

Access and Virtual Care COREs: Complementary Initiatives to Speed the Research Cycle

Stephanie Shimada, Ph.D.
Timothy Hogan, Ph.D.

CORE Cyberseminar Series
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Paul Hebert, Ph.D.
Jolie Haun, Ph.D., Ed.S.
Charlie Wray, DO, MS, FHM



Poll Question Number One

Which is your primary role in VA?

- A. Research Investigator (Principal Investigator or Co-Investigator)
- B. Post-Doctoral Fellow/Student/Trainee
- C. Project Manager/Coordinator/Admin
- D. Statistician/Data Analyst
- E. Clinician
- F. VA Operations
- G. Other

Outline

Introduction: What are the Access and Virtual Care COREs?

- Stephanie Shimada, PhD (Bedford VA Healthcare System; VARC / Access CORE)
- Timothy Hogan, PhD (Bedford VA Healthcare System; Virtual Care CORE)

VARC Exemplar: Routing Call Center Calls to Nurse Practitioners (NP) was Associated with Fewer Emergency Department and Outpatient Visits

- Paul Hebert, PhD (VA Puget Sound Healthcare System; University of Washington School of Public Health)

VC CORE Exemplar: Virtual Medical Modality Implementation Strategies for Patient Aligned Care Teams to Promote Veteran Centered Care

- Jolie Haun, PhD, EdS (James A. Haley Veterans Hospital)

Overlap Exemplar: Improving Access to Care For Socially Vulnerable Veterans Through the Focused Delivery of Telemedicine

- Charlie Wray, DO, MS, FHM (San Francisco VA Medical Center; University of California San Francisco)

Introduction: What are the Access and Virtual Care COREs?

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Center for Healthcare Organization and
Implementation Research, Bedford VA
Healthcare System

*Veterans Access Research Consortium (VARC)
Co-Lead*

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Poll Question Number Two

Which of the following best describes your interests?

- A. Healthcare Access
- B. Virtual Care
- C. Both A and B

What is a COnsortium of REsearch (CORE)?

COREs
primarily:

- Support and accelerate research through:
 - **Prioritized set of research goals**
 - **Collaborative network of researchers**

Relevant to
their topic
area,
COREs:

- **Identify key research priorities**
- Facilitate the **development and execution of research and evaluation**
- Promote **communication and collaboration with key program offices**
- Support impactful research through **collaborative networks of researchers**

Generally,
COREs *do not*:

- Determine VA's research or operational **funding priorities**
- **Act as gatekeepers**
- **Write letters of support** for funding
- **Serve as consultants**



Veterans Access Research Consortium (VARC)

...to support and accelerate collaborative health services research that will lead to measurable improvements in Veterans' access to care.

Mission: *Promote innovative, operationally-aligned, high priority research that will impact Veterans' healthcare access in measurable and tangible ways*

Goals:

- Build and support an Access Research Consortium Network.
- Conduct a **portfolio review** of access-related VA evaluation and research projects, federally-funded research, and VA operational initiatives.
- Develop an **Access Metrics Compendium**.
- Identify high priority access research and access metric research questions and create an **access research roadmap**.



VARC Principal Investigators



Michael Ho,
MD; Denver, CO



Stephanie
Shimada, PhD;
Bedford, MA



Sameer Saini, MD;
Ann Arbor, MI



Peter Kaboli,
MD; Iowa City, IA

Virtual Care (VC) CORE

...to facilitate research that evaluates and improves use of virtual care to enhance the accessibility, capacity, and quality of VA health care and Veteran experience.

Area of interest: *Investigate the ability of **virtual care modalities** to increase Veteran access to services; improve workflow and workload of VA clinical team members; and engage and support Veterans to participate in their own care.*

Impact Goals:

- Facilitate increased **adoption** and use of VC in VA
- Foster **research** on the impact of VC in VA
- Create a **network** of VC investigators aligned with the needs and priorities of relevant VACO partners.
 - Two emerging workgroups:
(1) Telemental Health & (2) Metrics and data sharing



VC CORE Principal Investigators



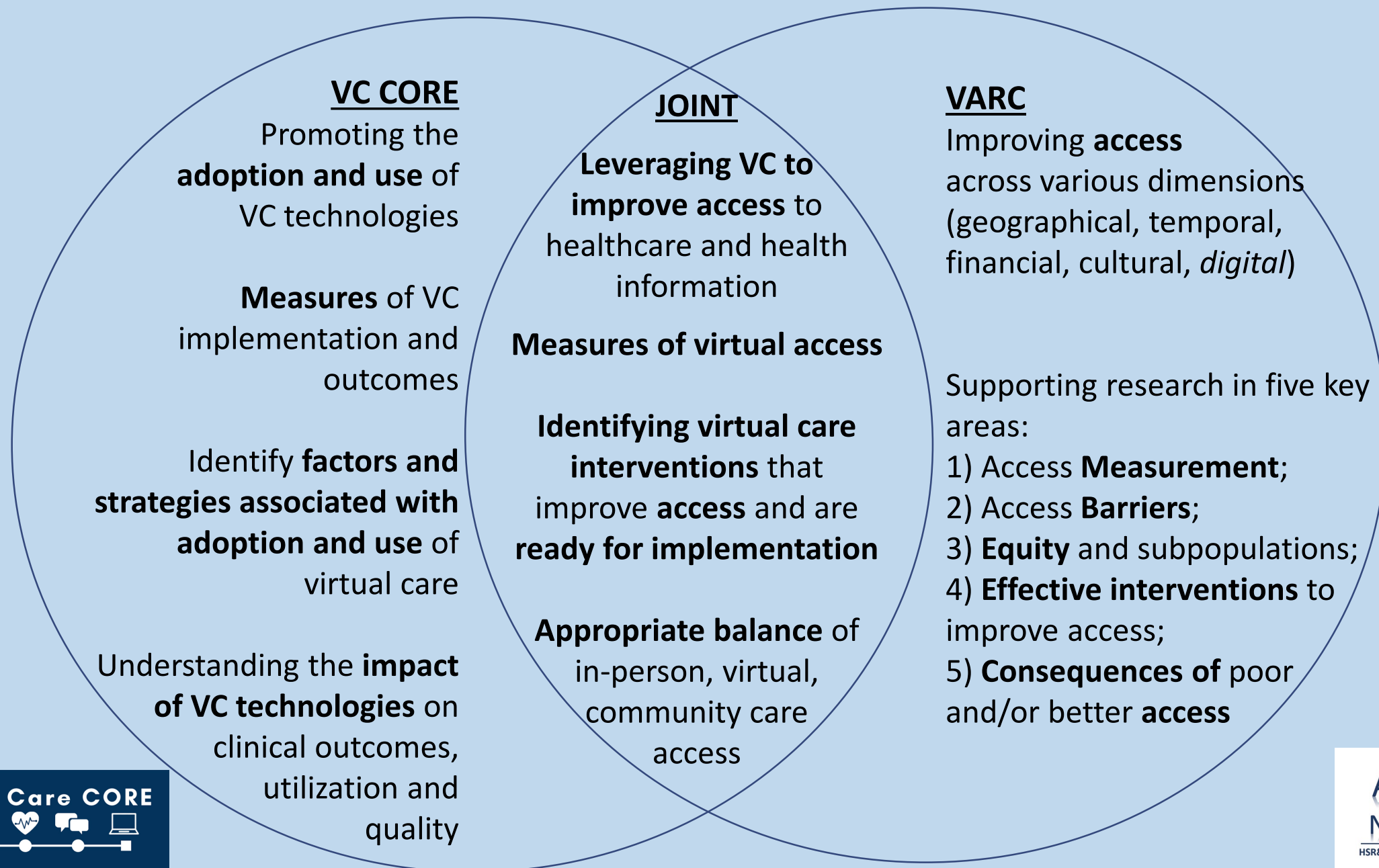
Scott Sherman
MD, MPH, VA
New York Harbor



Tim Hogan, PhD,
Bedford-Boston
VA



Donna Zulman
MD, MS VA Palo
Alto



Synergy and Collaboration

...to facilitate research that evaluates and improves use of virtual care to lead to measurable improvements in Veterans' access to care.

Synergistic Goals and Deliverables:

- Contribute jointly to virtual care access metrics and identification of data sources as part of the **VARC compendium of access metrics** and **VC CORE virtual care measures repository**.
- Identifying evidence-based virtual care interventions ready for implementation to maximize access to care.
- Collaborate on **portfolio review activities** to identify overlapping, priority areas and gaps in research relevant to access and virtual care.
- Explore opportunities for **cross-CORE workgroups** to address areas of overlap.



