

# **SUPPLEMENTAL MATERIAL**

**Table S1. Age-group specific risk for cardiovascular death related to atrial fibrillation,**

Age Groups (years)	2011		2014		2018	
	Deaths/Population	Crude Mortality Rate (95% CI)	Deaths/Population	Crude Mortality Rate (95% CI)	Deaths/Population	Crude Mortality Rate (95% CI)
35 - 44	117/40627954	0.29 (0.24 - 0.34)	131/40513133	0.32 (0.27 - 0.38)	187/41277888	0.45 (0.39 - 0.52)
45 - 54	567/44718203	1.27 (1.16 - 1.37)	735/43458851	1.69 (1.57 - 1.81)	892/41631699	2.14 (2 - 2.28)
55 - 64	2342/38062140	6.15 (5.9 - 6.4)	2976/40077581	7.43 (7.16 - 7.69)	4043/42272636	9.56 (9.27 - 9.86)
65 - 74	6155/22481738	27.38 (26.7 - 28.1)	8102/26398290	30.69 (30.0 - 31.4)	11449/30492316	37.55 (36.86 - 38.2)
75 - 84	18669/13175230	141.7 (139.7 - 143.7)	20985/13682690	153.37 (151.3 - 155.4)	25291/15394374	164.29 (162.26 - 166.31)

CI indicates confidence interval.

**Table S2. Age-adjusted cardiovascular mortality rates related to atrial fibrillation by age and race-sex groups in the US, 2011-2018**  
AAMR indicates age-adjusted mortality rate; CI, confidence interval.

Age Group	Race-Sex Group	2011	2014	2018	2011 - 2018
		N = 27,850	N = 32,929	N = 41,862	Average Annual Percent Change (95% CI)
		AAMR per 100,000 (95% CI)			
35-84 years	Total	18.0 (17.8 – 18.2)	19.8 (19.6 – 20.1)	22.3 (22.1 – 22.5)	3.4 (3.0 – 3.7)
	Black women	12.3 (11.5 – 13.0)	14.4 (13.6 – 15.1)	15.9 (15.2 – 16.7)	3.0 (2.2 – 3.8)
	White women	16.2 (15.9 – 16.5)	16.9 (16.6 – 17.2)	18.2 (17.9 – 18.5)	2.0 (1.6 – 2.5)
	Black men	17.2 (16.2 – 18.3)	20.9 (19.8 – 22.1)	25.2 (24.1 – 26.3)	5.2 (4.5 – 6.0)
	White men	21.7 (21.3 – 22.1)	24.9 (24.6 – 25.3)	28.7 (28.3 – 29.1)	4.4 (4.1 – 4.8)
35-64 years	Total	2.0 (1.9 – 2.1)	2.5 (2.4 – 2.6)	3.2 (3.1 – 3.3)	7.4 (6.8 – 8.0)
	Black women	2.1 (1.8 – 2.3)	2.6 (2.3 – 2.9)	2.9 (2.5 – 3.2)	3.3 (2.6 – 4.0)
	White women	1.1 (1.0 – 1.1)	1.2 (1.1 – 1.3)	1.6 (1.5 – 1.7)	6.1 (4.6 – 7.6)
	Black men	4.2 (3.8 – 4.7)	4.9 (4.5 – 5.4)	7.2 (6.7 – 7.8)	7.8 (6.3 – 9.3)
	White men	2.7 (2.6 – 2.9)	3.5 (3.3 – 3.6)	4.3 (4.1 – 4.5)	7.3 (6.6 – 7.9)
65-84 years	Total	75.0 (74.0 – 75.9)	82.2 (81.2 – 83.1)	91.1 (90.1 – 92.0)	3.0 (2.6 – 3.4)
	Black women	47.7 (44.5 – 50.9)	55.3 (52.0 – 58.6)	61.3 (58.1 – 64.6)	3.5 (2.6 – 4.4)
	White women	68.8 (67.5 – 70.1)	71.3 (70.1 – 72.6)	76.0 (74.8 – 77.3)	1.9 (1.4 – 2.4)
	Black men	62.4 (57.9 – 67.0)	76.5 (71.7 – 81.3)	87.4 (82.8 – 92.1)	4.3 (3.4 – 5.2)
	White men	87.4 (85.8 – 89.0)	99.5 (97.9 – 101.2)	113.5 (111.8 – 115.2)	4.1 (3.7 – 4.5)

The AAMR indicates rate per 100,000 population, directly standardized to the 2000 US Census population.

**Table S3. Trends in age-adjusted mortality rates and average annual percent change for cardiovascular mortality related to atrial fibrillation by leading cardiovascular disease and racial subtype as underlying cause of death, 2011-2018.**

CVD category	2011		2014		2018		2011-2018
	N (%)	AAMR (95% CI)	N (%)	AAMR (95% CI)	N (%)	AAMR (95% CI)	Average Annual Percent Change (95% CI)
<b>HHD</b>	2059 (100)	1.31 (1.25 – 1.37)	2560 (100)	1.53 (1.47 – 1.59)	4132 (100)	2.21 (2.14 – 2.28)	8.1 (7.2 – 9.0)
<b>Black</b>	278 (13.5)	1.85 (1.63 – 2.08)	333 (13.0)	2.00 (1.78 – 2.22)	523 (12.7)	2.60 (2.37 – 2.83)	5.1 (6.6 – 8.7)
<b>White</b>	1,731 (84.1)	1.28 (1.22 – 1.34)	2,149 (83.9)	1.52 (1.46 – 1.59)	3,473 (84.1)	2.17 (2.1 – 2.25)	8.5 (7.5 – 9.4)
<b>IHD</b>	10245 (100)	6.61 (6.48 – 6.73)	11867 (100)	7.14 (7.01 – 7.26)	15139 (100)	8.05 (7.92 – 8.18)	2.9 (2.3 – 3.5)
<b>Black</b>	677 (6.6)	4.65 (4.29 – 5.01)	873 (7.4)	5.26 (4.9 – 5.62)	1,173 (7.7)	6.05 (5.69 – 6.41)	3.6 (2.8 – 4.3)
<b>White</b>	9,321 (91.0)	6.98 (6.84 – 7.12)	10,696 (90.1)	7.55 (7.4 – 7.69)	13,529 (89.4)	8.54 (8.39 – 8.69)	3.0 (2.4 – 3.6)
<b>Stroke</b>	4120 (100)	2.70 (2.61 – 2.78)	4292 (100)	2.60 (2.52 – 2.68)	5223 (100)	2.82 (2.74 – 2.90)	1.2 (0.7 – 1.7)
<b>Black</b>	318 (7.7)	2.15 (1.90 – 2.39)	395 (9.2)	2.42 (2.17 – 2.66)	507 (9.7)	2.71 (2.46 – 2.95)	3.5 (1.6 – 5.4)
<b>White</b>	3,633 (88.9)	2.75 (2.66 – 2.84)	3,710 (86.4)	2.63 (2.55 – 2.72)	4,480 (85.8)	2.86 (2.77 – 2.94)	0.7 (-0.5 – 1.9)

AAMR indicates age-adjusted mortality rate; AAPC, average annual percent change; CI, confidence interval; CVD, cardiovascular disease; HHD, hypertensive disease; IHD, ischemic heart disease

The AAMR indicates rate per 100,000 population, directly standardized to the 2000 US Census population.

Each CVD category was defined based on the following ICD-10 codes: HHD (I10-15), IHD (I20-25), and Stroke (I60-69).