



U.S. Department
of Veterans Affairs

The Veterans Health Administration Quality Enhancement Research Initiative Model: Using Rapid Response Teams to Inform a National COVID-19 Vaccination Program

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DISCLAIMER AND CONFLICTS

- The views expressed in this presentation are the presenters and do not necessarily reflect the position or policy of the Department of Veterans Affairs or the US government.
- No conflicts related to this presentation.



LEARNING OBJECTIVES

1. Describe the Veterans Health Administration (VHA) Quality Enhancement Research Initiative (QUERI) Model for implementing evidence-based practice.
2. Discuss the purpose of rapid response teams in the context of the QUERI model.
3. Describe the use of rapid response teams in informing a COVID-19 vaccination program.



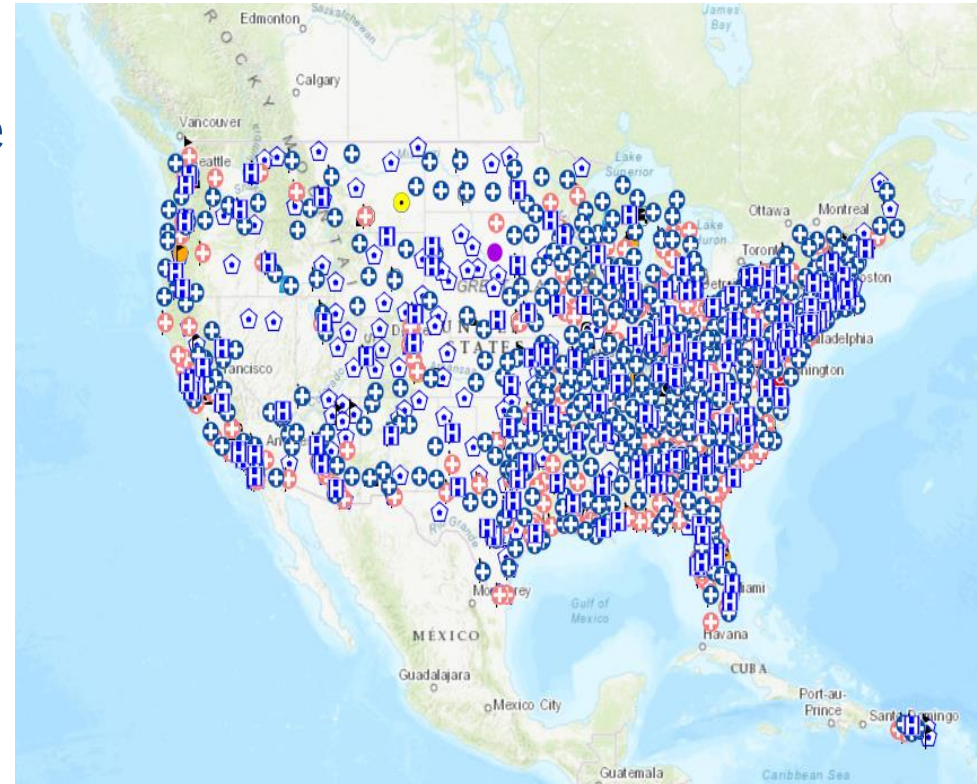
OVERVIEW

- VHA as a learning health system organization
- Background on QUERI
- Overview of rapid response teams
- Experiences of CARRIAGE QUERI in COVID-19 vaccine roll-out



OVERVIEW OF VHA

- Veterans Health Administration (VHA) is the largest integrated healthcare system in the U.S.
- Part of Department of Veterans Affairs (VA)
- Serves 9 million U.S. military Veterans
- 171 medical centers, 1000+ outpatient clinics
- 320,000+ employees

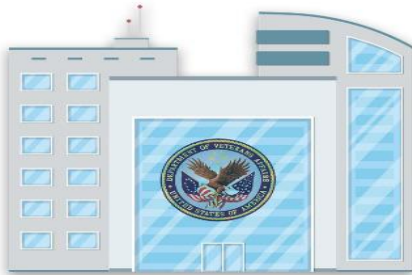


Kilbourne and Braganza, QUERI Strategic Plan, 2020; VHA <https://www.va.gov/health/>; VHA GIS Maps



VA Research by the Numbers

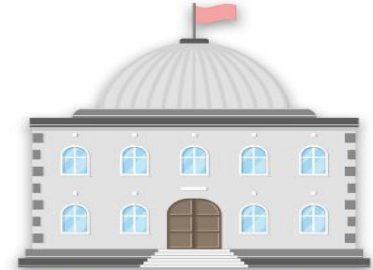
(For Fiscal 2021)



Active research
sites nationwide
102



Published research articles
authored or co-authored
by VA investigators
13,873



Total congressional
appropriation for VA medical
and prosthetic research
\$795M



Active funded research projects
(including VA funding and other sources)
7,304



Active funded
principal investigators
3,642



Total research budget
(including other VA and non-VA sources, such as NIH)
\$2.09B

Infographic by VA Research Communications, January 2021. Illustrations: © iStock/Olena Chernenka, Andrew_rybalko, all_is_magic, sesame, Misha Shutkevych.

