SUPPLEMENTAL MATERIAL

Table S1. Components of Area Deprivation index.

The ADI is a validated, weighted factor-based index which uses 17 markers of socioeconomic status including poverty, education, housing and employment indicators drawn from US Census data to create a measure of socioeconomic context for a particular census-based unit (data derived from Singh et al, *American journal of public health.* 2003;93:1137-1143).

Percent of population aged >= 25 years with < 9 years of education
Percent of population aged >= 25 years with < a high school diploma
Percent of employed persons >=16 years of age in white-collar occupations
Median family income
Income disparity (Defined by Singh as the log of 100 * the ratio of the number of households with <$10,000 in income to the number of households with $50,000 or more in income.)
Median home value
Median gross rent
Median monthly mortgage
Percent owner-occupied housing units (home ownership rate)
Percent of civilian labor force population >= 16 years of age unemployed (unemployment rate)
Percent of families below the poverty level
Percent of population below 150% of the poverty threshold
Percent of single-parent households with children < 18 years of age
Percent of households without a motor vehicle
Percent of households without a telephone
Percent of occupied housing units without complete plumbing
Percent of households with more than one person per room (crowding).

We estimated ADI at a 5 digit ZCTA by averaging the 9 digit ADI estimations for each zip code. We used the methodology described by Kind et al (*Annals of internal medicine.* 2014;161:765-774) and using datasets from the Health Innovation Program. Area Deprivation Index. UW Health Innovation Program; 2014. Available at: http://www.hipxchange.org/ADI.

Table S2. ICD-9 diagnosis and CPT codes used to define comorbidities and amputations.

Comorbid condition	Codes used
Depression	ICD9 diagnosis codes: 293.83, 296.0, 296.21, 296.22, 296.23, 296.24, 296.25, 296.26, 296.30, 296.31, 296.32, 296.33, 296.34, 296.35, 296.36, 300.4, 311
Hypertension	ICD9 diagnosis codes: 401.0 - 406
Coronary Artery Disease (CAD)	ICD9 diagnosis codes: 410.0 or 414.9 ICD9 ProcedureCode:36.xx
Atrial Fibrillation	ICD9 diagnosis codes: 427.31 or 427.32
Carotid artery stenosis	ICD9 diagnosis codes: 433.00 - 433.91,433.1, 433.10, 433.3, 433.30, 433.11, 433.31, 433.9 ,433.90, 433.91, 435.8 ,435.9, 784.94, 368.12, 434.91 ,436 ,342, 368.11, 368.44, 362.84, 435 ,437, 443.21, 900.01, 781.4, V12.54, 784.5 ,780.4, 780.2 ,368.9, 781.3, 447.1, 447.9, V72.81,v72.83, v72.84, 362.xx ICD9 Procedure Code: 00.63,38.12 CPT Code: 37215,37216,37217,0075T,35301
Congestive Heart Failure (CHF)	ICD9 diagnosis codes: 428.0 - 428.9
Chronic Obstructive Pulmonary Disease (COPD)	ICD9 diagnosis codes: 490,491.0, 491.1, 491.2, 491.20, 491.21, 491.22, 491.8, 491.9, 492.0, 492.8, 494, 494.0, 494.1, 496, 493.00, 493.01, 493.02, 493.10, 493.11, 493.12, 493.20, 493.21, 493.22, 493.81, 493.82, 494.90, 493.90, 493.92
Chronic Kidney Disease/End Stage Renal Disease (CKD/ESRD)	ICD9 diagnosis codes: 403.01, 403.11, 403.91, 404.02, 404.03, 404.12, 404.12, 404.13, 404.92, 404.93,585.5,585.6, V45.11, V45.12, V56.0, V56.1, V56.2, V56.32, V56.9,996.73 ICD9 Procedure Code: 38.95
Amputation	ICD9 Procedure Code: 84.10, 84.14, 84.15,84.16, 84.17, 84.18, 84.19 CPT Code: 27290, 27295, 27590, 27591,27592,27598, 27880, 27881,27882
Critical limb ischemia (additional codes besides PAD coding)	ICD9 diagnosis codes: 040.0, 785.4, 730.07, 730.17, 730.27, 730.97, 707.14, 707.15, 707.1, 680.7, 682.7, 681.10, 681.11 CPT codes: 11044, 10060, 10061, 20000, 20005

Table S3. Comparison of missing and non-missing demographics. Stratified by no vs. any missing data, and observations included in and excluded from each Cox proportional hazards models due to missing data.

