

CAN 3.0: Updating and improving VA's hospitalization & mortality risk-prediction score

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OBJECTIVES



CAN Primer
Overview of CAN
History



CAN 3.0
Development &
Updates



CAN 3.0
Access & Availability



CAN
Clinical Access &
Use Examples

ACKNOWLEDGEMENTS

• Stakeholders/Sponsors

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 - Scott Pawlikowski, MD
 - Ann-Marie Rosland, MD, MS
- Office of Analytics and Performance Integration
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• CAN 3.0 Dev Team – CART Program

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• Partners and Collaborators

- CAN Bias Investigators
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- Office of Women's Health
- Office of Health Equity
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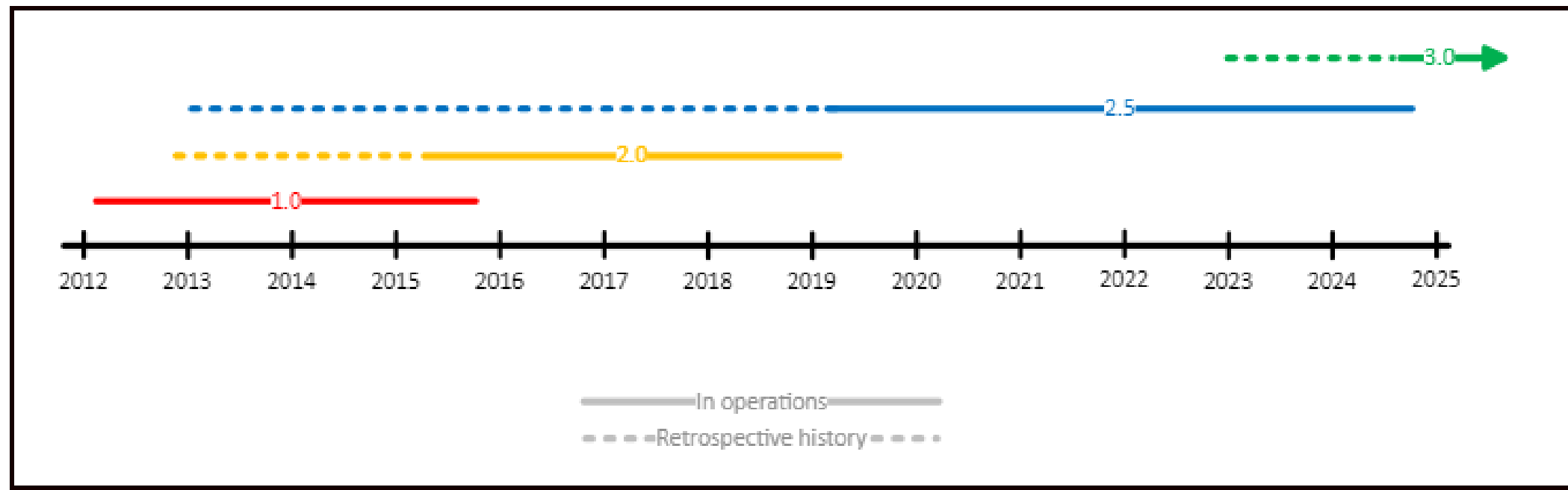
And many more...

CAN PRIMER

- What is the Care Assessment Needs (CAN) Score?
 - The CAN statistical model risk-stratifies Veterans based on their likelihood of near-term hospitalization or mortality
 - The *CAN Score* is a percentile ranking among the entire population for a given model
 - Available to clinicians in VA operations since 2012
 - Initial case use was to provide patient-aligned care team (PACT) clinicians with an objective measure of risk to sort their panels



VERSION HISTORY



MODEL CHARACTERISTICS BY VERSION

	CAN 3.0	CAN 2.5	CAN 2.0	CAN 1.0
Patient Population	<p>All living Veterans enrolled in VHA health care as of the risk date AND had at least one VHA health care encounter, in-house or VA-paid community care, in the prior two years.</p> <p>Veterans that are known to be currently hospitalized on the risk date will receive a CAN score for the 90-day mortality model only.</p>	<p>The criteria for the patient population are the same as CAN 1.0 and 2.0, plus:</p> <p>Veterans that are hospitalized in a VA facility on the risk date will receive CAN scores for the 90-day and 1-year mortality models only.</p>	<p>Patients that meet the following criteria are scored for all models:</p> <ol style="list-style-type: none"> 1. is assigned to a Primary Care PACT on the risk date. 2. is a Veteran. 3. is not hospitalized in a VA facility on the risk date. 4. is alive as of the risk date. 	
Update Frequency	Weekly; Friday = risk date			
Statistical Model	Binary Logistic Regression			Multinomial Logistic Regression
Events Modeled	<ol style="list-style-type: none"> 1. Hospitalization 2. Death 	<ol style="list-style-type: none"> 1. Hospitalization 2. Death 3. Combined Event of Hospitalization or Death 	<p>First occurrence of:</p> <ol style="list-style-type: none"> 1. Hospitalization 2. Death without Hospitalization 3. Combined event of Hospitalization or Death 	
Prediction Horizon	90 days	90 days and 1 year		
Number of Models	2	6	2	
Number of Predictors Per Model	19 (mort), 41 (hosp)	32-36		86-90

CAN 3.0 DEVELOPMENT

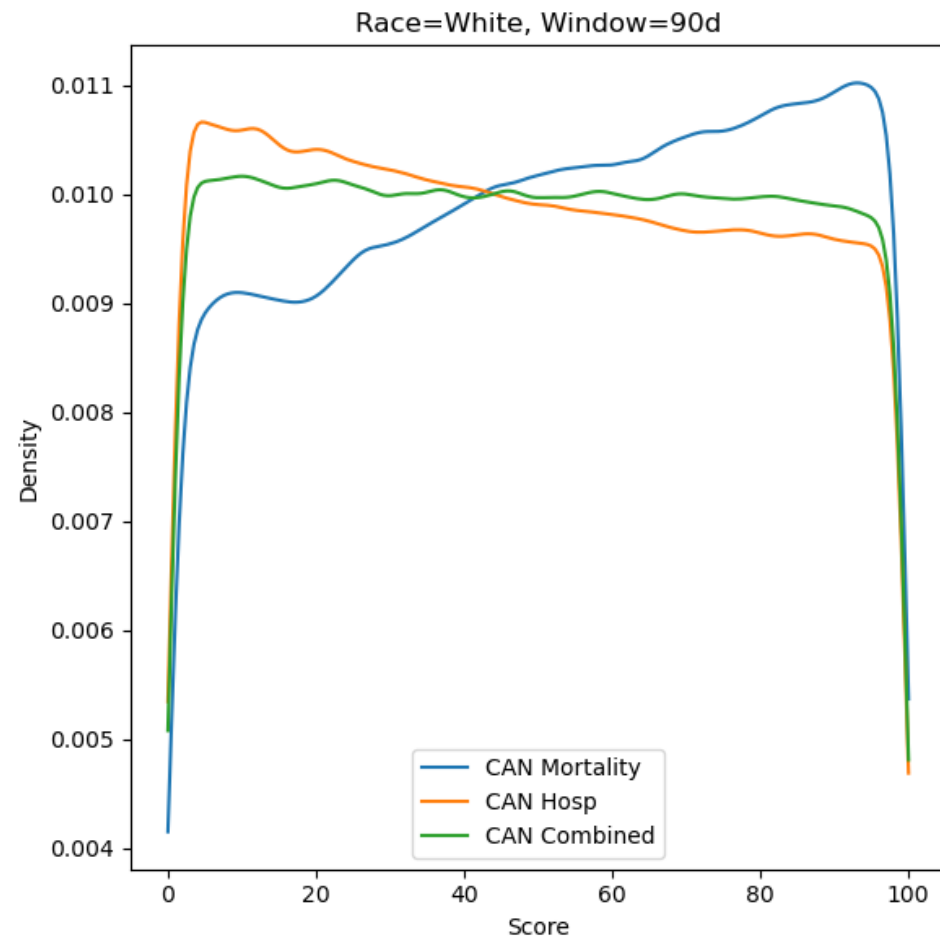
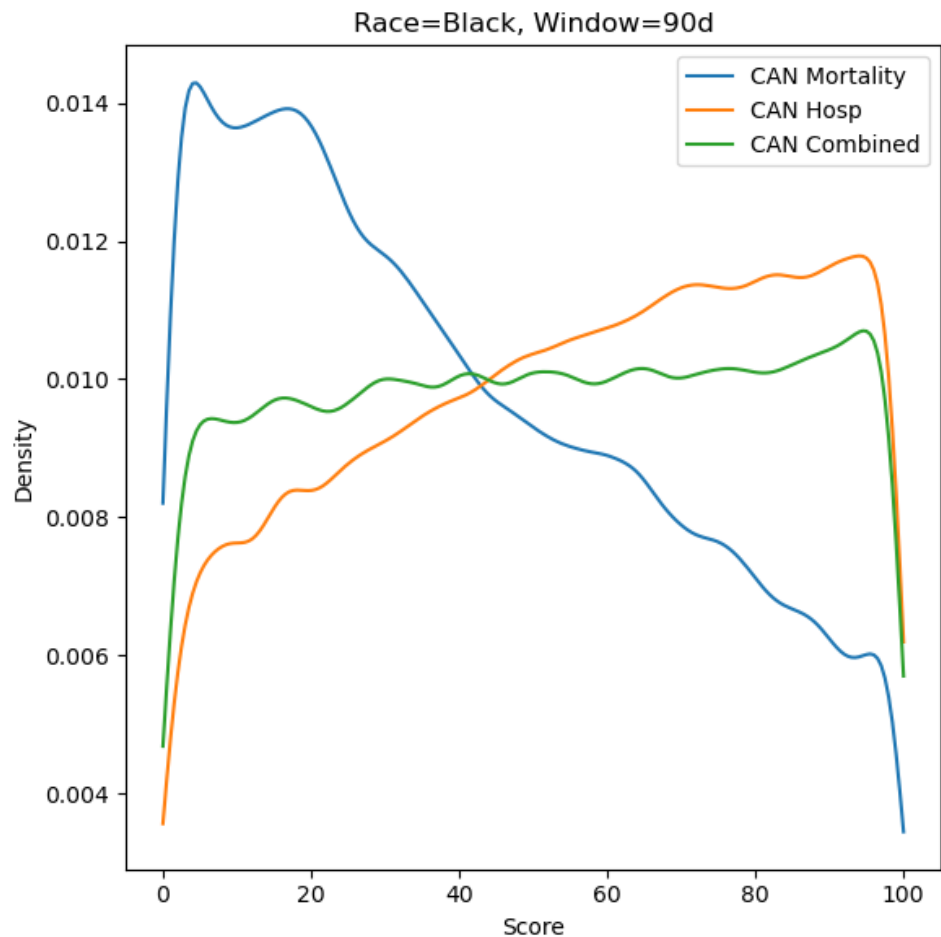
- Goals

