

## Supplementary Materials

# Trends in Cardiovascular Disease-related Mortality in Texas

Muhammad Shariq Usman, MD<sup>1</sup>; Adeena Jamil, MBBS<sup>2</sup>; Zainali Chunawala, MD<sup>1</sup>; Mahboob Alam, MD<sup>3,4</sup>; Vijay Nambi, MD, PhD<sup>3,4,5</sup>; Layla A. Abushamat, MD, MPH<sup>3,6</sup>; Arunima Misra, MD<sup>3,4</sup>; Salim S. Virani, MD PhD<sup>6,7</sup>; Christie M Ballantyne, MD<sup>3,6</sup>; George E Taffet, MD<sup>3</sup>; Khurram Nasir, MD<sup>8</sup>; Sachin Goel, MD<sup>8</sup>; Sadeer Al-Kindi, MD<sup>8</sup>; Javed Butler, MD<sup>9,10</sup>; Abdul Mannan Khan Minhas, MD<sup>3,6</sup>

<sup>1</sup>Department of Medicine, UT Southwestern Medical Center, Dallas, Texas

<sup>2</sup>Department of Medicine, Dow International Medical College, Dow University of Health Sciences, Karachi, Pakistan.

<sup>3</sup>Department of Medicine, Baylor College of Medicine, Houston, Texas

<sup>4</sup>Section of Cardiology, Department of Medicine, Baylor College of Medicine, Houston, Texas

<sup>5</sup>Michael E. DeBakey VA Medical Center, Houston, Texas

<sup>6</sup>Section of Cardiovascular Research, Department of Medicine, Baylor College of Medicine, Houston, Texas

<sup>7</sup>Aga Khan University, Karachi, Pakistan; Baylor College of Medicine and The Texas Heart Institute, Houston, Texas

<sup>8</sup>Department of Cardiology, Houston Methodist Hospital, Texas

<sup>9</sup>Baylor Scott and White Research Institute, Dallas, Texas

<sup>10</sup>Department of Medicine, University of Mississippi School of Medicine, Jackson, Mississippi

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### Corresponding author:

Muhammad Shariq Usman, MD, Department of Internal Medicine, University of Texas Southwestern Medical Center, 5323 Harry Hines Blvd, Dallas, TX 75390, USA (MuhammadShariq.Usman@UTSouthwestern.edu)

**Supplemental Table I.** Absolute number of CVD-related deaths stratified by sex in Texas and the United States, 1999-2019.

Year	Overall		Females		Males		Population	
	Texas	US	Texas	US	Texas	US	Texas	US
<b>1999</b>	83330	1406043	44087	744631	39243	661412	12570920	180408769
<b>2000</b>	84142	1399560	44523	743199	39619	656361	12766180	181984640
<b>2001</b>	85267	1391438	44888	739783	40379	651655	13056316	184305128
<b>2002</b>	86085	1399818	45120	740198	40965	659620	13289582	186208028
<b>2003</b>	84582	1391183	43915	732915	40667	658268	13511001	188090429
<b>2004</b>	82103	1349244	42322	706868	39781	642376	13765169	190205384
<b>2005</b>	83531	1363870	43019	713315	40512	650555	14052824	192551384
<b>2006</b>	82881	1338927	42617	695709	40264	643218	14448933	195019359
<b>2007</b>	84064	1328579	42688	687561	41376	641018	14788973	197403777
<b>2008</b>	85161	1346713	43072	695738	42089	650975	15121594	199795090
<b>2009</b>	85386	1320188	42736	674164	42650	646024	15460294	202107016
<b>2010</b>	88065	1334582	43989	679852	44076	654730	15706768	203891983
<b>2011</b>	89368	1351755	44413	687083	44955	664672	16083645	206592936
<b>2012</b>	92538	1361812	45597	687902	46941	673910	16390540	208826037
<b>2013</b>	96496	1395118	47326	699755	49170	695363	16692444	211085314
<b>2014</b>	99870	1406790	48712	699946	51158	706844	17093662	213809280
<b>2015</b>	103792	1457516	50569	725312	53223	732204	17485690	216553817
<b>2016</b>	105235	1473345	50611	726051	54624	747294	17800287	218641417
<b>2017</b>	109678	1522191	52523	747396	57155	774795	18170130	221447331
<b>2018</b>	113569	1548931	53919	754691	59650	794240	18507667	223311190
<b>2019</b>	112023	1567590	52926	758861	59097	808729	18782771	224981167
<b>Total</b>	1937166	29455193	969572	15040930	967594	14414263	325545390	4247219476

**Supplemental Table II.** Absolute number of CVD-related deaths stratified by place of death in Texas and the United States, 1999-2019.

Year	Medical facility		Nursing home/Long term care		Hospice		Home	
	Texas	US	Texas	US	Texas	US	Texas	US
1999	49151	761513	16502	339983	Missing	Missing	15669	267707
2000	48336	745439	17088	342824	Missing	Missing	16521	270885
2001	48274	731153	17303	342598	Missing	Missing	16996	273034
2002	47979	722476	17564	344370	Missing	Missing	17467	282929
2003	46470	701528	16959	340295	Suppressed	2356	17771	290752
2004	43842	668134	16456	327895	Suppressed	4213	17823	289893
2005	43330	665420	17028	331937	Suppressed	13725	18670	297661
2006	41703	642142	16840	320054	2920	20197	18914	302580
2007	41662	627977	16720	313517	3395	27512	19556	305164
2008	42143	618452	16975	309557	3784	34439	19793	308359
2009	41471	584106	16442	295295	4251	36843	20811	311704
2010	41207	592940	17442	301617	4390	46350	22450	334766
2011	41027	588259	17705	305687	4733	52791	23173	344083
2012	42002	576106	18389	302205	5073	61383	24259	358022
2013	42605	578092	19272	304097	4989	64010	26644	379297
2014	43350	575280	20072	304178	4756	73051	28314	391391
2015	44505	585677	20986	314077	5204	84216	29320	410955
2016	44690	584092	20672	308617	5218	86932	30936	428052
2017	45759	593136	21676	318850	5753	92260	32302	448196
2018	46330	596239	22250	318479	5952	93786	34567	468439
2019	44502	594143	20910	316289	5908	99231	35306	481305
<b>Total</b>	<b>930338</b>	<b>13332304</b>	<b>385251</b>	<b>6702421</b>	<b>66334</b>	<b>893295</b>	<b>487262</b>	<b>7245174</b>

**Supplemental Table III.** Annual percentage changes (APCs) in CVD-related AAMRs (CMRs for age groups) in Texas and the United States, 1999-2019.

	Texas	US
<b>Overall</b>	1999-2009 APC -2.5* (95% CI, -2.8 to -2.1) 2009-2019 APC -0.2 (95% CI, -0.5 to 0.2).	1999-2011 APC -2.4* (95% CI, -2.5 to -2.2) 2011-2019 APC -0.1 (95% CI, -0.4 to 0.1).
<b>Sex</b>		
Male	1999-2009 APC -2.5* (95% CI, -2.9 to -2.2) 2009-2019 APC 0 (95% CI, -0.3 to 0.3).	1999-2002 APC -1.9* (95% CI, -3.0 to -0.8) 2002-2007 APC -2.9* (95% CI, -3.6 to -2.2) 2007-2012 APC -1.7* (95% CI, -2.4 to -1.0) 2012-2019 APC 0.0 (95% CI, -0.3 to 0.3)
Female	1999-2009 APC -2.5* (95% CI, -2.9 to -2.1) 2009-2019 APC -0.5* (95% CI, -0.9 to -0.1).	1999-2002 APC -1.7* (95% CI, -3.0 to -0.3) 2001-2011 APC -2.6* (95% CI, -2.9 to -2.3) 2011-2019 APC -0.3* (95% CI, -0.6 to 0).
<b>Race and ethnicity</b>		
NH Black or African American	1999-2002 APC 0 (95% CI, -2.6 to 2.7) 2002-2009 APC -3.6* (95% CI, -4.5 to -2.8) 2009-2019 APC -0.3 (95% CI, -0.7 to 0.1).	1999-2003 APC -1.5* (95% CI, -2.0 to -0.9) 2003-2011 APC -3.0* (95% CI, -3.2 to -2.8), 2011-2014 APC -1.0 (95% CI, -2.7 to 0.7) 2014-2019 APC 0 (95% CI, -0.4 to 0.4).
NH White	1999-2009 APC -2.3* (95% CI, -2.6 to -1.9) 2009-2019 APC 0.2 (95% CI, -0.2 to 0.6).	1999-2002 APC -1.5* (95% CI, -2.8 to -0.3) 2002-2007 APC -2.8* (95% CI, -3.6 to -2.0) 2007-2012 APC -1.5* (95% CI, -2.3 to -0.7) 2012-2019 APC 0.2 (95% CI, -0.2 to 0.5).
Hispanic or Latino	1999-2009 APC -2.6* (95% CI, -3.2 to -2.1) 2009-2019 APC -0.6* (95% CI, -1.1 to -0.2).	1999-2012 APC -2.6* (95% CI, -2.8 to -2.4) 2012-2019 APC -0.4 (95% CI, -0.8 to 0).
<b>Age groups</b>		
25-39 years	1999-2010 APC 0 (95% CI, -0.7 to 0.6) 2010-2019 APC 1.6* (95% CI, 0.8 to 2.5).	1999-2013 APC -0.3* (95% CI, -0.6 to 0) 2013-2019 APC 2.7* (95% CI, 1.7 to 3.6).
40-54 years	1999-2002 APC 2.1 (95% CI, -0.5 to 4.7)	1999-2006 APC 0.2 (95% CI, -0.2 to 0.6)

