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Learning Health System Projects

San Francisco VA Clinician Investigators

July 13, 2023



Learning Health System Projects Conducted at San Francisco VA

Investigator	Торіс	Operational Partner
Tonya Kaltenbach MD	Colonoscopy Quality Improvement	Office of Gastroenterology (11SPEC8)
Sanket Dhruva MD MHS	Remote Monitoring	Cardiovascular Device Surveillance Program (11SPEC3A)
Dennis Oh MD PhD	TeleDermatology	Office of Dermatology (11SPEC5) Office of Rural Health (12POP7) Office of Connected Care (12CC)
Mehrdad Arjomandi MD	Airborne Hazards Center	War-related Illness and Injury Study Center (12POP5)
Maren Scheuner MD MPH	Precision Oncology	Office of Oncology (11SPEC17)
Katie Sarmiento MD MPH	Sleep Medicine	Office of Sleep Medicine (11SPEC25) Office of Rural Health (12POP7)
Gabby Schmajuk MD MSc	Medication Safety	Office of Rheumatology (11SPEC23) Pharmacy Benefits Management (12PBM)
Mary Whooley MD	Home-based Cardiac Rehabilitation	Office of Cardiology (11SPEC3) Office of Rural Health (12POP7)





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High Quality Colonoscopy for Colon Cancer Prevention

Operational Partner: National Gastroenterology Program Office

Tonya Kaltenbach MD MS Director of Advanced Endoscopy, VASF Professor of Medicine, UCSF Tonya.Kaltenbach@ucsf.edu





BACKGROUND

- Colon cancer prevention is a top VA priority.
- Colonoscopy with polypectomy is recommended for colon cancer prevention.
- Quality gap: There is wide variability in colonoscopy quality.

We developed and implemented a colonoscopy quality improvement program that includes colonoscopy quality dashboards with benchmarking, toolkits, and shared learning sessions across the Veterans Health Care System.











High quality colonoscopy is critical for colon cancer prevention.





University of California San Francisco advancing health worldwide^{**}

Substantial Variability in Colonoscopy Quality Across VA Sites & Providers





Kaltenbach, T et al. National Implementation of Evidence-based Colonoscopy Quality Measurement and Reporting – Initial Uptake of a Large Operational Program. Gastrointest Endosc 95.6 (2022): AB168–AB168.



QUERI / VA-EQuIP Infrastructure to Measure & Report Colonoscopy Quality Metrics



National VA Quality Metrics

75 sites, 501 providers Average annual volume = 372 (SD 325) colonoscopies



uality Enhancement Research

MEAS

SCIEN

Quality Enhancement Research Initiative

Filter by Year	Average Global ADR	Top 10 Sites	Top 10 Sites			
2019 2020		Average of Global ADR	Facility			
		69.48%	(618) Minneapolis, MN			
Filter by Station	10/	61.96%				
	40.31/0	<mark>61.77</mark> %				
All 🗸 🗸		61.76%	(740) Texas Valley Coastal Bend HCS (Harlingen TX)			
		61.06%				
Providers Under 25% ADR	Number of Sites Under 25% ADR	60.46%	(570) Central California HCS (Fresno CA)			
		60.31%				
		59.57%				
	~ ~ ~	57.77%	(689) Connecticut HCS (Westhaven)			
$6 \Lambda \Lambda \%$	72	57.74%	(635) Oklahoma City, OK			
Histogram of Global ADR		Bottom 10 Sites Average of Global ADR Facility				
280 -	268 256	5 36%	(568) Black Hills HCS (Fort Meade SD)			
260 -	230	9.12%				
220 -		14.01%	(517) Beckley, WV			
200 - 178		18.89%	(550) Illiana HCS (Danville IL)			
9 160 -		24.67%	910) Northern Indiana HCS (Marion, IN)			
र्क 140 –	130	25.57%	(562) Erie, PA			
120 – 105 100 –		28.89%	(581) Huntington, WV			
80 - 52	54	30.83%	(520) Biloxi, MS			
60-	34	35 37%	(652) Richmond, VA			
40 - 38		55.5170				
40 - 20 - 5 <u>11 13</u>	21 3 2	36.02%	(548) West Palm Beach, FL			
40 - 5 11 13 0 0.00 0.06 0.12 0.18 0.24 0.30 0.36 0.	21 3 2 42 0.49 0.55 0.61 0.67 0.73 0.79 0.85 0.91	36.02%	(548) West Palm Beach, FL			

Next Step: Coaching for Refractory Low Performance Sites & Providers





Video-Based Assessments of Colonoscopy Inspection Quality Correlate With Quality Metrics and Highlight Areas for Improvement



Anna Duloy,* Rena H. Yadlapati,[‡] Mark Benson,[§] Andrew J. Gawron,[∥] Charles J. Kahi,[¶] Tonya R. Kaltenbach,[#] Jessica McClure,^{**} Dyanna L. Gregory,^{*} and Rajesh N. Keswani^{*}

*Division of Gastroenterology and Hepatology, Northwestern University Feinberg School of Medicine, Chicago, Illinois; [‡]Department of Gastroenterology, University of Colorado, Aurora, Colorado; [§]Department of Gastroenterology and Hepatology, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin; ^{II}Division of Gastroenterology, Hepatology and Nutrition, University of Utah, Salt Lake City, Utah; ^{II}Department of Gastroenterology, Indiana University School of Medicine, Richard L Roudebush VA Medical Center, Indianapolis, Indiana; [#]Department of Gastroenterology, University of California, San Francisco, San Francisco, California; **Department of Medicine, Northwestern University Feinberg School of Medicine, Chicago, Illinois

- BACKGROUND & AIMS: Adenoma detection rate (ADR) and serrated polyp detection rate (SDR) vary significantly among colonoscopists. Colonoscopy inspection quality (CIQ) is the quality with which a colonoscopist inspects for polyps and may explain some of this variation. We aimed to determine the relationship between CIQ and historical ADRs and SDRs in a cohort of colonoscopists and assess whether there is variation in CIQ components (fold examination, cleaning, and luminal distension) among colonoscopists with similar ADRs and SDRs.
- METHODS: We conducted a prospective observational study to assess CIQ among 17 high-volume colonoscopists at an academic medical center. Over 6 weeks, we video-recorded >28 colonoscopies per colonoscopist and randomly selected 7 colonoscopies per colonoscopist for evaluation. Six raters graded CIQ using an established scale, with a maximum whole colon score of 75.
- **RESULTS:** We evaluated 119 colonoscopies. The median whole-colon CIQ score was 50.1/75. Whole-colon CIQ score (r=0.71; P<.01) and component scores (fold examination r=0.74; cleaning r=0.67; distension r=0.77; all P<.01) correlated with ADR. Proximal colon CIQ score (r=0.67; P<.01) and component scores (fold examination r=0.71; cleaning r=0.62; distension r=0.65; all P<.05) correlated with SDR. CIQ component scores differed significantly between colonoscopists with similar ADRs and SDRs for most of the CIQ skills.

 CONCLUSION:
 In a prospective observational study, we found CIQ and CIQ components to correlate with ADR and SDR. Colonoscopists with similar ADRs and SDRs differ in their performance of the 3 CIQ components—specific, actionable feedback might improve colonoscopy technique.
 •Video-based feedback has been shown to improve procedural skills.

•Colonoscopy quality inspection (CIQ) score, including fold examination, luminal distension and cleaning, has been developed and validated to reliably differentiate providers with varying levels of ADR.

