Supplemental Table 1. Demographic and clinical characteristics of the study population by age and sex groups on April 1, 2015 (N=197,578)[a]

Characteristic	Ages 20-49 N (%)		Ages 50-69 N (%)		Ages ≥70 N (%)		Total N (%)
	Men	Women	Men	Women	Men	Women	
Demographics							
Race							
White	38,041 (81.3)	44,059 (83.2)	29,210 (91.8)	31,672 (92.2)	13,128 (95.7)	17,152 (95.8)	173,262 (87.7)
Black	2,656 (5.7)	2,620 (5.0)	614 (1.9)	591 (1.7)	113 (0.8)	146 (0.8)	6,740 (3.4)
Asian	1,824 (3.9)	2,446 (4.6)	621 (2.0)	811 (2.4)	1698(1.2)	247 (1.4)	6,117 (3.1)
Other	2,293 (4.9)	2,632 (5.0)	810 (2.5)	835 (2.4)	224 (1.6)	250 (1.4)	7,044 (3.6)
Unknown	2,007 (4.3)	1,199 (2.3)	578 (1.8)	429 (1.3)	86 (0.6)	116 (0.7)	4,415 (2.2)
Ethnicity							
Hispanic	3,637 (7.8)	3,742 (7.1)	1,329 (4.2)	1,208 (3.5)	304 (2.2)	326 (1.8)	10,546 (5.3)
Non-Hispanic	43,184 (92.2)	49,214 (92.9)	30,504 (95.8)	33,130 (96.5)	13,415 (97.8)	17,585 (98.2)	187,032 (94.7)
Chronic Conditions							
Hypertension	3,626 (7.7)	2,982 (5.6)	12,368 (38.9)	11,573 (33.7)	9,840 (71.7)	13,034 (72.8)	53,423 (27.0)
Hyperlipidemia	4,394 (9.4)	3,261 (6.2)	14,905 (46.8)	13,856 (40.4)	9,868 (71.9)	12,220 (68.2)	58,504 (29.6)
Diabetes	2,546 (5.4)	3,056 (5.8)	8,644 (27.2)	7,576 (22.1)	6,244 (45.5)	6,685 (37.3)	34,751 (17.6)
Cardiac arrhythmias	1,515 (3.2)	2,466 (4.7)	3,732 (11.7)	3,219 (9.4)	5,658 (41.2)	5,710 (31.9)	22,300 (11.3)
Coronary artery disease	306 (0.7)	139 (0.3)	3,276 (10.3)	1,307 (3.8)	4,886 (35.6)	3,288 (18.4)	13,202 (6.7)
Congestive heart failure	123 (0.3)	83 (0.2)	713 (2.2)	449 (1.3)	1,756 (12.8)	1,951 (10.9)	5,075 (2.6)
Stroke	100 (0.2)	137 (0.3)	683 (2.2)	565 (1.7)	1,528 (11.1)	1,627 (9.1)	4,640 (2.4)
Arthritis	1,557 (3.3)	2,121 (4.0)	6,026 (18.9)	8,568 (25.0)	5,191 (37.8)	8,475 (47.3)	31,938 (16.2)
Osteoporosis	76 (0.2)	116 (0.2)	232 (0.7)	1,563 (4.6)	484 (3.5)	4,011 (22.4)	6,482 (3.3)
Cancer	663 (1.4)	1,600 (3.0)	3,617 (11.4)	4,602 (13.4)	5,386 (39.3)	5,180 (28.9)	21,048 (10.7)
Chronic kidney disease	490 (1.1)	549 (1.0)	1,601 (5.0)	1,299 (3.8)	2,751 (20.1)	2,724 (15.2)	9,414 (4.8)
Hepatitis	216 (0.5)	229 (0.4)	395 (1.2)	249 (0.7)	55 (0.4)	80 (0.5)	1,224 (0.6)
Asthma	1,907 (4.1)	3,889 (7.3)	1,382 (4.3)	2,796 (8.1)	844 (6.2)	1,401 (7.8)	12,219 (6.2)
Chronic obstructive pulmonary disease	480 (1.0)	942 (1.8)	1,617 (5.1)	1,920 (5.6)	1,979 (14.4)	2,074 (11.6)	9,012 (4.6)
Dementia	219 (0.5)	206 (0.4)	357 (1.1)	387 (1.1)	1,109 (8.1)	1,721 (9.6)	3,995 (2.0)
Anxiety	4,510 (9.6)	9,256 (17.5)	2,270 (7.1)	4,479 (13.0)	874 (6.4)	2,359 (13.2)	23,748 (12.0)
Depression	5,693 (12.2)	12,432 (23.5)	3,777 (11.9)	7,791 (22.7)	1,640 (12.0)	3,546 (19.8)	34,879 (17.7)
Schizophrenia	525 (1.1)	264 (0.5)	306 (1.0)	320 (0.9)	209 (1.5)	410 (2.3)	2,034 (1.0)
Substance abuse disorders	3,316 (7.1)	2,478 (4.7)	1,731 (5.4)	1,078 (3.1)	349 (2.5)	182 (1.0)	9,134 (4.6)

[a]Total population with age ≥20 years who provided research authorization and resided in a 7-county region of Southern Minnesota on April 1, 2015.

