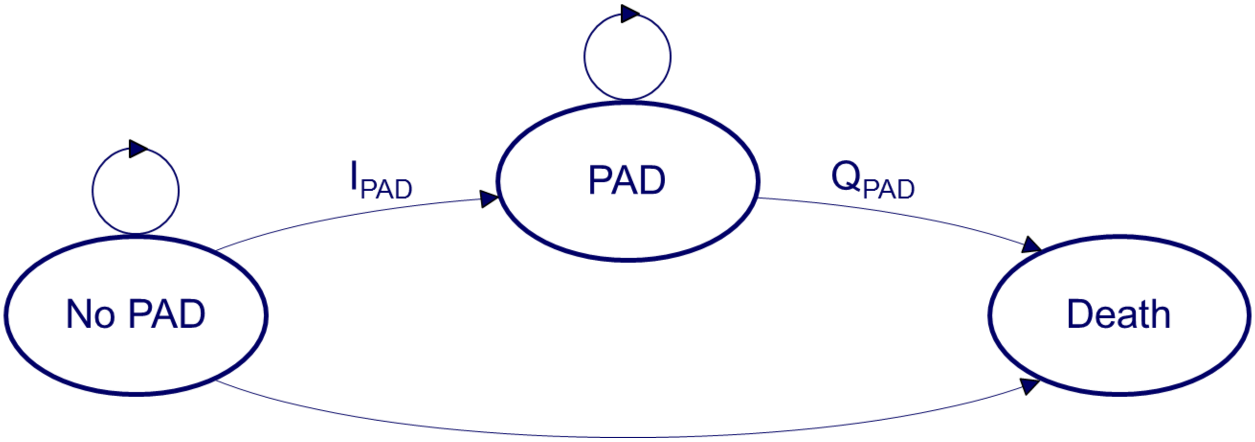
SUPPLEMENTAL MATERIAL

Data S1. State transition probabilities.

Markov chain model used to simulate the progression of an individual free of peripheral artery disease (PAD) through death or the development of PAD.



Terms of symbols in the formula

P_x --- prevalence of PAD at a given age, sex and race/ethnicity (from section “Estimating the prevalence of PAD”)

P_{x+1} --- prevalence of PAD at the next year of age as for P1x (from section “Estimating the prevalence of PAD”)

HR_x --- hazard ratios of mortality for PAD vs. no PAD at a given age, sex and race/ethnicity (from section “Estimating the relative risk of mortality for PAD vs. no PAD”)

Q_x --- annual probability of death for the US population at a given age, sex and race/ethnicity (from National Vital Statistics Report)

Q_{0x} (Q_{noPAD}) --- 1-year probability of dying among persons free of PAD at a given age, sex and race/ethnicity

Q_{1x} (Q_{PAD}) --- 1-year probability of dying among persons with PAD at a given age, sex and race/ethnicity

RR_x --- risk ratios of mortality for PAD vs. no PAD at a given age, sex and race/ethnicity

I_x (I_{PAD}) --- the probability of developing PAD at a given age, sex race/ethnicity

Step 1: calculate $Q_{0x.}$ This approach is based on the fact that annual overall mortality can be viewed as weighted average of 1-year probability of dying among persons with PAD and that of those without PAD

From Cox survival model

$Q_{1x} = 1 – (1 – Q_{0x})$ ^HR_x (1)

$RR_x = Q_{1x} / Q_{0x} = (1 – (1 – Q_{0x}) \text{^}HR_x) / Q_{0x}$ (2)

$Q_x = (1 – P_x) Q_{0x} + P_x Q_{1x} = (1 – P_x) Q_{0x} + P1_x RR_x Q_{0x} = (1 – P_x + P_x RR_x) Q_{0x}$ (3)

$Q_{0x} = Q_x / (1 – P_x + P_x RR_x)$ (4)

Since we do not know RR_x, we used iterations to approximate RR_x.

From equation (2) above, the limit of RR_x of Q_{0x} as Q_{0x} approaches 0 equals HR_x. So we used HR_x as the beginning value of RR_x. During iterations, we first used equation (4) and RR_x from the previous iteration to get Q_{0x} of the current iteration. Then we used equation (2) to get RR_x of the current iteration. The iterations were stopped until the difference of Q_{0x} between current and previous iteration was less than 1E-8.

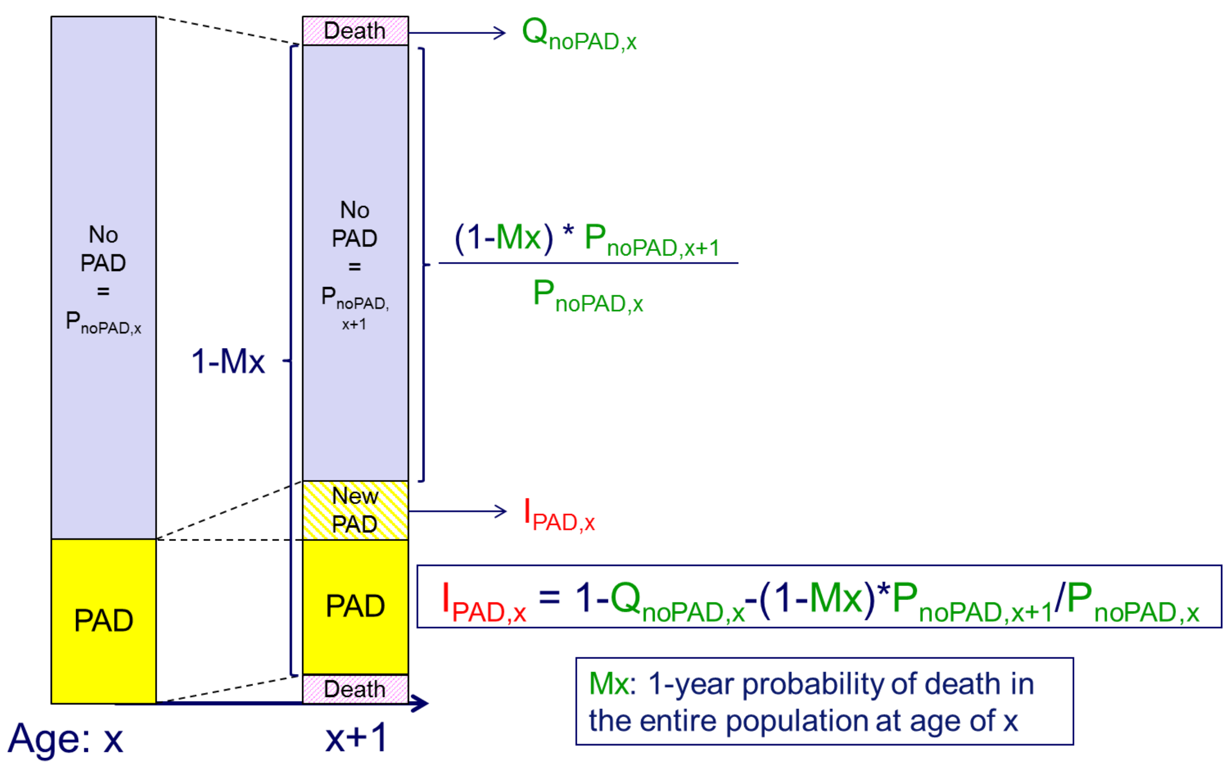
Step 2: calculate I_x. This approach is based on the fact that the prevalence of no PAD at age of x+1 is determined by four elements, the prevalence of no PAD at age of x, two types of exits from no PAD, annual incidence of PAD during age of x or mortality among no PAD during age of x, and annual mortality of the population.

