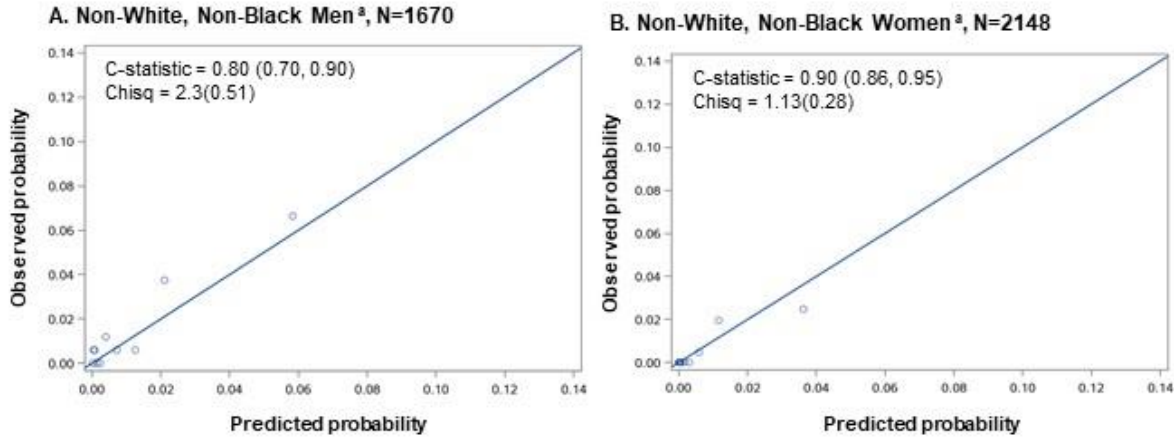


SUPPLEMENTAL MATERIAL

Supplemental Figures and Figure Legends

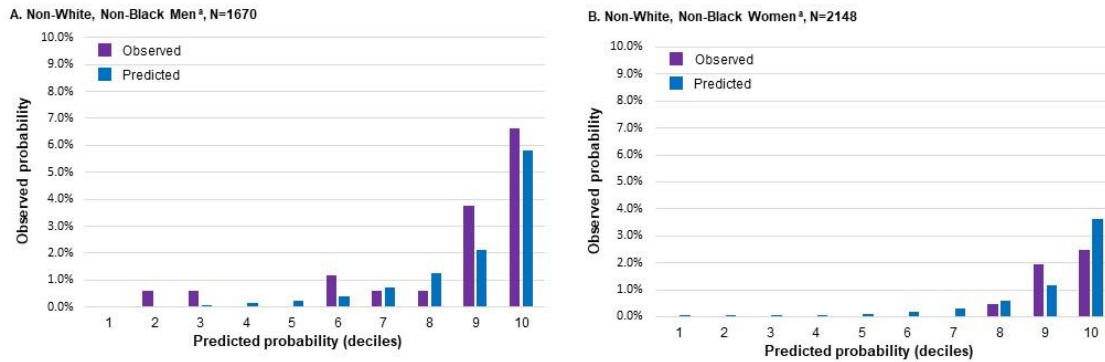
Online Figure I.



Online Figure I. Calibration and discrimination statistics of Modified Pooled Cohort equations to Prevent Heart Failure (PCP-HF) model when applied to contemporary electronic health record population in A) Non-White, Non-Black Men, B) Non-White, Non-Black Women. In each race-sex group, patients were categorized into deciles based on predicted probability of incident heart failure. Deciles were collapsed as needed if <2 heart failure events occurred. Harrell's C-statistics for discrimination and Greenwood-Nam D'Agostino chi square statistic for calibration were used. CI= confidence interval.

