

Table S1 Number of disability-adjusted life years and percentage change, 1990–2021: Global, Central African Republic, and China, by sex

	DALYs		
	Number of cases, 1990	Number of cases, 2021	Percentage change, 1990–2021
NRVD			
Global			
Both	1,791,843.969 (1,646,001.601–1,967,041.147)	3,238,184.620 (2,934,104.150–3,594,473.738)	0.807 (0.671–0.926)
Male	858,910.738 (794,324.345–945,731.267)	1,556,792.869 (1,417,075.202–1,742,183.451)	0.813 (0.678–0.938)
Female	932,933.231 (824,725.308–1,045,823.752)	1,681,391.751 (1,456,550.860–1,880,870.013)	0.802 (0.632–0.953)
CAR			
Both	688.920 (419.966–1,046.282)	1,199.076 (743.775–1,747.740)	0.741 (0.310–1.376)
Male	363.286 (204.435–600.044)	635.344 (379.604–1,018.829)	0.749 (0.260–1.578)
Female	325.634 (157.139–528.002)	563.731 (291.590–900.314)	0.731 (0.225–1.453)
China			
Both	58,152.934 (44,590.417–71,204.529)	94,587.355 (73,043.759–125,925.897)	0.627 (0.208–1.183)
Male	33,153.782 (25,495.828–41,400.658)	57,492.876 (42,887.606–77,058.657)	0.734 (0.291–1.335)
Female	24,999.153 (15,772.486–33,613.999)	37,094.479 (26,912.167–52,184.736)	0.484 (–0.015–1.422)
India			
Both	113,717.260 (80,628.947–163,351.172)	311,776.221 (256,484.272–369,656.815)	1.742 (1.107–2.643)
Male	58,292.439 (40,781.039–82,197.353)	153,219.930 (109,041.954–187,495.448)	1.628 (0.974–2.606)
Female	55,424.821 (31,858.711–88,002.558)	158,556.291 (107,622.699–204,820.538)	1.861 (1.026–3.097)
US			
Both	315,912.747 (289,470.452–345,449.742)	453,365.968 (395,697.123–512,888.911)	0.435 (0.355–0.492)
Male	153,348.124 (142,976.307–167,830.771)	221,045.301 (196,395.523–253,756.619)	0.441 (0.357–0.516)
Female	162,564.623 (145,102.781–178,324.691)	232,320.667 (196,312.100–260,866.503)	0.429 (0.343–0.487)
DMVD			
Global			
Both	645,876.733 (553,701.117–749,210.394)	943,258.355 (818,239.257–1,134,001.222)	0.460 (0.308–0.612)
Male	271,296.083 (230,849.156–319,850.580)	433,913.860 (358,439.527–527,230.917)	0.599 (0.455–0.770)
Female	374,580.650 (312,335.135–443,050.505)	509,344.494 (414,981.246–614,453.312)	0.360 (0.181–0.563)
CAR			
Both	352.912 (163.973–544.806)	563.317 (295.912–860.004)	0.596 (0.159–1.210)
Male	161.311 (69.017–258.566)	247.344 (116.894–406.754)	0.533 (0.039–1.264)
Female	191.601 (65.973–334.845)	315.973 (126.174–533.184)	0.649 (0.131–1.463)
China			
Both	34,735.048 (21,436.889–46,509.978)	53,735.732 (38,123.408–79,237.663)	0.547 (0.128–1.341)
Male	19,432.376 (11,928.555–26,730.724)	33,250.368 (21,753.820–48,313.237)	0.711 (0.264–1.383)
Female	15,302.673 (8,280.646–21,778.757)	20,485.364 (14,334.462–30,763.838)	0.339 (–0.136 to 1.357)

Table S1 (continued)

Table S1 (continued)

