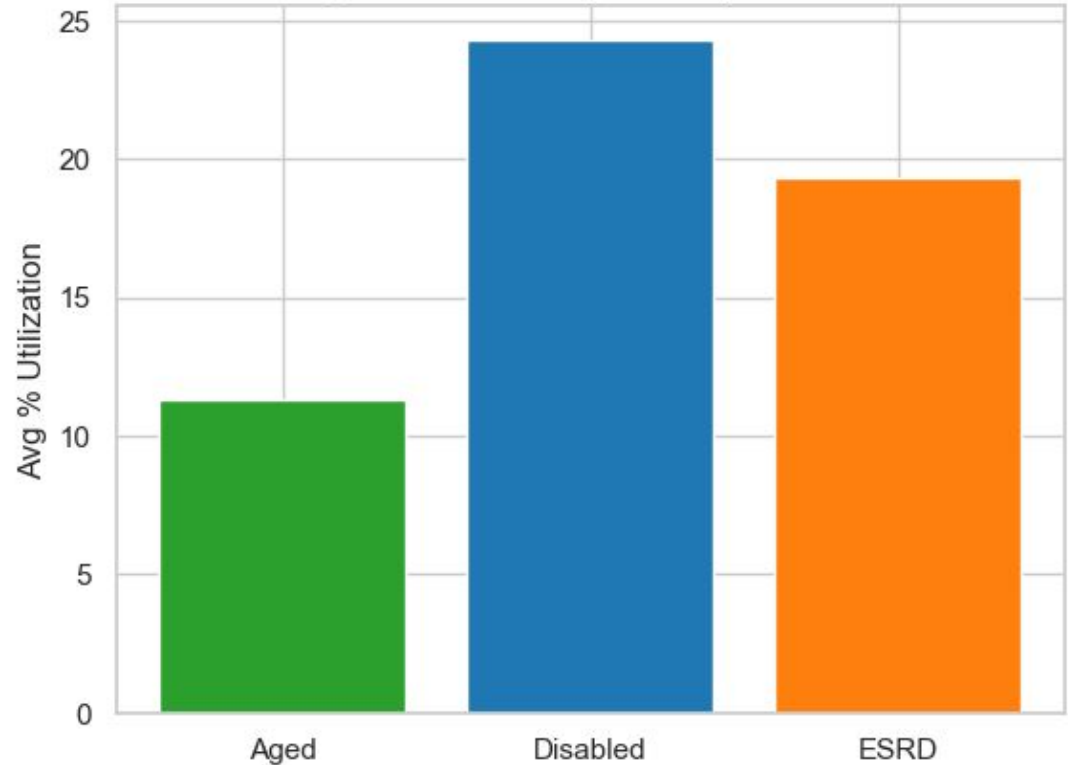


# TN Medicare Demographics - Entitlement

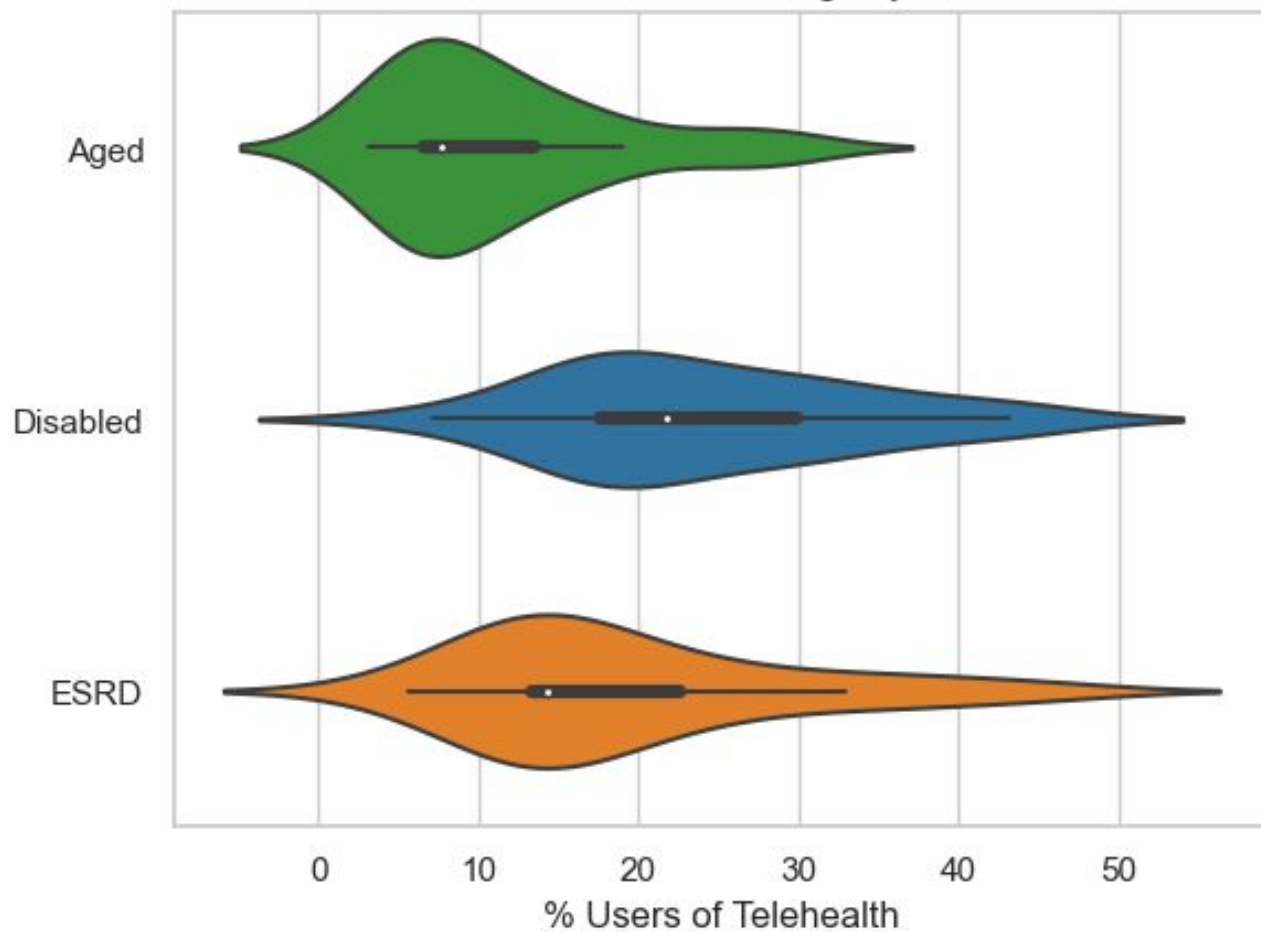
Enrollees by Entitlement