- To ensure the CAN models are as accurate, fair, and equitable as possible to our Veterans
- Expand the CAN cohort to include any Veteran that is actively engaging in VA health care
- Make better use of the data sources now available to VA operations
 - Ensure the clinical concepts used as predictors variables are translatable across the available data sources

CAN 3.0 – MODEL AVAILABILITY

- Models produced going forward
 - **90-Day hospitalization**
 - **90-Day mortality**
 - ~~1-Year Hospitalization~~
 - ~~1-Year Mortality~~
 - ~~90-Day Hospitalization or Mortality~~
 - ~~1-Year Hospitalization or Mortality~~
- Reasons for simplifying product
 - Combined outcome models
 - Equity, fairness, and statistical considerations
 - Office of Primary Care identified the 90-day hospitalization model as the most actionable for primary care teams
 - Fewer models = more consistent use throughout the enterprise

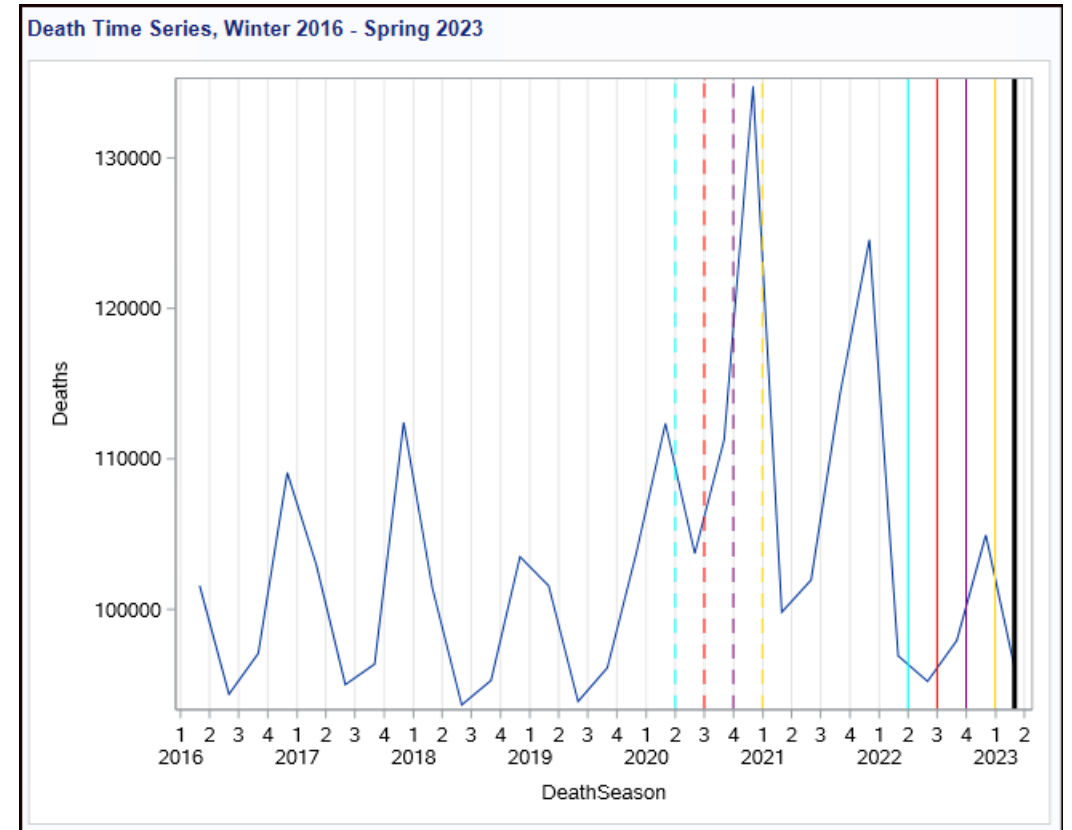
CAN SCORE DISTRIBUTION BY RACE, CAN 2.5



Courtesy of Saehwan Park, PhD

CAN 3.0 DEVELOPMENT – DATA & ALGORITHM

- Modeling cohort
 - 2022
 - Four index dates – Apr 1, July 1, Sept 30 and Dec 30
 - All Veterans enrolled in VHA health care services & had >1 encounter in prior two years
 - Repeated cross-sectional data
 - ~25% sample from each index date
 - Final cohort of 6m distinct Veterans
- Modeling algorithm
 - Logistic regression
 - Semi-competing risks between mortality and hospitalization outcomes
 - Inverse Probability Censored Weighting (IPCW) for hospitalization model
 - Account for those Veterans that died during the prediction period



CAN 3.0 DEVELOPMENT – TABLE 1

CAN 3.0 Modeling Cohort						
Subgroup	N	%	90-Day Mortality		90-Day Hospitalization	
			N	%	N	%
Enrolled Veterans with a VHA Encounter in past 24 months	6,000,000		52,318	0.9%	204,089	3.4%
Race						
White	4,136,745	68.9%	39,919	1.0%	141,569	3.4%
Black or African American	1,045,519	17.4%	6,216	0.6%	39,902	3.8%
Unknown	576,332	9.6%	4,852	0.8%	15,854	2.8%
Asian	80,520	1.3%	268	0.3%	1,435	1.8%
More than One Race	59,144	1.0%	313	0.5%	1,892	3.2%
Native Hawaiian or Other Pacific Islander	53,829	0.9%	370	0.7%	1,762	3.3%
American Indian or Alaska Native	47,911	0.8%	380	0.8%	1,675	3.5%
Sex at birth						
Male	5,385,838	89.8%	50,947	0.9%	187,862	3.5%
Female	614,162	10.2%	1,371	0.2%	16,227	2.6%
Rurality						
Urban	3,888,140	64.8%	32,927	0.8%	135,879	3.5%
Rural	1,759,488	29.3%	16,262	0.9%	58,157	3.3%
Highly Rural	216,703	3.6%	2,211	1.0%	7,166	3.3%
USTerritories/Unknown	135,669	2.3%	918	0.7%	2,887	2.1%

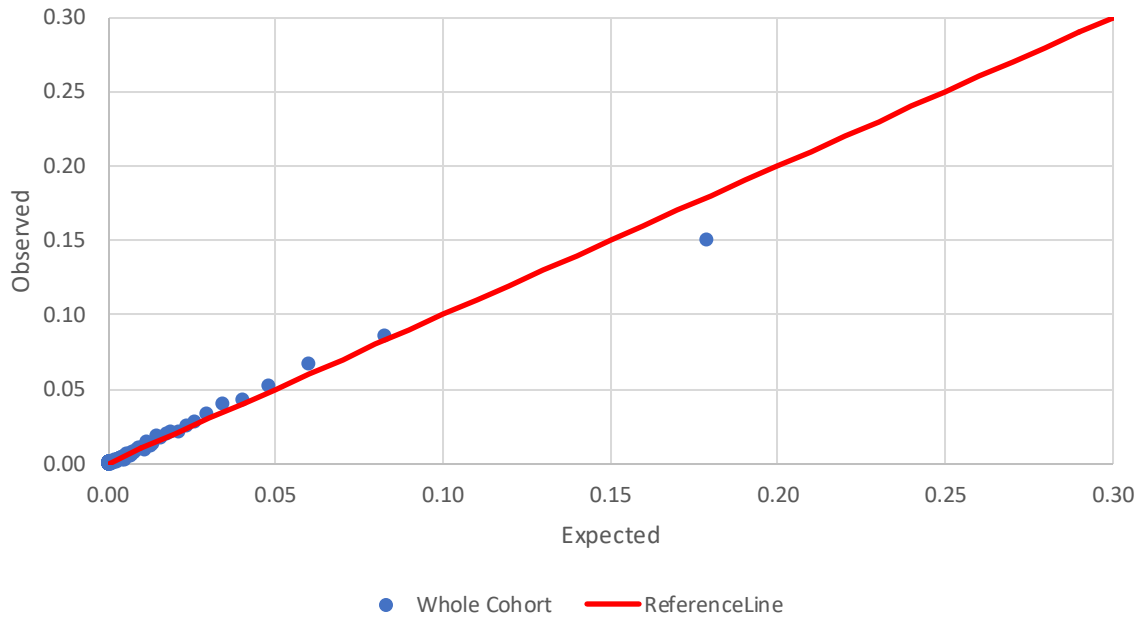
CAN 3.0 VS CAN 2.5 – PREDICTIVE POWER, 2022