FY 20 Virtual Care Focus (3 pilots)

FY 20 Overlapping Focus (4 pilots)

FY 20 Access Focus (3 pilots)

Amy O'Shea, PhD: *The Association of Broadband Access with Changes in Use of Primary Care and Mental Health Services During the COVID-19 Pandemic**
VA Iowa City, IA

Chelsea Leonard, PhD: *Improving care coordination using home pulse oximeters for COVID-19 patients**
VA Eastern Colorado HCS - Rocky Mountain Regional VAMC - Aurora, CO

Matthew Augustine, MD, MSHS: *Validation of a New Timely Care Metric with Self-Reported Patient Experiences and Healthcare Use among High-risk Patient Populations in the Veterans Health Administration***
James J Peters VA Medical Center

Ursula S. Myers, PhD: *A Mixed-Methods Investigation of High and Low Adoption of VVC for Mental Healthcare During COVID-19**
Ralph H. Johnson VAMC - Charleston, SC

Paul Krebs, PhD; Melanie Jay, MD, MS: *Patient Use Characteristics of VA Telehealth Services and Impact on Quality of Care during COVID-19**
VA San Diego, CA & VA New York Harbor, NY

Kyle Possemato, PhD: *Acceptance and Commitment Therapy (ACT) Workshops: A Novel Delivery Modality to Increase Access to Mental Health Care for Rural Veterans***
VA Center for Integrated Healthcare

Taona P. Haderlein, PhD, MA: *Assessing VA Health Disparities in Telehealth Use During COVID-19**
VHA Greater Los Angeles VA Medical Center, Los Angeles, CA

Jennifer Stevens-Lapsley, PT, PhD: *Tele-rehabilitation for Medically Complex Veterans During COVID-19**
VA Eastern Colorado HCS - Rocky Mountain Regional VAMC - Aurora, CO

Bryann DeBeer, PhD: *Improving Access to VA Mental Health and Suicide Prevention Services: A Pilot Study of Intensive Case Management between VA and Community Care***
Rocky Mountain Regional VA Medical Center



Leah Zullig, PhD & Karen Goldstein, MD, MSPH: *PROvider and VETeran PerSpectives ON Telehealth Access Disparities among Rural African-American VeTERans: (RESONATE)***
Durham VA HCS



**Funded through VC CORE RFA Process funded by the CARES Act*

***Funded through VARC RFA Process*

VC CORE FY21 Projects Funded by Office of Connected Care

Projects that Address VARC and
VC Priorities Identified in [Blue](#)

<p>Melanie Jay MD; Anne Dembitzer, MD: <i>Optimizing Telemedicine: Using Standardized Patients to Assess and Train Providers in Digital Communication and Use of Technology</i> VA New York Harbor</p>	<p>Jolie Haun, PhD, EdS: <i>Best practices of Virtual Care Provider Superusers for Coordinating Specialty Care</i> James A. Haley Veterans' Hospital</p>	<p>Amit Shah, MD; Linda Park PhD: <i>Development and implementation of Virtual Home-based Cardiac Rehabilitation in Older Veterans</i> VA Atlanta & VA San Francisco</p>
<p>Kathleen Sarmiento, MD; Michelle Zeidler, MD: <i>Efficacy of Tele-Initiation of Positive Airway Pressure in Obstructive Sleep Apnea</i> VA Greater Los Angeles-HCS & VA San Francisco</p>	<p>Megan E. Gately, PhD: <i>Partnering with Caregivers to Ensure Access to VA Video Connect Visits for Veterans with Complex Care Needs: A Mixed Methods Investigation</i> VA Bedford Health Care System</p>	<p>Evan Carey, PhD: <i>Understanding and Overcoming the Digital Divide in Specialty Care Following the Onset of COVID-19</i> VA Rocky Mountain Regional VAMC</p>
<p>Leah Haverhals, PhD: <i>Assessing Changes in Delivery and Utilization of Telehealth Between VAMCs and State Veterans' Nursing Homes due to COVID-19 Pandemic to Inform Future Utilization, Scalability, and Adoption of Telehealth Modalities</i> Rocky Mountain Regional VA Medical Center</p>	<p>Claudia Der-Martirosian, PhD; Lucinda Leung, PhD, MPH: <i>Leveraging Rapid COVID-Driven Telehealth Expansion to Optimize Delivery of In-Person and Virtual Services in VA Primary Care</i> VA Greater Los Angeles Health Care System (VAGLAHS)</p>	<p>Gala True, PhD; Joseph Constans, PhD: <i>Evaluation and Improvement of the SAIL Metric: Identifying and Mitigating Barriers to Virtual Care Among Veterans at High Risk for Suicide</i> Southeast Louisiana Veterans Health Care System</p>
<p>Sherry Ball, PhD: <i>Virtual Shared Medical Appointments: Enhancing the Patient and Caregiver Experience</i> VA Northeast Ohio Healthcare System</p>	<p>Lewei (Allison) Lin MD, MS; Megan Adams MD, JD, MS: <i>Understanding the Impacts of COVID-19 on Specialty Care Telehealth Uptake, Sustainability, and Downstream Outcomes</i> VA Ann Arbor Healthcare System</p>	



VARC Exemplar: Routing Calls to Nurse Practitioners (NP) was Associated with Fewer Emergency Department and Outpatient Visits

Paul Hebert, PhD

Core Investigator, Seattle-Denver Center of Innovation (COIN)

VA Puget Sound Healthcare System

Research Professor, Department of Health Services, University of Washington
School of Public Health

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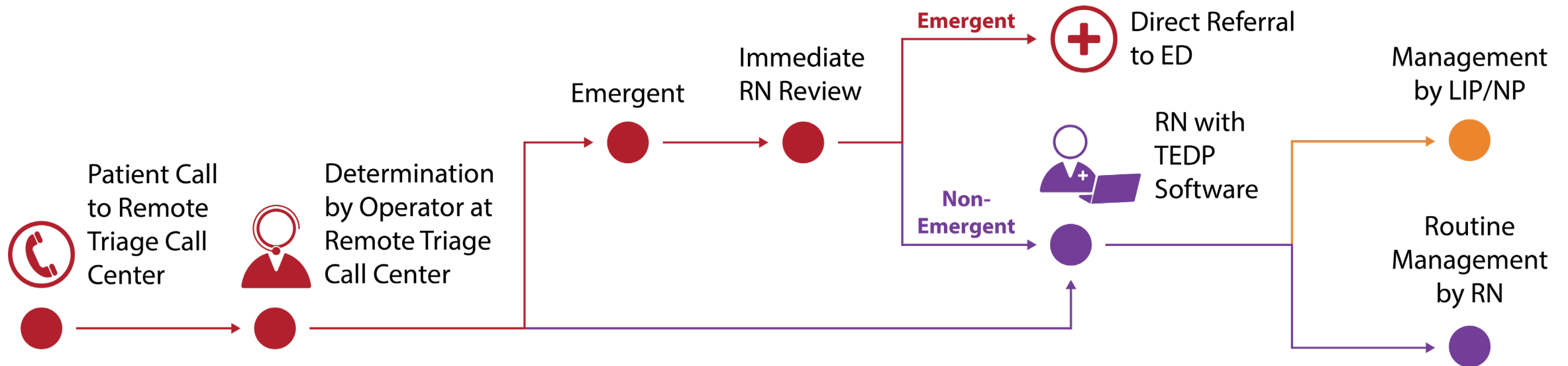
Background & Research Question

Starting in 2015, the Greater Los Angeles Call Center began a program in which calls could be forwarded to a Nurse Practitioner (NP)

- NPs can order medications and tests for the veteran
- NPs may obviate face-to-face visits including ED visits
- NPs may reduce the time between symptom complaint and resolution

Research question: Was routing a call to an NP associated with lower subsequent in-person visits than routine handling of a similar call by a registered nurse (RN)

Flow Diagram of Patient Experience when Contacting Call Center



TEDP Software Creates a Text Note in a Veteran's Electronic Health Records Containing:

- Chief Complaint (CC)
- Urgency
 - Recommended Follow-up interval and location
- Values and Measures Specific to CC
 - Duration
 - Biometrics (e.g., pain scale, BP, pulse)
- History of Present Illness (HPI)

