Office of Health Equity

Erica Morris, BS, MPH(c)
Health Equity Fellow
Office of Health Equity
Erica.Morris@va.gov

OFFICE OF HEALTH EQUITY

Created in 2012

Vision: To ensure that VHA provides appropriate individualized health care to each Veteran in a way that-

- Eliminates disparate health outcomes and
- Assures health equity

OFFICE OF HEALTH EQUITY GOALS

1. **Leadership:** Strengthen VA leadership to address health inequalities and reduce health disparities.
2. **Awareness:** Increase awareness of health inequalities and disparities.
3. **Health Outcomes:** Improve outcomes for Veterans experiencing health disparities.
4. **Workforce Diversity:** Improve cultural and linguistic competency and diversity of the VHA workforce.
5. **Data, Research and Evaluation:** Improve data and diffusion of research to achieve health equity.

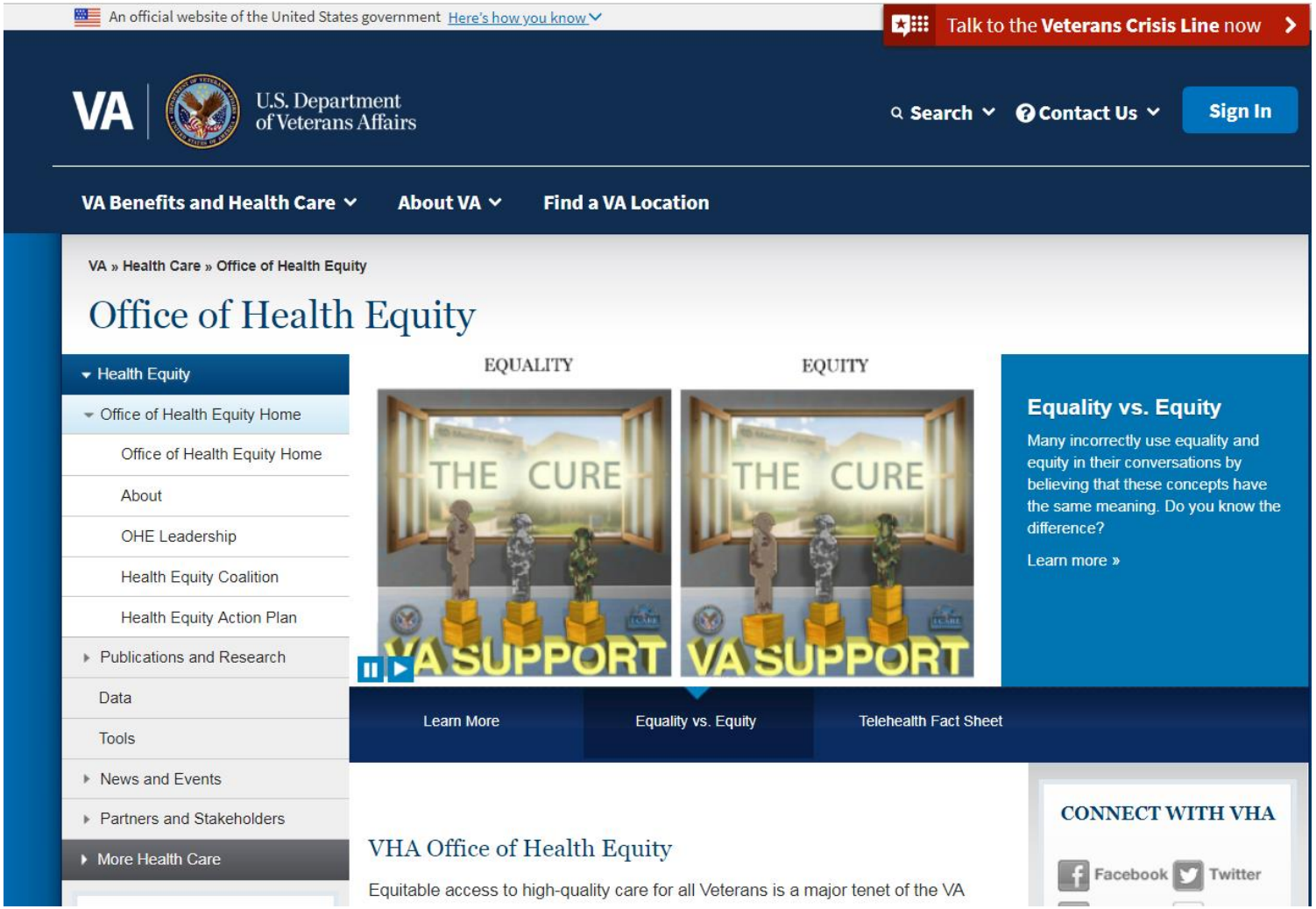
OFFICE OF HEALTH EQUITY POPULATIONS

Veterans who experience greater obstacles to health related to:

- Race or ethnicity
- Gender
- Age
- Geographic location
- Religion
- Socio-economic status
- Sexual orientation
- Mental health
- Military era
- Cognitive /sensory/ physical disability
- Justice-Involvement

OFFICE OF HEALTH EQUITY TEAM

https://www.va.gov/healthequity



OUR PRESENTERS

Michelle Wong, PhD – Postdoctoral Fellow, Health Service Research at the Center of the Study of Healthcare Innovation, Implementation & Policy (CSHIIP), VA Greater Los Angeles Healthcare System

Donna Zulman, MD, MS— Investigator, Center for Innovation to Implementation (Ci2i) in the VA Palo Alto Health Care System and Assistant Professor, Division of General Medical Disciplines at Stanford University

OUR PRESENTERS

Alicia Cohen, MD, MSc - Providence VA Medical Center and Assistant Professor, Department of Family Medicine, Brown University; Adjunct Lecturer, Department of Family Medicine, University of Michigan

Lauren Russell, MPP - Presidential Management Fellow, VA New England Healthcare System (VISN 1)

Racial/Ethnic Disparities in Mortality Across the Veterans Health Administration

Michelle S Wong, PhD

Associated Health Postdoctoral Fellow in Health Services Research
Center for the Study of Healthcare Innovation, Implementation, and Policy (CSHIIP)
VA Greater Los Angeles HSR&D