Subgroup	90-Day Mortality				90-Day Hospitalization			
	CAN 3.0		CAN 2.5		CAN 3.0		CAN 2.5	
	Normalized PR-AUC	ROC-AUC	Normalized PR-AUC	ROC-AUC	Normalized PR-AUC	ROC-AUC	Normalized PR-AUC	ROC-AUC
All*	0.09	0.88	0.07	0.87	0.16	0.82	0.15	0.78
Race								
White	0.09	0.88	0.07	0.86	0.16	0.82	0.15	0.78
Black or African American	0.10	0.88	0.06	0.87	0.19	0.82	0.17	0.78
Unknown	0.09	0.88	0.08	0.88	0.16	0.83	0.14	0.76
Asian	0.15	0.94	0.07	0.92	0.14	0.82	0.12	0.77
More than One Race	0.10	0.89			0.16	0.81		
Native Hawaiian or Other Pacific Islander	0.06	0.91	0.09	0.89	0.19	0.82	0.13	0.76
American Indian or Alaska Native	0.08	0.89	0.06	0.87	0.17	0.80	0.15	0.77
Sex at birth								
Male	0.09	0.87	0.07	0.86	0.17	0.82	0.16	0.78
Female	0.09	0.92	0.06	0.91	0.15	0.81	0.11	0.73
Rurality								
Urban	0.09	0.89	0.07	0.87	0.18	0.82	0.16	0.78
Rural	0.08	0.87	0.07	0.86	0.14	0.81	0.13	0.77
Highly Rural	0.11	0.85	0.07	0.85	0.14	0.79	0.13	0.76
USTerritories/Unknown	0.10	0.92	0.08	0.91	0.12	0.81	0.11	0.74

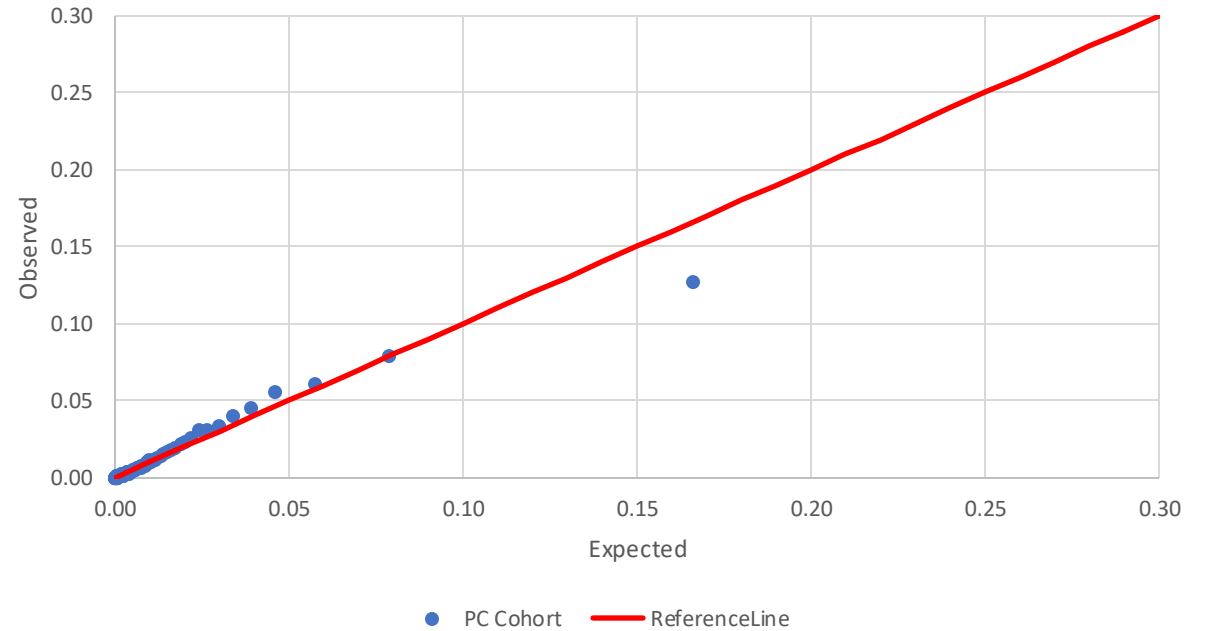
* CAN 2.5 cohort is Veterans on a Primary Care PACT. CAN 3.0 cohort is all Veterans enrolled in VHA health care with an encounter in the past two years.

