
Carotid artery stenosis-related mortality among older adults (>65 years): a retrospective analytical study

Abu Huraira Bin Gulzar,¹ Ayesha Ahmed Cheema,² Hina Nadeem,³ Syed Sarmad Javaid,⁴ Wolfram Doehner,⁵⁻⁷ Hafsa Azam³

¹Department of Medicine, Services Institute of Medical Sciences, Lahore, Punjab, Pakistan; ²Department of Medicine, Al-Tibri Medical College, Karachi, Sindh, Pakistan; ³Department of Medicine, Jinnah Sindh Medical University, Karachi, Sindh, Pakistan; ⁴Department of Medicine, The University of Mississippi Medical Center, Jackson, MS, USA; ⁵Berlin Institute of Health Center for Regenerative Therapies, Charité - Universitätsmedizin Berlin, Germany; ⁶Deutsches Herzzentrum der Charité, Department of Cardiology, Angiology and Intensive Care Medicine, German Center for Cardiovascular Research (DZHK), partner site Berlin, Germany; ⁷Center for Stroke Research Berlin, Charité - Universitätsmedizin Berlin, Berlin, Germany

Corresponding Author: Abu Huraira Bin Gulzar, Department of Medicine, Services Institute of Medical Sciences, Ghaus-ul-Azam (Jail Road), Shadman 1, Lahore, 54000 Punjab, Pakistan. E-mail: abu.huraira.bin.gulzar@gmail.com

Captions of supplementary figures

Supplementary figure 1. Distribution of deaths by place of occurrence from 1999-2020..

Supplementary figure 2. Age-adjusted mortality rate per 100,000 population by U.S. state, 1999–2020.

Captions of supplementary tables

Supplementary table 1. Overall CAS-related age-adjusted mortality rate per 100,000

Supplementary table 2. CAS-related age-adjusted mortality rate per 100,000 stratified by sex

Supplementary table 3. CAS-related age-adjusted mortality rate per 100,000 based on ten-year age groups

Supplementary table 4. Census regions with CAS-related age-adjusted mortality rate per 100,000

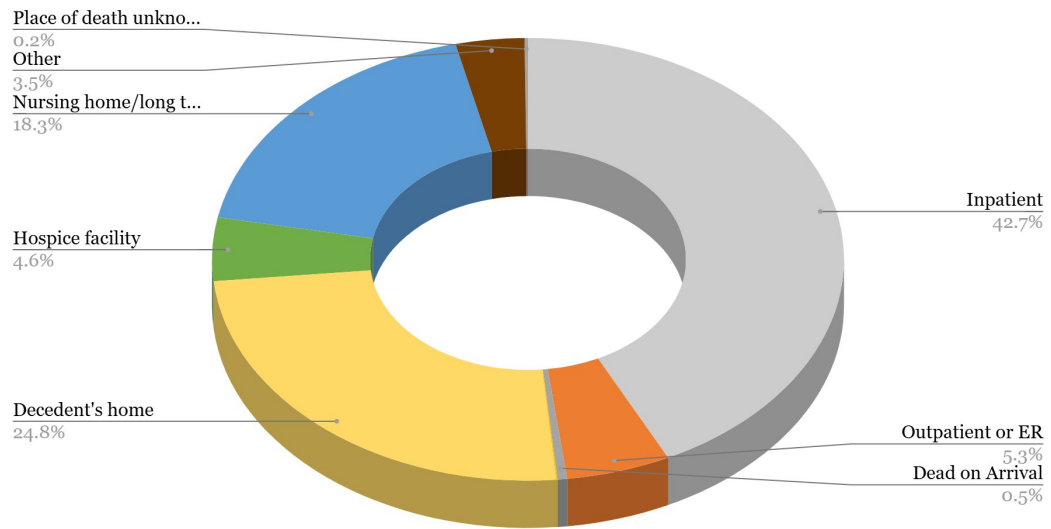
Supplementary table 5. CAS-related age-adjusted mortality rate per 100,000 as per urbanization

Supplementary table 6. Race/ ethnicity based CAS-related age-adjusted mortality rate per 100,000

