

# **SUPPLEMENTAL MATERIAL**

**Table S1. Age-Adjusted Mortality rate trend in US subjects with heart failure and atrial fibrillation, 1999-2020, stratified by census region.**

	<b>AAMR 1999 (95% CI)</b>	<b>AAMR 2020 (95% CI)</b>	<b>AAPC; (95% CI), p</b>	<b>Number of Joinpoints</b>	<b>Period 1 [years] APC; (95% CI), p</b>	<b>APC - period 2 years] APC; (95% CI), p</b>	<b>p (for parallelism)</b>
Northeast	8.03 (7.80 to 8.26)	17.95 (17.65 to 18.24)	+3.4; (3.0 to 3.9), p<0.001	1	[1999-2009] +1.4; (0.7 to 25.1), p<0.001	[2009-2020] +5.3; (4.7 to 6.0), p<0.001	Northeast vs Midwest p=0.004
Midwest	8.74 (8.52 to 8.97)	22.84 (22.53 to 23.16)	+4.4; (3.9 to 4.9), p<0.001	1	[1999-2012] +2.3; (1.8 to 2.8), p<0.001	[2012-2020] +7.8;(6.7 to 8.9), p<0.001	Northeast vs South p= 0.002
South	7.27 (7.10 to 7.45)	19.68 (19.46 to 19.70)	+4.3;(3.8 to 4.7), p<0.001	1	[1999-2011] +1.9; (1.3 to 2.5), p<0.001	[2011-2020] +7.5; (6.6 to 8.5), p<0.001	Northeast vs West p=0.002
West	9.09 (8.83 to 9.36)	21.51 (21.21 to 21.81)	+4.1; (3.7 to 4.4), p<0.001	1	[1999-2012] +2.9; (2.6 to 3.3), p<0.001	[2012-2020] +6.0; (5.2 to 6.7), p<0.001	Midwest vs South p=0.80
							Midwest vs West p=0.008
							South vs West p=0.009

AAMR: Age-adjusted mortality rate, expressed as deaths per 100.000 population. AAPC: Average Annual percent change; APC: Annual percent change. CI: Confidence interval.

**Table S2. Age-Adjusted Mortality rate trend in US subjects with heart failure and atrial fibrillation, 1999-2020, stratified by age.**

	<b>AAMR 1999 (95% CI)</b>	<b>AAMR 2020 (95% CI)</b>	<b>AAPC; (95% CI), p</b>	<b>Number of Joinpoints</b>	<b>Period 1 [years] APC; (95% CI), p</b>	<b>APC - period 2 years] APC; (95% CI), p</b>	<b>p (for parallelism)</b>
< 65 yrs (All)	0.23 (0.21 to 0.25)	1.32 (1.28 to 1.36)	+7.5; (6.7 to 8.4), p<0.001	1	[1999-2010] +3.9; (2.8 to 5.1), p<0.001	[2010-2020] +11.6; (10.2 to 13.0), p<0.001	-
Males	0.33 (0.11 to 0.15)	1.89 (1.83 to 1.96)	+8.1; (7.4 to 8.7), p<0.001	1	[1999-2010] +4.7; (3.8 to 5.6), p<0.001	[2010-2020] +11.9;(10.7 to 13.1), p<0.001	0.46
Females	0.13 (0.11 to 0.15)	0.75 (0.71 to 0.79)	+7.5;(6.3 to 8.6), p<0.001	1	[1999-2009] +3.7; (1.9 to 5.6), p<0.001	[2009-2020] +11.0; (9.3 to 12.7), p<0.001	
≥65 yrs (All)	62.93 (62.09 to 63.77)	152.90 (151.84 to 153.96)	+4.0; (3.7 to 4.3), p<0.001	1	[1999-2011] +2.1; (1.7 to 2.4), p<0.001	[2011-2020] +6.6; (6.0 to 7.2), p<0.001	-
Males	66.03 (64.54 to 67.53)	181.05 (179.23 to 182.88)	+4.6; (4.2 to 4.9), p<0.001	1	[1999-2011] +2.5; (2.1 to 2.9), p<0.001	[2011-2020] +7.4;(6.8 to 8.1), p<0.001	<0.001
Females	60.46 (59.45 to 61.48)	132.26 (130.98 to 133.54)	+3.5;(3.1 to 3.8), p<0.001	1	[1999-2011] +1.7; (1.3 to 2.2), p<0.001	[2011-2020] +5.8; (5.1 to 6.5), p<0.001	

AAMR: Age-adjusted mortality rate, expressed as deaths per 100.000 population. AAPC: Average Annual percent change; APC: Annual percent change. CI: Confidence interval.

**Table S3. COVID-19 decedents with heart failure and atrial fibrillation in the US during the 2020, stratified by sex.**

	<b>N° of deaths</b>	<b>AAMR</b>	<b>(95% CI)</b>	<b>% of deaths</b>
All	57,373	14.23	14.18-14.39	-
Males	30,763	17.63	17.43-17.83	53.6
Females	26,610	10.88	10.75-11.01	46.4
<65 yrs	6,758	1.95	1.90-2.00	-
Males	4,572	2.66	2.58-2.74	66.9
Females	2,006	1.19	1.14-1.25	33.1
≥65 yrs	50,614	97.83	96.9-98.68	-
Males	26,235	121.07	119.59—122.55	51.8
Females	24,379	77.82	71.83-78.80	48.1

AAMR: Age-adjusted mortality rate, expressed as deaths per 100.000 population. CI: Confidence interval.