Supplemental Table 2. Odds ratio (95% confidence interval)[a] of each chronic condition across national quintiles of area deprivation index by age group[b]

Chronic condition	Quintile 2 (21-40%)	Quintile 3 (41-60%)	Quintile 4 (61-80%)	Quintile 5 (81-100%)	P-trend[c]
Ages 20-49 (N=99,777)					
Cardiometabolic conditions					
Hypertension	1.47 (1.12,1.95)	2.07 (1.58,2.72)	2.36 (1.79,3.11)	3.14 (2.32,4.26)	<0.001
Hyperlipidemia	1.23 (0.96,1.57)	1.53 (1.20,1.94)	1.69 (1.33,2.15)	2.43 (1.86,3.19)	<0.001
Diabetes	1.14 (0.95,1.37)	1.50 (1.25,1.80)	1.74 (1.45,2.09)	2.19 (1.78,2.69)	<0.001
Cardiac arrhythmias	1.16 (0.95,1.41)	1.30 (1.07,1.58)	1.51 (1.24,1.84)	1.99 (1.59,2.50)	<0.001
Coronary artery disease	1.12 (0.62,2.01)	1.63 (0.92,2.90)	2.09 (1.17,3.73)	3.24 (1.70,6.14)	<0.001
Congestive heart failure	4.04 (0.94,17.36)	5.51 (1.30,23.47)	8.00 (1.88,34.04)	12.81 (2.89,56.85)	<0.001
Stroke	1.02 (0.51,2.03)	1.30 (0.66,2.57)	1.55 (0.78,3.08)	1.99 (0.90,4.42)	0.0068
Other somatic conditions					
Arthritis	1.27 (1.02,1.57)	1.58 (1.28,1.95)	1.68 (1.35,2.08)	2.07 (1.61,2.66)	<0.001
Osteoporosis	0.84 (0.43,1.63)	0.91 (0.47,1.76)	1.15 (0.59,2.24)	2.51 (1.19,5.27)	0.0024
Cancer	0.98 (0.79,1.23)	1.02 (0.82,1.28)	0.99 (0.79,1.25)	1.10 (0.83,1.47)	0.5763
Chronic kidney disease	1.46 (0.96,2.22)	2.20 (1.46,3.32)	2.14 (1.41,3.24)	3.81 (2.42,6.00)	<0.001
Hepatitis	0.77 (0.49,1.21)	0.89 (0.56,1.39)	1.33 (0.85,2.06)	1.82 (1.09,3.04)	<0.001
Asthma	1.09 (0.91,1.30)	1.17 (0.98,1.38)	1.37 (1.16,1.63)	1.60 (1.31,1.95)	<0.001
Chronic obstructive pulmonary disease	2.50 (1.39,4.51)	3.26 (1.83,5.83)	4.34 (2.43,7.78)	7.72 (4.18,14.26)	<0.001
Mental health conditions					
Dementia	0.60 (0.40,0.89)	0.72 (0.49,1.06)	0.84 (0.56,1.25)	1.11 (0.68,1.81)	0.0293
Anxiety	1.14 (0.97,1.34)	1.35 (1.16,1.58)	1.63 (1.39,1.91)	2.23 (1.87,2.66)	<0.001
Depression	1.28 (1.08,1.50)	1.57 (1.34,1.85)	1.91 (1.62,2.24)	2.49 (2.08,2.99)	<0.001
Schizophrenia	1.09 (0.69,1.61)	1.24 (0.82,1.87)	1.91 (1.31,2.77)	2.55 (1.76,3.70)	<0.001
Substance abuse disorders	1.16 (0.87,1.54)	1.41 (1.07,1.87)	2.04 (1.55,2.71)	3.40 (2.51,4.61)	<0.001
Ages 50-69 (N=66,171)					
Cardiometabolic conditions					
Hypertension	1.34 (1.15,1.57)	1.65 (1.41,1.92)	1.84 (1.57,2.15)	2.54 (2.13,3.03)	<0.001
Hyperlipidemia	1.12 (0.96,1.30)	1.36 (1.17,1.57)	1.39 (1.20,1.62)	1.77 (1.49,2.11)	<0.001
Diabetes	1.14 (1.01,1.29)	1.31 (1.16,1.47)	1.49 (1.32,1.68)	1.88 (1.63,2.17)	<0.001
Cardiac arrhythmias	1.06 (0.91,1.24)	1.19 (1.02,1.39)	1.36 (1.17,1.59)	1.72 (1.43,2.07)	<0.001
Coronary artery disease	1.23 (0.99,1.52)	1.55 (1.25,1.92)	1.78 (1.43,2.22)	2.43 (1.89,3.11)	<0.001
Congestive heart failure	1.28 (0.87,1.89)	1.88 (1.28,2.74)	2.41 (1.64,3.53)	3.82 (2.51,5.82)	<0.001
Stroke	1.11 (0.82,1.52)	1.38 (1.02,1.88)	1.74 (1.27,2.37)	2.48 (1.74,3.52)	<0.001
Other somatic conditions					
Arthritis	0.97 (0.86,1.10)	1.05 (0.94,1.18)	1.14 (1.01,1.28)	1.23 (1.07,1.42)	0.0021
Osteoporosis	0.91 (0.73,1.14)	0.97 (0.78,1.22)	1.05 (0.83,1.32)	1.19 (0.89,1.59)	0.0417
Cancer	0.94 (0.82,1.08)	0.93 (0.81,1.06)	0.94 (0.82,1.08)	0.97 (0.82,1.08)	0.8890
Chronic kidney disease	1.33 (1.06,1.65)	1.68 (1.36,2.09)	2.11 (1.69,2.62)	3.05 (2.39,3.91)	<0.001
Hepatitis	0.93 (0.56,1.53)	1.38 (0.84,2.26)	1.94 (1.18,3.18)	3.82 (2.24,6.51)	<0.001
Asthma	0.87 (0.74,1.03)	1.10 (0.94,1.30)	1.28 (1.08,1.51)	1.97 (1.63,2.40)	<0.001
Chronic obstructive pulmonary disease	1.41 (1.05,1.91)	2.04 (1.52,2.73)	3.13 (2.32,4.21)	5.58 (4.05,7.68)	<0.001
Mental health conditions					
Dementia	1.05 (0.73,1.50)	1.21 (0.85,1.73)	1.51 (1.05,2.17)	1.86 (1.21,2.86)	<0.001
Anxiety	1.14 (0.95,1.36)	1.36 (1.14,1.63)	1.79 (1.50,2.15)	2.86 (2.33,3.50)	<0.001
Depression	1.23 (1.05,1.43)	1.57 (1.35,1.82)	2.02 (1.73,2.36)	3.00 (2.52,3.57)	<0.001
Schizophrenia	0.59 (0.32,1.09)	0.92 (0.51,1.68)	1.89 (1.04,3.42)	3.38 (1.77,6.45)	<0.001
Substance abuse disorders	1.27 (0.91,1.79)	1.73 (1.24,2.41)	2.79 (2.00,3.90)	4.62 (3.21,6.65)	<0.001
Ages ≥70 (N=31,630)					
Cardiometabolic conditions					
Hypertension	1.29 (1.08,1.54)	1.38 (1.16,1.64)	1.68 (1.40,2.01)	2.17 (1.75,2.68)	<0.001