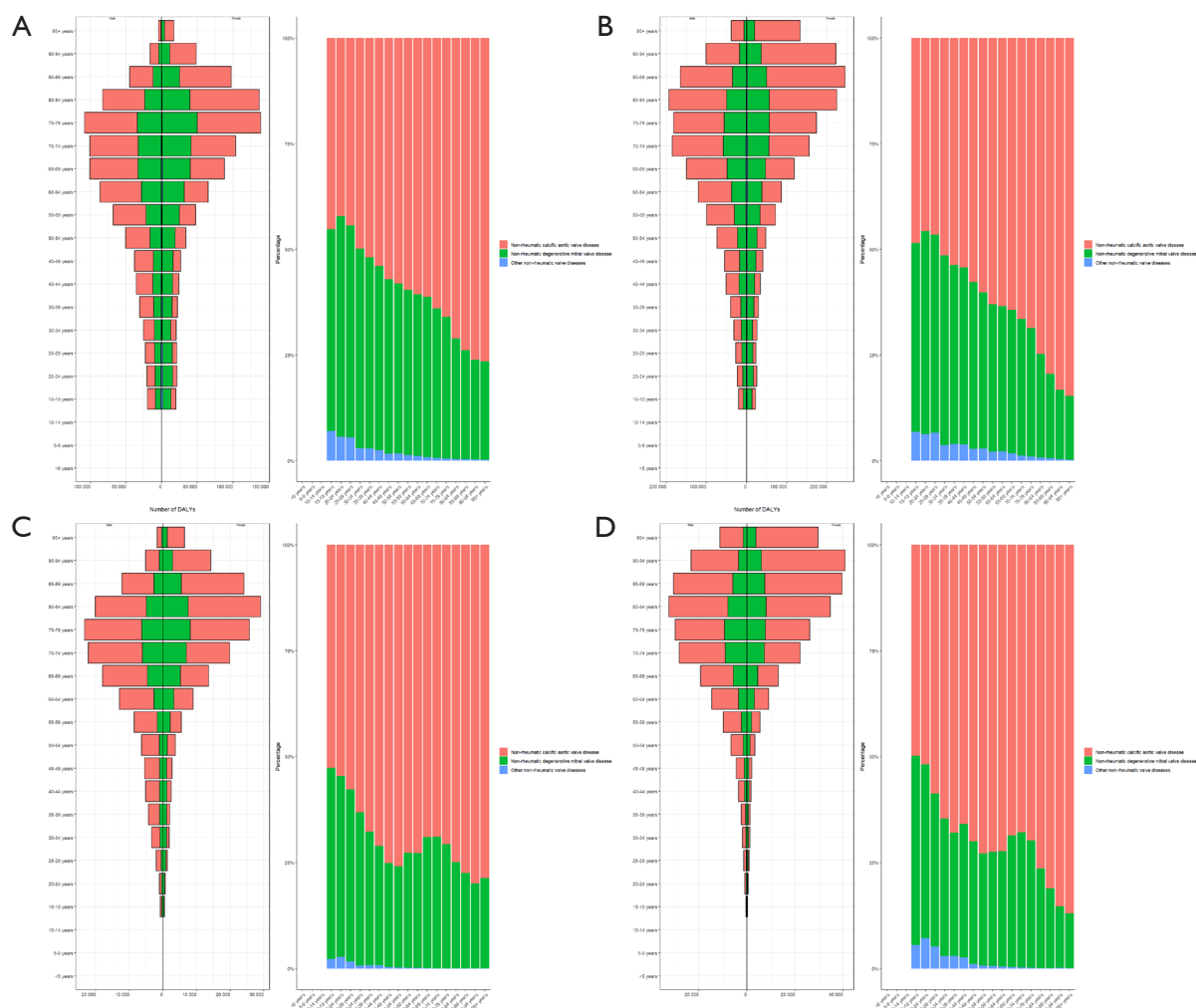
	DALYs		
	Number of cases, 1990	Number of cases, 2021	Percentage change, 1990–2021
India			
Both	47,781.905 (27,359.429–72,659.074)	108,779.769 (76,289.162–137,786.472)	1.277 (0.655–2.295)
Male	20,412.499 (11,457.711–30,500.806)	46,512.338 (31,316.133–67,532.109)	1.279 (0.642–2.305)
Female	27,369.406 (12,145.254–48,558.597)	62,267.430 (34,476.029–85,244.848)	1.275 (0.459–2.513)
US			
Both	86,293.512 (75,578.668–102,458.462)	107,178.311 (87,493.849–138,274.417)	0.242 (0.150–0.351)
Male	36,520.366 (30,580.944–45,010.894)	53,628.751 (41,131.915–72,863.792)	0.468 (0.345–0.606)
Female	49,773.146 (44,167.065–57,111.339)	53,549.561 (45,126.647–65,572.364)	0.076 (0.011–0.149)
CAVD			
Global			
Both	1,121,945.267 (1,040,350.232–1,218,803.033)	2,242,999.501 (2,004,168.076–2,459,248.204)	0.999 (0.857–1.135)
Male	576,659.039 (534,745.822–628,893.588)	1,101,321.608 (1,006,118.149–1,205,564.956)	0.910 (0.760–1.046)
Female	545,286.228 (486,430.385–612,400.308)	1,141,677.894 (966,439.111–1,281,683.969)	1.094 (0.897–1.242)
CAR			
Both	328.419 (186.029–531.708)	626.153 (369.920–965.142)	0.907 (0.371–1.769)
Male	198.015 (100.308–366.836)	384.134 (209.050–653.997)	0.940 (0.337–2.147)
Female	130.404 (65.023–231.750)	242.019 (118.397–400.977)	0.856 (0.259–1.814)
China			
Both	20,766.556 (12,941.967–30,740.351)	36,638.745 (28,314.244–47,287.152)	0.764 (0.245–1.939)
Male	12,190.306 (7,363.153–19,304.696)	22,211.037 (16,511.334–29,443.879)	0.822 (0.211–2.170)
Female	8,576.250 (5,076.618–15,342.861)	14,427.708 (10,301.063–20,784.798)	0.682 (–0.042 to 1.908)
India			
Both	64,562.320 (43,872.415–92,100.066)	199,214.292 (155,367.009–245,177.429)	2.086 (1.382–3.084)
Male	37,167.972 (23,142.281–57,787.895)	105,079.504 (67,582.284–136,295.359)	1.827 (0.998–3.036)
Female	27,394.348 (14,834.810–47,178.224)	94,134.787 (59,724.922–122,617.034)	2.436 (1.503–4.035)
US			
Both	229,047.312 (210,838.698–243,969.064)	344,568.987 (300,109.129–378,473.707)	0.504 (0.411–0.564)
Male	116,501.737 (110,746.873–122,889.074)	166,747.726 (150,876.453–182,156.794)	0.431 (0.349–0.498)
Female	112,545.575 (99,512.693–122,026.274)	177,821.262 (147,680.464–196,507.966)	0.580 (0.468–0.645)