ORD Infographics, <https://www.research.va.gov/pubs/infographs/default.cfm>

Element from IOM model for LHS	Example of VA component (Adapted from Atkins et al., 2017)
Real-time access to knowledge	Electronic Health Record
Digital capture of care experience	Corporate Data Warehouse of clinical and administrative data; Surveys of patient experience
Engaged, empowered patients	My HealtheVet Patient portal
Incentives aligned for value	Salaried clinicians; Financial incentives tied to limited clinical quality goals.
Full transparency	Public reporting of data on quality; Clinical dashboards; Independent researchers
Leadership-instilled culture of learning	Academic affiliations; Dual appointments; Training programs across multiple disciplines
Supportive system competencies	System redesign and “Lean” training; Implementation Science



WHAT IS QUERI?

- VA Quality Enhancement Research Initiative (QUERI)
<https://www.queri.research.va.gov/>
- Launched in 1998 as part of a system-wide transformation aimed at improving the quality of healthcare for Veterans.
- QUERI mission is to improve the health of Veterans by accelerating the adoption of evidence-based practices (EBPs) into routine health care settings using implementation science methods.

Kilbourne et al. Medical Care, 2019;57:10:S286-S293



QUERI IMPLEMENTATION ROADMAP



Kilbourne et al. Medical Care, 2019;57:10:S286-S293



QUERI STRUCTURE

Amy Kilbourne, PhD, MPH, QUERI Director

Overall Structure of QUERI

1. Implement

QUERI Programs develop strategies and tools to support the scale-up and spread of effective practices

QUERI-VISN Partnered Implementation Initiatives (PIIs) deploy effective practices that address time-sensitive regional priorities

2. Evaluate

Partnered Evaluation Initiatives (PEIs) evaluate a policy or program affecting Veterans

Partnered Evidence-based Policy Resource Center (PEPRc) performs data analysis for VA policy, planning, and management initiatives

3. Disseminate & Sustain

Implementation Strategy Learning Hubs provide training in implementation and quality improvement strategies

Center for Evaluation and Implementation Resources (CEIR) develops resources and provides guidance to support implementation efforts

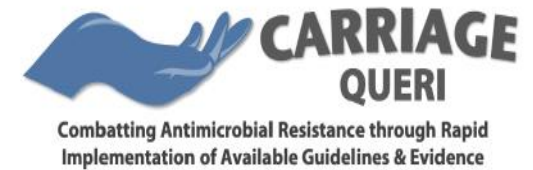
Kilbourne and Braganza. Cyberseminar. 11/4/2021



- **Combating Antimicrobial Resistance through Rapid Implementation of Available Guidelines and Evidence (CARRIAGE) QUERI Program**
- **Goal:** To use implementation strategies to support uptake of evidence-based practices and policies focused on prevention and spread of antimicrobial
- **3 current projects focused on:**
 - Implementing strategies to improve terminal room disinfection through automated Ultraviolet-C (UVC) devices
 - Implementing a tracking tool to rapidly identify patients with high priority resistant pathogens admitted to the hospital
 - Improving antimicrobial use through audit-feedback strategies