Supplemental Table 2. Odds ratio (95% confidence interval)[a] of each chronic condition across national quintiles of area deprivation index by age group[b]

Chronic condition	Quintile 2 (21-40%)	Quintile 3 (41-60%)	Quintile 4 (61-80%)	Quintile 5 (81-100%)	P-trend[c]
Hyperlipidemia	1.13 (0.91,1.39)	1.20 (0.98,1.48)	1.27 (1.03,1.56)	1.58 (1.24,2.01)	<0.001
Diabetes	1.05 (0.87,1.27)	0.98 (0.81,1.18)	1.00 (0.83,1.21)	1.19 (0.96,1.48)	0.4389
Cardiac arrhythmias	0.98 (0.83,1.17)	1.01 (0.85,1.20)	1.14 (0.96,1.35)	1.20 (0.99,1.47)	0.0004
Coronary artery disease	1.04 (0.89,1.23)	1.14 (0.97,1.33)	1.26 (1.07,1.49)	1.43 (1.18,1.73)	<0.001
Congestive heart failure	1.31 (0.99,1.73)	1.36 (1.04,1.78)	1.66 (1.26,2.18)	1.89 (1.39,2.56)	<0.001
Stroke	1.19 (0.95,1.48)	1.21 (0.98,1.50)	1.33 (1.07,1.65)	1.41 (1.09,1.81)	0.0021
Other somatic conditions					
Arthritis	0.82 (0.69,0.98)	0.80 (0.67,0.93)	0.78 (0.65,0.92)	0.72 (0.59,0.88)	0.0054
Osteoporosis	0.84 (0.66,1.07)	0.81 (0.64,1.03)	0.96 (0.76,1.23)	1.01 (0.76,1.34)	0.0870
Cancer	0.87 (0.74,1.03)	0.89 (0.76,1.05)	0.89 (0.75,1.05)	0.92 (0.75,1.12)	0.9454
Chronic kidney disease	1.22 (0.97,1.52)	1.37 (1.10,1.71)	1.57 (1.25,1.96)	2.08 (1.62,2.68)	<0.001
Hepatitis	1.16 (0.49,2.76)	1.30 (0.56,3.04)	1.14 (0.48,2.71)	0.96 (0.32,2.85)	0.9454
Asthma	0.93 (0.72,1.19)	1.01 (0.79,1.29)	1.20 (0.94,1.54)	1.80 (1.36,2.38)	<0.001
Chronic obstructive pulmonary disease	1.15 (0.91,1.45)	1.34 (1.06,1.68)	1.76 (1.40,2.22)	2.61 (2.02,3.36)	<0.001
Mental health conditions					
Dementia	1.04 (0.73,1.46)	1.03 (0.73,1.44)	1.32 (0.94,1.86)	1.27 (0.86,1.86)	0.0065
Anxiety	1.10 (0.84,1.44)	1.27 (0.97,1.65)	1.58 (1.21,2.06)	2.08 (1.55,2.79)	<0.001
Depression	1.10 (0.87,1.39)	1.21 (0.96,1.52)	1.47 (1.17,1.85)	1.83 (1.41,2.38)	<0.001
Schizophrenia	1.59 (0.84,2.98)	1.35 (0.73,2.52)	1.86 (1.00,3.48)	2.76 (1.40,5.43)	0.0019
Substance abuse disorders	0.78 (0.46,1.31)	0.98 (0.59,1.62)	1.21 (0.73,2.02)	1.42 (0.80,2.56)	0.0022