CAN 3.0 VS CAN 2.5 – CALIBRATION, 2022

CAN 3.0 90-Day Mortality, 2022

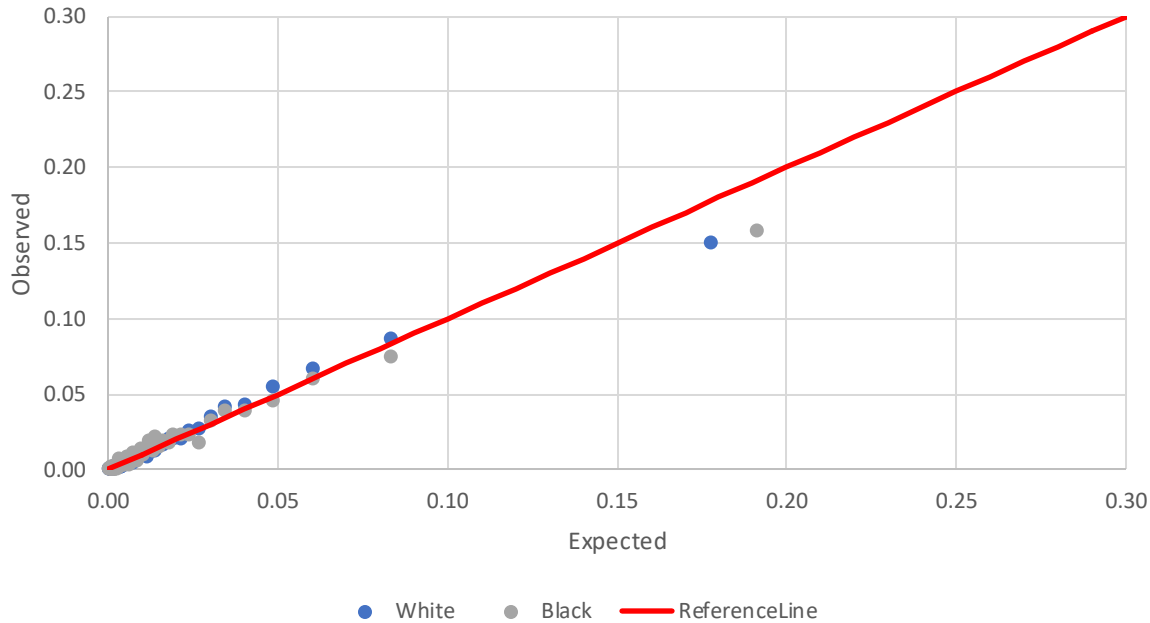


CAN 2.5 90-Day Mortality, December 2022

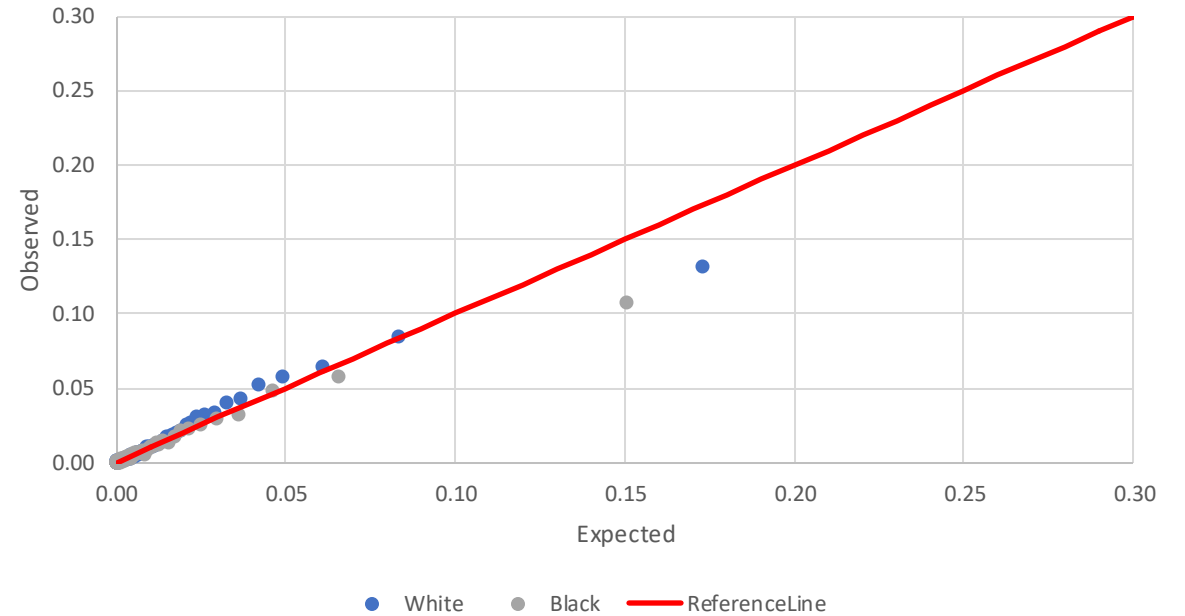


CAN 3.0 VS CAN 2.5 – CALIBRATION BY RACE, 2022

CAN 3.0 90-Day Mortality, 2022

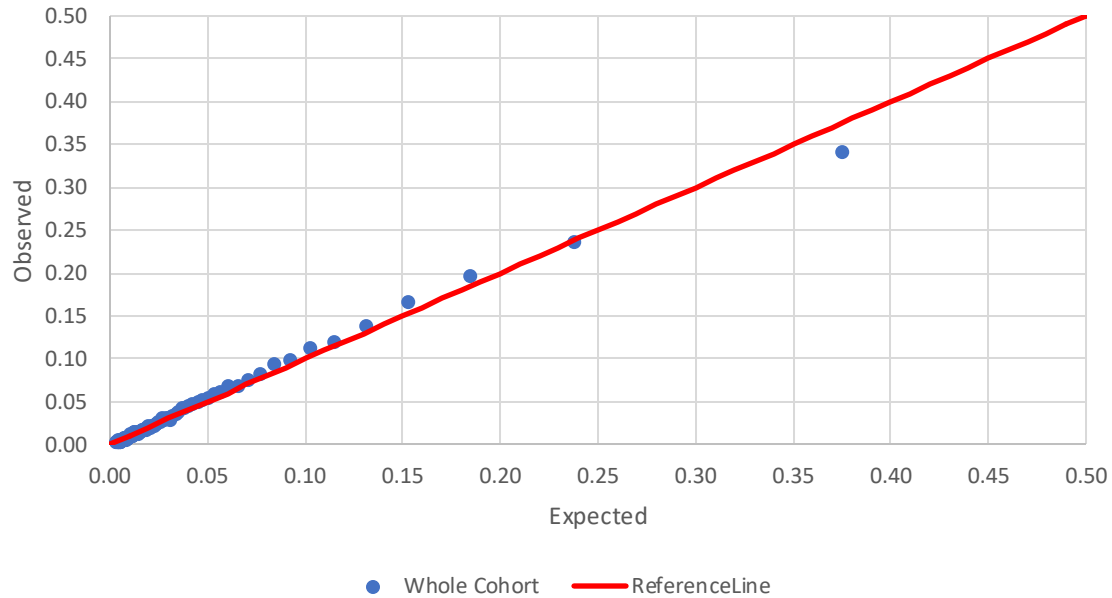


CAN 2.5 90-Day Mortality, December 2022

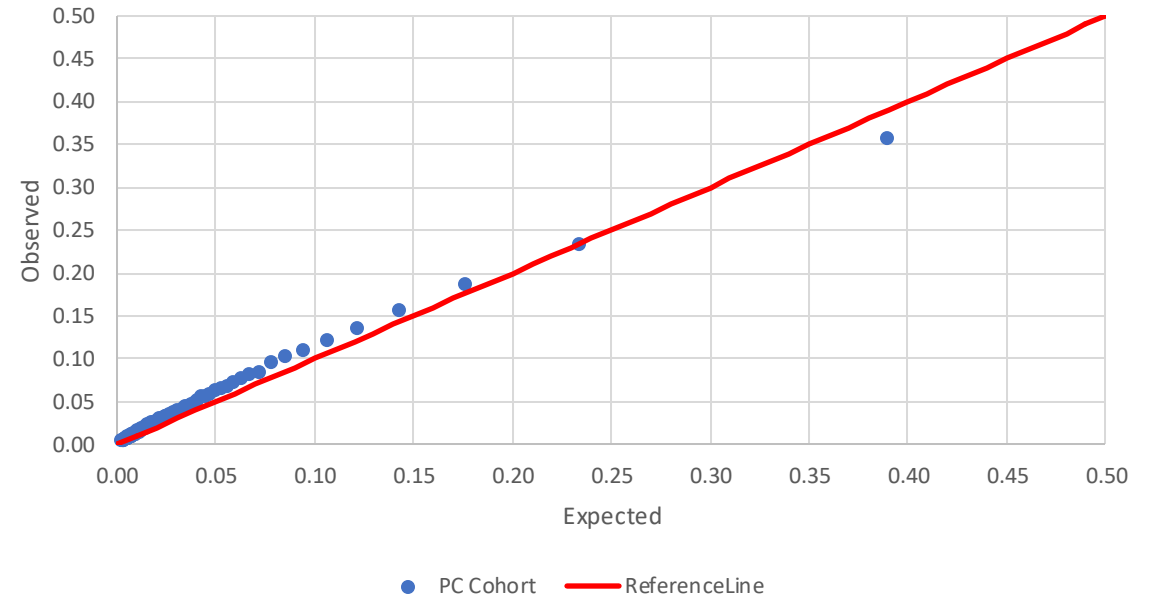


CAN 3.0 VS CAN 2.5 – CALIBRATION, 2022

CAN 3.0 90-Day Hospitalization, 2022

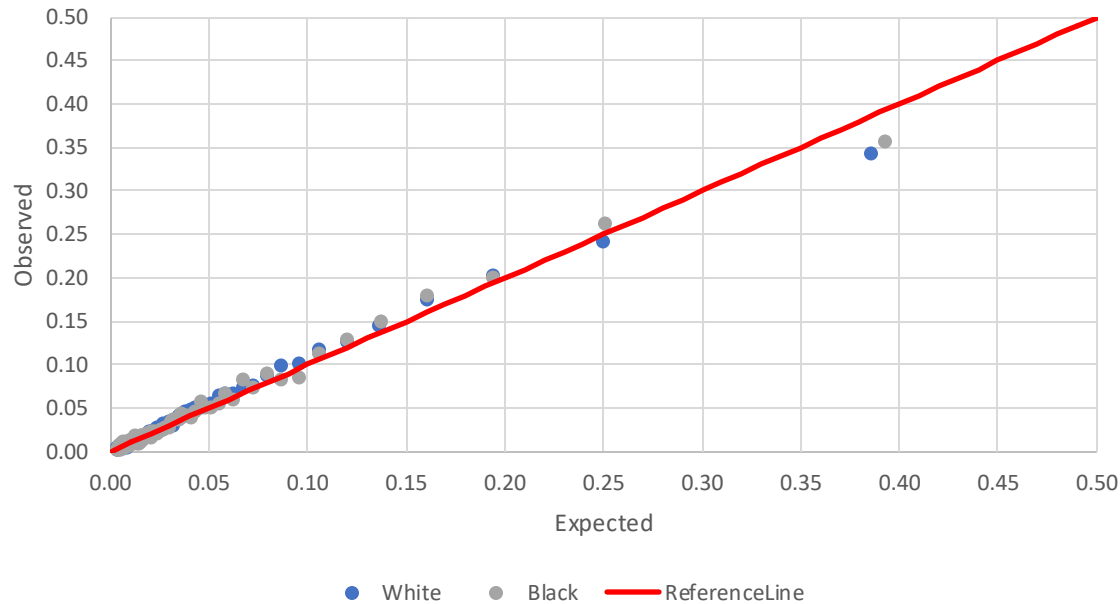


CAN 2.5 90-Day Hospitalization, December 2022

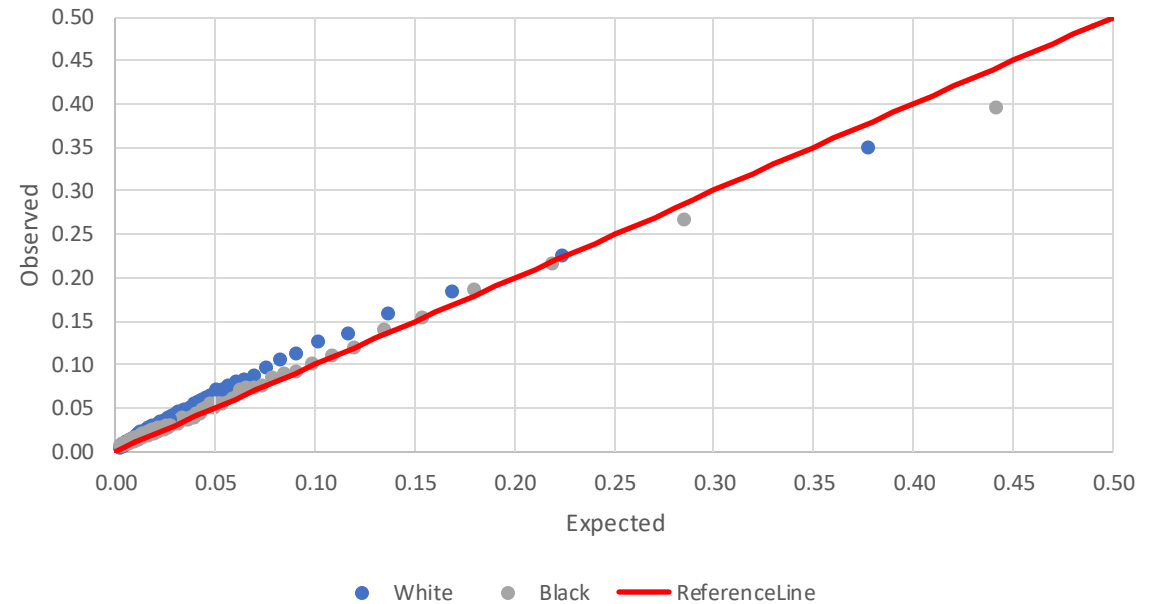


CAN 3.0 VS CAN 2.5 – CALIBRATION BY RACE, 2022

CAN 3.0 90-Day Hospitalization, 2022



CAN 2.5 90-day Hospitalization, December 2022



CAN SCORE – COMMON CUT POINTS

	15.0%	35.8%	64,000
	7.9%	22.8%	320,000
	5.4%	16.7%	640,000
	2.9%	9.9%	1,600,000
	1.7%	6.1%	3,200,000
	0.9%	3.4%	6,400,000

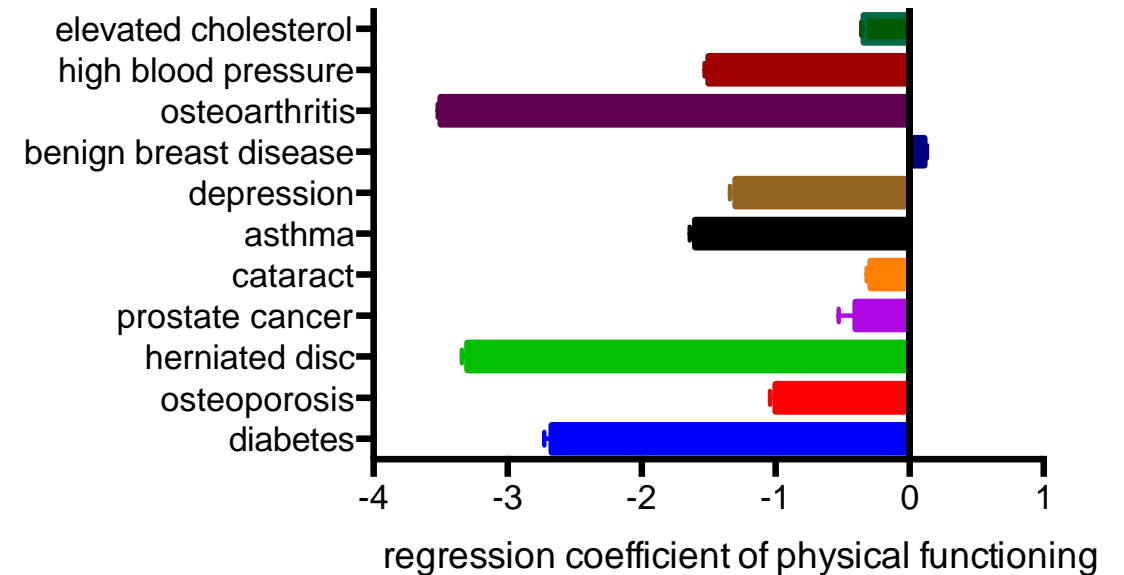
CAN 3.0 – MODEL COVARIATES

- Outcomes
 - All-cause mortality
 - All-cause hospitalization
- Demographics
 - Age
 - Marital status
 - Race
 - Sex at birth
 - Rurality
 - VHA priority group
- Health Care Utilization
 - Acute days of care
 - Visit days of care (in-house & IVC)
 - No show appointments
 - ER/UCC visit
 - Inpat medical/surgical stay
 - Inpat MH stay
 - Inpat NH stay
- Labs
 - Albumin
 - BUN
 - WBC
- Medical Conditions
 - Multimorbidity-Weighted Index (MWI)
 - HCCs
 - Acute renal failure
 - Artificial openings for feeding or elimination
 - Chronic pancreatitis
 - Chronic ulcer of skin, except pressure
 - Congestive heart failure
 - Drug/alcohol dependence
 - Drug/alcohol psychosis
 - Dialysis status
 - Lung and other severe cancers
 - Metastatic cancer
 - Specified heart arrhythmias
 - Pregnancy gestation status