CAR, Central African Republic; US, United States; DALYs, disability-adjusted life years; CAVD, calcific aortic valve disease; DMVD, degenerative mitral valve disease; NRVD, non-rheumatic valvular disease.

Table S2 Trends in incidence, mortality, and DALYs for degenerative mitral valve disease and calcific aortic valve disease, 1990–2021

	Global		CAR		China		India		US	
	DMVD	CAVD	DMVD	CAVD	DMVD	CAVD	DMVD	CAVD	DMVD	CAVD
Incidence										
AAPC%	−0.17	0.54	−0.53	−0.01	0.45	1.85	0.08	0.76	0.37	0.72
95% CI	−0.22 to −0.12	0.51 to 0.57	−0.60 to −0.47	−0.03 to 0.00	0.30 to 0.60	1.75 to 1.95	0.03 to 0.14	0.73 to 0.79	0.31 to 0.43	0.64 to 0.80
P value	<0.001	<0.001	<0.001	0.035	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Deaths										
AAPC%	−1.44	−0.16	−0.69	0.00	−2.79	−0.98	0.19	0.77	−1.65	−0.37
95% CI	−1.54 to −1.34	−0.29 to −0.03	−0.84 to −0.53	−0.12 to 0.11	−3.00 to −2.55	−1.13 to −0.83	−0.29 to 0.69	0.26 to 1.29	−2.21 to −1.09	−0.73 to −0.02
P value	<0.001	0.010	<0.001	0.968	<0.001	<0.001	0.438	0.003	<0.001	0.037
DALYs										
AAPC%	−1.26	−0.45	−0.77	−0.08	−1.53	−0.73	−0.04	0.67	−1.20	−0.82
95% CI	−1.32 to −1.19	−0.54 to −0.35	−0.95 to −0.59	−0.23 to 0.05	−1.68 to −1.38	−0.80 to −0.66	−0.23 to 0.14	0.21 to 1.14	−1.50 to −0.89	−1.14 to −0.50
P value	<0.001	<0.001	<0.001	0.222	<0.001	<0.001	<0.001	0.004	<0.001	<0.001