[a]Adjusted for sex, race, ethnicity, and individual level of education.
[b]The area deprivation index was estimated at the census block group level. Quintiles were defined using national area deprivation index rankings from the Neighborhood Atlas (https://www.neighborhoodatlas.medicine.wisc.edu/). Quintile 1 (1-20%) served as the reference (OR=1.00).
[c]Differences across quintiles were tested using a test for linear trend of the ORs. The P-value for trend was adjusted for the false discovery rate.
The two-way interactions of area deprivation index by age reached statistical significance for the following chronic conditions: hypertension, hyperlipidemia, diabetes, cardiac arrhythmias, coronary artery disease, congestive heart failure, stroke, arthritis, chronic kidney disease, hepatitis, asthma, chronic obstructive pulmonary disease, anxiety, depression, schizophrenia, and substance abuse disorders.

Supplemental Table 3. Odds ratio (95% confidence interval)[a] of each chronic condition across national quintiles of area deprivation index by sex[b]

Chronic condition	Quintile 2 (21-40%)	Quintile 3 (41-60%)	Quintile 4 (61-80%)	Quintile 5 (81-100%)	P-trend[c]
Women (N=105,205)					
Cardiometabolic conditions					
Hypertension	1.37 (1.16,1.62)	1.67 (1.42,1.97)	1.96 (1.66,2.31)	2.62 (2.18,3.16)	<0.001
Hyperlipidemia	1.19 (1.00,1.42)	1.46 (1.23,1.73)	1.62 (1.36,1.93)	2.18 (1.79,2.66)	<0.001
Diabetes	1.18 (1.04,1.35)	1.31 (1.16,1.49)	1.51 (1.33,1.71)	1.88 (1.62,2.17)	<0.001
Cardiac arrhythmias	1.06 (0.93,1.21)	1.16 (1.02,1.33)	1.39 (1.21,1.59)	1.52 (1.30,1.78)	<0.001
Coronary artery disease	1.38 (1.11,1.73)	1.51 (1.22,1.88)	1.89 (1.52,2.36)	2.34 (1.83,3.00)	<0.001
Congestive heart failure	1.57 (1.12,2.19)	1.77 (1.28,2.46)	2.26 (1.63,3.14)	2.71 (1.89,3.89)	<0.001
Stroke	1.25 (0.98,1.60)	1.42 (1.12,1.80)	1.58 (1.24,2.01)	1.79 (1.36,2.36)	<0.001
Other somatic conditions					
Arthritis	0.99 (0.89,1.11)	1.11 (0.99,1.25)	1.19 (1.06,1.34)	1.26 (1.10,1.45)	<0.001
Osteoporosis	0.86 (0.70,1.06)	0.89 (0.72,1.09)	0.99 (0.80,1.22)	1.13 (0.89,1.44)	0.0075
Cancer	0.93 (0.81,1.05)	0.94 (0.82,1.06)	0.93 (0.82,1.06)	0.97 (0.83,1.13)	0.9720
Chronic kidney disease	1.32 (1.05,1.67)	1.59 (1.26,1.99)	1.92 (1.53,2.42)	2.79 (2.16,3.59)	<0.001
Hepatitis	0.81 (0.51,1.27)	1.13 (0.72,1.76)	1.26 (0.81,1.97)	2.14 (1.30,3.52)	<0.001
Asthma	0.99 (0.86,1.15)	1.18 (1.02,1.36)	1.40 (1.21,1.62)	1.87 (1.59,2.20)	<0.001
Chronic obstructive pulmonary disease	1.58 (1.18,2.11)	2.07 (1.56,2.76)	2.93 (2.20,3.90)	5.17 (3.80,7.04)	<0.001
Mental health conditions					
Dementia	1.02 (0.74,1.41)	1.01 (0.73,1.38)	1.26 (0.92,1.74)	1.34 (0.93,1.93)	0.0023
Anxiety	1.20 (1.04,1.39)	1.41 (1.23,1.62)	1.75 (1.52,2.02)	2.48 (2.12,2.90)	<0.001
Depression	1.32 (1.15,1.51)	1.61 (1.41,1.83)	1.98 (1.73,2.26)	2.58 (2.23,3.00)	<0.001