DEMOGRAPHICS

68 y/o Male

RESULTS

CC: Headache

Recommended Follow-up Interval: 12-24 Hours

Recommended Follow-up Location: Clinic, VA

VALUES AND MEASURES

SBP: 158 mmHG

DBP: 82 mmHG

Temperature: 99.2 Fahrenheit

Pain scale: denies pain

Duration of CC: 1 Minute

POSITIVE RESPONSES

HPI: fever, subjective

HPI: headache, duration longer than 6 hours

HPI: headache, moderate to severe

HPI: nasal congestion, duration longer than 2 days

HPI: pain, maxillary or frontal sinuses

NEGATIVE RESPONSES

Denies: HPI: difficulty speaking, sudden onset

Denies: HPI: difficulty walking, sudden onset

Denies: HPI: eye pain

TEDP Software Creates a Text Note in a Veteran's Electronic Health Records Containing:

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NEGATIVE RESPONSES

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Denies: HPI: eye pain

Methods

1 Identify the TEDP notes for calls to NPs and RNs from April 2015 to March 2019

2 Restrict the sample to:

- Calls with chief complaints handled by NPs
- Calls that came on days and times when NPs were working

3 Dependent variable: Health care use in 7-days following index call

- Emergency department (ED) visits
- Primary care visits
- Specialty care visits
- Hospitalizations

Methods (2)

4 Estimate the association between healthcare use and NP-vs-RN managed calls adjusting for:

- Patient characteristics (e.g., demographics, prior year healthcare use, comorbidity, distance from the nearest VA)
- Characteristics of the symptom from TEDP(e.g., chief complaint, duration, pain score, urgency)
- Characteristics of the call (e.g., time of day, day of week)
- Logistic regression for any healthcare use, Poisson regression for the count of healthcare visits in 7 days following the call date

5 Propensity score matching

- 2:1 matching without replacement, within chief complaint categories, with 0.2 SD caliper, common support.
- Repeat logistic and Poisson regressions

Study Sample

	TOTAL (N=49,578)	NP CALLS (N=1,554)	RN CALLS (N=48,024)	P-VALUE
Mean Age (SD)	57.2 (17.2)	54.4 (17.5)	57.3 (17.2)	<0.001
Female, %	14.0	18.5	13.8	<0.001
Race, %				0.084
White	56.0	53.8	56.1	
Black	15.0	15.2	15.0	
Hispanic	14.7	14.3	14.7	
Other/Missing	14.3	16.7	14.2	
Chief Complaint Category, %				<0.001
Pain	40.8	33.5	41.0	
Respiratory	15.7	33.3	15.1	
Cardiac	8.06	2.45	8.25	
Urinary	7.88	15.8	7.62	
Ear, Nose, Throat	7.82	3.41	7.96	
Dermatologic	7.09	1.54	7.27	

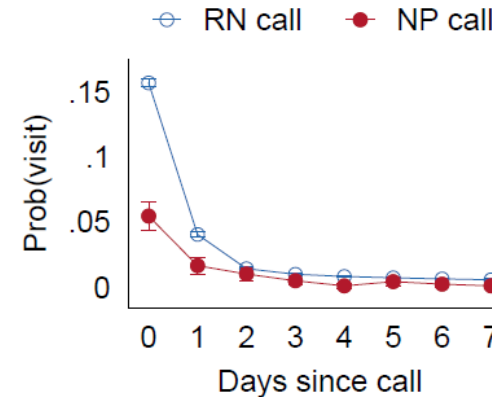
Calls Routed to NPs Were for Less Acute Symptoms

	NP CALLS (N=1,554)	RN CALLS (N=48,024)	P-VALUE
Comorbidity Score, Mean (SD)	0.27 (1.00)	0.46 (1.35)	<0.001
Health Care Use, prior 12-months			
Outpatient Visits, Mean (SD)	8.6 (11.7)	9.2 (12.8)	0.10
ED Visits, Mean (SD)	0.50 (1.2)	0.74 (1.7)	<0.001
Hospitalization, Mean (SD)	0.10 (0.45)	0.17 (0.63)	<0.001
TEDP Triage Disposition, %			<0.001
After Today or Phone	64.2	32.6	
Clinic Today	24.4	31.1	
Urgent Care	3.70	3.78	
Emergency Department	2.19	30.1	

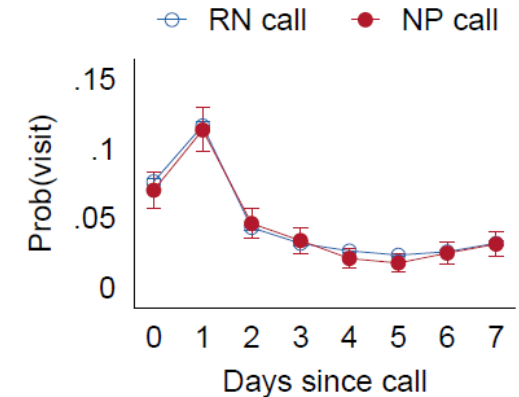
Unadjusted Results

- Probability of visits on days following index calls was higher for RN-managed than NP-managed calls for ED, inpatient, and specialty care, but not for primary care visits
- Most of the difference was day of or day following the index call, (except specialty care)

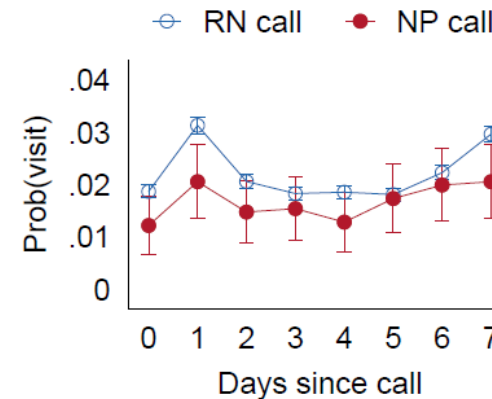
Emergency Department



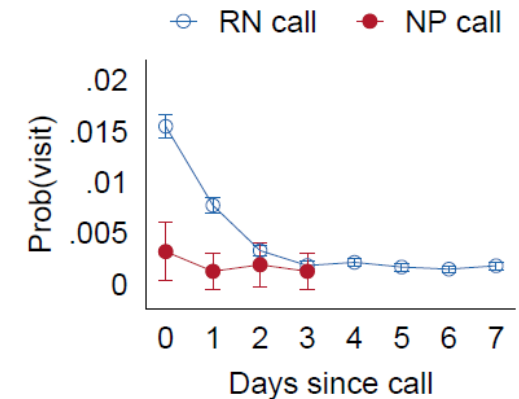
Primary Care



Specialty Care



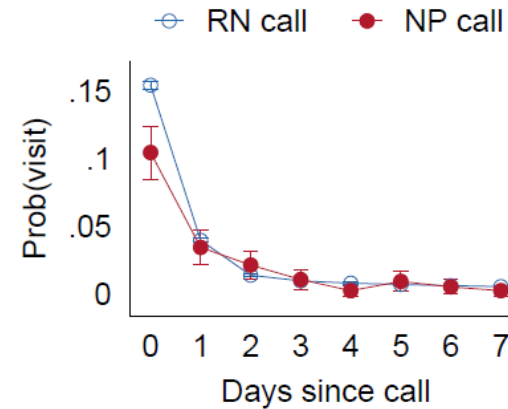
Hospitalization



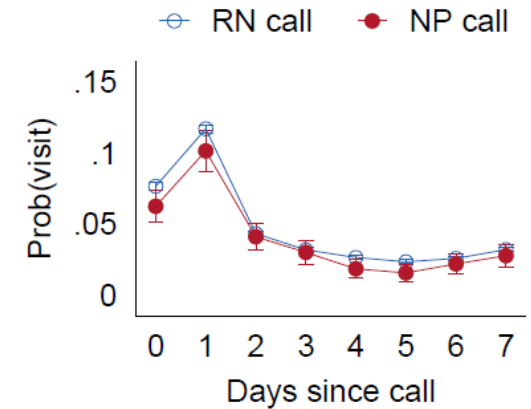
Adjusted Results

- Adjustment for Veteran, call, and symptom characteristics diminished the difference in **per day** use between NP and RN-managed calls
- After adjustment only, ED visits on the day of the call were statistically significantly different