^a Self report of race as non-white, non-Black or did not report race

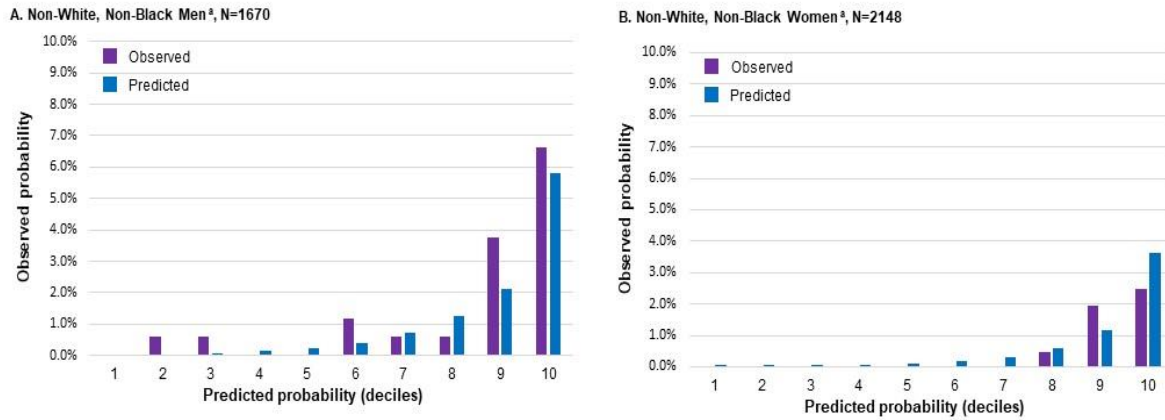
Online Figure II.



Online Figure II. Predicted vs observed probability of incident diagnosis of HF in contemporary electronic health record population in A) Non-White, Non-Black Men B) Non-White, Non-Black Women. Predicted probability estimated using Modified Pooled Cohort Equation to Prevent Heart Failure (PCP-HF) model. In each race-sex group, patients were categorized into deciles based on predicted probability of incident heart failure. Observed probability defined by established criteria using Internal Classification of Disease codes.

^a Self report of race as non-white, non-Black or did not report race

Online Figure III.



Online Figure III : Calibration and discrimination statistics of the Modified Pooled Cohort Equations to Prevent Heart Failure (PCP-HF) model when applied to contemporary electronic health record population with available data on QRS duration in A) White Men, B) White Women, C) Black Men and D) Black Women. In each race-sex group, patients were categorized into deciles based on predicted probability of incident heart failure. Deciles were collapsed as needed if <2 heart failure events occurred. Harrell’s C-statistics for discrimination and Greenwood-Nam D’Agostino chi square statistic for calibration were used. CI= confidence interval.

Supplemental Tables

Online Table I. Baseline Characteristics of the Electronic Health Record-Based Primary Prevention Cohort Stratified by Electrocardiogram Availability

	QRS Value N=5,749	No QRS Value N=25,507	P-Value
Mean age, years (SD)	54 (11.7)	51 (11.2)	<.0001
Female sex, n (%)	3448 (60.0)	14530 (56.8)	<.0001
Black race, n (%)	1393 (24.2)	1892 (7.4)	<.0001
Diabetes, n (%)	952 (16.6)	2735 (10.7)	<.0001
Casual glucose, mg/dL (SD)	104.3 (35.3)	99.5 (26.8)	<.0001
Diabetes treatment, n (%)	965 (16.8)	2050 (8.0)	<.0001
Current smoking, n (%)	518 (9.0)	2632 (10.3)	0.0037
Mean systolic blood pressure, mm Hg (SD)	127.1 (17.6)	125.5 (16.5)	<.0001
Hypertension, n (%)	3159 (54.9)	10657 (41.6)	<.0001
Hypertension treatment, n (%)	3022 (52.6)	9185 (35.9)	<.0001
Mean total cholesterol, mg/dL (SD)	189.2 (38.6)	194.6 (36.2)	<.0001
Mean HDL cholesterol, mg/dL (SD)	50.9 (15.7)	52 (15.1)	<.0001
Mean BMI, kg/m²	28.9 (6.3)	28.8 (6.0)	0.8984
Mean QRS duration, msec (SD)²	88.2 (12.9)	NA	NA

*Abbreviations: BMI, Body Mass Index; HDL, High Density Lipoprotein

Online Table II. Race- and Sex-Specific Equation Parameters for Estimation of 10 Year Risk of HF Derived from the Lifetime Risk Pooling Project for the Modified Pooled Cohort Equations to Prevent Heart Failure (PCP-HF) without QRS duration