Variable	All	Included in Cox models	Excluded from Cox models (missing covariates)*
N	155,647	129,157	26,490
Race [Missing= 11,872 (7.6%)]			
White	82.6	82.53	83.21
Black	16.14	16.24	15.25
Other	1.26	1.23	1.55
Median Household Income of Residential ZCTA [Missing= 3637 (2.3%)]			
<=$40,000	30.85	30.99	30.06
> $40,000	69.15	69.01	69.93
Urban vs. Rural ZCTA, %[(Missing= 3208 (2.1%)]			
Urban Area (pop. > 50K)	67.27	67.66	65.12
Urban Cluster (pop. <=50K)	20.1	19.9	21.18
Rural	12.63	12.44	13.7
Age (y) *[Missing= 11(0.01%)]*	66.66 (9.85)	66.41 (9.74)	67.89 (10.27)
Sex (% Male) *[Missing= 11(0.01%)]*	97.92	97.93	97.88
Smoking			
Current	51.38	52.48	46.01
Former	19.01	19.21	18.08
Never	6.46	6.36	6.95
Missing	23.15	21.96	28.96
BMI, kg/m2 *[Missing= 9514 (6.1%)]*			
Underweight (<18.5)	2.29	2.29	2.25
Normal Weight, 18.5-24.9	26.25	26.08	27.52
Overweight (25.0-29.9)	36.02	35.93	36.74
Obese (30.0+)	35.44	35.7	33.49
Serum Creatinine *[Missing= 3613 (2.3%)]*	1.10 (0.90-1.40)	1.10 (0.90-1.40)	1.10 (0.90-1.40)
Comorbidities [Missing= 0 (0%)]			
Diabetes	45.52	46.1	42.68
Hypertension	84.22	85.02	80.28

CAD	46.25	47.1	42.13
CHF	16.4	16.87	14.12
COPD	8.53	8.82	7.09
AF	12.01	12.26	10.8
Carotid Disease	63.79	65.07	57.55
Depression	15.99	16.52	13.41
CKD or ESRD	7.37	7.6	6.25
PAD severity, % [Missing=0 (0%)]			
Unspecified (per ICD-9 codes)	68.54	68.39	69.25
Claudication	20.2	20.1	20.66
Critical Limb Ischemia	11.26	11.51	10.08

Abbreviations: PAD, Peripheral Artery Disease; VHA, Veterans Health Administration; SD, standard deviation; IQR, interquartile range; BMI, body mass index; CAD, coronary artery disease; CHF, congestive heart failure; COPD, chronic obstructive pulmonary disease; AF, atrial fibrillation; CKD, chronic kidney disease; ESRD, end stage renal disease; mg, milligram; dL, deciliter.

*p for comparisons across Cox inclusion/exclusion <0.0001 for all variables except income, and poverty ($p<0.05$); and creatinine and sex ($p>0.05$)

Table S4. Cause specific Cox proportional hazard models for impact of race and socioeconomic status on amputations: (1) Fully adjusted primary model, (2) Fully adjusted model without medications and (3) Fully adjusted model using CKD as defined by eGFR