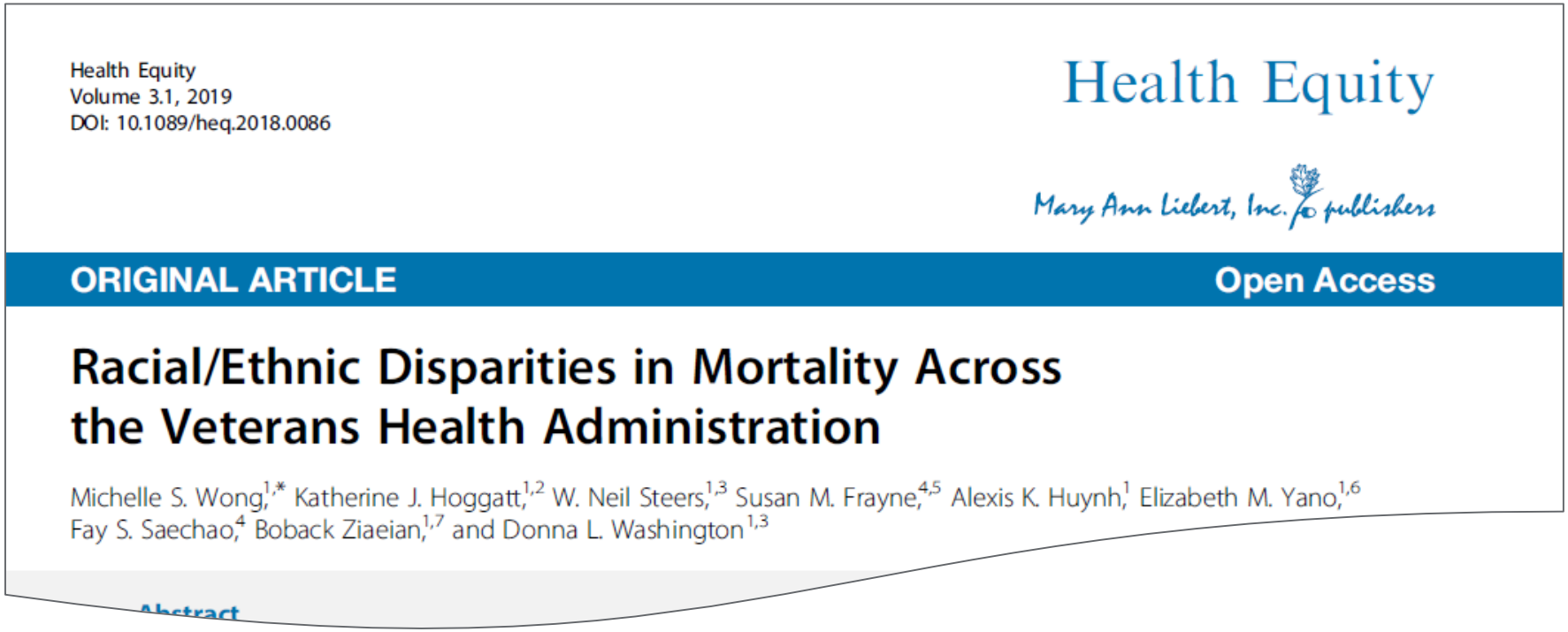
July 2019 HSR&D Cyberseminar

VA | U.S. Department of Veterans Affairs
Veterans Health Administration
Quality Enhancement Research Initiative

Disclosure

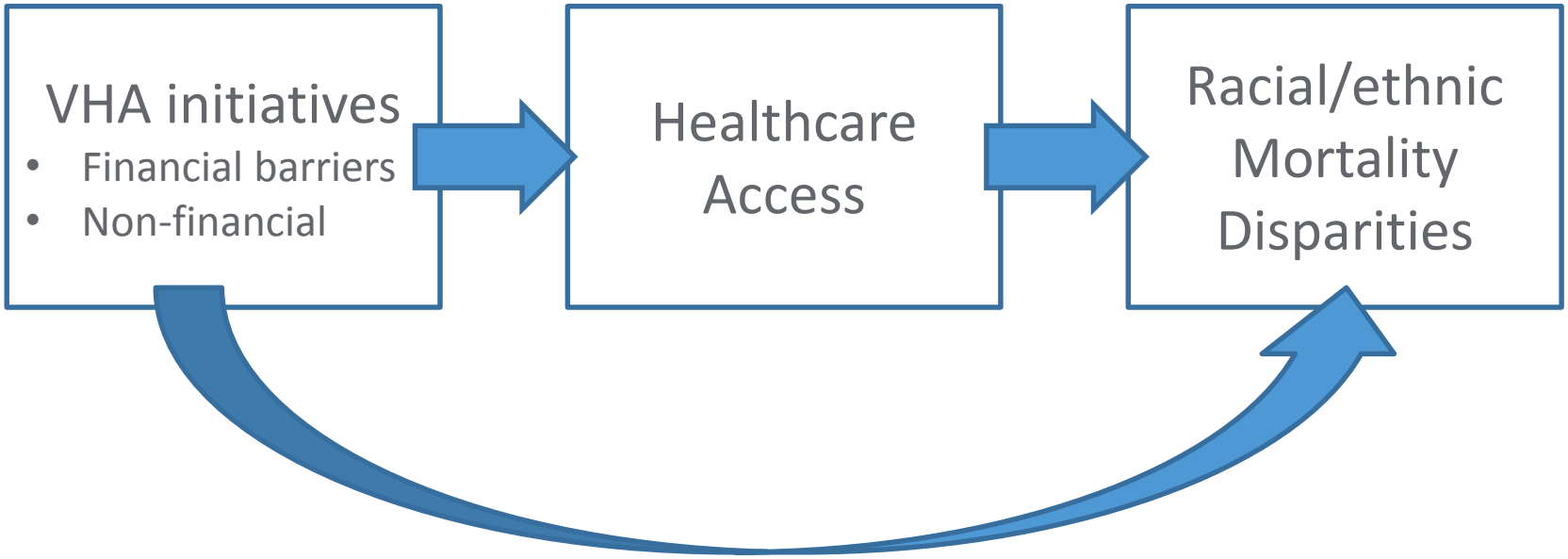
Authors have no competing conflicts of interest

These views are those of the authors and do not necessarily reflect the position or policy of the Department of Veterans Affairs or of the U.S. government



- Product of Office of Health Equity - QUERI National Partnered Evaluation Initiative, whose aims include to:
  - Systematically monitor health and healthcare equity for vulnerable Veteran groups
  - Improve understanding of mechanisms underlying VA disparities, to inform interventions to achieve health equity
- OHE-QUERI PEI sites: VA Greater Los Angeles HCS, VA Palo Alto HCS

Background: Healthcare Access and Racial/Ethnic Disparities



Beyond Black-White disparities??

Specific Aims

1. To characterize racial/ethnic disparities in all-cause, cancer, and heart-disease mortality within VHA

2. To compare racial/ethnic mortality disparities among Veterans receiving VHA care vs. within the U.S. general population

Methods – Data and Sample

- **Data:** VHA electronic medical records + CDC National Death Index (NDI)
- **Sample:** national sample of Veterans
  - 1+ VHA ambulatory care visit in fiscal year (FY) 2009
- **Observation period:** 10/2008-12/2011

NH/OPI = Native Hawaiian/Other Pacific Islander

Measures

Variables	Specifics
Dependent: *Time to mortality (hazard ratios):*	All-cause Cancer Heart disease
Independent: *Race/ethnicity:*	American Indian/Alaskan Native (AI/AN) Asian Non-Hispanic Black Hispanic Native Hawaiian/Other Pacific Islander (NH/OPI) Non-Hispanic White (reference)
Control:	Age, sex, medical comorbidity, mental health comorbidity

Statistical Methods

Cox regression models

- Adjusted for age, sex, medical and mental health comorbidities
- Statistical significance: $p<0.05$

Results: VHA Sample Demographic & Health Characteristics

Overall sample:

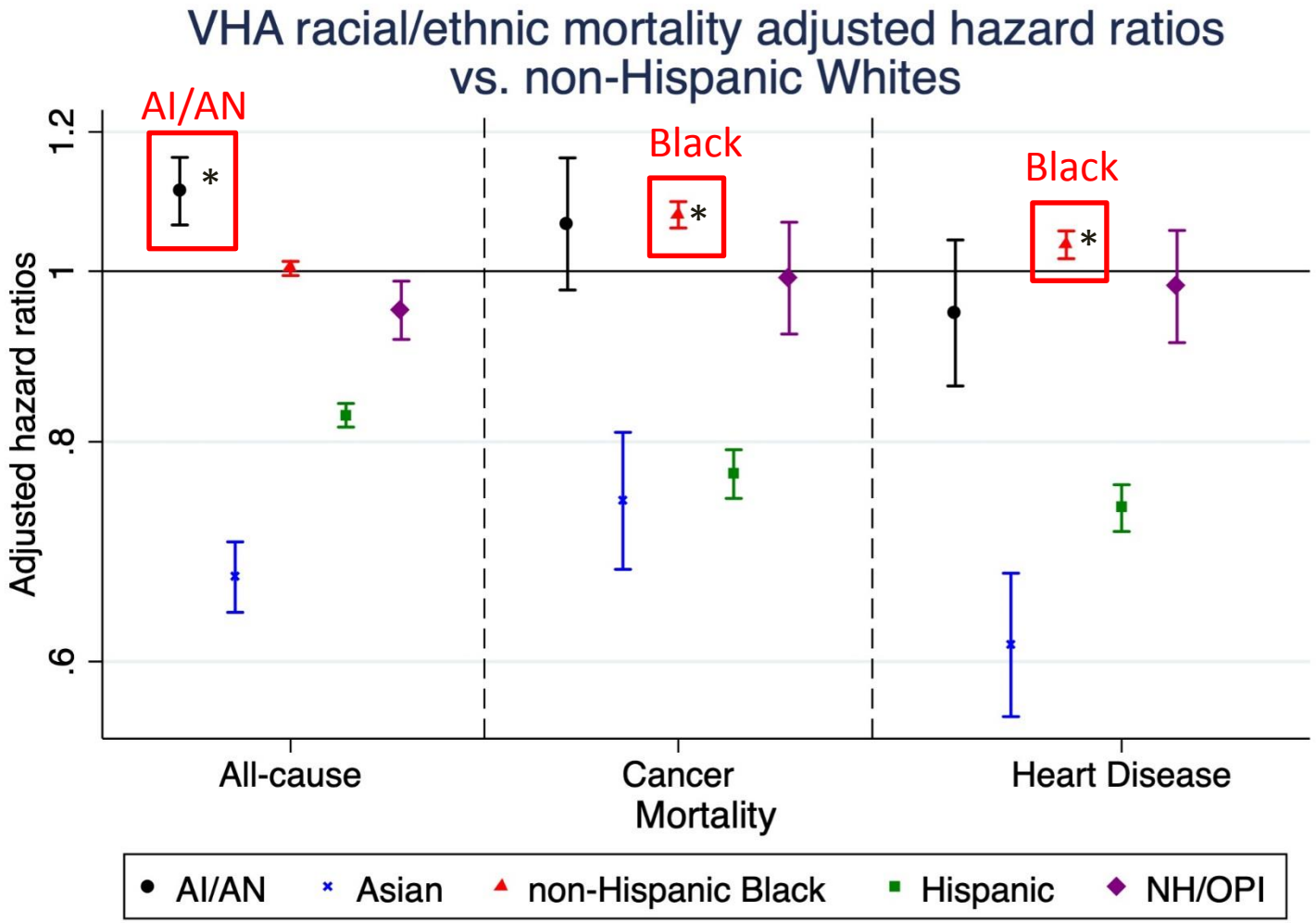
- >5 million Veterans observed for 14,000,000+ person-years
  - 516,540 deaths observed

Racial/ethnic differences:

- Racial/ethnic minorities vs. non-Hispanic Whites:
  - Younger (mean age 56-60 vs. 65)
  - Higher % female (6-10% vs. 4%)
  - Similar/less medical comorbidity
- AI/ANs, non-Hispanic Blacks, Hispanics, and NH/OPIs had greater mental health comorbidities vs. non-Hispanic Whites and Asians (36-42% vs. 25-29%)

AI/AN = American Indian/Alaskan Native
NH/OPI = Native Hawaiian/Other Pacific Islander

VHA Mortality Disparities among AI/ANs and non-Hispanic Blacks



* p<0.05

VHA racial/ethnic disparity vs. non-Hispanic Whites

Methods: Data & Sample

- **Data:**
  - *U.S.:* National Center for Health Statistics (NCHS)'s detailed Mortality files + 2010 U.S. Census annual population estimates
  - *VHA:* VHA electronic medical records + NDI
- **Sample:** Adults
  - AI/AN, non-Hispanic Blacks, Hispanic, non-Hispanic White

AI/AN = American Indian/Alaskan Native
NH/OPI = Native Hawaiian/Other Pacific Islander

Measures

Variables	Specifics
Dependent: *Mortality proportions (count/population)*	All-cause Cancer Heart disease
Independent: *Race/ethnicity*	AI/AN Non-Hispanic Black Hispanic Non-Hispanic White (reference)
Control Variables	Age, sex

AI/AN = American Indian/Alaskan Native
NH/OPI = Native Hawaiian/Other Pacific Islander