- Social Determinants of Health
 - Housing instability
 - Financial instability
 - Nonspecific psychosocial
 - Season
- Patient history
 - Military sexual trauma
 - Tobacco usage
- Vitals
 - Body mass index
 - Mean arterial pressure
 - Pulse

[CAN Primer, Table 2](#)

MULTIMORBIDITY-WEIGHTED INDEX (MWI)

- 91 conditions weighted by physical functioning
- Developed, validated community-dwelling adults
- Interpretation: disease burden + physical functioning
- Easy to use: self-reported conditions, ICD-9 & 10
- Significantly predicts long-term physical, cognitive and social functioning, disability, health-related quality of life, readmissions, length of stay, mortality
- Widest distribution of multimorbidity



Wei *AJE* 2016; Wei *J Geron A* 2017; Wei *AJE* 2018; Wei *JAGS* 2020, Wei *JGIM* 2021

Courtesy of Melissa Wei, MD

CAN 3.0 – DATA SOURCES BY COVARIATE CATEGORY

Data sources by category

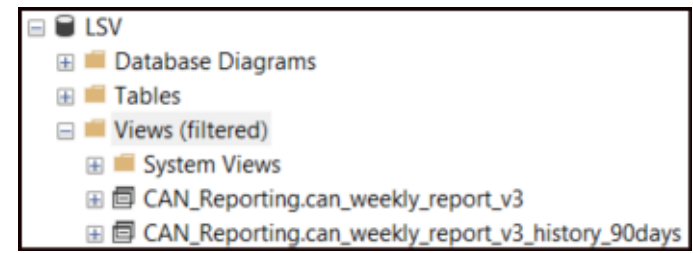
	VHA EHR & Administrative Records (CPRS & Oracle Health)	Integrated Veteran Care Claims	DoD Health Care & Administrative Records (DaVINCI)	Centers for Medicare & Medicaid Services	Health care not paid for by VA
Outcomes	✓	✓	✓	✗	✗
Demographics	✓	✗	✗	✗	✗
Health Care Utilization*	✓	✓	✓	✗	✗
Labs	✓	✗	✓	✗	✗
Medical Conditions	✓	✓	✓	✗	✗
Social Determinants of Health (SDoH)**	✓	✓	✓	✗	✗
Patient History (MST & Tobacco)	✓	✗	✗	✗	✗
Vital Signs	✓	✗	✓	✗	✗

*No show appointments only using VHA EHR

**Concepts that include clinic names as part of value set only utilize VA EHR

CAN 3.0 – DATA ACCESS FOR OPERATIONS

- *CAN_Reporting_Share* databases on A01, RB03, & SQL33
 - Views require national *CDW_FULL* data privileges
- LSV database on SQL33
 - For facility/MISN level reports that require embedded queries
- Summit Data Platform (SDP)
 - Coming soon