$1 – P_{x+1} = (1 – P_x) (1 – I_x – Q_{0x}) / (1-Q_x)$ (5)

$1 – I_x – Q_{0x} = (1 – P_{x+1}) (1-Q_x) / (1 – P_x)$ (6)

$I_x = 1– Q_{0x} – (1 – P_{x+1}) (1-Q_x) / (1 – P_x)$ (7)

The scheme below depicts how we obtained $I_{PAD,x}$.



Data S2. Methods for measuring ABI in each cohort.

ARIC: The ABI was measured by Dinamap Model 1846 SX, an oscillometric device.[1] Ankle systolic blood pressure was measured a maximum of four times in a randomly selected single leg, and the last measurement was used for ABI. Brachial systolic blood pressure was measured twice, and the first measurement was used.

FHS and FOF: The ABI was measured using an 8-MHz Doppler probe and an ultrasonic Doppler flow detector (Parks Medical Electronics Inc, Shaw Aloha, Oregon).[2, 3] Systolic blood pressure was measured twice on both arms and both ankles. When the first two blood pressure values were different by >10 mmHg at any site, a third measurement was performed. When the posterior tibial pulse was not located, measurement was conducted at the dorsalis pedis artery. The ABI was calculated for each leg as the average ankle systolic blood pressure divided by the average systolic blood pressure of the higher arm.

MESA: The ABI was measured by a handheld Doppler instrument with a 5-MHz probe.[4] Systolic blood pressure was measured at the right and left brachial, dorsalis pedis, and posterior tibial arteries. The higher value of brachial artery pressure was used as the denominator of ABI. The higher pressure from dorsalis pedis or posterior tibial was used as the numerator of ABI for each leg, and the smaller value between right or left was recorded.

NHANES: Systolic blood pressure was measured on the right arm (left arm was used if there were any conditions on the right arm that would interfere with blood pressure measurement) and bilateral posterior tibial arteries.[5] The measurements were done twice among participants aged 40-59 years and once in participants aged 60 years or older. ABI was calculated for each leg by dividing the average systolic blood pressure in the ankle by the average blood pressure in the arm, and the smaller value was recorded.

Data S3. Residual lifetime cumulative incidence by traditional atherosclerotic risk factors.

Lifetime cumulative incidence estimates at a given age, sex and race/ethnicity can be viewed as a weighted average of residual lifetime risk of subgroups determined by combinations of the presence and absence (or higher and lower values if continuous factors) of traditional risk factors at that given age, sex and race/ethnicity. Using sample weights and actual values of traditional risk factors in NHANES, we first estimated lifetime cumulative incidence for a hypothetical person at a given age, sex and race/ethnicity, as well as traditional risk factors.

Terms of symbols in the formula

R_x --- Lifetime cumulative incidence estimates of PAD at a given age, sex and race/ethnicity (from section "Lifetime accumulative incidence estimation")

R_{x0} --- Lifetime cumulative incidence estimates of PAD at a given age, sex and race/ethnicity for a hypothetical person with given values of traditional risk factors (no diabetes, nonsmoker, systolic blood pressure 120 , high-density lipoprotein cholesterol 60mg/dL, total cholesterol 200 mg/dL and no history of CHD or stroke)

R_{xi} --- Lifetime cumulative incidence estimates of PAD at a given age, sex and race/ethnicity for a real individual in NHANES with actual values of traditional risk factors

OR_{xi} --- odds ratios of PAD for a real individual in NHANES compared to the hypothetical person at the same sex and race/ethnicity group and within 5 year of age (from section "Estimating relative risk of PAD for traditional risk factors", combined with difference between actual value of the individual and the given value of the hypothetical person for each risk factor as well as age)

W_{xi} --- sample weight for a real individual in NHANES at the same sex and race/ethnicity group and within 5 year of age

TW --- total sample weight for real individuals in NHANES at the same sex and race/ethnicity group and within 5 year of age

RR_{xi} --- risk ratios of PAD for a real individual in NHANES compared to the hypothetical person at the same sex and race/ethnicity group and within 5 year of age.