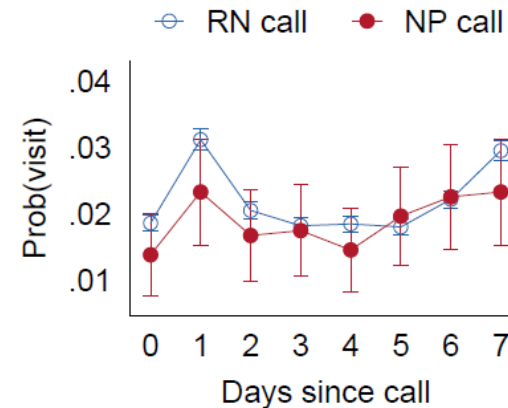
Emergency Department



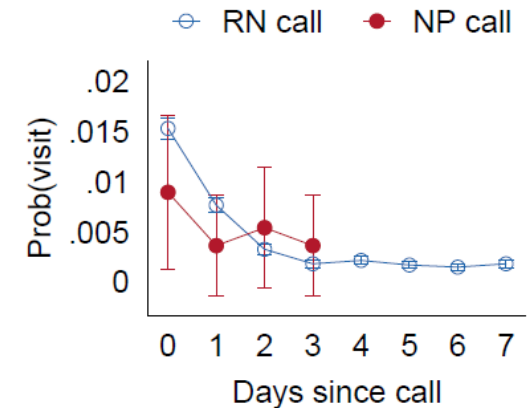
Primary Care



Specialty Care



Hospitalization



Healthcare Use Over 7-Days Was Lower for Calls Routed to an NP

Count of use: visits per person (VPP)

	UNADJUSTED			ADJUSTED ²		
	RN call	NP call	p-value	Rate ratio ²	p-value	Visits avoided per 100 calls (95% CI)
PRIMARY CARE	0.42	0.43	0.80	0.90	0.008	0.7 (0.4, 0.1)
SPECIALTY CARE	0.20	0.15	<0.001	0.87	0.04	2.6 (0.0, 5.1)
ED	0.27	0.11	<0.001	0.78	0.002	5.9 (2.7, 9.1)
HOSPITALIZATION	0.04	0.01	<0.001	0.60	0.08	1.4 (0.1, 2.6)

² Rate ratio from a Poisson model of use as a function of patient characteristics (i.e., socio-demographics; prior 12-month emergency department, primary care, specialty care, and inpatient use), and call characteristics (i.e., chief complaint, duration of complaint, urgency of condition, and pain score)

Propensity Score Matched NP and RN Triaged Calls Found Similar Reductions in 7-Day Health Care Use

	PRIMARY CARE	SPECIALTY CARE	ED
Mean Healthcare Use per Caller at 7-days Since Index Call			
Propensity score matched			
RN	0.48	0.15	0.14
NP	0.43	0.11	0.11
IRR	0.90	0.73	0.79
p-value	0.007	0.013	0.005
Propensity score matched and adjusted for urgency			
IRR	0.89	0.80	0.79
p-value	0.016	0.004	<0.001

Limitations

- We did not observe healthcare not paid for by the VA, e.g., through Medicare/Medicaid
- RNs appropriately routed less acute calls to NPs, which we may not have adequately adjusted for

Summary & Conclusion

Incorporating NPs into a call center was associated with **lower** in-person healthcare use in the subsequent 7 days compared to routine RN triage calls



Collaborators:

Eric Gunnink, MS, Jorge Rojas, MS, Ryan
Laundry, MS, Christopher Wilson, MS,
Emily Ashmore, Peter Kaboli, MD

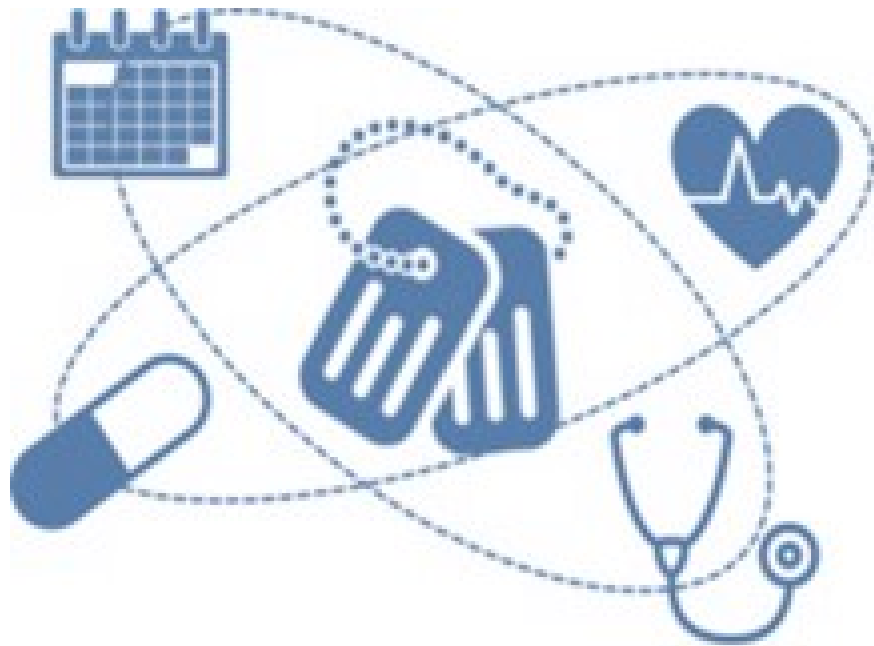
Virtual Care CORE Exemplar: Virtual Medical Modality Implementation Strategies for Patient Aligned Care Teams to Promote Veteran Centered Care

Jolie Haun, PhD EdS

Director of Implementation and Dissemination & Research Health Scientist
Research Service, James A. Haley Veterans Hospital, Tampa FL

Affiliate Associate Professor,
College of Public Health, University of South Florida, Tampa FL

Virtual Medical Modality Implementation Strategies for Patient Aligned Care Teams to Promote Veteran Centered Care*



PROJECT PURPOSE

- The purpose of this study is to inform the VHA's system-wide **implementation efforts** to increase **proactive integrated use of virtual resources** among Primary Care (PACT) team members.

Protocol Publication: Haun, JN, et al. Virtual Medical Modality Implementation Strategies for Patient-Aligned Care Teams to Promote Veteran-Centered Care: Protocol for a Mixed-Methods Study. *JMIR Research Protocols*, 2018.

*Funded by Health Services Research and Development Service; IIR 15-443 - I01 HX002010

Proactive Integrated Virtual Resource Use Defined



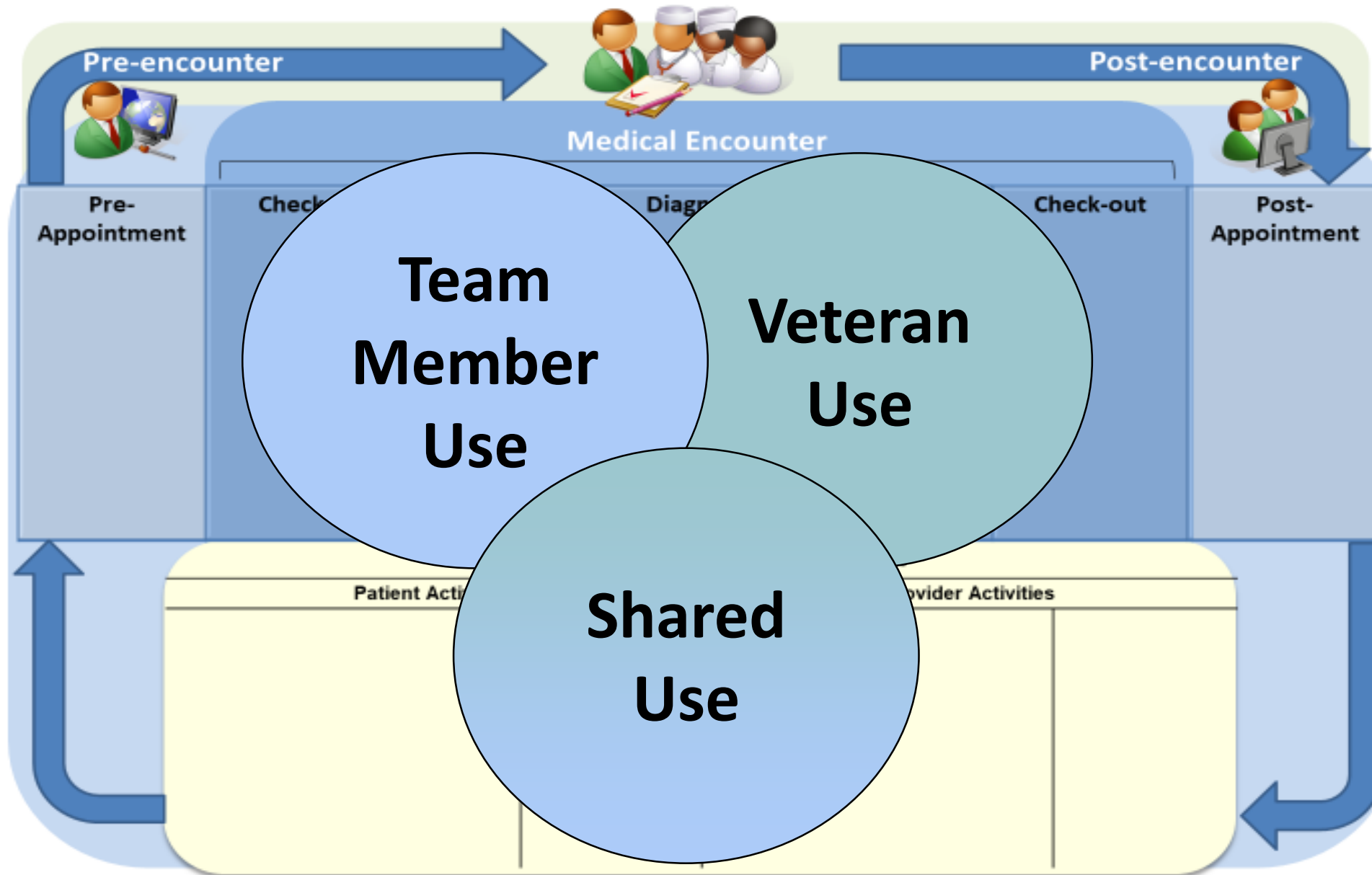
Self-initiated coordinated use of applicable virtual systems as a team for the purposes of coordinating timely delivery of high-quality care across the care continuum