	2002-2008 APC -0.9 (95% CI, -2.0 to 0.2) 2008-2019 APC 0.3 (95% CI, 0 to 0.6).	2006-2011 APC -0.9 (95% CI, -1.9 to 0) 2011-2019 APC 0.5* (95% CI, 0.2 to 0.8).
55-69 years	1999-2001 APC -1.1 (95% CI, -5.6 to 3.6) 2001-2006 APC -3.9* (95% CI, -5.3 to -2.6) 2006-2011 APC 0 (95% CI, -1.4 to 1.4) 2011-2019 APC 1.2* (95% CI, 1.1 to 1.4).	1999-2006 APC -3.4* (95% CI, -3.7 to -3.2) 2006-2011 APC -1.5* (95% CI, -2.0 to -0.9), 2011-2019 APC 1.2* (95% CI, 1.1 to 1.4).
70-84 years	1999-2002 APC -1.1 (95% CI, -3.1 to 0.9) 2002-2008 APC -3.4* (95% CI, -4.3 to -2.5) 2008-2019 APC -0.9* (95% CI, -1.1 to -0.6).	1999-2002 APC -1.9* (95% CI, -3.0 to -0.8) 2002-2012 APC -2.9* (95% CI, -3.1 to -2.7) 2012-2019 APC -1.0* (95% CI, -1.3 to -0.7).
85+ years	1999-2011 APC -2.2* (95% CI, -2.6 to -1.9) 2011-2019 APC -0.4 (95% CI, -0.9 to 0.2).	1999-2012 APC -2.1* (95% CI, -2.3 to -1.9) 2012-2019 APC -0.1 (95% CI, -0.7 to 0.4).
<b>Urbanization</b>		
Metropolitan	APC -2.6* (95% CI, -3.0 to -2.2) 2009-2019 APC -0.3 (95% CI, -0.7 to 0.1).	1999-2011 APC -2.5* (95% CI, -2.7 to -2.4) 2011-2019 APC -0.2 (95% CI, -0.5 to 0.1).
Nonmetropolitan	1999-2002 APC -0.4 (95% CI, -2.1 to 1.4) 2002-2005 APC -3.2 (95% CI, -6.7 to 0.4) 2005-2010 APC -1.2 (95% CI, -2.3 to 0) 2010-2019 APC 0.5* (95% CI, 0.2 to 0.9).	1999-2011 APC -1.8* (95% CI, -2.0 to -1.6) 2011-2019 APC 0.3* (95% CI, 0 to 0.7).
<b>Cardiovascular disease type</b>		
HF/Cardiomyopathy	1999-2011 APC -2.1* (95% CI, -2.4 to -1.9) 2011-2019 APC 1.0* (95% CI, 0.6 to 1.4).	1999-2005 APC -1.9* (95% CI, -2.3 to -1.5) 2005-2009 APC -3.3* (95% CI, -4.6 to -1.9) 2009-2012 APC -1.3 (95% CI, -4.2 to 1.7) 2012-2019 APC 1.6* (95% CI, 1.2 to 1.9).
Ischemic heart disease	1999-2022 APC -2.6* (95% CI, -4.5 to -0.7) 2002-2008 APC -5.1* (95% CI, -6.0 to -4.2), 2008-2016 APC -2.3* (95% CI, -2.9 to -1.8)	1999-2002 APC -2.9* (95% CI, -4.1 to -1.7) 2002-2009 APC -4.2 (95% CI, -4.7 to -3.8) 2009-2014 APC -3.0* (95% CI, -3.8 to -2.2)

	2016-2019 APC -0.3 (95% CI, -2.4 to 1.7).	2014-2019 APC -1.7* (95% CI, -2.3 to -1.1).
Cerebrovascular disease	1999-2002 APC -1.9 (95% CI, -4.3 to 0.5)	1999-2002 APC -2.5* (95% CI, -3.9 to -1.1)
	2002-2006 APC -6.4* (95% CI, -8.8 to -3.9)	2002-2007 APC -5.7* (95% CI, -6.6 to -4.8)
	2006-2011 APC -2.9* (95% CI, -4.5 to -1.4)	2007-2012 APC -3.0* (95% CI, -3.9 to -2.1)
	2011-2019 APC -0.6 (95% CI, -1.1 to 0).	2012-2019 APC 0.3 (95% CI, -0.1 to 0.7).

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\*Indicates that the annual percentage change (APC) is significantly different from zero at  $\alpha=0.05$ .

AAMR: age-adjusted mortality rates; CMR: Crude mortality rates; HF: heart failure; NH: Non-Hispanic

**Supplemental Table IV.** Overall and sex-stratified CVD-related age-adjusted mortality rates per 100,000 in Texas and the United States, 1999 to 2019.

<b>Year</b>	<b>Overall</b>		<b>Male</b>		<b>Female</b>	
	<b>Texas</b>	<b>US</b>	<b>Texas</b>	<b>US</b>	<b>Texas</b>	<b>US</b>
<b>1999</b>	802.5	798.5	953.5	963.6	690.4	678.5
<b>2000</b>	798.2	784.3	945.4	943.3	688.8	668.7
<b>2001</b>	792.7	766.8	934.6	915.7	685.3	657
<b>2002</b>	786.8	760.1	927.8	909.4	681.5	650
<b>2003</b>	756.2	742.5	892.4	886.2	652.2	635.1
<b>2004</b>	718.4	709.2	847	846.4	619	606.3
<b>2005</b>	710	702.4	833.5	835.8	613.2	601.1
<b>2006</b>	679.3	675	794.8	804.2	589.3	576.2
<b>2007</b>	670.3	655.8	790.4	781.2	576.7	559.2
<b>2008</b>	660.1	650.9	774.4	773.6	568.8	555.8
<b>2009</b>	641.1	625.2	755.7	747.8	549.9	530.3
<b>2010</b>	646.9	621.2	764.4	743.8	554.3	526.1
<b>2011</b>	629.3	611.6	739.8	729.3	538.7	518.8
<b>2012</b>	631.1	601.4	746.8	718.3	537.6	509
<b>2013</b>	636.4	602.1	753.1	719.4	542	508.4
<b>2014</b>	635.5	593.6	752.5	710.5	540.1	499.8
<b>2015</b>	639	601.4	755.2	716.8	543.7	507.9
<b>2016</b>	626.7	596	749.4	713.6	527.1	500.5
<b>2017</b>	636	602.2	758.9	720.8	534.9	505.7
<b>2018</b>	641.1	599.7	767.3	719.5	536.6	501.3
<b>2019</b>	615.2	595.6	736.5	715.6	514.1	496.6
<b>Total</b>	674.1	654	795.2	779.4	577.3	555.8

**Supplemental Table V.** CVD-related age-adjusted mortality rates per 100,000 stratified by race/ethnicity in Texas and the United States, 1999-2019.

Year	NH Black or African American		NH White		Hispanic or Latino	
	Texas	US	Texas	US	Texas	US
1999	1097	1074.4	791.1	779.2	702	654.9
2000	1078.8	1052.2	788.1	767.5	706	636.9
2001	1107.8	1040.1	781.3	749.5	703.1	632.9
2002	1095.7	1027.4	775.2	744.4	706.1	615.9
2003	1067.5	1010.7	748.2	727	659	603.6
2004	1004.5	974	712.8	694.8	623.2	573.4
2005	984.1	958.8	698.3	688.2	649.6	581.1
2006	906.9	918.8	672.7	662.5	601	551.8
2007	905.7	895.3	670.2	644.7	590.1	532.7
2008	887	869.1	668.7	643	565.7	517.9
2009	846.4	834.2	641.9	617.9	557.7	495.8
2010	843.9	818.7	654.1	614.9	564.2	499
2011	849.9	795.2	636.6	609.3	542.2	479.2
2012	825.5	780.4	641.3	599.5	546.5	471.7
2013	825.8	781.6	649.5	601	550.7	472.2
2014	837.5	765.9	652.5	594.9	539	458.5
2015	836.1	766.7	656.4	604.4	543.6	460.6
2016	821.6	768.3	649.7	599.4	526.2	458.6
2017	828.1	769.5	658.7	607.6	540.1	460
2018	838.6	771.9	668.7	605.2	534.8	457.8
2019	801.8	764.2	643.3	602.3	517.6	456.8
<b>Total</b>	900.3	861	683.3	649.9	575.5	506.2

NH: Non-Hispanic



**Supplemental Table VI.** Rate ratios for CVD-related age-adjusted mortality rates in Texas and United States, 1999-2019.

Year	Texas			US		
	Rate ratio	95% CI	95% CI	Rate ratio	95% CI	95% CI
<b>Female</b>	Reference			Reference		
<b>Male</b>	1.38	1.38	1.38	1.40	1.40	1.41
<b>NH White</b>	Reference			Reference		
<b>NH Black/AA</b>	1.32	1.32	1.32	1.32	1.32	1.33
<b>Hispanic</b>	0.84	0.84	0.84	0.78	0.78	0.78
<b>Metropolitan</b>	Reference			Reference		
<b>Nonmetropolitan</b>	1.14	1.14	1.14	1.14	1.13	1.14

**Supplemental Table VII.** CVD-related crude mortality rates per 100,000 stratified by age in Texas and the United States, 1999-2019.

Year	25-39 years		40-54 years		55-69 years		70-84 years		85+ years	
	Texas	US	Texas	US	Texas	US	Texas	US	Texas	US
<b>1999</b>	26	29.9	142.8	148.6	686.8	683.6	2901.7	2887.4	11196.2	11141.4
<b>2000</b>	24.4	27.6	141.5	147.1	675.9	661.7	2885.4	2836.2	11221.3	11047.2
<b>2001</b>	26.1	28.4	146.6	145.6	669.4	639.1	2851	2768.5	11155.4	10873.5
<b>2002</b>	25.1	28.8	152	148.9	648.2	615	2835.3	2737.2	11094.2	10898.9
<b>2003</b>	28	29	148.1	150.2	619.1	597	2731.8	2670.9	10593.6	10658.4
<b>2004</b>	24.9	29	144.4	148.9	594	566.2	2576.1	2555	10101.8	10146.2
<b>2005</b>	25.3	29	144.9	149.4	567.3	555.3	2560.1	2516.2	10053.1	10148.7
<b>2006</b>	25.7	29.1	148.4	149.4	551.4	539.5	2407.9	2406.2	9618	9678.9
<b>2007</b>	25.5	28.4	143.5	147	549.2	524.8	2366.5	2328.3	9558.8	9431.1
<b>2008</b>	24.7	28.2	140.6	146.3	549.1	522.7	2327.9	2296.5	9378	9414.4
<b>2009</b>	26	28.3	143.7	146.9	543.1	509.7	2257.5	2191.1	8921.5	8914.1
<b>2010</b>	25.6	27.7	141.9	142.6	548.8	506.3	2254.6	2152.3	9149.7	9014.3
<b>2011</b>	25.9	27.8	142.1	143.2	545	500.4	2184	2110.2	8743.4	8800.6
<b>2012</b>	26.4	27.6	140.1	141.1	547	502.2	2197.9	2048.2	8756.3	8692.5
<b>2013</b>	26.4	27.8	145.3	144.7	562.9	508.3	2196.5	2026.9	8733.5	8651
<b>2014</b>	27.9	28.7	147.7	144.8	567.4	512.7	2188	1977.3	8623.7	8476
<b>2015</b>	28.3	29.2	146.2	145.4	581.8	521.4	2168.7	1987.6	8730.9	8662.8
<b>2016</b>	26.8	30.7	143.8	148.1	582.7	530.8	2124.6	1956.8	8539.4	8491.1
<b>2017</b>	29.3	31.7	148	147	587.9	538.7	2131.1	1939.3	8620.3	8636.3
<b>2018</b>	29	31.9	145.2	147.3	600.5	543.9	2126.2	1919	8768.8	8580.8
<b>2019</b>	29.3	31.9	145.7	146.9	584.5	546.9	2024.2	1896.9	8310.7	8479.1
<b>Total</b>	26.6	29.1	144.9	146.6	582.9	546.1	2356.2	2267.4	9346.1	9327.9

**Supplemental Table VIII.** CVD-related age-adjusted mortality rates per 100,000 stratified by urban-rural classification in Texas and the United States, 1999-2019.