From logistic model

$R_{xi} = R_{x0}\ OR_{xi} / (1 – R_{x0} + R_{x0}\ OR_{xi})$ (8)

$RR_{xi} = R_{xi} / R_{x0} = OR_{xi} / (1 – R_{x0} + R_{x0}\ OR_{xi})$ (9)

R_x = sum of i ($R_{xi}\ W_{xi}$ / TW) = sum of i ($RR_{xi}\ R_{x0}\ W_{xi}$ / TW) = sum of i ($RR_{xi}\ W_{xi}$) R_{x0} / TW (10)

$R_{x0} = R_x$ TW / sum of i ($RR_{xi}\ W_{xi}$)   (11)

Since we do not know RR_{xi}, we used iterations to approximate RR_{xi}.

From equation (9) above, RR_{xi} approximately equals OR_{xi} when R_{x0} is very small. So we used OR_{xi} as the beginning value of RR_{xi}. During iterations, we first used equation (11) and RR_{xi} from the previous iteration to get R_{x0} of the current iteration. Then we used equation (9) to get RR_{xi} of the current iteration. The iterations were stopped until the difference of R_{x0} between current and previous iteration was less than 1E-8.

By using equation (9) above, we can estimate residual lifetime cumulative incidence for scenarios with combinations of any traditional risk factors.

Data S4. Project an Individual's residual cumulative incidence (%) of PAD in the United States.

Step 1: Calculate linear function (B) for individual participant

B = 0.1194242 × (SBP – 120) /10 – 0.3924322 × (HDLC – 1.5516) + 0.1301318 × (Tchol – 5.172) + 0.4291214 (if diabetes) + 0.4024582 (if former smoker) + 1.129064 (if current smoker) + 0.6998957 (if history of CVD)

Step 2: Use the Lifetime Risk (%) for given age, sex, and race x (Hx)

Age Group	White Man	White Woman	Black Man	Black Woman	Hispanic Man	Hispanic Woman
40-44	10.996	13.045	16.922	16.335	10.601	14.178
45-49	9.307	11.033	16.605	14.678	9.197	13.352
50-54	8.760	9.401	14.730	16.944	11.227	13.878
55-59	8.473	9.359	18.222	15.068	8.584	12.654
60-64	6.917	7.287	13.709	12.058	8.655	10.319
65-69	6.481	6.698	13.971	10.647	10.156	8.857
70-74	5.575	5.087	11.872	6.764	7.181	6.090
75-79	3.754	3.554	8.821	4.716	5.007	4.547

Step 3: Project residual cumulative incidence (%) for an individual

Residual cumulative incidence (%) = H_x × exp(B) / (100 + H_x × (exp(B) – 1)) × 100

Table S1. Baseline study characteristics by sex.

Male	Study					
	ARIC (6517)	CHS (2428)	FHS (221)	FOF (1650)	MESA (3199)	NHANES (3748)
Total of death - N (%)	2366 (36%)	2123 (87%)	173 (78%)	239 (14%)	653 (20%)	895 (24%)
Follow-up time (y) - Mean(SD)	18 (5.6)	12 (6.5)	8.4 (4.0)	10 (2.2)	12 (2.7)	8.8 (2.7)
Age (y) - Mean (SD)	55 (5.9)	73 (5.7)	79 (3.9)	59 (9.7)	62 (10)	60 (13)
Race/Ethnicity - N (%)						
White	5121 (79%)	2092 (86%)	221 (100%)	1650 (100%)	1255 (39%)	2124 (57%)
Black	1396 (21%)	319 (13%)	-	-	835 (26%)	691 (18%)
Hispanic	-	17 (0.70%)	-	-	1109 (35%)	933 (25%)
Smoking Status - N (%)						
Never	1798 (28%)	772 (32%)	212 (96%)	1408 (85%)	1296 (41%)	1020 (27%)
Former	2938 (45%)	1386 (57%)	-	-	1438 (45%)	2252 (60 %)
Current	1781 (27%)	270 (11%)	9 (4.1%)	242 (15%)	465 (15%)	473 (13%)
SBP (mmHg) - Mean (SD)	122 (18)	136 (21)	143 (22)	129 (17)	126 (19)	130 (19)
Total cholesterol (mmol/L) - Mean(SD)	5.5 (1.0)	5.1 (0.9)	5.0 (0.8)	5.1 (1.0)	4.6 (0.9)	5.3 (1.1)
HDL cholesterol (mmol/L) - Mean(SD)	1.1 (0.4)	1.2 (0.3)	1.1 (0.4)	1.1 (0.3)	1.2 (0.3)	1.2 (0.4)
Diabetes - N (%)	735 (11%)	416 (17%)	58 (26%)	195 (12%)	444 (14%)	659 (18%)
History of CHD or stroke - N (%)	878 (13%)	505 (21%)	74 (33%)	156 (9.5%)	3 (0.09%)	576 (15%)
ABI - Mean (SD)	1.16 (0.14)	1.08 (0.20)	1.04 (0.23)	1.14 (0.13)	1.14 (0.13)	1.11 (0.16)
PAD (ABI <0.90) - N (%)	220 (3.4%)	359 (15%)	48 (22%)	56 (3.4%)	121 (3.8%)	312 (8.3%)

