



# CARDI•OH

Ohio Cardiovascular and Diabetes Health Collaborative



In partnership with:



## Cardi-OH ECHO

# *Health Equity and Cardiovascular Risk*

October 19, 2023

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# Today's Presenters



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  - Danette Conklin, PhD; Kathleen Dungan, MD, MPH; Adam T. Perzynski, PhD; Christopher A. Taylor, PhD, RDN, LD, FAND; Jackson Wright, MD, PhD
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# Telemedicine and Health Equity

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# Learning Objectives



1. Describe disparities in use of technology for health purposes.
2. Describe strategies to prepare patients to participate in telemedicine.
3. Describe a minimum of two initiatives to mitigate cardiovascular risk among rural residents.

# Telehealth Has Grown Rapidly

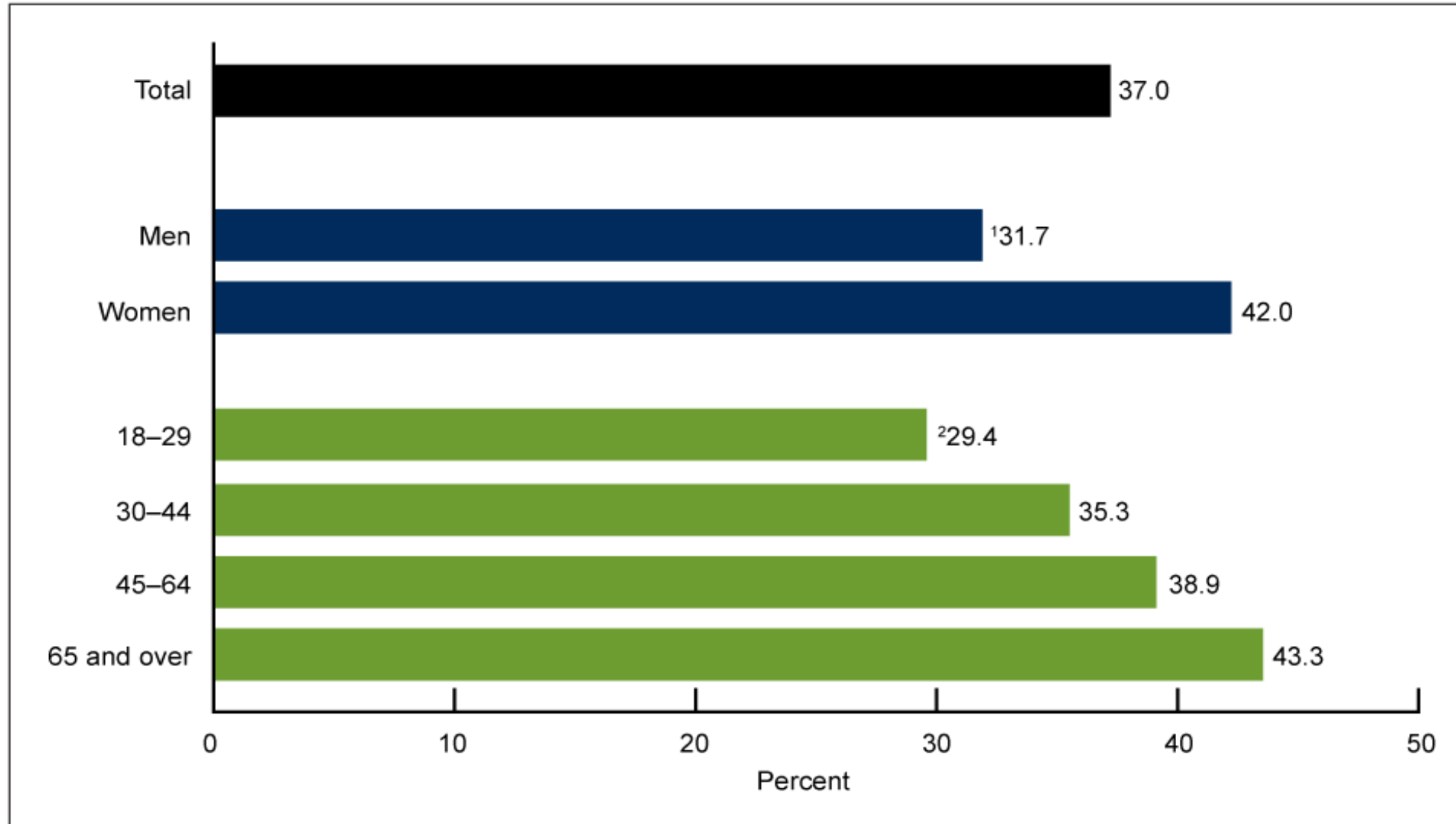


- Telemedicine estimated to grow 80% from baseline in 2020 alone
- Telemedicine, telehealth, m-health, e-health etc.
- Patients like to avoid COVID & traffic