Year	Nonmetropolitan		Metropolitan	
	Texas	US	Texas	US
1999	839.8	837.1	794.4	789.6
2000	828.6	825.3	791.8	775
2001	830.2	809.3	784.5	757.3
2002	833	810.9	776.7	748.8
2003	794.5	796.2	748.1	730.6
2004	772.1	760.9	706.8	698
2005	755.8	760.6	699.8	689.7
2006	730.1	730.3	668.8	663.2
2007	739.7	717	655.8	642.7
2008	726.5	721.3	646.7	635.9
2009	714.3	697.6	626.7	610
2010	702.7	693.1	636.4	606.2
2011	703.2	686.9	615.8	596.2
2012	715.5	679.6	615.7	585.6
2013	725.6	682.8	620.9	585.9
2014	720.1	679.1	621	576.8
2015	739.5	692.7	622	583.5
2016	721.9	686.7	611.1	578.5
2017	742.1	694.9	618.8	584.5
2018	740.4	694.3	625.6	581.7
2019	732.3	695.6	596.5	576.7
<b>Total</b>	750.9	727	659.4	638.9

**Supplemental Table IX.** CVD-related mortality in the United States, 1999-2019.

<b>State</b>	<b>Rank</b>	<b>Percentile</b>	<b>AAMR per 100,000</b>
<b>Arizona</b>	1	0	530.4
<b>Minnesota</b>	2	2	536.5
<b>Utah</b>	3	4	536.6
<b>Hawaii</b>	4	6	539.4
<b>Colorado</b>	5	8	543.6
<b>Alaska</b>	6	10	552.5
<b>Montana</b>	7	12	559.9
<b>Florida</b>	8	14	564.4
<b>Massachusetts</b>	9	16	565.8
<b>New Mexico</b>	10	18	570.6
<b>New Hampshire</b>	11	20	579.6
<b>Maine</b>	12	22	579.9
<b>Idaho</b>	13	24	580.5
<b>Oregon</b>	14	26	580.9
<b>Washington</b>	15	28	581.4
<b>Wisconsin</b>	16	30	582.6
<b>Wyoming</b>	17	32	583.1
<b>Virginia</b>	18	34	595.8
<b>South Dakota</b>	19	36	597.5
<b>Iowa</b>	20	38	603.4
<b>Illinois</b>	21	40	614.1
<b>North Dakota</b>	22	42	615.8
<b>Kansas</b>	23	44	616.5
<b>Delaware</b>	24	46	616.7
<b>Connecticut</b>	25	48	621.8
<b>New Jersey</b>	26	50	622.3

<b>Vermont</b>	27	52	622.8
<b>Maryland</b>	28	54	635.9
<b>Pennsylvania</b>	29	56	655.8
<b>Rhode Island</b>	30	58	656.1
<b>Nebraska</b>	31	60	659.1
<b>North Carolina</b>	32	62	661.2
<b>California</b>	33	64	664.3
<b>Nevada</b>	34	66	672.8
<b>Texas</b>	35	68	674.1
<b>Missouri</b>	36	70	680.1
<b>Michigan</b>	37	72	681.9
<b>Indiana</b>	38	74	693.4
<b>District of Columbia</b>	39	76	706.6
<b>South Carolina</b>	40	78	708.3
<b>Louisiana</b>	41	80	710.5
<b>New York</b>	42	82	713.5
<b>Ohio</b>	43	84	735.8
<b>Georgia</b>	44	86	739.5
<b>Tennessee</b>	45	88	753.8
<b>Arkansas</b>	46	90	764.6
<b>Kentucky</b>	47	92	765.3
<b>Alabama</b>	48	94	777.3
<b>West Virginia</b>	49	96	820.7
<b>Oklahoma</b>	50	98	830.4
<b>Mississippi</b>	51	100	902.2

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AAMR: Age-adjusted mortality rate

**Supplemental Table X.** CVD-related mortality stratified by counties in Texas, 1999-2019.

<b>COUNTY</b>	<b>AAMR per 100,000</b>	<b>Rank</b>	<b>Percentile</b>
<b>Presidio County, TX</b>	359.9	1	0
<b>Borden County, TX</b>	437	2	0.3984064
<b>Glasscock County, TX</b>	437.7	3	0.7968128
<b>Jeff Davis County, TX</b>	446.5	4	1.195219
<b>Hudspeth County, TX</b>	451.5	5	1.593626
<b>Brewster County, TX</b>	490.8	6	1.992032
<b>Irion County, TX</b>	492.4	7	2.390438
<b>Collin County, TX</b>	494.6	8	2.788845
<b>Williamson County, TX</b>	497.2	9	3.187251
<b>Bandera County, TX</b>	523.6	10	3.585657
<b>Llano County, TX</b>	525.4	11	3.984064
<b>Fort Bend County, TX</b>	525.6	12	4.38247
<b>Travis County, TX</b>	529.5	13	4.780877
<b>Hartley County, TX</b>	535.9	14	5.179283
<b>Mason County, TX</b>	536.7	15	5.577689
<b>Denton County, TX</b>	545.7	16	5.976096
<b>Washington County, TX</b>	552.3	17	6.374502
<b>Kinney County, TX</b>	552.5	18	6.772908
<b>Edwards County, TX</b>	559.3	19	7.171315
<b>McMullen County, TX</b>	559.4	20	7.569721
<b>Zapata County, TX</b>	559.8	21	7.968128
<b>Gillespie County, TX</b>	561.5	22	8.366534
<b>Cameron County, TX</b>	561.8	23	8.76494
<b>Hidalgo County, TX</b>	561.8	23	8.76494
<b>Hays County, TX</b>	565.8	25	9.561753
<b>Live Oak County, TX</b>	571.5	26	9.960159

<b>Midland County, TX</b>	578.1	27	10.35857
<b>Kerr County, TX</b>	582.6	28	10.75697
<b>Goliad County, TX</b>	583.1	29	11.15538
<b>Culberson County, TX</b>	584.1	30	11.55379
<b>Comal County, TX</b>	585.2	31	11.95219
<b>Sterling County, TX</b>	593.3	32	12.3506
<b>Rockwall County, TX</b>	601	33	12.749
<b>Burnet County, TX</b>	604.9	34	13.14741
<b>Somervell County, TX</b>	612.4	35	13.54582
<b>Blanco County, TX</b>	613.1	36	13.94422
<b>Briscoe County, TX</b>	615.2	37	14.34263
<b>Willacy County, TX</b>	615.7	38	14.74104
<b>Castro County, TX</b>	618.2	39	15.13944
<b>Randall County, TX</b>	618.7	40	15.53785
<b>El Paso County, TX</b>	621	41	15.93626
<b>Maverick County, TX</b>	621.1	42	16.33466
<b>Wilson County, TX</b>	627.6	43	16.73307
<b>Hardeman County, TX</b>	628.3	44	17.13147
<b>Scurry County, TX</b>	633.4	45	17.52988
<b>Webb County, TX</b>	634.9	46	17.92829
<b>Caldwell County, TX</b>	639.8	47	18.32669
<b>San Saba County, TX</b>	640.5	48	18.7251
<b>Starr County, TX</b>	642.8	49	19.12351
<b>Montgomery County, TX</b>	643.2	50	19.52191
<b>Mills County, TX</b>	643.4	51	19.92032
<b>Sherman County, TX</b>	644	52	20.31873
<b>Calhoun County, TX</b>	647.2	53	20.71713
<b>Guadalupe County, TX</b>	647.2	53	20.71713
<b>Brazos County, TX</b>	648.1	55	21.51394
<b>Dimmit County, TX</b>	648.2	56	21.91235

<b>Harris County, TX</b>	648.2	56	21.91235
<b>Kenedy County, TX</b>	651	58	22.70916
<b>Val Verde County, TX</b>	651.5	59	23.10757
<b>Franklin County, TX</b>	651.6	60	23.50598
<b>Brazoria County, TX</b>	652.1	61	23.90438
<b>Dallas County, TX</b>	654.6	62	24.30279
<b>Lavaca County, TX</b>	657.1	63	24.70119
<b>Kimble County, TX</b>	658.9	64	25.0996
<b>Kendall County, TX</b>	659.3	65	25.49801
<b>Deaf Smith County, TX</b>	660.8	66	25.89641
<b>Archer County, TX</b>	661.7	67	26.29482
<b>Erath County, TX</b>	666.3	68	26.69323
<b>Uvalde County, TX</b>	667.2	69	27.09163
<b>Victoria County, TX</b>	667.3	70	27.49004
<b>Bastrop County, TX</b>	668.4	71	27.88845
<b>Smith County, TX</b>	670.7	72	28.28685
<b>Hansford County, TX</b>	671.1	73	28.68526
<b>Terrell County, TX</b>	671.8	74	29.08367
<b>Fayette County, TX</b>	673.5	75	29.48207
<b>Hemphill County, TX</b>	675.7	76	29.88048
<b>Lee County, TX</b>	676.6	77	30.27888
<b>Tarrant County, TX</b>	678.2	78	30.67729
<b>Hood County, TX</b>	678.5	79	31.0757
<b>Reeves County, TX</b>	680.3	80	31.4741
<b>Throckmorton County, TX</b>	681.6	81	31.87251
<b>Oldham County, TX</b>	683	82	32.27092
<b>Menard County, TX</b>	683.3	83	32.66932
<b>Walker County, TX</b>	683.5	84	33.06773
<b>Lipscomb County, TX</b>	684.4	85	33.46614
<b>Parmer County, TX</b>	685.4	86	33.86454