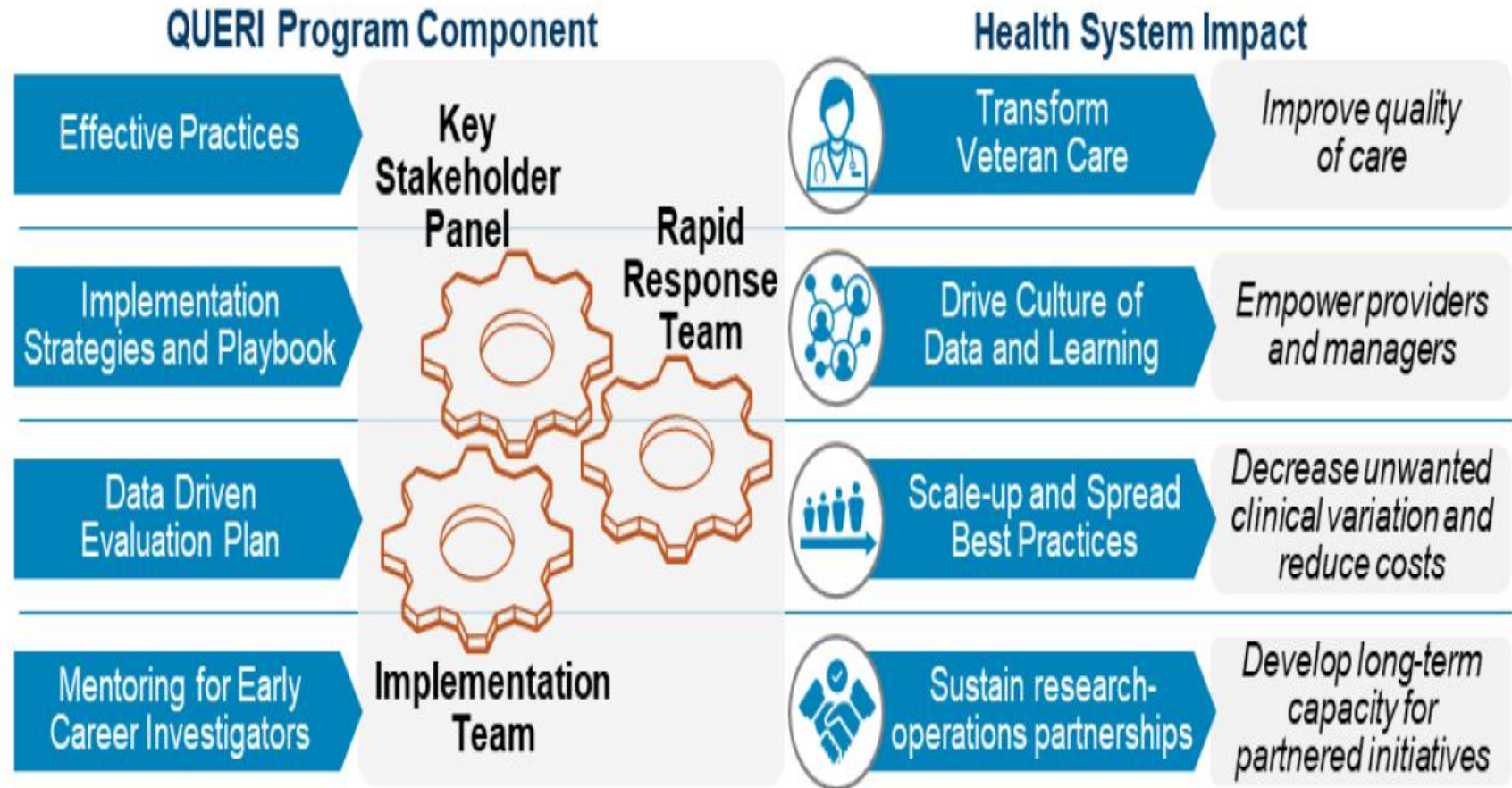
QUERI PROGRAMS



Kilbourne and Braganza. Cyberseminar. 11/4/2021



QUERI PROGRAM STRUCTURE



Kilbourne and Braganza. Cyberseminar. 11/4/2021



RAPID RESPONSE TEAMS (RRT)

- Groups of embedded researchers collaborating with VA clinical and policy partners to rapidly facilitate a goal.
- Projects are time sensitive (3-6 month project), high priority, high profile issues that come from VA national leadership and clinical offices.
- QUERI programs are charged with doing 1-2 rapid response projects per year.
 - Work on retainer (program funds and additional funds provided)
 - Expected to include team members with clinical, mixed methods, and quantitative data expertise



RAPID RESPONSE TEAMS (RRT)

- RRT requests can come directly from partners or be submitted by QUERI programs in collaboration with a clinical partner
- Memorandum of understanding between the requester and the QUERI program
- First rapid response teams focused on the roll-out of COVID-19 vaccines
 - Request by VA National Center for Health Promotion and Disease Prevention (NCP) (November 2020)
 - Selection of QUERI Programs to deploy RRTs to conduct rapid studies



RAPID RESPONSE TEAMS (RRT)

- Three Rapid Response Teams launched in December 2020 to focus on COVID-19 vaccination
 - Three Rapid response teams (RRT-3) from CARRIAGE, Bridge, and Function QUERIs deployed to conduct small-scale studies to establish a baseline assessment of intentions and beliefs of Veterans and employees regarding COVID-19 vaccines and evaluate vaccine messaging.
- Knowledge gained from these rapid response teams was used to promptly assist VA partners (NCP) in identifying key targets for improving vaccine acceptance

Questions	Methods	Sites
1) What are Veteran attitudes toward COVID-19 vaccination? What factors are associated with vaccine hesitancy? How do they change over time with the education and communication campaign? (CARRIAGE; BRIDGE)	<ul style="list-style-type: none"> • Veteran surveys • Qualitative focus groups and interviews 	<ul style="list-style-type: none"> • National surveys • Sites TBD
2) What are VA employee attitudes toward COVID-19 vaccination? What factors are associated with vaccine hesitancy? How do they change over time with the education and communication campaign? (FUNCTION; BRIDGE)	<ul style="list-style-type: none"> • Employee surveys 	<ul style="list-style-type: none"> • Durham VA Health Care System • Other sites TBD
3) Can the CERT implementation strategy for risk communication to Veterans and employees be adapted and refined for use in the case of COVID-19 vaccine distribution and deployment? (BRIDGE)	<ul style="list-style-type: none"> • Mixed methods interviews/ focus groups of Veterans & employees 	<ul style="list-style-type: none"> • Sites TBD



RAPID RESPONSE TEAM ACTIONS

- Progress updates, preliminary findings to date, and ongoing activities were shared in biweekly reports to NCP, QUERI and VA central office
 - Emphasis on findings such that might be more actionable for tailoring communication strategies, such as reasons for not getting a COVID-19 vaccine
 - Refine strategies and procedures based on stakeholder feedback