Schizophrenia	0.98 (0.60,1.59)	1.19 (0.74,1.91)	2.06 (1.28,3.29)	2.83 (1.70,4.73)	<0.001
Substance abuse disorders	1.21 (0.89,1.63)	1.53 (1.14,2.05)	2.29 (1.71,3.07)	3.53 (2.57,4.85)	<0.001
Men (N=92,373)					
Cardiometabolic conditions					
Hypertension	1.32 (1.12,1.57)	1.64 (1.39,1.94)	1.81 (1.53,2.14)	2.48 (2.05,3.01)	<0.001
Hyperlipidemia	1.11 (0.93,1.31)	1.28 (1.09,1.51)	1.26 (1.06,1.49)	1.61 (1.33,1.95)	<0.001
Diabetes	1.06 (0.94,1.20)	1.17 (1.05,1.32)	1.24 (1.10,1.40)	1.55 (1.35,1.78)	<0.001
Cardiac arrhythmias	1.03 (0.88,1.20)	1.11 (0.96,1.29)	1.20 (1.03,1.40)	1.58 (1.32,1.89)	<0.001
Coronary artery disease	1.02 (0.88,1.19)	1.26 (1.09,1.46)	1.33 (1.14,1.55)	1.66 (1.39,1.98)	<0.001
Congestive heart failure	1.21 (0.94,1.55)	1.21 (1.10,1.79)	1.70 (1.33,2.18)	2.35 (1.78,3.11)	<0.001
Stroke	1.09 (0.86,1.38)	1.16 (0.92,1.47)	1.39 (1.10,1.77)	1.69 (1.28,2.24)	<0.001
Other somatic conditions					
Arthritis	0.94 (0.83,1.06)	0.95 (0.84,1.07)	0.95 (0.84,1.08)	0.98 (0.84,1.14)	0.6671
Osteoporosis	0.95 (0.66,1.37)	0.77 (0.53,1.11)	1.19 (0.83,1.73)	1.22 (0.78,1.92)	0.0419
Cancer	0.92 (0.80,1.07)	0.93 (0.81,1.08)	0.94 (0.81,1.09)	0.98 (0.82,1.17)	0.7830
Chronic kidney disease	1.27 (1.03,1.56)	1.56 (1.28,1.91)	1.73 (1.41,2.12)	2.39 (1.89,3.01)	<0.001
Hepatitis	0.96 (0.61,1.52)	1.22 (0.78,1.92)	1.95 (1.25,3.07)	3.13 (1.90,5.14)	<0.001
Asthma	0.92 (0.79,1.07)	0.99 (0.85,1.16)	1.13 (0.96,1.32)	1.55 (1.29,1.86)	<0.001
Chronic obstructive pulmonary disease	1.18 (0.91,1.52)	1.53 (1.19,1.97)	2.12 (1.64,2.73)	3.36 (2.54,4.43)	<0.001
Mental health conditions					
Dementia	0.93 (0.68,1.27)	1.01 (0.75,1.38)	1.38 (1.01,1.88)	1.46 (1.02,2.09)	<0.001
Anxiety	1.00 (0.83,1.19)	1.22 (1.02,1.45)	1.52 (1.27,1.82)	2.25 (1.84,2.74)	<0.001
Depression	1.06 (0.89,1.26)	1.33 (1.12,1.58)	1.68 (1.42,2.00)	2.42 (2.00,2.94)	<0.001
Schizophrenia	1.03 (0.62,1.70)	1.28 (0.78,2.09)	1.97 (1.20,3.22)	3.55 (2.09,6.03)	<0.001
Substance abuse disorders	1.12 (0.84,1.48)	1.42 (1.08,1.86)	2.08 (1.58,2.74)	3.57 (2.64,4.82)	<0.001

[a]Adjusted for sex, race, ethnicity, and individual level of education.
[b]The area deprivation index was estimated at the census block group level. Quintiles were defined using national area deprivation index rankings from the Neighborhood Atlas (https://www.neighborhoodatlas.medicine.wisc.edu/). Quintile 1 (1-20%) served as the reference (OR=1.00).

[c]Differences across quintiles were tested using a test for linear trend of the ORs. The P-value for trend was adjusted for the false discovery rate.
The two-way interactions of area deprivation index by sex reached statistical significance for the following chronic conditions: hyperlipidemia, diabetes, cardiac arrhythmias, coronary artery disease, arthritis, osteoporosis, and depression.

