

# An Introduction to the U.S. Department of Veterans Affairs (VA) Office of Rural Health (ORH)

Presented by: Travis Lovejoy

In collaboration with: Sarah Ono, Matt Vincenti, Vince Watts

September 23<sup>rd</sup>, 2021



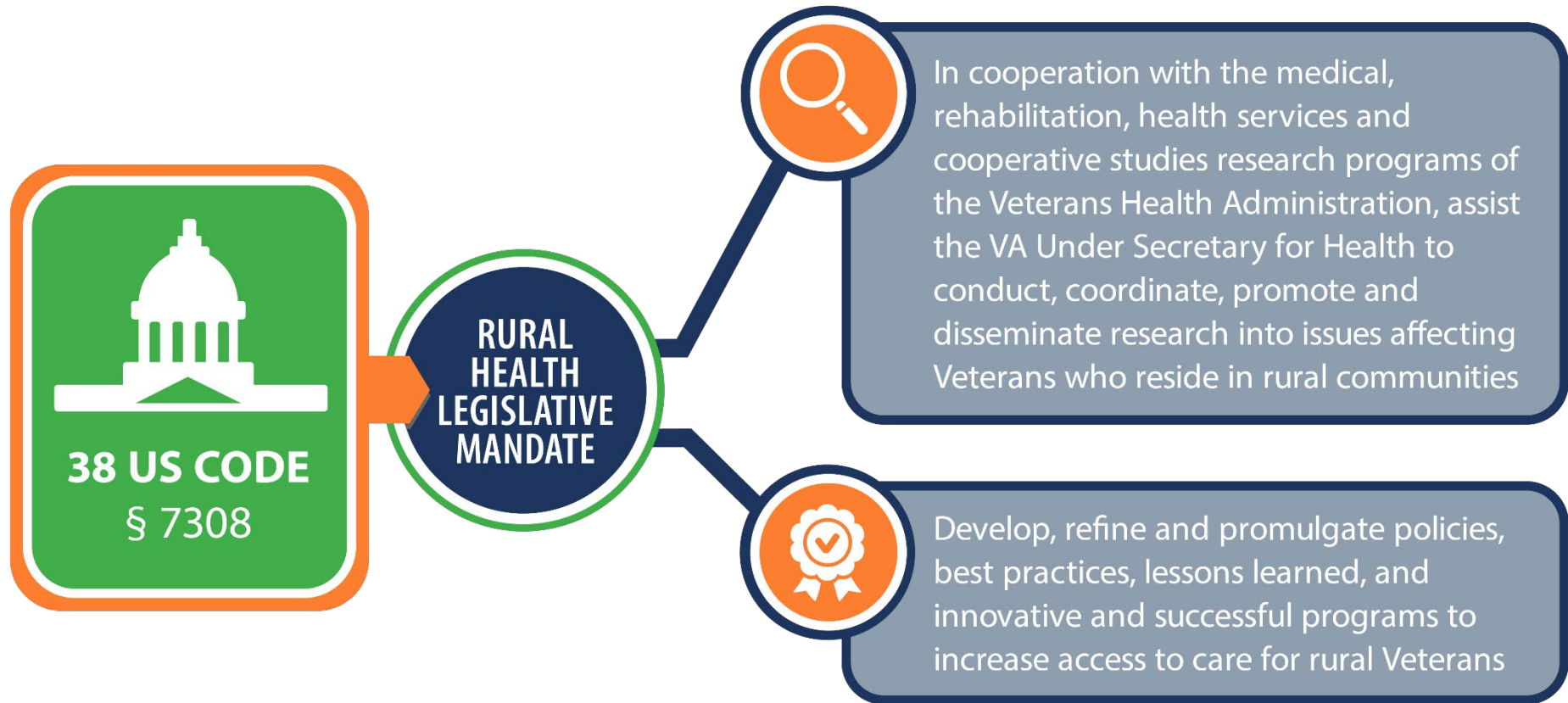
Choose **VA**

VA

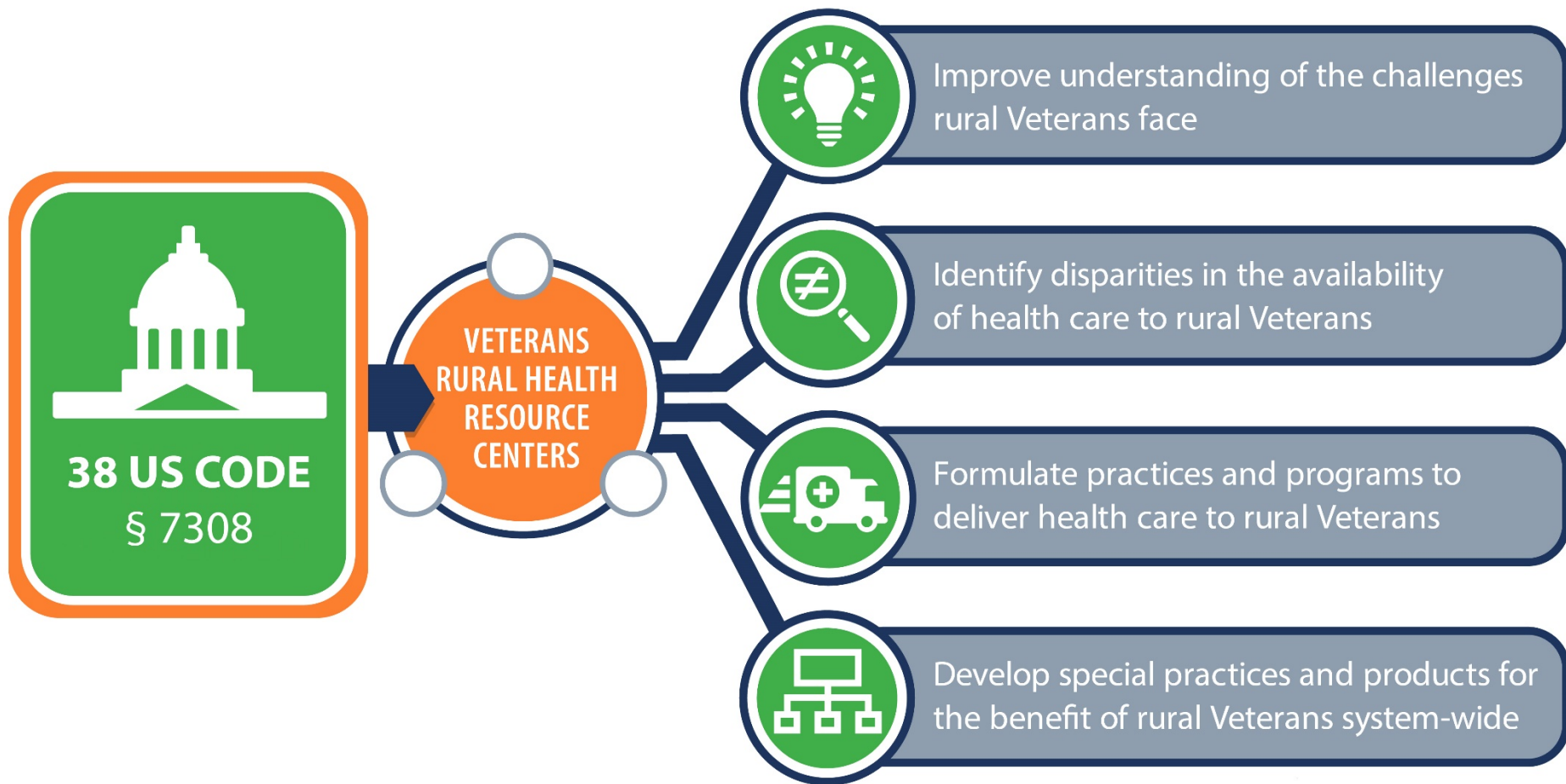


U.S. Department  
of Veterans Affairs

# OFFICE OF RURAL HEALTH LEGISLATIVE MANDATE



# VETERANS RURAL HEALTH RESOURCE CENTERS LEGISLATIVE MANDATE



# ORH VISION, MISSION & STRATEGIC GOALS

## Vision

**America's Veterans thrive in rural communities**

## Mission

**Improve the health and well-being of rural Veterans through research, innovation, and the dissemination of best practices**



### Promote federal and community care solutions for rural Veterans

#### OBJECTIVES

- ▶ Unite relationships within VA and the federal government to exchange rural-centered information
- ▶ Collaborate with non-governmental organization that support rural Veterans' health and well-being
- ▶ Expand ORH's partnership and programing reach



### Reduce rural health care workforce disparities

#### OBJECTIVES

- ▶ Expand understanding of current health care workforce
- ▶ Support rural implications of the MISSION Act



### Enrich rural Veteran health research and innovation

#### OBJECTIVES

- ▶ Increase rural Veteran health research
- ▶ Innovate new models of care for Veterans who live in rural communities
- ▶ Build recognition of VA's rural research, innovations and outcomes

# ORH PROGRAM OVERVIEW

**2021** portfolio includes:  
**42** national access initiatives adopted at  
**99** percent of VA health systems



## INNOVATION

Rural Promising Practices, such as:

- Home-Based Cardiac Rehabilitation
- Advanced Comprehensive Diabetes Care
- Geriatric Scholars Program



## OFFICE OF RURAL HEALTH



## ACCESS

Enterprise-Wide Initiatives, such as:

- Clinical Resource Hubs
- Home Based Primary Care
- Veteran Transportation Services



