TN 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.

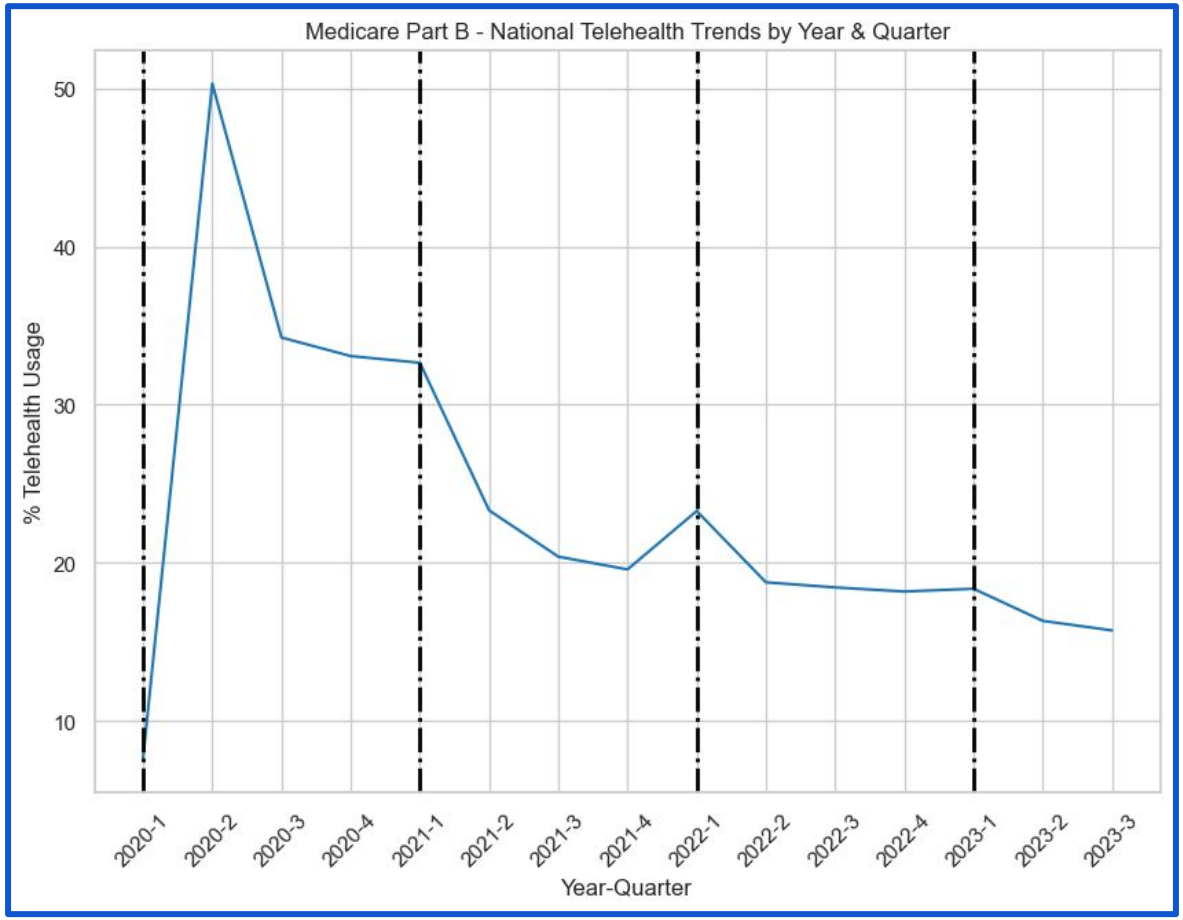
2. Medicaid & CHIP Telehealth Trends

   - 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

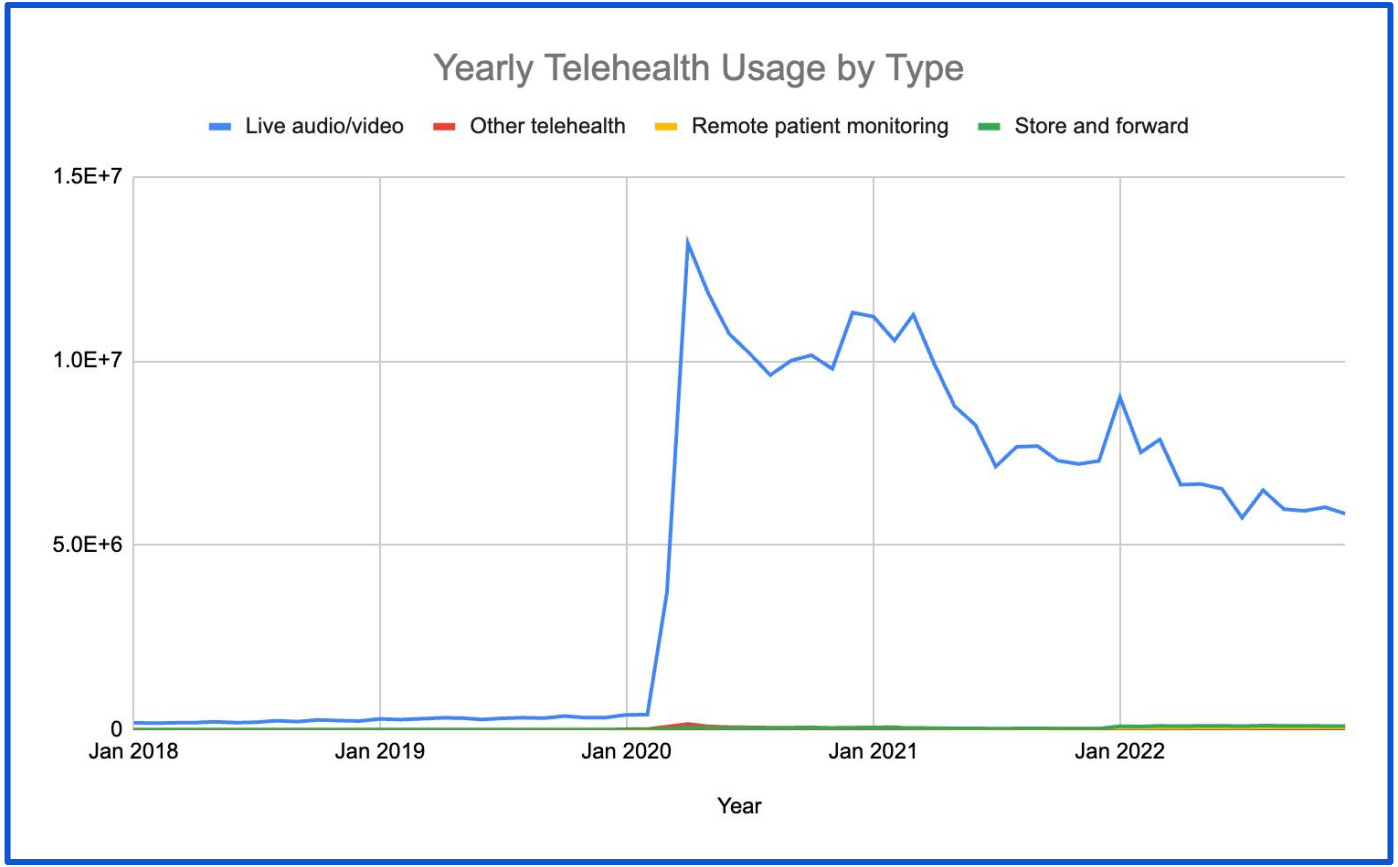
3. TN County Health Rankings and Roadmaps

   - 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

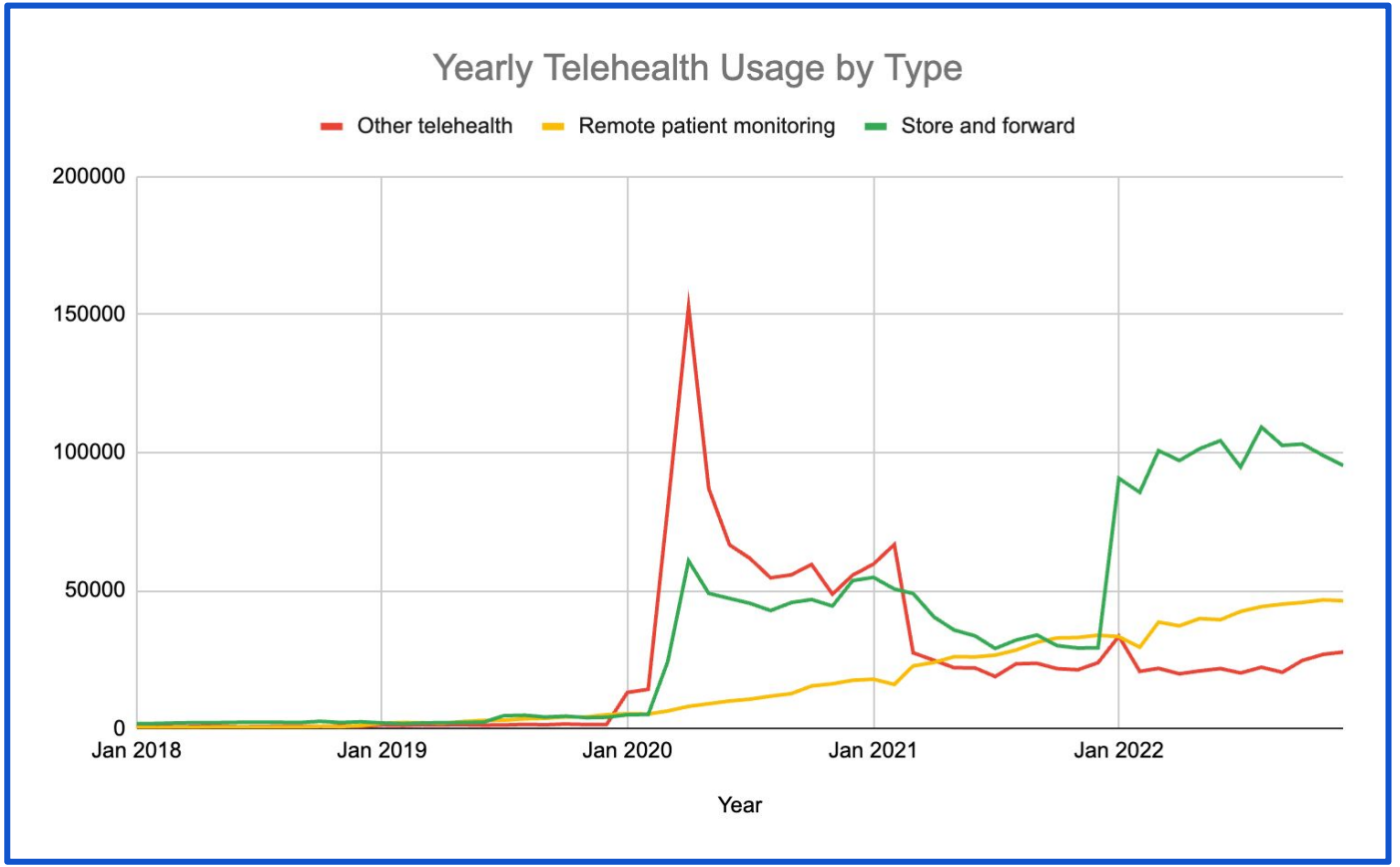
2020-2023 Medicare Telehealth Usage Trends