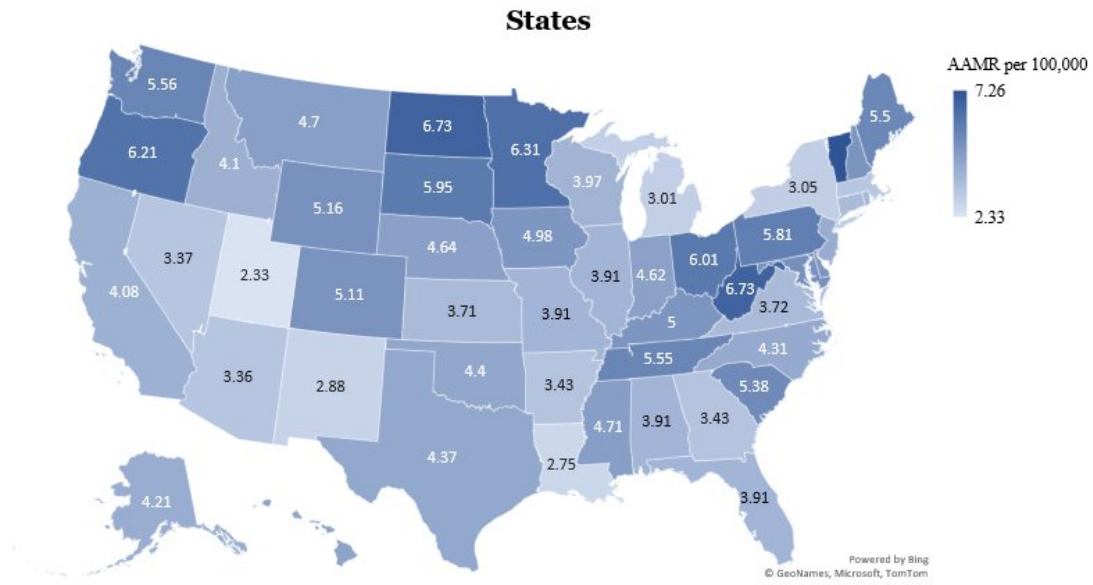
Supplementary table 7. CAS-related age-adjusted mortality rate per 100,000 at state-level

Supplementary table 8. CAS-related age-adjusted mortality rate per 100,000 stratified by place of death

Place of Death



Supplementary figure 1. Distribution of deaths by place of occurrence from 1999-2020.



Supplementary figure 2. Age-adjusted mortality rate per 100,000 population by U.S. state, 1999–2020.

Supplementary table 1. Overall CAS-related age-adjusted mortality rate per 100,000

Year	Age-Adjusted Rate	Age Adjusted Rate Standard Error
1999	4.74	0.12
2000	4.53	0.11
2001	4.37	0.11
2002	4.33	0.11
2003	4.13	0.11
2004	4.11	0.11
2005	3.93	0.1
2006	3.88	0.1
2007	3.65	0.1
2008	3.69	0.1
2009	3.49	0.09
2010	3.73	0.1
2011	3.47	0.09
2012	3.83	0.09
2013	3.63	0.09
2014	3.74	0.09
2015	3.86	0.09
2016	4.32	0.1
2017	4.71	0.1
2018	5.14	0.1
2019	5.83	0.11
2020	6.56	0.11

Supplementary table 2. CAS-related age-adjusted mortality rate per 100,000 stratified by sex

Sex	Year	Age Adjusted Rate	Age Adjusted Rate Standard Error
Female	1999	3.91	0.14
Female	2000	3.56	0.13
Female	2001	3.44	0.13
Female	2002	3.49	0.13
Female	2003	3.36	0.12
Female	2004	3.21	0.12
Female	2005	3.37	0.12
Female	2006	3.14	0.12
Female	2007	3.03	0.11
Female	2008	3.14	0.11
Female	2009	2.87	0.11
Female	2010	3.13	0.11
Female	2011	2.86	0.11
Female	2012	3.21	0.11
Female	2013	2.9	0.11
Female	2014	3.16	0.11
Female	2015	3.19	0.11
Female	2016	3.55	0.11
Female	2017	3.91	0.12
Female	2018	4.12	0.12
Female	2019	4.73	0.13
Female	2020	5.45	0.13
Male	1999	5.97	0.22
Male	2000	6.19	0.22
Male	2001	5.93	0.21
Male	2002	5.59	0.21
Male	2003	5.48	0.2
Male	2004	5.57	0.2