<b>Waller County, TX</b>	687.4	87	34.26295
<b>Carson County, TX</b>	687.9	88	34.66135
<b>Fisher County, TX</b>	688.3	89	35.05976
<b>Nueces County, TX</b>	689.1	90	35.45817
<b>San Jacinto County, TX</b>	689.2	91	35.85658
<b>Medina County, TX</b>	691.5	92	36.25498
<b>Tom Green County, TX</b>	692.8	93	36.65339
<b>Hale County, TX</b>	695.1	94	37.05179
<b>Armstrong County, TX</b>	695.8	95	37.4502
<b>Gaines County, TX</b>	697.9	96	37.84861
<b>Burleson County, TX</b>	698.9	97	38.24701
<b>Milam County, TX</b>	700.1	98	38.64542
<b>Hamilton County, TX</b>	700.6	99	39.04382
<b>Coleman County, TX</b>	701.2	100	39.44223
<b>Ellis County, TX</b>	701.9	101	39.84064
<b>Gonzales County, TX</b>	702.8	102	40.23904
<b>Zavala County, TX</b>	703.4	103	40.63745
<b>Swisher County, TX</b>	706.6	104	41.03586
<b>Freestone County, TX</b>	706.8	105	41.43426
<b>Cooke County, TX</b>	707	106	41.83267
<b>Yoakum County, TX</b>	707	106	41.83267
<b>Leon County, TX</b>	708.3	108	42.62948
<b>Bell County, TX</b>	710.2	109	43.02789
<b>Garza County, TX</b>	711	110	43.4263
<b>Rains County, TX</b>	712.2	111	43.8247
<b>Foard County, TX</b>	712.9	112	44.22311
<b>Lampasas County, TX</b>	713.5	113	44.62151
<b>Sutton County, TX</b>	714.2	114	45.01992
<b>Parker County, TX</b>	714.7	115	45.41833
<b>Haskell County, TX</b>	715.7	116	45.81673

<b>Cottle County, TX</b>	716.4	117	46.21514
<b>Pecos County, TX</b>	717.4	118	46.61354
<b>Galveston County, TX</b>	719	119	47.01195
<b>Bexar County, TX</b>	719.9	120	47.41036
<b>Aransas County, TX</b>	720.3	121	47.80877
<b>Wood County, TX</b>	721.9	122	48.20717
<b>Concho County, TX</b>	722	123	48.60558
<b>Bee County, TX</b>	722.2	124	49.00398
<b>Floyd County, TX</b>	723.6	125	49.40239
<b>Motley County, TX</b>	725.6	126	49.8008
<b>Stonewall County, TX</b>	727.7	127	50.1992
<b>Hopkins County, TX</b>	733	128	50.59761
<b>Lubbock County, TX</b>	733.1	129	50.99602
<b>Real County, TX</b>	733.3	130	51.39442
<b>Comanche County, TX</b>	733.9	131	51.79283
<b>McLennan County, TX</b>	734.1	132	52.19123
<b>Shackelford County, TX</b>	734.4	133	52.58964
<b>Bailey County, TX</b>	735.1	134	52.98805
<b>Chambers County, TX</b>	735.6	135	53.38646
<b>Houston County, TX</b>	735.7	136	53.78486
<b>Moore County, TX</b>	735.7	136	53.78486
<b>Wise County, TX</b>	736.5	138	54.58167
<b>Hill County, TX</b>	743.6	139	54.98008
<b>Baylor County, TX</b>	745.7	140	55.37849
<b>Titus County, TX</b>	746.2	141	55.77689
<b>Knox County, TX</b>	746.9	142	56.1753
<b>Dickens County, TX</b>	747.2	143	56.5737
<b>Colorado County, TX</b>	747.5	144	56.97211
<b>Austin County, TX</b>	748	145	57.37052
<b>Matagorda County, TX</b>	749.2	146	57.76892

<b>Roberts County, TX</b>	749.7	147	58.16733
<b>Clay County, TX</b>	750.1	148	58.56574
<b>Rusk County, TX</b>	751.5	149	58.96414
<b>Jim Hogg County, TX</b>	751.8	150	59.36255
<b>Kent County, TX</b>	755.2	151	59.76096
<b>Van Zandt County, TX</b>	756.5	152	60.15936
<b>San Patricio County, TX</b>	758	153	60.55777
<b>Grayson County, TX</b>	759.3	154	60.95618
<b>Hockley County, TX</b>	766	155	61.35458
<b>Upton County, TX</b>	766.8	156	61.75299
<b>Lynn County, TX</b>	768.5	157	62.15139
<b>McCulloch County, TX</b>	768.8	158	62.5498
<b>Runnels County, TX</b>	769.1	159	62.94821
<b>Gregg County, TX</b>	769.4	160	63.34661
<b>La Salle County, TX</b>	770.4	161	63.74502
<b>Bosque County, TX</b>	772.7	162	64.14342
<b>Atascosa County, TX</b>	774.1	163	64.54183
<b>Jones County, TX</b>	775	164	64.94024
<b>Donley County, TX</b>	775	164	64.94024
<b>Madison County, TX</b>	775.7	166	65.73705
<b>Hunt County, TX</b>	777.3	167	66.13546
<b>Jackson County, TX</b>	778.1	168	66.53387
<b>Cherokee County, TX</b>	778.7	169	66.93227
<b>Grimes County, TX</b>	779.3	170	67.33068
<b>Wharton County, TX</b>	780.9	171	67.72908
<b>Callahan County, TX</b>	780.9	171	67.72908
<b>Lamb County, TX</b>	784.1	173	68.52589
<b>Dallam County, TX</b>	784.1	173	68.52589
<b>Crockett County, TX</b>	785.1	175	69.32271
<b>Refugio County, TX</b>	787.1	176	69.72112

<b>Martin County, TX</b>	789.8	177	70.11952
<b>Ward County, TX</b>	791.1	178	70.51793
<b>Kaufman County, TX</b>	791.3	179	70.91634
<b>Upshur County, TX</b>	792.2	180	71.31474
<b>Montague County, TX</b>	793.5	181	71.71315
<b>Coke County, TX</b>	793.9	182	72.11156
<b>Hardin County, TX</b>	794.7	183	72.50996
<b>Johnson County, TX</b>	797.4	184	72.90836
<b>Henderson County, TX</b>	798.8	185	73.30677
<b>Eastland County, TX</b>	803.5	186	73.70518
<b>Frio County, TX</b>	803.7	187	74.10358
<b>Collingsworth County, TX</b>	803.8	188	74.50199
<b>Taylor County, TX</b>	805.8	189	74.9004
<b>Navarro County, TX</b>	806	190	75.29881
<b>Terry County, TX</b>	808.6	191	75.69721
<b>Schleicher County, TX</b>	808.9	192	76.09562
<b>Cochran County, TX</b>	810.9	193	76.49403
<b>Anderson County, TX</b>	811.6	194	76.89243
<b>Nacogdoches County, TX</b>	811.9	195	77.29084
<b>Duval County, TX</b>	812.9	196	77.68924
<b>Andrews County, TX</b>	812.9	196	77.68924
<b>Gray County, TX</b>	813.2	198	78.48605
<b>Harrison County, TX</b>	813.4	199	78.88446
<b>Coryell County, TX</b>	815.5	200	79.28287
<b>Limestone County, TX</b>	816.8	201	79.68127
<b>Panola County, TX</b>	820.1	202	80.07968
<b>Lamar County, TX</b>	824.7	203	80.47809
<b>Crane County, TX</b>	826.5	204	80.8765
<b>Tyler County, TX</b>	827.8	205	81.2749
<b>Crosby County, TX</b>	828.4	206	81.67331

<b>Stephens County, TX</b>	829.6	207	82.07172
<b>Hall County, TX</b>	836.8	208	82.47012
<b>Delta County, TX</b>	838.6	209	82.86852
<b>Mitchell County, TX</b>	838.8	210	83.26693
<b>Dawson County, TX</b>	838.9	211	83.66534
<b>Sabine County, TX</b>	839.8	212	84.06374
<b>Cass County, TX</b>	841.6	213	84.46215
<b>Robertson County, TX</b>	841.9	214	84.86056
<b>Childress County, TX</b>	843.9	215	85.25896
<b>Trinity County, TX</b>	845.1	216	85.65737
<b>Marion County, TX</b>	846.1	217	86.05578
<b>Falls County, TX</b>	850.1	218	86.45419
<b>Young County, TX</b>	851	219	86.85259
<b>Brown County, TX</b>	852.2	220	87.251
<b>Ochiltree County, TX</b>	852.7	221	87.6494
<b>Ector County, TX</b>	853.4	222	88.04781
<b>Fannin County, TX</b>	856	223	88.44621
<b>Nolan County, TX</b>	857.7	224	88.84462
<b>Wichita County, TX</b>	858.4	225	89.24303
<b>DeWitt County, TX</b>	858.7	226	89.64143
<b>Brooks County, TX</b>	859.8	227	90.03984
<b>Kleberg County, TX</b>	860.4	228	90.43825
<b>Jefferson County, TX</b>	863.7	229	90.83665
<b>Hutchinson County, TX</b>	864.1	230	91.23506
<b>Jack County, TX</b>	864.4	231	91.63347
<b>Potter County, TX</b>	869.6	232	92.03188
<b>Morris County, TX</b>	871.3	233	92.43028
<b>Jim Wells County, TX</b>	871.9	234	92.82868
<b>Karnes County, TX</b>	875.1	235	93.22709
<b>Polk County, TX</b>	876.2	236	93.6255

<b>Jasper County, TX</b>	878.6	237	94.0239
<b>Angelina County, TX</b>	881.5	238	94.42231
<b>Reagan County, TX</b>	887.3	239	94.82072
<b>Wilbarger County, TX</b>	889.4	240	95.21912
<b>Shelby County, TX</b>	893.3	241	95.61753
<b>Wheeler County, TX</b>	895.1	242	96.01594
<b>San Augustine County, TX</b>	896	243	96.41434
<b>Palo Pinto County, TX</b>	903.5	244	96.81275
<b>Howard County, TX</b>	903.6	245	97.21116
<b>Bowie County, TX</b>	904.1	246	97.60956
<b>Camp County, TX</b>	907.5	247	98.00797
<b>Orange County, TX</b>	909.6	248	98.40637
<b>Red River County, TX</b>	911	249	98.80478
<b>Newton County, TX</b>	917.8	250	99.20319
<b>Winkler County, TX</b>	936.2	251	99.60159
<b>Liberty County, TX</b>	979.1	252	100
<b>Loving County, TX</b>	Suppressed		
<b>King County, TX</b>	Unreliable		

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AAMR: Age-adjusted mortality rate

**Supplemental Table XI.** CVD-related age-adjusted mortality rates per 100,000 stratified by type of CVD in Texas and the United States, 1999-2019.