Improves **workflow and workload**, supports **provider uptake and promotion**, which increases **patient adoption** and **sustained use**, to improve care outcomes

Fragmented use creates **inefficiency, frustration**, and **reduces adoption and satisfaction with care**

Long-term goal of promoting **proactive integrated virtual resource use** is facilitating a new **cultural norm** for **integrating virtual resource use into care delivery**

Healthcare Continuum



- Health Information Technology**
1. ANNIE
 2. Appointment Tools
 3. Blue Button
 4. Care Assessment Need Risk Assessment
 5. CPRS
 6. Healthy Living Assessments
 7. Joint Legacy viewer
 8. Journals
 9. Labs and Tests
 10. Mobile Apps- Non-VA
 11. Mobile Apps- VA
 12. Rx Refill
 13. Secure instant message
 14. Secure Messaging
 15. Telehealth
 16. Telephone
 17. VA and Non-VA YouTube videos for education
 18. VA email
 19. Veterans Health Library
 20. VetLink Kiosks
 21. VISTA
 22. Vitals Tracker
 23. Wellness Reminders

Connecting the Research to the VC CORE



AIM 1 (Complete)

Focus groups

- Core PACT (n=19)
- Extended PACT (n=2)

Content analysis

Matrix analysis

Statistical analysis

Follow-up interviews (n=16)

Content analysis

Matrix analysis

AIM 2 (Complete)

Aim 1 data: cases,
comparative
matrices, focus
group activity data

Gap analysis

Expert Informant Interviews (n=13)

Content analysis

Matrix analysis

Environmental Scan

Content analysis

Intervention Development

Develop
Implementation
Strategies

Panel Evaluation

Develop
Implementation
Plan

Develop
Implementation
Toolkit

AIM 3 (Complete – Spring 2021)

Intervention delivery (n~252)

Pre & post surveys (n~62)

Statistical analysis



Administrative data

Statistical analysis



Debriefing Interviews (n~60)



Content analysis



Matrix analysis

Key:  Data collection activity
 Data analysis/review activity

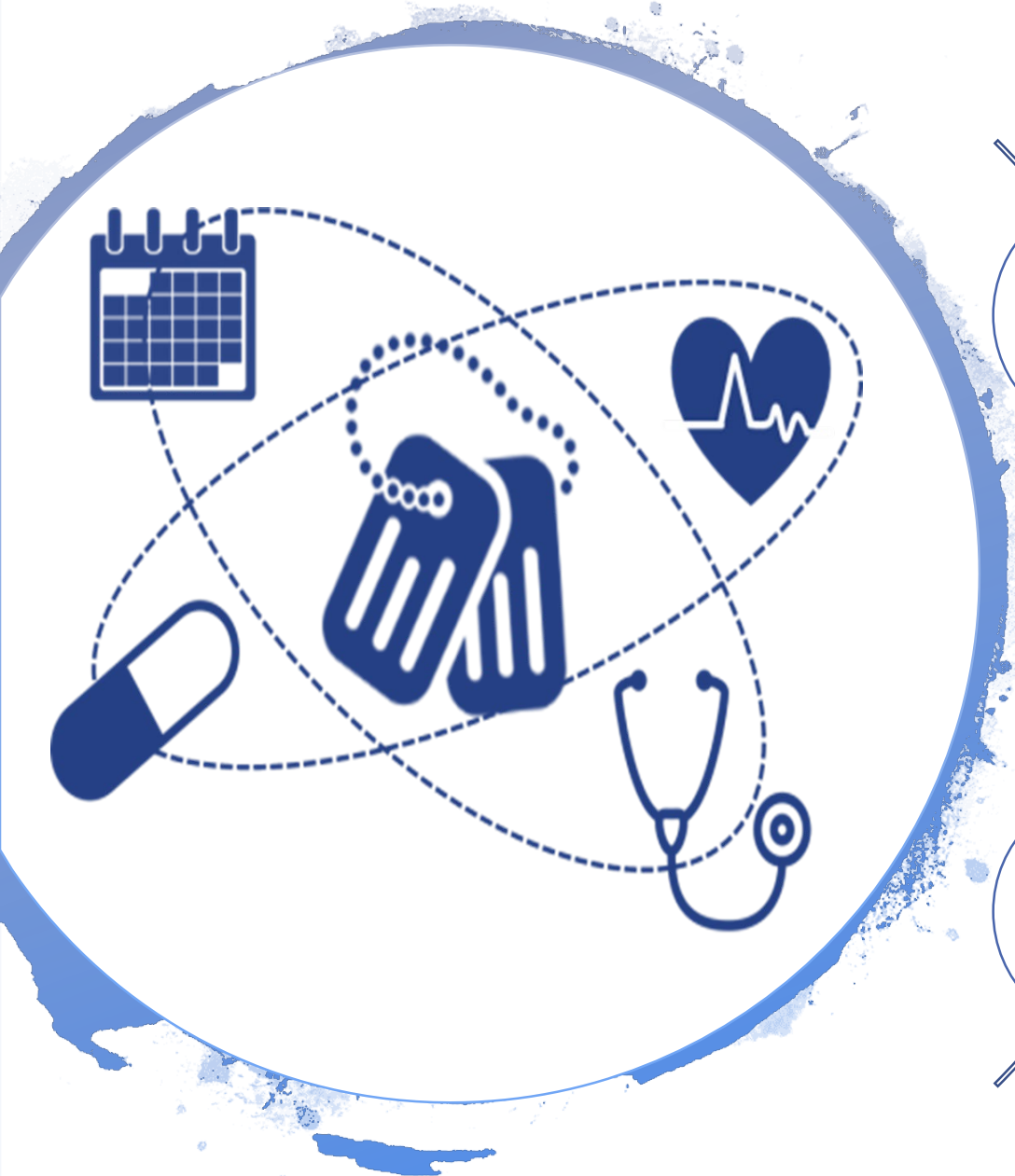
Study activities result in...