AAPC, average annual percentage change; CAR, Central African Republic; CI, confidence interval; NRVD, non-rheumatic valvular disease; US, United States.



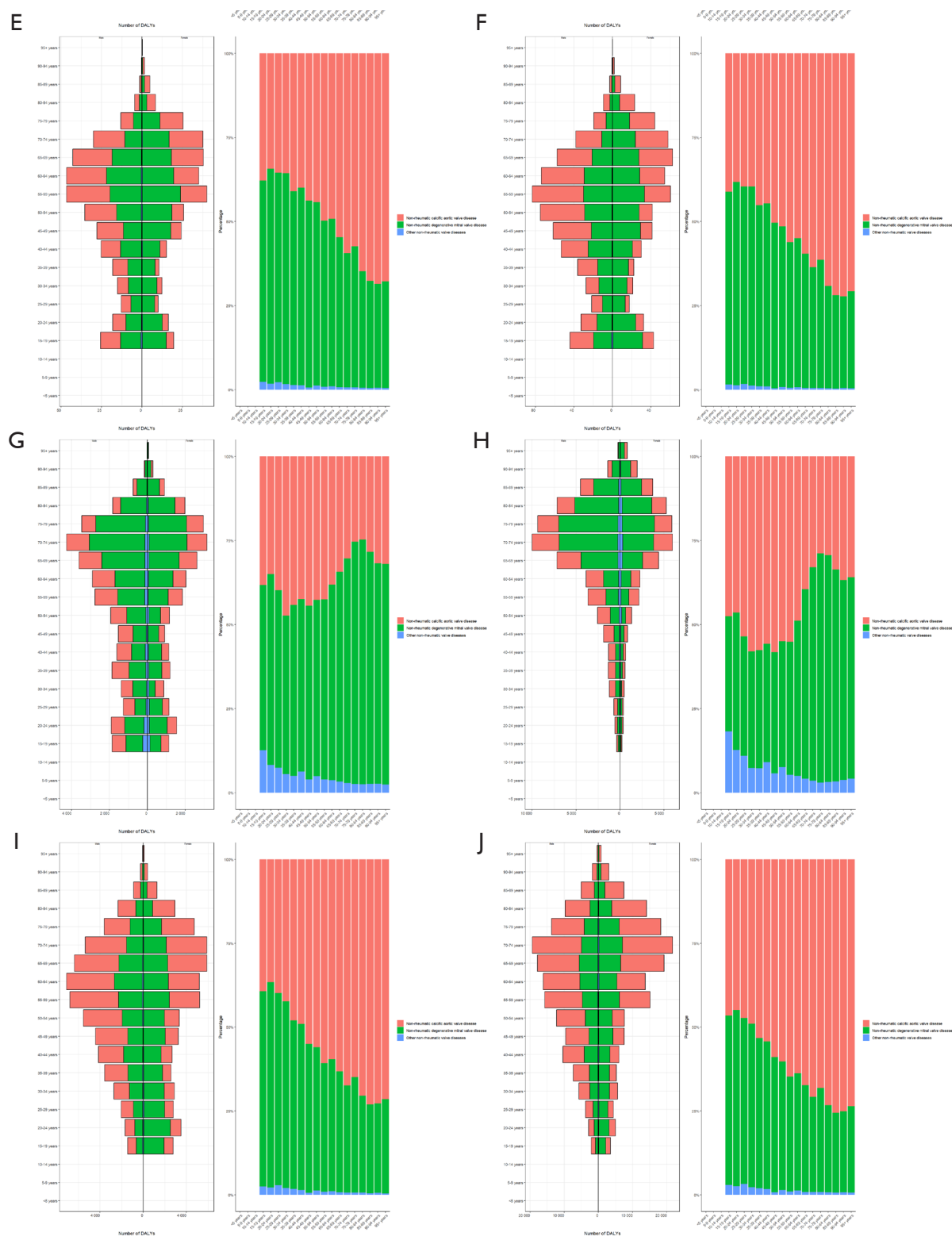
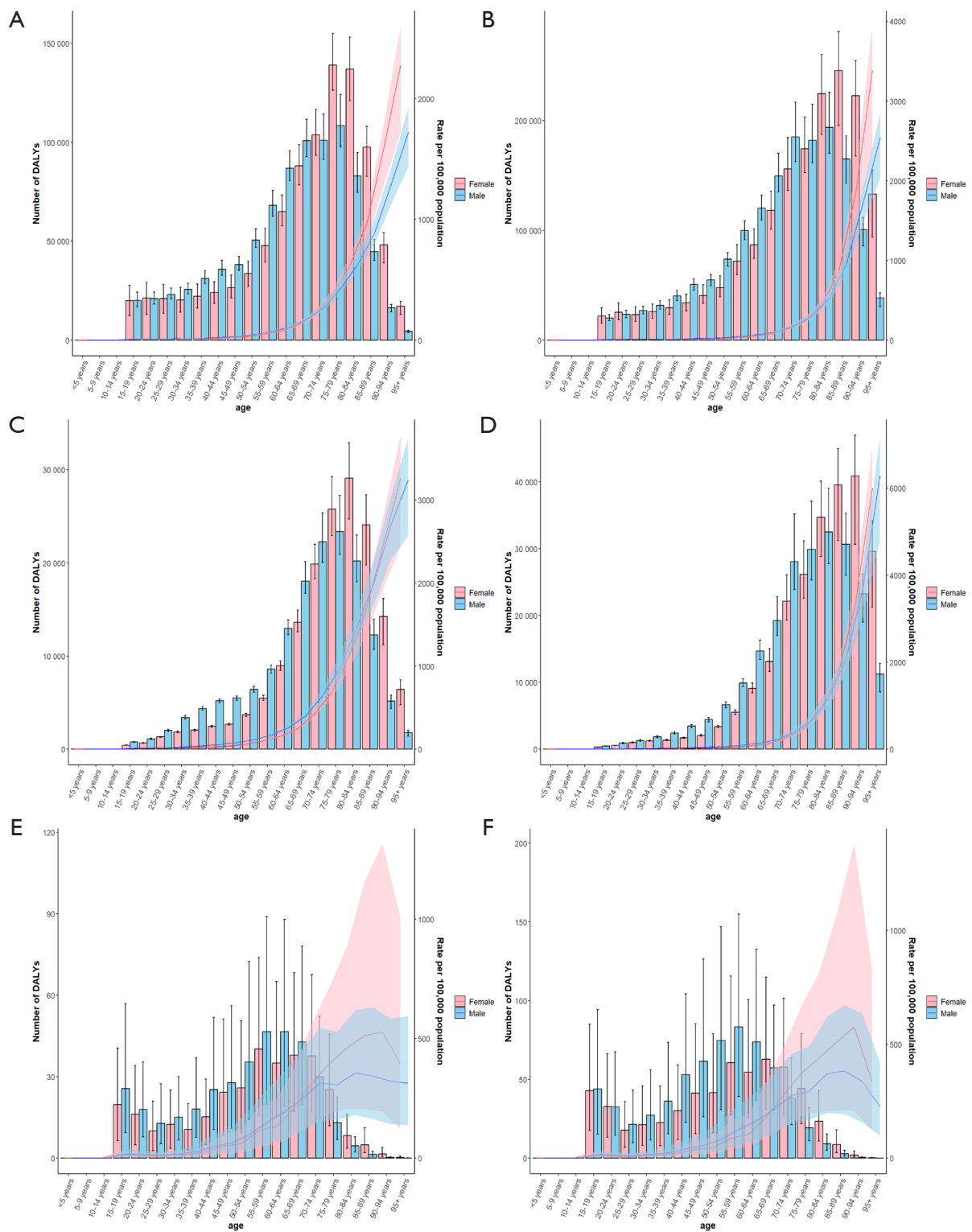


Figure S1 Age-specific burden of DALYs for NRVD globally and in selected countries, 1990–2021. Each panel corresponds to: (A,B) Global; (C,D) the US; (E,F) the CAR; (G,H) China; (I,J) India. CAR, Central African Republic; DALYs, disability-adjusted life years; NRVD, non-rheumatic valvular disease; US, United States.