RAPID RESPONSE TEAMS

- RRT-3 were invited on weekly national VA Vaccine Education Workgroup calls
 - Workgroup responsible for the education, training, and communication strategy for COVID-19 vaccine
 - Reported findings and updates each week
 - Education materials/infographics for Veterans were developed and revised iteratively as new information emerged
 - Learned about the current state of COVID-19 vaccination roll-out in the VA and rapid learning of other RRT findings



CARRIAGE RRT

- 6-month Rapid Response quality improvement project
- Timeframe: December 30, 2020-June 30, 2021
- Partnered with the VA National Center for Health Promotion and Disease Prevention (NCP)
- Goals: To assess **Veteran** COVID-19 vaccine intentions and receipt and inform NCP ongoing efforts to increase vaccine uptake across the VA Healthcare System



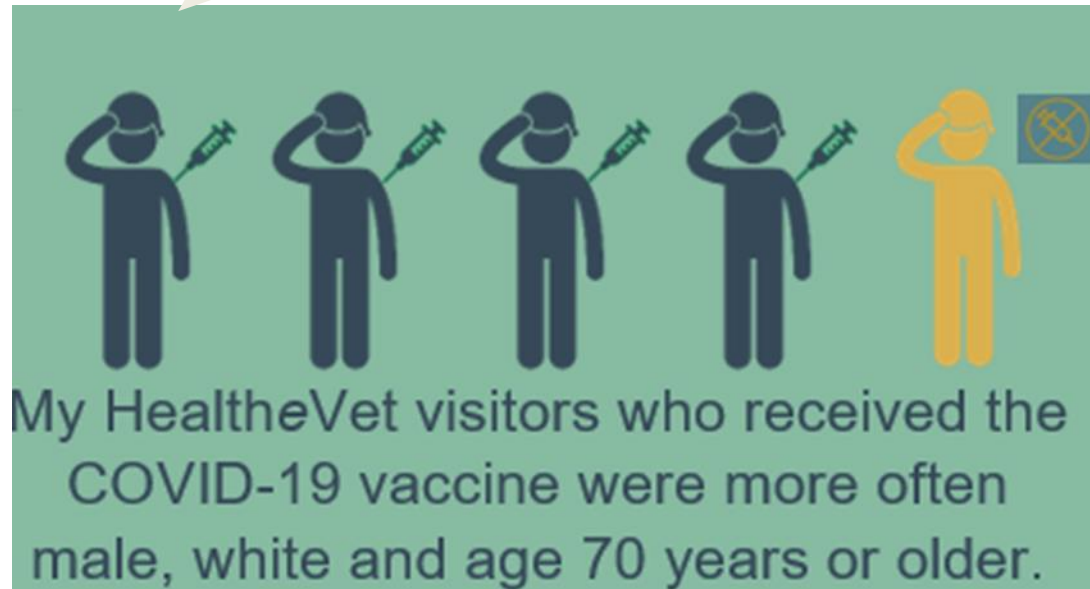
- Design and Sample:
 - Online survey (May 8-June 6, 2021)
 - Leveraged monthly patient satisfaction survey with MyHealthVet to add 5 questions about vaccination (ForeSee)
 - Two cross-sectional paper surveys of Veterans in facilities with low vaccination rates:
 - First survey fielded in March 2021
 - Second survey fielded in May 2021



MY HEALTHEVET FORSEE SURVEY RESULTS

- 7,881 Veterans responded (78%)
- 5 items about COVID-19 vaccination:
 - COVID-19 vaccination intentions/status
 - Reasons for getting a COVID-19 vaccine
 - Reasons for *not* getting a COVID-19 vaccine
 - Perceived COVID-19 vaccine safety
 - Trusted sources of information about COVID-19