Female	Study					
	ARIC (7757)	CHS (3234)	FHS (376)	FOF (1870)	MESA (3573)	NHANES (3581)
Total of death - N (%)	1906 (25%)	2485 (77%)	257 (68%)	141 (7.5%)	491 (14%)	621 (17%)
Follow-up time (y) - Mean(SD)	19 (4.8)	14 (6.3)	9.4 (3.8)	10 (1.9)	13 (2.3)	9.2 (2.5)
Age (y) - Mean (SD)	54 (5.9)	72 (5.4)	80 (3.9)	58 (9.5)	62 (10)	60 (13)
Race/Ethnicity - N (%)						
White	5598 (72%)	2698 (83%)	376 (100%)	1870 (100%)	1359 (38%)	1968 (55%)
Black	2159 (28%)	518 (16%)	-	-	1033 (29%)	670 (19%)
Hispanic	-	18 (0.56%)	-	-	1181 (33%)	943 (26%)
Smoking Status - N (%)						
Never	4065 (52%)	1843 (57%)	345 (92%)	1569 (84%)	2107 (59%)	2043 (57%)
Former	1761 (23%)	983 (30%)	-	-	1051 (29%)	1040 (29%)
Current	1931 (25%)	408 (13%)	31 (8.2%)	301 (16%)	415 (12%)	494 (14%)
SBP (mmHg) - Mean (SD)	120 (20)	137 (22)	143 (21)	126 (19)	127 (23)	133 (23)
Total cholesterol (mmol/L) - Mean(SD)	5.6 (1.1)	5.7 (1.0)	5.5 (1.0)	5.5 (1.0)	5.2 (0.9)	5.5 (1.0)
HDL cholesterol (mmol/L) - Mean(SD)	1.5 (0.4)	1.5 (0.4)	1.4 (0.4)	1.5 (0.4)	1.5 (0.4)	1.5 (0.4)
Diabetes - N (%)	844 (11%)	421 (13%)	72 (19%)	141 (7.5%)	404 (11%)	541 (15%)
History of CHD or stroke - N (%)	918 (12%)	388 (12%)	62 (16%)	65 (3.5%)	2 (0.06%)	338 (9.4%)
ABI - Mean (SD)	1.11 (0.14)	1.05 (0.15)	0.99 (0.19)	1.08 (0.10)	1.09 (0.11)	1.07 (0.15)
PAD (ABI <0.90) - N (%)	414 (5.3%)	400 (12%)	76 (20%)	56 (3.0%)	134 (3.8%)	321 (9.0%)

SD: standard deviation; SBP: systolic blood pressure; HDL: high-density lipoprotein; ABI: ankle-brachial index; PAD: peripheral artery disease

Table S2. Odds ratio of PAD (ABI <0.9) according to demographic factors from the pooled data of six US cohorts.

Demographic variables	Odds ratios for ABI<0.9
Age for White and Black male, per 5y	1.56 (1.50, 1.61)
Female at age 65 for Whites	1.24 (1.12, 1.38)
Black for male	2.16 (1.86, 2.52)
Hispanic at age 65 for male	0.76 (0.62, 0.93)
Age * female, per 5y	0.90 (0.86, 0.94)
Age * Hispanic, per 5y	1.16 (1.06, 1.27)
Female * Black	0.77 (0.63, 0.94)

All variables listed were modeled simultaneously.

Table S3. Sex- and race/ethnicity-adjusted hazard ratios (95% CIs) for mortality according to PAD (ABI <0.9) vs. no PAD (ABI ≥0.9)

Characteristic	**HR (95% CIs)**
Low ABI at age 65	2.43 (2.18, 2.72)
Low ABI * age with age<65, per 5y	1.09 (1.00, 1.18)
Low ABI * age with age≥65, per 5y	0.87 (0.83, 0.92)

All variables listed were modeled simultaneously.

Table S4. Estimated Q_{noPAD} (1-year probability of dying among persons of a given age, sex, and race/ethnicity and free of PAD) and I_{PAD} (the probability of developing PAD at a given age) at each age from birth to 80 years in each sex and racial/ethnic group.

	White men		White women		Black men		Black women		Hispanic men		Hispanic women	
Age	$Q_{noPAD,x}$	$I_{PAD,x}$	$Q_{noPAD,x}$	$I_{PAD,x}$	$Q_{noPAD,x}$	$I_{PAD,x}$	$Q_{noPAD,x}$	$I_{PAD,x}$	$Q_{noPAD,x}$	$I_{PAD,x}$	$Q_{noPAD,x}$	$I_{PAD,x}$
0	0.0060382	0.0000224	0.0049966	0.0000843	0.0139084	0.0000534	0.0114623	0.0001567	0.0060643	0.0000032	0.0050652	0.0000130
1	0.0004640	0.0000227	0.0003913	0.0000827	0.0007636	0.0000492	0.0005462	0.0001385	0.0004421	0.0000034	0.0003704	0.0000135
2	0.0002985	0.0000247	0.0002167	0.0000881	0.0004622	0.0000535	0.0003487	0.0001476	0.0002846	0.0000039	0.0001887	0.0000148
3	0.0002337	0.0000270	0.0001573	0.0000941	0.0003470	0.0000584	0.0003214	0.0001577	0.0001934	0.0000043	0.0001619	0.0000163
4	0.0001671	0.0000294	0.0001427	0.0001006	0.0003105	0.0000637	0.0002063	0.0001682	0.0001723	0.0000049	0.0001383	0.0000180
5	0.0001565	0.0000322	0.0001248	0.0001076	0.0002693	0.0000696	0.0001894	0.0001798	0.0001467	0.0000055	0.0001203	0.0000198
6	0.0001400	0.0000351	0.0001138	0.0001150	0.0002516	0.0000760	0.0001582	0.0001921	0.0001289	0.0000062	0.0001081	0.0000218
7	0.0001247	0.0000384	0.0001052	0.0001229	0.0002293	0.0000830	0.0001376	0.0002053	0.0001123	0.0000069	0.0001002	0.0000241
8	0.0001055	0.0000419	0.0000965	0.0001314	0.0001909	0.0000906	0.0001260	0.0002195	0.0000921	0.0000078	0.0000954	0.0000265
9	0.0000837	0.0000457	0.0000878	0.0001405	0.0001394	0.0000989	0.0001226	0.0002346	0.0000692	0.0000088	0.0000937	0.0000292
10	0.0000684	0.0000500	0.0000821	0.0001502	0.0000945	0.0001079	0.0001278	0.0002509	0.0000519	0.0000099	0.0000958	0.0000322
11	0.0000756	0.0000546	0.0000852	0.0001606	0.0000901	0.0001179	0.0001428	0.0002683	0.0000557	0.0000111	0.0001033	0.0000355
12	0.0001238	0.0000597	0.0001036	0.0001718	0.0001644	0.0001289	0.0001687	0.0002869	0.0000996	0.0000125	0.0001185	0.0000391
13	0.0002216	0.0000653	0.0001402	0.0001838	0.0003333	0.0001411	0.0002048	0.0003070	0.0001949	0.0000141	0.0001420	0.0000431
14	0.0003528	0.0000714	0.0001885	0.0001967	0.0005609	0.0001546	0.0002471	0.0003284	0.0003287	0.0000159	0.0001714	0.0000475
15	0.0004888	0.0000782	0.0002412	0.0002105	0.0007961	0.0001695	0.0002919	0.0003514	0.0004750	0.0000180	0.0002050	0.0000523
16	0.0006165	0.0000855	0.0002894	0.0002253	0.0010067	0.0001857	0.0003363	0.0003759	0.0006159	0.0000202	0.0002375	0.0000577
17	0.0007456	0.0000936	0.0003290	0.0002410	0.0012031	0.0002033	0.0003806	0.0004022	0.0007552	0.0000228	0.0002642	0.0000636
18	0.0008759	0.0001024	0.0003567	0.0002578	0.0013860	0.0002227	0.0004264	0.0004303	0.0008895	0.0000257	0.0002825	0.0000701
19	0.0010050	0.0001121	0.0003762	0.0002757	0.0015626	0.0002438	0.0004753	0.0004604	0.0010173	0.0000290	0.0002946	0.0000772
20	0.0011433	0.0001227	0.0003953	0.0002949	0.0017594	0.0002670	0.0005314	0.0004926	0.0011544	0.0000327	0.0003057	0.0000851
21	0.0012718	0.0001342	0.0004165	0.0003154	0.0019565	0.0002924	0.0005905	0.0005271	0.0012811	0.0000368	0.0003183	0.0000938
22	0.0013553	0.0001468	0.0004351	0.0003373	0.0020987	0.0003199	0.0006429	0.0005640	0.0013514	0.0000415	0.0003299	0.0001033
23	0.0013763	0.0001604	0.0004506	0.0003606	0.0021539	0.0003496	0.0006812	0.0006032	0.0013446	0.0000467	0.0003399	0.0001139
24	0.0013519	0.0001751	0.0004637	0.0003856	0.0021411	0.0003817	0.0007082	0.0006449	0.0012869	0.0000525	0.0003483	0.0001255
25	0.0013129	0.0001911	0.0004772	0.0004123	0.0021021	0.0004166	0.0007343	0.0006896	0.0012171	0.0000590	0.0003576	0.0001382
26	0.0012838	0.0002086	0.0004921	0.0004408	0.0020757	0.0004547	0.0007659	0.0007373	0.0011620	0.0000664	0.0003666	0.0001523
27	0.0012646	0.0002278	0.0005073	0.0004713	0.0020680	0.0004964	0.0008011	0.0007884	0.0011209	0.0000747	0.0003724	0.0001678
28	0.0012644	0.0002488	0.0005239	0.0005039	0.0020970	0.0005422	0.0008440	0.0008431	0.0011004	0.0000841	0.0003743	0.0001849