Male	2005	4.88	0.19
Male	2006	5.12	0.19
Male	2007	4.6	0.18
Male	2008	4.49	0.17
Male	2009	4.41	0.17
Male	2010	4.64	0.17
Male	2011	4.4	0.16
Male	2012	4.73	0.17
Male	2013	4.73	0.16
Male	2014	4.67	0.16
Male	2015	4.86	0.16
Male	2016	5.39	0.17
Male	2017	5.89	0.17
Male	2018	6.52	0.18
Male	2019	7.39	0.19
Male	2020	8.01	0.19

Supplementary table 3. CAS-related age-adjusted mortality rate per 100,000 based on ten-year age groups

Ten-Year Age Groups	Year	Crude Rate	Crude Rate	Standard Error
	199			
65-74 years	9	2.27		0.11
	200			
65-74 years	0	2.04		0.11
	200			
65-74 years	1	2.09		0.11
	200			
65-74 years	2	1.9		0.1
	200			
65-74 years	3	2.02		0.1
	200			
65-74 years	4	1.87		0.1
	200			
65-74 years	5	1.82		0.1
	200			
65-74 years	6	1.71		0.09
	200			
65-74 years	7	1.56		0.09
	200			
65-74 years	8	1.43		0.08
	200			
65-74 years	9	1.46		0.08
	201			
65-74 years	0	1.47		0.08
	201			
65-74 years	1	1.39		0.08
	201			
65-74 years	2	1.6		0.08
	201			
65-74 years	3	1.5		0.08
	201			
65-74 years	4	1.64		0.08
	201			
65-74 years	5	1.52		0.07
	201			
65-74 years	6	1.71		0.08
	201			
65-74 years	7	1.84		0.08
	201			
65-74 years	8	2.11		0.08
	201			
65-74 years	9	2.25		0.08
	202			
65-74 years	0	2.48		0.09
	199			
75-84 years	9	5.88		0.22
	200			
75-84 years	0	5.84		0.22
	200			
75-84 years	1	5.49		0.21

	200		
75-84 years	2	5.26	0.2
	200		
75-84 years	3	5	0.2
	200		
75-84 years	4	4.93	0.19
	200		
75-84 years	5	4.67	0.19
	200		
75-84 years	6	4.6	0.19
	200		
75-84 years	7	4.44	0.18
	200		
75-84 years	8	4.59	0.19
	200		
75-84 years	9	4.44	0.18
	201		
75-84 years	0	4.51	0.19
	201		
75-84 years	1	4.31	0.18
	201		
75-84 years	2	4.54	0.19
	201		
75-84 years	3	4.33	0.18
	201		
75-84 years	4	4.21	0.18
	201		
75-84 years	5	4.94	0.19
	201		
75-84 years	6	5.08	0.19
	201		
75-84 years	7	5.68	0.2
	201		
75-84 years	8	6	0.2
	201		
75-84 years	9	6.57	0.2
	202		
75-84 years	0	7.27	0.21
	199		
85+ years	9	11.8	0.53
	200		
85+ years	0	11.58	0.52
	200		
85+ years	1	10.78	0.5
	200		
85+ years	2	11.88	0.52
	200		
85+ years	3	10.75	0.49
	200		
85+ years	4	11.17	0.5
	200		
85+ years	5	10.8	0.48
	200		
85+ years	6	11.12	0.48
85+ years	200	10.24	0.45

	7		
	200		
85+ years	8	10.76	0.46
	200		
85+ years	9	9.26	0.42
	201		
85+ years	0	10.99	0.45
	201		
85+ years	1	9.87	0.41
	201		
85+ years	2	11.43	0.44
	201		
85+ years	3	10.81	0.42
	201		
85+ years	4	11.46	0.43
	201		
85+ years	5	10.9	0.42
	201		
85+ years	6	13.18	0.45
	201		
85+ years	7	14.24	0.47
	201		
85+ years	8	15.6	0.49
	201		
85+ years	9	19.06	0.54
	202		
85+ years	0	21.67	0.57

Supplementary table 4. Census regions with CAS-related age-adjusted mortality rate per 100,000

