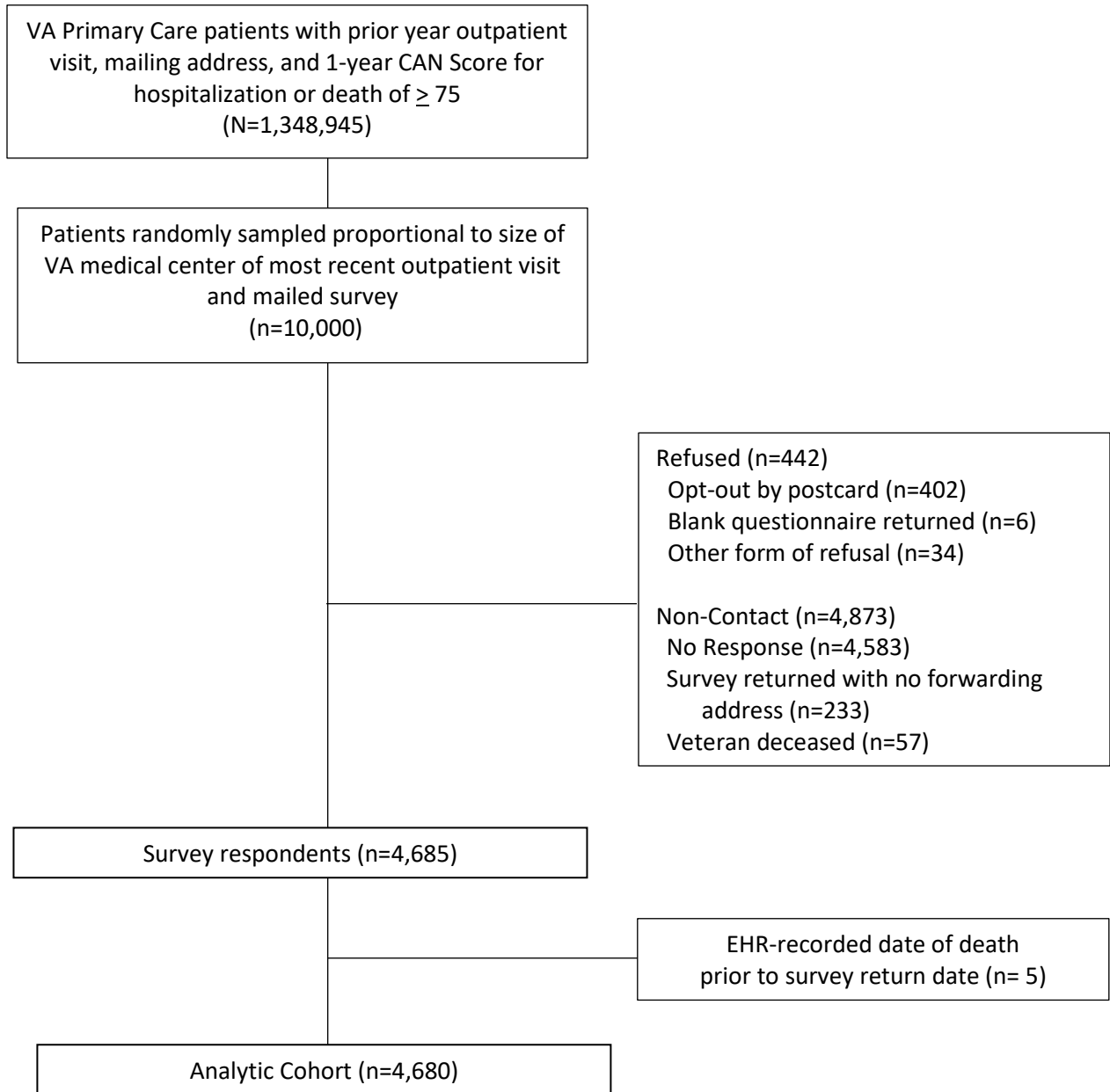


**eFigure 1.** Analytic cohort flow diagram.



**eTable 1.** Survey measures of patient-reported social risks and adjustment variables.

<b>Domain</b>	<b>Measure</b>	<b>Specification</b>
<b>Social resources</b>		
Social support	Medical Outcomes Study Social Support Survey 8 items <sup>1</sup>	Dichotomous: lower social support ( $\leq 32$ ) vs. higher social support ( $> 32$ ) based on median split
Help with health care	Do you have a family member or friend who gets involved with your health care?	Dichotomous: yes vs no
<b>Material resources</b>		
Employment	Which of the following best describes your current work status? Employed full time, 30+ hours/week (includes self-employment); Employed part time, less than 30 hours/week (includes self-employment; unemployed, looking for work, or laid off; unemployed, not searching for work; retired; disabled; student	Dichotomous: Unemployed, looking for work, or laid off vs not
Transportation problem	Within the past 12 months, have you missed an appointment or been unable to obtain needed health care because of problems with your transportation to the VA?	Dichotomous: yes vs no
Food insecurity	Material insecurities measure, 3 items <sup>2</sup>	Dichotomous: Yes ( $\geq 2$ ) vs. no (0-1)
Medication insecurity	Material insecurities measure, 4 items <sup>2</sup>	Dichotomous: Yes ( $\geq 1$ ) vs no (0)
Financial strain	Which one of the following statements best describes your own personal economic situation? 1) I am in good shape. I am able to save and plan for the future; 2) I am okay. I am saving a little and I am able to provide for my needs; 3) I am barely getting by. I have to budget carefully and I am not able to plan for the future; 4) I am falling behind. I have to use savings or go further into debt to pay my bills; 5) I am in serious financial trouble, and can't quite see how I am going to make it.	Dichotomous: good shape or okay vs not
<b>Personal resources</b>		
Medical literacy	Health literacy measure <sup>3</sup>	Dichotomous: not at all confident filling out medical forms vs a little confident or more
Education	What is the highest level of education that you have completed?	Dichotomous: less than high school vs high school or more
<b>Precision variables</b>		
Functional limitation	OARS Activities of Daily Living (ADLs) and Instrumental ADLs <sup>4</sup>	At least one functional limitation (score $\geq 2$ on any question) vs 0 functional limitations
Typical location of care	Where do you normally receive your medical care? Mostly at the VA; mostly outside the VA; about half in VA, half outside VA; nowhere	Dichotomous: mostly at the VA vs not

**eTable 2.** Characteristics of respondents vs non-respondents and results of logistic regression model predicting non-response.