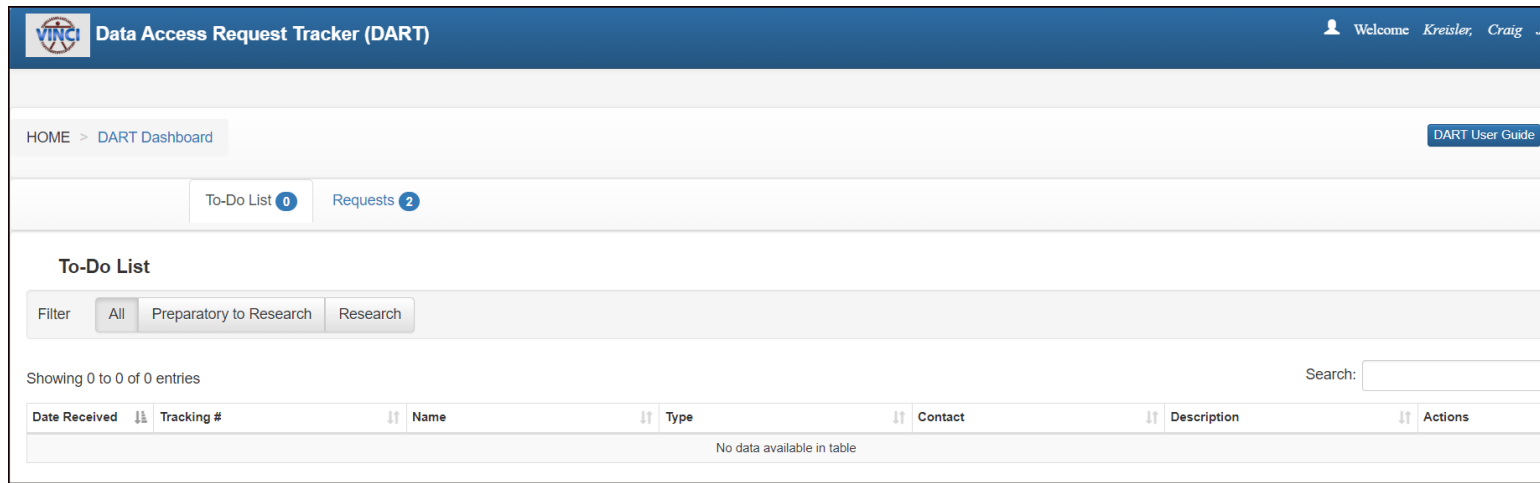


	MVIPersonSID	HospitalizedFlag	pMort_90d	cMort_90d	pHosp_90d	cHosp_90d	RiskDate	ExecuteDate
1	[REDACTED]	0	0.0580103732645512	97	0.0193545930087566	55	2024-09-13	2024-09-14
2	[REDACTED]	0	0.0011920970864594	35	0.0277986116707325	70	2024-09-13	2024-09-14

[CAN in the CDW: An Overview](#)

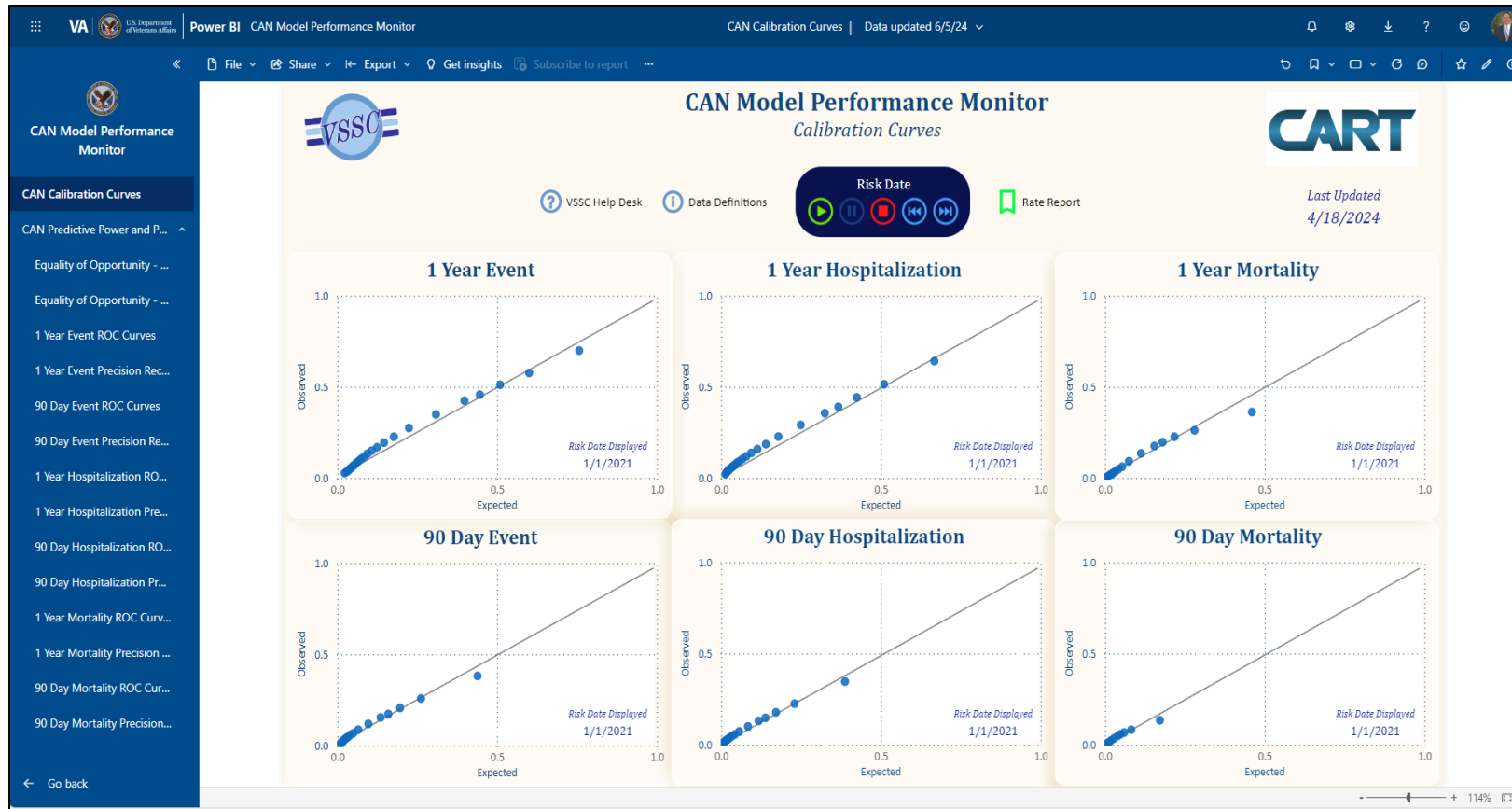
CAN 3.0 – DATA ACCESS FOR RESEARCH

- Request via the Data Access Request Tracker (DART) portal
- CAN objects will be provisioned in your study database
- For questions, contact VINCI@va.gov



[DART Research Request Process \(va.gov\)](#)

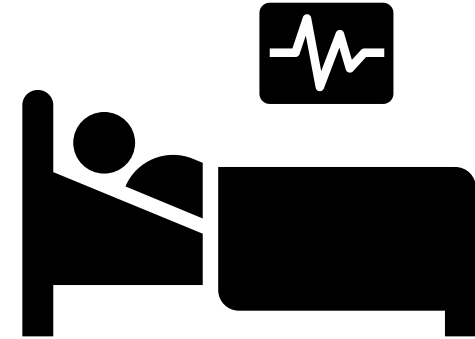
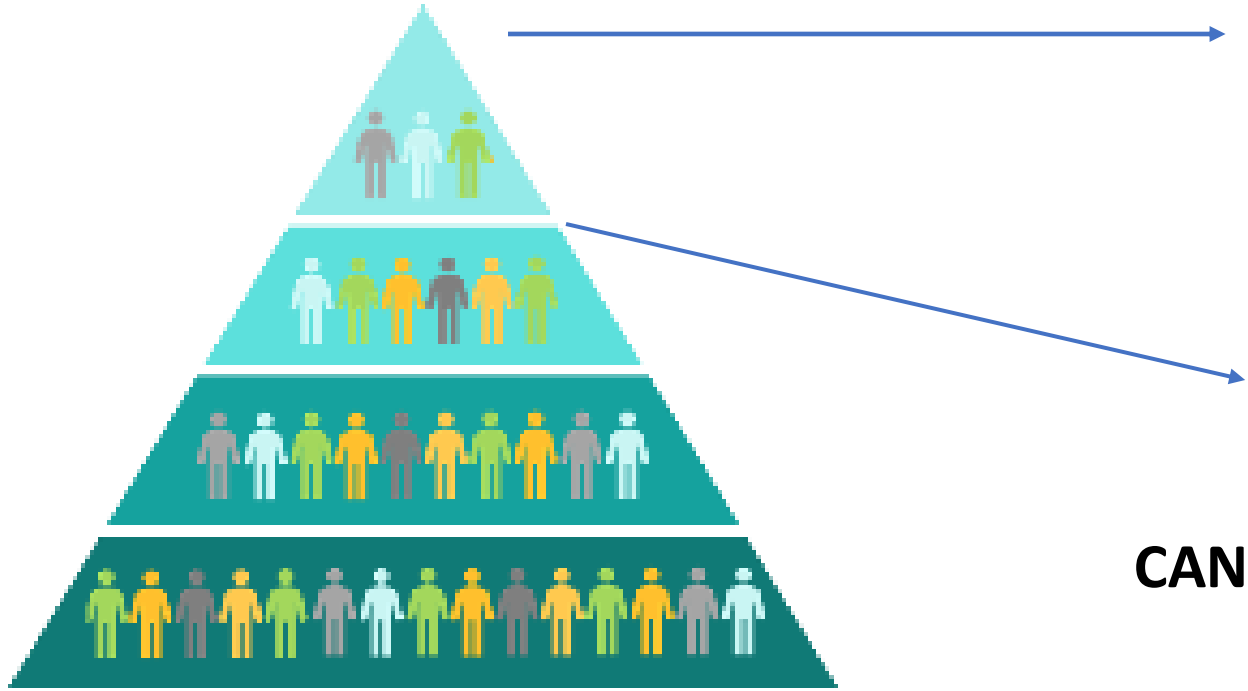
CAN 3.0 – MODEL PERFORMANCE MONITORING



[VSSC Search: CAN Model Performance \(va.gov\)](https://va.gov)

CAN SCORE CLINICAL USES

What is the clinical meaning of a high CAN score?