Census Region	Year	Age Adjusted Rate	Age Adjusted Rate Standard Error
Census Region 1: North-east	1999	5.01	0.26
Census Region 1: North-east	2000	4.77	0.25
Census Region 1: North-east	2001	5.09	0.26
Census Region 1: North-east	2002	4.33	0.24
Census Region 1: North-east	2003	4.22	0.23
Census Region 1: North-east	2004	4.22	0.23
Census Region 1: North-east	2005	4.01	0.23
Census Region 1: North-east	2006	3.68	0.22
Census Region 1: North-east	2007	3.41	0.21
Census Region 1: North-east	2008	3.2	0.2
Census Region 1: North-east	2009	3.15	0.2
Census Region 1: North-east	2010	3.77	0.21
Census Region 1: North-east	2011	3.58	0.21
Census Region 1: North-east	2012	3.53	0.2
Census Region 1: North-east	2013	3.92	0.21
Census Region 1: North-east	2014	3.64	0.2
Census Region 1: North-east	2015	3.7	0.21
Census Region 1: North-east	2016	3.7	0.2
Census Region 1: North-east	2017	4.3	0.22
Census Region 1: North-east	2018	4.66	0.22
Census Region 1: North-east	2019	5.29	0.23
Census Region 1: North-east	2020	6.16	0.25
Census Region 2: Midwest	1999	5.33	0.25
Census Region 2: Midwest	2000	4.93	0.24
Census Region 2: Midwest	2001	4.61	0.23
Census Region 2: Midwest	2002	4.74	0.24
Census Region 2: Midwest	2003	4.81	0.24
Census Region 2: Midwest	2004	4.81	0.23

Census Region 2: Midwest	2005	4.16	0.22
Census Region 2: Midwest	2006	4.49	0.22
Census Region 2: Midwest	2007	4.05	0.21
Census Region 2: Midwest	2008	4.23	0.21
Census Region 2: Midwest	2009	3.78	0.2
Census Region 2: Midwest	2010	3.85	0.2
Census Region 2: Midwest	2011	3.46	0.19
Census Region 2: Midwest	2012	3.86	0.2
Census Region 2: Midwest	2013	3.64	0.19
Census Region 2: Midwest	2014	4.22	0.21
Census Region 2: Midwest	2015	3.85	0.2
Census Region 2: Midwest	2016	4.43	0.21
Census Region 2: Midwest	2017	4.78	0.21
Census Region 2: Midwest	2018	5.08	0.22
Census Region 2: Midwest	2019	5.66	0.23
Census Region 2: Midwest	2020	6.71	0.25
Census Region 3: South	1999	4.48	0.19
Census Region 3: South	2000	4.57	0.19
Census Region 3: South	2001	4.22	0.18
Census Region 3: South	2002	4.35	0.19
Census Region 3: South	2003	3.98	0.18
Census Region 3: South	2004	3.84	0.17
Census Region 3: South	2005	4.03	0.18
Census Region 3: South	2006	3.73	0.17
Census Region 3: South	2007	3.7	0.17
Census Region 3: South	2008	3.7	0.16
Census Region 3: South	2009	3.56	0.16
Census Region 3: South	2010	3.62	0.16
Census Region 3: South	2011	3.3	0.15
Census Region 3: South	2012	3.72	0.15
Census Region 3: South	2013	3.6	0.15
Census Region 3: South	2014	3.51	0.15
Census Region 3: South	2015	3.72	0.15
Census Region 3: South	2016	4.26	0.16
Census Region 3: South	2017	4.49	0.16
Census Region 3: South	2018	5.1	0.17
Census Region 3: South	2019	6.3	0.18
Census Region 3: South	2020	6.5	0.18
Census Region 4: West	1999	4.08	0.25
Census Region 4: West	2000	3.8	0.24
Census Region 4: West	2001	3.49	0.22
Census Region 4: West	2002	3.8	0.23
Census Region 4: West	2003	3.53	0.22
Census Region 4: West	2004	3.52	0.22
Census Region 4: West	2005	3.38	0.21
Census Region 4: West	2006	3.67	0.22
Census Region 4: West	2007	3.35	0.21
Census Region 4: West	2008	3.62	0.21

Census Region 4: West	2009	3.24	0.2
Census Region 4: West	2010	3.66	0.21
Census Region 4: West	2011	3.62	0.2
Census Region 4: West	2012	4.31	0.22
Census Region 4: West	2013	3.37	0.19
Census Region 4: West	2014	3.82	0.2
Census Region 4: West	2015	4.4	0.21
Census Region 4: West	2016	4.86	0.22
Census Region 4: West	2017	5.43	0.23
Census Region 4: West	2018	5.71	0.23
Census Region 4: West	2019	5.67	0.22
Census Region 4: West	2020	6.77	0.24

Supplementary table 5. CAS-related age-adjusted mortality rate per 100,000 as per urbanization