•Provision of a colonoscopy skills dashboard detailing performance on core colonoscopy inspection skills, in conjunction with video coaching, significantly improved ADR in non-VA colonoscopists with lower ADRs.

Keywords: Quality Improvement; Endoscopy; Early Detection; Colon Cancer Prevention.

Modernize Endoscopy Training for Practicing Providers

Mastery Learning Adenoma **Detection & \ctive** Passive Collabora Polypectomy Learning _earning Learning **Bedside** Case-Simulation Blenaed Study Learning **Deliberate Practice** and Feedback Reflection

Apprentice Based

Adenoma

Detection &

Polypectomy

Didactics

Clincal Bedside Case by Learning Case

Current Apprentice-Based Learning

Artificial Intelligence Coaching Computer-Aided Detection Colonoscopy









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Dashboards Improve Remote Monitoring Adherence for Veterans with Pacemakers and Implantable Cardioverter-Defibrillators (ICDs)

Operational Partner: VA National Cardiac Device Surveillance Program

Sanket Dhruva, MD, MHS Staff Physician, Cardiology Assistant Professor of Medicine, UCSF sanket.dhruva2@va.gov

July 13, 2023



BACKGROUND



- Pacemakers and ICDs monitor their own function, arrhythmias, and other physiologic parameters
 - Generator and lead information (e.g., battery life, impedance)
 - Rhythm and therapy diagnostics (VT, VF, shock, pacing, high atrial or ventricular rates)
- These data can be transmitted to clinicians using cellular, Wi-Fi, or analog transmission from a patient's residence through remote monitoring
- Remote monitoring allows clinicians to review and act upon these clinical data







VA National Cardiovascular Device Surveillance Program (NCDSP)



- Approximately 61,000 Veterans actively monitored
- > 320,000 remote monitoring transmissions reviewed/adjudicated annually







STRONG EVIDENCE BASE – BUT QUALITY GAP

- Remote monitoring:
 - reduces mortality
 - reduces hospitalizations
 - reduces ICD shocks
 - improves patient satisfaction
 - reduces healthcare costs



- Standard of care: Class 1, Level of Evidence A (strongest) recommendation
- Quality gap: Many Veterans are non-adherent to remote monitoring







PowerBI Dashboard: Clinic-Level Adherence, Remote Transmission Dates, and Pacemaker/ICD Information for all Veterans

VA VA U.S. Department of Veterans Atfairs P	ower BI NCDSP NCDSP Dashboard V	8
«	$ [] File \lor \mapsto Export \lor Q Get insights Subscribe to report S $	□╯□╯♡┌ ☆∥⊙
	Active Patient Count % Adherence % Participation Location 0-100 101-200 Total days ago days ago days ago VA - San Francisco NCDSP 4 1 Total 4 1	Cocation MEASUREMENT SCIENCE QUERI Quality Enhancement Research initiative
Active Patients	80 % 0 % 100 % 0 % 100 % P	/A - San Francisco NCDSP V Patient Name All V
All Patients	Patient Name Last DateOfBirth Last Transmission Days GeneratorTy ImplantDate DeviceType Manufacturer Model Chamber	.ast4
Devices	Zzbełno, Test 2999 01/23/1923 6/6/2023 7:00:00 AMI 23 IPG Zztest, BTest Z0008 11/28/1944 6/8/2023 7:00:00 AMI 21 ICD ZzTest, Test Z0000 0/03/1945 4/26/2023 7:00:00 AMI 64 IPG	jenerator Type
Transmissions	EncounterDate EventComment	_] IPG Manufacturer
ERI Transmissions		All
Clinic Visit		ransmission Category
Dashboard Instructions		ast Transmission 1/1/2020 6/29/2023
Instructional Video	Date FileName PDF_link (00
- Go back		+ 71% 🖸







PowerBI Dashboard: NCDSP Interpretation and Downloadable Remote Transmission PDFs

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_	«	🗅 File 🗸	\mapsto Export \sim	Q Get insights	🕞 Sub		5		א [0)
			Patient Name	Last4 TransmissionDate	PostedDate	EventComment		Location		<	K ≼
NCDSP			Zzdest, Brest Zzdemo, Test	z9999 06/06/2023	07/29/2021	Unscheduled Tic Abnormal; Shock lead impedance out of range 5/6/17 (>200 ohms). Suspect lead fracture.	Quality Enhancement Research Initiative	Patient Name			
NCDSP Dashboard	^		ZzTest, Test Zzdemo, ATest L ZzTester, Test	Z0000 04/26/2023 Z5555 04/07/2023 Z7890 02/06/2023	07/29/2021	No significant abnormalities Unscheduled Tic Normal AT/AF Burden Battery at ERI		All V		č	5
Active Patients			ZzTest, Test Zztest, BTest Zzdemo, ATest L	Z0000 05/28/2022 Z0008 05/23/2022 Z5555 05/18/2022	07/29/2021 06/15/2022 07/29/2021	Inappropriate ATP therapy Possible RV failure to capture Atrial undersensing		All	7		
All Patients			Zzdemo, Test Zzdemo, Test	z9999 03/30/2022 z9999 11/05/2021	11/22/2021 11/05/2021	VT/VF with ATP Battery at ERI as of November 1 2021 VT/VF with shock(s) two episodes	Date FileName	PDF Link			
Devices			Zztest, BTest Zztest, BTest ZzTest, Test	Z0008 09/23/2021 Z0008 09/23/2021 Z0000 06/16/2021	07/29/2021 07/29/2021 06/21/2021	VT/VF with ATP AFL/AF noted, persistent (> 7 days)					
Transmissions			Zzdemo, Test ZzTest, Test ZzTest, Test	z9999 05/10/2021 Z0000 04/21/2021 Z0000 03/17/2021	05/10/2021	No significant abnormalities AFL/AF noted, persistent (> 7 days)H/O AF,on OAC AFL/AF noted, persistent (> 7 days).					
ERI Transmissions			ZzTest, Test ZzTest, Test	Z0000 02/10/2021 Z0000 01/08/2021	07/29/2021	ETR= 8.1 years. No significant abnormalities AFL/AF noted, persistent (> 7 days) AT/AF burden					
Clinic Visit						100% since implant on 12/31/20. Known AF on Coumadin. no VHR battery life 8.3yrs. normal device function.					
Dashboard Instructions			ZzTest, Test ZzTest, Test	Z0000 12/02/2020 Z0000 08/11/2020	07/29/2021	AFL/AF noted, longest episode 30 sec to < 6 minutes. High V rate episodes, non-sustained VT No significant abnormalities					
Instructional Video			Zzdemo, ATest L	Z5555 06/25/2020	07/29/2021	No significant abnormalities					
← Go back								•	+ 71	% 🖸	







NCDSP PowerBI Dashboard Usage

FY23 to date: 8775 views by 205 viewers







Cardiovascular implantable electronic device lead safety: Harnessing real-world remote monitoring data for medical device evaluation

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Teledermatology Enterprise-Wide Initiative

Operational Partners: Office of Rural Health Office of Connected Care Office of Specialty Care Services

Dennis Oh, MD, PhD Co-Lead, Teledermatology, Office of Connected Care Assistant Chief, Dermatology Service, SFVAHCS Associate Professor, Department of Dermatology, UCSF