Average Telehealth Usage Rates per Entitlement



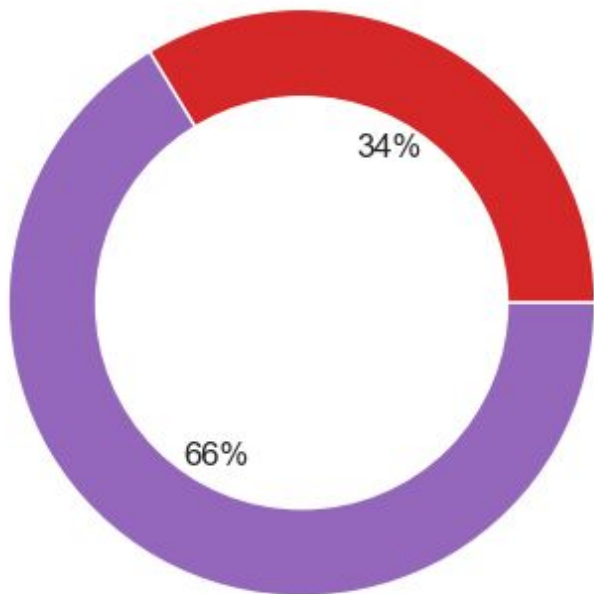
Distribution of Telehealth Usage by Entitlement