Choose **VA**

September 2021

**VA**



U.S. Department  
of Veterans Affairs

# VETERANS RURAL HEALTH RESOURCE CENTERS (VRHRC)



**Improve** understanding of rural-specific challenges



**Identify** disparities in rural Veteran care and services

## VETERANS RURAL HEALTH RESOURCE CENTERS (VRHRC) RESPONSIBILITIES

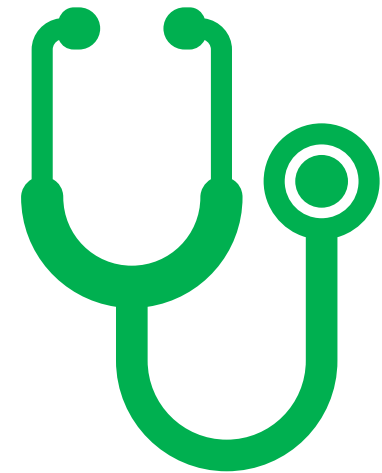


**Formulate** practices or programs to enhance the delivery of health care

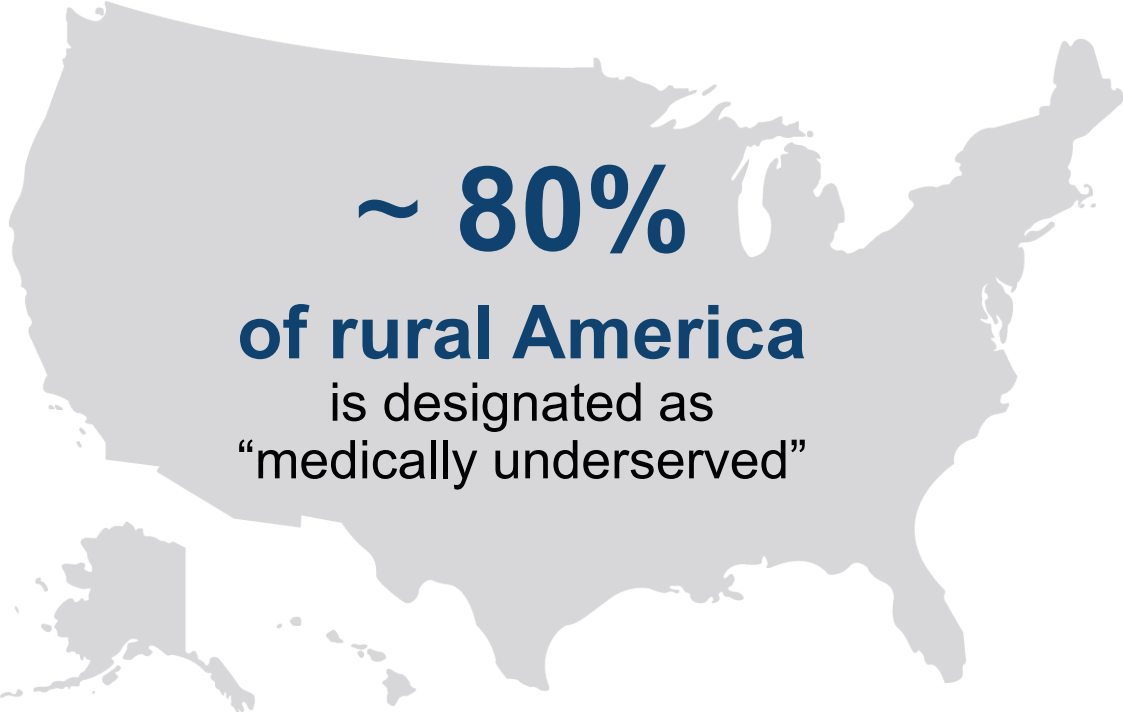


**Implement** practices systemwide

# Rural Health Care Challenges



# MEDICAL WORKFORCE CHALLENGES IN RURAL U.S.



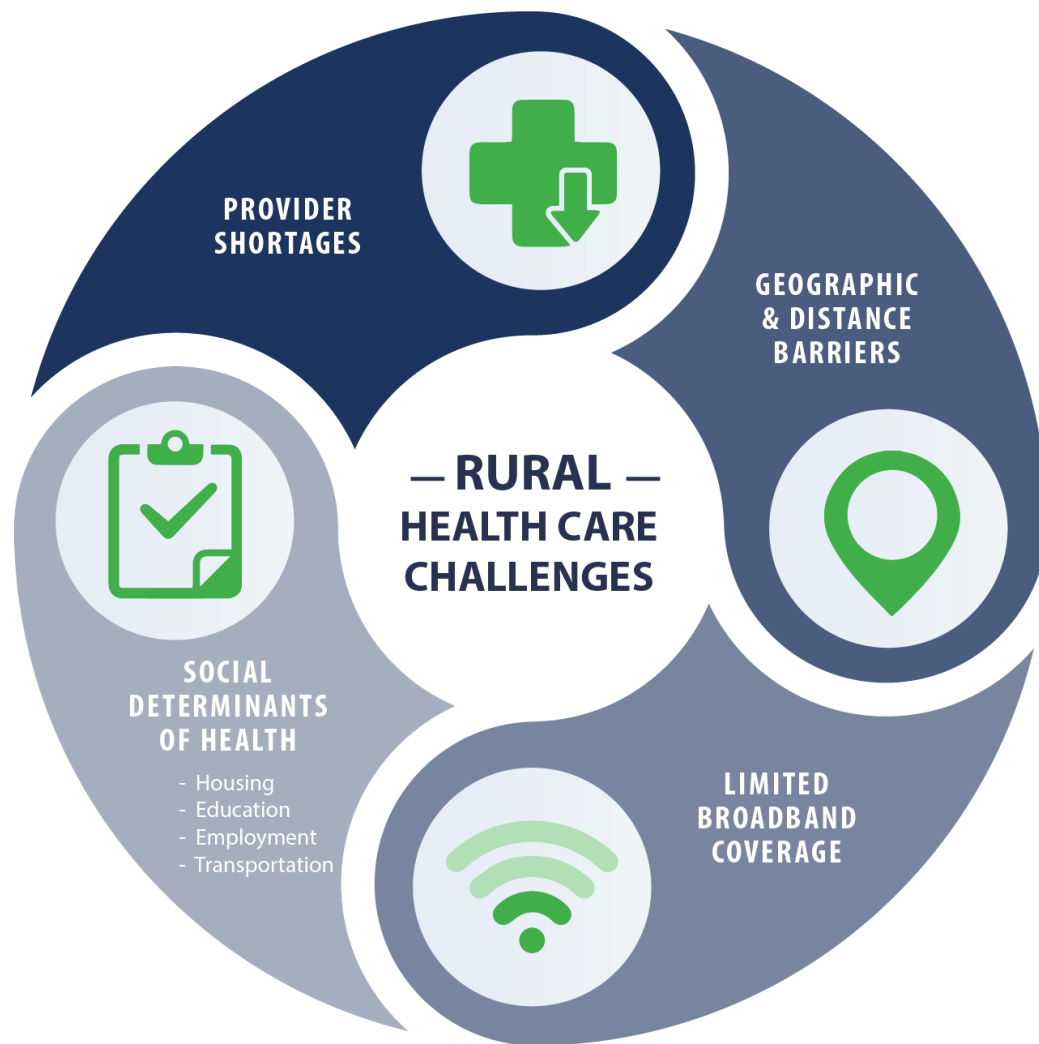
**~ 80%**  
**of rural America**  
is designated as  
“medically underserved”



[https://www.washingtonpost.com/national/out-here-its-just-me/2019/09/28/fa1df9b6-deef-11e9-be96-6adb81821e90\\_story.html](https://www.washingtonpost.com/national/out-here-its-just-me/2019/09/28/fa1df9b6-deef-11e9-be96-6adb81821e90_story.html)



# RURAL HEALTH CARE CHALLENGES



# MEDICAL WORKFORCE CHALLENGES IN RURAL U.S.



**Half of rural doctors** are over the age of 50



**More than a quarter of rural doctors** are over the age of 60



The number of rural doctors is predicted to **decline by 23 percent** over the next decade

[https://www.washingtonpost.com/national/out-here-its-just-me/2019/09/28/fa1df9b6-deef-11e9-be96-6adb81821e90\\_story.html](https://www.washingtonpost.com/national/out-here-its-just-me/2019/09/28/fa1df9b6-deef-11e9-be96-6adb81821e90_story.html)

# TRANSPORTATION CHALLENGES REDUCE ACCESS TO CARE

- Rural Veterans say a lack of transportation is one of the top five reasons for not attending or canceling an appointment
- Challenges:
  - Long distances
  - Steep grades and mountain passes
  - More dramatic weather effects
  - Costs time and money
- ORH's rural needs assessment showed that transportation was the number one challenge across the country



The top five states with the most rural Veterans, see an average of 14.5" of snow fall per year