	White men		White women		Black men		Black women		Hispanic men		Hispanic women	
Age	$Q_{noPAD,x}$	$I_{PAD,x}$	$Q_{noPAD,x}$	$I_{PAD,x}$	$Q_{noPAD,x}$	$I_{PAD,x}$	$Q_{noPAD,x}$	$I_{PAD,x}$	$Q_{noPAD,x}$	$I_{PAD,x}$	$Q_{noPAD,x}$	$I_{PAD,x}$
29	0.0012809	0.0002718	0.0005439	0.0005388	0.0021585	0.0005925	0.0008969	0.0009017	0.0010957	0.0000946	0.0003752	0.0002037
30	0.0013052	0.0002969	0.0005700	0.0005762	0.0022380	0.0006475	0.0009625	0.0009645	0.0010937	0.0001065	0.0003758	0.0002244
31	0.0013319	0.0003243	0.0006035	0.0006162	0.0023173	0.0007077	0.0010386	0.0010319	0.0010919	0.0001198	0.0003822	0.0002472
32	0.0013633	0.0003543	0.0006420	0.0006590	0.0024199	0.0007736	0.0011237	0.0011041	0.0010792	0.0001348	0.0003976	0.0002723
33	0.0014067	0.0003872	0.0006875	0.0007048	0.0024507	0.0008447	0.0012012	0.0011811	0.0011309	0.0001518	0.0004378	0.0003002
34	0.0014546	0.0004231	0.0007357	0.0007538	0.0024994	0.0009226	0.0012825	0.0012634	0.0011744	0.0001710	0.0004881	0.0003308
35	0.0015152	0.0004623	0.0007896	0.0008063	0.0025566	0.0010076	0.0013684	0.0013515	0.0012266	0.0001925	0.0005467	0.0003647
36	0.0015917	0.0005053	0.0008520	0.0008626	0.0026413	0.0011009	0.0014700	0.0014460	0.0012897	0.0002168	0.0006083	0.0004020
37	0.0016831	0.0005525	0.0009244	0.0009229	0.0027590	0.0012032	0.0015956	0.0015477	0.0013744	0.0002441	0.0006733	0.0004431
38	0.0017931	0.0006041	0.0010105	0.0009876	0.0029212	0.0013156	0.0017535	0.0016574	0.0014851	0.0002750	0.0007402	0.0004884
39	0.0019260	0.0006607	0.0011116	0.0010570	0.0031279	0.0014393	0.0019419	0.0017756	0.0016183	0.0003099	0.0008113	0.0005384
40	0.0020736	0.0007227	0.0012201	0.0011315	0.0033660	0.0015750	0.0021443	0.0019025	0.0017709	0.0003493	0.0008882	0.0005935
41	0.0022445	0.0007908	0.0013391	0.0012113	0.0036306	0.0017240	0.0023579	0.0020387	0.0019347	0.0003936	0.0009758	0.0006543
42	0.0024567	0.0008657	0.0014791	0.0012971	0.0039327	0.0018876	0.0025970	0.0021853	0.0021018	0.0004436	0.0010788	0.0007214
43	0.0027111	0.0009481	0.0016388	0.0013895	0.0042697	0.0020675	0.0028596	0.0023431	0.0022656	0.0004999	0.0011998	0.0007955
44	0.0029929	0.0010388	0.0018088	0.0014885	0.0046392	0.0022649	0.0031371	0.0025125	0.0024302	0.0005633	0.0013354	0.0008773
45	0.0032796	0.0011380	0.0019808	0.0015945	0.0050127	0.0024808	0.0034143	0.0026937	0.0026051	0.0006348	0.0014803	0.0009675
46	0.0035701	0.0012466	0.0021511	0.0017077	0.0054195	0.0027179	0.0036944	0.0028875	0.0028008	0.0007154	0.0016308	0.0010670
47	0.0038829	0.0013658	0.0023230	0.0018289	0.0059230	0.0029806	0.0039956	0.0030958	0.0030221	0.0008064	0.0017885	0.0011767
48	0.0042294	0.0014969	0.0025008	0.0019586	0.0065616	0.0032736	0.0043302	0.0033203	0.0032787	0.0009093	0.0019546	0.0012977
49	0.0046108	0.0016412	0.0026893	0.0020976	0.0073193	0.0035996	0.0046969	0.0035623	0.0035729	0.0010254	0.0021313	0.0014311
50	0.0050250	0.0017997	0.0028966	0.0022470	0.0081400	0.0039596	0.0050937	0.0038230	0.0038966	0.0011567	0.0023275	0.0015784
51	0.0054540	0.0019737	0.0031166	0.0024071	0.0089777	0.0043546	0.0054976	0.0041021	0.0042487	0.0013048	0.0025373	0.0017408
52	0.0058863	0.0021641	0.0033389	0.0025784	0.0098475	0.0047887	0.0058881	0.0043992	0.0046412	0.0014723	0.0027448	0.0019196
53	0.0063126	0.0023721	0.0035593	0.0027612	0.0107327	0.0052643	0.0062480	0.0047139	0.0050751	0.0016617	0.0029394	0.0021160
54	0.0067439	0.0025997	0.0037875	0.0029569	0.0116324	0.0057851	0.0065891	0.0050478	0.0055457	0.0018756	0.0031267	0.0023317
55	0.0071995	0.0028493	0.0040285	0.0031665	0.0126175	0.0063601	0.0069414	0.0054048	0.0060732	0.0021177	0.0033222	0.0025692
56	0.0077006	0.0031239	0.0043064	0.0033925	0.0136499	0.0069919	0.0073299	0.0057884	0.0066381	0.0023913	0.0035436	0.0028310
57	0.0082524	0.0034261	0.0046479	0.0036379	0.0146019	0.0076739	0.0077575	0.0062010	0.0071853	0.0026989	0.0037959	0.0031199
58	0.0088623	0.0037590	0.0050702	0.0039056	0.0154138	0.0084032	0.0082455	0.0066470	0.0076792	0.0030435	0.0040906	0.0034389
59	0.0095266	0.0041256	0.0055632	0.0041969	0.0161333	0.0091859	0.0088041	0.0071303	0.0081361	0.0034297	0.0044293	0.0037913
60	0.0102477	0.0045293	0.0061153	0.0045131	0.0168518	0.0100342	0.0094446	0.0076552	0.0085940	0.0038633	0.0048068	0.0041803
61	0.0110167	0.0049731	0.0067012	0.0048541	0.0176850	0.0109664	0.0101553	0.0082236	0.0091131	0.0043522	0.0052209	0.0046094