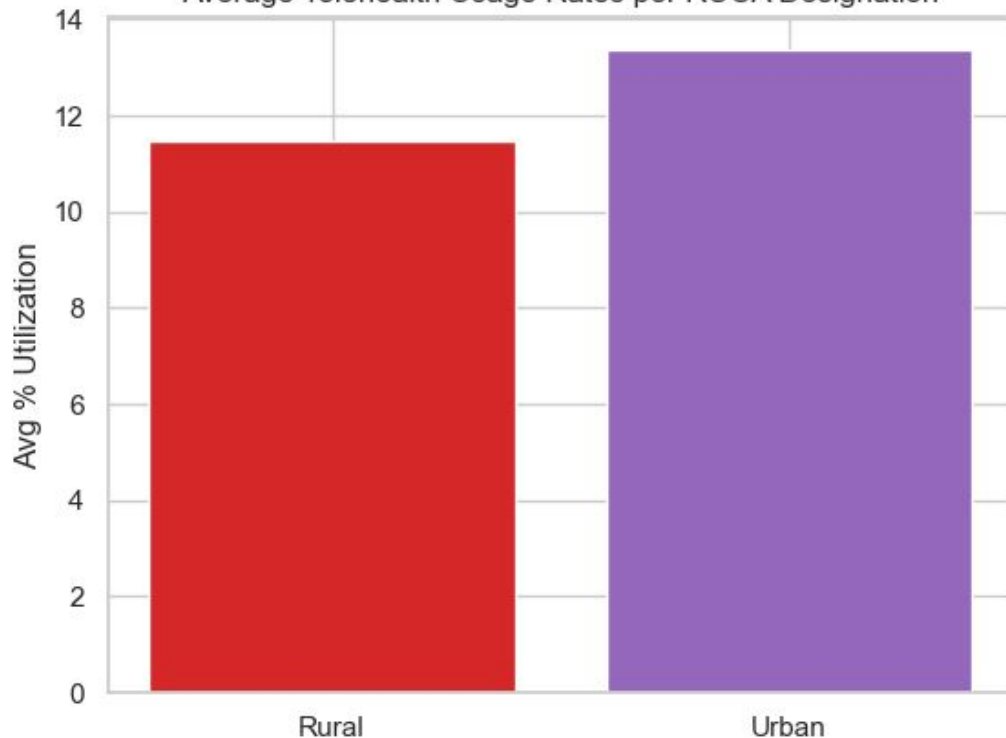


# TN Medicare Demographics - RUCA Designation

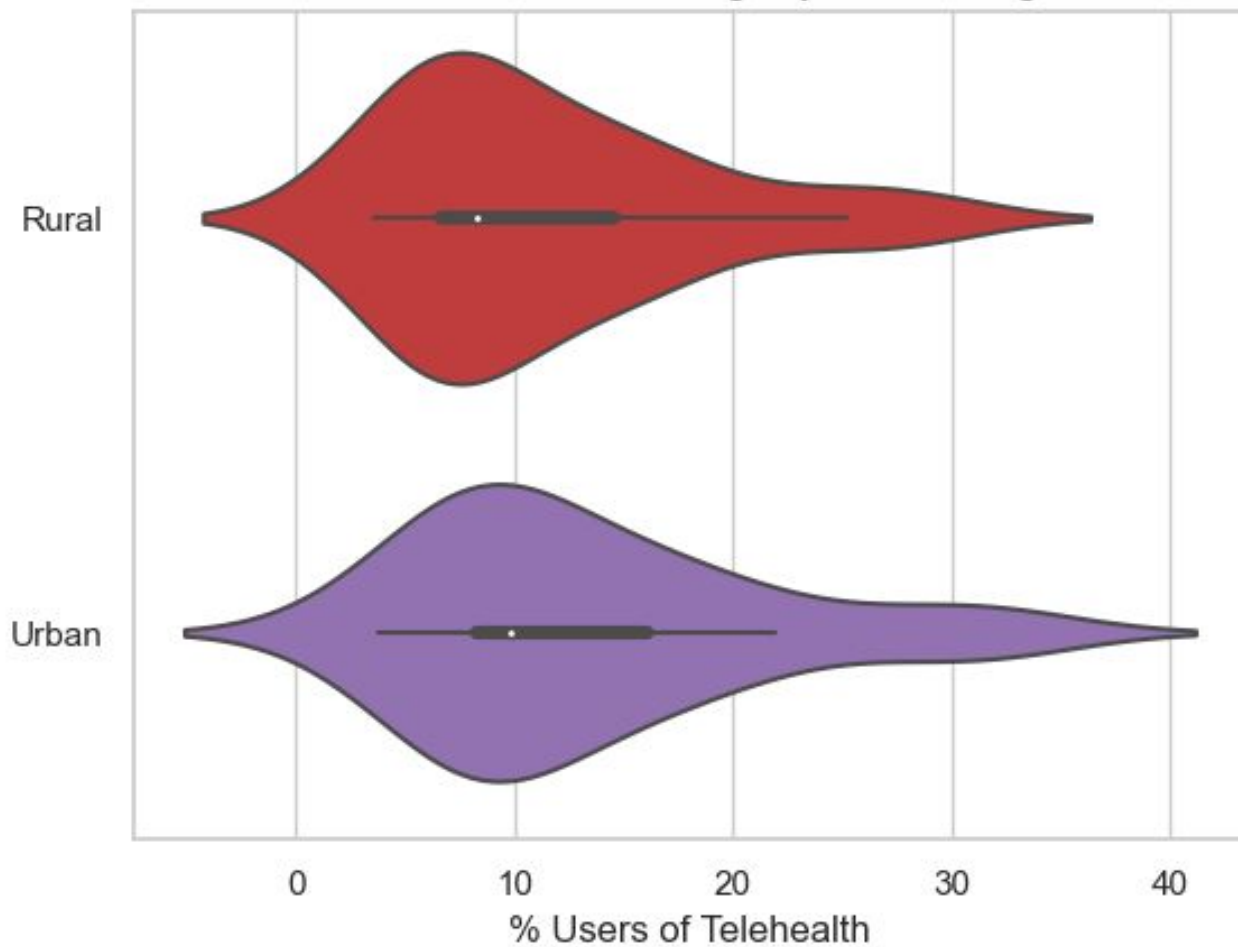
Enrollees by RUCA Designation



Average Telehealth Usage Rates per RUCA Designation



Distribution of Telehealth Usage by RUCA Designation



# Telehealth Applications for Rural Populations

## Challenges:

- Transportation
- Distance to provider
- Availability of Providers
- Cost of Services