Statistical Methods

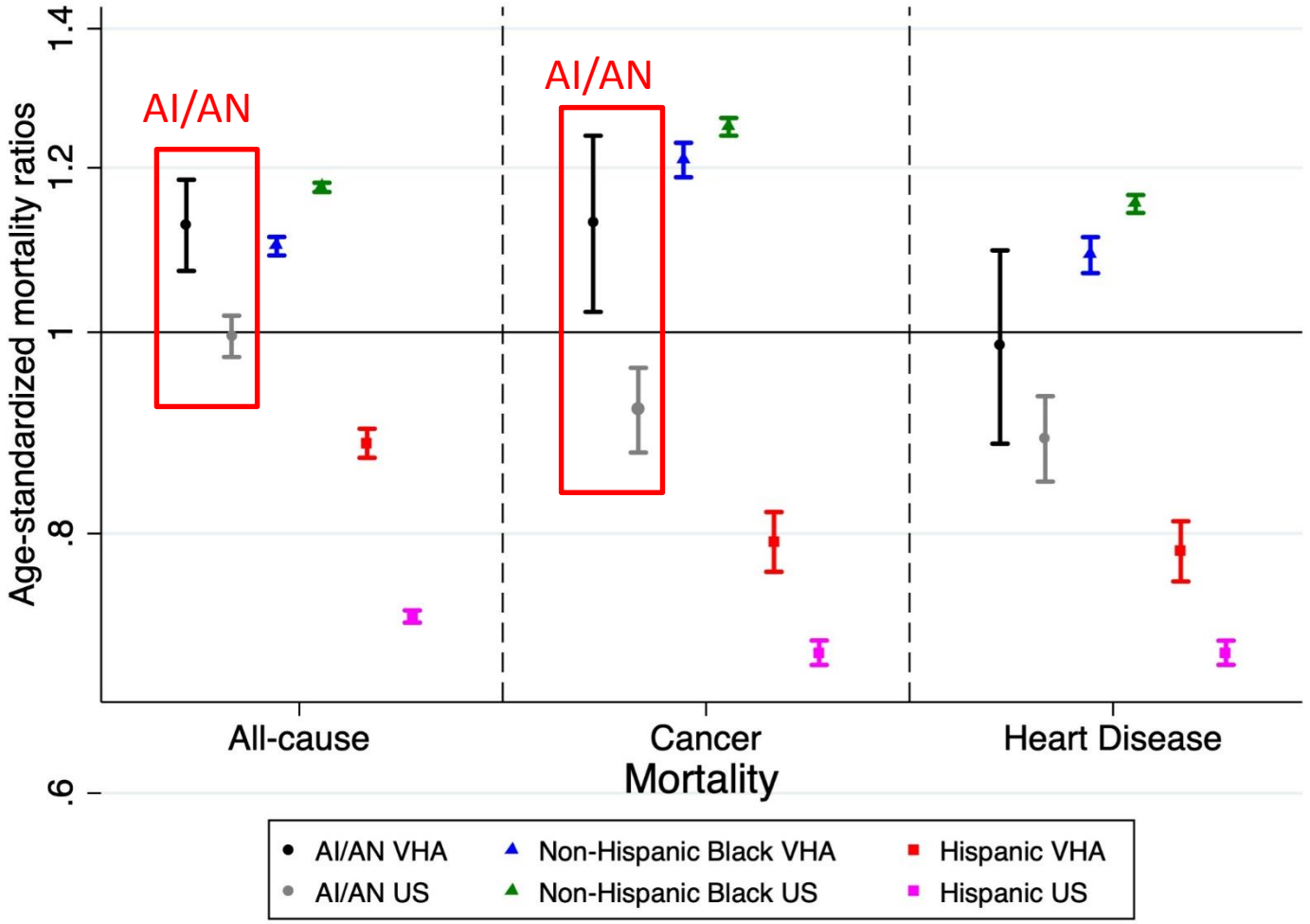
Direct standardization Method

- Sex-stratified, age-standardized mortality risk ratios
  - Standardized to non-Hispanic White male and female VHA patients
- Compared racial/ethnic minority group vs. non-Hispanic Whites
- Statistical significance: non-overlapping confidence intervals

Mortality Disparities Differ in the VHA and U.S. General Populations

Age-standardized mortality ratios

Veteran VHA users vs. U.S. general population: MALES



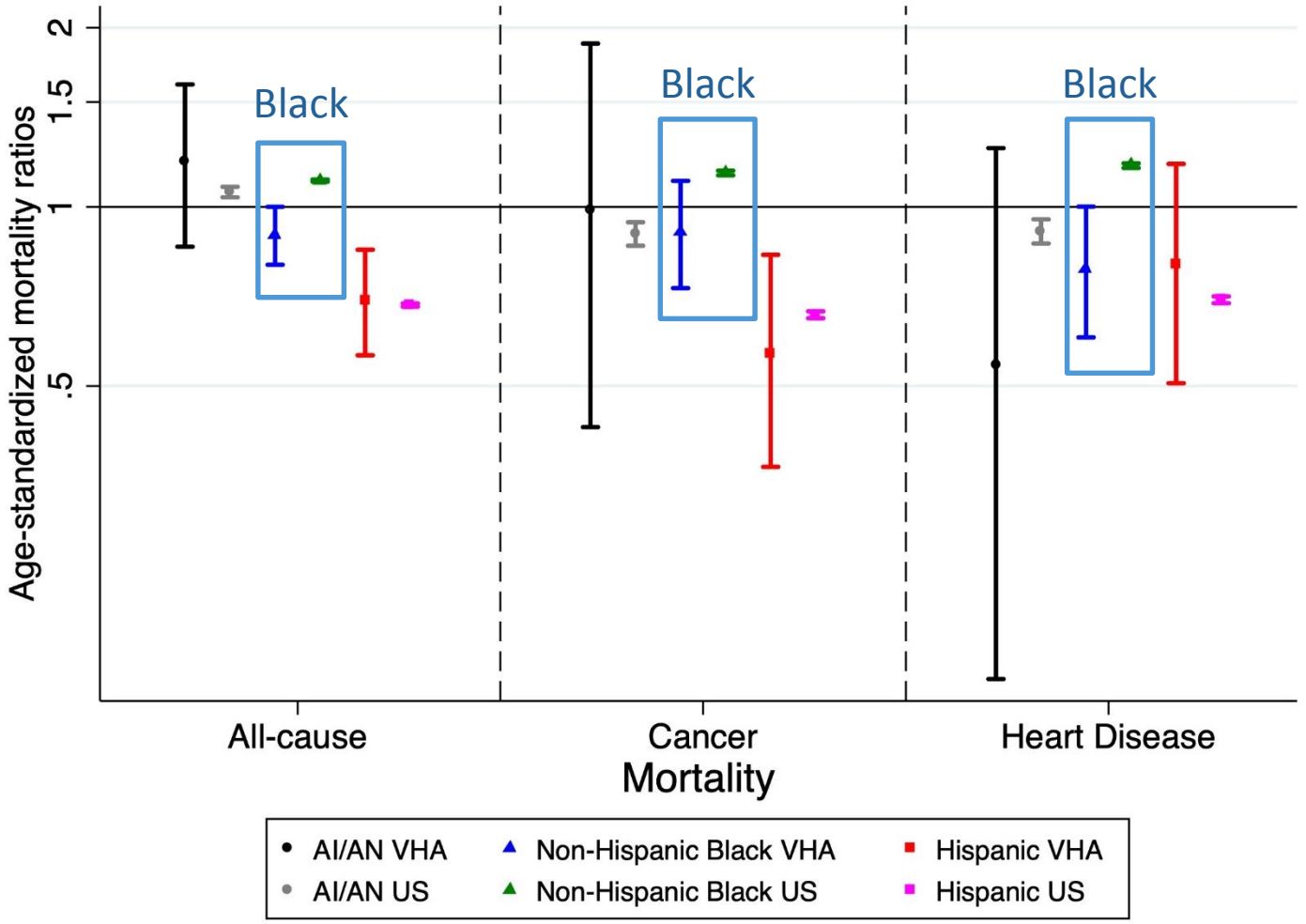
Disparity in VHA, but not in U.S. general population

Disparity in the U.S., but not in the VHA population

Mortality Disparities Differ in the VHA and U.S. General Populations

Age-standardized mortality ratios

Veteran VHA users vs. U.S. general population: FEMALES



Disparity in VHA, but not in U.S. general population

Disparity in the U.S., but not in the VHA population

Conclusions

VHA racial/ethnic disparities present for some groups

- **AI/AN disparities** in all-cause mortality
- **Non-Hispanic Black disparities** in cancer and heart disease mortality

Patterns of mortality disparities differ between VHA and U.S. general populations

- **AI/AN disparities in male VHA users** not in U.S. general population
- Non-Hispanic Black disparities in both male VHA and U.S. populations, **but smaller** in the VHA
- **No non-Hispanic Black disparities** in VHA women

Implications

Need to address disparities in AI/AN and non-Hispanic Black populations

- More research to understand drivers of AI/AN and non-Hispanic Black disparities in VHA
  - Social determinants of health
  - Differences in health behaviors
  - Healthcare services
- Efforts tailored to AI/ANs and non-Hispanic Blacks
  - Use and acceptability of behavioral risk factor reduction programs
  - Address non-health care risk factors
  - Different social context: AI/ANs vs. non-Hispanic Blacks

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- **Staff/Team Members**
  - Co-authors: Katherine J. Hoggatt, W. Neil Steers, Susan M. Frayne, Alexis K. Huynh, Elizabeth M. Yano, Fay S. Saechao, Boback Ziaeian, Donna L. Washington
  - Mentor: Dr. Washington

Thank You!