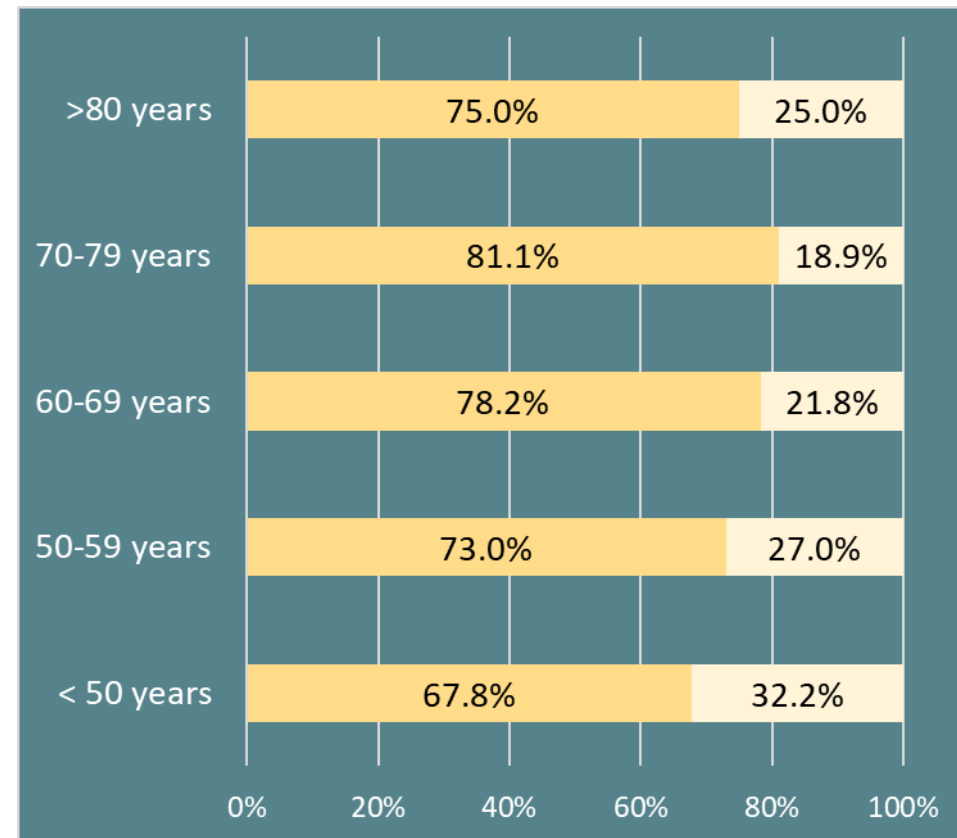
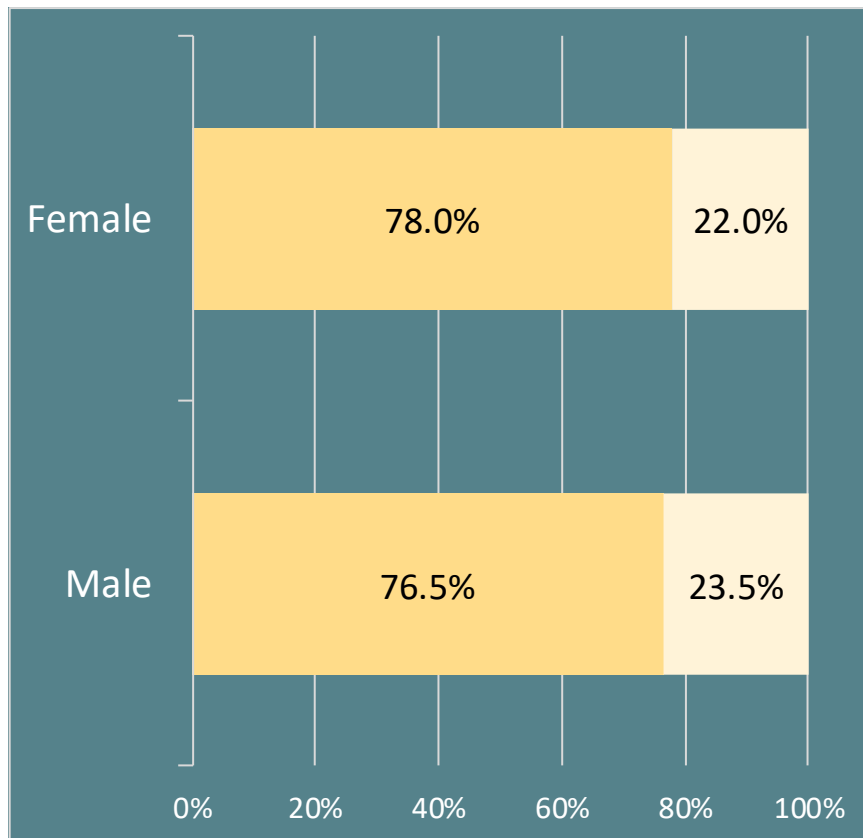
As of May 2021, around 4 in 5 My HealtheVet visitors had already received the COVID-19 vaccine.