2013 Urbanization	Year	Age Adjusted Rate	Age Adjusted Rate	Standard Error
Large Central Metro	1999	3.98		0.2
Large Central Metro	2000	3.83		0.2
Large Central Metro	2001	3.6		0.19
Large Central Metro	2002	3.42		0.19
Large Central Metro	2003	3.34		0.18
Large Central Metro	2004	3.47		0.19
Large Central Metro	2005	3.14		0.18
Large Central Metro	2006	3.55		0.19
Large Central Metro	2007	3.13		0.17
Large Central Metro	2008	3.08		0.17
Large Central Metro	2009	3.05		0.17
Large Central Metro	2010	3.31		0.18
Large Central Metro	2011	3.04		0.17
Large Central Metro	2012	3.26		0.17
Large Central Metro	2013	2.75		0.15
Large Central Metro	2014	3.14		0.16
Large Central Metro	2015	3.26		0.16
Large Central Metro	2016	3.55		0.17
Large Central Metro	2017	4		0.18
Large Central Metro	2018	3.94		0.17
Large Central Metro	2019	4.29		0.18
Large Central Metro	2020	4.9		0.19
Large Fringe Metro	1999	4.93		0.25
Large Fringe Metro	2000	4.48		0.24
Large Fringe Metro	2001	4.37		0.24
Large Fringe Metro	2002	4.17		0.23
Large Fringe Metro	2003	3.98		0.22
Large Fringe Metro	2004	3.67		0.21
Large Fringe Metro	2005	3.65		0.21
Large Fringe Metro	2006	3.37		0.2
Large Fringe Metro	2007	3.27		0.19
Large Fringe Metro	2008	3.72		0.2
Large Fringe Metro	2009	3.39		0.19
Large Fringe Metro	2010	3.26		0.18
Large Fringe Metro	2011	3.08		0.18
Large Fringe Metro	2012	3.64		0.19
Large Fringe Metro	2013	3.39		0.18
Large Fringe Metro	2014	3.59		0.18
Large Fringe Metro	2015	3.7		0.18
Large Fringe Metro	2016	4.1		0.19
Large Fringe Metro	2017	4.16		0.19
Large Fringe Metro	2018	4.5		0.19
Large Fringe Metro	2019	5.12		0.2
Large Fringe Metro	2020	5.44		0.21
Medium Metro	1999	4.99		0.26
Medium Metro	2000	4.83		0.26

Medium Metro	2001	4.84	0.26
Medium Metro	2002	4.74	0.25
Medium Metro	2003	4.58	0.24
Medium Metro	2004	4.47	0.24
Medium Metro	2005	4.58	0.24
Medium Metro	2006	4.28	0.23
Medium Metro	2007	4.16	0.23
Medium Metro	2008	4.01	0.22
Medium Metro	2009	3.66	0.21
Medium Metro	2010	4.21	0.22
Medium Metro	2011	3.77	0.21
Medium Metro	2012	4.13	0.21
Medium Metro	2013	4.08	0.21
Medium Metro	2014	4	0.2
Medium Metro	2015	4.37	0.21
Medium Metro	2016	4.79	0.22
Medium Metro	2017	5.3	0.23
Medium Metro	2018	5.86	0.23
Medium Metro	2019	7.1	0.25
Medium Metro	2020	7.24	0.25
Small Metro	1999	5.73	0.41
Small Metro	2000	5.07	0.39
Small Metro	2001	4.55	0.36
Small Metro	2002	5.05	0.38
Small Metro	2003	4.63	0.36
Small Metro	2004	4.09	0.34
Small Metro	2005	4.52	0.35
Small Metro	2006	4.51	0.35
Small Metro	2007	3.89	0.32
Small Metro	2008	3.76	0.31
Small Metro	2009	4.02	0.32
Small Metro	2010	4.16	0.32
Small Metro	2011	3.88	0.31
Small Metro	2012	4.65	0.33
Small Metro	2013	4.72	0.33
Small Metro	2014	4.23	0.31
Small Metro	2015	4.79	0.32
Small Metro	2016	5.29	0.33
Small Metro	2017	5.59	0.34
Small Metro	2018	6.89	0.37
Small Metro	2019	7.66	0.39
Small Metro	2020	9.14	0.42
Micropolitan (Non-metro)	1999	5.4	0.39
Micropolitan (Non-metro)	2000	5.53	0.39
Micropolitan (Non-metro)	2001	4.75	0.36
Micropolitan (Non-metro)	2002	4.62	0.35