Dennis.Oh@va.gov



July 13, 2023

BACKGROUND

- Skin complaints and disease are very common
- VA dermatologists are unevenly distributed
- Teledermatology can help
- Quality gap: 20% of sites still have no access to dermatology
- Project: Longitudinal evaluation of implementation of Teledermatology EWI funded by ORH, executed by OCC in partnership with SCS



FY 2022 Dermatology









ORH Teledermatology EWI

- Implementation goal: Disseminate teledermatology to rural Veterans
- Standard VA consultative asynchronous teledermatology model
- Funding (Cohort 1: FY17-19, Cohort 2: FY20-22, Cohort 3: FY23-25)
 - Facilities with >50% rural or highly rural clinic population
 - 3 years funding to independence
- Evaluation data
 - VA centralized administrative data
 - Online surveys of recipient facilities (quantitative and qualitative)

RE-AIM for rural VA teledermatology

Peracca SB et al., "Implementing teledermatology for rural veterans: an evaluation using the RE-AIM framework", Telemed J E Health, 2020

- Reach increased
 - Spokes: 137 to 165
 - Encounters & patients
- Effectiveness
 - Reduced in-person clinic usage
 - Follow-ups (1.5% w/o f/u)
- Adoption
 - Greater proportion of dermatology visits in funded sites
 - Reflects teledermatology VA-wide
- Implementation facilitators/barriers
- Maintenance



Impact

- Improvements to EWI
 - Equipment
 - Staffing
- Improvements generally
 - Importance of follow-up
 - TSAs
- Continued EWI funding



TeleDermatology

Telehealth Clinical Service Model Manual

January 2023

VETERANS AFFAIRS January 12, 2023 Assistant Under Secretary for Health for Patient Care Services / Chief Nursing Officer (12) Results Communication for Asynchronous Store-and-Forward Telehealth (VIEWS 9138345) Veterans Integrated Service Network (VISN) Directors (10N1-10N23) Chief Medical Officers (CMO) (10N1-10N23) Quality Management Officers (QMO) (10N1-10N23)

DEPARTMENT OF

Date:

Subi

1. The purpose of this memorandum is to communicate requirements to mitigate potential vulnerabilities in the communication of Asynchronous Telehealth (aka Storeand-Forward Telehealth) results to patients including the quality oversight of these communications. Veteran Health Administration is committed to the timely communication of test results which is essential for high quality patient-centered care.

- 2. All Asynchronous telehealth results must be communicated to patients.
 - a. It is the responsibility of the ordering provider or designee to communicate results to patients unless otherwise specified in the Telehealth Service Agreement.

b. The responsibilities for communicating Asynchronous Telehealth results to patients are to be clearly defined in Telehealth Service Agreements/Care Coordination Agreements as required by Office of Connected Care <u>Conditions of</u> <u>Participation Standards</u>.

NOTE: An Asynchronous telehealth result represents both a consult result and a test result.

3. Within 60 days of this memorandum VISNs and facilities will:

Screenshot

- a. Review Telehealth Service Agreements to verify they outline how and by whom (e.g., referring provider, designee, or interpreting provider) results are communicated to patients for Asynchronous Telehealth and ensure stakeholders are aware of responsibilities.
- b. Ensure a process exists that 1) informs patients on when they should expect to receive their results after an Asynchronous Telehealth visit, and 2) provides a means (e.g., phone number) and instructions for the patient to contact the appropriate clinical area if results are not provided within expectations.
 - i. A customizable Results Communication Card template for this requirement is available for facility use.



VA Telehealth





Memorandum

TELEMEDICINE AND E-HEALTH Volume 27, Number 2, 2021 © 2021, Mary Ann Liebert, Inc., publishers https://doi.org/10.1089/tmj.2020.0013

Mary Ann Liebert, Inc. 2 publishers

Original Research

Implementing Teledermatology for Rural Veterans: An Evaluation Using the RE-AIM Framework

Sara B. Peracca, PhD, MPH, MS¹, George L. Jackson, PhD, MHA^{2,3}, Rebecca P. Lamkin, MA⁴, David C. Mohr, PhD^{4,5}, Molly Zhao, BA⁴, Olevie Lachica, BS¹, Julia C. Prentice, PhD^{4,6}, Andrea M. Grenga, BA⁷, Allen Gifford, MD⁴, Jennifer G. Chapman, BASW², Martin A. Weinstock, MD, PhD^{7,8,9}, and Dennis H. Oh, MD, PhD^{1,8,10}

Current Dermatology Reports (2019) 8:35–45 https://doi.org/10.1007/s13671-019-0252-2

TELEDERMATOLOGY (D OH, SECTION EDITOR)

Implementation of Teledermatology: Theory and Practice

Sara B. Peracca¹ · George L. Jackson^{2,3} · Martin A. Weinstock^{4,5} · Dennis H. Oh^{1,6}

Published online: 2 May 2019 © The Author(s) 2019

Abstract

Purpose of Review Multiple factors influence the success and failure of teledermatology programs. We evaluate the current teledermatology literature using the Reach, Effectiveness, Adoption, Implementation, and Maintenance (RE-AIM) framework developed for implementation research. We introduce this framework to encourage a thorough examination of teledermatology's implementation including its sustainability. In this way, programs can better realize teledermatology's promise for enhancing patients' access to expert dermatologic care in real-world healthcare settings.

Recent Findings While teledermatology continues to expand throughout the world, barriers continue to exist. Many evaluations of teledermatology focus on the effectiveness of the programs, without examining other factors that underlie success. The use of implementation science enables researchers to better assess different factors influencing a program's success or failure. **Summary** Implementation science offers theories, frameworks, and methodologies to study and improve teledermatology's

summary implementation science offers theories, frameworks, and methodologies to study and improve teledermatology's impact.



Telemedicine and e-HealthVolume 27, Number 12, 2021. https://doi.org/10.1089/tmj.2020.0500







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Designing diagnostic and therapeutic algorithms for management of deployment-related respiratory diseases

<u>VA Operational Partner</u>: Airborne Hazards & Burn Pit Center of Excellence Post-Deployment Cardiopulmonary Evaluation Network (PDCEN)

Mehrdad Arjomandi, MD Director, SFVAHCS PDCEN Professor of Medicine, UCSF Mehrdad.arjomandi@ucsf.edu





July 13, 2023

BACKGROUND

- Over 3.7 million veterans have served in Southwest Asia theater of military operations, with nearly half of them having been deployed multiple times.
- Many of the veterans of these conflicts have reported concerns about exposures to airborne hazards and the long-term health effects possibly associated with those exposures.
- Quality gap: The nature and breadth of the associated health effects have not been fully understood.
- Thus, there is an urgent need for design and validation of well-defined non-invasive diagnostic and therapeutic approaches that could be implemented in a high throughput, easy-to-administer, and cost-effective manner.
- The Airborne Hazards and Burn Pits Center of Excellence was established and congressionally recognized in 2019 as a part of VA's WRIISC.
- The Center specializes in clinical and translational research that uses scientific insights to help improve health outcomes for Veterans exposed to airborne hazards while deployed.











U.S. Department of Veterans Affairs



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- Through the Center of Excellence, PDCEN was established, which is comprised of pulmonary and occupational health experts from across the VA health care system and academia.
- The network conducts in-depth clinical evaluations for Veterans with specific health concerns who have been evaluated as a part of the Airborne Hazards and Open Burn Pit Registry or are referred by clinicians at other VA facilities.