MY HEALTHEVET FORESEE SURVEY RESULTS

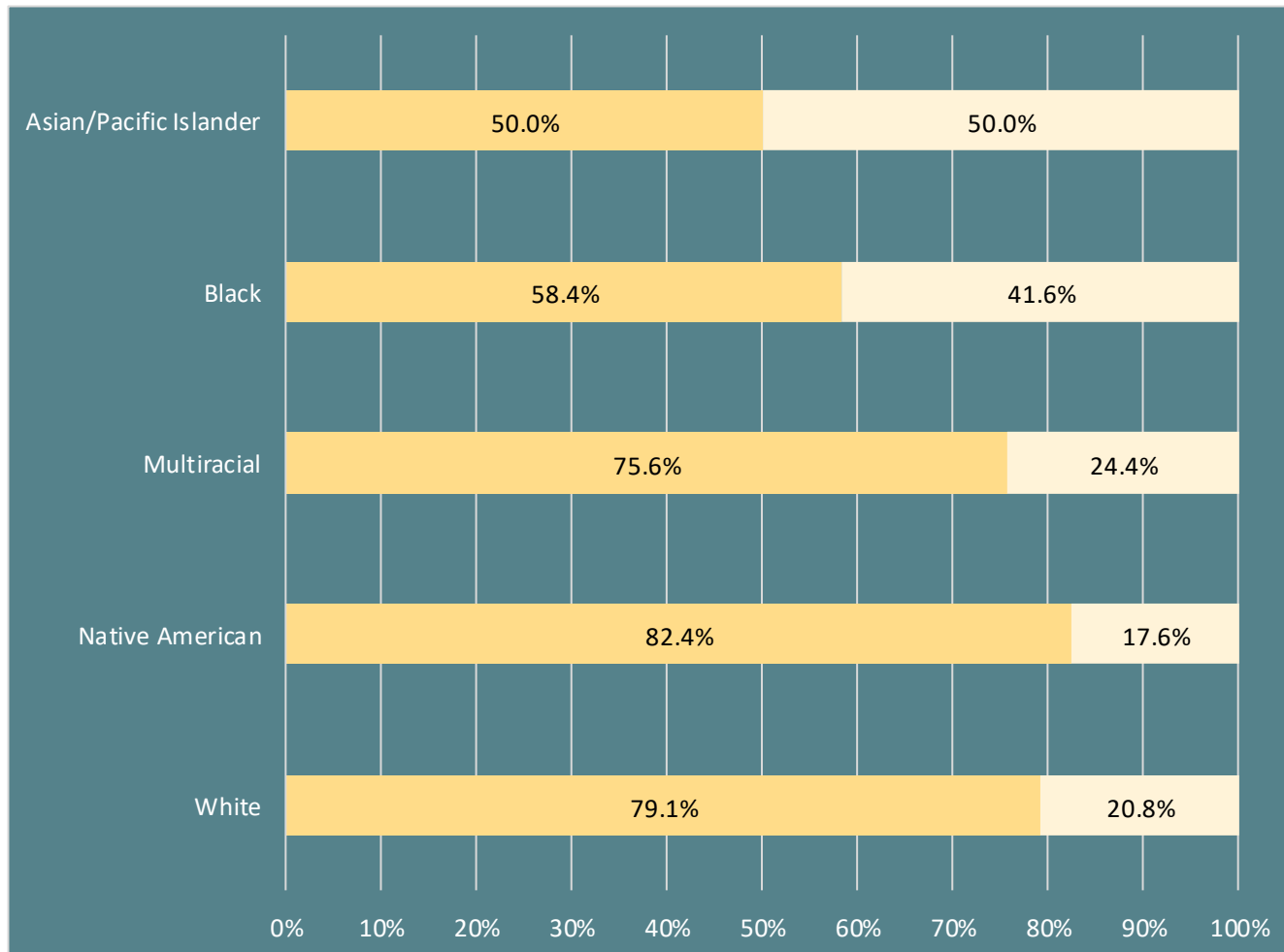
Characteristics of **Unvaccinated** My HealthVet Visitors (**Vaccine Unfavorable** vs. Vaccine Favorable)





MY HEALTHEVET FORESEE SURVEY RESULTS

Characteristics of **Unvaccinated** My HealtheVet Visitors (**Vaccine Unfavorable** vs. **Vaccine Favorable**)





MY HEALTHEVET FORESEE SURVEY RESULTS

Beliefs Among Vaccine Unfavorable My HealtheVet Visitors





CROSS-SECTIONAL SURVEY METHODS (WAVE 1 & 2)

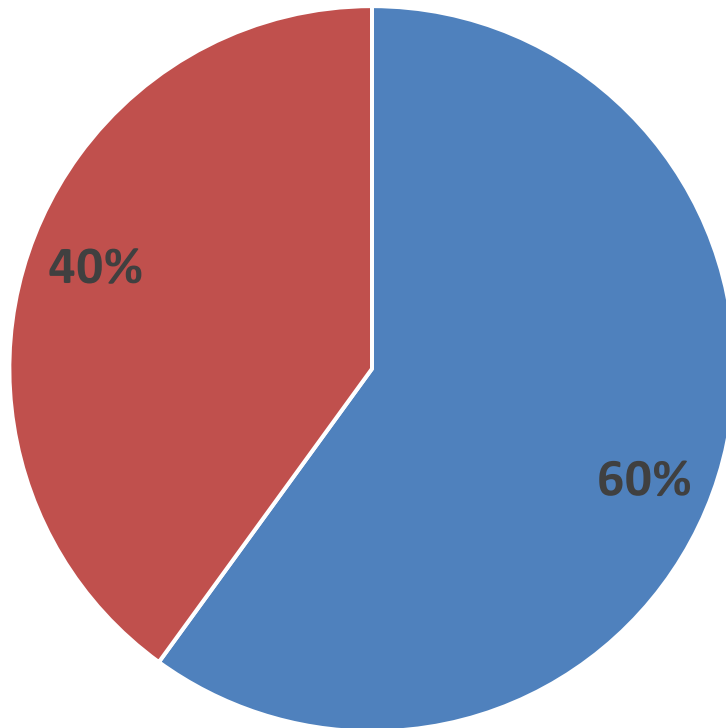
Sample selection criteria	WAVE 1	WAVE 2
User of VA facilities with <4% vaccination rates as of 2/1/2021*; <1/3 of Veterans vaccinated as of 4/26/2021**	X*	X**
No long-term care admissions in the past 2 years	X	X
Complete US mailing address	X	X
Complete data on race/ethnicity	X	X
500 Veterans/Strata: Non-Hispanic White, Non-Hispanic Black, Hispanic, American Indian/Alaska Native, all other racial/ethnic categories	X	
100 Veterans (50 men and 50 women) per racial/ethnic category strata		X