Medicaid & CHIP Telehealth (Audio/Video)



Medicaid & CHIP Telehealth (Non-Audio/Video)

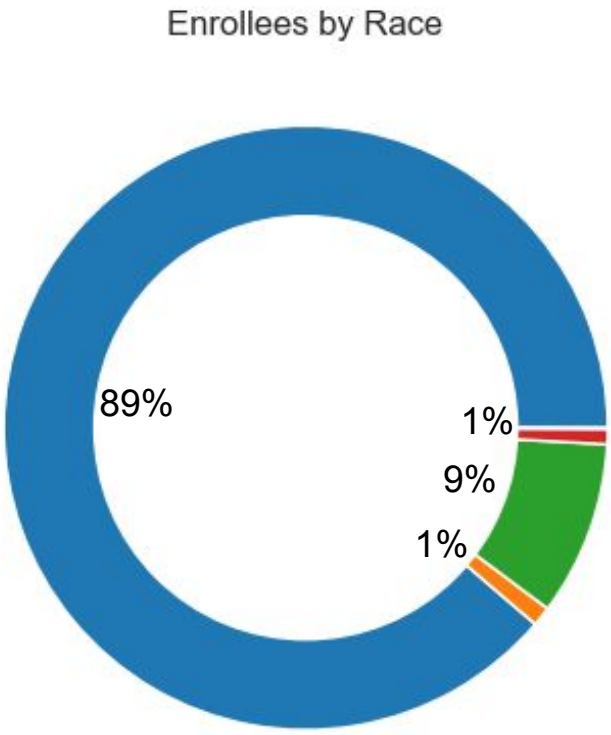


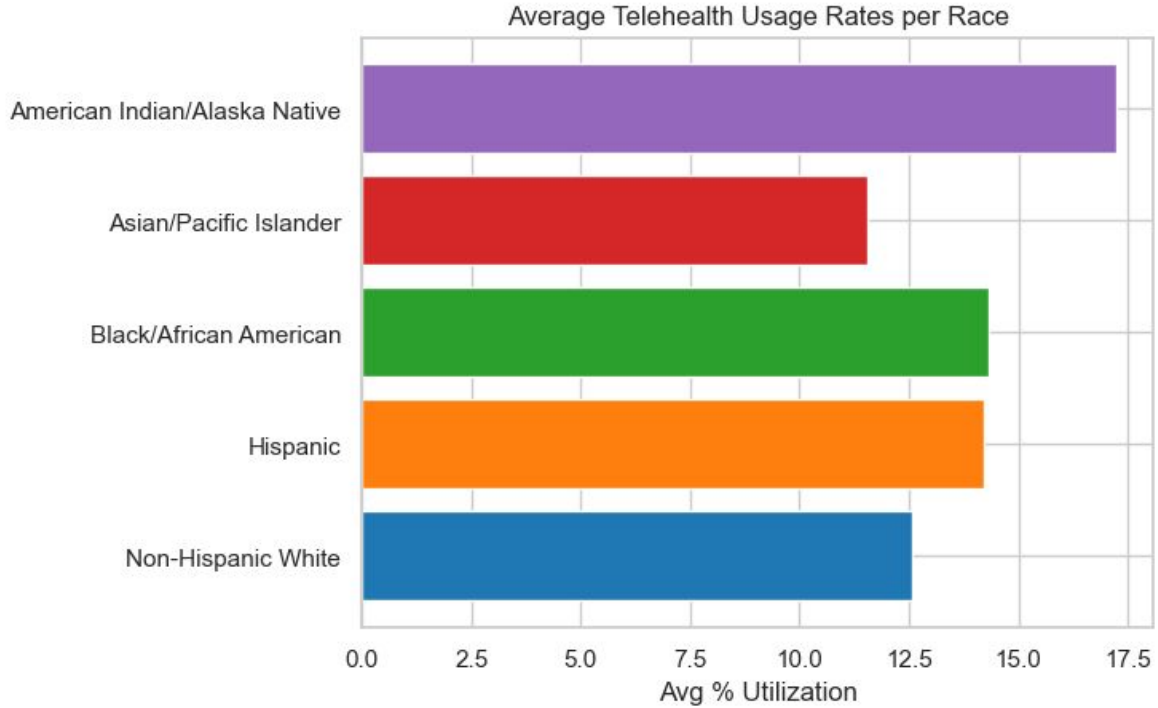
TN Medicare - Demographic Trends

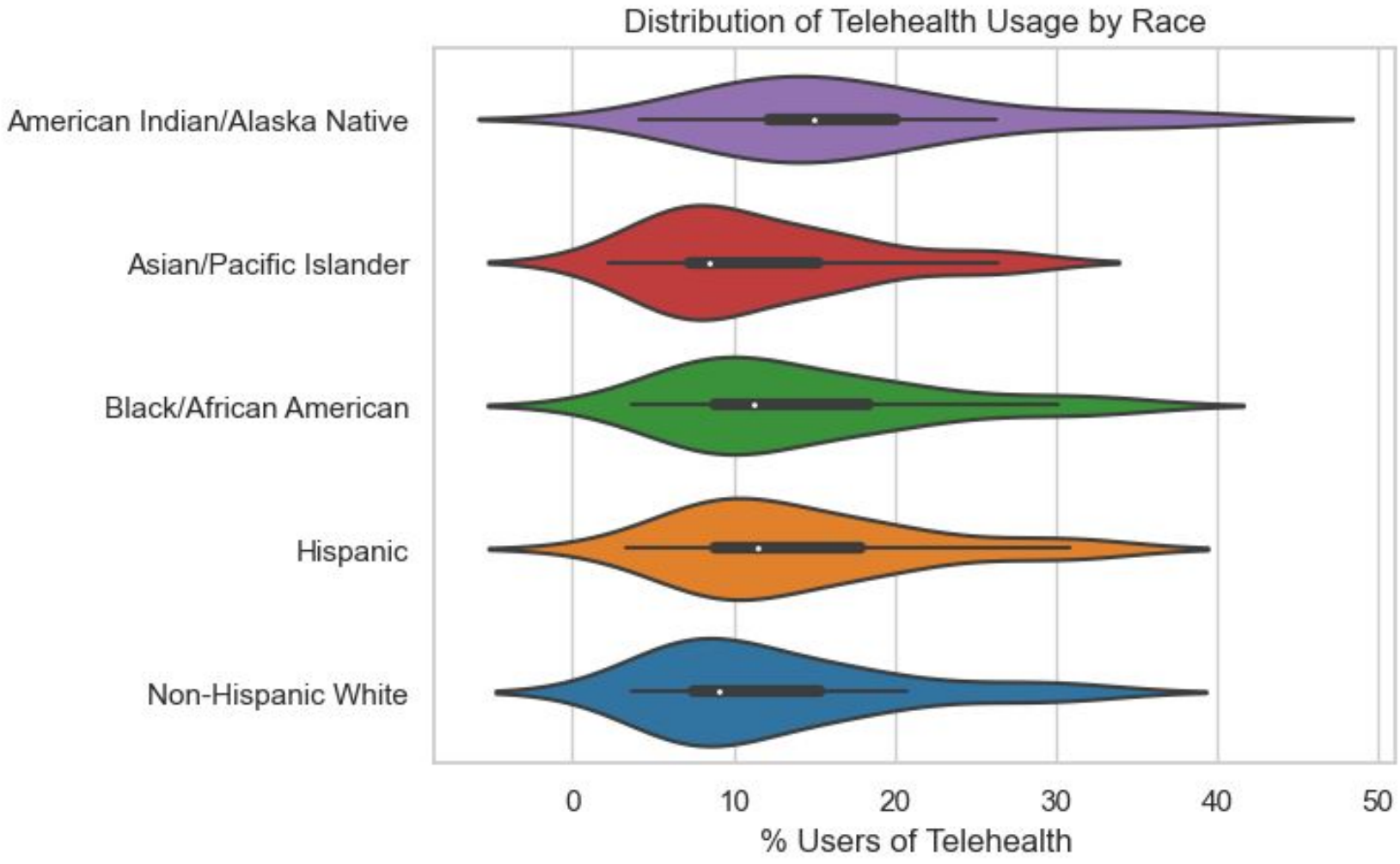
Telehealth trends are broken down by:

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

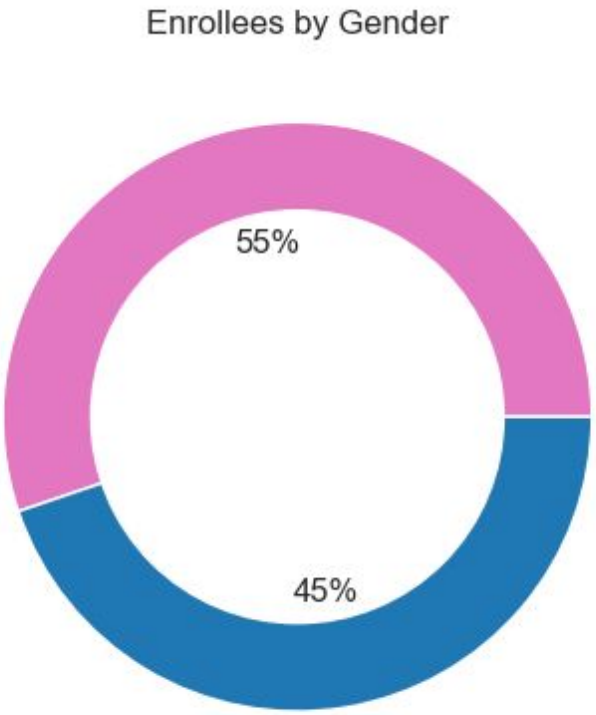
TN Medicare Demographics - Race

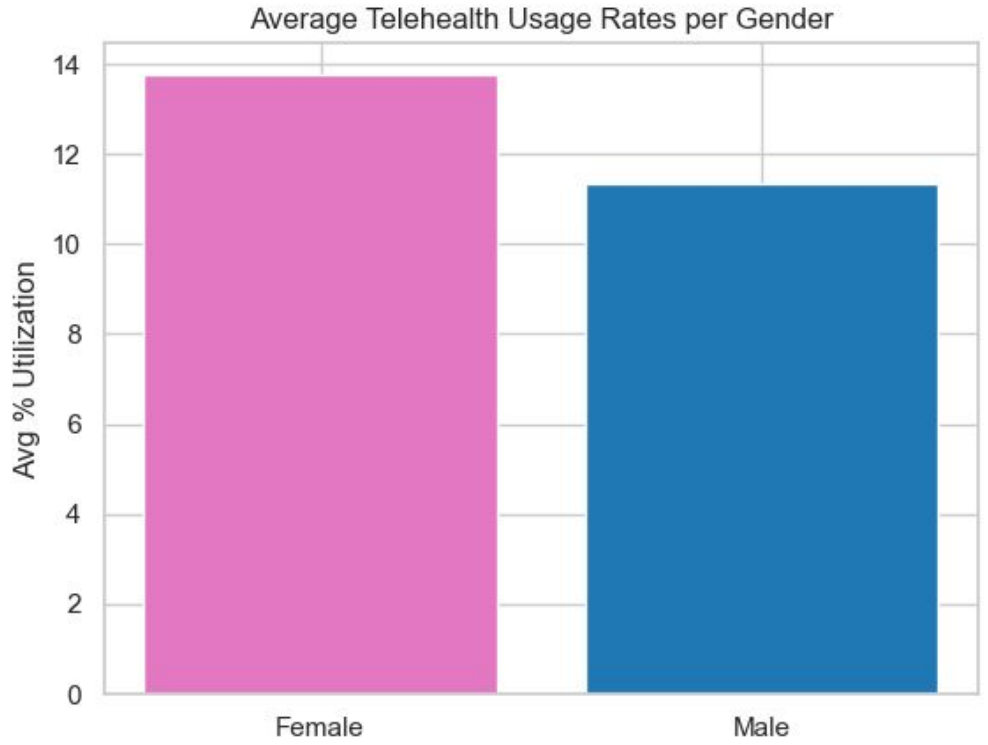


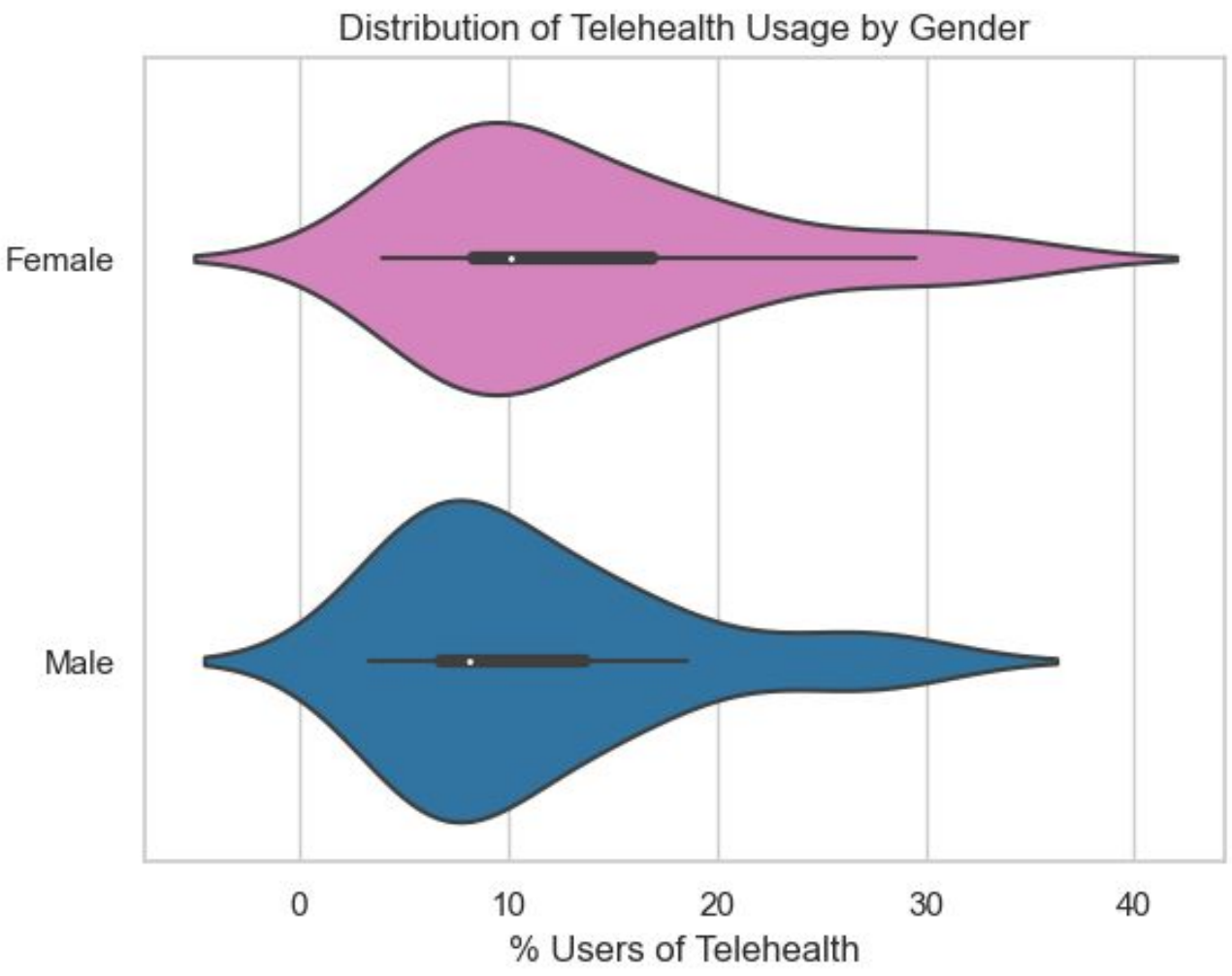



Distribution of Telehealth Usage by Race
American Indian/Alaska Native
Asian/Pacific Islander
Black/African American
Hispanic
Non-Hispanic White
0
10
20
30
40
50
% Users of Telehealth