Year	HF/Cardiomyopathy		Ischemic heart disease		Cerebrovascular disease	
	Texas	US	Texas	US	Texas	US
<b>1999</b>	203.5	190	402.7	385.5	177.1	159.9
<b>2000</b>	201.4	187.7	395.4	374.3	177.7	157.4
<b>2001</b>	200.9	183.1	382.3	361.3	171.2	151.1
<b>2002</b>	196.3	180.1	375.8	354.2	168.6	148.1
<b>2003</b>	190.3	177.9	351.8	340.4	158.2	141.2
<b>2004</b>	183.8	171.8	329.9	318.3	147	132.6
<b>2005</b>	182.8	172.1	327.2	312	137.1	124.6
<b>2006</b>	177.9	163.1	299.8	295.6	129.4	116.6
<b>2007</b>	174	156.6	286.8	281.6	128.5	112
<b>2008</b>	169.2	155.3	274.7	275.7	122	108.1
<b>2009</b>	162.6	148.6	264	259.5	115.1	102.1
<b>2010</b>	166.5	148.1	262.1	253.3	116.5	101.2
<b>2011</b>	158.9	145.8	250.7	245.3	112.2	98.8
<b>2012</b>	160.6	142.9	245.3	237.2	110.8	96.5
<b>2013</b>	162.9	145.8	243.1	231.5	107.7	94.6
<b>2014</b>	163.6	146	236.7	223.2	109.5	94.5
<b>2015</b>	167.4	151.8	230.8	220.4	111	96.9
<b>2016</b>	165.2	151	224	214.6	108.7	96.3
<b>2017</b>	168.8	154.6	224.9	212.8	108.7	97.3
<b>2018</b>	174	157.6	226.9	209.5	107.3	96.6
<b>2019</b>	170.2	159.6	220.5	204.9	105.5	97.1
<b>Total</b>	174.4	160.1	278.6	269.9	126.2	113

HF: Heart Failure


**Supplemental Table XII.** CVD-related age-adjusted mortality rates per 100,000 stratified by various groups in Texas and United States in 2020.

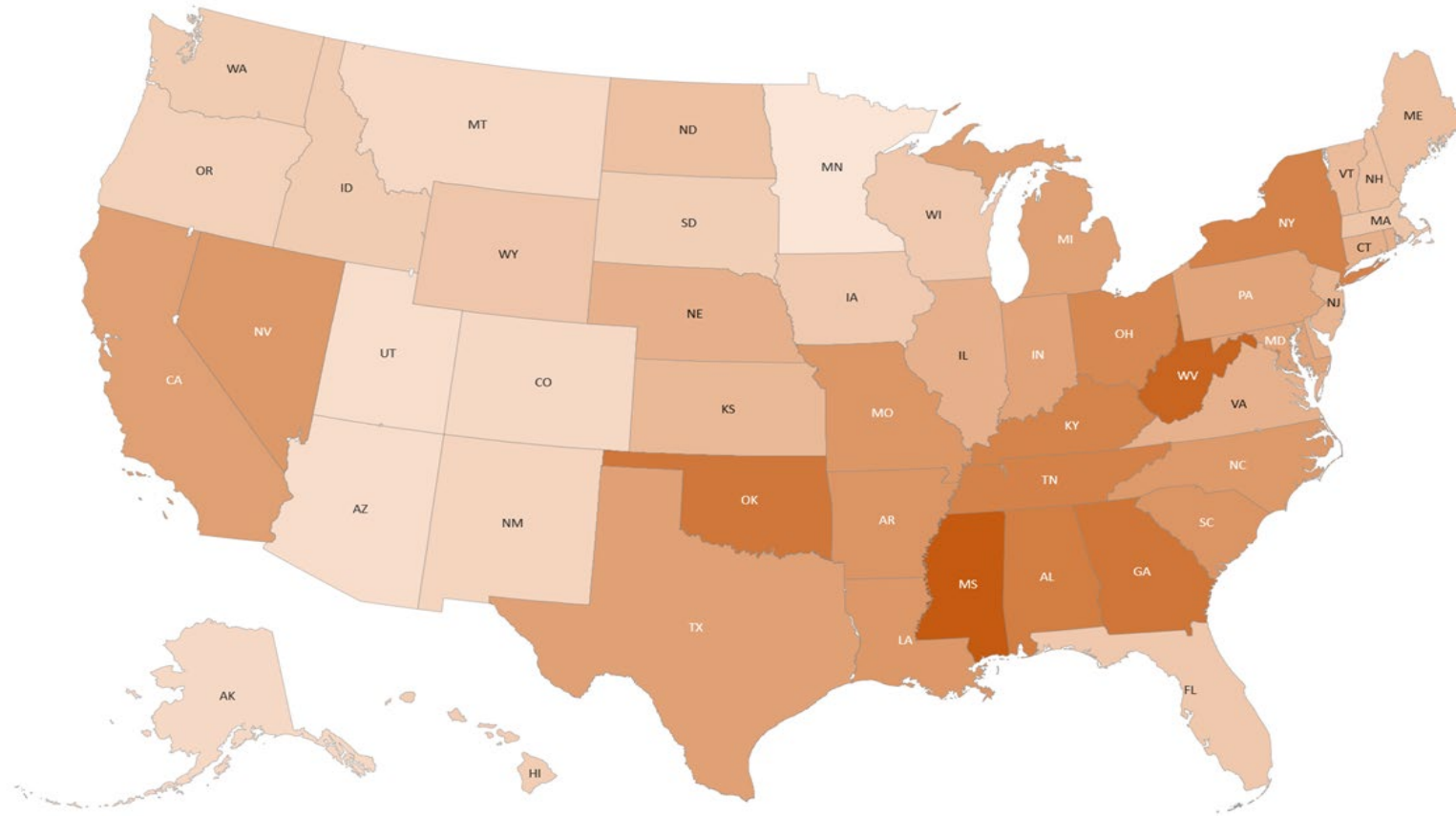
Year	Texas			US		
	AAMR	95% CI	95% CI	AAMR	95% CI	95% CI
<b>Overall</b>	727.6	723.7	731.6	691	690	692
<b>Female</b>	599.1	594.4	603.8	570.8	569.5	572
<b>Male</b>	881.9	875.3	888.4	779.4	779	779.8
<b>NH White</b>	723	718	728.1	676.3	675.1	677.5
<b>NH Black/AA</b>	966.5	951.8	981.2	957.6	953.8	961.4
<b>Hispanics</b>	701.4	693.6	709.2	618.8	615.6	621.9
<b>25-39 years</b>	35.8	34.3	37.3	39.9	39.4	40.4
<b>40-54 years</b>	179.3	175.7	182.8	179.9	178.8	181
<b>55-69 years</b>	714.1	706.4	721.8	655.3	653.3	657.4
<b>70-84 years</b>	2391.3	2370.7	2412	2186.9	2181.7	2192.1
<b>85+ years</b>	9541.2	9447.1	9635.3	9545.5	9522	9568.9
<b>Metropolitan</b>	705.3	701.1	709.5	671.3	670.2	672.4
<b>Nonmetropolitan</b>	873.3	861.9	884.6	796.7	794	799.5
<b>HF/Cardiomyopathy</b>	185.7	183.7	187.7	174.2	173.7	174.7
<b>Ischemic heart disease</b>	254.5	252.2	256.8	229.1	228.5	229.7
<b>Cerebrovascular disease</b>	119	117.4	120.5	109.1	108.7	109.5