CAN data does not tell us why someone is at high-risk

HIGH CAN PATIENT CHARACTERISTICS

Table 1. Characteristics and Health Service Use of High-Risk and Low-Risk Veterans*

Variable	High-risk veterans (n = 351 012)	Low-risk veterans (n = 3 958 180)	Odds ratio (95% CI) or P value ^b
Characteristics, No. (%)			
Male	327 443 (93.3)	3 665 273 (92.6)	1.11 (1.10-1.13)
Not married	218 418 (62.8)	1 639 231 (42.0)	2.33 (2.32-2.35)
Service connection \geq 50% ^c	146 181 (72.7)	1 151 896 (55.2)	2.17 (2.14-2.19)
Housing instability	28 805 (8.2)	59 562 (1.5)	5.85 (5.77-5.94)
Age, y			
<45	20 452 (5.8)	631 976 (16.0)	1 [Reference]
45-65	151 613 (43.2)	1 343 279 (33.9)	3.49 (3.44-3.54)
66-75	116 027 (33.1)	1 178 532 (29.8)	3.04 (3.00-3.09)
>75	62 920 (17.9)	804 393 (20.3)	2.42 (2.38-2.46)
Medical comorbidities			
Hypertension	259 361 (73.9)	2 055 111 (52.5)	2.56 (2.54-2.58)
Diabetes	155 226 (44.2)	913 274 (23.1)	2.65 (2.63-2.66)
Asthma or COPD ^d	117 234 (33.4)	425 815 (11.1)	4.03 (4.00-4.06)
Congestive heart failure	82 037 (23.4)	117 827 (3.0)	9.94 (9.85-10.04)
Chronic kidney disease	14 229 (4.1)	22 615 (0.6)	7.35 (7.20-7.51)
Arthritis	178 655 (50.9)	1 300 670 (33.2)	2.08 (2.07-2.10)
Schizophrenia ^d	19 261 (5.5)	43 039 (1.1)	5.14 (5.05-5.22)
Depression ^d	145 738 (41.5)	729 080 (18.6)	3.10 (3.08-3.13)
Alcohol abuse ^d	69 774 (19.9)	202 734 (5.2)	4.54 (4.50-4.59)
Dementia	35 794 (10.2)	101 343 (2.6)	4.32 (4.27-4.38)
Health service use during the past year, mean (SD)			
Any face-to-face primary care encounters ^d	6.3 (6.6)	2.5 (2.9)	<.001
Any primary care telephone encounters ^d	4.0 (4.9)	1.0 (2.1)	<.001
Any primary care secure messages	2.7 (12.7)	1.2 (6.5)	<.001
Hospitalizations ^d	0.8 (1.1)	0.02 (0.2)	<.001
Emergency department visits ^d	2.1 (2.6)	0.2 (0.7)	<.001




Data from
2016-2018

CAN SCORE CLINICAL ACCESS



VSSC Primary Care Almanac Main Menu
Data updated through: 9/12/2024

[Obtain Real SSN from NSSD](#)
[Data Definitions](#)

 <p>CAN Score</p> <ul style="list-style-type: none"> CAN Score - Team Panel CAN Score - Provider Panel CAN Score - Excel Friendly Multi-select CAN Score - Individual Patient 	<p>Medication Reports</p>  <ul style="list-style-type: none"> Medication Renewal Alert Report OTRR - Choose Providers, Prescribers & OTRR - Pharmacists, Analysts, & Pain Prgrm OTRR - Patient Lookup by SSN <p>Colorectal Cancer Screening & Surveillance (CRCS/S)</p>  <ul style="list-style-type: none"> CRCS/S Reports Launch Page To Learn more... CRCS/S Clinical Reminders Information CRC: +FOBT to Follow-up Colonoscopy
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CAN SCORE TEAM PANEL (PC ONLY)

VISN: 4
 Facility: (V04) (646) Pittsburgh, PA HCS
 Division: (V04) (646) Pittsburgh, PA
 Team: (646) UNV-CHAMPION *WH*
 Event Potential: 90 Day Potential Event

[View Report](#)

Navigation: 1 of 2? | 100% | Find | Next



CARE ASSESSMENT NEED SCORE
 For (646) UNV-CHAMPION *WH*
 CAN Score As Of: 9/6/2024
 Patient Data As Of: 9/12/2024

- [Data Definitions](#)
- [VSSC Help Desk](#)
- [Return to Almanac Menu](#)

CAN Score	Team Name	Patient Name	SSN	Age	Probability of Event	Consider Home Telehealth NIC	Dx Count	CARE MANAGEMENT RESOURCES IN USE					UTILIZATION				
								Home TeleHealth	Palliative Care	Last Pal Care Visit	HBPC	Last HBPC Visit	2yr ER/UC Visit Count	2yr Disch Count	Last Disch Date	2yr PC Visit Count	Last PC Visit Location



CAN SCORE CLINICAL ACCESS

PATIENT CARE ASSESSMENT SYSTEM
PCAS
Ver. 6.0

User: VHA041WHAPTHRoslaA

Manage Patients | Tasks and Reminders | Consults | About | News | PCAS Power BI

Manage Patients

Show Page Overview... [dropdown]

You have PCMM Access and NSSD Access(NAT), which Access would you like to use? -- Choose One -- [dropdown]

<https://secure.vssc.med.va.gov/PCAS/>

Through CPRS Tools - > Primary Care Almanac

PCAS TOOL

Filter Panel By Patient(s) or Appointment:

Name: <input type="text"/> Go [?]	Race: -- Choose Race -- [?]	Team: -- Team Name --
SSN: <input type="text"/> Go [?]	Ethnicity: -- Choose Ethnicity -- [?]	Next Appointment: Start: <input type="text"/> End: <input type="text"/> Go [?]
Gender: -- Choose Gender -- [?]	Deprivation: -- Choose Deprivation -- [?]	Last Appointment: Start: <input type="text"/> End: <input type="text"/> Go [?]

Or Filter Panel Based on Risk Characteristics:

Focused Care Management:	High Risk:	Utilization:
Case Management Activity [?]	ACSC Risk Score (3 months) [?]	Bed Days [?]
GOCC (Goals of Care Conversation) [?]	CAN [?]	Discharge Follow-up List [?]
HBPC Use [?]	CAN by Comorbidity Group [?] OR Select	Emergency Departments/Urgent Care Centers - community (recent) [?]
Homeless Services Use [?]	COVID-19 Positive [?]	Emergency Departments/Urgent Care Centers - VHA (recent) [?]
Hospice Use [?]	COVID-19 Vaccination Status [?] Or Select Status Or Select Booster Or Select Bivalent	Frequent Encounters List (30 days) [?]
Medication Renewal [?]	Diabetes Diagnosis [?] Or Select Glycemic Control eQM	MCA [?]
Opoid Use [?]	Fall Risk [?]	
PACT Social Work Acuity [?] Or Select Or Select	HF Admission (recent) [?]	
Palliative Care Use [?]	Hypertension Diagnosis [?] Or Select Blood Pressure eQM	
STORM [?] OR Select	Provider Assigned Clinical Priority [?] OR Select	
Telehealth Enrolled [?]	Provider Assigned High Risk Flag [?]	
Well Being Signs [?] OR Select	Suicide Risk (CMTRA) [?]	
Whole Health Tracking [?] OR Select	Suicide Risk (SPRITE) [?]	