 Qualitative data collection
 Quantitative data collection

 Data
 Resource scoping activity

 Product development
 Product dissemination

Focus of Today's Presentation



AIM 1: Explore Virtual Resource Use in Primary Care Teams

AIM 1: Identify Preferred Implementation Strategies

AIM 2: Development & Formative Evaluation of Patient Aligned Care Team Virtual Resources Implementation Toolkit

Findings: Focus Group and Interviews

- Data gleaned little *evidence of proactive integrated virtual resource use – Secure Messaging & Superusers*
- Differences between high- and low- volume users: identified *facilitators and barriers*, recommendations, *process for patient education* and preferred *implementation strategies*
- Similarly, all groups described *lacking knowledge on patient-facing resource availability*, and *resource access and functionality* – impacting their perceived ability to promote use
- Need to identify *best practices* that are *specific to care tasks and performance measures*
- Expert informant interviews resulted in the identification and review of *twenty-three virtual resources* that could be proactively integrated *across the care continuum*

Participant Recommended Implementation Strategies*

Top 3 Implementation Strategy Approaches:

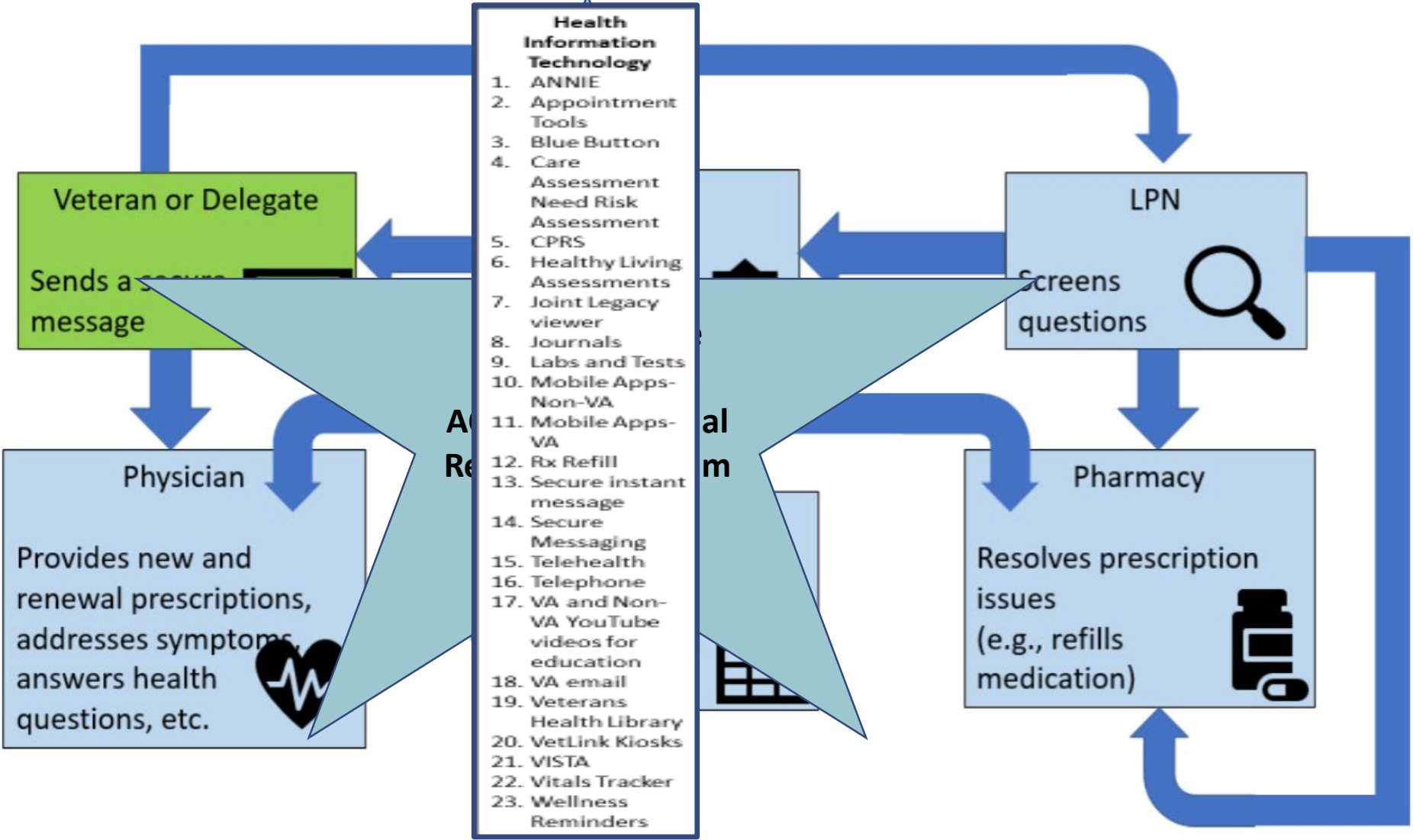
1. Education
2. Technical & Infrastructure Support
3. System-based changes

*Powell, et al. A refined compilation of implementation strategies: results from the Expert Recommendations for Implementing Change (ERIC) project. Implementation Science. 2015

**Mandates, Workload
Credit, CEU credit for
Training**

High Utilization Groups Recommended Implementation Strategies		%
Develop educational materials		40
Change record systems		40
Centralize technical assistance		33
Assess for readiness and identify barriers and facilitators		33
Low Utilization Groups' Most Useful Implementation Strategies		
Centralize technical assistance		61
Conduct educational outreach visits		61
Capture and share local knowledge		61
Change physical structure and equipment		57
Conduct educational meeting		57
Build a coalition		57
Distribute educational materials		57
Develop educational material		43
Involve patients/consumers and family members		43
Assess for readiness and identify barriers and facilitators		39
Prepare patients/consumers to be active participants		39
Access new funding		39
Conduct local consensus discussions		39
Audit and provide feedback		39
Intervene with patients/consumers to enhance uptake and adherence		35
Make training dynamic		35
Obtain and use patients/consumers and family feedback		35
Conduct local needs assessment		30
Develop academic partnerships		30

Example of Proactive Integrated Use of Secure Messaging by PACT Team



Primary Care Team Member Care Activities Using Virtual Resources Across the Care Continuum

This system of documenting virtual resource use can be applied to:

- Veteran/Informal Caregiver/Delegate Activities
- Shared Activities
- Diverse Systems of Care, i.e. Specialty Care
- Performance Measures Across Discrete Points of Continuum of Care
- Complex Coordinated Care Tasks

	Pre-appointment	Check-in/Check-out	Medical Encounter	Post-appointment
Primary Care Team Member Activities	<ul style="list-style-type: none"> • Schedule medical visit (14, 15, 16) • Prepare Veteran for appointment (e.g., fast for labs, list concerns to be discussed) (14, 15, 16) • Stratify hospitalization risk (4) • Coordinate with staff in preparation for appointment (5, 13, 16, 18, 21, 23) 	<ul style="list-style-type: none"> • Check-in (20) • Update Personal Information (20) • Schedule follow-up visit (14, 15, 16) 	<ul style="list-style-type: none"> • Measure and document health indices (5, 9, 14, 15, 16, 22) • Obtain medical history (3, 5, 7, 14, 15, 16, 21, 22) • Physical examination (15, 16) • Documentation of assessment and plan (5, 21) • Coordinate care with other providers and services (3, 5, 13, 18, 21) • Educate patient on plan and conditions (4, 10, 11, 14, 15, 16, 17, 19, 23) • Prescribe medication (5) 	<ul style="list-style-type: none"> • Send Veteran to Travel for reimbursement on appointment travel (13, 16) • Staff create RN follow-up messages (1, 13, 14, 18) • Home health assessment for personal care needs and follow-up on resources (5, 14, 15, 16)

Patient Aligned Care Team Virtual Resources Implementation Toolkit Development



Patient Aligned Care Team Virtual Resource Implementation Toolkit Development



Toolkit includes Implementation and Dissemination Plans, Training, Introduction, Fact Sheet, Linked Resources, Healthcare Continuum w/ Options for Integrated Use

Resources Tabled by: Virtual Resource, Resource Title, Format, Description

Resources consist of videos and presentations on: Kiosks, My HealtheVet electronic health portal including Secure Messaging, Telehealth, and VA Mobile, ANNIE texting, and HealtheLiving Assessments

Virtual care modalities organized by tasks: (1) Communication with Care Team; (2) Medical Management; (3) Care Delivery; (4) Appointment Management; and (5) Tracking Vitals

Formative Evaluation of Toolkit Training



**Total number of
attendees**

**In person training: 187
Virtual training via VTEL:
83**



**Respondents had positive response,
found training useful**



Preferred the dynamic training videos



**Valued information about emergent
virtual resources (e.g., ANNIE app)**



**Learning effects occurred & group
discussion was valuable**



**Opportunity for champions to be
introduced and offer support**

Toolkit Training Challenges



**Need effective
means for delivery
and dissemination**

**Competing demands
when integrating
training into workload**



**Virtual training delivery
issues**

**Technical issues
Difficulty facilitating
discussion during
training**



**Some training attendees didn't see connection
between their use of virtual resources and patients'
use – felt the training should fall on patient use**

Participant Suggestions

Training options

- In-person training with the PACT team
- Designated time set aside for training
- Demonstrations on how to use virtual resources
 - Include patient facing accounts for team

Educate Veterans on Proactive Integrated Use

- Provide dedicated space
- Play Veteran targeted videos in waiting rooms
- Offer education classes to Veterans during new patient orientation
- One site had a librarian who could provide education to Veterans

VA Office of CONNECTED CARE

Expanding Veteran Access to Care Through Virtual Care

Learn more at [ConnectedCare.va.gov](https://connectedcare.va.gov).