PDCEN



- Hybrid clinical & Research Program
- Determines best practice
- Educates veterans & their providers



EXCELLENCE



- Comprehensive health history and physical examination
- Detailed lifetime exposure assessment including before, during, and after deployment
- Advanced pulmonary function testing, forced oscillometry, bronchoprovocation, and cardiopulmonary exercise testing
- Ear, nose, and throat examination including sinus imaging
- Chest imaging
- Sleep studies
- Lab work





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PROGRAM PROFILE

Postdeployment Respiratory Health: The Roles of the Airborne Hazards and Open Burn Pit Registry and the Post-Deployment Cardiopulmonary Evaluation Network

Caroline W. Davis, MD^{a,b}; Alexander S. Rabin, MD^{a,b}; Nisha Jani, PhD, MPH^c; John J. Osterholzer, MD^{a,b}; Silpa Krefft, MD, MPH^{d,e,f}; Stella E. Hines, MD, MSPH^{g,h}; Mehrdad Arjomandi, MD^{LJ,k}; Michelle W. Robertson, MD, MPH^c; Anays M. Sotolongo, MD^{c,k} Michael J. Falvo, PhD^{c,j}; and the Post-Deployment Cardiopulmonary Evaluation Network

Background: Following deployment to the Southwest Asia theater of operations and Afghanistan, many service members and veterans report respiratory symptoms and concerns about their military and environmental exposures. The US Department of Veterans Affairs (VA) established the national Airborne Hazards and Open Burn Pit Registry (AHOBPR) in 2014 to help better understand long-term health conditions that may be related to these exposures.

Observations: The AHOBPR provides an online questionnaire and optional health evaluation performed by a primary care or environmental health clinician. The clinical evaluation provides an opportunity for the service member or veteran to talk with a health care professional about their symptoms, exposures, and potential treatment. Data derived from questionnaire responses and health evaluations facilitate medical surveillance and research. The VA also established a network of specialists, referred to

as the Post-Deployment Cardiopulmonary Evaluation Network (PDCEN). The PDCEN identifies veterans within the AHOBPR who self-report certain conditions or have unexplained dyspnea and conducts comprehensive diagnostic evaluations. Primary objectives of PDCEN evaluations are to define respiratory and related conditions that are present, determine whether conditions are related to deployment, and work with the veteran's clinician to identify treatments and/or follow-up care to improve their health. We utilize a case example to illustrate the role of the primary care practitioner in connecting veterans to PDCEN clinical evaluations. Conclusions: AHOBPR clinical evaluations represent an initial step to better understand postdeployment health conditions. The PDCEN clinical evaluation extends the AHOBPR evaluation by providing specialty care for certain veterans requiring more comprehensive evaluation while systematically collecting and analyzing clinical data to advance the field.

Consensus Statements on Deployment-Related Respiratory Disease, Inclusive of Constrictive Bronchiolitis A Modified Delphi Study

Michael J. Falvo, PhD; Anays M. Sotolongo, MD; John J. Osterholzer, MD; Michelle W. Robertson, MD; Ella A. Kazerooni, MD; Judith K. Amorosa, MD; Eric Garshick, MD; Kirk D. Jones, MD; Jeffrey R. Galvin, MD; Kathleen Kreiss, MD; Stella E. Hines, MD; Teri J. Franks, MD; Robert F. Miller, MD; Cecile S. Rose, MD; Mehrdad Arjomandi, MD; Silpa D. Krefft, MD; Michael J. Morris, MD; Vasiliy V. Polosukhin, MD; Paul D. Blanc, MD; and Jeanine M. D'Armiento, MD, PhD


Clinical Guidelines for Deployment-Related Respiratory Disease (DRRD)

Data from these evaluations are used to make treatment recommendations for individual veterans, support research studies, and identify trends in health outcomes to improve care standards and treatment protocols.

Clinical Guidelines for **Deployment-Related Respiratory Disease (DRRD)** Evaluations Other Co-Morbidities? Veteran with Consider Diagnose Post-Deployment Respiratory Medical and Exposure H&P Asthma - Sinusitis - Rhinitis Consider pulmonary consult or evaluate for other contributing factors and/or comorbid Respiratory symptom Symptoms conditions including but not limited to: questionnaire · Is the patient a previously deployed Veteran or a currently OSA, GERD, cardiac factors, laryngeal deployed military individual? Chest imaging (x-ray, CT) disorders, anemia, Has the Veteran deployed to Irag, other Southwest Asia country, Complete pulmonary function Tests may include, but are not limited to: Afghanistan or region where there may have been airborne testing with bronchodilator transthoracic echo, laryngoscopy, sleep hazards? study, blood work Does the Veteran endorse exposure to burn pits and/or other sources of vapors, gases, dust and fumes? Manage Symptoms **Rep. Symptom** Does the Veteran present with persistent respiratory symptoms · Respiratory symptoms may be improved by Questionnaire e.g., unexplained shortness of breath, decreased exercise managing co-morbidities. tolerance, and/or chronic cough? **Constrictive Bronchiolitis (CB)** Is defined as a histological pattern of lung injury characterized by Asthma, Sinusitis or Rhinitis **Evidence Based Treatment** Improvement? subepithelial fibrosis of the small airways that narrows and sometimes obliterates bronchiolar lumens. Note that this **Brief Exposure** abnormality is one of a spectrum of distal lung histopathology that History has been seen in deployed Veterans with airborne hazards exposure. YES (REASSESS AS NEEDED) Ouestionnaire YES (REASSESS AS NEEDED) **Differential Diagnosis for** Lung Biopsy Bronchiolitis, small airways **Evidence Based Treatment** Improvement? inflammation, peribronchiolar Consider fibrosis Lung Biopsy Granulomatous pneumonitis Hyperinflation or emphysema Surgical lung biopsies should Consider Advanced Assessments and/or Chronic pleuritis and Pleural fibrosis F be reviewed at a specialty Referral to Specialty Referral Center Vasculopathy center by an experienced Interstitial lung disease If results of testing pulmonary pathologist. If undiagnosed symptoms/inadeguate response to remain non-diagnostic Autoimmune disease

If undiagnosed symptoms/inadequate response to treatment/persistence of additional symptoms or abnormal test results, then; consider referral to specialist for the following (if not available locally):

- Paired Inspiratory-expiratory HRCT;
- Cardiopulmonary exercise test (CPET)
- Methacholine challenge test

Manage Symptoms Management of Veteran's symptoms should focus on

for persistent symptoms,

despite treatment:

overall pulmonary health

 Surgical lung biopsy may be considered, but not mandatory, when non-invasive/ minimally invasive diagnostic procedures do not yield a diagnosis and when there is a high suspicion of pathology, such as constrictive bronchiolitis.

Depending on diagnoses, additional treatments may include:

- Steroids
- Methotrexate
- Referral to appropriate subspecialist
- Immunosuppressive agents
- Continue to manage symptoms and optimize health

Other related work using VA Electronic Health Records

 Screening for Exposure to Beryllium Among US Veterans With a Diagnosis of Sarcoidosis, 2002-2020. Seedahmed MI, Albirair MT, Whooley MA, Koth LL, Blanc PD, Arjomandi M. Chest. 2023 Jun 17:S0012-3692(23)00798-5. doi: 10.1016/j.chest.2023.05.034. Online ahead of print. PMID: 37364853 No abstract available.