## Rural Transportation At A Glance



**50+**

ORH-funded rural transportation initiatives since 2012



**215**

wheelchair vehicles purchased since 2014



**\$131 million+**

invested in rural transportation since 2012

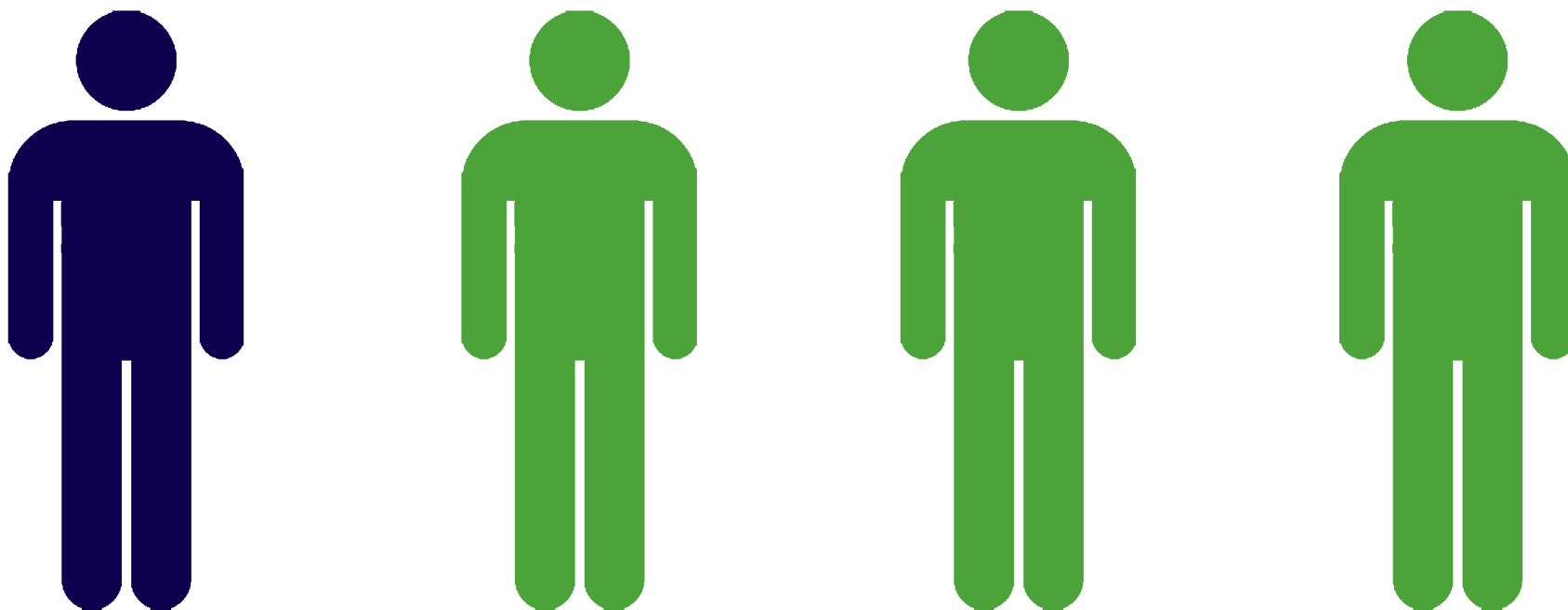


**738**

drivers hired since 2014

# RURAL HIGH-SPEED INTERNET ACCESS

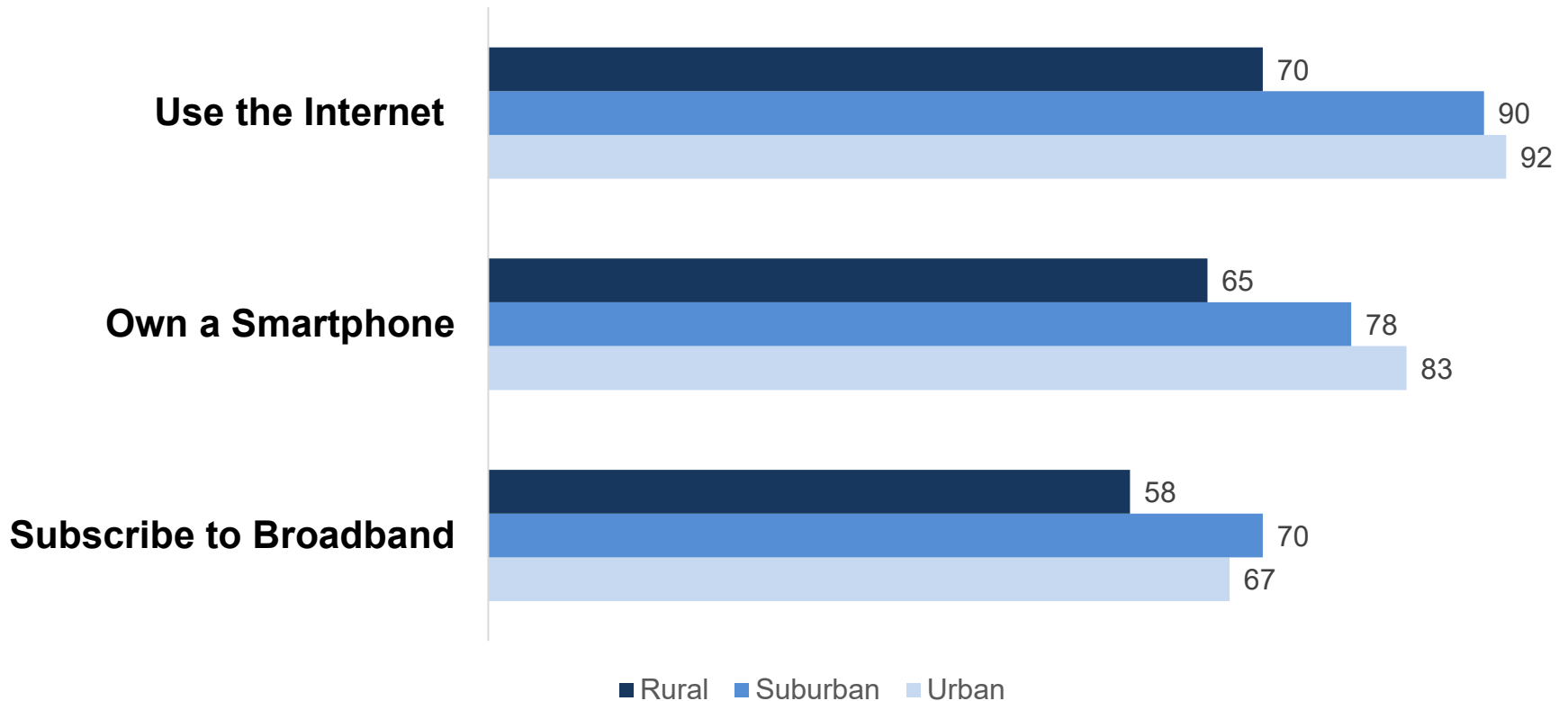
**Roughly one-in-four rural residents say access to high-speed internet is a major problem in their area.**



Source: Pew Research Center - <http://www.pewresearch.org/fact-tank/2018/09/10/about-a-quarter-of-rural-americans-say-access-to-high-speed-internet-is-a-major-problem/>

# RURAL INTERNET ACCESS

Rural adults are less likely than those in other areas to have high-speed internet at home, own a smartphone



Source: Pew Research Center - <http://www.pewresearch.org/fact-tank/2018/09/10/about-a-quarter-of-rural-americans-say-access-to-high-speed-internet-is-a-major-problem/>

# VRHRC-FUNDED PROJECTS

## Deborah Gurewich

*Did Access to Care Improve since Passage of the Veterans Choice Act: Differences between Rural and Urban Veterans*

## Michael Ward

*Accessing Emergency Mental Health Care*

# Did Access to Care Improve since Passage of the Veterans Choice Act: Differences between Rural and Urban Veterans

Deborah Gurewicz, PhD





# Disclosures

- No conflicts of interest to report
- The contents of this presentation do not represent the views of the U.S. Department of Veterans Affairs or the U.S. Government.

# Co-Authors

- Erin Beilstein-Wedel, MA
- Heather Davila, PhD
- Amy K. Rosen, PhD
- Michael Shwartz, PhD

# Background

- 2014 “Choice Act” established Veterans Choice Program (VCP)
  - Passed in response to VA wait time crisis
  - Expanded eligibility for use of community care (CC)
- Little known about differential effect of VCP on rural and urban Veterans
  - Rural Veterans historically experienced greater access barriers
  - Does this mean that rural Veterans disproportionately use CC compared to urban Veterans?
  - If true, provider shortages in rural areas could limit CC success for rural Veterans

# Aim

Examine care access for Rural vs. Urban Veterans since implementation of VCP

- Objective Access: Days from service referral to medical appointment
- Perceived Access: Veteran assessment ease of getting care as soon as needed

# Methods: Objective Access

- Retrospective study using VA data from FY15 and FY18
  - VA FY October 1 – September 30
- 5 outpatient services representing most frequently authorized CC services
  - Cardiology
  - Physical Therapy (PT)
  - Optometry
  - Ophthalmology
  - Dental

# Sample

- Veterans who received “new patient” consult
  - For 1  $\geq$  of the 5 services in VA and/or CC during study period
- New patient consult
  - Developed by VA Partnered Evidence-Based Policy Resource Center (PEPReC)
  - Veteran with no encounter for same service in prior 24 months at same VA medical center
  - Use prior 2 FY to determine (e.g., use FY13 and FY14 to identify FY15 new patients)
- Study population
  - N=446,329 (FY15)
  - N=561,786 (FY18)

# Measures

- **Dependent Variable**
  - Mean wait time
- **Primary Predictor: User Group**
  - Intersect care setting (VA vs. CC) and Veteran status (rural vs urban)
  - Create 4 User Groups: Rural CC (RCC), Rural VA (RVA), Urban CC (UCC), Urban VA (UVA)
- **Covariates**
  - Race/ethnicity, age, sex, marital status
  - VA priority group
  - Nosos risk score (VA comorbidity measure)

# Analysis

- Descriptive statistics: Rural vs. Urban Veteran characteristics
  - Given large sample, report effect sizes (< .10 negligible; .20 small; .50 medium)
- For each service, ran linear regression model predicting mean wait time
- For all models:
  - Include covariates listed on Slide 8 plus interact User Groups with time (FY18)
  - For each User Group, results reported for “hypothetical average Veteran” (technically, population marginal means).