	Model 1	**Model 2**	**Model 3**
Variable	**Fully adjusted model**	**Fully adjusted model without medications**	**Fully adjusted model using CKD by eGFR**
Race			
White	Ref.	Ref	Ref.
Black	1.37 (1.30, 1.45)	1.41(1.34, 1.49)	1.38 (1.30 , 1.45)
Median Income (Household) of Residential ZCTA			
$40,001+	Ref.	Ref	Ref
<=$40,000	1.12 (1.06, 1.17)	1.12 (1.07, 1.17)	1.12 (1.06 , 1.17)
Age (1-year increase)	0.99, 0.98, 0.99)	0.99 (0.98, 0.99)	0.99 (0.99 , 0.99)
Sex			
Male	Ref.	Ref	Ref.
Female	0.46 (0.37 , 0.57)	0.46 (0.36, 0.57)	0.46 (0.37 , 0.57)
Diabetes	1.64 (1.49, 1.82)	1.90 (1.10, 1.28)	1.65 (1.50 , 1.82)
CKD or ESRD	1.59 (1.46, 1.73)	1.67 (1.54, 1.83)	-
PAD Severity			
Claudication	Ref.	Ref	Ref
Unspecified (per ICD-9 codes)	0.88 (0.80, 0.96)	0.90 (0.83 - 0.98)	0.88 (0.80 , 0.96)
Critical Limb Ischemia	6.43 (5.92, 6.98)	6.99 (6.45, 7.59)	6.41 (5.91 , 6.96)
Urban			
Urban Area, pop. > 50k	Ref.	Ref	Ref.
Urban Cluster, pop. 2.5k-50k	0.99 (0.93, 1.05)	0.98 (0.93, 1.04)	0.93 (0.86 , 1.00)
Rural	0.93 (0.87, 1.01)	0.93 (0.86, 1.00)	0.99 (0.93 , 1.05)
Comorbidities (ref: no)			
Hypertension	1.22 (1.14, 1.32)	1.19 (1.10, 1.28)	1.23 (1.14 , 1.32)
Coronary Artery Disease	1.09 (1.04, 1.14)	1.04 (0.99, 1.09)	1.09 (1.04 , 1.15)
Congestive Heart failure	1.34 (1.26, 1.42)	1.37 (1.29, 1.45)	1.33 (1.26 , 1.41)
COPD	0.90 (0.83, 0.99)	0.90 (0.83, 0.98)	0.90 (0.83 , 0.98)
Atrial Fibrillation	1.22 (1.14, 1.30)	1.23 (1.15, 1.31)	1.22 (1.14 , 1.31)
Carotid Disease	1.14 (1.09, 1.20)	1.16 (1.10, 1.22)	1.14 (1.09 , 1.20)
Depression	1.07 (1.01, 1.13)	1.09 (1.03, 1.16)	1.07 (1.01 , 1.13)

BMI (kg/m2)			
Normal Weight (18.5-24.9)	Ref.	Ref	Ref
Underweight (<18.5)	1.67 (1.49, 1.87)	1.72 (1.54, 1.92)	1.67 (1.49 , 1.86)
Overweight (25.0-29.9)	0.70 (0.66, 0.74)	0.70 (0.66, 0.74)	0.70 (0.67 , 0.75)
Obese (30.0+)	0.60 (0.57, 0.64)	0.61 (0.58, 0.65)	0.60 (0.57 , 0.64)
Smoking			
Current	1.26 (1.15, 1.38)	1.22 (1.11, 1.33)	1.25 (1.15 , 1.37)
Former	1.01 (0.91, 1.11)	0.98 (0.89, 1.09)	1.00 (0.91 , 1.11)
Never	Ref.	Ref	Ref.
Unknown	1.05 (0.95, 1.12)	1.03 (0.94, 1.14)	1.04 (0.94 , 1.15)
Creatinine (1 mg/dL increase)	1.02 (1.00, 1.04)	1.03 (1.01, 1.04)	1.01 (0.99 , 1.03)
Medications			
Statin (Ref. = None)	0.81 (0.77, 0.85)	-	0.81 (0.77 , 0.85)
Antiplatelets (Ref. = None)	0.91 (0.86, 0.96)	-	0.91 (0.86 , 0.96)
Antiglycemics (Ref. = None)		-	
Oral	0.91 (0.82, 1.00)	-	0.90 (0.82 , 1.00)
Insulin	1.46 (1.33, 1.61)	-	1.46 (1.33 , 1.61)
Cilostazol (Ref. = No)	0.81 (0.74, 0.90)	-	0.81 (0.73 , 0.90)
CKD stage by eGFR			
None/Stage 1-2	-	-	Ref.
Stage 3	-	-	0.91 (0.86 , 0.97)
Stage 4	-	-	1.35 (1.19 , 1.52)
Stage 5/ESRD	-	-	1.60 (1.46 , 1.76)

Abbreviations: HR, hazard ratio; CI, confidence interval; ZCTA, zip code tabulation area; BMI, body mass index; CKD, chronic kidney disease; ESRD, end stage renal disease, COPD: Chronic obstructive pulmonary disease.