Contact:
Michelle S Wong
Michelle.Wong6@va.gov

Social Determinants of Health in High-Risk Veterans

Findings from a National Survey of Veterans at High-Risk for Hospitalization

Office of Health Equity Cyberseminar
July 10, 2019

Donna Zulman, MD, MS
Center for Innovation to Implementation, VA Palo Alto Healthcare System
Division of Primary Care and Population Health, Stanford University School of Medicine

VA | U.S. Department of Veterans Affairs
Veterans Health Administration
Health Services Research & Development Service

Study Team and Funding

PIs: Matt Maciejewski and Donna Zulman
Valerie Smith
Janet Grubber
Heather Whitson
Hollis Weidenbacher
Nicki Hastings
Dan Blalock
Leah Zullig
Jo Jacobs
Liberty Greene
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Ann-Marie Rosland

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Social & Behavioral Determinants of Health (SDH)

SDH Factors: Personal circumstances and environmental factors that shape an individual's conditions of daily life

→ Contribute to meaningful variation in clinical and economic outcomes

In 2014, IOM recommended a battery of SDH measures that should be universally incorporated into EHRs

Given the unique patient population served by VA, it may be valuable to incorporate additional SDH factors into EHR

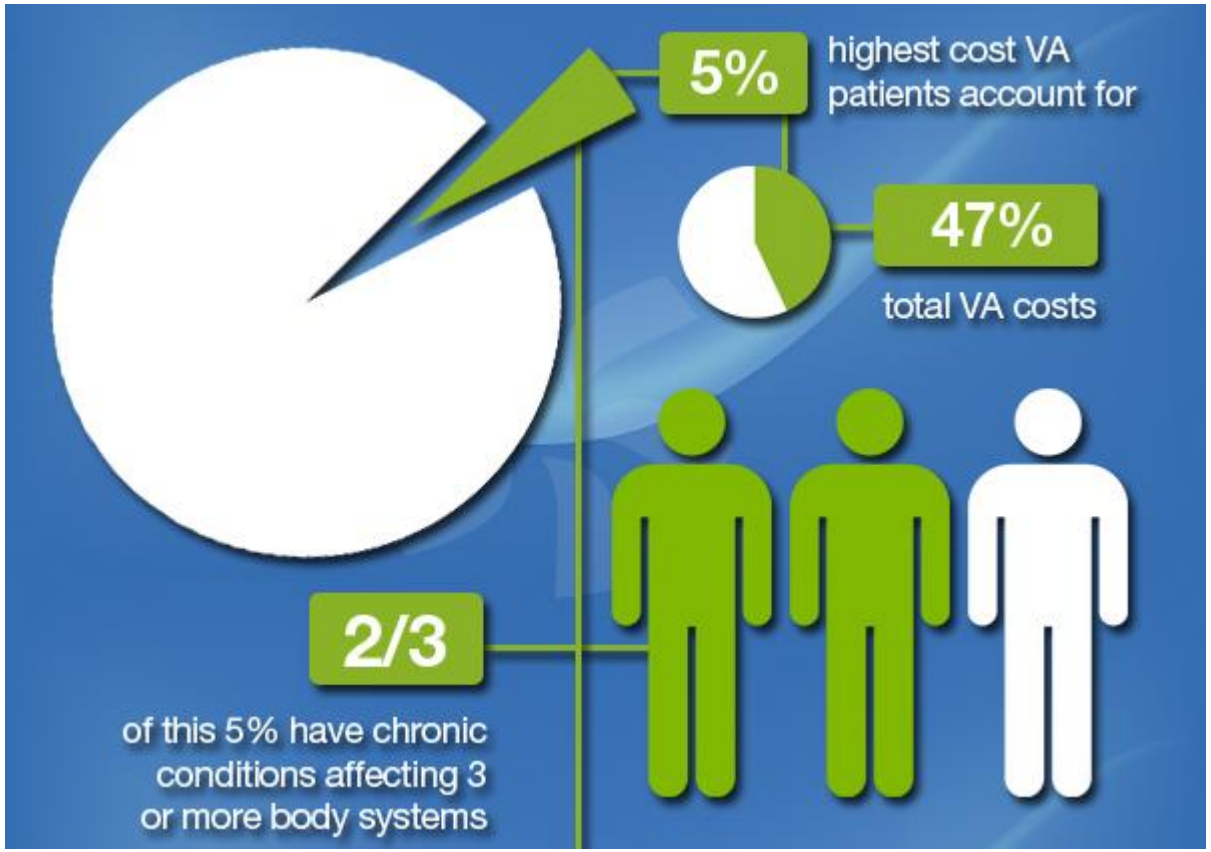
IOM-recommended SDH Domains	Structured Data in VA EHR
Race/Ethnicity	X
Education	
Financial Strain	
Stress	
Depression	X
Physical Activity	
Tobacco Use	X
Alcohol Use	X
Social Connection/Isolation	
Intimate-Partner Violence	
Residential Address	X
Census-Tract Median Income	

Adler N *et al.* NEJM, 2015

Criteria for Selecting SDH Measures for EHR

- Concise and useful in clinical practice
- Validated
- Perceived to be valuable by clinical stakeholders
- Predictive of outcomes important to Veterans and the health system
  - e.g., hospitalization, mortality, others

Role of SDH Factors in High-Risk Veterans is Unknown



- 5% of Veterans account for nearly half of VA spending
- Understanding the needs and care improvement opportunities of high-risk Veterans is a VA priority
- SDH factors may be important (non-medical) driver of outcomes in this patient population

Zulman DM, *et al*., *BMJ Open,* 2015 (based on national VA data for Fiscal Year 2010)