metro)			
Micropolitan (Non-metro)	2003	5.1	0.37
Micropolitan (Non-metro)	2004	5.56	0.38
Micropolitan (Non-metro)	2005	4.51	0.34
Micropolitan (Non-metro)	2006	4.87	0.35
Micropolitan (Non-metro)	2007	3.89	0.31
Micropolitan (Non-metro)	2008	4.35	0.33
Micropolitan (Non-metro)	2009	3.64	0.3
Micropolitan (Non-metro)	2010	4.15	0.32
Micropolitan (Non-metro)	2011	3.8	0.3
Micropolitan (Non-metro)	2012	4.57	0.33
Micropolitan (Non-metro)	2013	4.34	0.32
Micropolitan (Non-metro)	2014	4.64	0.32
Micropolitan (Non-metro)	2015	4.04	0.3
Micropolitan (Non-metro)	2016	4.47	0.31
Micropolitan (Non-metro)	2017	5.19	0.33
Micropolitan (Non-metro)	2018	5.83	0.35
Micropolitan (Non-metro)	2019	6.8	0.37
Micropolitan (Non-metro)	2020	8.92	0.43
NonCore (Nonmetro)	1999	4.13	0.37
NonCore (Nonmetro)	2000	4.82	0.4
NonCore (Nonmetro)	2001	4.83	0.4
NonCore (Nonmetro)	2002	5.25	0.41
NonCore (Nonmetro)	2003	4.34	0.38
NonCore (Nonmetro)	2004	4.63	0.39
NonCore (Nonmetro)	2005	4.33	0.37
NonCore (Nonmetro)	2006	3.66	0.34
NonCore (Nonmetro)	2007	4.49	0.38
NonCore (Nonmetro)	2008	3.99	0.35
NonCore (Nonmetro)	2009	3.81	0.35
NonCore (Nonmetro)	2010	3.96	0.35
NonCore (Nonmetro)	2011	4.2	0.36
NonCore (Nonmetro)	2012	3.84	0.34
NonCore (Nonmetro)	2013	3.94	0.34
NonCore (Nonmetro)	2014	4.09	0.34

NonCore (Nonmetro)	2015	3.81	0.33
NonCore (Nonmetro)	2016	4.76	0.37
NonCore (Nonmetro)	2017	5.56	0.39
NonCore (Nonmetro)	2018	6.32	0.41
NonCore (Nonmetro)	2019	6.54	0.42
NonCore (Nonmetro)	2020	7.71	0.45

Supplementary table 6. Race/ ethnicity based CAS-related age-adjusted mortality rate per 100,000

Race	Year	Age Adjusted Rate	Age Adjusted Rate Standard Error
Asian or Pacific Islander	2000	4.03	0.77
Asian or Pacific Islander	2001	3.3	0.63
Asian or Pacific Islander	2002	4.41	0.75
Asian or Pacific Islander	2003	3.02	0.6
Asian or Pacific Islander	2004	2.89	0.56
Asian or Pacific Islander	2005	2.79	0.53
Asian or Pacific Islander	2006	1.88	0.42
Asian or Pacific Islander	2007	2.04	0.43
Asian or Pacific Islander	2008	1.91	0.41
Asian or Pacific Islander	2009	1.6	0.35
Asian or Pacific Islander	2010	2.99	0.48
Asian or Pacific Islander	2011	2.14	0.39
Asian or Pacific Islander	2012	2.5	0.4
Asian or Pacific Islander	2013	2.2	0.37
Asian or Pacific Islander	2014	1.97	0.33
Asian or Pacific Islander	2015	1.27	0.26
Asian or Pacific Islander	2016	2.8	0.38
Asian or Pacific Islander	2017	3.13	0.39
Asian or Pacific Islander	2018	2.78	0.35
Asian or Pacific Islander	2019	2.65	0.33
Asian or Pacific Islander	2020	3.79	0.38
Black or African American	1999	2.98	0.33
Black or African American	2000	3.9	0.38
Black or African American	2001	2.68	0.31
Black or African American	2002	2.32	0.29
Black or African American	2003	3.07	0.33
Black or African American	2004	3.64	0.36
Black or African American	2005	2.56	0.3
Black or African American	2006	3.25	0.33
Black or African American	2007	2.48	0.29
Black or African American	2008	2.7	0.29
Black or African American	2009	2.61	0.29
Black or African American	2010	2.44	0.28
Black or African American	2011	2.4	0.27
Black or African American	2012	2.2	0.25
Black or African American	2013	2.84	0.28
Black or African American	2014	2.39	0.26
Black or African American	2015	3.13	0.29
Black or African American	2016	3.21	0.29
Black or African American	2017	3	0.27
Black or African American	2018	3.32	0.28
Black or African American	2019	4.57	0.32
Black or African American	2020	5.04	0.33
White	1999	5.07	0.13