HF: Heart Failure

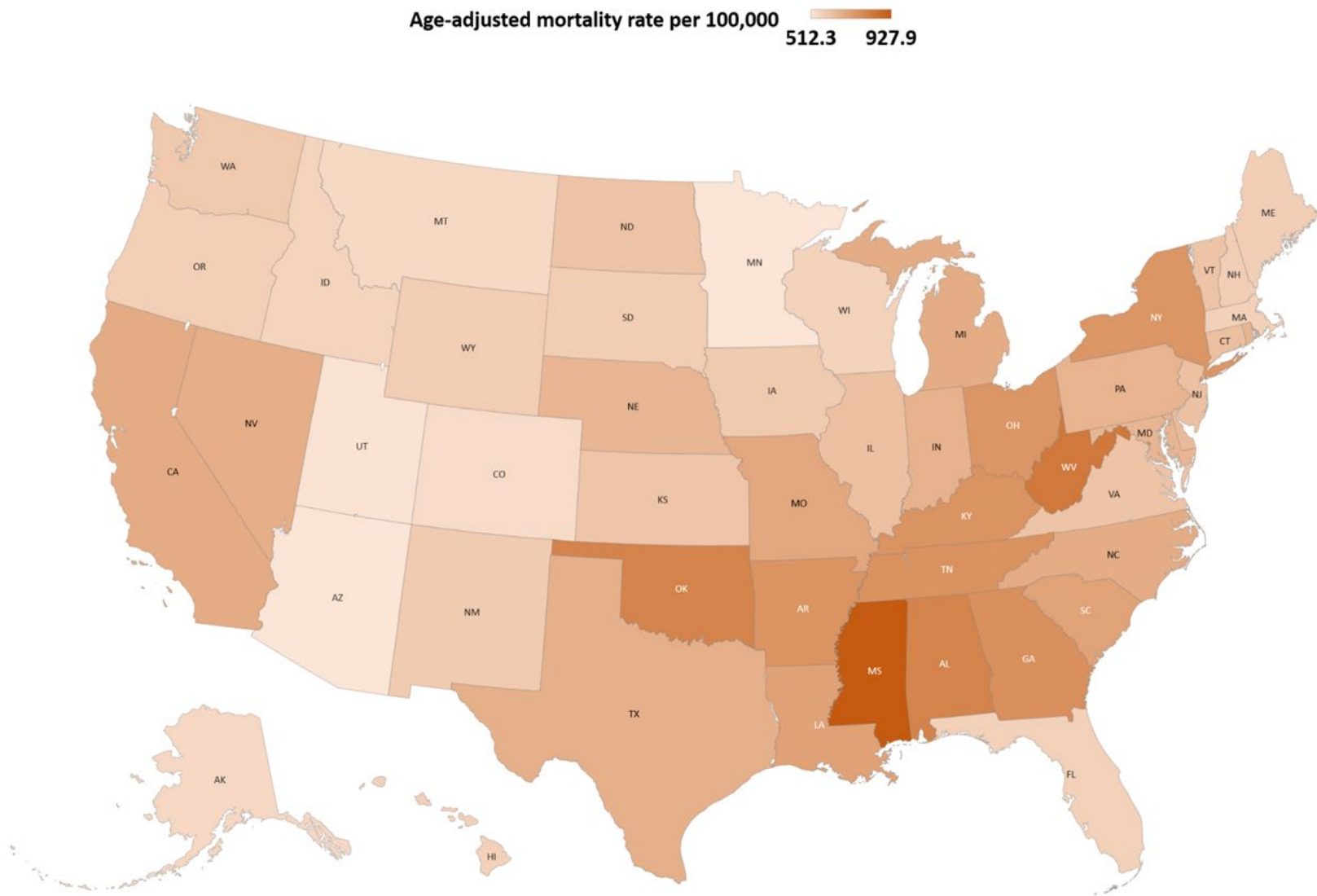
Crude death rates per 100,000 persons are given for age groups.



Age-adjusted mortality rate per 100,000  585.1 975.2

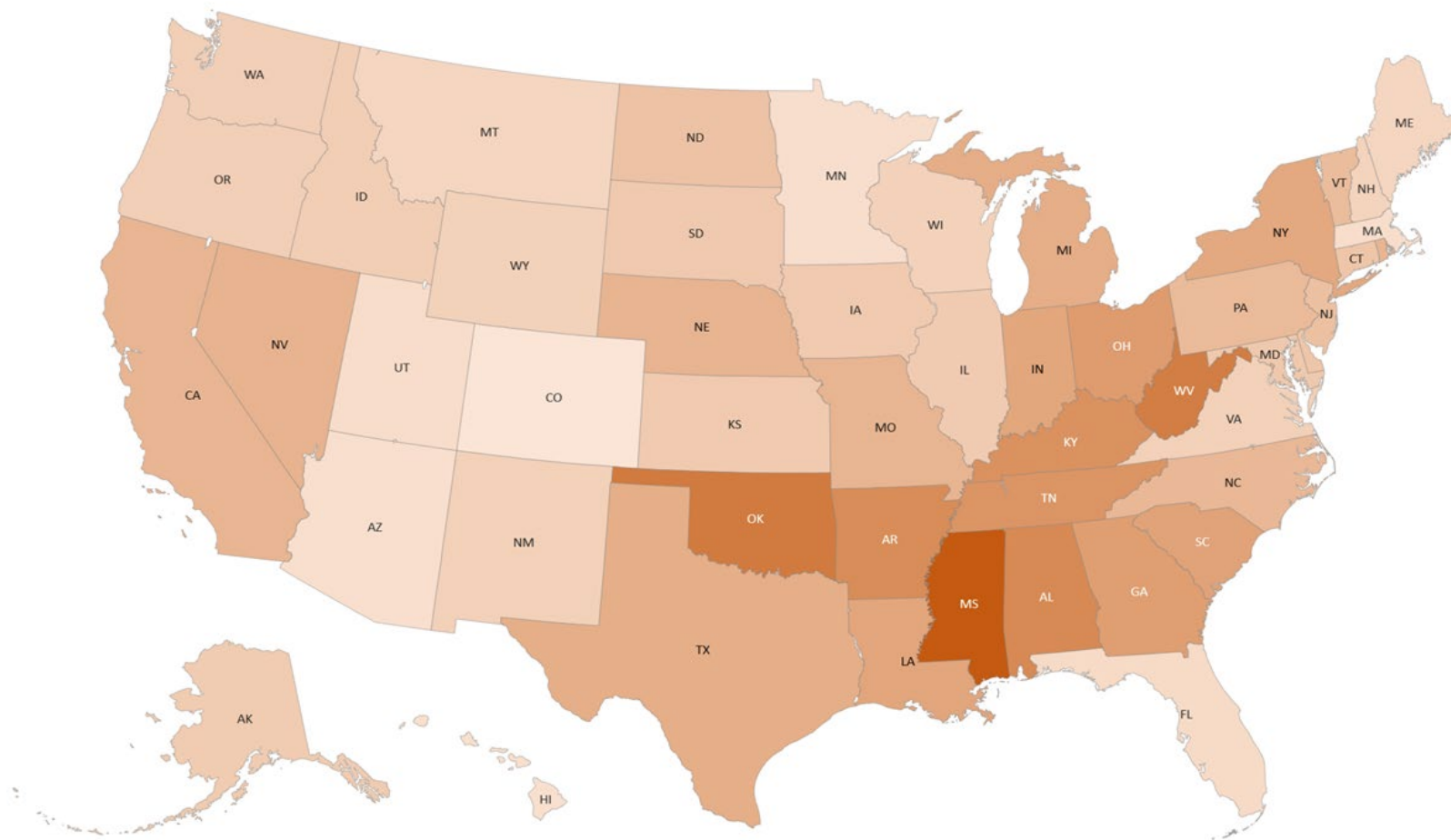


**Supplemental Figure 1A.** State-level DM and CVD-related age-adjusted mortality rates per 100,000 people in the United States, 1999 to 2004.

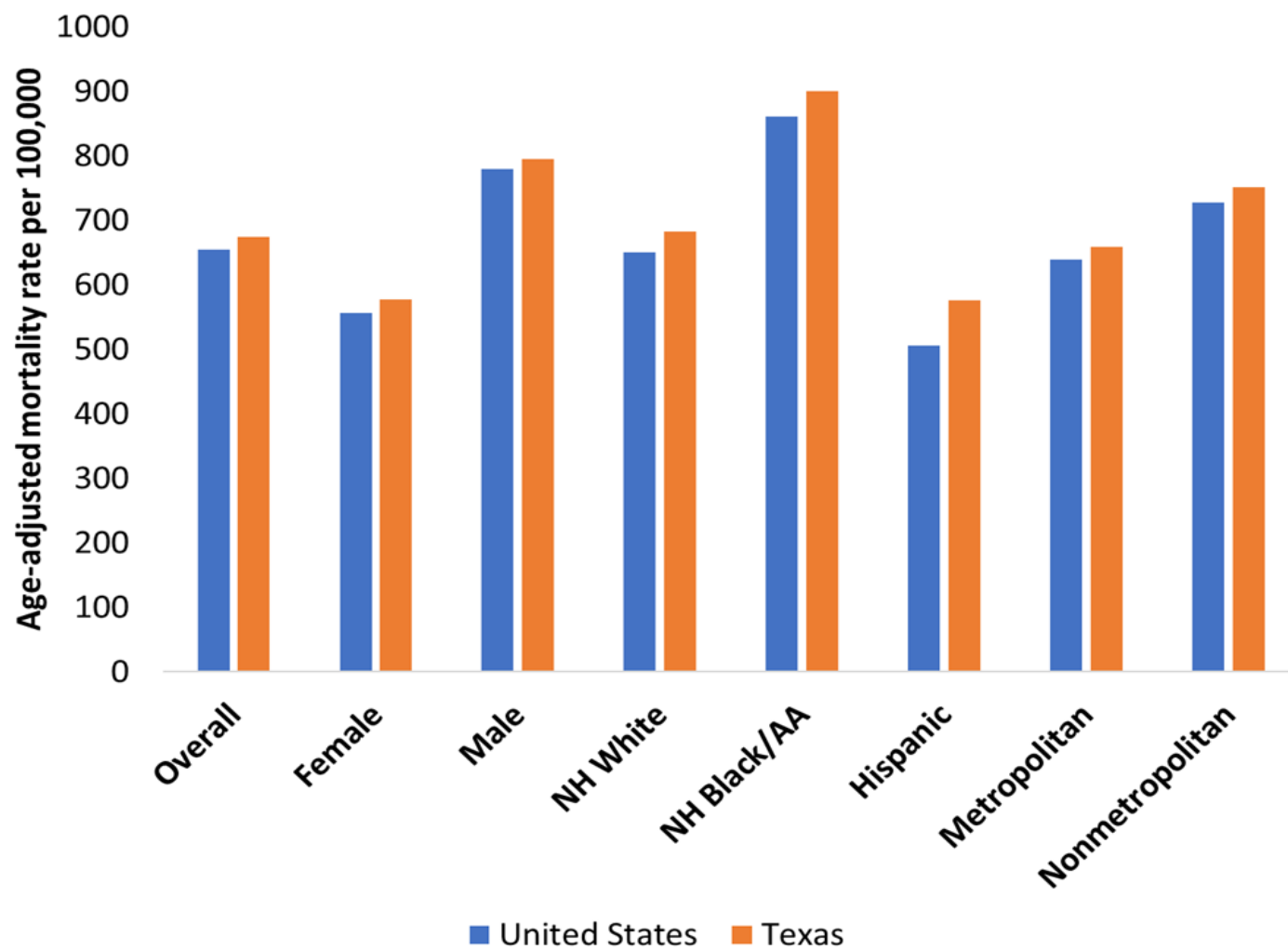


**Supplemental Figure 1B.** State-level DM and CVD-related age-adjusted mortality rates per 100,000 people in the United States, 2005-2009.