## Potential Applications:

- Remote monitoring and care
- Chronic disease management
- Mental health services (reduced stigma)
- Health education and public health campaigns

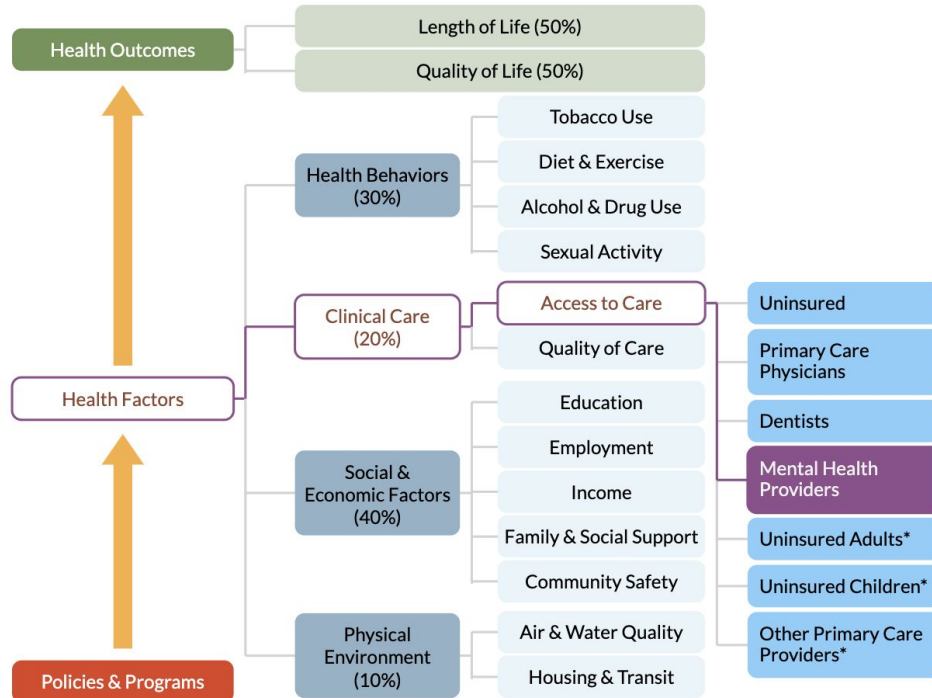
The TN Rural Health Care [Task Force](#) recommends investing in telehealth infrastructure, in line with federal initiatives



[Rural telehealth investments coming to East Tennessee \(news clip\)](#), Feb. 22, 2024. WVLT 8.

[TN Rural Health Care Task Force recommends changes to healthcare access, workforce development and 'social drivers of health' \(news clip and article\)](#), June 30, 2023. WBIR.