Need to Develop Content on:

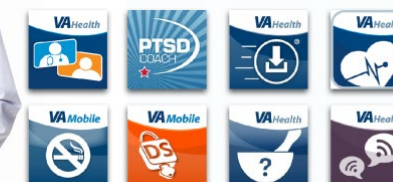
1. Additional Available Virtual Resources
2. Examples of proactive integrated resource use that address specific complex coordinated care tasks and performances measures
3. Individual, team, and patient-based examples
4. Develop content to support team member promotion to patients
5. Add Veteran/informal caregiver/delegate targeted content

VA Mobile



VA App Store

<https://mobile.va.gov/appstore/veterans>



VA Health



VA Telehealth



Integration, Dissemination & Implementation

Collaborate with OCC to
integrate Tool kit into the OCC
Academy and disseminate tool
kit throughout VA system

Continue to collect and
develop content

VC Funded Operation Project
*Super Users' Best Practices for
Coordinating Specialty Care:
Creating A Culture for
Proactive Integrated Use of
Virtual Resources (OCC-21-07)*

Conclusions



Knowledge, skills, access, and infrastructural support to proactively integrate virtual resources to improve daily workflow and workload are warranted

Education and skill building in best practices of proactive integrated use to achieve performance measures and complex coordinated tasks across the care continuum is needed for targeted users

Innovative implementation strategies including mandates, workload credit, accessible dynamic training, credit for training are critical

The Virtual Resource Implementation Toolkit requires ongoing development and dissemination to support a cultural norm of proactive integrated virtual resource use across the healthcare continuum

Lessons Learned

Flexibility Is Key

- Discovered No Proactive Integrated Use = Added Expert Informant Interviews to Protocol (Admin, Operational Leadership, Leaders in Field)
- COVID created confounding impact, but created timely opportunity

Partnership is Critical

- Working with clinical and operational partners is key in keeping virtual resource content current
- Working with OCC Partners to broadly disseminate Tool Kit is central to broad dissemination

Iteratively Reconnect Research to Operational Transformative Efforts

- Evaluated findings against VC CORE priorities to develop Superuser QI Project
- This ongoing work will support creating new cultural norms

VARC and VC CORE Overlap Exemplar: Improving Access to Care For Socially Vulnerable Veterans Through the Focused Delivery of Telemedicine

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Access Failures & Their Impact On Care

- Access to care is a high priority within VA
- Missed clinic visits (aka. 'no-shows') are a type of access failure.
 - Primary care no-show rates range from 15-30% ; at VA ~15-20%
- At an individual level, no-shows lead to interruptions in continuity of care, increased rates of hospitalization, and greater resource utilization
- At a systems level, no-shows lead to scheduling and operational inefficiencies, reduced clinic productivity, and reduced access for *all* Veterans
- Due to these issues, the VA estimates the cost of no-shows and unused appointments to be half a billion dollars annually.

Who As At Risk For Access Failures?

- Prior research has shown that socially vulnerable populations (e.g. homelessness, poor mental health, substance use disorder, etc.) have poor access to care.
- Social risk factors can be extracted from administrative data.
 - Using national VA data, we created six measures of social risk using ICD-9 codes, stop codes, and lab data.

Social Risk Factor	Prevalence	PPV
Lives Alone	2.9%	0.60
Housing	2.9%	0.78
Uses Substance Use Services	3.2%	0.88
Alcohol Use Disorder	2.4%	0.88
Substance Use Disorder	4.4%	0.82
Violence	1.1%	0.94

Social Risk and Access Failures?

Association of social risk factors with missed clinic visits

- Of the 1500 patients, 1282 (85%) had ≤ 1 missed clinic visit, while 218 (14%) had 2+ missed clinic visits in prior year.
- Patients with 2+ missed clinic visits had higher prevalence of all analyzed social risk factors compared to those with ≤ 1

Social Risk Factors	Unadjusted OR	Adjusted OR of 2+ No-Shows
Lives Alone*	*1.70 (1.21-2.36)	*1.71 (1.21-2.41)
Marginal Housing*	*9.68 (4.19-23.52)	*6.93 (2.88-17.4)
Substance Use Disorder*	*1.97 (1.39-2.78)	*1.48 (1.01-2.12)
Lacks Social Support	*4.27 (1.25-13.49)	2.21 (0.54-8.04)
Mental Health Diagnosis	0.97 (0.69-1.37)	0.91 (0.64-1.27)

Telemedicine as a Cure?

- Telemedicine aims to improve access to care
- VA Video Connect (VVC) is a mobile app released in 2017 that provides video conferencing services to connect Veterans with their medical providers
- Because VVC promises to increase access to care, expanding such services is currently a top priority for the VA—highlighted by the telehealth related provisions in the MISSION Act of 2018
- In response, the VA has mandated that 100% of *all* providers be VVC capable by the end of FY 2021

Telemedicine. But for Who?

While telemedicine services are often focused on Veterans living in rural or remote locations, other Veteran populations may also benefit from the use of such services

- Assessments by the eHealth QUERI found that among a cohort of surveyed Veterans, most had access to a smartphone (90%), tablet (60%), or a laptop/desktop computer (98%)
- Research has demonstrated that vulnerable Veterans (e.g. homeless) are technologically capable and desire video-based access to their medical care teams
- Evidence supports the idea that VVC may be useful in socially vulnerable populations and could be targeted to those at elevated risk of no-showing clinic appointments

Telemedicine. But for Who?

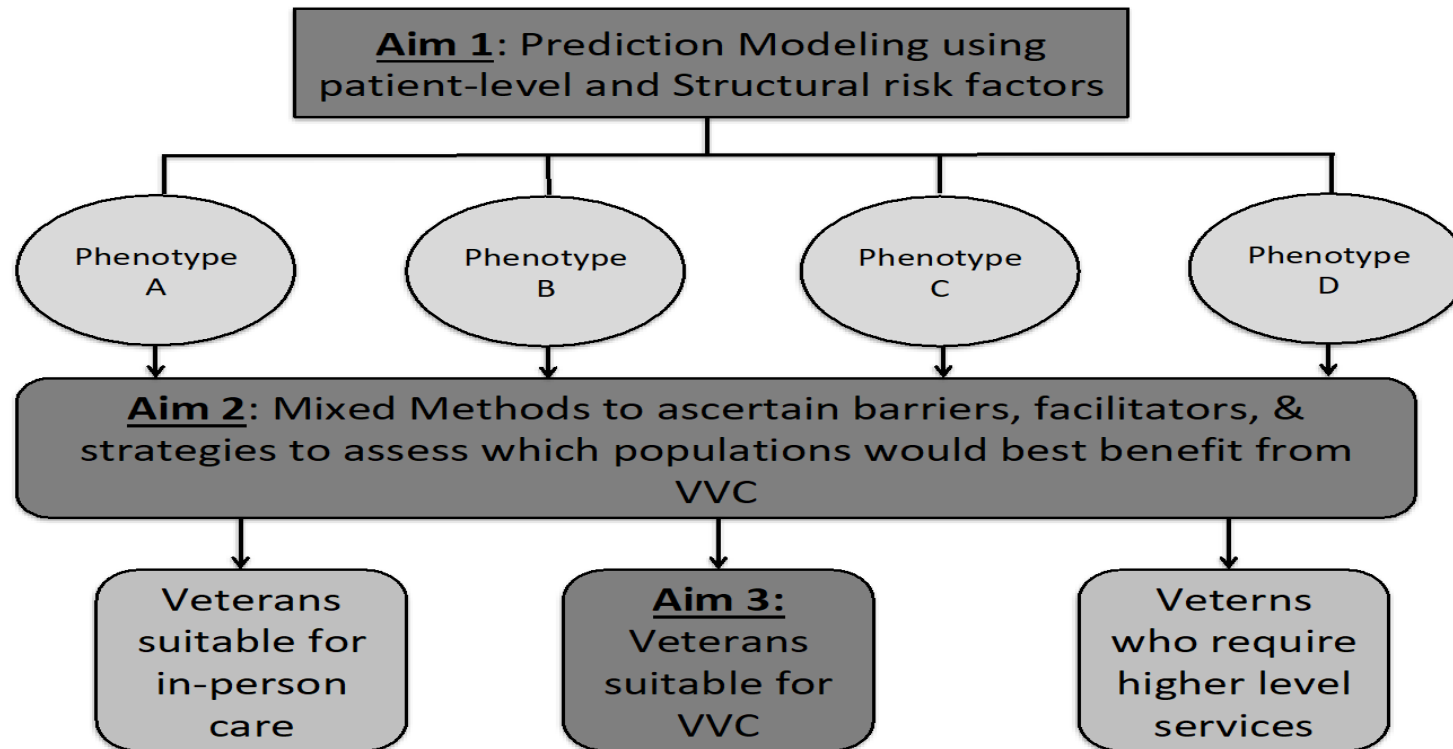
Primary care providers would like assistance in selecting patients appropriate for VA Video Connect.