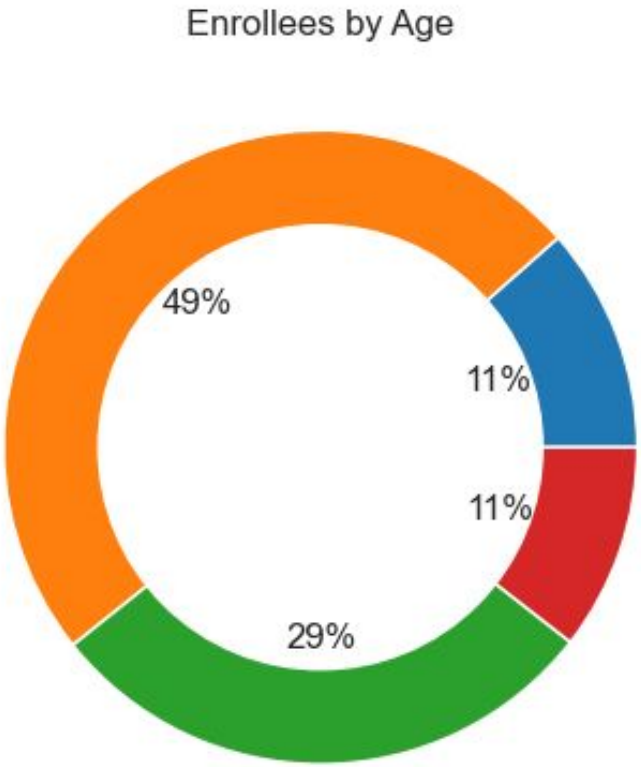
TN Medicare Demographics - Gender

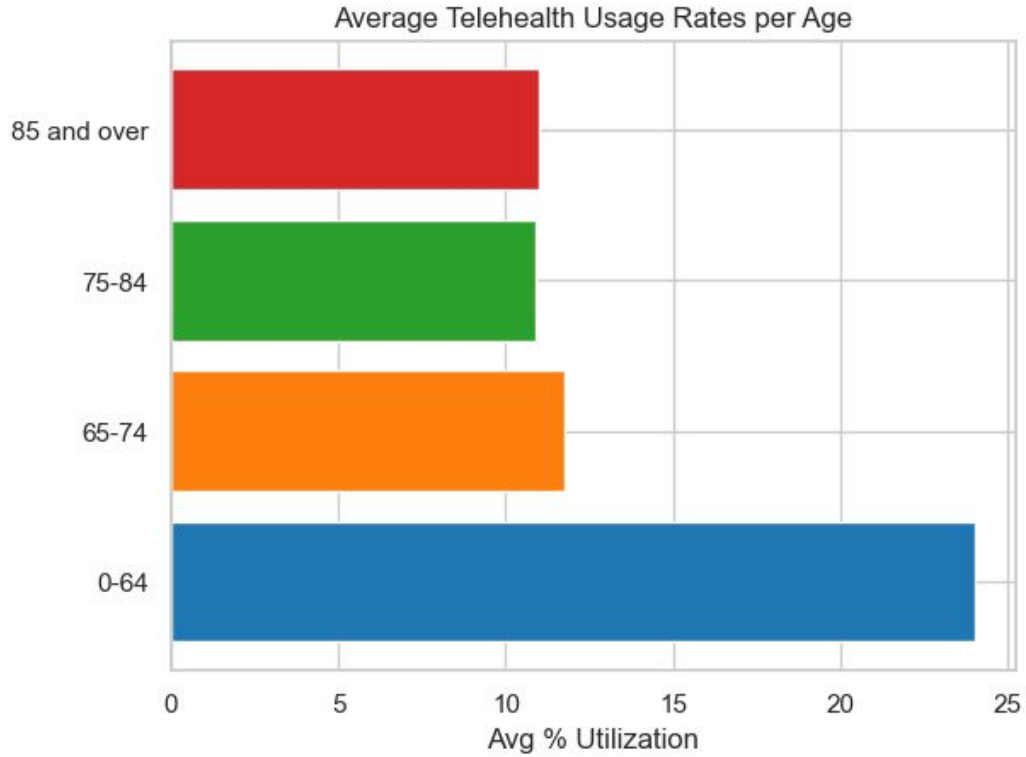


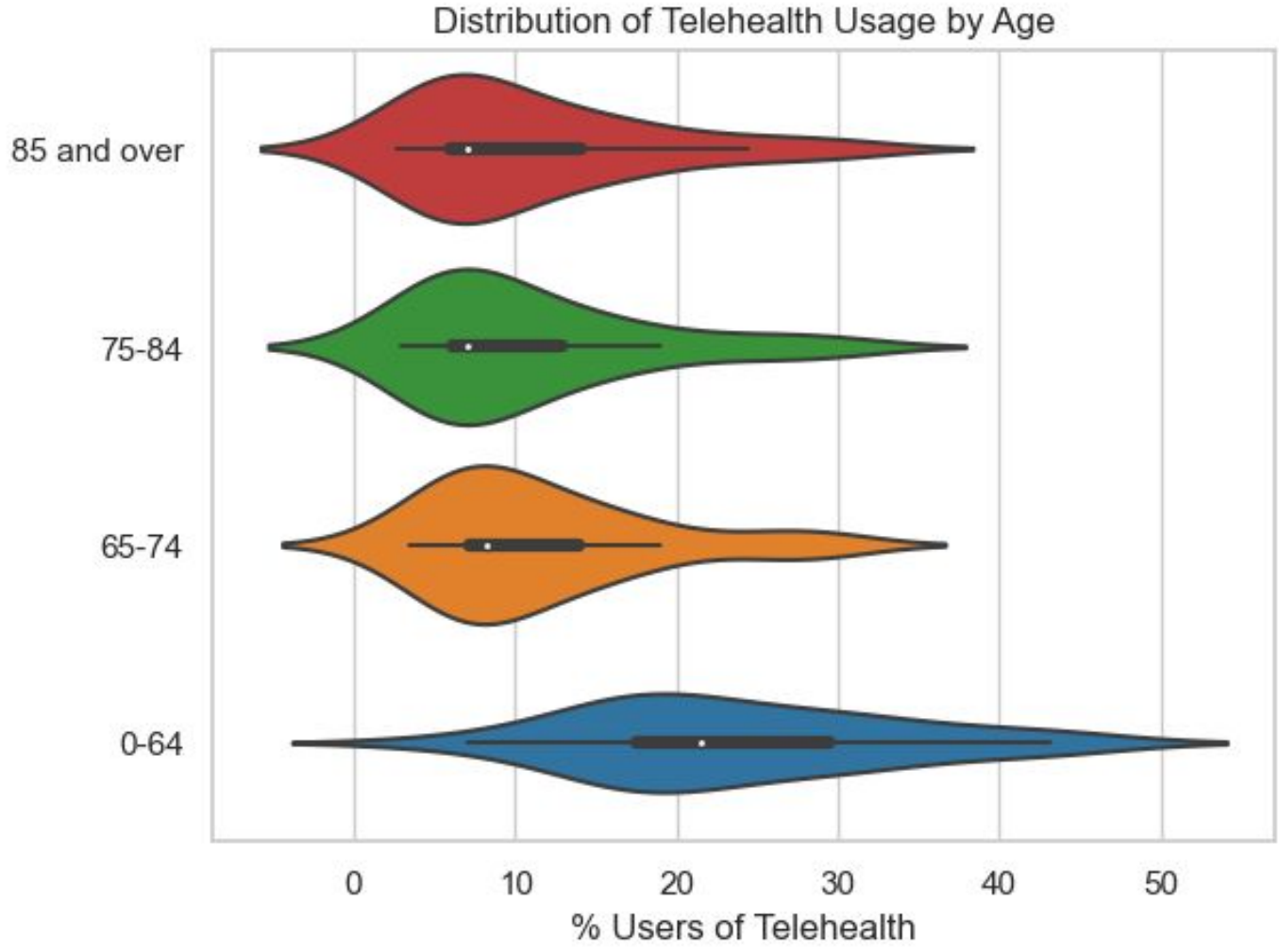



Distribution of Telehealth Usage by Gender
Female
Male
0
10
20
30
40
% Users of Telehealth

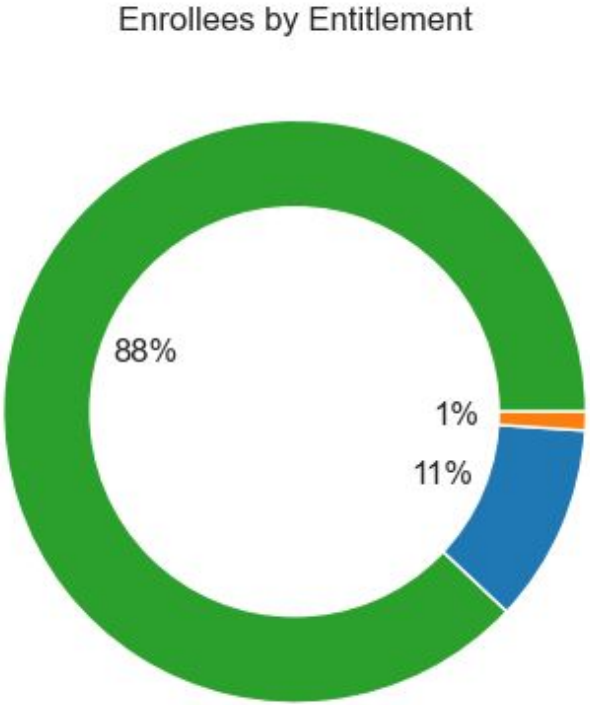
TN Medicare Demographics - Age Group

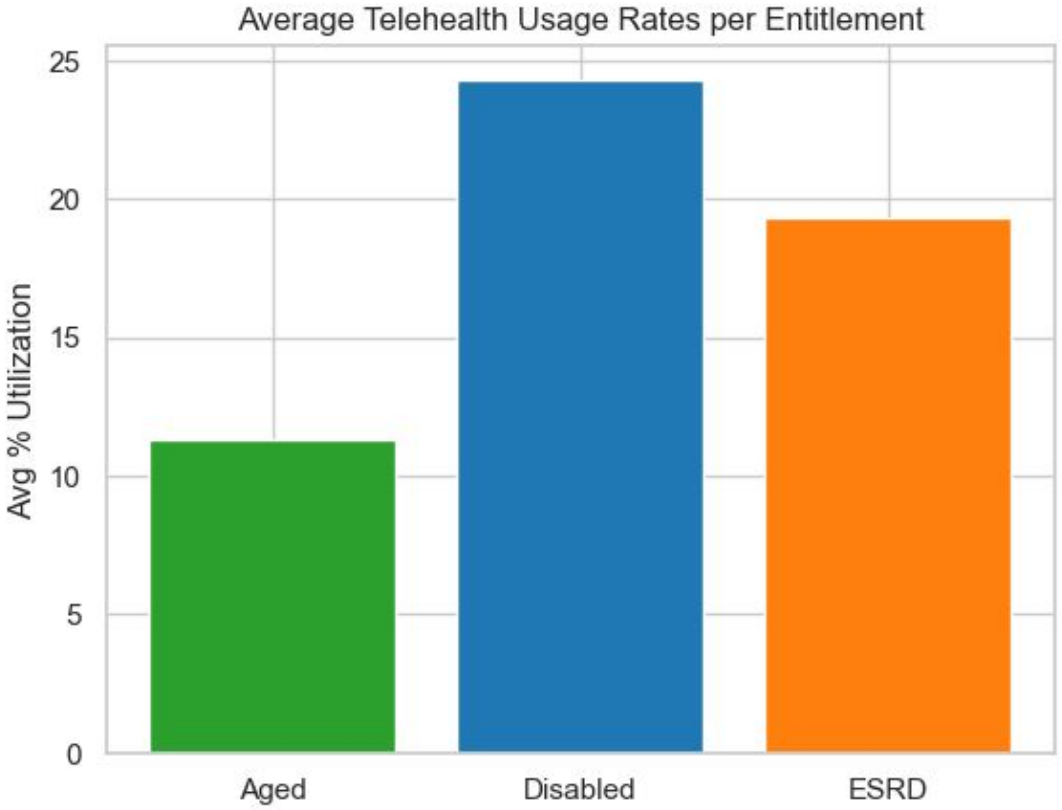


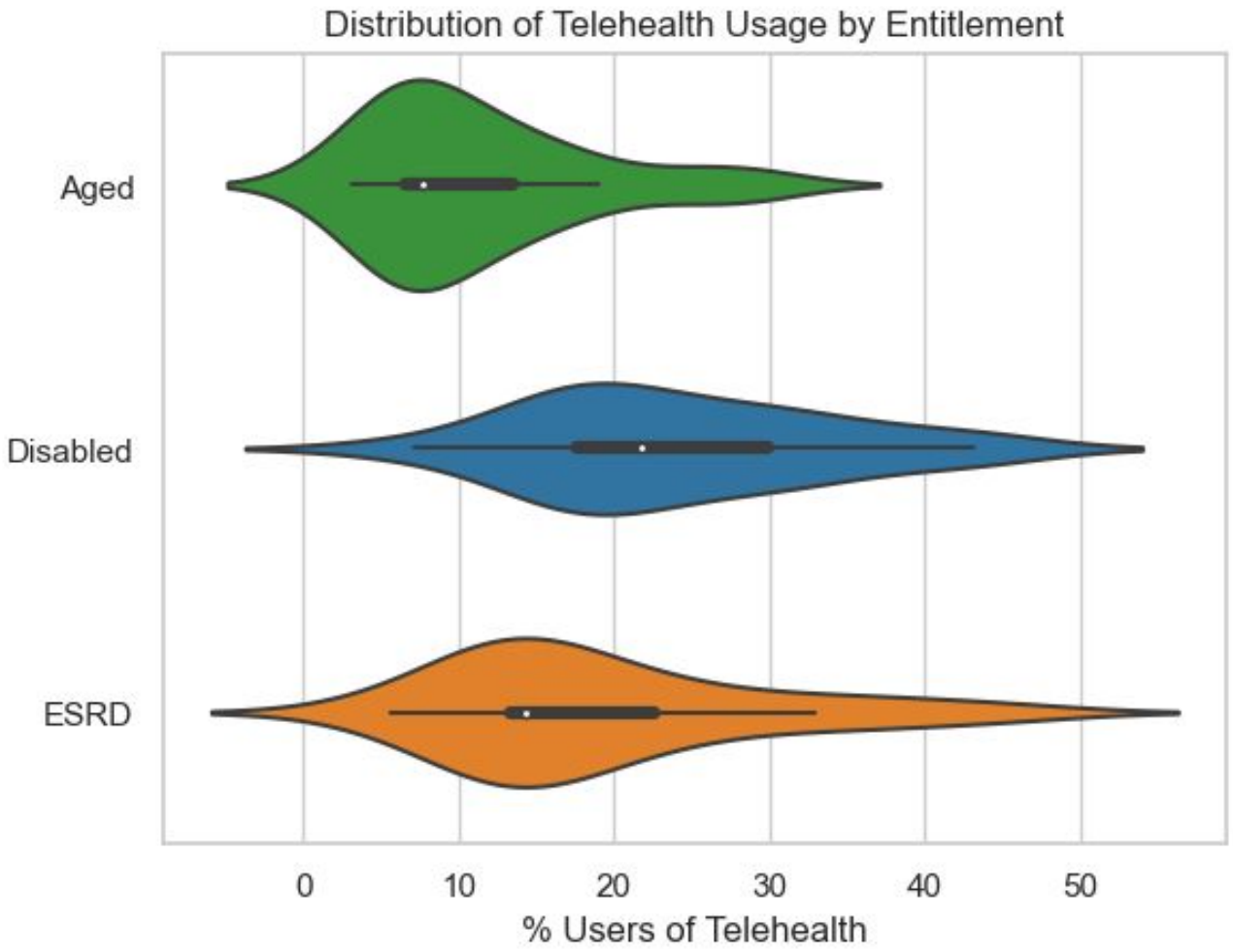



Distribution of Telehealth Usage by Age
85 and over
75-84
65-74
0-64
0
10
20
30
40
50
% Users of Telehealth