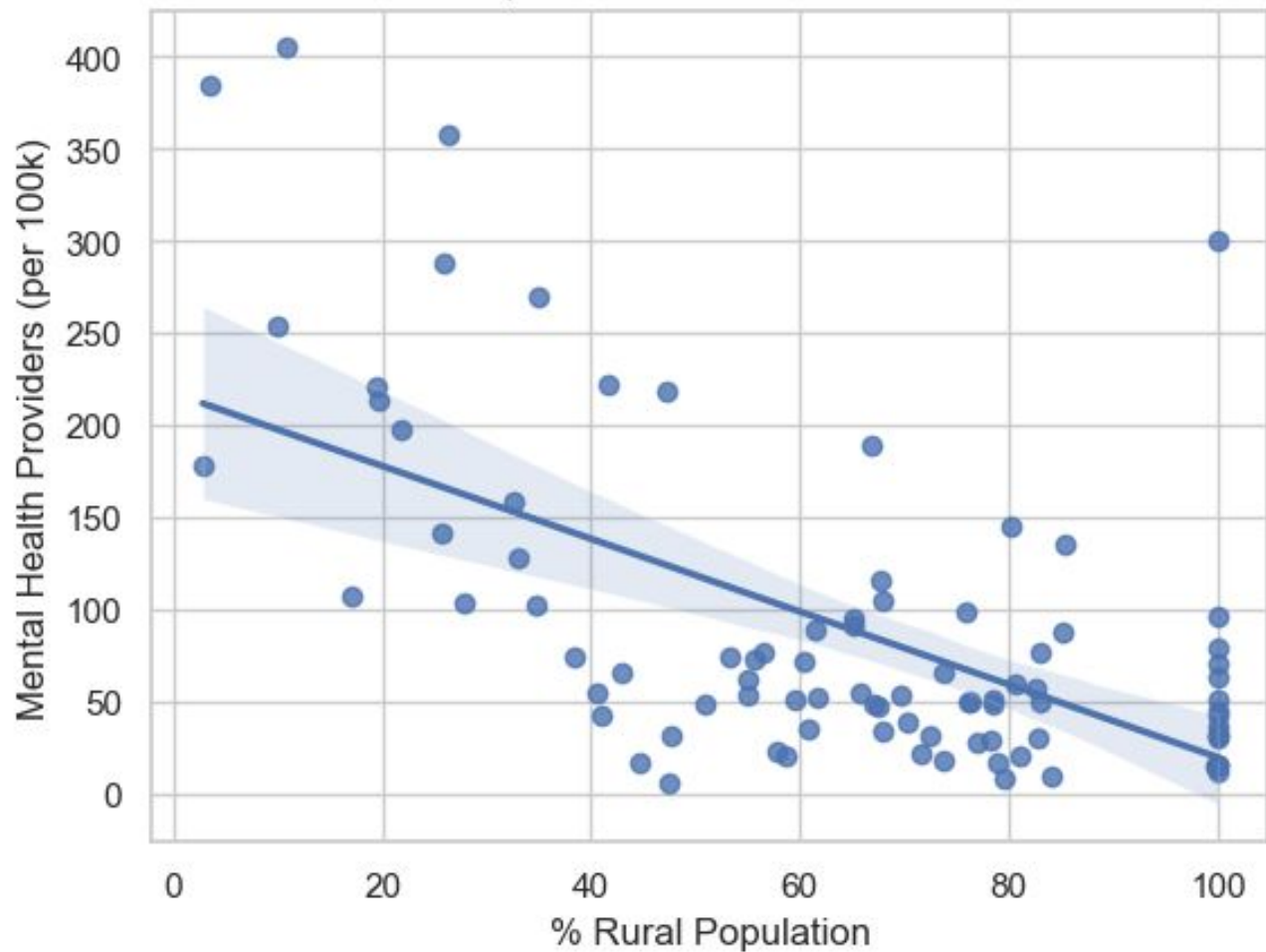
# County Health & Rankings Roadmaps (CHRR)



County Health Rankings model © 2014 UWPHI

- [Mental Health Provider](#) Rate per 100k population
- Average # of [Mentally Unhealthy](#) days reported in the past 30 days
- % [Frequent Mental Distress](#) - Percentage of adults reporting 14 or more days of poor mental health per month
- % [Disconnected Youth](#) - Age 16-19 who are not working or in school
- % [Rural](#) population per county

% Rural Population vs. Mental Health Providers



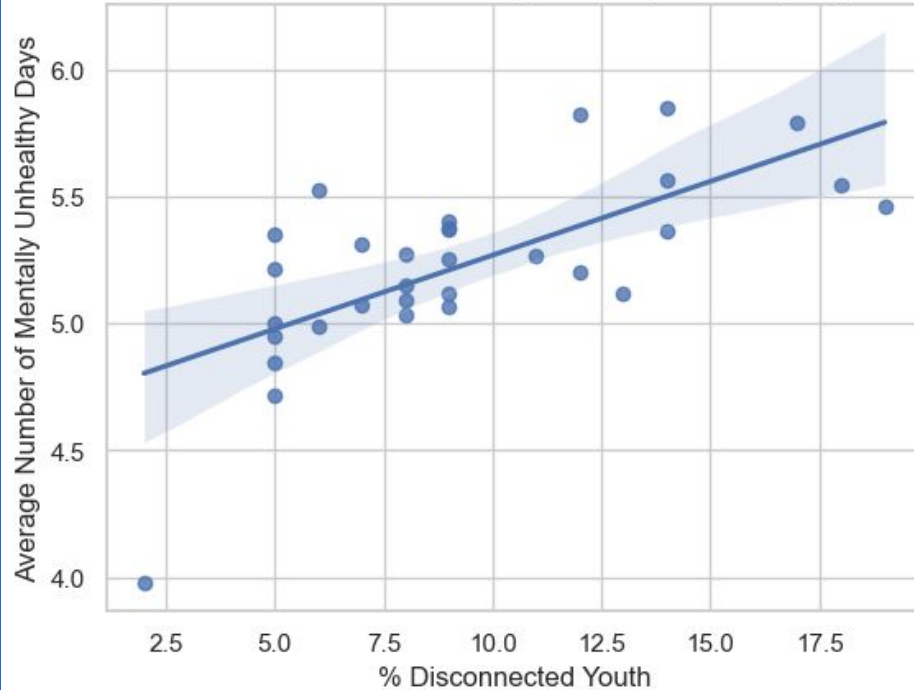
# Who are Disconnected Youths?