Dryda, L. *Telehealth may see big long-term gains due to COVID-19: 10 observations*. April 17, 2020–October 22, 2020]; Available from: <https://www.beckershospitalreview.com/telehealth/telehealth-may-see-big-long-term-gains-due-to-covid-19-10-observations.html>.

Ufholz K, Sheon A, Bhargava D, Rao G Telemedicine Preparedness Among Older Adults With Chronic Illness: Survey of Primary Care Patients JMIR Form Res 2022;6(7):e35028  
doi: [10.2196/35028](https://doi.org/10.2196/35028)

Figure 1. Percentage of adults aged 18 and over who used telemedicine in the past 12 months, by sex and age: United States, 2021



<sup>1</sup>Significantly different from women ( $p < 0.05$ ).

<sup>2</sup>Significant linear trend by age ( $p < 0.05$ ).

NOTES: Telemedicine use is defined as an appointment with a doctor, nurse, or other health professional by video or phone. Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population. Access data table for Figure 1 at: <https://www.cdc.gov/nchs/data/databriefs/db445-tables.pdf#1>.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2021.

# Telemedicine Works!



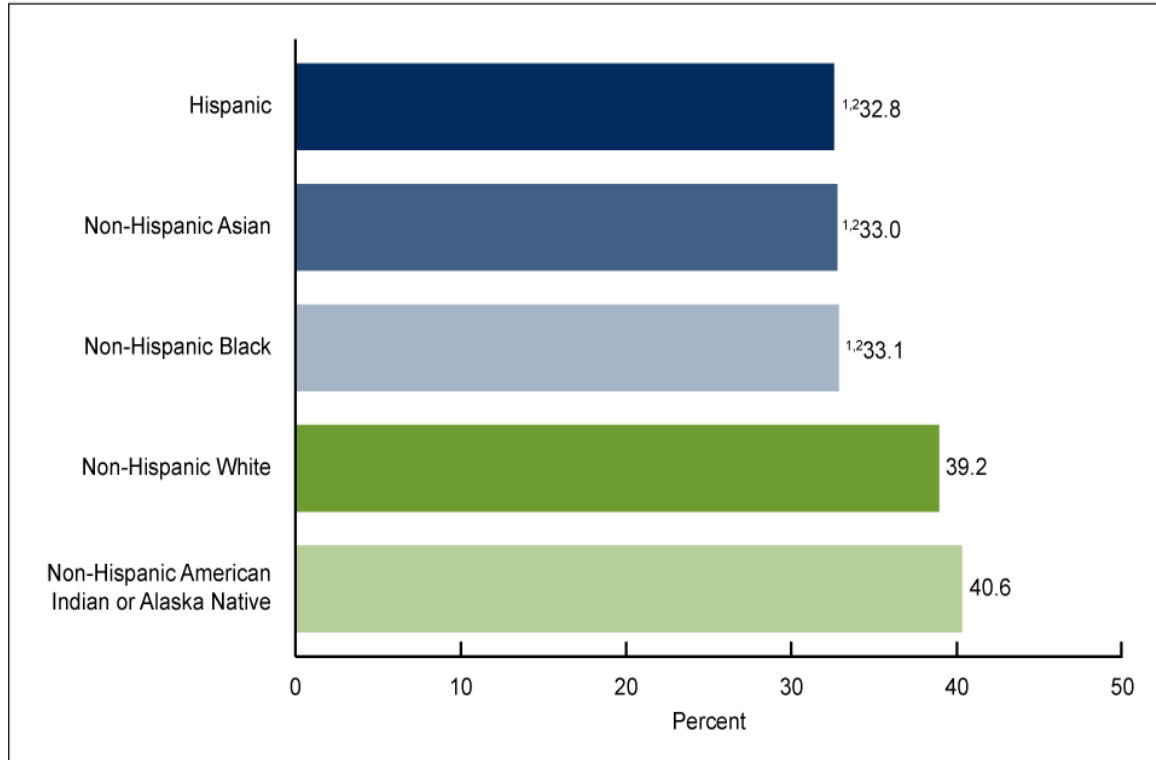
- Primary care patients who received 12 weeks of diabetes self-management counseling by telemedicine showed improvements in HbA1c, blood pressure, body weight, and diabetes care self-efficacy compared to control
- Meta-analysis of 42 RCTs (telemed vs. usual care) for diabetes showed significantly:
  - **Greater** HbA1c reductions (mean difference for telemedicine vs usual care = -0.37; 95% CI -0.43, -0.31) ( $p < 0.001$ ).
  - Especially for older patients (age > 50) (mean difference = -1.05; 95% CI -1.50, -0.60), ( $p > 0.01$ )