	White men		White women		Black men		Black women		Hispanic men		Hispanic women	
Age	$Q_{noPAD,x}$	$I_{PAD,x}$	$Q_{noPAD,x}$	$I_{PAD,x}$	$Q_{noPAD,x}$	$I_{PAD,x}$	$Q_{noPAD,x}$	$I_{PAD,x}$	$Q_{noPAD,x}$	$I_{PAD,x}$	$Q_{noPAD,x}$	$I_{PAD,x}$
62	0.0118283	0.0054606	0.0073075	0.0052206	0.0186714	0.0119955	0.0109087	0.0088352	0.0097311	0.0049049	0.0056814	0.0050830
63	0.0126917	0.0059964	0.0079283	0.0056138	0.0198587	0.0131373	0.0116616	0.0094862	0.0105013	0.0055323	0.0061945	0.0056060
64	0.0136353	0.0065873	0.0085877	0.0060379	0.0212007	0.0143965	0.0124078	0.0101778	0.0114238	0.0062445	0.0067682	0.0061839
65	0.0147176	0.0072435	0.0093504	0.0065019	0.0226730	0.0157796	0.0132002	0.0109203	0.0124666	0.0070506	0.0074245	0.0068238
66	0.0160049	0.0079061	0.0102757	0.0069601	0.0243399	0.0170951	0.0141728	0.0116198	0.0136317	0.0079138	0.0081928	0.0074993
67	0.0174127	0.0086245	0.0112766	0.0074467	0.0259332	0.0184635	0.0152008	0.0123524	0.0148693	0.0088727	0.0090175	0.0082349
68	0.0188965	0.0093973	0.0123221	0.0079586	0.0273930	0.0198724	0.0163035	0.0131210	0.0161176	0.0099304	0.0098661	0.0090312
69	0.0204738	0.0102279	0.0134457	0.0084996	0.0287685	0.0213276	0.0175170	0.0139308	0.0173635	0.0110932	0.0107413	0.0098919
70	0.0221607	0.0111198	0.0146714	0.0090724	0.0300198	0.0228187	0.0187703	0.0147688	0.0186248	0.0123694	0.0116419	0.0108198
71	0.0241157	0.0120897	0.0161474	0.0096932	0.0314385	0.0243945	0.0200805	0.0156364	0.0199747	0.0137721	0.0126443	0.0118253
72	0.0264680	0.0131521	0.0178453	0.0103582	0.0334119	0.0261226	0.0217066	0.0165750	0.0214678	0.0153135	0.0138401	0.0129205
73	0.0291013	0.0142969	0.0197306	0.0110628	0.0357968	0.0279724	0.0236453	0.0175806	0.0231860	0.0170080	0.0153101	0.0141170
74	0.0319259	0.0155148	0.0217536	0.0118001	0.0388376	0.0299813	0.0258418	0.0186399	0.0251324	0.0188624	0.0170373	0.0154157
75	0.0349096	0.0168013	0.0239242	0.0125695	0.0424434	0.0321215	0.0282534	0.0197410	0.0271593	0.0208667	0.0188975	0.0168052
76	0.0381151	0.0181601	0.0263736	0.0133823	0.0460587	0.0342791	0.0307084	0.0208507	0.0294029	0.0230360	0.0208046	0.0182762
77	0.0418193	0.0196147	0.0291561	0.0142405	0.0501478	0.0365214	0.0336099	0.0220262	0.0320727	0.0253914	0.0229083	0.0198430
78	0.0461280	0.0211697	0.0324286	0.0151552	0.0546033	0.0388095	0.0369800	0.0232601	0.0353255	0.0279459	0.0253269	0.0215153
79	0.0511228	0.0228234	0.0361976	0.0161199	0.0592316	0.0410888	0.0400724	0.0244320	0.0392497	0.0307010	0.0281402	0.0232964
80	0.0564387	0.0245285	0.0402896	0.0171093	0.0641786	0.0433605	0.0437745	0.0256629	0.0436807	0.0336254	0.0312835	0.0251719