2 Changes in Lung Volumes with Spirometric Disease Progression in COPD.

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Precision Oncology Evaluation Team (POETry)

VA Operation Partner: National Oncology Program Office

Maren T. Scheuner, MD, MPH Chief, Genomics Section, V21 Clinical Resource Hub Professor of Medicine, Division of Hematology-Oncology Professor of Pediatrics, Division of Medical Genetics UCSF School of Medicine maren.scheuner@va.gov



July 13, 2023

BACKGROUND

- Evidence-based VA Oncology Clinical Pathways have been created to ensure the delivery of high quality, cost-effective care for all VA cancer patients at each point in their care plan.
- Precision oncology tumor or germline testing to inform the selection of effective cancer treatment is a core component of the VA Oncology Clinical Pathways for
 - ✓ Prostate cancer, launched May 2021
 - \checkmark Colorectal, pancreas and breast cancers, launched July 2023
- Quality gap: Most eligible Veterans are not receiving germline testing.
- Objectives:
 - 1. Conduct readiness assessment of VA frontline clinicians
 - 2. Facilitate use of germline testing by oncology providers (i.e., point-of-care delivery model)
 - 3. Evaluate adoption and reach of point-of-care germline testing.







Readiness for Point-of-Care Genetic Testing in VHA

- Clinicians at 20 VA facilities surveyed. Response rate 11.3% (1,207/10,680), 909 eligible.
- Only 13% ordered at least one genetic test in past year, and usually only 1-2 tests.
 - Expect most to have many patients in their practice with indications for genetic testing.
 - ✓ Non-VA clinician surveys show 30-50% have ordered genetic tests in past year.
- Reasons for not ordering indicate lack of preparedness to use genetic tests (e.g., not sure if relevant to their practice, don't know how to order).
- Genetics professionals key to integration of genetics in practice of frontline clinicians.
 - Genetics education positively associated with feeling prepared and knowing testing guidelines, which in turn was positively associated with test ordering. Genetics team/service rated #1 for keeping clinicians up to date on genetics topics.
 - As clinicians used genetic tests in their practice, there was a paradoxical positive association with genetics referrals. Thus, expect the demand for genetic providers will increase as

MEACIMICIONS INTEGRATE GENETIC TESTING INTO THEIR PRACTICE.



ARTICLE

Genetics professionals are key to the integration of genetic testing within the practice of frontline clinicians



Maren T. Scheuner^{1,2,3,*}, Paloma Sales¹, Katherine Hoggatt^{1,2}, Ning Zhang¹, Mary A. Whooley^{1,2}, Michael J. Kelley^{4,5,6}

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ARTICLE INFO

ABSTRACT

Article history: Received 1 April 2022 Received in revised form 19 September 2022 Accepted 22 September 2022 Available online 28 October 2022

Purpose: Genetic tests have become widely available. We sought to understand the use of genetic tests in the practice of frontline clinicians within the United States Department of Veterans Affairs (VA).

Methods: We administered a web-based survey to clinicians at 20 VA facilities. Physicians, nurse practitioners, physician assistants, and pharmacists were eligible. We excluded genetics providers and clinicians not seeing patients. We used multiple logistic regression to evaluate the associations between clinician characteristics and experience with genetics.

Genetics in Medicine

Volume 25, Issue 1, January 2023, Pages 103-114

Evaluation of POC Germline Testing Adoption and Reach

- From launch of the Prostate Cancer Clinical Pathway 5/3/2021 through 10/26/2022, 8.1% (1,666) of 20,706 patients with metastatic prostate cancer had germline tests ordered by 92 clinicians at 69 VA facilities.
 - ✓ In California and Georgia 2013 2019, 3.7% of 15,620 patients with stage IV prostate cancer had germline testing reported to Surveillance, Epidemiology, and End Results (SEER) Registries (Kurian et al., JAMA. doi:10.1001/jama.2023.9526).
- 47% of the 1,666 germline test orders were for VA patients at 9 of the 69 facilities. Use of cancer navigators appears important to improving access to germline testing at these sites.
- While VA appears to be outperforming community practice, improvements in adoption and reach are needed to ensure all eligible Veterans are offered germline testing.







Next Steps: POETry Phase II

- Operations QI project underway (June 1, 2023 September 30, 2024).
 - ✓ MOAs for 7 VA investigators San Francisco (Scheuner, Sales, Hoggatt, Purmal, Lerner, Danowski, Wu)
 - ✓ At 3 VA facilities (San Francisco, Boston, Durham)
- POETry Phase II Aims:
 - Identify multi-level determinants associated with implementation and service outcomes for germline testing under available delivery models for patients with prostate, breast, colorectal and pancreatic cancers.
 - Create a toolkit that promotes the uptake and use of germline testing by mapping implementation strategies to the multi-level determinants for implementation and service outcomes and pilot testing promising strategies (e.g., navigator-supported).
- POETry Phase III: Implement the genetic testing toolkit across VHA enterprise.













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Sleep Medicine Dashboard: Increasing visibility of sleep services

VA Operational Partner: Sleep Medicine (11SPEC25)

Kathleen Sarmiento, MD MPH Executive Director, National Sleep Medicine Program Professor of Medicine, UCSF Kathleen.sarmiento@va.gov



July 13, 2023

BACKGROUND

- Sleep medicine is a new specialty recognized by VA
- Sleep services historically hidden under pulmonary, neurology, medicine, respiratory therapy services
- 2014-21: Sleep stop codes implemented nationally and education on clinic set up provided through practice management webinars, sharepoint resources, and direct implementation support
- Gap: Sleep data lacks visibility, accuracy, and a usable interface to support assessments of access, utilization, reach, and capacity
- To address this, a dashboard for sleep data was developed and data vetted by the field. This work has been funded by operational evaluation funding from ORH







VA WS. Department of Veterans Affairs Power BI Sleep Medicine

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							En	cou	inter	s by	y N	loda	lity	MEASUREMENT SCIENCE QUERI Quality Enhancement Research Initiative
Sleep Medicine	•		10/1/20	20 7,	/10/2023		\sim	Facility All					CRH V All V O S/F (H S/F (P PSG	(SAT) = Store & Forward (Home Sleep Apnea Test) AP) = Store & Forward (Positive Airway Pressure) = Polysomnography
Sleep Encounters	^					0	_0	Gender All	F	Rurality		Race	Ethnicity	
Patients by Modality		l i	Encount	ters							\vee	$\downarrow \downarrow \downarrow \downarrow \downarrow$		Encounters by Modality (%)
			VISN	CVT	eConsult	In person	Phone	PSG	S/F (HSAT)	S/F (PAP)	VVC	Total	Modal	i ty ● CVT ●eConsult ● In person ● Phone ▶
Encounters by Modality			+	0	0	2,711	0	0	0	0	178	2,889		(Blank) 94%
			+ V01	420	9,928	48,939	73,145	3,870	15,877	18,391	5,942	176,512		(402) VA M 11%12% 36% 38%
Detiente hu Dunelitu			+ V02	4,064	3,901	48,029	21,308	3,750	8,216	3,921	7,583	100,772	(4	405) WHITE 22% 64% 13%
Patients by Rurality				11,358	10,299	23,425	63,726	1,600	29,593	7,317	9,396	156,714		436) FORT 20% 41% 14%
			+ V05	4,875	6.422	35,855	52 548	9,670	9 724	25 098	4,422	231 298		(437) FARG 13% 23% 27% 32%
Encounters by Rurality				2.025	8,924	72,457	73.333	11.094	2,899	8.307	40.089	219,128	(4	38) SIOUX 46% 46% 8%
	J		÷ V08	100	42,265	142,011	118,059	10,393	37,019	57,425	35,369	442,641	(4	42) CHEYE 33% 62%
Time and Medality Courses			+ V09	793	15,986	50,223	100,850	3,267	21,280	723	20,877	213,999		Encounters by Modality (N)
Time and Modality Graphs	;		+ V10	5,387	17,488	114,411	66,568	9,255	22,216	38,049	26,527	299,901	Martin Martin	
			+ V12	3,630	6,452	44,909	39,319	6,190	12,282	4,683	5,419	122,884	Modal	ty CVI econsult in person Prione
Encounter details				6,163	122	41,846	30,448	5,901	6,234	14,199	4,215	109,128		(Blank)
			+ V10	2,522	12,679	87,330	54,212	10,136	28,168	17,838	12,067	224,952		(402) VA M 0M.0M
			+ V17	1 4,001	11 229	77 767	44 382	1 1 1 0 4	23 514	23 716	19 362	200,577	× (4	.05) WHITE OM
Sleep Procedures	\checkmark			2.047	31,991	42.637	81.650	50 8.576 6.551 8.819 13.129 195,400		(436) FORT OM OM				
			+ V21	5,711	29,323	54,362	58,691	2,800	27,035	27,588	19,714	225,224		(437) FARG
Sleen Consults	\sim		+ V22	526	20,087	106,228	89,569	8,817	37,903	58,495	31,206	352,831	(4	.38) SIOUX
			Total	59,122	246,102	1,254,731	1,120,240	121,971	317,994	357,084	293,327	3,770,571	(4	(42) CHEYE I