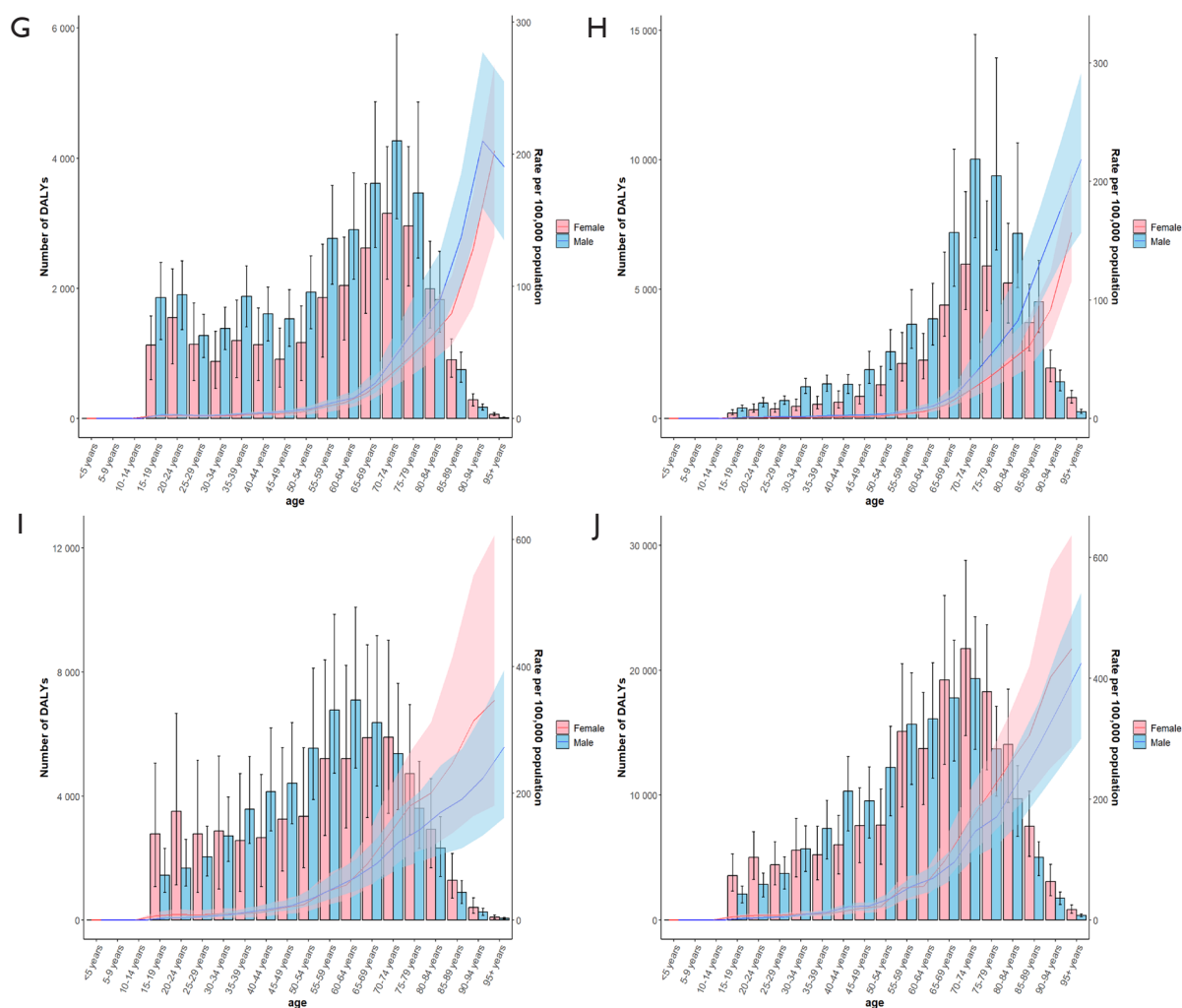


Figure S2 ASDR and number of DALYs for NRVD globally and in selected countries, stratified by sex and age group, 1990 (left panels) versus 2021 (right panels). Each pair of panels corresponds to: (A,B) Global estimates; (C,D) the US; (E,F) the CAR; (G,H) China; (I,J) India. ASDR, age-standardized DALY rate; CAR, Central African Republic; DALYs, disability-adjusted