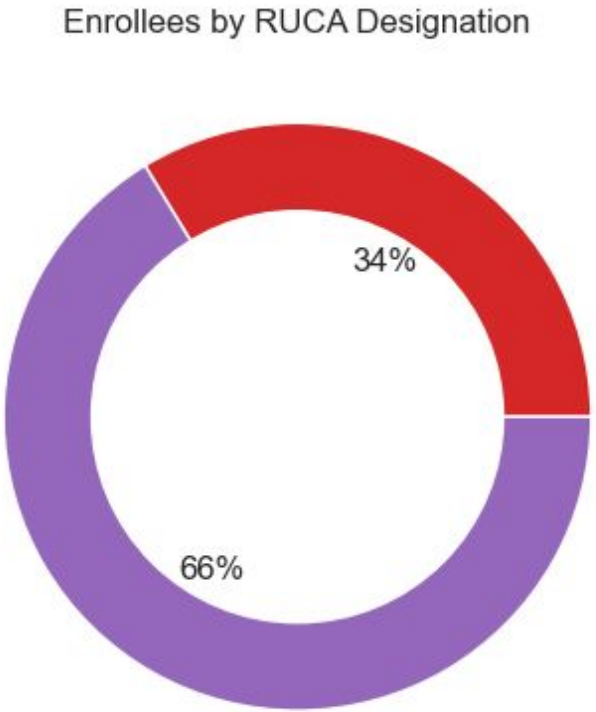
TN Medicare Demographics - Entitlement

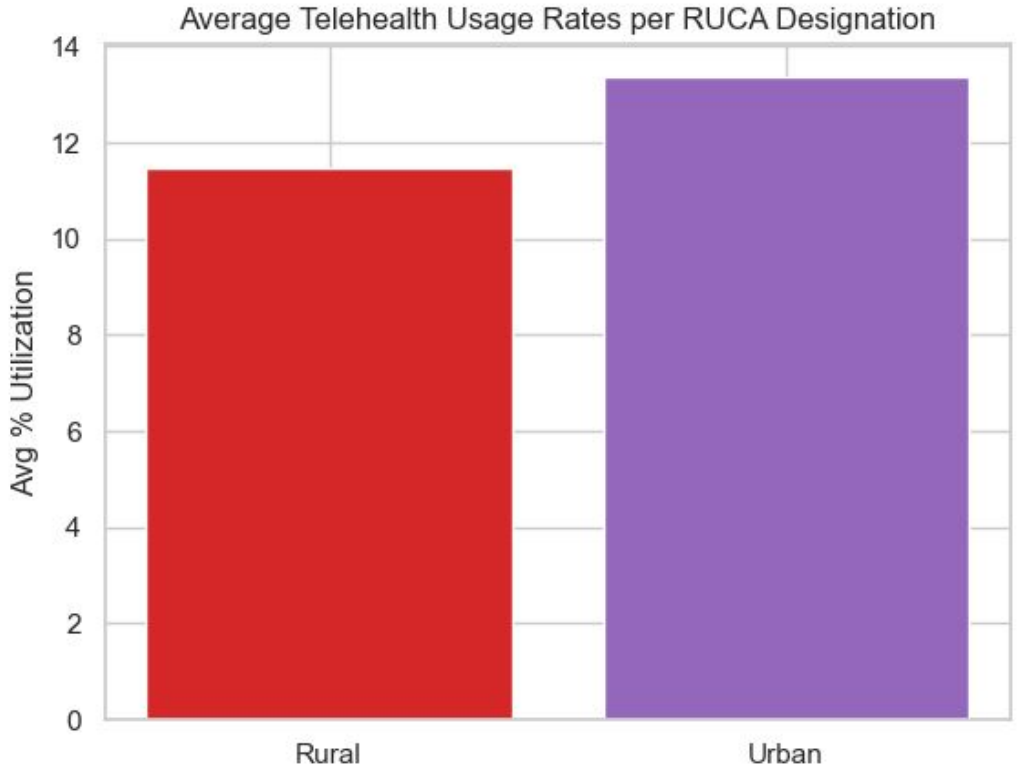


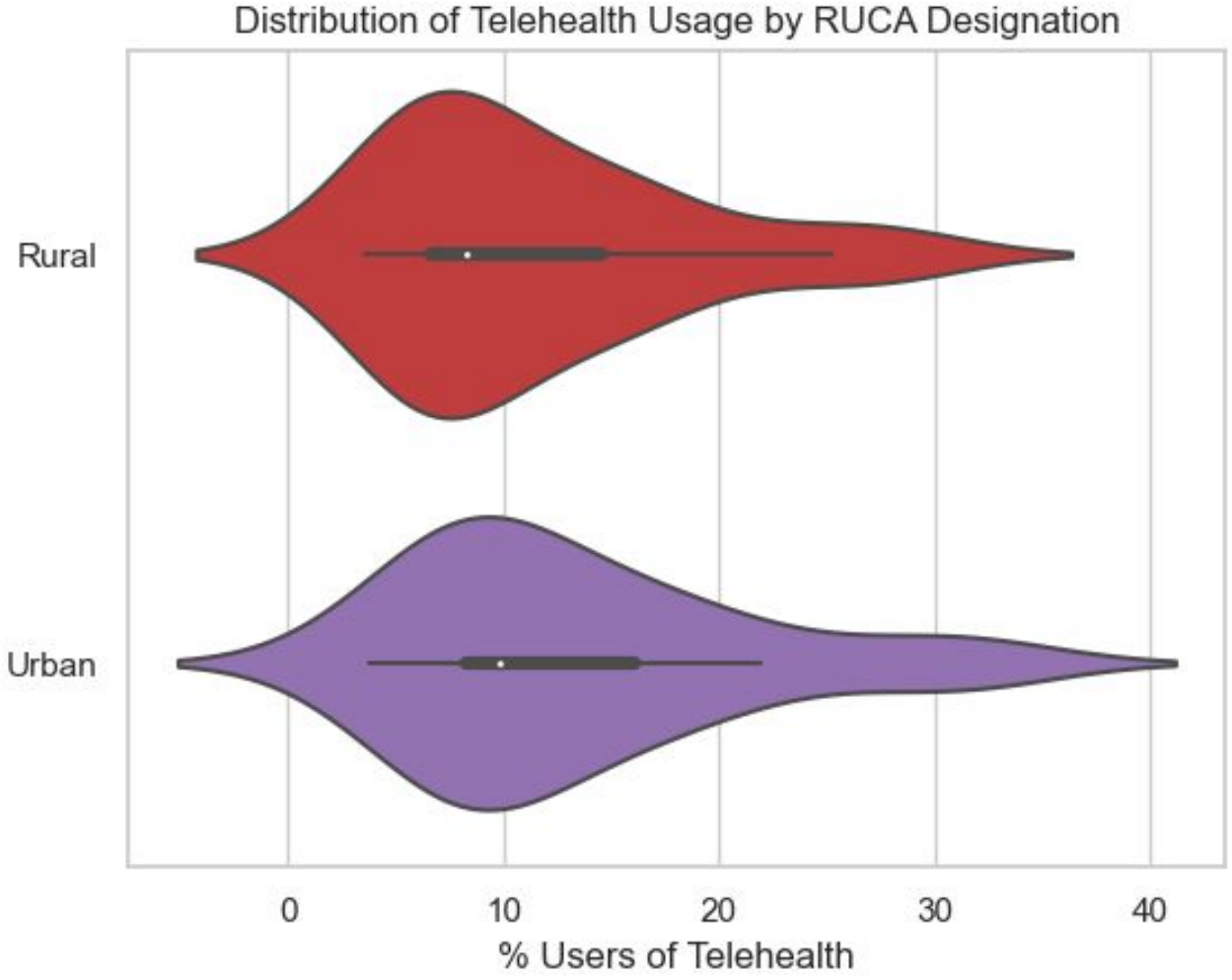



Distribution of Telehealth Usage by Entitlement
Aged
Disabled
ESRD
0
10
20
30
40
50
% Users of Telehealth

TN Medicare Demographics - RUCA Designation






Distribution of Telehealth Usage by RUCA Designation
Rural
Urban
0
10
20
30
40
% Users of Telehealth

Telehealth Applications for Rural Populations

Challenges:

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

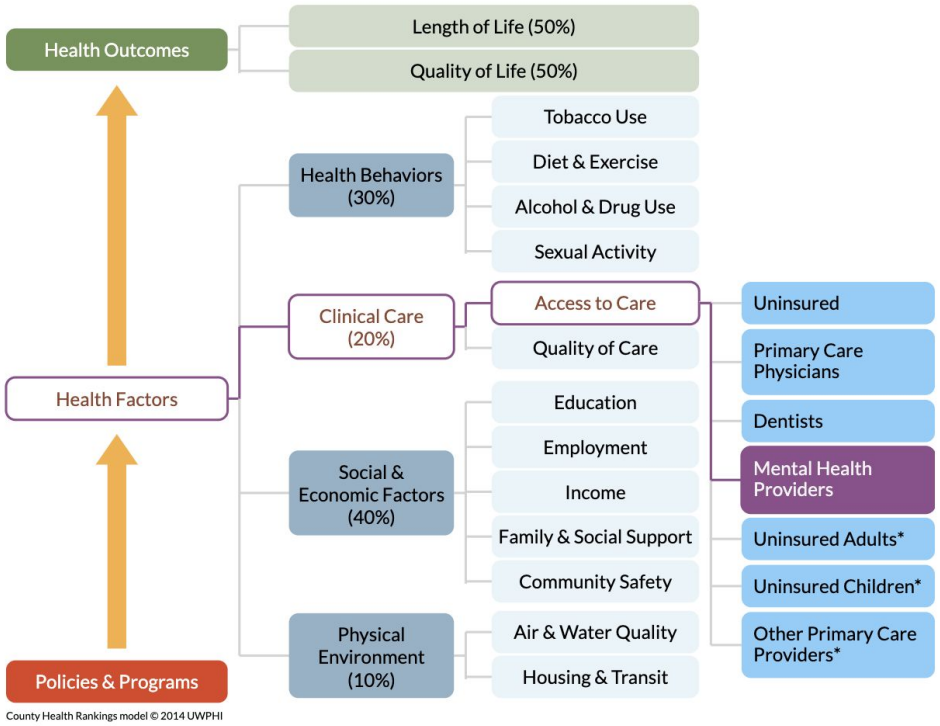
Potential Applications:

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

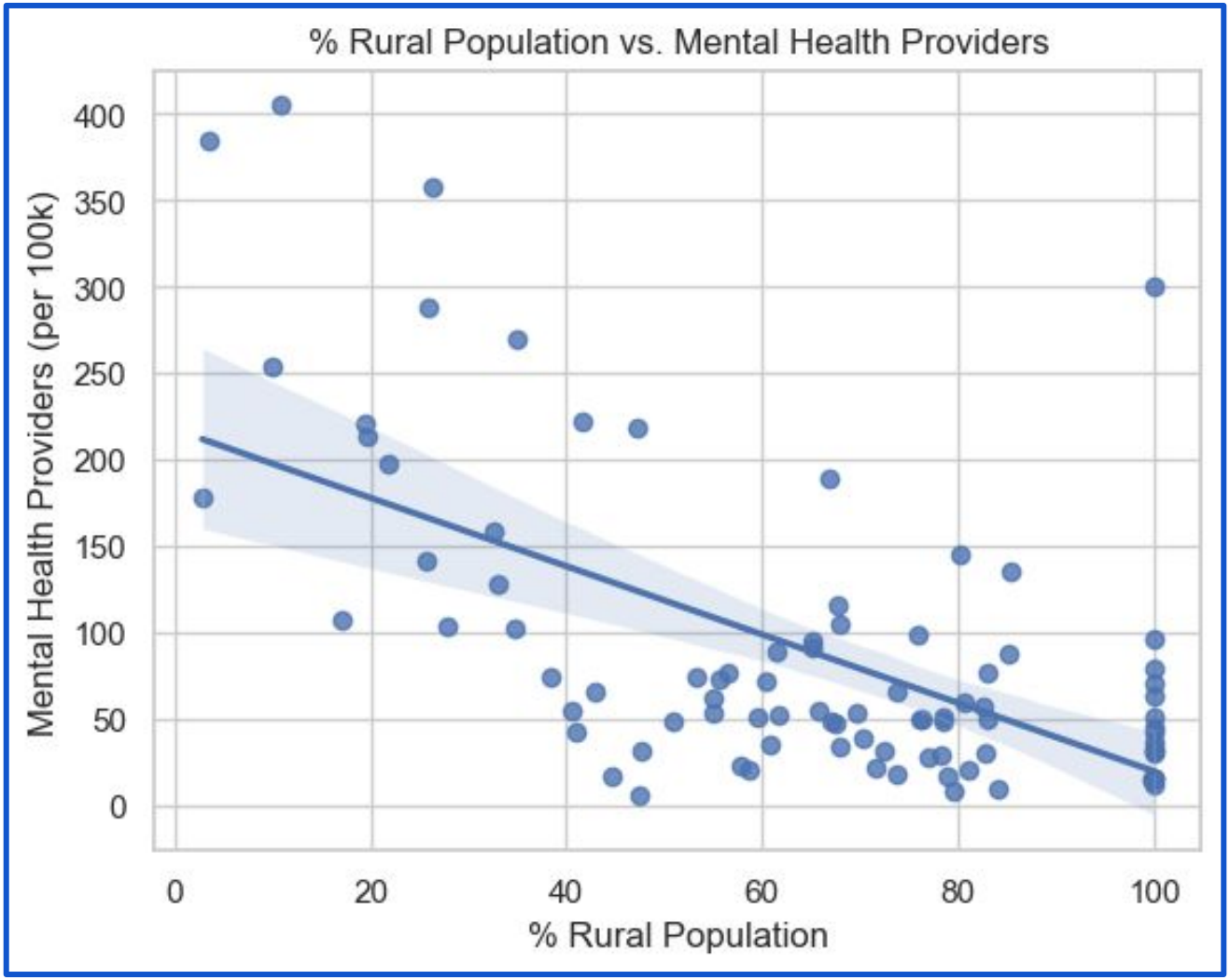
The TN Rural Health Care Task Force recommends investing in telehealth infrastructure, in line with federal initiatives

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)



- 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

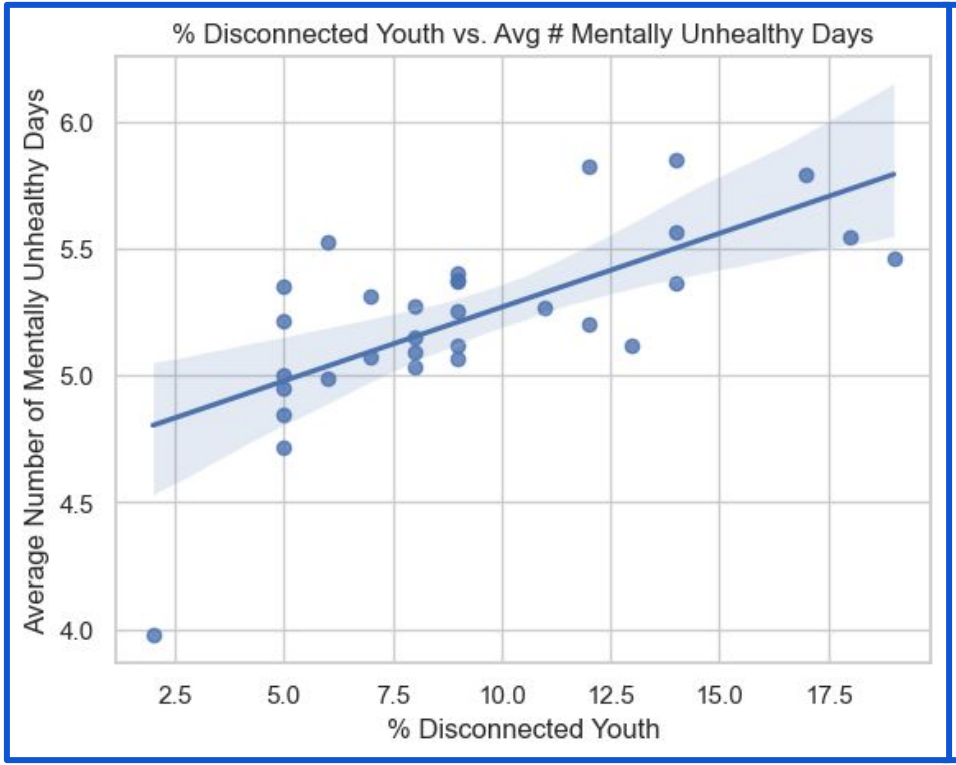

% Rural Population vs. Mental Health Providers
Mental Health Providers (per 100k)
400
350
300
250
200
150
100
50
0
0
20
40
60
80
100
% Rural Population

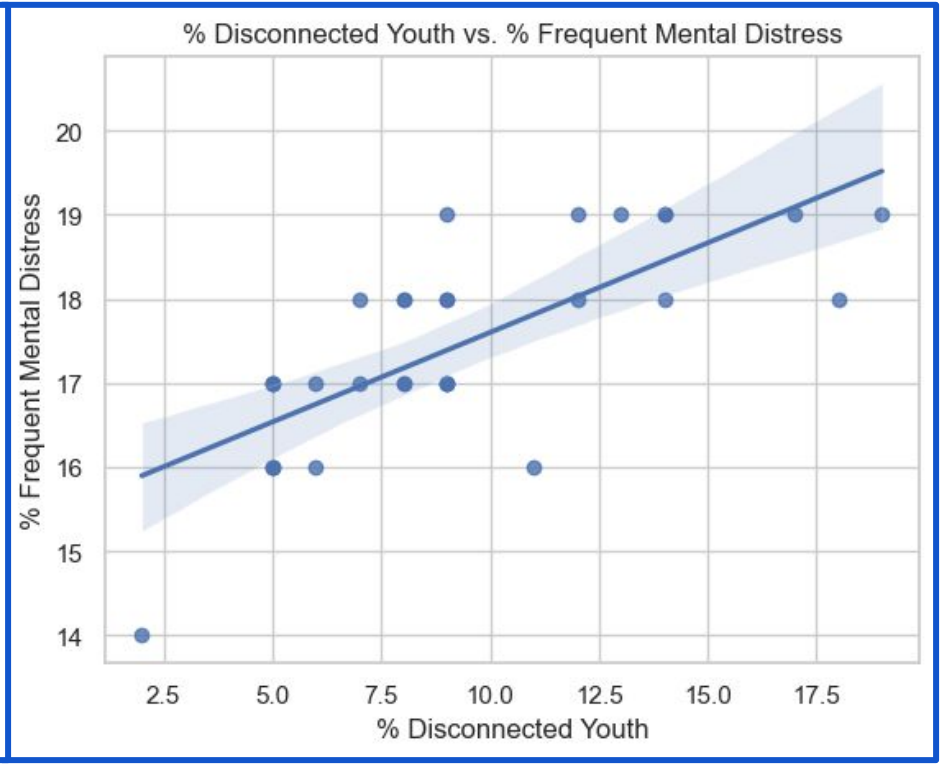
Who are Disconnected Youths?

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

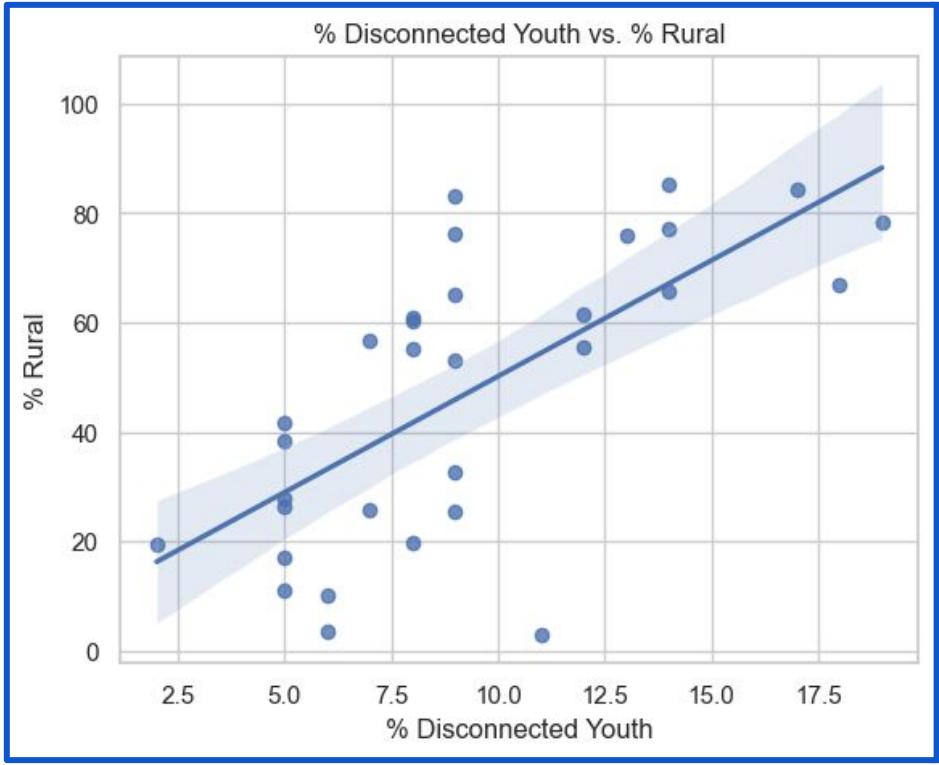
- 5.5 Million disconnected youth in the US
- Heavy toll on society when teens lack training or education opportunities
- Rural counties are disproportionately affected
- National average is 12.1%
- TN average is 13.5%
- Black youth in TN are the most affected population, at 22.9%
- The report also has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