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ower BI Sleep Medicine

Sleep Procedures | Data updated 7/13/23 V

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MEASUREMENT

Quality Enhancement Research Initiativ

SCIENCE

Sleep Studies in VA and Community Care Settings



Unique Patients

TypeCare		Cor	nmunity	Care	,	Total		
	VISN	HSAT	PSG	Subtotal	HSAT	PSG	Subtotal	
	VOA	605	1 200	1 0 6 2	0,240	-,0-0	12,200	12,001
+	V04	025	1,300	1,662	20,424	2,382	22,122	23,623
+	V05	441	2,197	2,520	8,494	4,581	12,182	14,399
$\left +\right $	V06	3,480	7,804	10,901	15,659	9,920	23,961	33,817
$\left + \right $	V07	4,782	8,285	12,592	11,428	10,304	20,085	32,227
$\left +\right $	V08	595	1,039	1,610	29,056	9,800	36,378	37,699
$\left +\right $	V09	1,283	5,184	6,216	11,878	2,839	14,316	20,121
$\left +\right $	V10	3,184	6,036	8,516	14,085	9,855	22,585	30,255
$\left +\right $	V12	863	2,634	3,361	11,103	6,009	15,835	18,979
$\left +\right $	V15	4,673	3,751	8,147	4,305	6,359	9,366	17,399
$\left +\right $	V16	2,896	11,467	13,829	15,553	7,207	21,400	33,788
$\left +\right $	V17	1,828	5,709	7,416	20,118	8,590	27,248	34,085
$\left +\right $	V19	3,314	6,290	9,283	12,799	2,167	14,523	22,174
$\left +\right $	V20	1,122	3,777	4,733	8,324	6,582	13,947	18,378
$\left +\right $	V21	1,321	5,501	6,621	14,056	2,564	15,964	22,275
$\left +\right $	V22	2,051	3,951	5,833	24,550	9,401	31,915	36,831
+	V23	1,893	3,933	5,607	9,345	5,088	13,701	18,697
	Total	34,749	80,983	111,486	244,282	111,010	334,027	434,716

Encounters TypeCare **Community Care VA Facility** Total VISN HSAT PSG Subtotal HSAT PSG Subtotal ----TVL 23,099 011 ما ما ما , ام ما ما 31,504 2,623 681 1,690 2,371 + V04 34,127 36,498 5,586 ⊢ V05 513 3,299 3,812 9,577 15,163 18,975 3,739 11,750 15,489 20,833 13,064 H V06 33,897 49,386 12,193 17,260 16,636 12,614 + V07 5.067 29,250 46,510 + V08 638 1,266 1,904 36,844 11,836 48,680 50,584 8,058 14,853 3,345 + V09 1,493 9,551 18,198 27,749 9,821 13,581 19,164 13,175 3,760 32,339 ∃ V10 45,920 1,299 3,896 15,560 6,883 + V12 5,195 22,443 27,638 + V15 4,848 6,333 11,181 5,279 8,009 13,288 24,469 17,629 20,773 27,692 9,610 + V16 3,144 37,302 58,075 2,326 8,096 9,839 + V17 10,422 32,677 42,516 52,938 3,941 8,394 18,861 2,340 + V19 12,335 21,201 33,536 + V20 1,482 5,368 6,850 11,300 8,611 19,911 26,761 + V21 1.502 6.418 22,790 3,069 7,920 25,859 33,779 + V22 2.299 36,715 10,570 4,670 6,969 47,285 54,254 V23 2.277 5,127 10,369 5,839 7,404 $\left|+\right|$ 16,208 23,612

Total 39,484 116,914 156,398 362,658 137,208 499,866 656,264

* Encounters not associated with a station were excluded.

Sleep Community Care | Data updated 7/10/23 🗸

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MEASUREMENT

Quality Enhancement Research Initiativ

SCIENCE

Community Care: Unique Patients by SEOC



Standardized Episode of Care

_	Sleep Co	omprehensive	Sleep Study	in Clinical Setting	Sleep St	udy In Home	Un	known	Total	
VISN	Patients	Amount	Patients	Amount	Patients	Amount	Patients	Amount	Patients	Amount
∀01	2,213	\$2,843,893.94	198	\$221,613.22	38	\$7,612.73	529	\$1,048,251.38	2,929	\$4,121,371.27
	520	\$518,984.78	232	\$200,535.25	36	\$10,372.54	41	\$78,079.40	809	\$807,971.97
	1,594	\$1,758,415.24	591	\$553,176.79	563	\$507,664.60	924	\$1,681,731.66	3,535	\$4,500,988.29
	4,596	\$3,807,846.53	741	\$903,798.15	185	\$129,581.59	1,468	\$2,234,996.21	6,211	\$7,076,222.48
	9,639	\$9,683,303.73	1,595	\$1,504,340.56	2,032	\$1,326,794.75	2,397	\$4,524,331.59	15,177	\$17,038,770.63
	8,766	\$8,594,960.13	2,781	\$2,950,971.87	2,951	\$3,146,206.51	2,767	\$5,286,573.92	16,703	\$19,978,712.43
+ V08	1,000	\$801,087.26	373	\$276,850.66	621	\$384,175.73	882	\$1,433,426.78	2,847	\$2,895,540.43
	7,038	\$6,378,374.38	1,598	\$1,552,229.28	551	\$464,554.00	263	\$205,272.15	9,302	\$8,600,429.81
	8,169	\$10,094,010.20	1,307	\$1,408,265.75	1,588	\$904,571.91	3,401	\$6,060,310.29	14,006	\$18,467,158.15
⊕ V12	3,422	\$3,196,113.41	834	\$779,397.32	75	\$30,587.52	1,035	\$2,021,968.01	5,181	\$6,028,066.26
	4,396	\$5,147,535.72	752	\$928,967.50	4,505	\$4,248,795.46	2,290	\$4,087,738.61	11,515	\$14,413,037.29
	10,974	\$11,129,574.20	2,571	\$2,438,586.90	2,045	\$1,200,644.21	700	\$1,475,106.76	15,863	\$16,243,912.07
	2,227	\$2,148,776.18	4,239	\$3,892,779.97	1,581	\$2,126,112.07	242	\$142,251.84	8,104	\$8,309,920.06
	3,902	\$3,761,960.62	3,786	\$3,829,428.22	3,015	\$2,978,026.63	1,693	\$3,070,048.83	11,939	\$13,639,464.30
	5,566	\$6,477,193.83	452	\$549,438.52	65	\$42,398.60	169	\$446,306.02	6,200	\$7,515,336.97
⊕ V21	4,683	\$4,219,233.51	2,593	\$1,843,020.85	806	\$271,955.20	883	\$1,575,260.36	8,714	\$7,909,469.92
	4,473	\$3,738,305.84	1,486	\$1,231,508.60	1,050	\$708,870.48	396	\$924,799.52	7,242	\$6,603,484.44
	4,916	\$5,039,651.94	1,524	\$1,987,867.69	864	\$289,269.45	1,622	\$2,367,986.57	8,496	\$9,684,775.65
Tota	88,006	\$89,339,221.44	27,649	\$27,052,777.10	22,569	\$18,778,193.98	21,701	\$38,664,439.90	154,538	\$173,834,632.42