White	2000	4.72	0.13
White	2001	4.58	0.12
White	2002	4.58	0.12
White	2003	4.44	0.12
White	2004	4.24	0.12
White	2005	4.19	0.12
White	2006	4.09	0.11
White	2007	3.94	0.11
White	2008	3.97	0.11
White	2009	3.71	0.11
White	2010	3.91	0.11
White	2011	3.74	0.11
White	2012	4.14	0.11
White	2013	3.94	0.11
White	2014	4.06	0.11
White	2015	4.2	0.11
White	2016	4.62	0.11
White	2017	5.16	0.12
White	2018	5.65	0.12
White	2019	6.43	0.13
White	2020	7.12	0.13
Hispanics	1999	2.01	0.39
Hispanics	2000	2.65	0.43
Hispanics	2001	2.88	0.44
Hispanics	2002	2.66	0.41
Hispanics	2003	1.82	0.32
Hispanics	2004	2.46	0.37
Hispanics	2005	2	0.33
Hispanics	2006	2.41	0.35
Hispanics	2007	2.13	0.32
Hispanics	2008	1.89	0.29
Hispanics	2009	2.23	0.31
Hispanics	2010	2.78	0.33
Hispanics	2011	1.9	0.27
Hispanics	2012	2.71	0.31
Hispanics	2013	2.18	0.27
Hispanics	2014	2.72	0.29
Hispanics	2015	2.76	0.29
Hispanics	2016	2.94	0.28
Hispanics	2017	3.12	0.29
Hispanics	2018	3.32	0.29
Hispanics	2019	3.53	0.29
Hispanics	2020	4.13	0.31

Supplementary table 7. CAS-related age-adjusted mortality rate per 100,000 at state-level

State	Age Adjusted Rate	Age Adjusted Rate	Standard Error
Alabama	3.91		0.17
Alaska	4.21		0.63
Arizona	3.36		0.13
Arkansas	3.43		0.19
California	4.08		0.06
Colorado	5.11		0.21
Connecticut	3.68		0.17
Delaware	4.97		0.42
District of Columbia	2.38		0.38
Florida	3.91		0.07
Georgia	3.43		0.13
Hawaii	4.56		0.32
Idaho	4.1		0.31
Illinois	3.91		0.1
Indiana	4.62		0.16
Iowa	4.98		0.21
Kansas	3.71		0.2
Kentucky	5		0.2
Louisiana	2.75		0.15
Maine	5.5		0.34
Maryland	5.17		0.18
Massachusetts	3.3		0.12
Michigan	3.01		0.1
Minnesota	6.31		0.2
Mississippi	4.71		0.24
Missouri	3.91		0.14
Montana	4.7		0.38
Nebraska	4.64		0.28
Nevada	3.37		0.23
New Hampshire	5.05		0.35
New Jersey	4.2		0.12
New Mexico	2.88		0.22
New York	3.05		0.07
North Carolina	4.31		0.13
North Dakota	6.73		0.54
Ohio	6.01		0.13
Oklahoma	4.4		0.2
Oregon	6.21		0.23
Pennsylvania	5.81		0.11
Rhode Island	3.87		0.32
South Carolina	5.38		0.2
South Dakota	5.95		0.47
Tennessee	5.55		0.17
Texas	4.37		0.09
Utah	2.33		0.21

Vermont	7.26	0.59
Virginia	3.72	0.13
Washington	5.56	0.17
West Virginia	6.73	0.32
Wisconsin	3.97	0.15
Wyoming	5.16	0.58

Supplementary table 8. CAS-related age-adjusted mortality rate per 100,000 stratified by place of death

Place of Death	Deaths	% of Total Deaths
Inpatient	16906	42.68%
Outpatient or ER	2112	5.33%
Dead on Arrival	195	0.49%
Medical Facility - Status unknown	29	0.07%
Decedent's home	9836	24.83%
Hospice facility	1832	4.62%
Nursing home/long term care	7237	18.27%
Other	1392	3.51%
Place of death unknown	73	0.18%