Supplemental Table 4. Odds ratio (95% confidence interval)[a] of each chronic condition across national quintiles of area deprivation index by race[b]

Chronic condition	Quintile 2 (21-40%)	Quintile 3 (41-60%)	Quintile 4 (61-80%)	Quintile 5 (81-100%)	P-trend[c]
White (N=173,262)					
Cardiometabolic conditions					
Hypertension	1.34 (1.15,1.57)	1.64 (1.41,1.92)	1.89 (1.62,2.21)	2.58 (2.17,3.08)	<0.001
Hyperlipidemia	1.14 (0.97,1.35)	1.36 (1.16,1.60)	1.43 (1.22,1.68)	1.92 (1.60,2.31)	<0.001
Diabetes	1.12 (1.00,1.25)	1.23 (1.11,1.38)	1.37 (1.22,1.53)	1.73 (1.52,1.96)	<0.001
Cardiac arrhythmias	1.06 (0.94,1.20)	1.15 (1.02,1.30)	1.32 (1.17,1.50)	1.54 (1.34,1.78)	<0.001
Coronary artery disease	1.12 (0.97,1.29)	1.32 (1.15,1.53)	1.50 (1.30,1.73)	1.86 (1.58,2.20)	<0.001
Congestive heart failure	1.35 (1.06,1.71)	1.55 (1.23,1.96)	1.94 (1.53,2.46)	2.47 (1.90,3.21)	<0.001
Stroke	1.14 (0.96,1.37)	1.23 (1.03,1.47)	1.45 (1.22,1.74)	1.69 (1.38,2.08)	<0.001
Other somatic conditions					
Arthritis	0.97 (0.87,1.08)	1.03 (0.93,1.15)	1.07 (0.96,1.19)	1.11 (0.98,1.26)	0.0003
Osteoporosis	0.86 (0.70,1.06)	0.85 (0.70,1.05)	0.98 (0.80,1.21)	1.14 (0.90,1.45)	0.0057
Cancer	0.94 (0.83,1.05)	0.95 (0.85,1.07)	0.95 (0.84,1.06)	1.00 (0.87,1.15)	0.6772
Chronic kidney disease	1.31 (1.09,1.57)	1.57 (1.32,1.88)	1.85 (1.54,2.21)	2.63 (2.17,3.21)	<0.001
Hepatitis	0.96 (0.59,1.54)	1.34 (0.84,2.14)	1.92 (1.20,3.07)	3.43 (2.06,5.73)	<0.001
Asthma	0.97 (0.86,1.09)	1.10 (0.98,1.24)	1.31 (1.16,1.48)	1.78 (1.55,2.04)	<0.001
Chronic obstructive pulmonary disease	1.36 (1.08,1.72)	1.77 (1.41,2.22)	2.49 (1.98,3.13)	4.26 (3.32,5.46)	<0.001
Mental health conditions					
Dementia	0.95 (0.73,1.25)	0.97 (0.74,1.26)	1.24 (0.95,1.62)	1.30 (0.96,1.76)	<0.001
Anxiety	1.11 (0.97,1.27)	1.32 (1.16,1.51)	1.68 (1.47,1.92)	2.40 (2.06,2.79)	<0.001
Depression	1.21 (1.06,1.38)	1.49 (1.31,1.70)	1.88 (1.65,2.15)	2.59 (2.24,3.00)	<0.001
Schizophrenia	0.94 (0.61,1.45)	1.17 (0.77,1.79)	2.01 (1.32,3.08)	3.13 (1.98,4.97)	<0.001
Substance abuse disorders	1.13 (0.88,1.46)	1.45 (1.13,1.86)	2.20 (1.71,2.83)	3.60 (2.73,4.75)	<0.001
Non-white (N=24,316)					
Cardiometabolic conditions					
Hypertension	1.37 (1.06,1.77)	1.78 (1.38,2.29)	1.85 (1.44,2.39)	2.40 (1.80,2.39)	<0.001
Hyperlipidemia	1.03 (0.82,1.30)	1.14 (0.90,1.43)	1.14 (0.91,1.44)	1.40 (1.07,1.82)	0.0058
Diabetes	1.11 (0.89,1.38)	1.25 (1.00,1.55)	1.42 (1.15,1.77)	1.62 (1.26,2.07)	<0.001
Cardiac arrhythmias	0.94 (0.71,1.25)	1.00 (0.75,1.32)	1.17 (0.89,1.54)	1.63 (1.19,2.24)	<0.001
Coronary artery disease	1.45 (0.95,2.23)	1.36 (0.88,2.09)	1.64 (1.07,2.51)	2.32 (1.42,3.79)	0.0022
Congestive heart failure	1.72 (0.80,3.72)	1.70 (0.79,3.67)	2.19 (1.03,4.69)	2.70 (1.18,6.17)	0.0087
Stroke	1.55 (0.76,3.17)	2.56 (1.28,5.11)	1.86 (0.92,3.76)	2.46 (1.11,5.44)	0.0634
Other somatic conditions					
Arthritis	0.95 (0.73,1.23)	1.17 (0.90,1.51)	1.25 (0.97,1.62)	1.34 (0.99,1.81)	<0.001
Osteoporosis	0.83 (0.51,1.36)	0.88 (0.54,1.43)	1.14 (0.70,1.86)	0.80 (0.43,1.48)	0.4146
Cancer	0.91 (0.69,1.21)	0.71 (0.53,0.96)	0.81 (0.60,1.08)	0.78 (0.53,1.15)	0.1150
Chronic kidney disease	1.29 (0.84,1.99)	1.65 (1.08,2.52)	1.71 (1.12,2.61)	2.25 (1.40,3.62)	0.0014
Hepatitis	0.76 (0.46,1.26)	0.88 (0.54,1.45)	1.19 (0.73,1.92)	1.47 (0.83,2.58)	0.0031
Asthma	1.06 (0.75,1.49)	1.26 (0.90,1.77)	1.42 (1.02,1.98)	1.71 (1.18,2.48)	0.0010
Chronic obstructive pulmonary disease	1.83 (0.90,3.71)	2.60 (1.30,5.18)	3.44 (1.73,6.83)	5.26 (2.55,10.86)	<0.001
Mental health conditions					
Dementia	1.27 (0.57,2.84)	1.74 (0.79,3.82)	2.42 (1.11,5.25)	2.52 (1.06,5.97)	0.0009
Anxiety	1.56 (1.11,2.19)	1.68 (1.20,2.34)	1.78 (1.28,2.48)	2.72 (1.90,3.90)	<0.001
Depression	1.47 (1.08,2.02)	1.79 (1.31,2.43)	1.89 (1.39,2.56)	2.36 (1.69,3.31)	<0.001
Schizophrenia	1.41 (0.62,3.19)	1.62 (0.72,3.62)	2.26 (1.02,4.99)	3.36 (1.45,7.77)	<0.001
Substance abuse disorders	1.55 (0.88,2.75)	1.98 (1.14,3.46)	2.47 (1.42,4.30)	3.92 (2.18,7.05)	<0.001