Impact of Dashboard

- Access to accurate data = empowerment
- Program Office can respond to congressional, actions, FOIAs, and other requests for information about the state of VHA sleep medicine
- Facilities are using the data to advocate for resources
 - Human resources, equipment (home sleep apnea testing expansion)
 - Community care volume and cost
 - Outcomes: 17/18 hubs in the ORH TeleSleep EWI converted to sustainment
- Identifying the data and creating the dashboard has laid the groundwork for local, regional and national QI and research







Prevalence and management of sleep disorders in the Veterans Health Administration

Robert L. Folmer ^{a, b, *}, Connor J. Smith ^c, Eilis A. Boudreau ^{a, c, d}, Alex W. Hickok ^a, Annette M. Totten ^c, Bhavika Kaul ^{e, f}, Carl J. Stepnowsky ^{g, h}, Mary A. Whooley ^{e, f}, Kathleen F. Sarmiento ^{e, f}

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Sleep Medicine Reviews, 2020

Nicosia *et al. BMC Health Services Research* (2021) 21:77 https://doi.org/10.1186/s12913-021-06080-5

BMC Health Services Research

RESEARCH ARTICLE

Open Access

Leveraging Telehealth to improve access to care: a qualitative evaluation of Veterans' experience with the VA TeleSleep program



Francesca M. Nicosia^{1,2*}, Bhavika Kaul^{1,2}, Annette M. Totten³, Molly C. Silvestrini⁴, Katherine Williams^{1,2}, Mary A. Whooley^{1,2} and Kathleen F. Sarmiento^{1,2}

SCIENTIFIC INVESTIGATIONS

Veterans Health Administration TeleSleep Enterprise-Wide Initiative 2017–2020: bringing sleep care to our nation's veterans

Victor S. Chun, MD^{1,2}; Mary A. Whooley, MD^{3,4}; Katherine Williams, PhD^{3,4}; Ning Zhang, MS^{3,4}; Michelle R. Zeidler, MD^{1,2}; Charles W. Atwood, MD^{5,6}; Robert L. Folmer, PhD^{7,8}; Annette M. Totten, PhD⁹; Connor J. Smith, MS⁹; Eilis A. Boudreau, MD, PhD^{9,10}; Jill M. Reichert, MSW¹¹; Kathleen F. Sarmiento, MD, MPH^{4,12}; on behalf of the VA TeleSleep Enterprise-Wide Initiative

¹Pulmonary, Critical Care, and Sleep Medicine, Veterans Administration (VA) Greater Los Angeles Health Care System, Los Angeles, California; ²Department of Medicine, University of California, Los Angeles, Los Angeles, California; ³Measurement Science Quality Enhancement Research Initiative, San Francisco VA Health Care System, San Francisco, California; ⁴Department of Medicine, University of California, San Francisco, San Francisco, California; ⁵Sleep Medicine Program and Pulmonary Section, VA Pittsburgh Health Care System, Pittsburgh, Pennsylvania; ⁶Division of Pulmonary, Allergy, Critical Care Medicine, University of Pittsburgh Medical Center, University of Pittsburgh, Pittsburgh, Pennsylvania; ⁷VA Portland Health Care System, Portland, Oregon; ⁸Department of Otolaryngology, Oregon Health & Science University, Portland, Oregon; ⁹Department of Medical Informatics and Clinical Epidemiology, Oregon Health & Science University, Portland, Oregon; ¹⁰Sleep Medicine and Epilepsy Program, VA Portland Health Care System, Portland Oregon; ¹¹VA Specialty Care Program Office (11SPEC); ¹²Pulmonary, Critical Care, and Sleep Medicine, San Francisco VA Health Care System, San Francisco, California

Study Objectives: The Veterans Health Administration cares for many veterans with sleep disorders who live in rural areas. The Veterans Health Administration's Office of Rural Health funded the TeleSleep Enterprise-Wide Initiative (EWI) to improve access to sleep care for rural veterans through creation of national telehealth networks.

Methods: The TeleSleep EWI consists of (1) virtual synchronous care, (2) home sleep apnea testing, and (3) REVAMP (Remote Veterans Apnea Management Platform), a patient- and provider-facing web application that enabled veterans to actively engage with their sleep care and sleep care team. The TeleSleep EWI was designed as a hub-and-spoke model, where larger sites with established sleep centers care for smaller, rural sites with a shortage of providers. Structured formative evaluation for the TeleSleep EWI is supported by the Veterans Health Administration's Quality Enhancement Research Initiative and was critical in assessing outcomes and effectiveness of the program.

Results: The TeleSleep EWI launched with 7 hubs and 34 spokes (2017) and rapidly expanded to 13 hubs and 63 spokes (2020). The TeleSleep EWI resulted in a significant increase in rural veterans accessing sleep care by utilizing home sleep apnea testing to establish a diagnosis of obstructive sleep apnea and virtual care for follow-up. Rates of virtual care utilization were greater in hubs and spokes participating in the TeleSleep EWI compared with non-EWI sleep programs. Additionally, veterans expressed satisfaction with their virtual care TeleSleep experiences.

Conclusions: The TeleSleep EWI successfully increased sleep care access for rural veterans, promoted adoption of virtual care services, and resulted in high patient satisfaction.