According to [Geographies of Opportunity](#) [A Measure of America Report] by the Social Science Research Council:

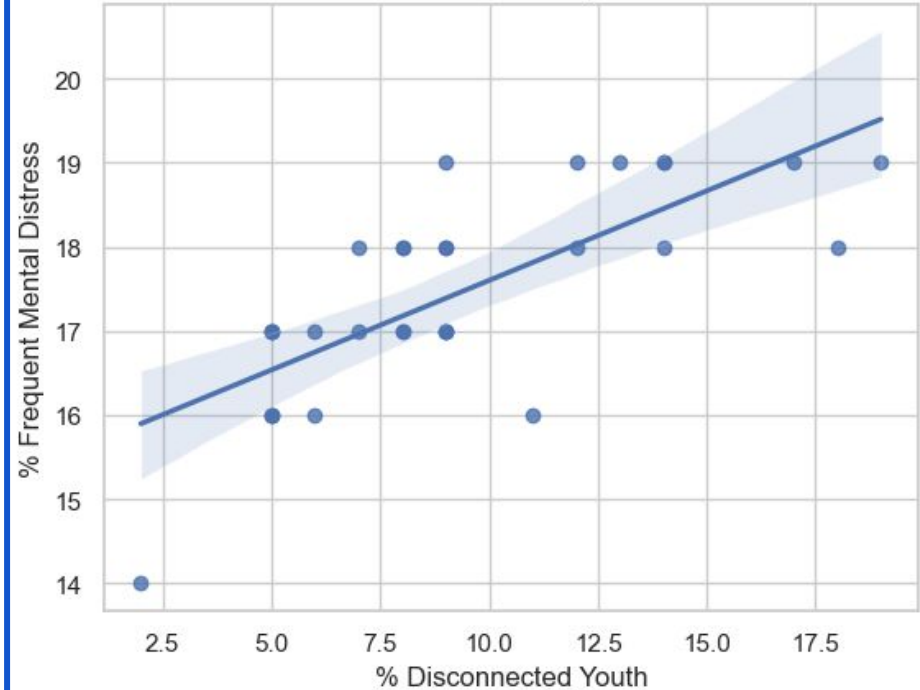
- 5.5 Million disconnected youth in the US
- Heavy toll on society when teens lack training or education opportunities
- Rural counties are disproportionately affected
- National average is 12.1%
- TN average is 13.5%
- Black youth in TN are the most affected population, at 22.9%
- The report also has an [Interactive Website](#)