# Results

- In FY15:
  - 20.7% of rural Veterans used CC
  - 11.9% of urban Veterans used CC
- In FY18
  - 30.1% of rural Veterans used CC
  - 18.9% of urban Veterans used CC

# Study Population: Rural vs. Urban Veterans in FY15

	Overall	Rural	Urban	Effect Size (ES)
N Veterans	489,508	163,852	325,656	
New patient consults	537,174	178,841	358,333	
Age in FY15 (mean (sd))	60.1 (14.87)	62.0 (13.89)	59.2 (15.25)	<b>0.192</b>
Nosos (mean (sd)) <sup>1</sup>	1.61 (2.08)	1.50 (1.94)	1.66 (2.15)	0.074
Gender = M %	91%	93%	90%	0.123
VA priority group 1-2 (%) <sup>2</sup>	47%	46%	47%	0.022
Marital status = Married (%)	52%	59%	49%	<b>0.211</b>
Race (%)				
Black non-Hispanic	20%	9%	26%	<b>0.444</b>
Hispanic	7%	3%	9%	<b>0.26</b>
Other	3%	3%	3%	0.039
White non-Hispanic	65%	81%	57%	<b>0.524</b>
Unknown	5%	4%	5%	0.008

<sup>1</sup> Nosos risk score: risk adjustment score; scores >1 indicate greater than average cost and clinical complexity

<sup>2</sup> VA priority group = lower score represents higher priority

# Study Population: User Group Comparisons in FY15

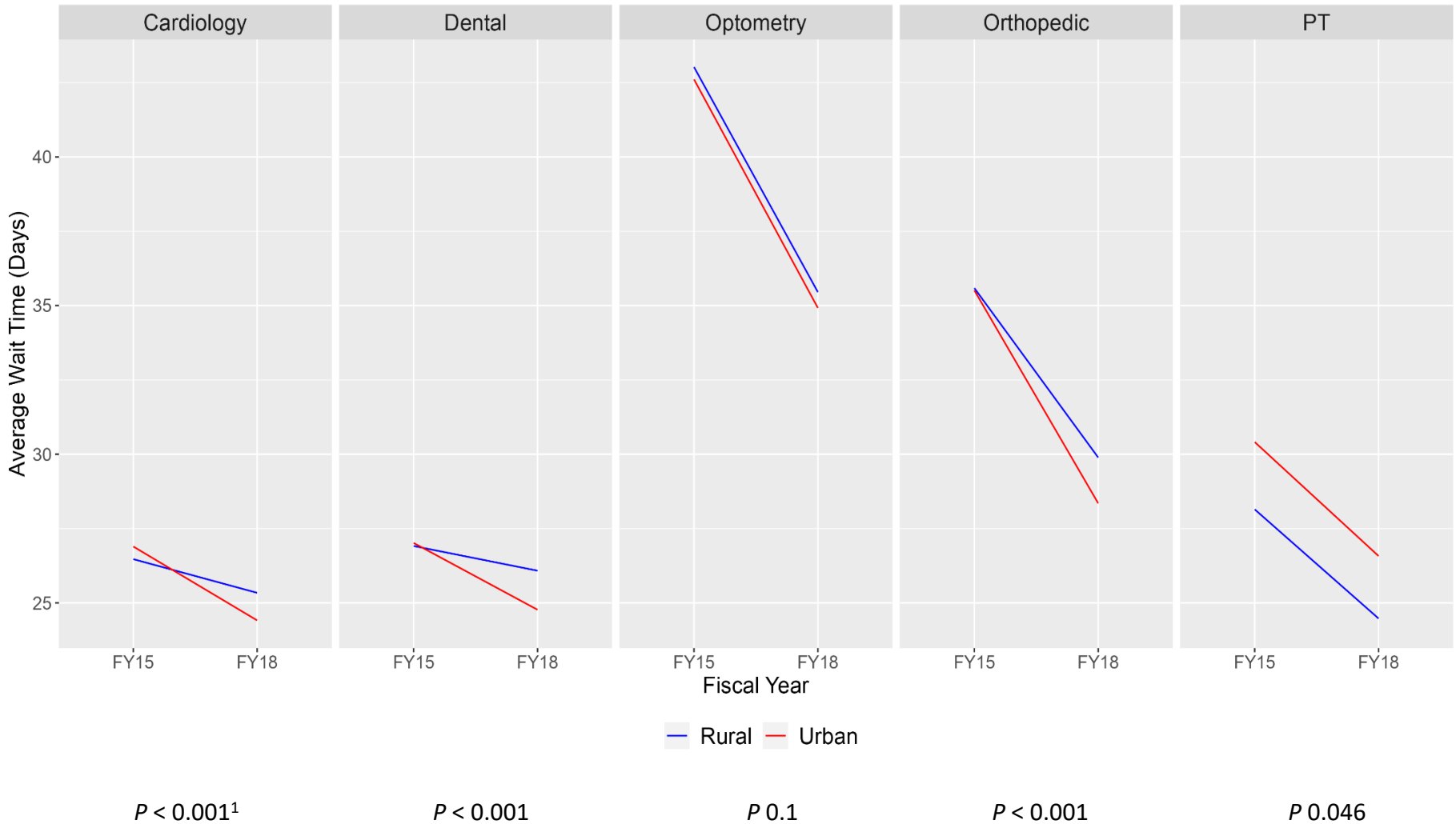
	Rural CC	Rural VA	ES	Urban CC	Urban VA	ES
N Veterans	33,984	129,868		38,666	286,990	
New patient consults	36,725	142,116		41,882	316,451	
Age in FY15 (mean (sd))	61.5 (13.94)	62.1 (13.88)	0.048	57.7 (15.06)	59.4 (15.26)	0.111
Nosos (mean (sd)) <sup>1</sup>	1.36 (1.74)	1.54 (1.99)	0.097	1.51 (1.94)	1.68 (2.17)	0.078
Gender = Male (%)	93%	93%	0.023	89%	90%	0.028
VA priority group (%) <sup>2</sup>						
1-2	50%	45%	0.101	55%	46%	<b>0.185</b>
3	21%	21%	0.008	19%	20%	0.03
4-6	29%	34%	0.116	26%	34%	<b>0.176</b>
Marital status = Married (%)	61%	59%	0.034	54%	48%	0.106
Race = Black non-Hispanic (%)	9%	9%	0.021	21%	27%	0.133

Abbreviations: CC=Community Care; VA=Veterans Affairs

<sup>1</sup> Nosos risk score: risk adjustment score; scores>1 indicate greater than average cost and clinical complexity

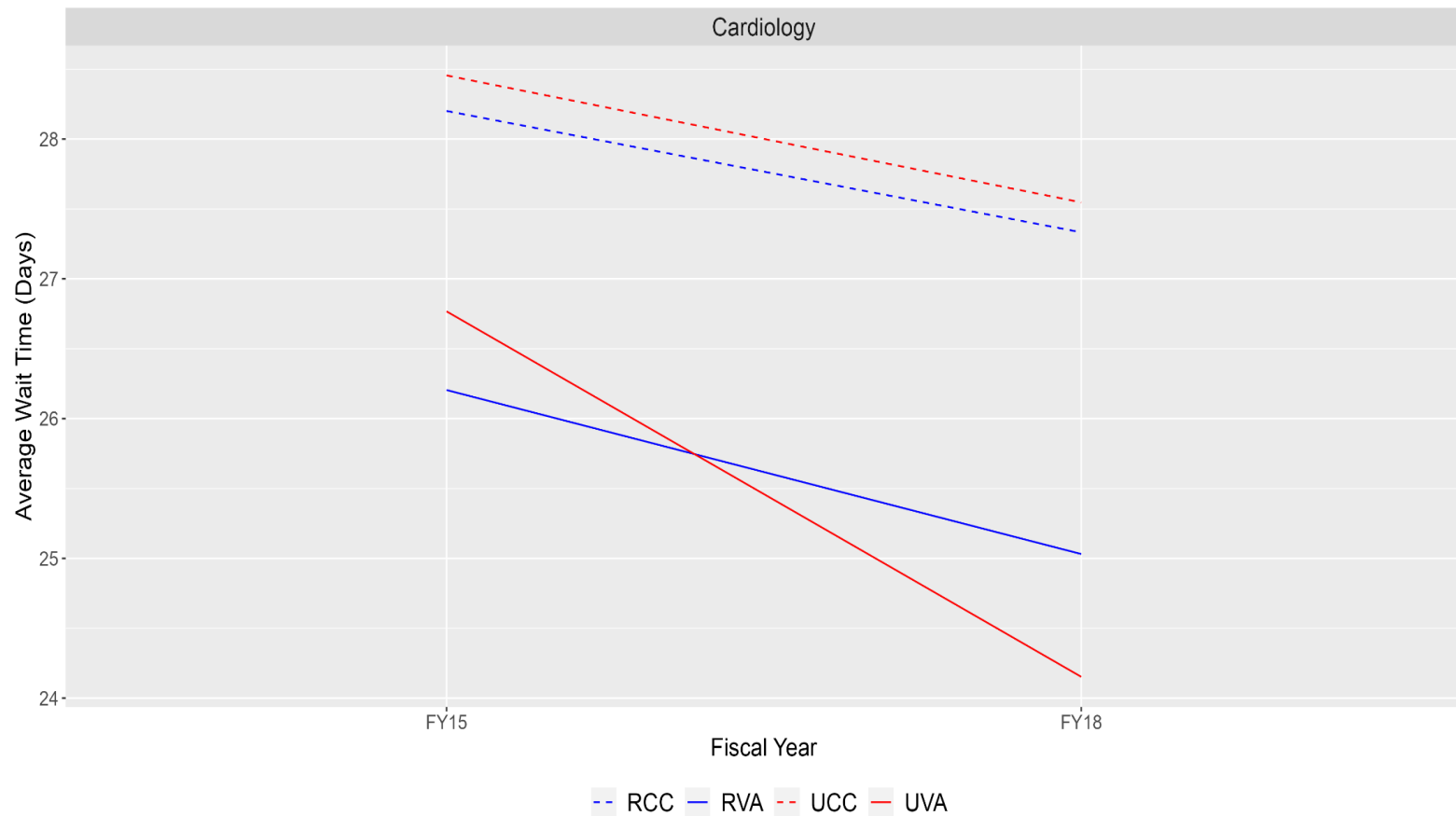
<sup>2</sup> VA priority group = lower score represents higher priority