National Survey of High-Risk Veterans

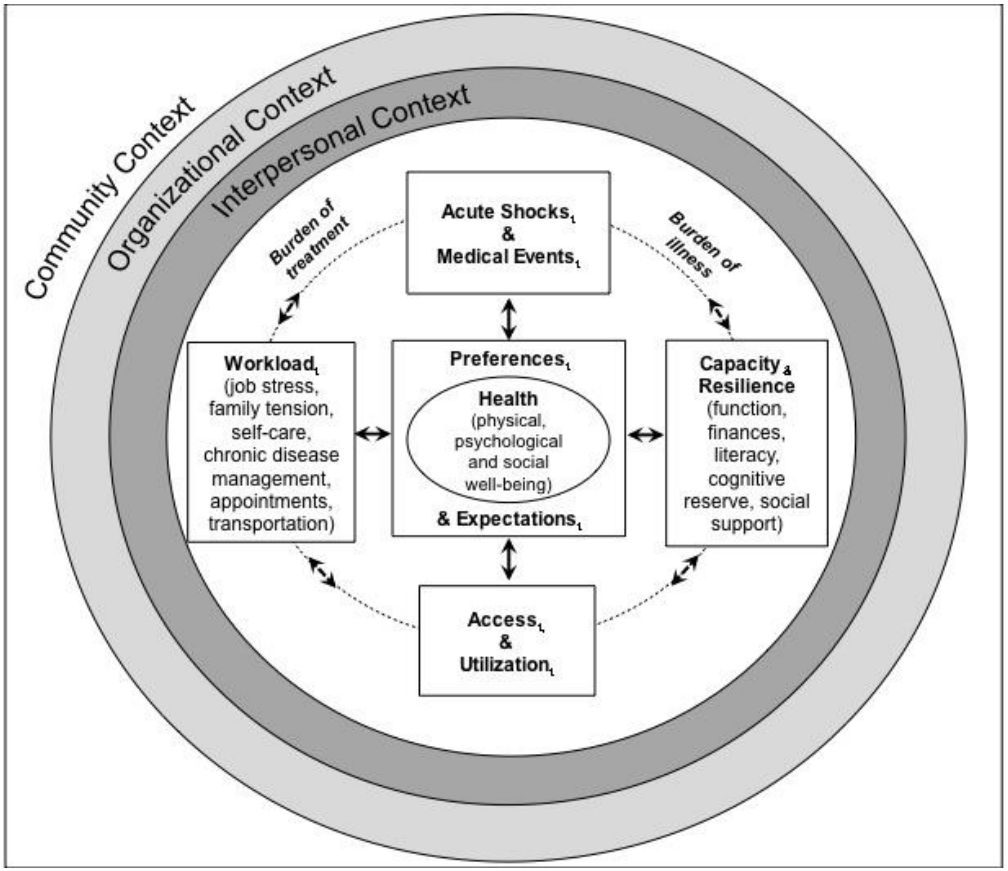
- **Study Objective**
  - Identify meaningful SDH factors in high-risk Veterans (possible candidates for EHR measures)
    - Are there survey measures that can help predict patients' risk of hospital admission?
    - Which measures improve prediction of hospitalization beyond model with available EHR factors?

- **Study Population**
  - Nationally representative sample: 10,000 high-risk Veterans
  - Inclusion Criteria: PACT visit in previous year, 1-year hosp risk in top 25% (VA CAN score, March 2018)

- **Survey**
  - Validated measures of SDH factors (e.g., physical function, social support, life stressors, health literacy)
  - Mailed to study subjects April-July 2018

- **Analyses**
  - Describe common SDH factors in high-risk Veterans
  - Identify SDH factors associated with 90-day hospitalization
  - Analyze predictive ability of models with EHR only vs. EHR + survey characteristics

Conceptual Framework: Cycle of Complexity



Zullig, *et al. JGIM* 2016. Cycle of Complexity

Survey Measures

Domain	Construct	Source
Work load	Health Status	SF-1
	Physical Function – ADLs and IADLs	OARS
	Symptom Burden	Duke EPESE
	Tobacco Use	WHO 3-item
	Transportation Barriers	Shook
	Loneliness	UCLA Loneliness
	Sleep	PROMIS
	Chaotic lifestyle	Matheney CHAOS
Capacity/Resilience	Health Literacy	Chew
	Employment Status	Durham HSR&D
	Finances	Financial Stress Inventory
	Income	Durham HSR&D
	Education	Durham HSR&D
	Social Support	MOS-8
	Patient Activation	CHAI
	Resilience	Smith Brief Resilience Scale
	Grit	Duckworth 8-item
Acute Shocks & Medical Events	Life Stressors in Past Year	Duke EPESE
Access/Utilization	VA/non-VA care	Modified from HERC
Preferences/Expectations	Self-Determination	Kelly

Characteristics of Survey Respondents (47% response rate)

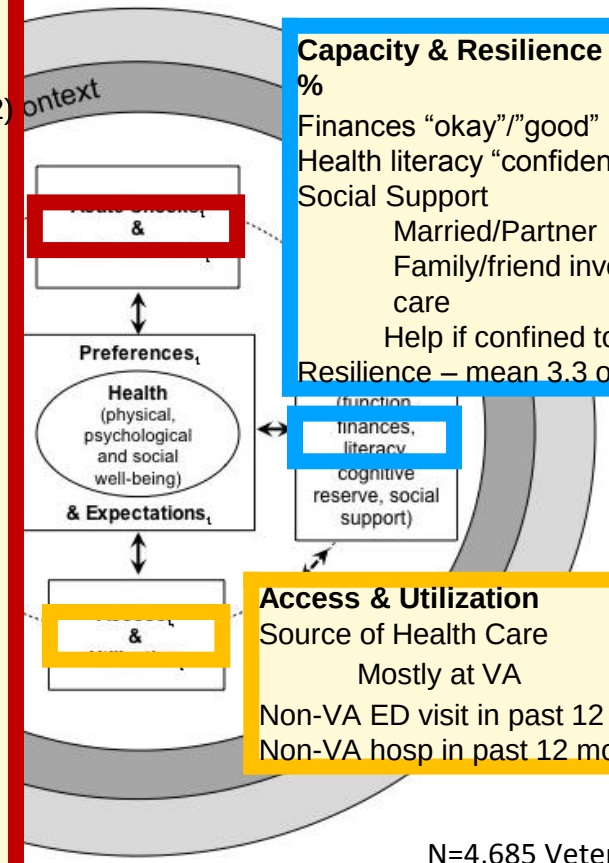
	Respondents (4,685)	Non-respondents (n=5,315)	Standardized Mean Diff
Age, Mean, (SD)	70.3 (11.5)	65.0 (15.0)	0.396
Male, %	94	90	0.13
Race/Ethnicity			0.25
White, %	74	63	
Black, %	16	25	
Hispanic/Latino, %	4	6	
Rural, %	37	30	0.147
JEN Frailty Index, Mean (SD)	4.3 (1.8)	4.4 (1.9)	0.034
Gagne score, Mean, (SD)	1.64 (1.93)	1.61 (1.96)	0.015
Chronic Conditions # out of 18, Mean (SD)	4.0 (1.9)	3.9 (2.0)	0.041
Hypertension	73	63	0.211
Diabetes	44	37	0.151
Heart Failure	14	12	0.071
Depression	26	35	0.202
PTSD	18	24	0.136

All differences statistically significant at $p<0.05$

SDH Factors in High-Risk Veterans

Life Stressors in Past Year

Mean (SD) of 13 items	3 (2)
	%
Illness/injury prevented usual activities	51
Family/friend with illness/injury	46
Finances worsened	24
Retirement	20
Moved location	13
Legal trouble for self or family	10
Death of spouse/significant other	7



Capacity & Resilience

	%
Finances "okay"/"good"	59
Health literacy "confident"	60
Social Support	
Married/Partner	58
Family/friend involved in care	74
Help if confined to bed	62
Resilience – mean 3.3 out of 5	

Access & Utilization

	%
Source of Health Care	
Mostly at VA	84
Non-VA ED visit in past 12 mo	44
Non-VA hosp in past 12 mo	25