EHR-Derived Characteristic	Non-respondent (n=5,221)	Respondent (n=4,680)	p-value <sup>a</sup>	Logistic Model of Response Odds Ratio (95% CI)
<b>Age</b>			< 0.001	
18-44	549 (10.5%)	121 (2.6%)		Ref
45 - 64	1802 (34.5%)	1081 (23.1%)		2.13 (1.70, 2.68)
65 - 80	2117 (40.5%)	2604 (55.6%)		3.48 (2.75, 4.39)
80+	753 (14.4%)	874 (18.7%)		3.32 (2.56, 4.31)
<b>Gender</b>			< 0.001	
Female	519 (9.9%)	294 (6.3%)		Ref
Male	4702 (90.1%)	4386 (93.7%)		0.97 (0.82, 1.15)
<b>Race/Ethnicity</b>			< 0.001	
White, Non-Hispanic	3190 (61.1%)	3361 (71.8%)		Ref
Black, Non-Hispanic	1285 (24.6%)	741 (15.8%)		0.69 (0.61, 0.77)
Hispanic	288 (5.5%)	203 (4.3%)		0.88 (0.73, 1.08)
Other	147 (2.8%)	103 (2.2%)		0.81 (0.62, 1.06)
Missing	311 (6.0%)	272 (5.8%)		0.85 (0.71, 1.02)
<b>VA Enrollment Priority</b>			0.015	
Priority 7-8	536 (10.3%)	529 (11.3%)		Ref
Priority 5 (low income)	1366 (26.2%)	1227 (26.2%)		1.14 (0.98, 1.33)
Priority 1-4 (high disability)	2613 (50.0%)	2217 (47.4%)		1.08 (0.93, 1.25)
Priority 2-3-6 (low/moderate disability)	706 (13.5%)	707 (15.1%)		1.19 (1.01, 1.41)
<b>Rural/Urban Status</b>			< 0.001	
Urban	3650 (69.9%)	2949 (63.0%)		Ref
Rural/Highly Rural	1571 (30.1%)	1731 (37.0%)		1.09 (0.99, 1.19)
<b>History of Homelessness</b>			< 0.001	
No	4632 (88.7%)	4427 (94.6%)		Ref
Yes	589 (11.3%)	253 (5.4%)		0.90 (0.75, 1.07)
<b>Marital Status</b>			< 0.001	
Not married	3166 (60.6%)	2248 (48.0%)		Ref
Married	2039 (39.1%)	2418 (51.7%)		1.35 (1.23, 1.47)
Missing	16 (0.3%)	14 (0.3%)		1.35 (0.62, 2.90)
<b>Any ED visits prior year</b>	3002 (57.5%)	2251 (48.1%)	< 0.001	0.83 (0.76, 0.91)
<b>Primary Care Visits prior year</b>			< 0.001	
<=2	998 (19.1%)	766 (16.4%)		Ref
3-9	3014 (57.7%)	2891 (61.8%)		1.16 (1.03, 1.30)
10+	1209 (23.2%)	1023 (21.9%)		1.03 (0.89, 1.20)
<b>Any Mental Health visits prior year</b>	2823 (54.1%)	1887 (40.3%)	< 0.001	1.00 (0.89, 1.13)
<b>Any VA hospitalization prior year</b>	1231 (23.6%)	915 (19.6%)	< 0.001	0.93 (0.83, 1.04)
<b>CAN Score 1-year hospitalization</b>			< 0.001	
75	1003 (19.2%)	917 (19.6%)		Ref
80	1039 (19.9%)	1017 (21.7%)		1.08 (0.95, 1.23)
85	1007 (19.3%)	928 (19.8%)		0.98 (0.851, 1.12)
90	1001 (19.2%)	947 (20.2%)		1.03 (0.89, 1.19)
95+	1171 (22.4%)	871 (18.6%)		0.86 (0.73, 1.02)
<b>Number of Chronic Conditions</b>			< 0.001	
<4	740 (14.2%)	516 (11.0%)		Ref
4-5	1316 (25.2%)	1153 (24.6%)		1.14 (0.97, 1.35)
6-7	1476 (28.3%)	1430 (30.6%)		1.27 (1.03, 1.56)
8+	1689 (32.4%)	1581 (33.8%)		1.28 (0.95, 1.73)
<b>Chronic Conditions</b>				
Cancer	917 (17.6%)	1081 (23.1%)	<0.001	1.13 (1.01, 1.27)
Hypertension	3325 (63.7%)	3426 (73.2%)	<0.001	1.09 (0.98, 1.22)