[a]Adjusted for sex, race, ethnicity, and individual level of education.

[b]The area deprivation index was estimated at the census block group level. Quintiles were defined using national area deprivation index rankings from the Neighborhood Atlas (https://www.neighborhoodatlas.medicine.wisc.edu/). Quintile 1 (1-20%) served as the reference (OR=1.00).

[c]Differences across quintiles were tested using a test for linear trend of the ORs. The P-value for trend was adjusted for the false discovery rate.

The two-way interactions of area deprivation index by race reached statistical significance for the following chronic conditions: hyperlipidemia, arthritis, hepatitis, anxiety, depression, and substance abuse disorders.

Supplemental Table 5. Odds ratio (95% confidence interval)[a] of each chronic condition across national quintiles of area deprivation index by ethnicity[b]

Chronic condition	Quintile 2 (21-40%)	Quintile 3 (41-60%)	Quintile 4 (61-80%)	Quintile 5 (81-100%)	P-trend[c]
Hispanic (N=10,546)					
Cardiometabolic conditions					
Hypertension	1.55 (1.05,2.29)	1.77 (1.20,2.60)	2.34 (1.59,3.46)	2.56 (1.68,3.89)	<0.001
Hyperlipidemia	0.92 (0.66,1.28)	1.08 (0.78,1.50)	1.10 (0.79,1.54)	1.51 (1.06,2.17)	0.0011
Diabetes	1.12 (0.78,1.62)	1.34 (0.94,1.93)	1.76 (1.22,2.53)	2.33 (1.58,3.44)	<0.001
Cardiac arrhythmias	1.08 (0.67,1.75)	1.36 (0.85,2.19)	1.58 (0.98,2.56)	1.96 (1.17,3.28)	0.0005
Coronary artery disease	1.32 (0.70,2.48)	1.38 (0.74,2.58)	1.69 (0.90,3.19)	1.99 (1.00,3.96)	0.0186
Congestive heart failure	7.04 (0.44,114.06)	12.03 (0.76,191.46)	12.89 (0.80,206.51)	20.18 (1.24,328.58)	0.0021
Stroke	0.59 (0.26,1.35)	0.91 (0.42,2.00)	0.98 (0.44,2.19)	0.98 (0.40,2.44)	0.2919
Other somatic conditions					
Arthritis	0.91 (0.64,1.30)	1.17 (0.82,1.66)	1.12 (0.78,1.60)	1.50 (1.01,2.23)	0.0051
Osteoporosis	0.51 (0.25,1.04)	0.84 (0.43,1.66)	0.71 (0.35,1.45)	0.36 (0.15,0.89)	0.3622
Cancer	0.86 (0.58,1.28)	0.82 (0.55,1.23)	0.78 (0.52,1.19)	0.84 (0.51,1.37)	0.4063
Chronic kidney disease	1.75 (0.80,3.81)	2.65 (1.23,5.70)	2.71 (1.25,5.87)	3.42 (1.51,7.74)	0.0011
Hepatitis	3.02 (0.39,23.63)	4.27 (0.56,32.78)	5.94 (0.78,45.22)	9.86 (1.27,76.78)	0.0005
Asthma	1.43 (0.87,2.35)	1.59 (0.97,2.61)	1.60 (0.97,2.63)	2.01 (1.19,3.39)	0.0143
Chronic obstructive pulmonary disease	1.48 (0.61,3.56)	1.83 (0.77,4.35)	2.55 (1.07,6.07)	3.65 (1.48,8.99)	<0.001
Mental health conditions					
Dementia	0.45 (0.20,1.03)	0.33 (0.14,0.78)	0.60 (0.27,1.37)	0.42 (0.16,1.12)	0.5998
Anxiety	1.09 (0.75,1.58)	1.25 (0.86,1.81)	1.45 (1.00,2.10)	1.86 (1.25,2.76)	0.0086
Depression	1.11 (0.80,1.56)	1.30 (0.94,1.81)	1.44 (1.04,2.01)	1.77 (1.24,2.53)	0.0019