N=4,685 Veterans at high-risk for hospitalization

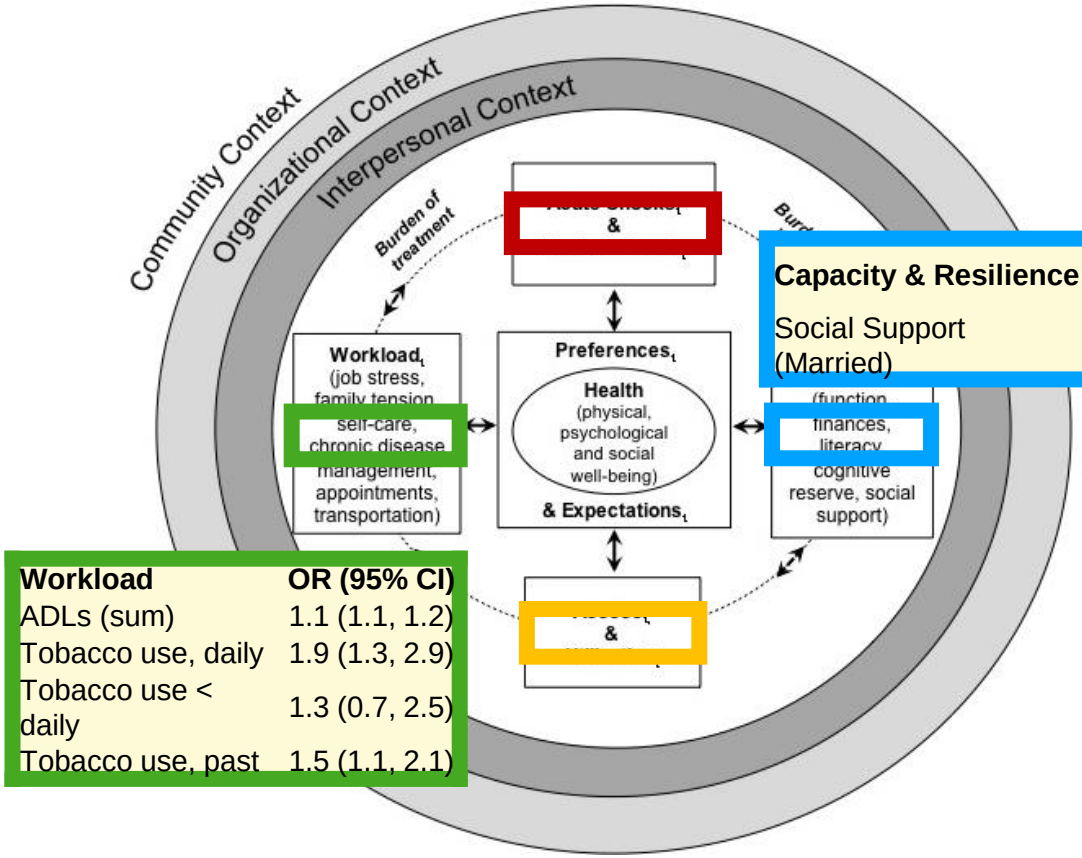
SDH Factors Improve Prediction of 90-day Admission

- At 90 days, 5.6% of respondents had VA admission
- Multiple imputation to account for missing data
- Logistic regression of 90-day hosp in 3 models

		AIC
EHR Covariates (Full Model)	Pre-specified EHR covariates only **Sociodemographics:** age, sex, race, ethnicity, rural status, VA copay **Clinical characteristics:** BMI, JEN frailty index, AUDIT-C, Gagne comorbidity score, specific chronic conditions	1968
EHR Covariates (Restricted Model)	EHR covariates chosen via forward selection (optimizes model, avoids overfitting)	1944
EHR + Survey Covariates	EHR + survey covariates chosen via forward selection (optimizes model, avoids overfitting)	1926

- AIC (Akaike Information Criterion) – estimator of the relative quality of statistical model, with penalty for overfitting.
- Lower AIC = adding survey covariates improves prediction of 90-day hosp

SDH Factors Associated with 90-day Admission



Capacity & Resilience	OR (95% CI)
Social Support (Married)	0.8 (0.6-1.0)

Workload	OR (95% CI)
ADLs (sum)	1.1 (1.1, 1.2)
Tobacco use, daily	1.9 (1.3, 2.9)
Tobacco use < daily	1.3 (0.7, 2.5)
Tobacco use, past	1.5 (1.1, 2.1)

Explanation for Modest Number of SDH Factors Influencing Hosp Risk?

- Low rate of 90-day hosps
- Missing non-VA hosps
- SDH drivers may have greater influence on longer term hosps and other clinical outcomes

Summary

- This nationally-representative survey of Veterans at high-risk for hospitalization illuminates common social and behavioral factors that may influence health care navigation and clinical outcomes.
- Integrating patient-reported SDH data improved prediction of 90-day VA hosp
  - Only functional status, tobacco use, and active marital/partner status were independently associated with 90-day hosp
  - Findings are currently limited to VA data and VA hosp
  - For predictions of 90-day hosp, existing EHR data may provide most of what we need, while limiting data-reporting burden to patients
- Additional factors may predict hospitalizations and other meaningful clinical outcomes over longer time periods (Next Steps…)

Screening for and Addressing Health-related Social Needs within VA

Lauren Russell, MPP
Presidential Management Fellow
VA New England Healthcare System (VISN 1)

Alicia Cohen, MD, MSc
Providence VA Medical Center
Assistant Professor, Department of Family Medicine, Brown University

Office of Health Equity
Social Risks for Adverse Health Outcomes Among Veterans Cyberseminar
July 10, 2019

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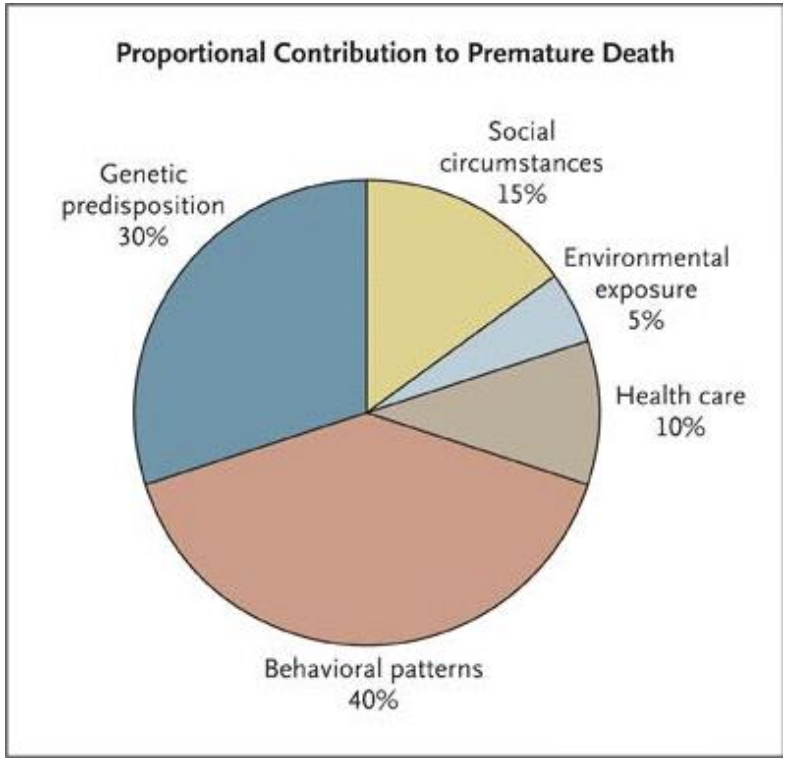
Overview

- Background
- VA Health-related Social Needs eScreener
- Resource Guides
- Bedford VA Pilot
- Next Steps

Background


Proportional Contribution to Premature Death
Social circumstances 15%
Environmental exposure 5%
Health care 10%
Behavioral patterns 40%
Genetic predisposition 30%