# Adjusted Mean Wait Times: Rural vs. Urban



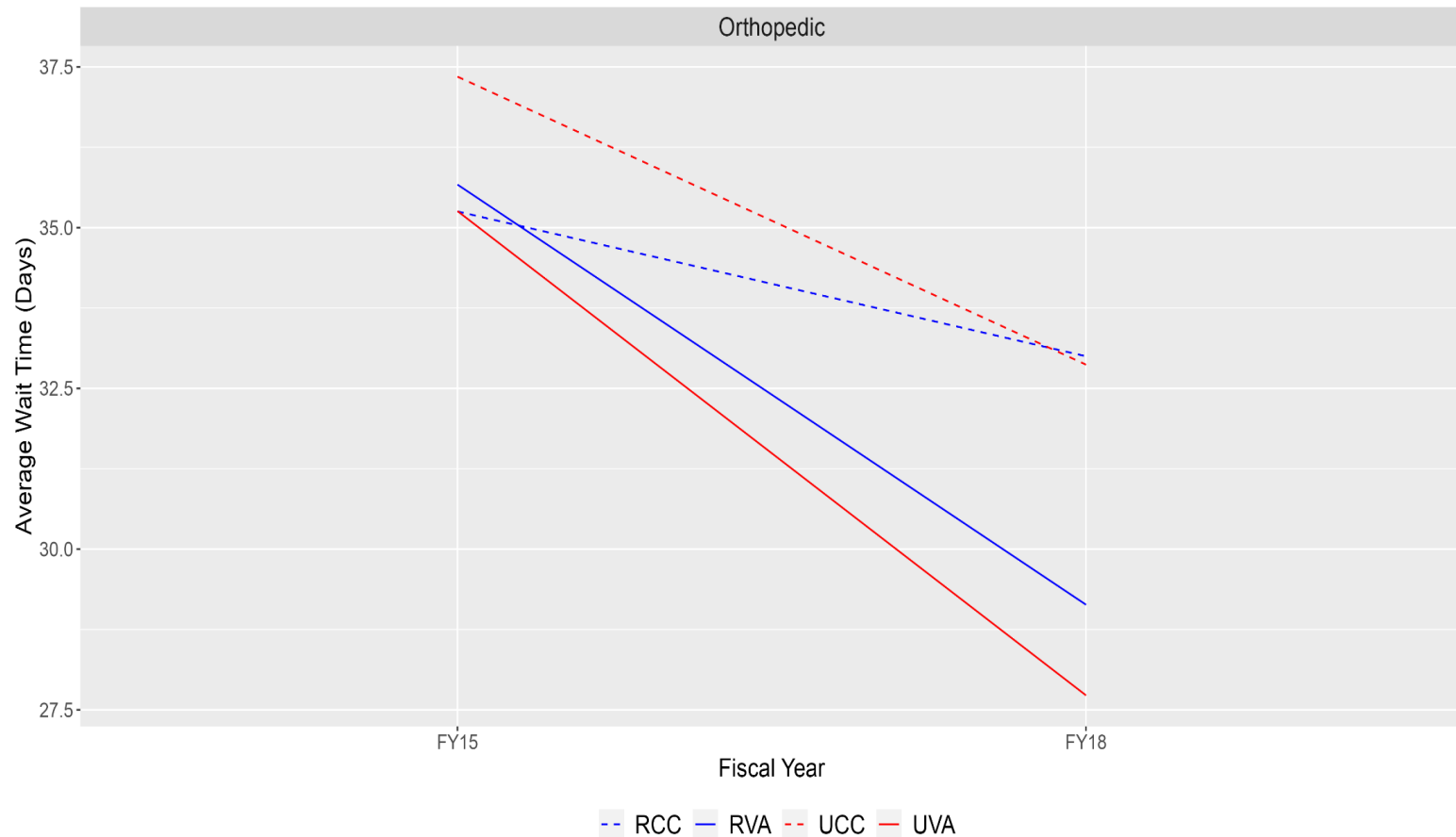
<sup>1</sup> FY15-FY18 difference (Rural/Urban comparative magnitude of decline)

# Adjusted Mean Wait Times by User Group: Cardiology



	<u>RCC</u>	<u>RVA</u>	<u>UCC</u>	<u>UVA</u>	<u>ES (RCC/RVA)</u>	<u>ES (UCC/UVA)</u>
FY15	28.2	26.2	28.5	26.8	0.10	0.09
FY18	27.3	25.0	27.6	24.2	0.12	0.18
% Decline FY15-FY19 (P)					0.19	< 0.001

# Adjusted Mean Wait Times by User Group: Orthopedics

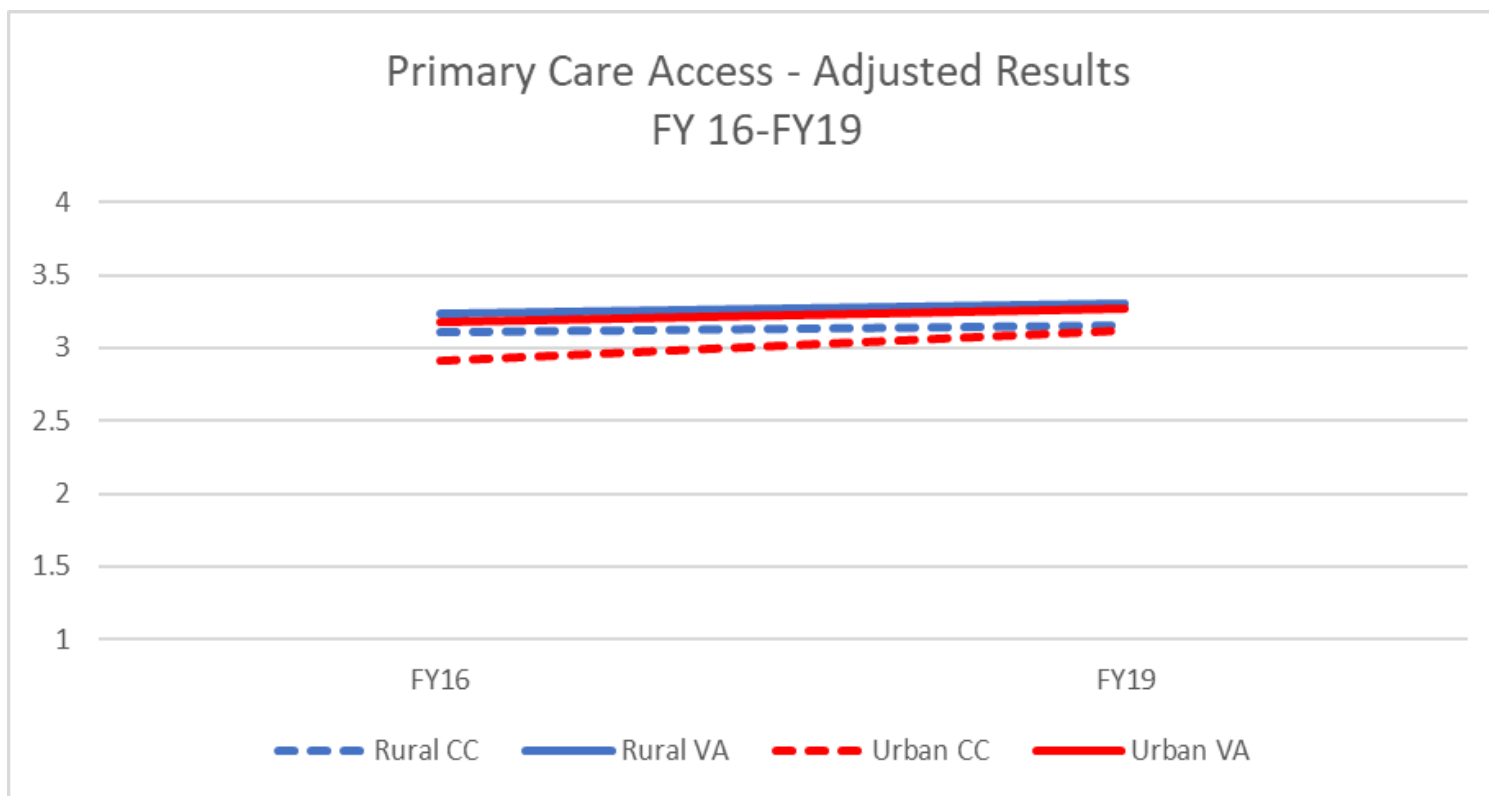


	<u>RCC</u>	<u>RVA</u>	<u>UCC</u>	<u>UVA</u>	<u>ES (RCC/RVA)</u>	<u>ES (UCC/UVA)</u>
FY15	35.3	35.7	37.4	35.3	0.02	0.09
FY18	33.0	29.1	32.9	27.8	0.19	0.26
% Decline FY15-FY19 (P)					< 0.001	< 0.001