CROSS-SECTIONAL SURVEY RESULTS (WAVE 1 & 2)

Vaccination Status Wave 1

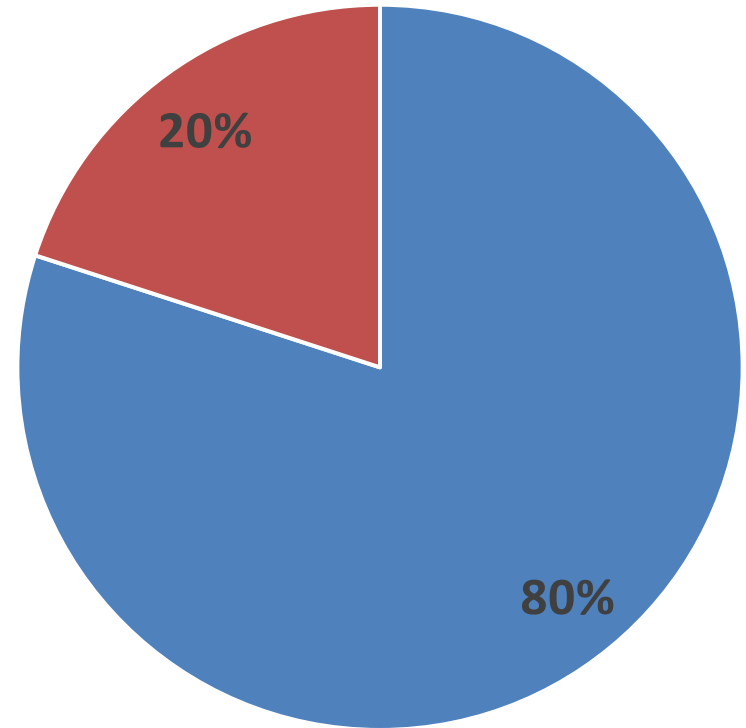
N=818



■ Yes ■ No

Vaccination Status Wave 2

N=262

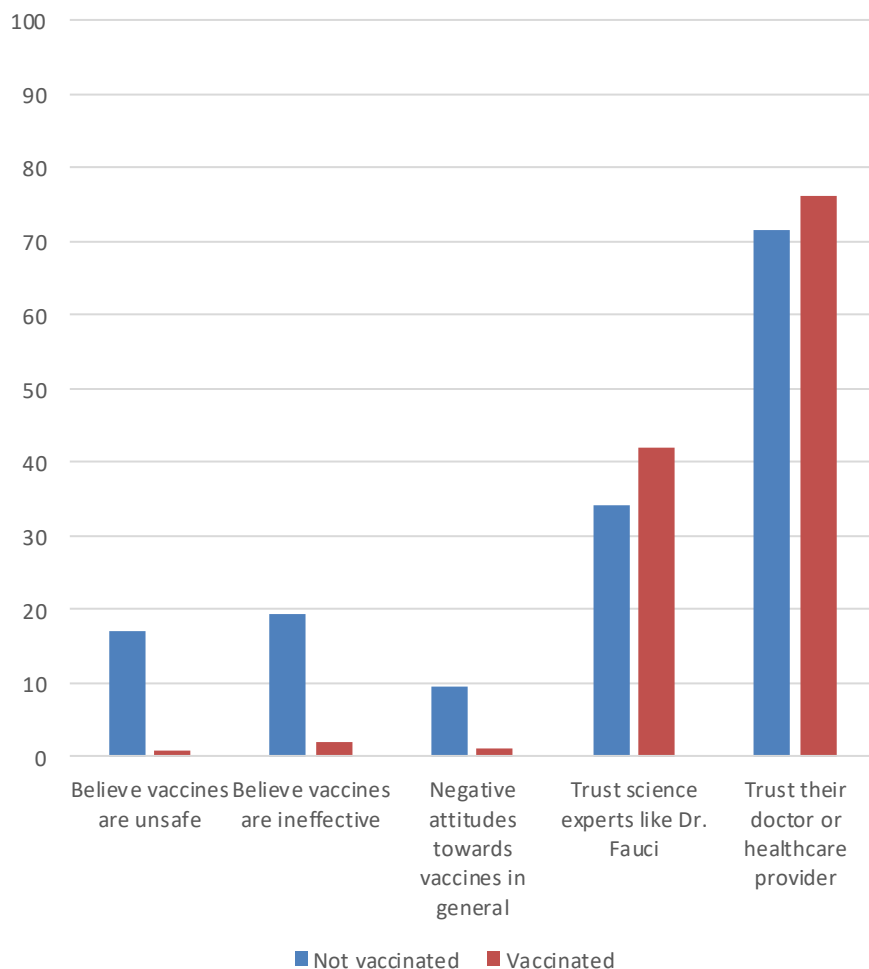


■ Yes ■ No

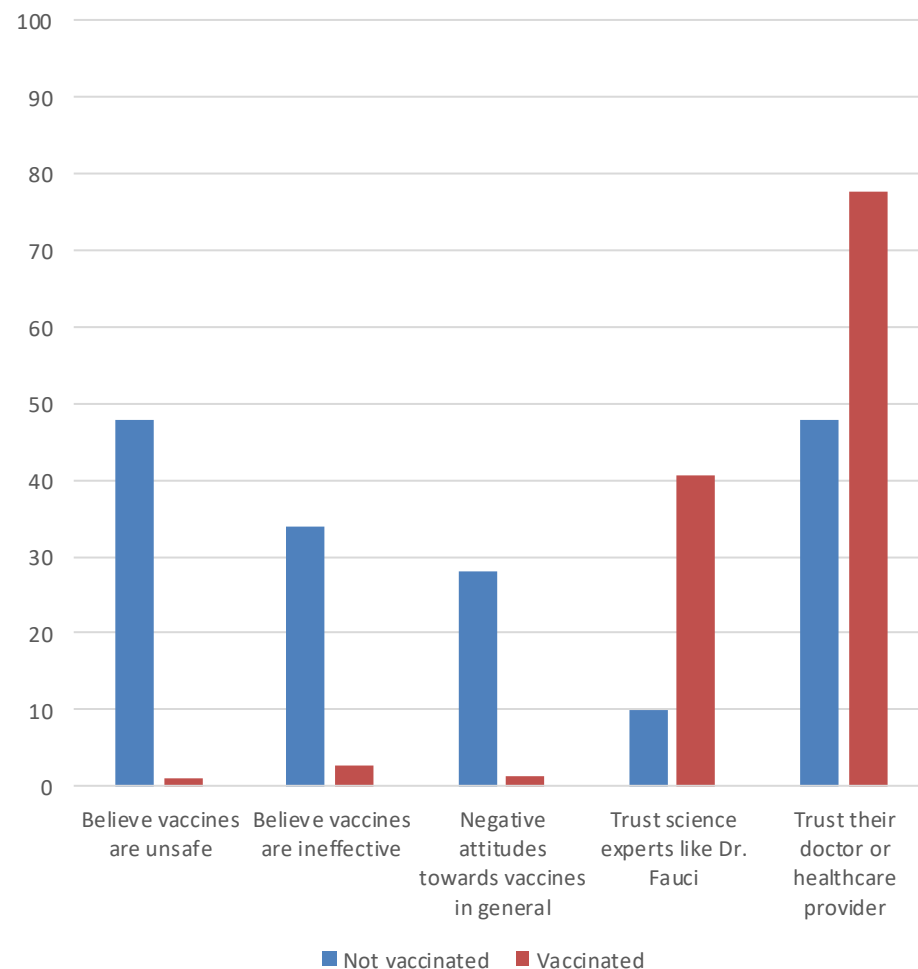


CROSS-SECTIONAL SURVEY RESULTS (WAVE 1 & 2)

Wave 1



Wave 2





SUMMARY OF FINDINGS

- Vaccine uptake increased
- Highlight the roles of perceived vaccine efficacy, perceived risks of COVID-19 vs. vaccines, and trust in medical experts in COVID-19 vaccination uptake
- Consistent with other findings

Guidry, 2020; Reiter, 2020; Pogue, 2020; Malik, 2020; Reinhart, 2020



LESSONS LEARNED

- Use methods that are fast and flexible
- Ensure availability of staff and adequate time
- Take advantage of existing evaluation opportunities and infrastructure
- Manage expectations and develop realistic plans



Have questions before you get your COVID-19 vaccine?

This page offers advice from VA providers, Veterans, and other resources to help you learn more.

[Learn how to get your vaccine at VA](#)





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Hines: Kevin Stroupe; Frances Weaver; Ibuola Kale; Howard Gordon; Geneva Wilson; Bridget Smith; Cara Ray; Jessica Gardner; Swetha Ramanathan; Charlesnika T. Evans
Salt Lake City: Susan Zickmund
Iowa City: Aaron Scherer
- Bridge and Function QUERI RRT leads:
Rani Elwy and Nina Sperber



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QUERI REFERENCES

- Atkins D, Kilbourne AM, Shulkin D. Moving From Discovery to System-Wide Change: The Role of Research in a Learning Health Care System: Experience from Three Decades of Health Systems Research in the Veterans Health Administration. *Annu Rev Public Health*. 2017 Mar 20;38:467-487. doi: 10.1146/annurev-publhealth-031816-044255.
- Kilbourne AM et al. Quality Enhancement Research Initiative Implementation Roadmap: Toward Sustainability of Evidence-based Practices in a Learning Health System. *Medical Care* 2019;57:10;Supp3: S286-S293.
- Kilbourne AM, Braganza MZ. Quality Enhancement Research Initiative (QUERI) 2021-2025 Strategic Plan. United States Department of Veterans Affairs Veterans Health Administration Office of Research and Development Health Services Research and Development, 2020. Available at https://www.queri.research.va.gov/about/strategic_plans/default.cfm



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