Table S5. 1-year probability of dying among those with ABI >0.9 by age categories.

Age, years	$Q_{noPAD,x}$ MCMC model	Mortality rate in cohort					
		ARIC	CHS	FHS	FOF	MESA	NHANES
White men							
45	0.0032795	0.0021880	0.0009498	0.0011324	0.0005746	0.0004181	0.0016187
55	0.0071989	0.0057350	0.0024921	0.0029707	0.0015080	0.0010976	0.0038198
65	0.0147150	0.0149888	0.0065306	0.0077816	0.0039548	0.0028795	0.0090004
75	0.0349024	0.0425772	0.0186995	0.0222554	0.0113516	0.0082735	0.0211321
White women							
45	0.0019808	0.0014211	0.0006168	0.0007354	0.0003731	0.0002715	0.0010181
55	0.0040288	0.0037273	0.0016188	0.0019298	0.0009793	0.0007128	0.0024036
65	0.0093520	0.0097574	0.0042450	0.0050592	0.0025695	0.0018705	0.0056688
75	0.0239289	0.0278543	0.0121811	0.0145066	0.0073849	0.0053795	0.0133401
Black men							
45	0.0050128	0.0031765	0.0013794			0.0006073	0.0025685
55	0.0126175	0.0083194	0.0036179			0.0015939	0.0060572
65	0.0226729	0.0216977	0.0065306			0.0028795	0.0142504
75	0.0424430	0.0612442	0.0270464			0.0119950	0.0333385
Black women							
45	0.0034142	0.0020636	0.0008958			0.0003944	0.0016158
55	0.0069412	0.0054094	0.0023504			0.0010352	0.0038130
65	0.0132003	0.0141417	0.0061600			0.0027158	0.0089843
75	0.0282548	0.0402030	0.0176446			0.0078044	0.0210944
Hispanic men							
45	0.0026056		0.0008874			0.0003907	0.0018822
55	0.0060763		0.0023285			0.0010255	0.0044408
65	0.0124837		0.0061026			0.0026905	0.0104592
75	0.0272090		0.0174811			0.0077317	0.0245326
Hispanic women							
45	0.0014800		0.0005763			0.0002537	0.0011839
55	0.0033205		0.0015124			0.0006659	0.0027946
65	0.0074147		0.0039665			0.0017476	0.0065894
75	0.0188635		0.0113849			0.0050268	0.0154967

Figure S1. Prevalence estimates of PAD according to odds of PAD at a given demographic variables in NHANES and meta-analyzed odds ratio for age, sex, and race/ethnicity from six cohorts.

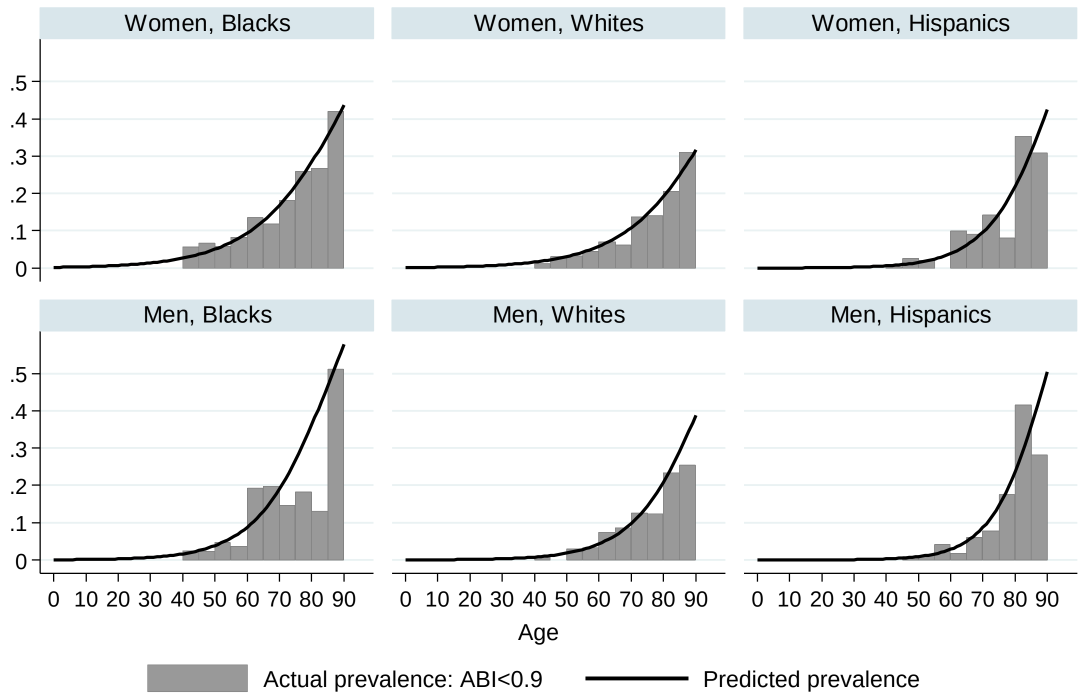
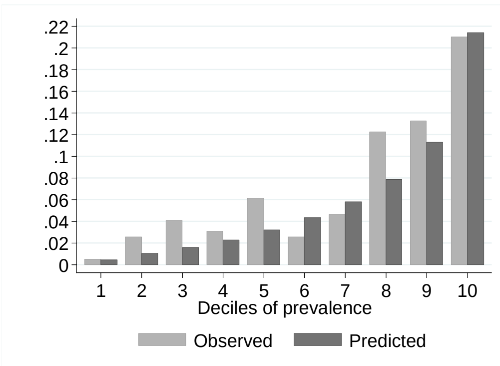
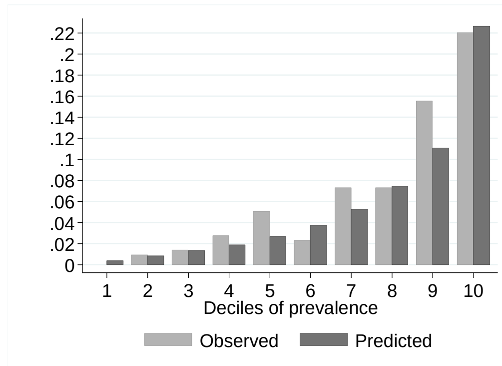