<b>EHR-Derived Characteristic</b>	<b>Non-respondent (n=5,221)</b>	<b>Respondent (n=4,680)</b>	<b>p-value<sup>a</sup></b>	<b>Logistic Model of Response Odds Ratio (95% CI)</b>
Coronary Artery Disease	999 (19.1%)	1235 (26.4%)	<0.001	1.06 (0.95, 1.19)
Heart Failure	624 (12.0%)	678 (14.5%)	<0.001	0.95 (0.82, 1.09)
Arrhythmia/Conduction Disorder	1059 (20.3%)	1204 (25.7%)	<0.001	1.07 (0.96, 1.20)
Cerebrovascular Disease	514 (9.8%)	465 (9.9%)	0.88	0.87 (0.75, 1.00)
Vascular Disease	703 (13.5%)	809 (17.3%)	<0.001	1.04 (0.92, 1.17)
Valvular Disease	214 (4.1%)	291 (6.2%)	<0.001	1.21 (0.99, 1.47)
Diabetes Mellitus	1938 (37.1%)	2075 (44.3%)	<0.001	1.05 (0.95, 1.16)
Lipid Disorders	2492 (47.7%)	2608 (55.7%)	<0.001	0.97 (0.88, 1.07)
Overweight/Obesity	983 (18.8%)	959 (20.5%)	0.037	1.11 (0.99, 1.25)
Thyroid disorders	556 (10.6%)	620 (13.2%)	<0.001	1.07 (0.94, 1.22)
Osteoporosis	92 (1.8%)	85 (1.8%)	0.84	0.91 (0.66, 1.25)
Esophageal/Gastric/Duodenal Disorders	1396 (26.7%)	1336 (28.5%)	0.044	1.02 (0.92, 1.13)
Inflammatory Bowel Disease	56 (1.1%)	38 (0.8%)	0.18	0.76 (0.49, 1.18)
Liver Disease or Hepatitis C	590 (11.3%)	397 (8.5%)	<0.001	0.85 (0.73, 0.98)
Tuberculosis	8 (0.2%)	3 (0.1%)	0.18	0.58 (0.14, 2.35)
HIV/AIDS	63 (1.2%)	35 (0.7%)	0.021	1.04 (0.67, 1.62)
Depression	1808 (34.6%)	1176 (25.1%)	<0.001	0.83 (0.74, 0.94)
PTSD	1261 (24.2%)	854 (18.2%)	<0.001	0.88 (0.78, 1.01)
Anxiety Disorders	960 (18.4%)	590 (12.6%)	<0.001	0.83 (0.73, 0.95)
Bipolar Disorders	287 (5.5%)	163 (3.5%)	<0.001	0.94 (0.75, 1.17)
Personality Disorders	137 (2.6%)	56 (1.2%)	<0.001	0.93 (0.66, 1.31)
Schizophrenia	225 (4.3%)	100 (2.1%)	<0.001	0.77 (0.59, 1.00)
Psychotic Disorders	93 (1.8%)	27 (0.6%)	<0.001	0.69 (0.44, 1.09)
Alcohol Use Disorders	801 (15.3%)	444 (9.5%)	<0.001	1.01 (0.87, 1.18)
Opioid Drug Use	198 (3.8%)	74 (1.6%)	<0.001	0.76 (0.56, 1.02)
Non-Opioid Drug Use	518 (9.9%)	218 (4.7%)	<0.001	0.97 (0.79, 1.18)
Rheumatologic/Autoimmune Disorders	164 (3.1%)	187 (4.0%)	0.022	1.19 (0.95, 1.50)
Spine Disorders	2076 (39.8%)	1807 (38.6%)	0.24	0.99 (0.90, 1.09)
Joint Disorders	2172 (41.6%)	2139 (45.7%)	<0.001	1.20 (1.09, 1.32)
Multiple Sclerosis	26 (0.5%)	16 (0.3%)	0.23	0.96 (0.50, 1.86)
Parkinson's Disease	67 (1.3%)	65 (1.4%)	0.65	0.99 (0.69, 1.43)
Traumatic Brain Injury	148 (2.8%)	63 (1.3%)	<0.001	0.77 (0.56, 1.06)
Dementia	408 (7.8%)	217 (4.6%)	<0.001	0.47 (0.39, 0.57)
Spinal Cord Injury or Paralysis	68 (1.3%)	47 (1.0%)	0.17	0.87 (0.59, 1.29)
Peripheral Nerve Disorders	398 (7.6%)	413 (8.8%)	0.029	1.07 (0.92, 1.25)
Epilepsy/Convulsions	136 (2.6%)	93 (2.0%)	0.041	1.02 (0.77, 1.36)
Chronic Pain Syndromes	576 (11.0%)	477 (10.2%)	0.18	1.01 (0.87, 1.17)
Tobacco Use Disorder	1160 (22.2%)	776 (16.6%)	<0.001	0.85 (0.75, 0.95)
Renal Failure or Nephropathy	761 (14.6%)	813 (17.4%)	<0.001	0.98 (0.86, 1.11)
Chronic Obstructive Pulmonary Disease	1069 (20.5%)	1201 (25.7%)	<0.001	1.10 (0.99, 1.23)
Asthma	212 (4.1%)	184 (3.9%)	0.74	0.98 (0.79, 1.21)
Allergic & Other Chronic Sinusitis/Rhinitis	592 (11.3%)	532 (11.4%)	0.96	1.02 (0.89, 1.17)
Anemia	756 (14.5%)	745 (15.9%)	0.046	0.95 (0.84, 1.07)
Thrombocytopenia	67 (1.3%)	78 (1.7%)	0.11	1.02 (0.72, 1.44)
Coagulation and Hemorrhagic Disorders	46 (0.9%)	36 (0.8%)	0.54	0.78 (0.49, 1.24)

<sup>a</sup>Two sample t-test for continuous variables, rank-sum test for continuous skewed variables, and chi-square test for categorical variables.