# Disconnected Youth vs. Mental Health

% Disconnected Youth vs. Avg # Mentally Unhealthy Days

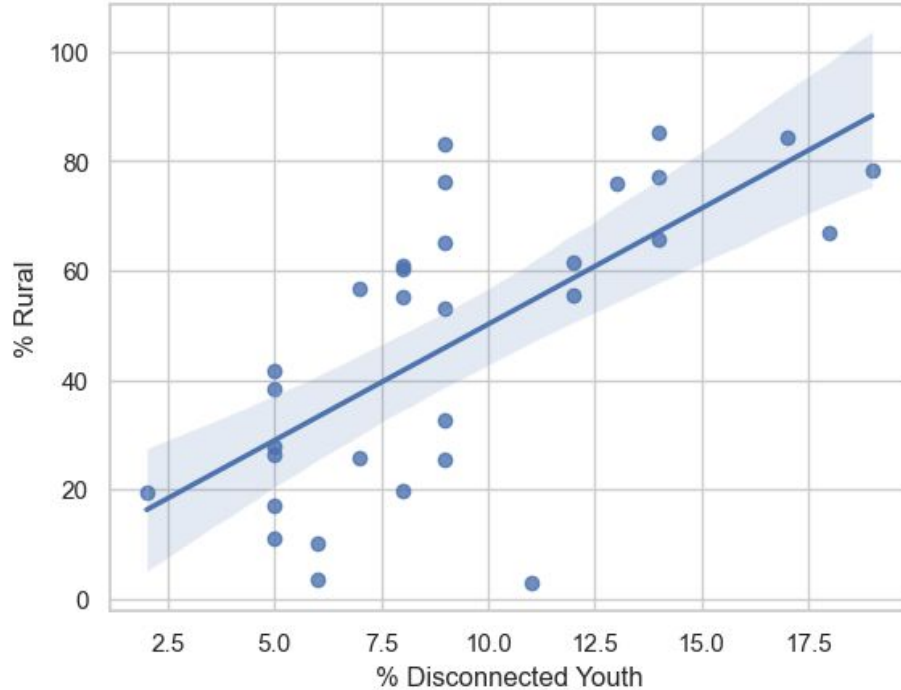


% Disconnected Youth vs. % Frequent Mental Distress

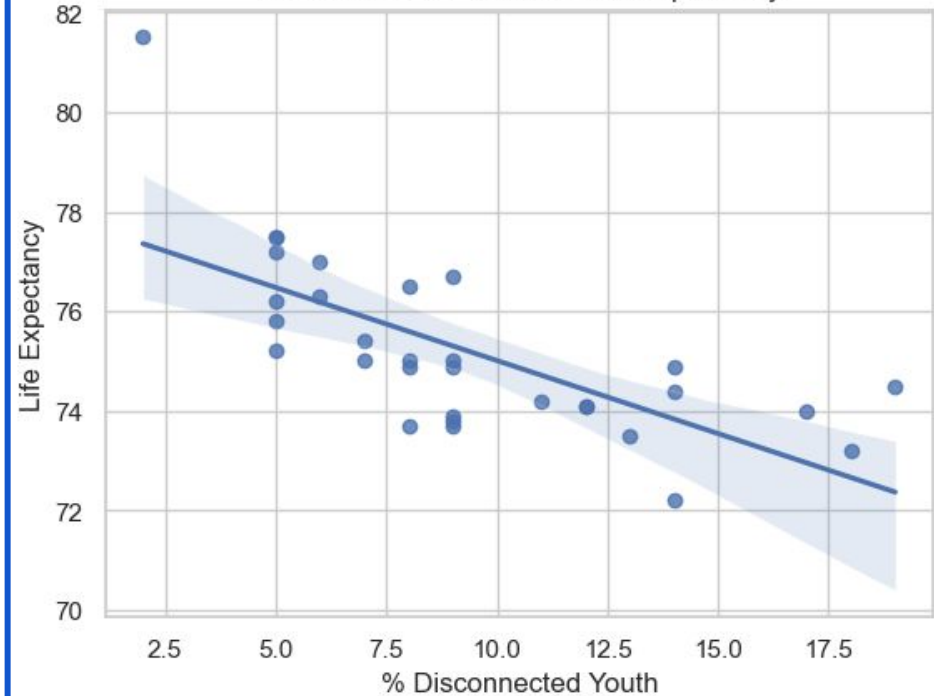


# Disconnected Youth - % Rural and Life Expectancy

% Disconnected Youth vs. % Rural

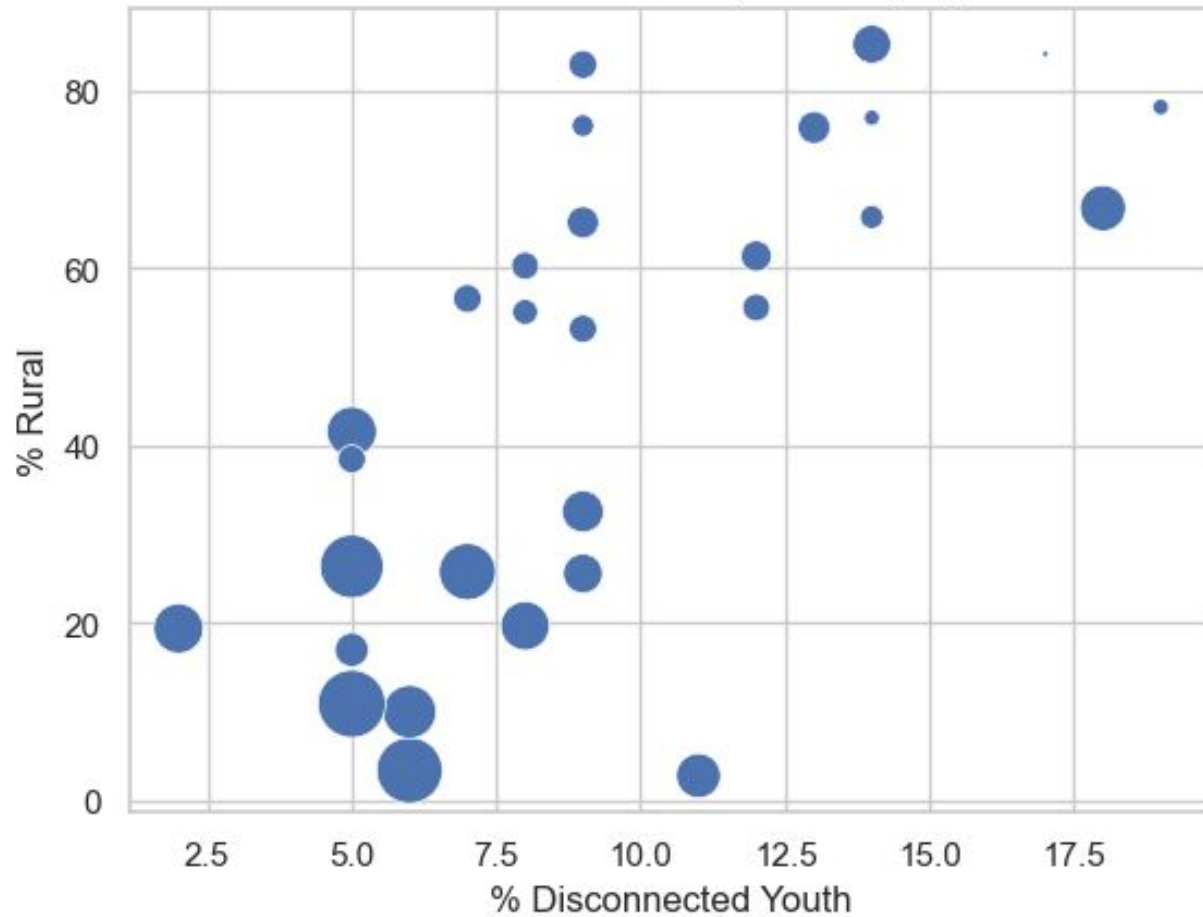


% Disconnected Youth vs. Life Expectancy





Mental Health Providers per 100k people



# Targeting Mental Telehealth Initiatives

- **Target Populations:**

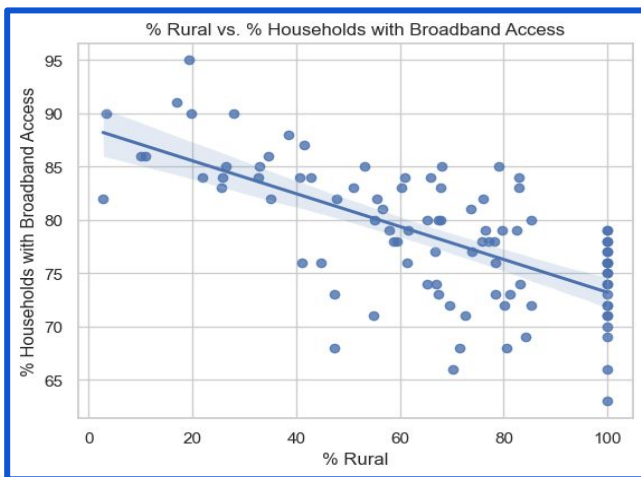
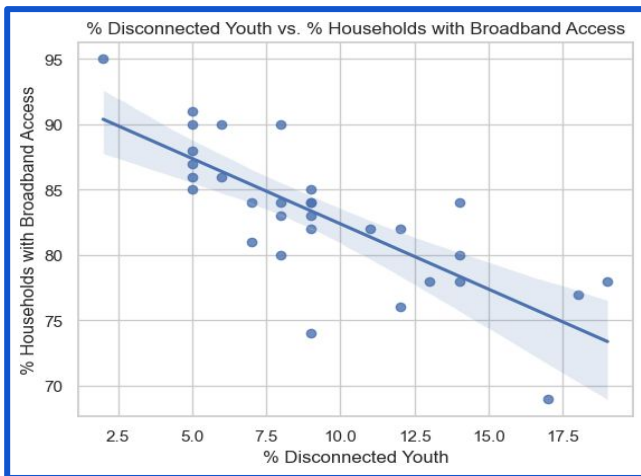
- At risk youths, esp African Americans
- Rural populations
- Minorities

- **Considerations:**

- Telehealth can be seen as an additional modality to be carefully considered, rather than as a substitute for care as usual.”<sup>1</sup>
- “flexibility and shared decision-making, two attributes often linked to technology-based additions to care, have been linked to improved patient satisfaction and overall health outcomes”<sup>2</sup>

Sources:

- 1) [Telehealth for Social Interventions With Adolescents and Young Adults: Diverse Perspectives](#)
- 2) [A Rural Youth Consumer Perspective of Technology to Enhance Face-to-Face Mental Health Services](#)



Challenges	Solutions