# Telehealth is a health equity issue



Figure 2. Percentage of adults aged 18 and over who used telemedicine in the past 12 months, by race and Hispanic origin: United States, 2021



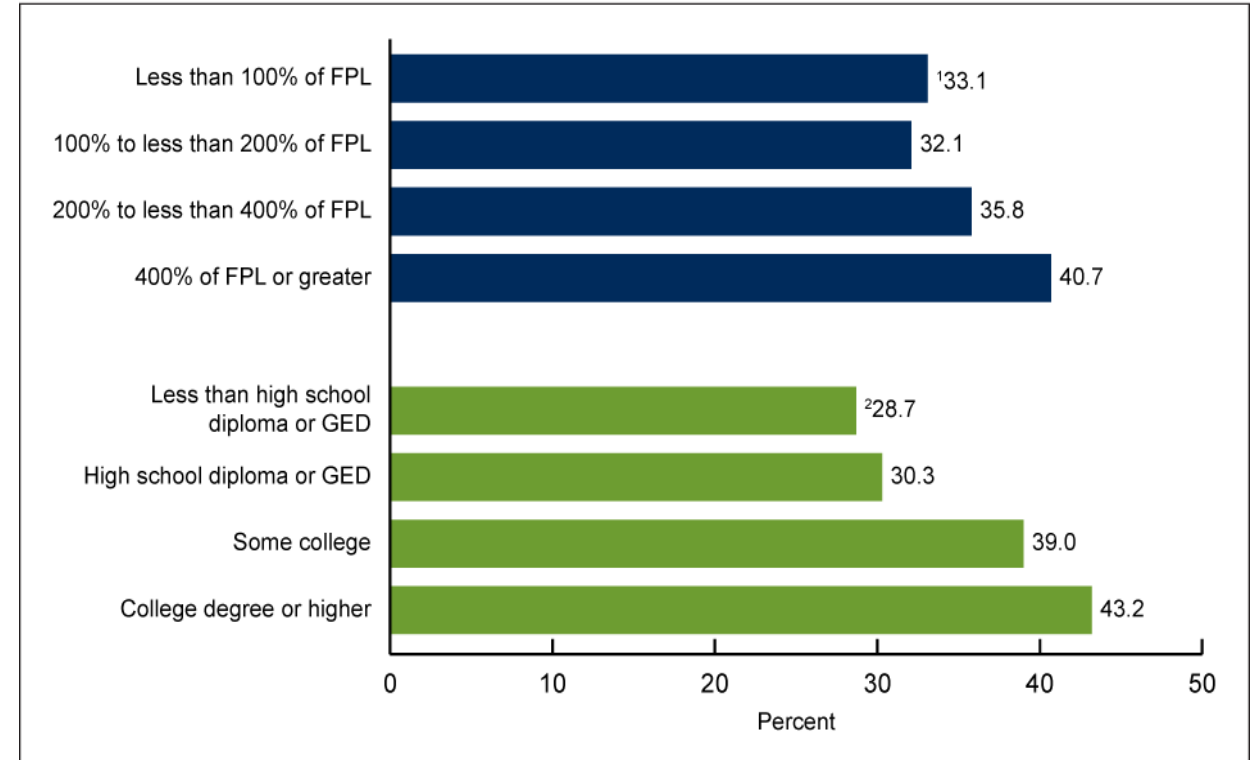
<sup>1</sup>Significantly different from non-Hispanic White adults ( $p < 0.05$ ).