# Methods: Subjective Access

- Data and sample
  - Survey of Healthcare Experiences of Patients (SHEP)
  - VA administrative data
  - All Veterans who responded to SHEP survey in FY16 and FY19
- Outcome measures
  - Perceived access to 1) primary care and 2) specialty care
  - 4 items each; used composite measure for each, range 1-4 (1=never to 4=always)
- Predictors and analysis
  - Similar to Objective Access analysis

# Adjusted Perceived Access to Primary Care

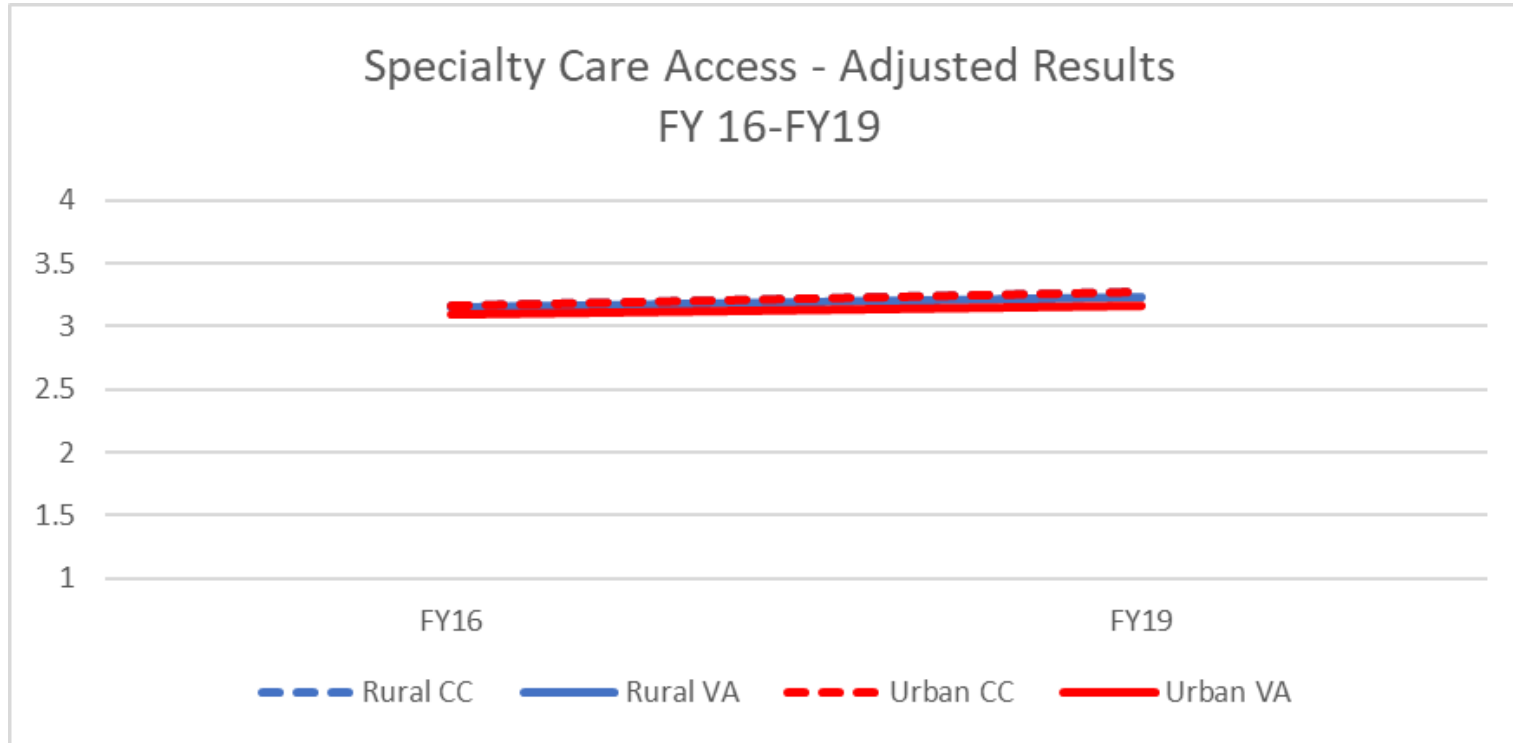


Scale: 1-4; higher=better

	RVA	RCC	UVA	UCC	ES (RCC.UCC)	ES (RVA/RCC)
FY16	3.24	3.11	3.18	2.91	0.24	0.17
FY18	3.31	3.16	3.27	3.12	0.06	0.21



# Adjusted Perceived Access to Specialty Care



Scale: 1-4; higher=better

	RVA	RCC	UVA	UCC	ES (RCC.UCC)	ES (RVA/RCC)
FY16	3.15	3.17	3.17	3.17	0.00	- 0.02
FY18	3.23	3.28	3.17	3.28	0.00	- 0.07

# Discussion and Implications

- Despite concerns about provider shortages, VCP associated with improved timely access to care for rural Veterans.
  - *As expansion of CC continues, future research needed to update our analysis post-FY18.*
- Rural and urban Veterans experienced essentially comparable wait times for similar services types
- Despite reduced wait times, many rural Veterans still wait over 30 (and 45) days for services in both care settings.
  - *Future study needed to identify sources of excessive waiting times and ways to reduce.*
- Wait times only one dimension of care.
  - *Future study needed to understand implications of CC use on care quality and outcomes, and long wait time implications for outcomes.*

# Thank You

For additional information:

- Gurewicz D, Shwartz M, Davila H, Rosen A. (2021). Did Access to Care Improve since Passage of the Veterans Choice Act? Differences between Rural and Urban Veterans. Medical Care 59(6) Suppl 3: S270-S278.
- Davila H, Rosen AK, Beilstein-Wedel E, Shwartz M, Chatelain L, Gurewicz D. (2021). Rural Veterans' Experiences with Outpatient Care in the Veterans Health Administration versus Community Care. Medical Care 59(6) Suppl 3: S286-S291.
- And/or contact [Deborah.Gurewicz@va.gov](mailto:Deborah.Gurewicz@va.gov) or [Heather.Davila@va.gov](mailto:Heather.Davila@va.gov)



# Accessing Emergency Mental Health Care:

## A Pilot Implementation of Telemental Health

**HSR&D Access CORE Cyberseminar Series**  
**Advancing Access to Care Through Partnered Research with the Office of Rural Health**

**Michael Ward MD, PhD**

Geriatric Research, Education and Clinical Center (GRECC)  
Tennessee Valley Healthcare System, Nashville, TN

Department of Emergency Medicine, Vanderbilt University Medical Center,  
Nashville, TN

September 2021



**Choose VA**

**VA**



U.S. Department  
of Veterans Affairs

# Background on VA ED Visits and Transfers

- From 2012-2014 there were 6.2M VA ED visits
  - 12% by rural Veterans
  - 6% of all VA ED visits were for mental health conditions
  - Mental health: 6<sup>th</sup> most common reason for ED visits
- There were 54,000 (0.8%) transfers from VA EDs
  - 18,852 transfers between VA EDs
  - Rural Veterans were 3x more likely to be transferred (0.6% vs. 0.2%,  $p < 0.001$ )
  - Mental health conditions were the #1 reason for interfacility transfers (34% overall) from VA EDs

Mohr et al. *BMC Hlth Svcs* 2020



Choose **VA**

VA

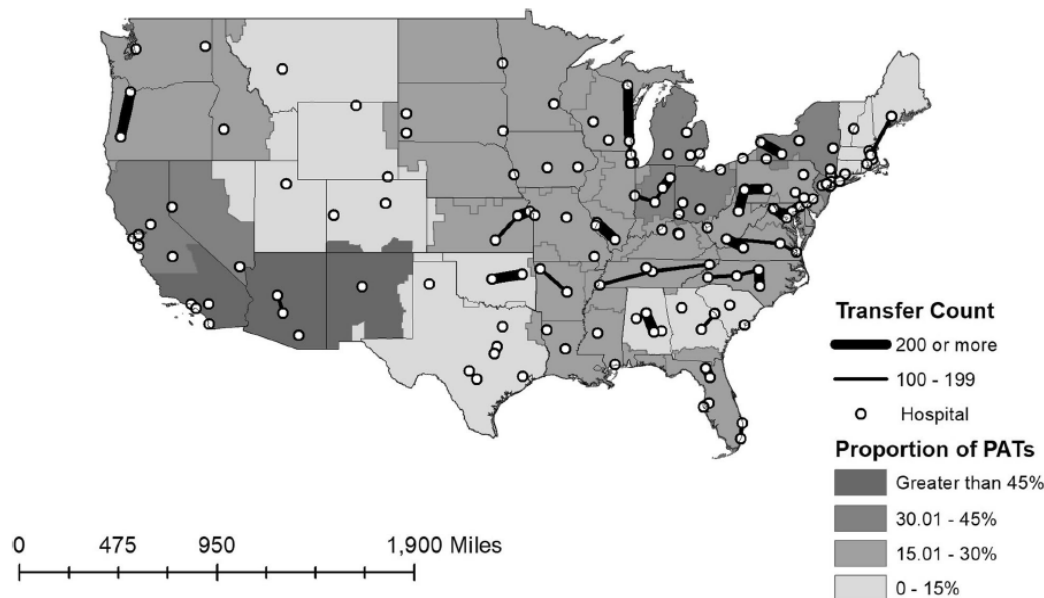


U.S. Department  
of Veterans Affairs

# Potentially Avoidable Transfers (PATs)

**PAT:** Transfers in which the Veteran was either discharged from the receiving ED or admitted to the receiving hospital for  $\leq 1$  day without having a procedure performed.