Broadband Access	<ul style="list-style-type: none"> <li>Remote Patient Monitoring</li> <li>Store &amp; Forward</li> </ul>
State Medicare & Medicaid Policies	<ul style="list-style-type: none"> <li>Change policy language</li> <li>Raise awareness of non-live telehealth</li> <li>Medicaid Policy Maps: <a href="https://www.cchpca.org/policy-trends/">https://www.cchpca.org/policy-trends/</a></li> </ul>
Technical Literacy	<ul style="list-style-type: none"> <li>Transparent, low-barrier online scheduling</li> <li>Mobile health apps</li> </ul>

# Further Research

## Additional Articles & Resources:

- [Telehealth.HHS.gov](https://www.telehealth.hhs.gov) - Additional research articles and papers on the impact and uses of telehealth, maintained by the HRSA Office for Advancement of Telehealth
- [CHRR Strategies for Telehealth](#) - Strategy guides with extensive research notes and citations. Includes evidence-informed strategies to create communities where everyone can thrive.
- [Additional CHRR Tennessee Data and Resources](#) - These data sources provide further localized data; more information on demographic breakdowns (e.g., age, sex, race/ethnicity); or data for sub-county geographic units (e.g., cities, zipcodes or school districts).
- [Reconnecting Youth](#) - Extensive database and gap analysis tool for understanding existing research on the topic of Disconnected Youth

Questions?