Clear Filter

[Patient Report](#)

1st 4 SSN	Patient Name	ACSC	CAN	SWA	Covid19 Status	Covid 19 Vaccination Status	PCP Clinical Priority	PCP High Risk Flag	VA Next Appointment (days since last appt.)	Whole Health System Tracking	Med Renewal	Tasks	GOCC [?]	Comorbidity Group	Team	Active or Pending Consults	BDOC	MCA Cost
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PCAS – POWER BI PLATFORM



VA Clinical Assessment, Reporting and Tracking Program Patient Details

[Data Definition](#) ⓘ [Email CART](#) ✉

Selected Cohort

PCMM Population
6.0M

Selected Team Size
370

Filtered Panel Size
370

Venue

VISN
 4

Sta3n
 646

Team
 Multiple selections

Risk Characteristics

BP < 140/90
 All

DM: HbA1c poor control
 All

VA ED Visits (6 mo)
 All

PC Appt In Next 30 Days
 All

CAN Score
 90 100


Score	CKD Nephrology Cohort	Palliative Hospice Encounter	Case Management	GOCC ETHICS	Homeless Indicator	Hospice 12 Months	Opioid Rx	Opioid Rx	Home Teleh
97	No CKD	No	Yes	Yes	No	No	No	0	Not Enrollec
98	Yes	No	Yes	Yes	No	No	No	0	Active Enroll
99	No CKD	No	Yes	Yes	No	No	No	0	Not Enrollec
90	No CKD	No	No	Yes	No	No	No	0	Not Enrollec
99	No CKD	No	Yes	Yes	Yes	No	Yes	1	Not Enrollec
99	No CKD	No	Yes	Yes	No	No	No	0	Not Enrollec





CAN SCORE CLINICAL ACCESS

Brillians Tool - Accessed from CPRS in some VISNs

Can start a floating window that shows the current patient's CAN score

 VistA CPRS in use by: Mavi, Jasbir S (vista.orlando.med.va.gov)

File Edit View Tools Help

 **CAN Score: 99** **Details...**  27 **PATIENT)**
04,1928 (94)

CAN SCORE CLINICAL USE EXAMPLES

- **Prioritize patients recently discharged for intensive post-discharge follow-up**
- **Prioritize patients for comprehensive medical and social needs screening**
- **Site-wide RN care manager focused on high-CAN patient care planning and coordination**

PACT Roadmap for Managing High-Risk Veterans

What is a High-Risk Roadmap?

The High-risk Roadmap offers a process to help PACTs provide better ambulatory “intensive care” to high-risk Veterans using a full complement of team resources and facility programs.

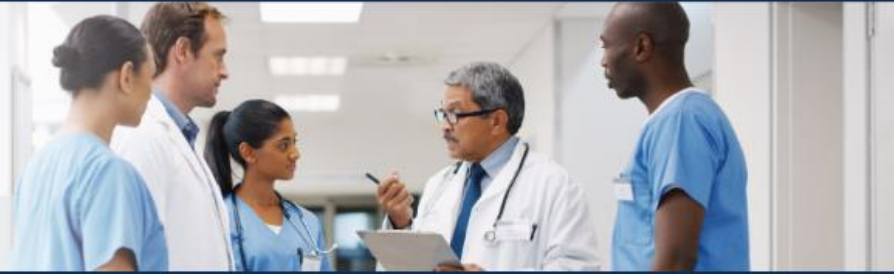
Roadmap for Managing High-Risk Veterans



[Primary Care Roadmaps
\(sharepoint.com\)](https://sharepoint.com)

RIVET HIGH-RISK VETERANS INITIATIVE

The Office of Primary Care aims to provide PACT teams with the RIVET toolkit to improve the management and health outcomes of their high-risk patients. This national SharePoint site compiles a dynamic set of promising tools for high-risk populations.



Search the categories below to find the tool that fits your needs.

How to Care for High-Risk Veterans

-  Identify High-Risk Veterans
-  Assess High-Risk Veterans
-  Foster Trusting Patient-Provider Relationships
-  Engage High-Risk Veterans and Families in Self-Management
-  Improve Care Coordination and Transitions in Care
-  Create and Implement an Individualized Plan of Care

Tools for Providers and Patients by Patient Needs

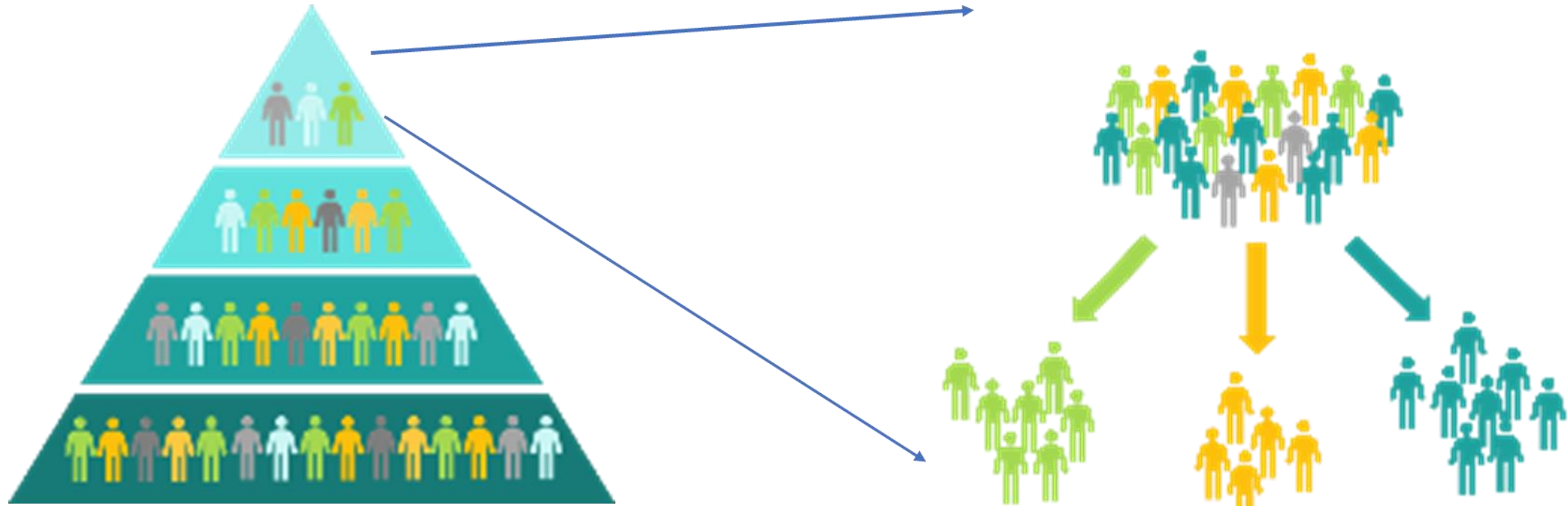
-  Ambulatory Care Sensitive Conditions (ACSC)
-  Chronic Pain
-  Mental Health & Substance Use Disorders
-  Social Needs
-  Cognitive Impairment

PACT Strategies and Resources


-  Innovative PACT Processes
-  Trainings for PACT Staff
-  Ways to Increase Access to Care
-  Additional Wraparound VA & Community Resources

[RIVET High-Risk Veteran Initiative - Home \(sharepoint.com\)](#)

CAN SCORE USE - FUTURE DIRECTIONS



VA CAN-Score
Risk for Hospitalization



CART VA CLINICAL ASSESSMENT REPORTING & TRACKING PROGRAM

VA Clinical Assessment, Reporting and Tracking Program
VETeran PAnel management Tool for High-Risk Subgroups (VET-PATHS)

[Data Definition](#) [Email CART](#)

Selected Cohort

PCMM Population
6.0M

Selected Team Size
592

Filtered Panel Size
370

Venue

VISN
4

Sta3n
646

Team
Multiple selections

Risk Characteristics

BP < 140/90
All

DM: HbA1c poor control
All

VA ED Visits (6 mo)
All

PC Appt In Next 30 Days
All

CAN Score
90 100

Care Steps

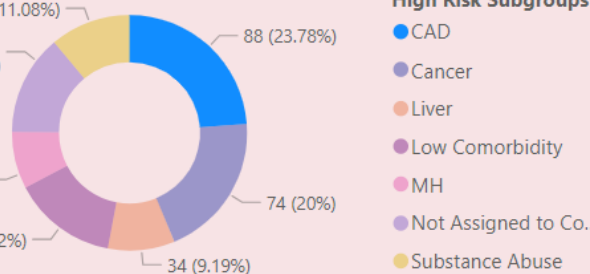
Patient Details

CAD Care Steps Details

MH Care Steps Details

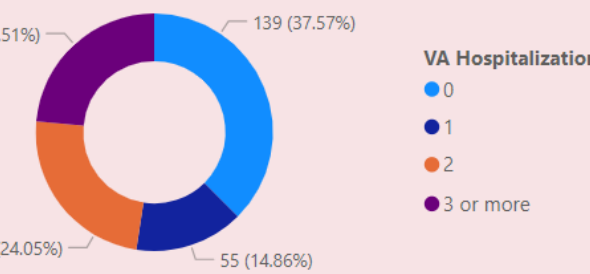
SUD Care Steps Details

High Risk Subgroups



Subgroup	Count	Percentage
CAD	88	23.78%
Cancer	74	20%
Liver	34	9.19%
Low Comorbidity	53	14.32%
MH	29	7.84%
Not Assigned to Co...	41	11.08%
Substance Abuse	51	13.78%

VA Hospitalizations in Past 12 Months



Hospitalization Count	Count	Percentage
0	139	37.57%
1	55	14.86%
2	89	24.05%
3 or more	87	23.51%

U.S. Department of Veterans Affairs

CAN 3.0 | September 18, 2024

SUMMARY

- CAN 3.0 released in August 2024
 - CAN 2.5 ceases production in FY25Q1
- CAN 3.0 Changes
 - Two models produced: 90-Day Mortality and 90-Day Hospitalization
 - Cohort includes all Veterans enrolled in VHA health care and have an encounter in past two years
 - Integrating more Veteran data sources – VA EHR, IVC, and DoD
- For questions and more information, visit the [CAN SharePoint](#)



THANK
YOU!

QUESTIONS?