- 23% of all VA-to-VA ED transfers were PATs
- >1-in-10 mental health transfers were PATs



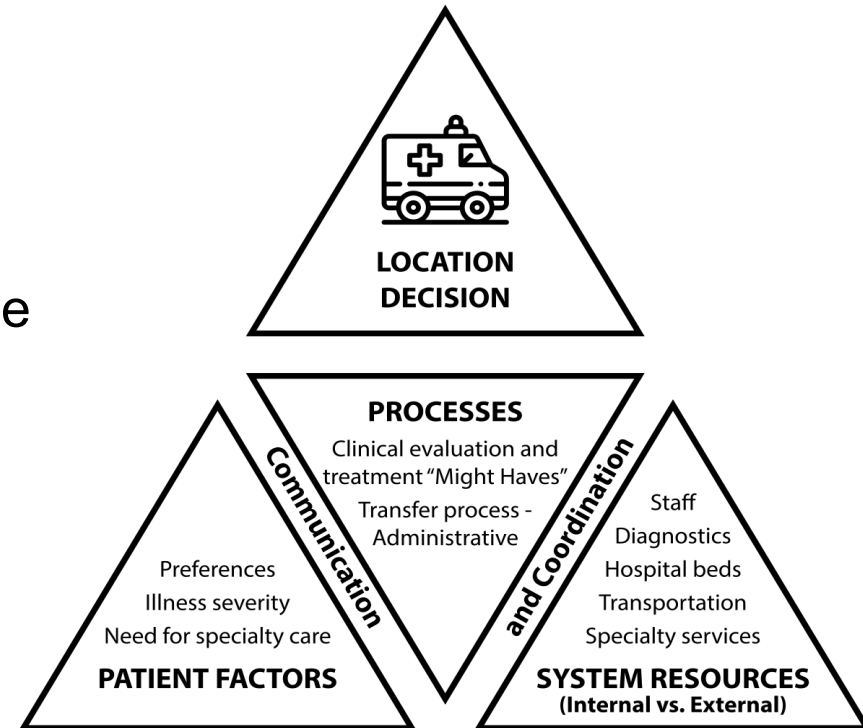
**Figure.** Interfacility transfer variability within the VHA

Mohr et al. *BMC Hlth Svcs* 2020

# Rural VA ED Transfers Are Complex and Burdensome

Conducted 81 interviews at 7 VA EDs (5 rural) in 2018 to understand complexities of transfers

- Resource limitations were burdensome and diverted from clinical care
- Complexity > Perceived Quality drove the location decision
- Transfers were burdensome for Veterans and their families
- Mental health conditions epitomized challenges of emergency transfers



McNaughton et al. *West J Emerg Med* 2020

# Telehealth as a Potential Intervention

## Telehealth

- Reduces rural time-to-provider and ED transfer times<sup>1</sup>
- Reduces rural ED wait times for behavioral health patients<sup>2</sup>
- Is non-inferior to in-person care for PTSD and major depression and is cost-efficient<sup>3</sup>

1-Mohr et al. *Telemed J E Hlth* 2018

2-Fairchild et al. *Telemed J E Hlth* 2019

3-Egede et al. *Lancet Psych* 2015



Choose **VA**

VA



U.S. Department  
of Veterans Affairs



# Telemental Health Pilot at Tennessee Valley

## Tennessee Valley Healthcare System

- Nashville ED 26K visits
- Alvin C. York (Murfreesboro) UCC 15K visits
- Located 40 miles apart



## Equipment

- VA Mobile
- Telestroke model (iPads, Facetime)



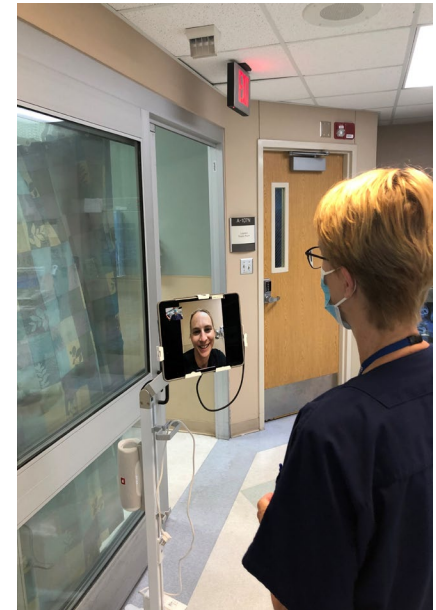
# Telemental Health Pilot Intervention

## Original Mental Health Consult Process

- Veteran presents for emergency care
- Emergency clinician evaluates and identifies need for mental health
- Consultation ordered and warm hand-off given by phone
- ~~Mental Health clinician presents to ED/UCC~~

## Telemental Health Process (New)

- Veteran oriented to telemental health and permission obtained
- Telemental health cart called by mental health
- Cart wheeled into Veteran's room



# Preparation and Analysis

## Phases of Implementation

- Preparation of workflow, training
- Pre-Implementation: 12/1/19-2/29/20
  - Work with champions
- Wash-In: March 2020
- Post-Implementation: 4/1/20-6/30/20
- Sustainability: 7/1/20-1/31/21

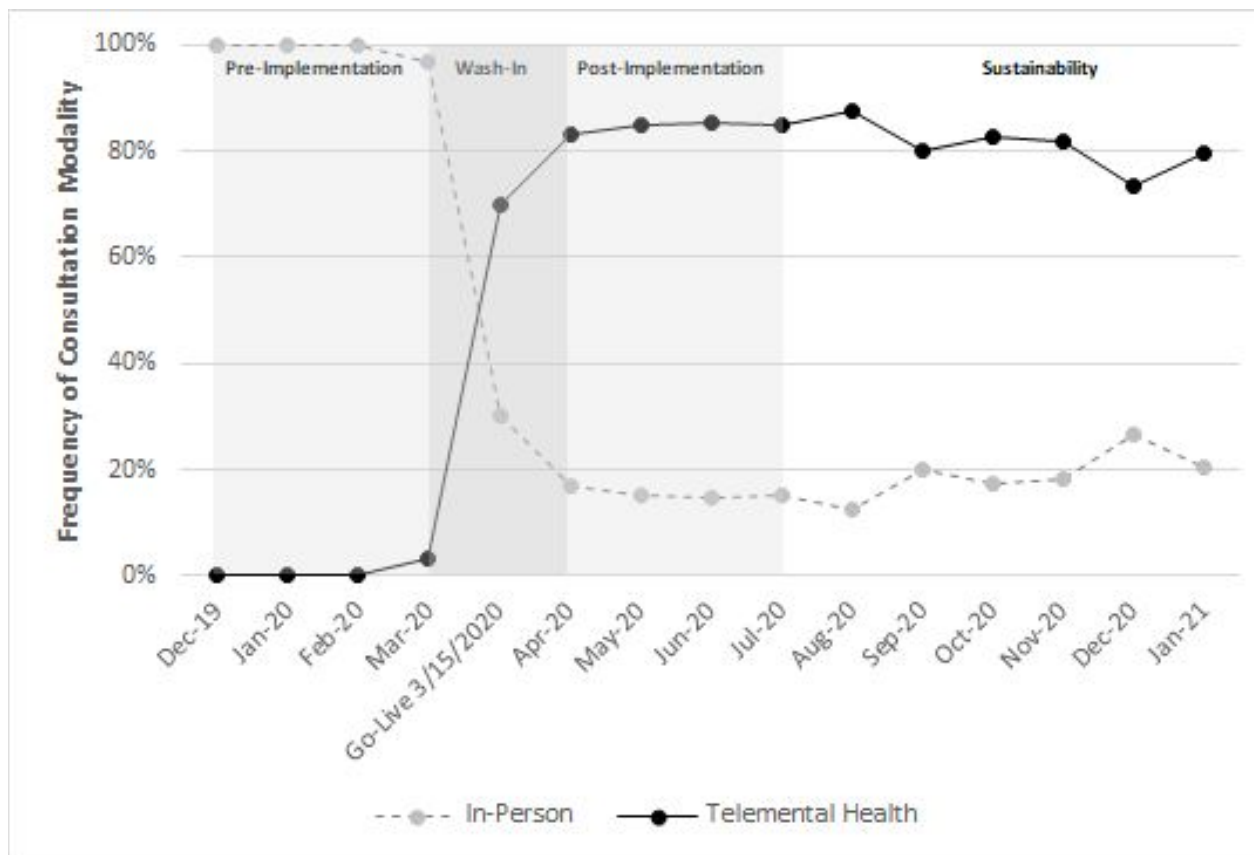
Used RE-AIM (Reach, Effectiveness, Adoption, Implementation, Maintenance) framework<sup>1</sup>