<sup>2</sup>Significantly different from non-Hispanic American Indian or Alaska Native adults ( $p < 0.05$ ).

NOTES: Telemedicine use is defined as an appointment with a doctor, nurse, or other health professional by video or phone. Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population. Access data table for Figure 2 at: <https://www.cdc.gov/nchs/data/databriefs/db445-tables.pdf#2>.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2021.

Figure 3. Percentage of adults aged 18 and over who used telemedicine in the past 12 months, by family income and education level: United States, 2021



<sup>1</sup>Significant quadratic trend by family income as a percentage of FPL ( $p < 0.05$ ).

<sup>2</sup>Significant linear trend by education level ( $p < 0.05$ ).

NOTES: Telemedicine use is defined as an appointment with a doctor, nurse, or other health professional by video or phone. FPL is federal poverty level. Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population. Access data table for Figure 3 at: <https://www.cdc.gov/nchs/data/databriefs/db445-tables.pdf#3>.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2021.

# Patient Readiness at Bolwell Clinic



- Survey of 30 primary care patients (age +65) with a chronic health condition
- Urban clinic, primarily low-income patients
- Feb-June 2021
- 10 question survey written for this study

# Patient Readiness at Bolwell Clinic

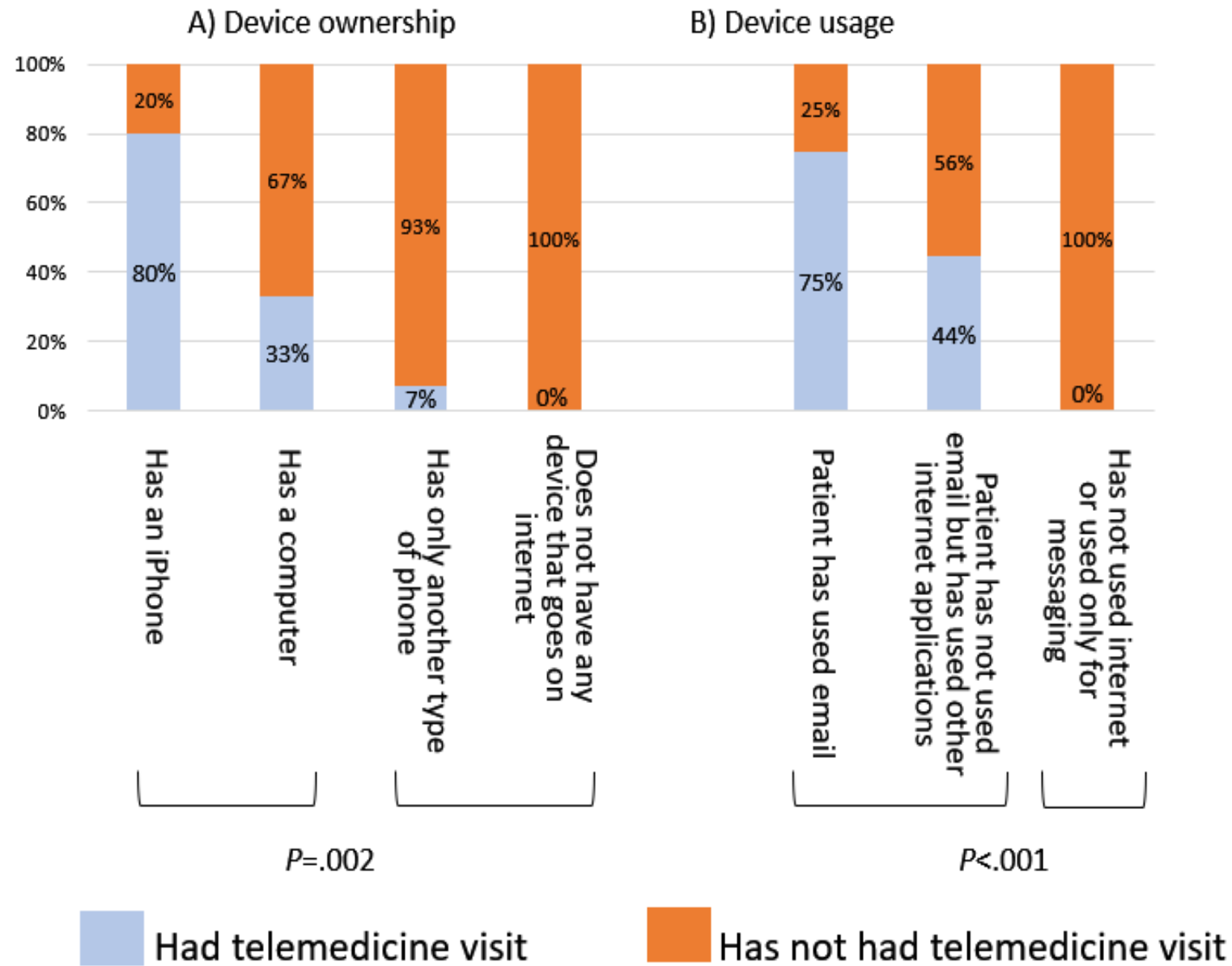


- Out of 30 respondents:
- 25 (83%) had telemedicine-capable devices & used the internet
- 7 of 30 (23%) had attended telemedicine visits.
- Few had devices like iPhones (5), desktops, laptops, or tablets (6) that are best suited to telemedicine.
- 14 respondents (47%) had only a single device that was not an iOS-based mobile device

# Patient Readiness at Bolwell Clinic



- All participants with devices said they used them for “messaging on the internet,”
  - Only function used by 12 of 30 respondents (40%).
- No one (0%) used the internet for banking or shopping
- Few used internet functions commonly needed for telemedicine
  - Email: 7 respondents (23%)
  - Video calling: 9 respondents (30%)
- Participants with a computer or iPhone were more likely to have had a telemedicine visit than others ( $\chi^2=9.5$ ;  $P=.002$ ),
- Participants used the internet for email or functions other than messaging ( $\chi^2=11.9$ ;  $P<.001$ ) more likely to have had a telemedicine visit



# Rural Regions



- People in rural areas have limited access to health care, travel long distances for care, and/or delay care until there is an emergency.
- Limited access to care can result in negative health outcomes and increased expenditures for patients and the health care system.
  - Costs include travel to medical care, lost work hours, caregiver and/or childcare costs, etc.
- Telehealth provides an opportunity to reduce these barriers to care in rural areas.