Background

- VA currently screens all non-institutionalized Veterans for homelessness and food insecurity
- No infrastructure to systematically screen for health-related social needs (HRSN) more broadly
- Aims of this project are to:
  - Screen for health-related social needs
  - Document this information in the VA EHR
  - Provide tailored resources guides to help address identified needs

VA Health-related Social Needs Screening Instrument

- VA-designed electronic screening platform
  - Veterans able to self-administer questions
  - Direct integration with VA EHR, data instantly available to care team
- HSRN screening instrument developed by interdisciplinary team of content experts
  - Boston Medical Center
  - Health Leads
  - VA Intimate Partner Violence Assistance Program
  - VA National Center for Post-traumatic Stress Disorder
  - VA Office of Care Management and Social Work

Electronic Screening Instrument

Domains
Food Insecurity
Housing Instability
Utility Needs
Transportation Needs
Exposure to Abuse and Violence
Legal Needs
Social Isolation
Employment Needs
Educational Needs

Sample Resource Guide

Social Risk Factors Resource Guide: TRANSPORTATION RESOURCES

If you have any questions about the information provided below or want additional assistance contacting the programs, please contact Timothy Driscoll, 781-687-2374, Health Care for Homeless Veterans Program at Bedford VA.

The Bedford Shuttle Services: Shuttle service to Boston VA facilities and Bedford CBOC locations. You must be scheduled to utilize so please call (781) 687-2505 with questions. Seating is limited to scheduled Veterans. For full listing of shuttle services and times and location of departure please follow this link:
https://vaww.visn1.portal.va.gov/intranet/bedford/shuttle-schedule

MBTA Cards, Social Work Service 781-687-2375
MBTA cards for Veteran's who are without funds and in need of transportation within the Mass Transit system.

The Ride is the T's Paratransit program, provides door-to door transportation to eligible people who cannot use general public transportation all or some of the time, because of a physical, cognitive or mental disability In order to use THE RIDE you must complete and submit an application. Per ADA regulations, 21 days is allowed to process applications upon receipt. Only completed signed original applications, mailed to the address below, will be considered for review. You will receive written notification of eligibility via U.S. mail.
http://www.mbta.com/uploadedfiles/Riding_the_T/Accessible_Services/ridecvrltrappl0410.pdf
MBTA Office for Transportation Access
10 Park Plaza - Room 5750
Boston, MA 02116

Pilot at Bedford VA
Mental Health Evaluation Center

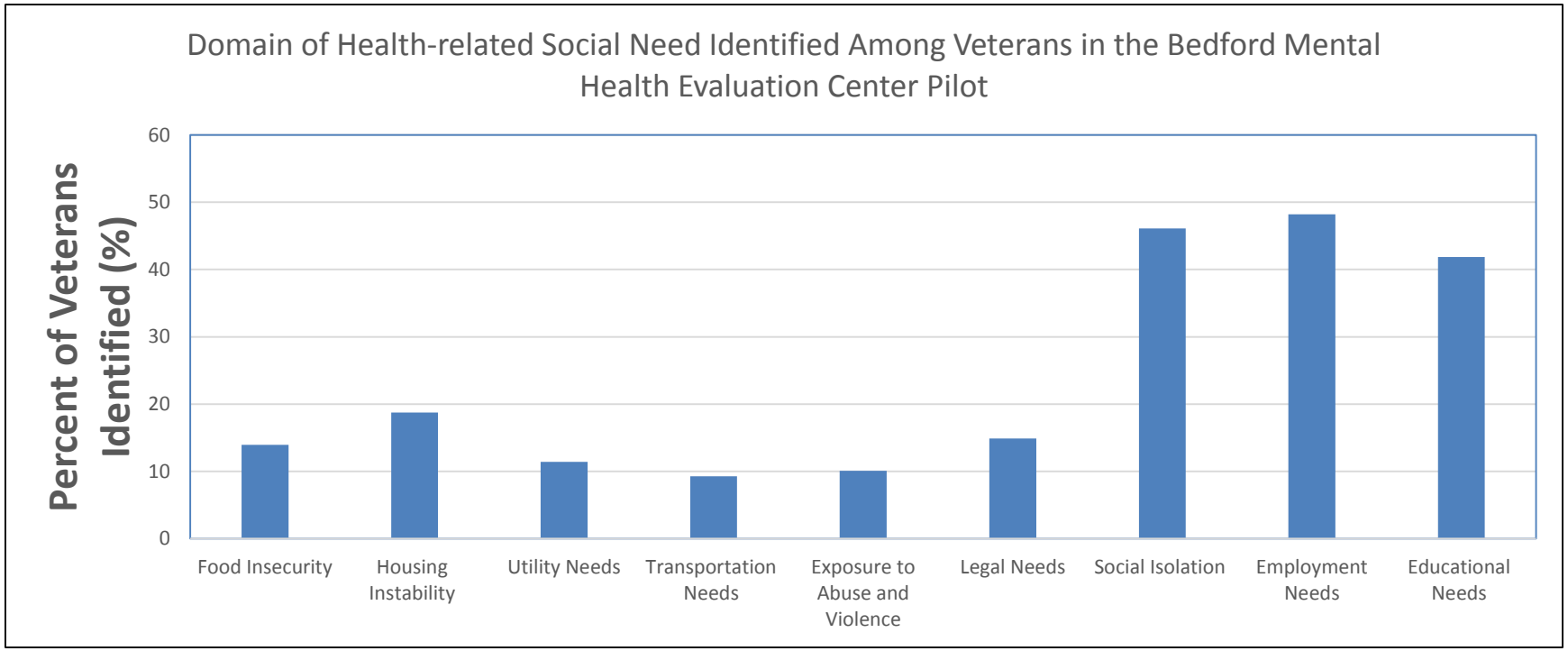
- October 2018 – Present
- Screener embedded in larger panel of intake questions
- Results synced to VA EHR and available for immediate review
- Relevant resource guides given to Veteran during visit

Prevalence of Health-related Social Needs (Total N = 141)

Domain	Positive Screen N (%)
Food Insecurity	18 (14.0)
Housing Insecurity	24 (18.8)
Utility Needs	16 (11.4)
Transportation Needs	13 (9.3)
Exposure to Abuse and Violence	14 (10.1)
Legal Needs	21 (14.9)
Social Isolation	65 (46.1)
Employment Needs	67 (48.2)
Educational Needs*	59 (41.8)

*Question quite broad, asks about a desire for information regarding educational benefits/resources for Veterans.

Prevalence of Health-related Social Needs (Total N = 141)



Lessons Learned

- Technology challenges with eScreening
- Tailoring clinical operations integration
- Development of site-specific resource guides

Currently Underway

- Multi-site evaluation of screening and referral process
  - Expansion to two additional sites in VA Boston Healthcare System
- Evaluation aims
  - Examine feasibility of integrating HRSN eScreening into clinical care
  - Determine prevalence and correlates associated with HRSN
  - Examine Veteran acceptability of eScreening, effectiveness of resource guides, and remaining barriers to addressing identified needs

Ongoing Work

- Expanding resource referral reach
  - Partnership with the National Resource Directory (NRD)
  - Explore partnership with PatriotLink
- Collaboration with HelpSteps

Questions?

Lauren Russell

Lauren.Russell3@va.gov

Alicia Cohen

Alicia.Cohen@va.gov