- Mixed methods analysis: CDW, surveys, interviews
  - Staff, nurses, and stakeholders (10), emergency (3), and mental health clinicians (3)
- In Press with *Telemedicine and e-Health*

1-Glasgow *Am J Pub Hlth*, 1999

# Reach

- Pre-implementation: 502 in-person consultations
- Post-implementation: 83% of all mental health consults (N=386) in ED/UCC performed by TMH



# Reach of Telemental Health (TMH)

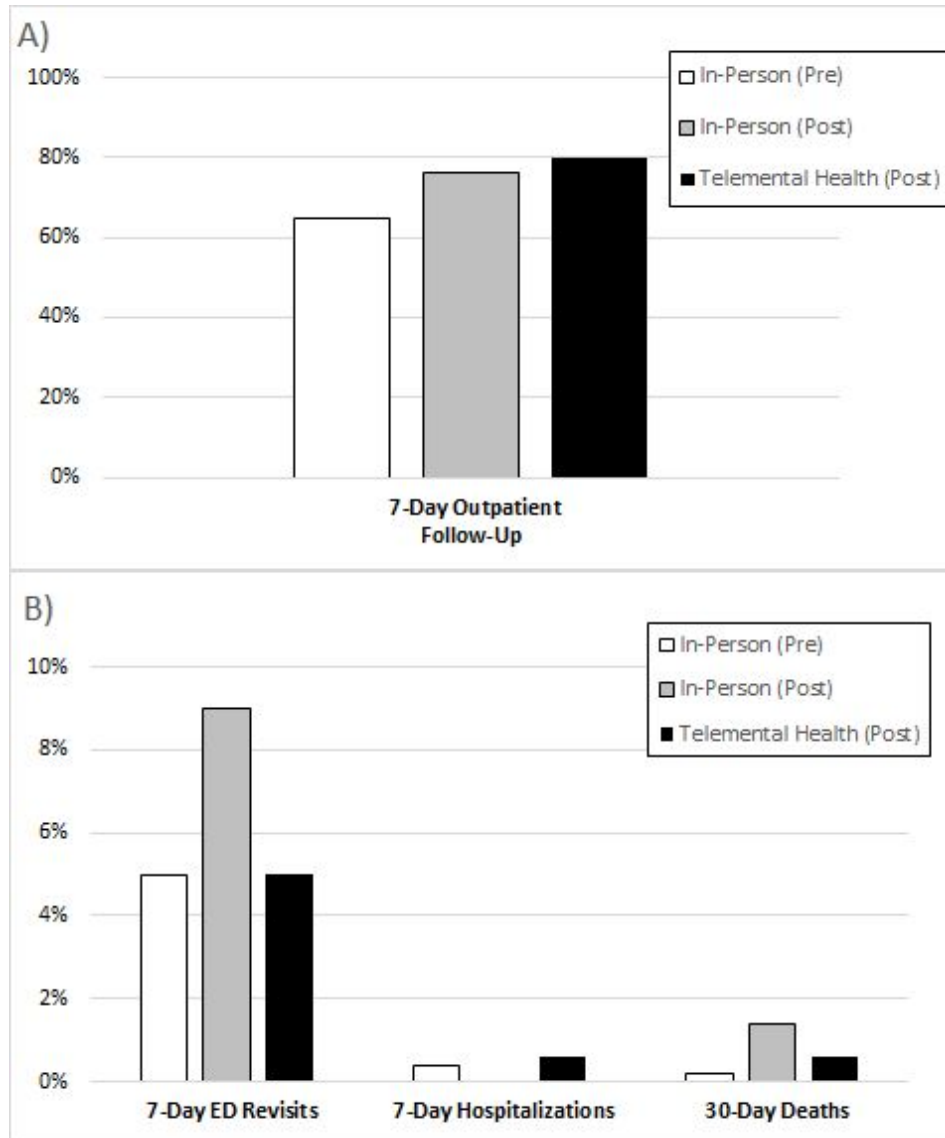
Surveys (N=64) 97% agreed that the intervention “improved access” to mental health services

## Interview Themes

- Perception that Veterans had positive experiences, likely due to the timeliness of care
- Pandemic enhanced Veterans willingness
- Advantages over other forms of unscheduled mental health care during the pandemic (e.g., telephone) such as the ability to take down one’s mask



# Effectiveness of Telemental Health



# Adoption of Telemental Health

100% adoption (N=44; 24 attendings, 15 residents, 5 APPs)

## Interview Themes

- COVID-19 accelerated adoption
- Prior telehealth experience facilitated clinician willingness
- Intervention provided “electronic PPE”<sup>1</sup>
- Policy change requiring use overcame early reluctance
- Improved efficiency: multitasking, response time, ↓ interruptions
- Comparable quality of care

1-Turer *JAMIA* 2020



Choose **VA**

VA



U.S. Department  
of Veterans Affairs

# Implementation of Telemental Health

Survey: 99% agreed that sound quality was good

## Interview Themes

- Minor technical barriers easily overcome
- Identified workarounds (involuntary holds & cognitive assessments)
- Multiple patients waiting addressed through 2<sup>nd</sup> unit
- Mixed perception of rapport building
  - Impeded awareness of disposition planning
  - Improved consultant communication
- Availability of in-person provider for emergencies





# Maintenance of Telemental Health

- Tracked for an additional 10 months
  - 82% use and 1,010 consultations
- Interview Themes
  - MH clinicians reported enhanced job satisfaction
  - Provided an alternative to private sector jobs
  - Better integration of the TMH units with other VHA software applications needed
  - Long-term viability may be dependent on measurement of productivity
  - Uncertainty about use and the end of COVID-19



# Conclusions

- Telemental health in the emergency and urgent care clinic setting was feasible, well-liked, and sustainable
- Potential threats to sustainability: perceived threat of COVID-19, technical issues, MH clinician staffing
- Future directions: sustainability and spread, safety of prescribing, inpatient acute care implementation.



# Thank You

## Iowa VA

- Peter Kaboli, MD

## University of Iowa

- Nick Mohr, MD, MS

## Tennessee Valley Healthcare System

- Corey Campbell, DO
- Gweyn Kemmer, NP
- John Shuster, MD
- Candace McNaughton, MD, PhD

For additional information: [michael.ward1@va.gov](mailto:michael.ward1@va.gov)



# Extra Slide: Demographics and Lengths of Stay

	In-Person		Telemental Health	
	Pre-Implementation n=502	Post-Implementation n=67	Pre-Implementation N/A	Post-Implementation n=319
<b>Total Mental Health ED/UCC Visits</b>				
ED, n (%)	242 (48)	36 (54)	-	162 (51)
UCC, n (%)	262 (52)	31 (46)	-	157 (49)
<b>Visits by Age, y</b>				
18-44, n (%)	154 (31)	16 (24)	-	102 (32)
45-64, n (%)	247 (49)	30 (45)	-	158 (50)
≥65, n (%)	101 (20)	21 (31)	-	59 (18)
<b>Visits by Sex</b>				
Female, n (%)	42 (8)	9 (13)	-	29 (9)
Male, n (%)	460 (92)	58 (87)	-	290 (91)
<b>Visits by Race/Ethnicity</b>				
American Indian or Alaska Native, n (%)	4 (1)	0 (0)	-	0 (0)
Black, n (%)	120 (24)	16 (24)	-	68 (21)
Native Hawaiian or Other Pacific Islander, n (%)	1 (0)	0 (0)	-	5 (2)
Unknown, n (%)	25 (5)	2 (3)	-	14 (4)
White, n (%)	352 (70)	49 (73)	-	232 (73)
<b>Visits by Rurality</b>				
Rural, n (%)	195 (39)	20 (30)	-	118 (37)
Urban, n (%)	278 (56)	44 (66)	-	191 (60)
Missing, n (%)	29 (6)	3 (4)	-	10 (3)
<b>Disposition</b>				
Discharge, n (%)	142 (28)	15 (22)	-	79 (25)
Admission (Medicine), n (%)	63 (13)	6 (9)	-	37 (12)
Admission (Mental Health), n (%)	133 (26)	16 (24)	-	124 (39)
Transfer (VA), n (%)	83 (17)	13 (19)	-	28 (9)
Transfer (Non-VA), n (%)	2 (0)	-	-	2 (1)
Other, n (%)	2 (0)	-	-	-
Missing, n (%)	77 (15)	17 (25)	-	49 (15)
<b>Length of Stay</b>				
Discharge, median (IQR)	7.5 (5.7-11.6)	9.6 (7.7-11.0)	-	6.2 (4.7-8.2)
Admission (Medicine), median (IQR)	13.5 (9.1-17.5)	12.9 (12.6-14.4)	-	14.1 (9.1-17.5)
Admission (Mental Health), median (IQR)	6.3 (4.6-8.2)	7.5 (4.8-9.1)	-	5.8 (4.7-8.8)
Transfer (VA), median (IQR)	15.4 (11.3-18.0)	19.0 (15.0-19.2)	-	14.5 (11.6-17.0)
Transfer (Non-VA), median (IQR)	19.3 (17.6-20.9)	-	-	32.1 (31.8-32.4)
Other, median (IQR)	11.5 (11.5-11.5)	-	-	-