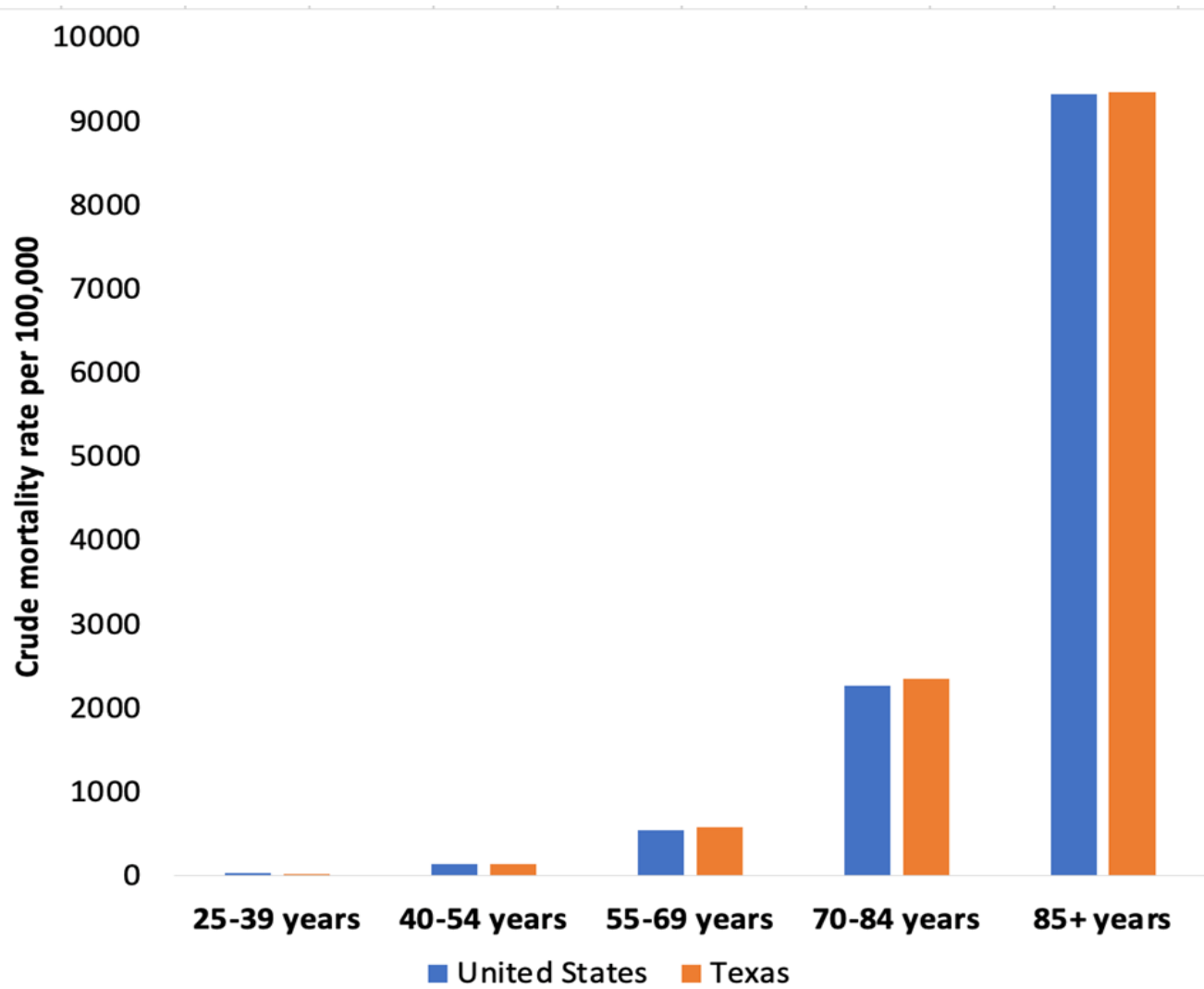
Age-adjusted mortality rate per 100,000   
486.5 867.1



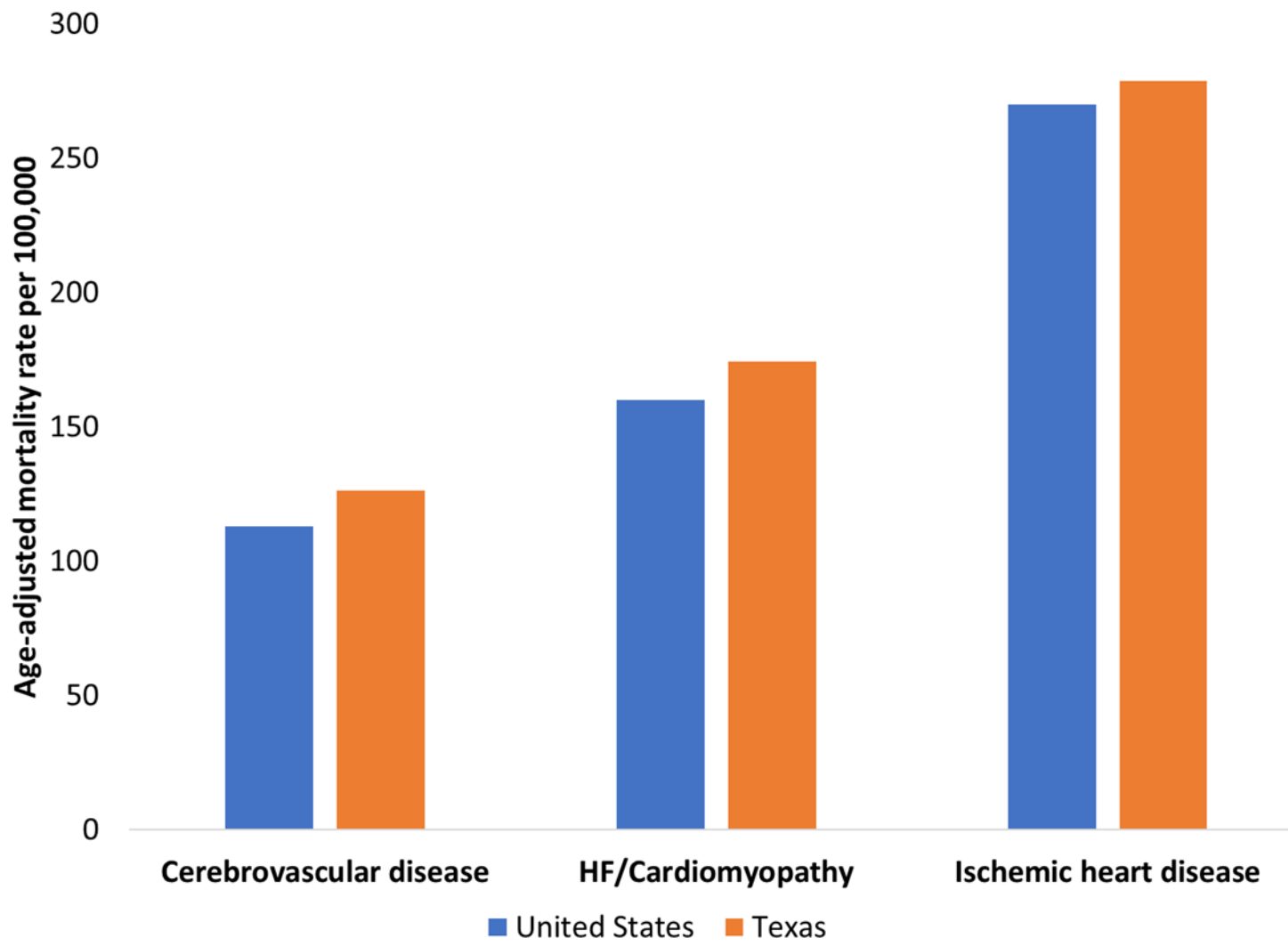
**Supplemental Figure 1C.** State-level DM and CVD-related age-adjusted mortality rates per 100,000 people in the United States, 2009 to 2014.



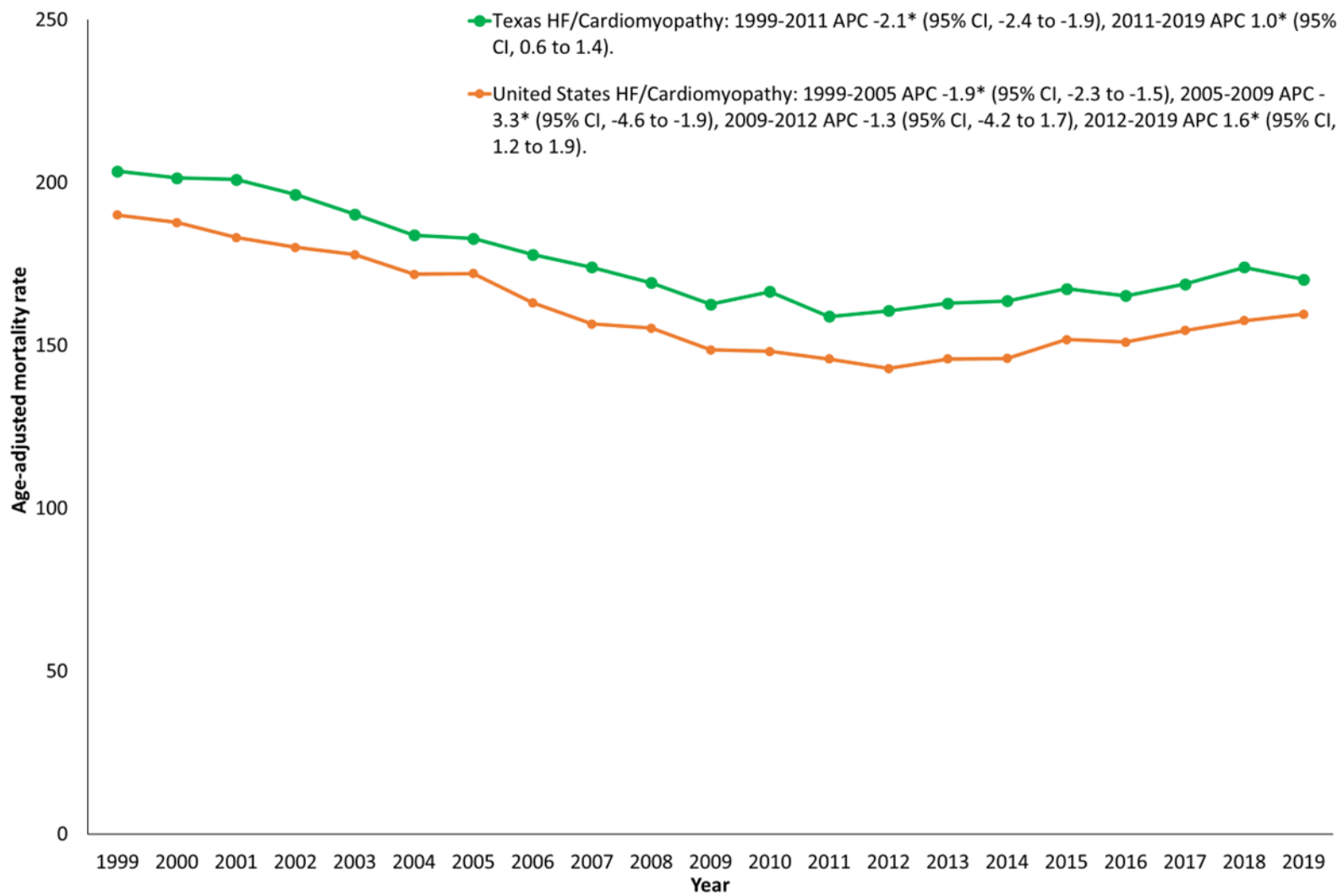
**Supplemental Figure 2A.** CVD-related mortality rates overall and stratified by subgroups in Texas and United States, 1999 to 2019.