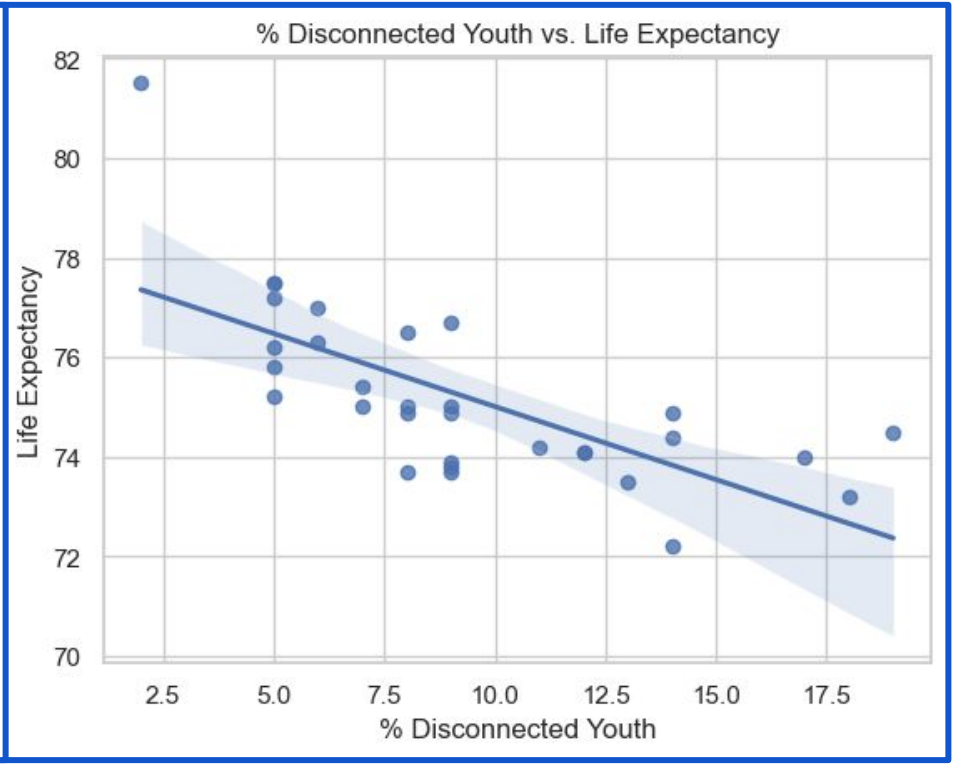
Disconnected Youth vs. Mental Health

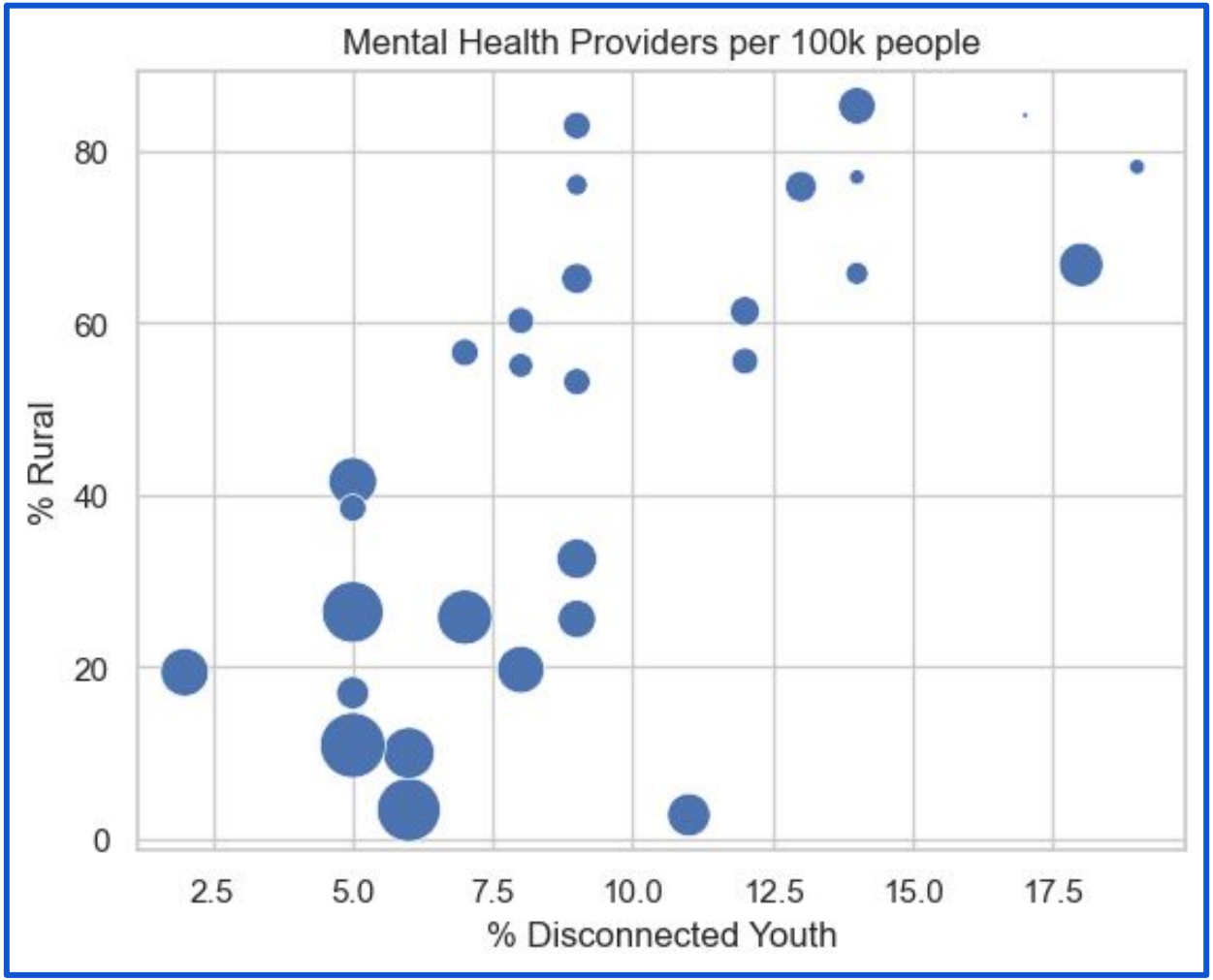




Disconnected Youth - % Rural and Life Expectancy



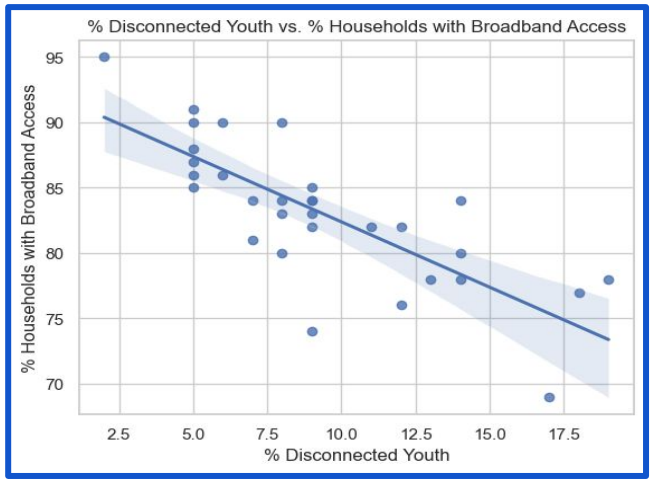


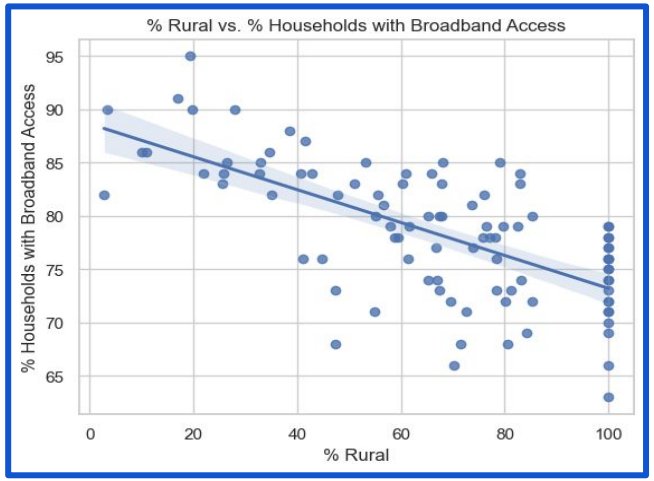

Mental Health Providers per 100k people
% Rural
0
20
40
60
80
2.5
5.0
7.5
10.0
12.5
15.0
17.5
% Disconnected Youth

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."[1]
  - "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"[2]

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





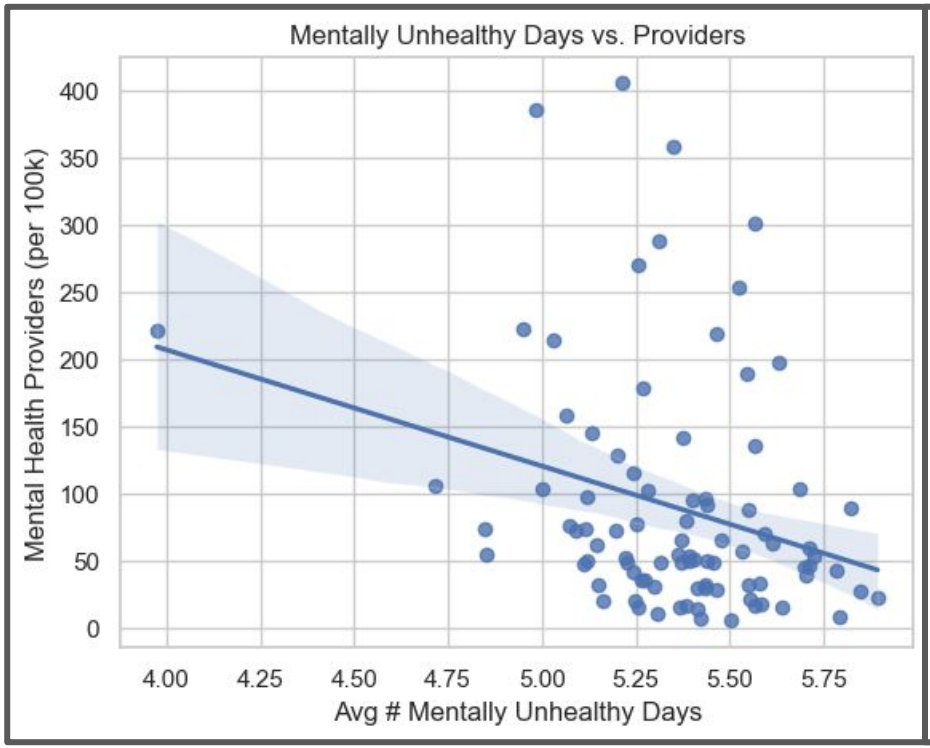
Challenges	Solutions
Broadband Access	• Remote Patient Monitoring • Store & Forward
State Medicare & Medicaid Policies	• Change policy language • Raise awareness of non-live telehealth • Medicaid Policy Maps: https://www.cchpca.org/policy-trends/
Technical Literacy	• Transparent, low-barrier online scheduling • Mobile health apps