- Working with my operational partners at the SFVA, including primary care and telehealth leadership, we surveyed 33 physicians at the following completion of a two-hour VVC certification course.

	% responding “very good” or “excellent”
My comfort level with selection of appropriate patients for a video visit is...	50%
My confidence in the effectiveness of video visits for Veterans is....	71%
The value of video visits to my patients is...	85%
The value of video visits to me as a provider is...	85%
Likelihood that you will incorporate VVC in the next 3 months	91%

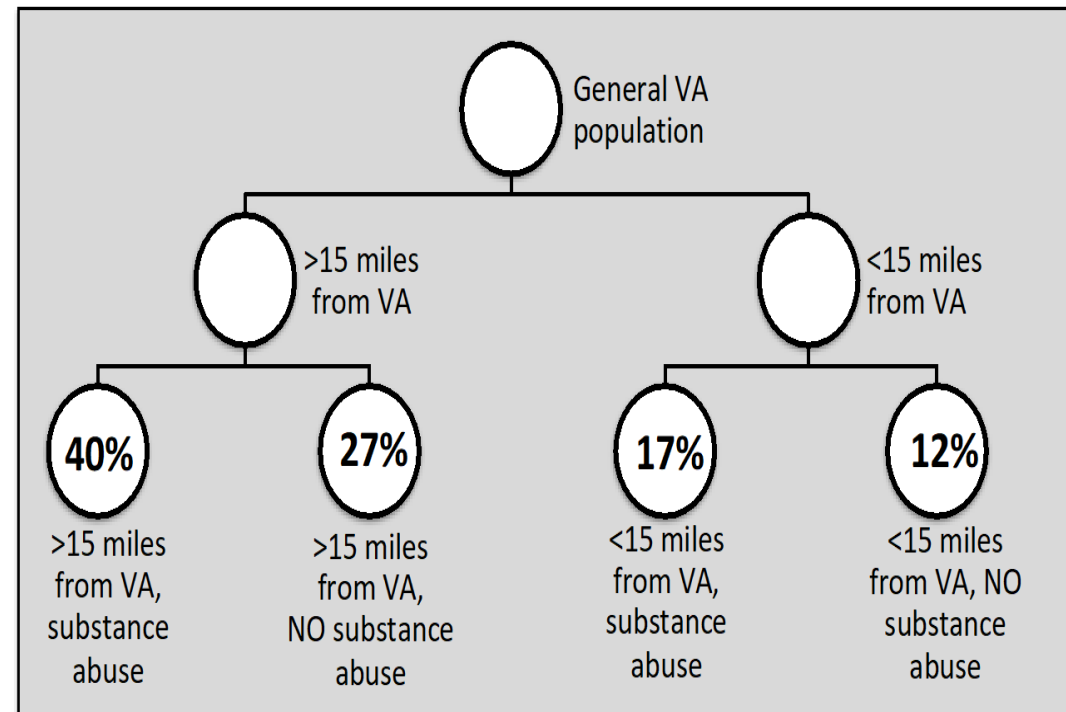
VA HSRD CDA Proposal:

Identify Veterans at high risk of missing primary care clinic appointments and understand which sub-populations may benefit most VVC



Aim 1:
Use regression trees
to phenotype
Veterans based on
their estimated risk
of no-showing clinic
appointments.

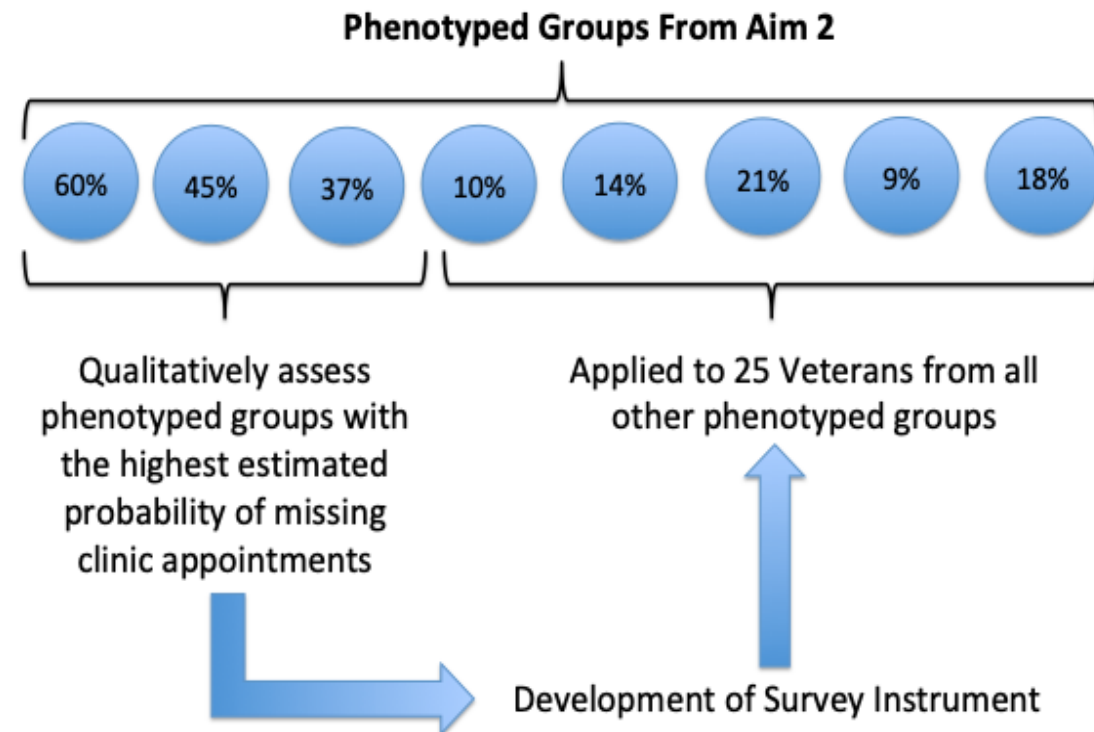
- Expand and validate these variables among a larger, ambulatory population of Veterans.
- Use regression tree analysis to derive a prediction model that will estimate the probability of having a high no-show rate *and* phenotypically describe Veterans who are at high-risk of access failure



Aim 2:

Using mixed methods design, we will engage phenotyped Veterans at high risk for no-showing and assess suitability, desire and capability of using VVC as a means of obtaining access to care

- Understand Veterans perceived barriers, obtain suggestions for design improvement, and additional thoughts that may better inform VVC implementation
- This aim will allow us to better target VVC to those who have the capacity to engage and interact through VVC



Aim 3:

Pilot the targeted use of VVC among Veterans at-risk of no-showing primary care clinic appointments at the SFVA using implementation science strategies

- We will perform formative and process evaluations of the implementation of VVC among a select group of Veterans at increased risk of having high no-show rates
 - The purpose of these evaluations is to assess environmental, systems, and individual characteristics to inform focused implementation of VVC
- We will also assess preliminary effectiveness to guide in the design and implementation of a subsequent full effectiveness study

For More Information...



VC CORE

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Contact for VC CORE Project Management Team:
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VARC

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