	White Male	White Female	Black Male	Black Female
Ln Age (y)	42.50	18.15	2.99	50.32
Ln Age, Squared	-0.97	N/A	N/A	N/A
Ln Treated Systolic BP (mm Hg)	0.97	10.85	2.40	29.0
Ln Age×Ln Treated Systolic BP	N/A	-2.47	N/A	-6.57
Ln Untreated Systolic BP (mm Hg)	0.85	9.71	2.26	28.09
Ln Age×Ln Untreated Systolic BP	N/A	-2.21	N/A	-6.37
Current Smoker (1=Yes, 0=No)	0.73	10.95	1.49	0.75
Ln Age×Current Smoker	N/A	-2.50	-0.21	N/A
Ln Treated glucose (mg/dL)	0.92	1.03	0.63	0.99
Ln Untreated glucose (mg/dL)	0.80	0.90	0.55	0.83
Ln Total Cholesterol (mg/dL)	0.46	N/A	N/A	0.26
Ln HDL-C (mg/dL)	-0.42	-0.07	-0.80	N/A
Ln BMI (Kg/m²)	37.0	1.37	1.21	19.75
Ln Age× Ln BMI	-8.77	N/A	N/A	-4.60
Ln QRS duration (msec)	N/A	N/A	N/A	N/A
Mean Coefficient× Value (<i>MeanCV</i>)	169.25	85.03	26.30	223.05
Baseline Survival (<i>S₀</i>)	0.98743	0.99331	0.98297	0.99241

*Abbreviations: BMI, Body Mass Index; BP, Blood Pressure; HDL, High Density Lipoprotein

Online Table III. Model Discrimination of the Modified Pooled Cohort Equations to Prevent Heart Failure (PCP-HF) without QRS in the Lifetime Risk Pooling Project (Internal Validation)

	Modified PCP-HF Model (C statistics (95% CI))
White Men	0.82 (0.79, 0.85)
White Women	0.83 (0.80, 0.87)
Black Men	0.82 (0.77, 0.88)
Black Women	0.78 (0.71, 0.85)

*Abbreviations: CI, Confidence Interval

Online Table IV. Diagnosis and Associated International Classification of Disease Codes

Diagnosis	ICD 9/10 Code
Stroke/Cerebrovascular Disease	ICD 9: 430-432.9; 433.x; 434.x ICD 10: I60-62; I63.x; I65.x; I66.x
Coronary Artery Disease(including MI and ACS)	ICD 9: 410.x; 411.x; 412; 413.x; 414.x ICD 10: I20.xx; I21.x; I22.x; I23.x; I24.8; I24.9; I25.x;
Peripheral Arterial Disease	ICD 9: 440.2x; 440.3x; 443.9x ICD 10: I70.2x; 170.3x; 170.4x; 170.5x; 170.6x; 170.7x; I73.9x
Heart Failure	ICD 9: 402.x1; 404.x1; 404.x3; 428.x ICD 10: I09.81; I11.0; I13.0; I50.x
Pacemaker	ICD 9: V45.x ICD-10: Z95.x
Diabetes	ICD 9: 250 ICD10: E11
Hypertension	ICD9: 401-405 ICD10: I10-I15

*Abbreviations: ACS, Acute Coronary Syndrome; ICD 9/10, Internal Classification of Diagnosis Ninth or Tenth Revision; MI, Myocardial Infarction

Online Table V. Baseline Patient Characteristics of the Electronic Health Record-Based Primary Prevention Cohort not self-identified as White or Black

	Non-White, Non-Black Race †	
	Men	Women
	N= 1670	N= 2148
Mean age, years (SD)	48.0 (11.3)	48.5 (11.6)
Current smoking, n (%)	194 (12)	157 (7)
Diabetes, n (%)	221 (13)	226 (11)
Casual glucose, mg/dL (SD)	105 (33)	98 (28)
Mean systolic blood pressure, mm Hg (SD)	126 (15)	121 (17)
Hypertension treatment, n (%)	725 (43)	904 (42)
Mean BMI, kg/m²	28.2 (5.0)	27.2 (6.3)
Mean total cholesterol, mg/dL (SD)	191 (38)	192 (36)
Mean HDL cholesterol, mg/dL (SD)	44 (12)	55 (15)

*Abbreviations: BMI, Body Mass Index; HDL, High Density Lipoprotein

†Self report of race as non-white, non-Black, or did not disclose race

Online Table VI. Discrimination and Calibration Statistics of the Modified Pooled Cohort Equations to Prevent Heart Failure in Electronic Health Record-Based Cohort Patients not self-identified as White or Black

	Non-White, Non-Black Race [†]	
	Men	Women
Total N	1670	2148
Events	30	27
Events per 1000 patient years	3.6	2.5
C statistics (95% CI)	0.80 (0.70, 0.90)	0.90 (0.86, 0.95)
GND Chi-square, P value	2.3 (0.51)	1.13 (0.28)

*Abbreviations: CI, Confidence Interval; GND, Greenwood Nam D'Agostino

[†]Self report of race as non-white, non-black, or did not disclose race