life years; NRVD, non-rheumatic valvular disease; US, United States.

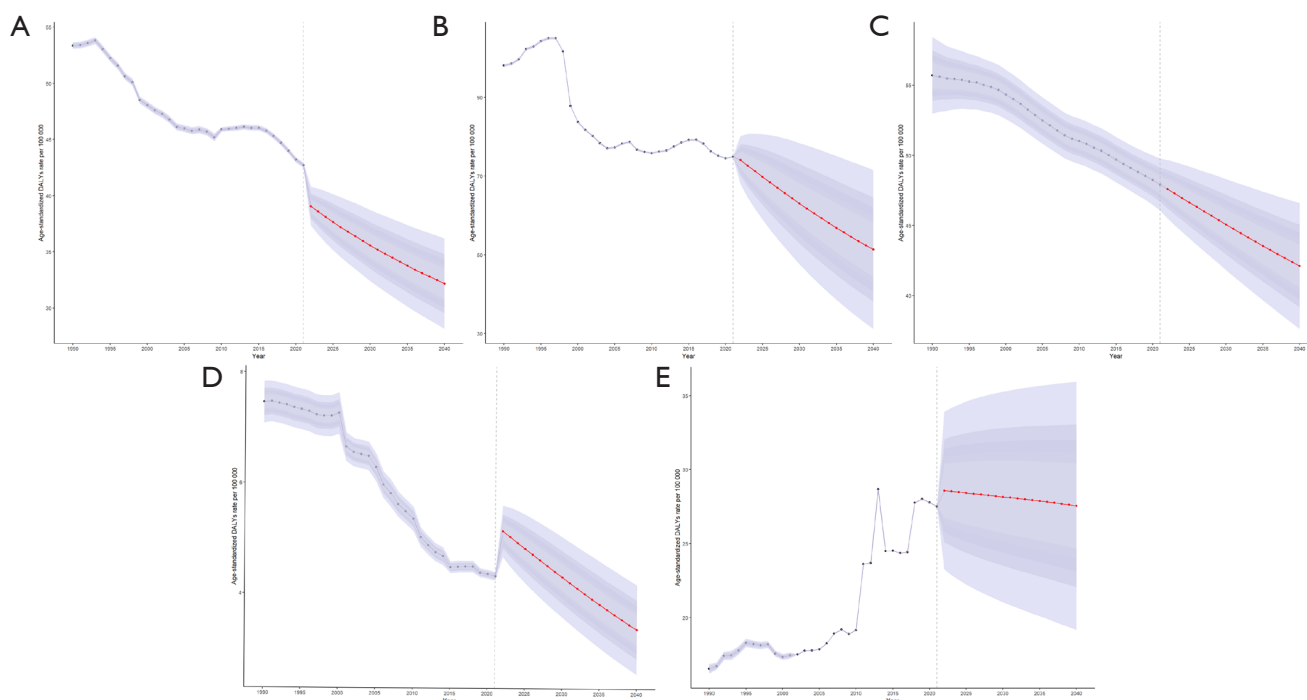


Figure S3 Projected trends in the ASDR of NRVD from 2022 to 2040, with 95% UI, for the Global population, US, CAR, China, and India. ASDR, age-standardized DALY rate; CAR, Central African Republic; NRVD, non-rheumatic valvular disease; UI, uncertainty interval; US, United States.