**Supplemental Figure 2B.** CVD-related mortality rates stratified by age groups in Texas and United States, 1999 to 2019.

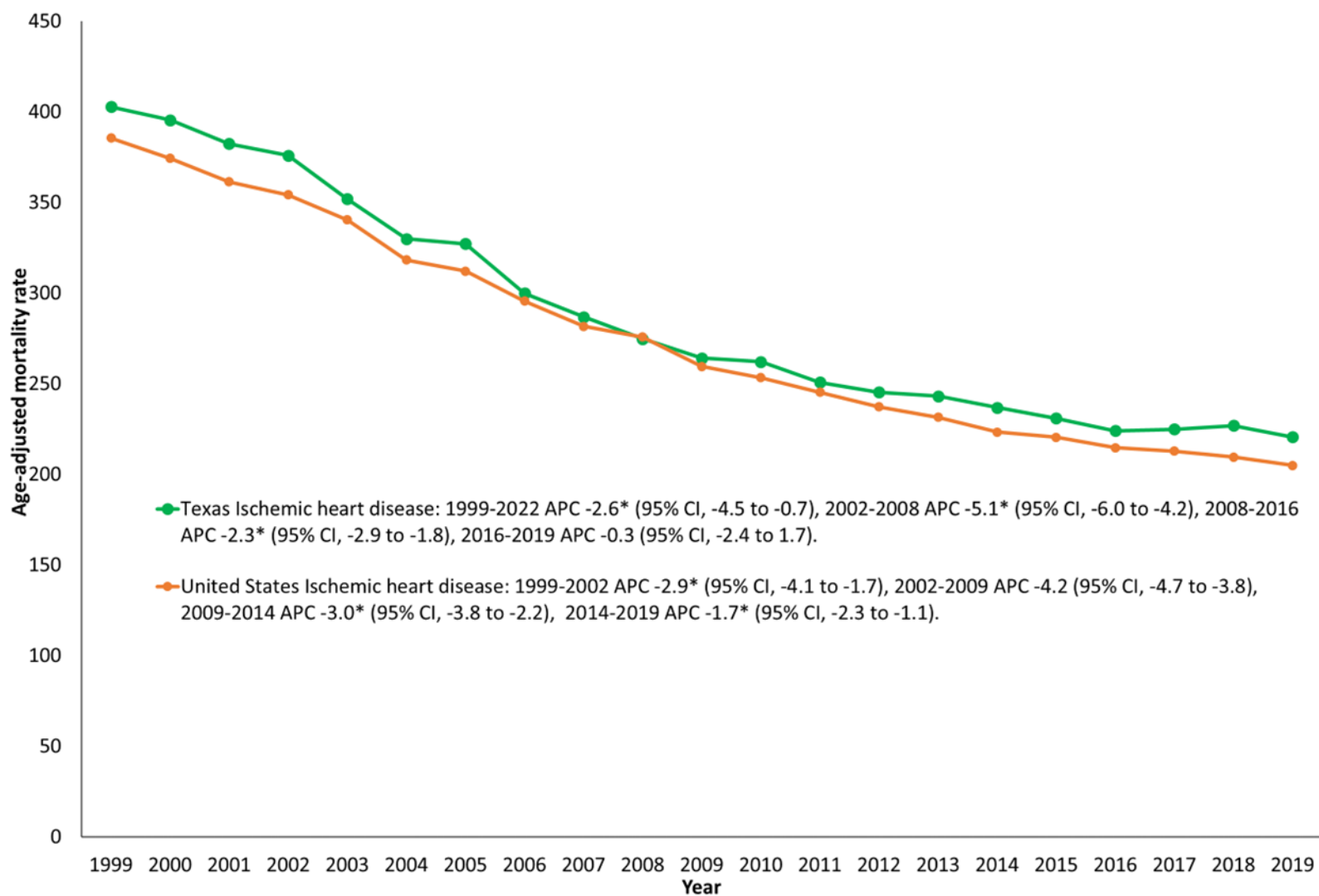


**Supplemental Figure 2C.** CVD-related mortality rates stratified by type of CVD in Texas and United States, 1999 to 2019.



**Supplemental Figure 3A.** Heart failure/cardiomyopathy–related mortality rates in Texas and United States, 1999 to 2019.

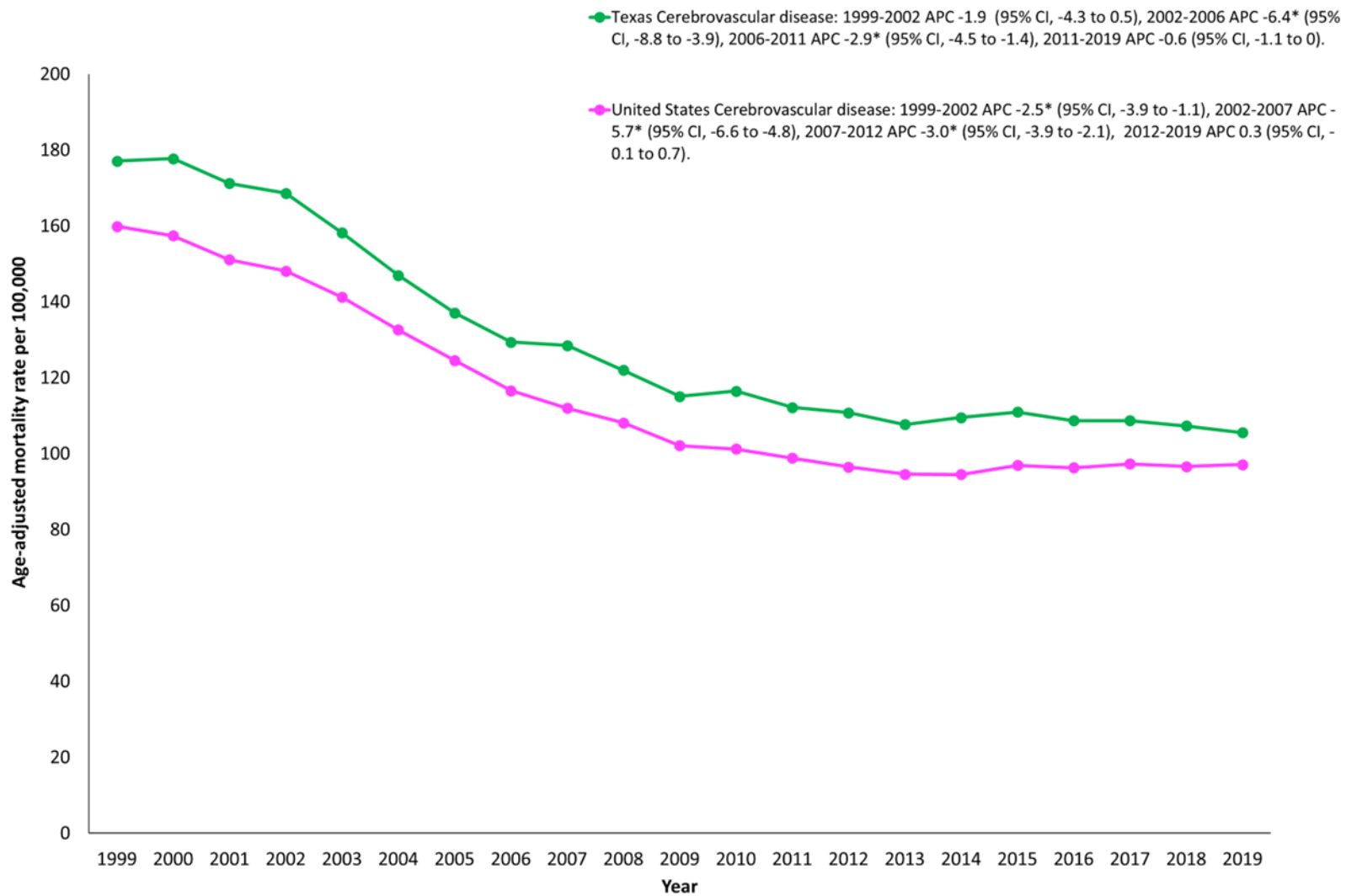
\*Indicates that the annual percentage change (APC) is significantly different from zero at  $\alpha=0.05$ .



**Supplemental Figure 3B.** Ischemic heart disease–related mortality rates in Texas and United States, 1999 to 2019.

\*Indicates that the annual percentage change (APC) is significantly different from zero at  $\alpha=0.05$ .





**Supplemental Figure 3C.** Cerebrovascular disease-related mortality rates in Texas and United States, 1999 to 2019.

\*Indicates that the annual percentage change (APC) is significantly different from zero to  $\alpha=0.05$ .