Keywords: telehealth, sleep, rural, Veterans Administration

Citation: Chun VS, Whooley MA, Williams K, et al. Veterans Health Administration TeleSleep Enterprise-Wide Initiative 2017–2020: bringing sleep care to our nation's veterans. J Clin Sleep Med. 2023;19(5):913–923.







advancing health worldwide"

Medication safety dashboard improves testing for latent infection among users of immunotherapy

VA Operational Partner: Office of Rheumatology

Gabriela Schmajuk MD MS Chief, Rheumatology, SFVA Professor of Medicine, UCSF gabriela.shmajuk@ucsf.edu



July 13, 2023

BACKGROUND

- Biologics or targeted synthetic disease-modifying anti-rheumatic drugs (b/tsDMARDs) are commonly used for the treatment of autoimmune conditions
- To avoid reactivation of life-threatening infection, national guidelines recommend testing patients for latent hepatitis and TB prior to initiating b/tsDMARDs
- Quality gap: Many Veterans not receiving appropriate testing for infection
- To improve prescribing safety, we developed a dashboard that enables providers to identify patients on b/tsDMARDs who have not completed screening







Rheumatology Medication Safety Overview





Dashboards developed by Measurement Science QUERI

DMARD Latent Infections Dashboard



Screenings Complete: Yes:

No: 🚫 Not Applicable: 🤇

To fulfill All Screenings, each of the following is required:

- \Rightarrow Hepatitis B Virus surface antigen (or viral load) and core antibody (IgG or total) tests
- \Rightarrow Hepatitis C Virus antibody or viral load test
- \Rightarrow Tuberculosis PPD, Interferon-Gamma Release Assay, or evidence of TB treatment (ever)

FI	LTERS			
Drug Type All	\sim	All 5 N Y	Screenings Co	mplete
Drug Name All	\sim	Hepatitis B Virus N Y	Hepatitis C Virus N Y	Tuberculosis N N/A Y



FREQUENT USERS STARTED LOW AND IMPROVED the MOST



University of California San Francisco



Dashboard Adopted by National Academic Detailing (Medsafe)



Screening for Latent Infections Among Users of High-Risk Immunosuppressants: A Cross-Sectional Analysis From the Veterans Health Administration Healthcare System

Gabriela Schmajuk, MD, MS, *† Anna Montgomery, MPH, *† Gary Tarasovsky, BS, *† Jing Li, MPH, *† Ronald G. Hauser, MD, ‡§ Karine Rozenberg-Ben-Dror, PharmD,// and Mary A. Whooley, MD*†

Objectives: Guidelines recommend screening for latent hepatitis B virus (HBV), hepatitis C virus (HCV), and tuberculosis (TB) before initiating biologics or targeted synthetic disease-modifying antirheumatic drugs (b/ts DMARDs) to avoid reactivation of life-threatening infections. The extent to which such screening occurs in the national Veterans Health Administration (VA) healthcare system is unknown.

Methods: Using data from the Veterans Affairs' (VA) Corporate Data Warehouse, we performed a cross-sectional analysis of veterans receiving b/ts DMARDs between October 1, 2017, and September 30, 2019. We calculated the proportion of patients with screening completed for latent HBV, HCV, and TB between October 1, 1999 and September 30, 2019. Patient characteristics associated with complete screening were evaluated using mixed-effects multivariate logistic regression models. We also examined facility-level factors associated with high versus lower performance.

Results: A total of 51,764 unique patients from 129 VA facilities received b/ts DMARDs from 2017 to 2019. Of these, 63% had complete screening. Among the 11,006 patients identified as new users, 64% had complete to patients with autoimmune conditions. However, these drugs are known to increase the risk of reactivation of life-threatening infections, including latent hepatitis B virus (HBV), hepatitis C virus (HCV), or tuberculosis (TB). When latent infections are detected, prophylaxis (for hepatitis B) or treatment (for hepatitis C or TB) can be administered to reduce the risk of complications. For example, patients receiving rituximab who have a positive HBV core antibody have a reactivation risk between 3% and 41%; risk of HBV reactivation is lower for patients receiving tumor necrosis factor (TNF) inhibitors (1%–5%).¹ Patients who test positive for latent hepatitis B can take entecavir as prophylaxis for hepatitis B reactivation. In addition, chronic HCV is curable with oral medications taken daily for 8 to 12 weeks and ameliorates HCV-related rheumatologic conditions. Therefore, screening for latent infections, including for hepatitis B, hepatitis C, and TB, is recommended for patients receiving these drugs, and quality measures assessing practice-level performance on testing have been developed for pay-for-performance programs in the United States.2,3

JMIR MEDICAL INFORMATICS

Montgomery et al

Original Paper

An Electronic Dashboard to Improve Dosing of Hydroxychloroquine Within the Veterans Health Care System: Time Series Analysis

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advancing health worldwide"

Home-based cardiac rehabilitation increases access, reduces wait times, and lowers mortality

VA Operational Partners:

Office of Rural Health Office of Cardiology

Mary Whooley MD Director, VA Measurement Science QUERI Professor of Medicine, Epidemiology & Biostatistics, UCSF <u>mary.whooley@va.gov</u>

July 13, 2023



Only 35 Cardiac Rehab Centers in VHA (none in VISN 21)



Participation in Cardiac Rehab (FY07-FY11)



Program Profile

The Design and Implementation of a Home-Based Cardiac Rehabilitation Program

Gregory Rohrbach, DNP; David W. Schopfer, MD; Nirupama Krishnamurthi, MBBS, MPH; Mark Pabst, MPH; Michael Bettencourt; Jo Loomis, DNP; Mary A. Whooley, MD

A home-based cardiac rehabilitation program improves access and enrollment by using an evidence-based alternative model of care.

Federal Practitioner; May 2017:30-35

Effects of Home-Based Cardiac Rehabilitation on Time to Enrollment and Functional Status in Patients With Ischemic Heart Disease

David W. Schopfer ^(D), MD, MAS; Mary A. Whooley, MD; Kelly Allsup, BS; Mark Pabst, MPH; Hui Shen, MS; Gary Tarasovsky, BS; Claire S. Duvernoy ^(D), MD; Daniel E. Forman ^(D), MD

BACKGROUND: Cardiac rehabilitation is an established performance measure for adults with ischemic heart disease, but patient participation is remarkably low. Home-based cardiac rehabilitation (HBCR) may be more practical and feasible, but evidence regarding its efficacy is limited. We sought to compare the effects of HBCR versus facility-based cardiac rehabilitation (FBCR) on functional status in patients with ischemic heart disease.

METHODS AND RESULTS: This was a pragmatic trial of 237 selected patients with a recent ischemic heart disease event, who enrolled in HBCR or FBCR between August 2015 and September 2017. The primary outcome was 3-month change in distance completed on a 6-minute walk test. Secondary outcomes included rehospitalization as well as patient-reported physical activity, quality of life, and self-efficacy. Characteristics of the 116 patients enrolled in FBCR and 121 enrolled in HBCR were similar, except the mean time from index event to enrollment was shorter for HBCR (25 versus 77 days; *P*<0.001). As compared with patients undergoing FBCR, those in HBCR achieved greater 3-month gains in 6-minute walk test distance (+95 versus +41 m; *P*<0.001). After adjusting for demographics, comorbid conditions, and indication, the mean change in 6-minute walk test distance remained significantly greater for patients enrolled in HBCR (+101 versus +40 m; *P*<0.001). HBCR participants reported greater improvements in quality of life and physical activity but less improvement in exercise self-efficacy. There were no deaths or cardiovascular hospitalizations.

CONCLUSIONS: Patients enrolled in HBCR achieved greater 3-month functional gains than those enrolled in FBCR. Our data suggest that HBCR may safely derive equivalent benefits in exercise capacity and overall program efficacy in selected patients.

REGISTRATION: URL: https://www.clinicaltrials.gov; Unique identifier: NCT02105246.

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ORIGINAL RESEARCH

Association of Home-Based Cardiac Rehabilitation With Lower Mortality in Patients With Cardiovascular Disease: Results From the Veterans Health Administration Healthy Heart Program

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