Schizophrenia	1.11 (0.25,5.03)	1.38 (0.31,6.05)	2.40 (0.56,10.24)	3.42 (0.78,14.92)	0.0005
Substance abuse disorders	1.30 (0.69,2.44)	1.55 (0.83,2.90)	2.01 (1.08,3.73)	2.99 (1.58,5.66)	<0.001
Non-Hispanic (N=187,032)					
Cardiometabolic conditions					
Hypertension	1.34 (1.15,1.56)	1.65 (1.42,1.92)	1.88 (1.61,2.20)	2.58 (2.17,3.07)	<0.001
Hyperlipidemia	1.14 (0.97,1.34)	1.35 (1.15,1.58)	1.42 (1.21,1.67)	1.87 (1.56,2.24)	<0.001
Diabetes	1.12 (1.00,1.25)	1.23 (1.10,1.38)	1.36 (1.21,1.52)	1.65 (1.45,1.87)	<0.001
Cardiac arrhythmias	1.05 (0.93,1.19)	1.14 (1.01,1.29)	1.31 (1.16,1.48)	1.54 (1.34,1.77)	<0.001
Coronary artery disease	1.13 (0.97,1.31)	1.33 (1.15,1.53)	1.50 (1.29,1.74)	1.88 (1.59,2.23)	<0.001
Congestive heart failure	1.30 (1.10,1.54)	1.50 (1.27,1.77)	1.88 (1.59,2.22)	2.43 (2.02,2.93)	<0.001
Stroke	1.19 (0.99,1.44)	1.30 (1.08,1.56)	1.50 (1.25,1.80)	1.78 (1.44,2.20)	<0.001
Other somatic conditions					
Arthritis	0.97 (0.87,1.09)	1.04 (0.93,1.15)	1.09 (0.97,1.21)	1.11 (0.98,1.26)	<0.001
Osteoporosis	0.87 (0.71,1.07)	0.86 (0.70,1.05)	1.00 (0.82,1.23)	1.16 (0.91,1.46)	0.0029
Cancer	0.94 (0.83,1.05)	0.95 (0.85,1.07)	0.95 (0.84,1.07)	1.00 (0.87,1.14)	0.6922
Chronic kidney disease	1.29 (1.08,1.54)	1.55 (1.31,1.84)	1.81 (1.52,2.15)	2.59 (2.14,3.15)	<0.001
Hepatitis	0.80 (0.55,1.16)	1.08 (0.76,1.55)	1.52 (1.06,2.17)	2.42 (1.62,3.62)	<0.001
Asthma	0.96 (0.85,1.09)	1.11 (0.98,1.25)	1.31 (1.16,1.48)	1.78 (1.55,2.05)	<0.001
Chronic obstructive pulmonary disease	1.38 (1.10,1.74)	1.81 (1.44,2.26)	2.53 (2.02,3.17)	4.33 (3.39,5.54)	<0.001
Mental health conditions					
Dementia	1.00 (0.76,1.31)	1.04 (0.80,1.35)	1.33 (1.02,1.74)	1.43 (1.05,1.94)	<0.001
Anxiety	1.14 (0.99,1.31)	1.35 (1.18,1.55)	1.69 (1.48,1.94)	2.50 (2.14,2.91)	<0.001
Depression	1.23 (1.08,1.41)	1.53 (1.34,1.74)	1.91 (1.67,2.17)	2.66 (2.30,3.08)	<0.001
Schizophrenia	0.98 (0.65,1.49)	1.21 (0.81,1.82)	2.01 (1.34,3.02)	3.12 (2.00,4.87)	<0.001
Substance abuse disorders	1.16 (0.90,1.50)	1.48 (1.15,1.90)	2.21 (1.71,2.85)	3.66 (2.77,4.84)	<0.001

[a]Adjusted for sex, race, ethnicity, and individual level of education.

[b]The area deprivation index was estimated at the census block group level. Quintiles were defined using national area deprivation index rankings from the Neighborhood Atlas (https://www.neighborhoodatlas.medicine.wisc.edu/). Quintile 1 (1-20%) served as the reference (OR=1.00).

[c]Differences across quintiles were tested using a test for linear trend of the ORs. The P-value for trend was adjusted for the false discovery rate.

The two-way interactions of area deprivation index by ethnicity reached statistical significance for the following chronic conditions: diabetes, asthma, anxiety, and depression.