# Rural Regions: Telestroke Services

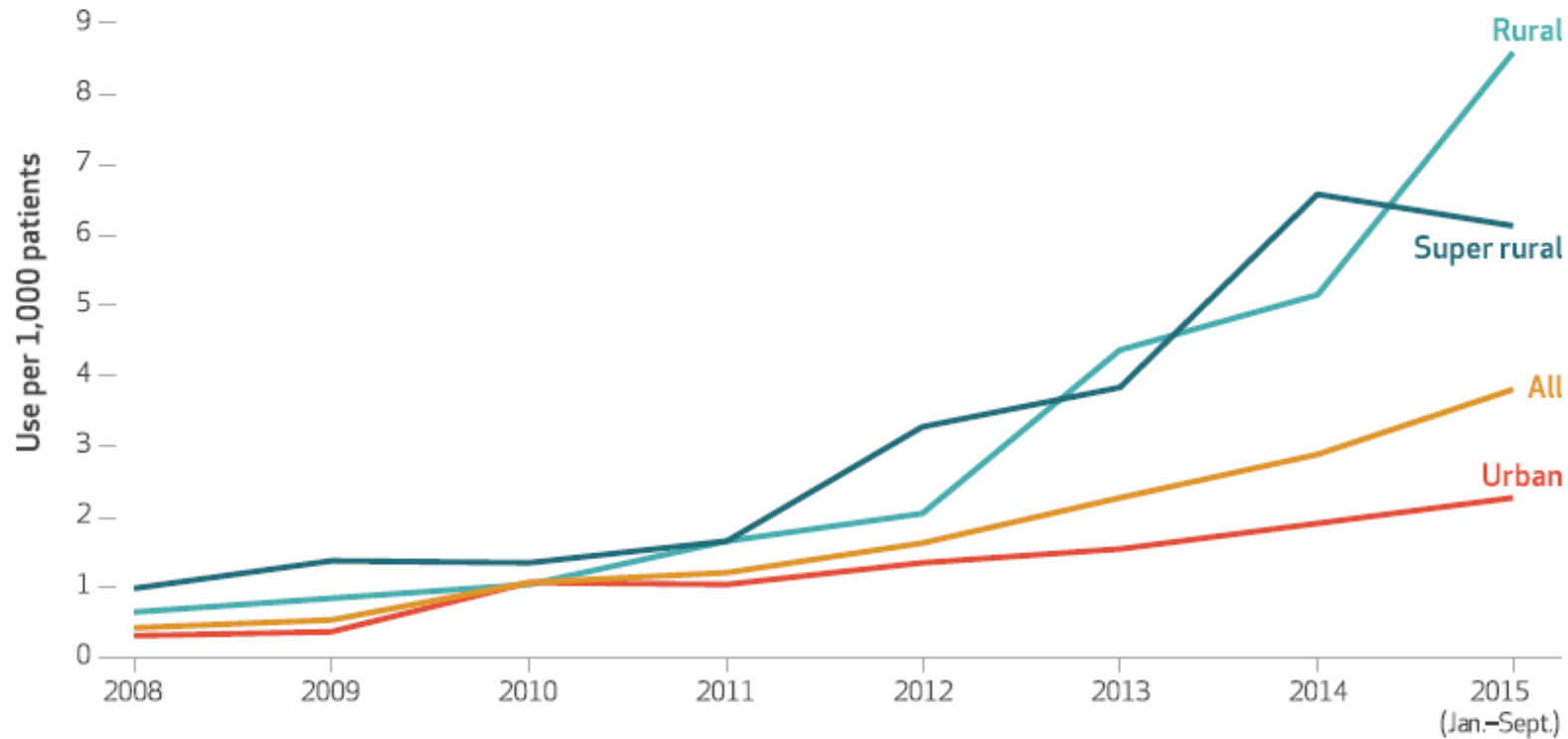


- AHA telestroke networks offer low-cost, effective tools to improve access to critical stroke care in rural areas.
- Assessed claims data from CMS from 1/1/2008 to 9/30/2015 (CMS began reimbursing telestroke services in 2007.)
- The proportion of ischemic stroke cases where telestroke services were provided increased from 0.4 to 3.8 per 1,000.
  - Proportions were highest among younger, male, non-Hispanic white, and rural or super rural patients.

# Rural Regions

## EXHIBIT 2

Use of telestroke care per 1,000 fee-for-service Medicare patients with acute ischemic stroke, by rurality of residence, January 2008–September 2015



**SOURCE** Authors' analysis of fee-for-service Medicare claims data for the period January 1, 2008–September 30, 2015. **NOTE** Urban, rural, and super rural areas are explained in the notes to exhibit 1.





# Rural Regions: DSMES



- 62% of rural communities have limited access to DSMES.
- 12-month trial in FQHC with telemedicine from CDCES providing DMSES via videoconferencing.
- 64% (n=27/42) achieved self-management goals.
  - Mean HbA1c decrease of 0.21% (95% CI: -0.279, -0.1336).
  - ↓ regimen-related diabetes distress (p=.0019; 95% CI: -0.1171, -0.0273)
  - ↑ dietary intake (p<.05; 95% CI: 0.0006, 0.1563)

# Referral to Telemedicine Training for Older Adults with Type 2 Diabetes



- **Specific Aim # 1: Increase the telemedicine readiness of older African American patients with type 2 diabetes.**
- **Specific Aim # 2: Evaluate the experience of those who complete telemedicine appointments in terms of overall satisfaction.**

# Study Procedures

- Patients (aged 50-70) with T2D & a telemedicine-ready device
- Have not already had a successful telemedicine appointment
- Screened for telemedicine readiness
- Call digital navigator's hotline
- Referred to community partners
  - Digital skills training & telemedicine readiness
- Telemedicine diabetes management appointment scheduled for 6 months later
- Primary outcome: did they have a telemedicine appointment?

## Participants who completed a telemedicine appointment:

- How was your overall telemedicine experience?
- How did your telemedicine appointment compare to an in-person appointment?
- Did you find the telemedicine training helpful? Why or why not?
- What would have made your telemedicine appointment better?
- Were you able to address all your questions about managing your diabetes in the telemedicine visit?
- Would you want to schedule another telemedicine visit (either to replace or add to an in-person visit) in the future? Why or why not?

## Patients who did NOT complete a telemedicine appointment:

- What barriers did you face in making and attending a telemedicine appointment?
- Are you still interested in having a telemedicine appointment?
- Did the telemedicine training program meet your needs? If not, what could have been better?
- Do you have any other barriers to using telemedicine that you could tell us about?



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Thank you!

Questions/Discussion