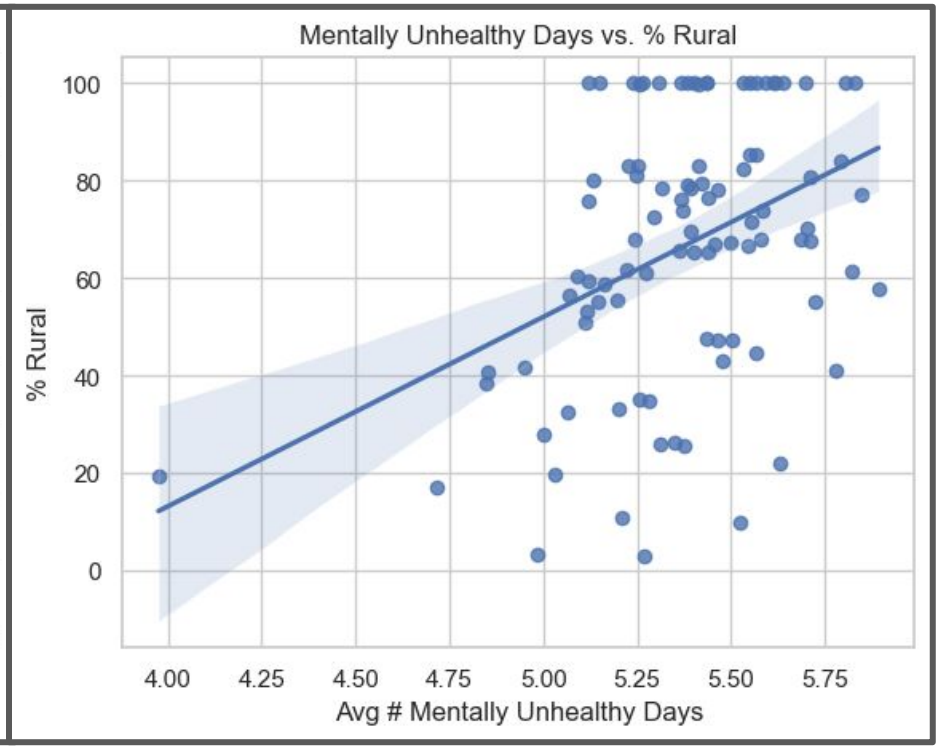
Further Research

Additional Articles & Resources:

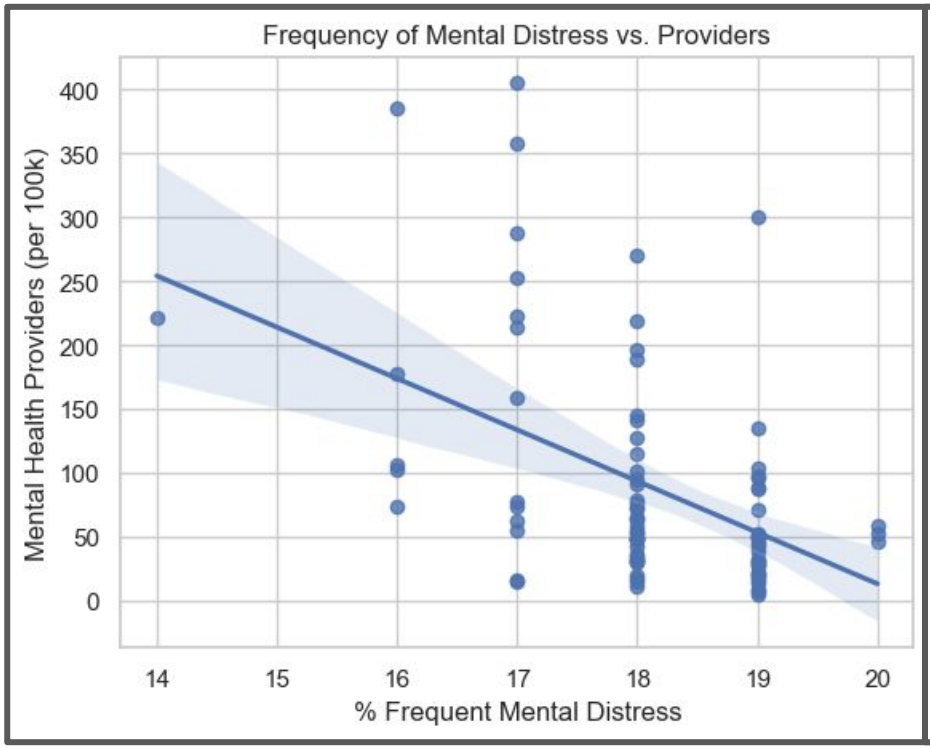
- Telehealth.HHS.gov - Additional research articles and papers on the impact and uses of telehealth, maintained by the HRSA Office for Advancement of Telehealth
- CHRR Strategies for Telehealth - Strategy guides with extensive research notes and citations. Includes evidence-informed strategies to create 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

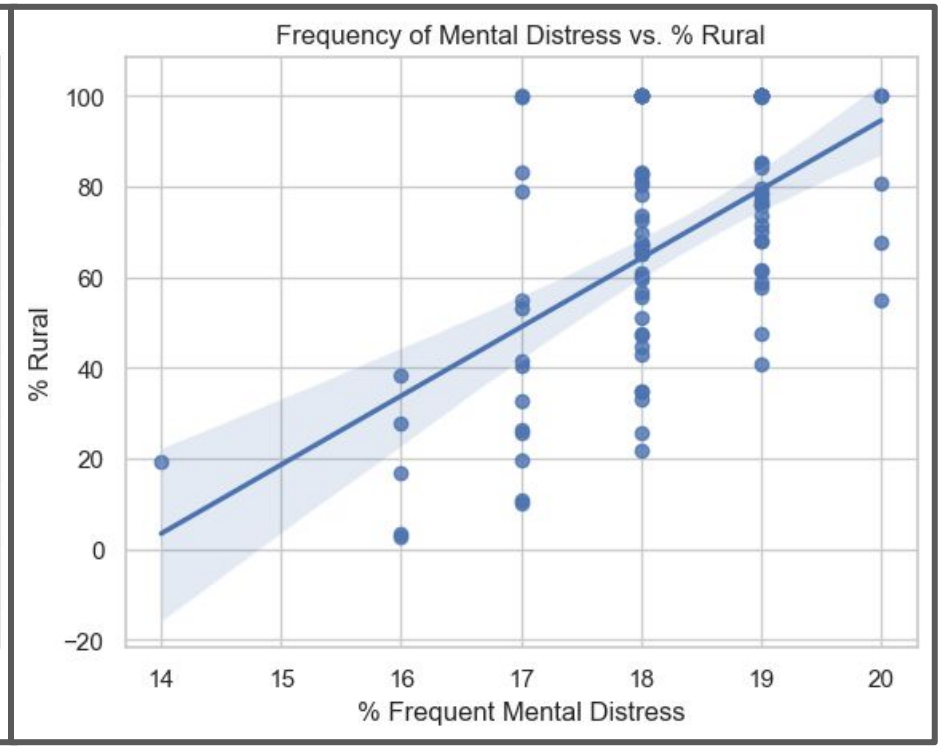
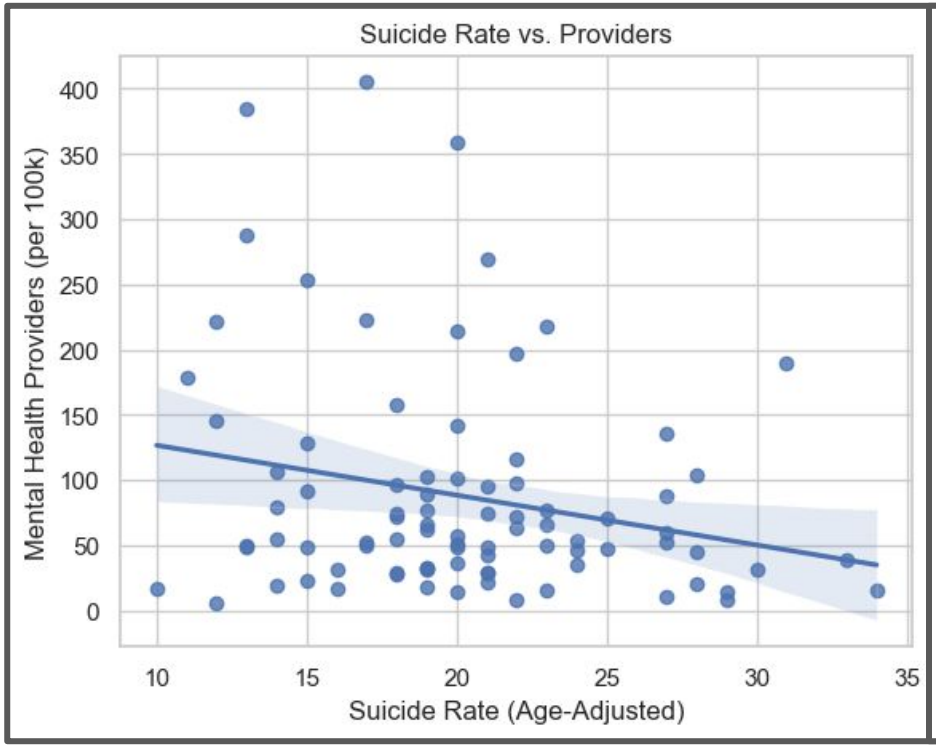
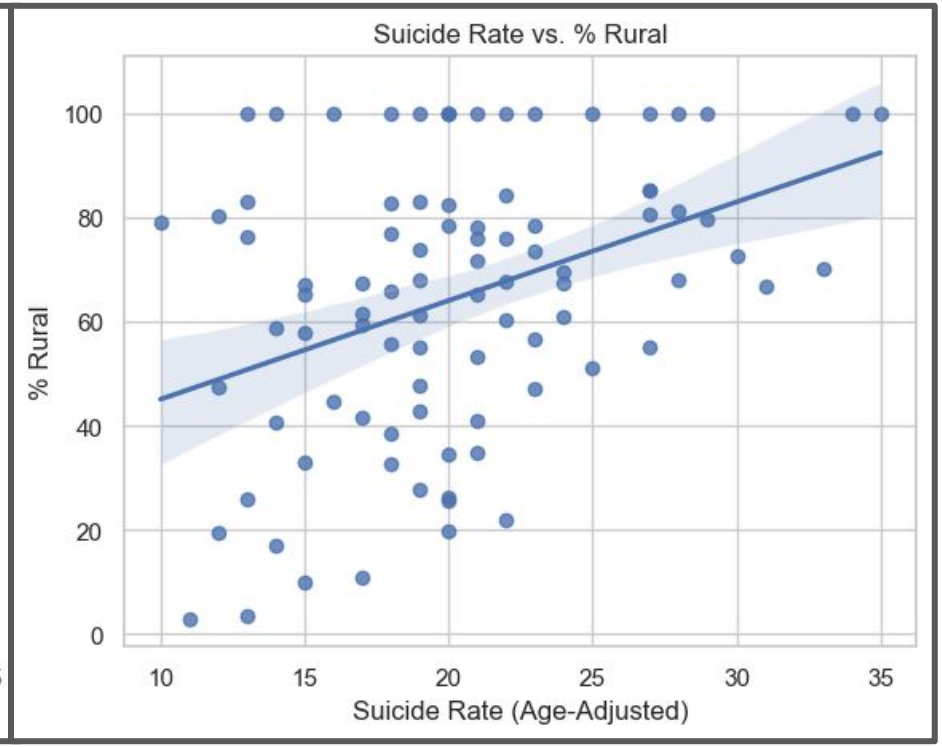
Avg # of Mentally Unhealthy Days





% Frequency of Mental Distress





Age-Adjusted Suicide Rate