Figure S2. Observed vs. predicted risk of PAD by deciles of predicted risk (cross-validation by splitting NHANES according to 2-year cycles).

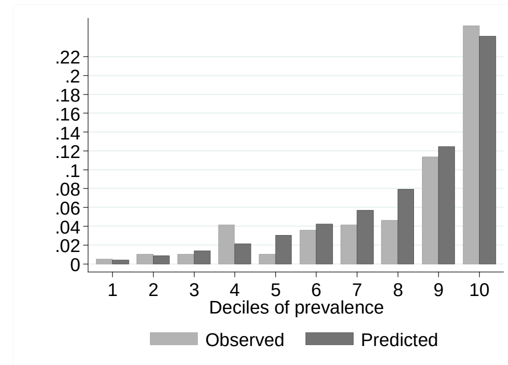
1. 1999-2002 for development and 2003-2004 for validation



2. 1999-2000 and 2003-2004 for development and 2001-2002 for validation

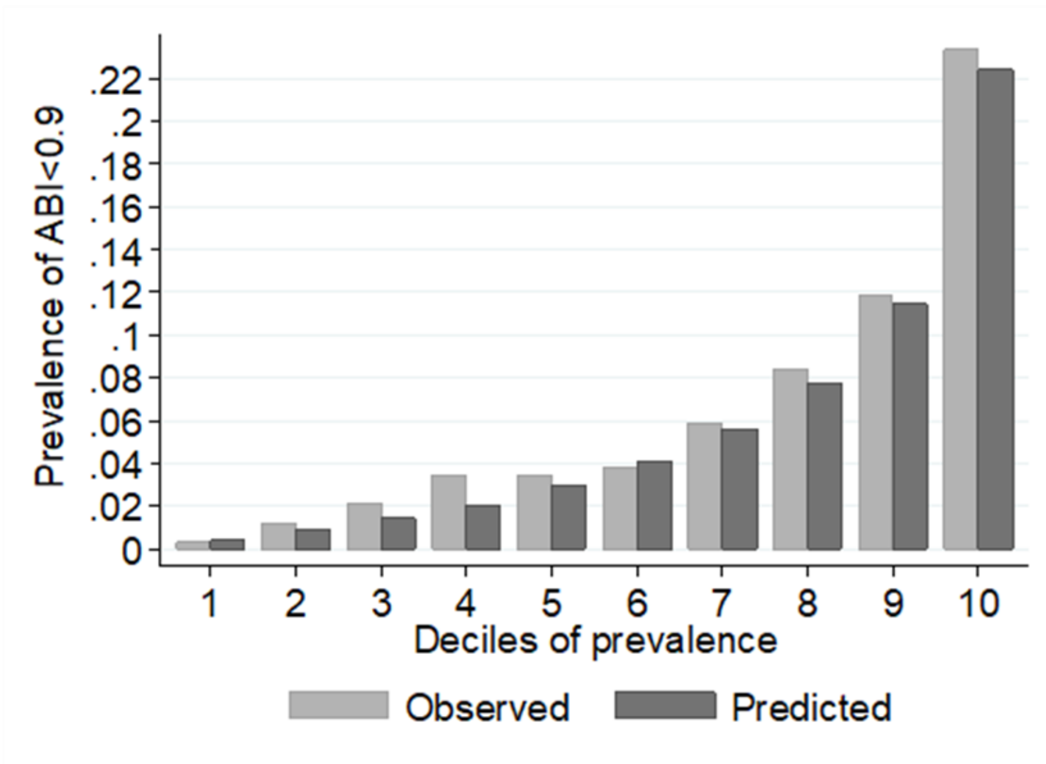


3. 2001-2004 for development and 1999-2000 for validation



		Statistics in a validation dataset			
		Chi^2, p-value			C-statistic
Development	Validation	All deciles	Bottom 5 deciles	Top 5 deciles	
1999-2002	2003-2004	26.5, 0.0002	18.6, 0.0002	8.0, 0.14	0.736
1999-2000 & 2003-2004	2001-2002	14.1, 0.11	6.5, 0.27	7.7, 0.17	0.786
2001-2004	1999-2000	11.1, 0.28	6.7, 0.25	4.3, 0.54	0.801

Figure S3. Observed vs. predicted risk of PAD by deciles of predicted risk (NHANES 1999-2004).



Chi^2 was 10.2 (p=0.35) in all deciles, 9.2 (p=0.08) in bottom 5 deciles, and 1.0 (p=0.95) in top 5 deciles. C-statistic was 0.77.

Supplemental References:

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