

Supplementary table and figure legends

Table S1: Prevalence of cardiovascular diseases among adults aged 60 years and older in Iran in 1990 and 2023, by sex, with percentage change in rates per 100,000. (Data generated from <http://ghdx.healthdata.org/gbd-results-tool>).

Table S2: Deaths due to cardiovascular diseases among adults aged 60 years and older in Iran in 1990 and 2023, by sex, with percentage change in rates per 100,000 (Data generated from <http://ghdx.healthdata.org/gbd-results-tool>).

Table S3: DALYs due to cardiovascular diseases among adults aged 60 years and older in Iran in 1990 and 2023, by sex, with percentage change in rates per 100,000 (Data generated from <http://ghdx.healthdata.org/gbd-results-tool>).

Figure S1: Prevalence estimates of cardiovascular diseases among adults aged 60 years and older in Iran in 2023, by sex and province. (Data generated from <http://ghdx.healthdata.org/gbd-results-tool>).

Figure S2: Death rates of cardiovascular diseases among adults aged 60 years and older in Iran in 2023, by sex and province. (Data generated from <http://ghdx.healthdata.org/gbd-results-tool>).

Figure S3: Disability-adjusted life year (DALY) rates of cardiovascular diseases among adults aged 60 years and older in Iran in 2023, by sex and province. (Data generated from <http://ghdx.healthdata.org/gbd-results-tool>).

Figure S4: Percentage change in prevalence estimates of cardiovascular diseases among adults aged 60 years and older in Iran from 1990 to 2023, by sex and province. (Data generated from <http://ghdx.healthdata.org/gbd-results-tool>).

Figure S5: Percentage change in death rates of cardiovascular diseases among adults aged 60 years and older in Iran from 1990 to 2023, by sex and province. (Data generated from <http://ghdx.healthdata.org/gbd-results-tool>).

Figure S6: Percentage change in disability-adjusted life year (DALY) rates of cardiovascular diseases among adults aged 60 years and older in Iran from 1990 to 2023, by sex and province. (Data generated from <http://ghdx.healthdata.org/gbd-results-tool>).

Figure S7: Number of prevalent cases and prevalence for cardiovascular diseases among adults aged 60 years and older in Iran in 2023, by age group and cause. (generated from data available from <http://ghdx.healthdata.org/gbd-results-tool>).

Figure S8: Number of deaths and death rate for cardiovascular diseases among adults aged 60 years and older in Iran in 2023, by age group and cause. (generated from data available from <http://ghdx.healthdata.org/gbd-results-tool>).

Figure S9: Number of disability-adjusted life years (DALYs) and DALY rate for cardiovascular diseases among adults aged 60 years and older in Iran in 2023, by age group and cause. (generated from data available from <http://ghdx.healthdata.org/gbd-results-tool>).

Table S1: Prevalence of cardiovascular diseases among adults aged 60 years and older in Iran in 1990 and 2023, by sex, with percentage change in rates per 100,000
(Generated from data available from <http://ghdx.healthdata.org/gbd-results-tool>)

	1990		2023		Percentage change in rate per 100,000
	No (95% UI)	Rate per 100,000 (95% UI)	No (95% UI)	Rate per 100,000 (95% UI)	
Iran	1079970 (959439 , 1234117)	33985.3 (30192.3 , 38836.1)	3416479 (3091920 , 3826367)	34612.8 (31324.7 , 38765.5)	1.8 (-3.5 , 8)
Alborz	23460 (21039 , 26947)	35536.2 (31869 , 40818.1)	122614 (109008 , 138854)	34157.4 (30367 , 38681.5)	-3.9 (-8.8 , 1.2)
Ardebil	23457 (20686 , 26896)	39643.2 (34960 , 45455.1)	62878 (56300 , 70842)	41885 (37503.5 , 47190.3)	5.7 (-0.1 , 11.8)
Bushehr	11118 (9770 , 12674)	32892.1 (28905.7 , 37495.5)	37406 (33655 , 42575)	34249 (30814.7 , 38981.6)	4.1 (-3.1 , 12.6)
Chahar Mahaal and Bakhtiari	12318 (10738 , 13995)	33759.6 (29430 , 38357.9)	40368 (35960 , 45764)	35503.4 (31626.7 , 40249.2)	5.2 (-3 , 14.7)
East Azarbayejan	62412 (54648 , 71563)	31384.3 (27480 , 35985.8)	179810 (161806 , 203055)	34303.7 (30868.8 , 38738.4)	9.3 (0.5 , 19.9)
Fars	65605 (57103 , 75112)	33784.5 (29406 , 38680)	226198 (203539 , 256077)	35795 (32209.3 , 40523.2)	6 (-2.2 , 14.9)
Gilan	52893 (46413 , 60423)	33240.7 (29168.2 , 37973.1)	149826 (134680 , 170221)	35351.1 (31777.3 , 40163.1)	6.3 (-0.9 , 14.4)
Golestan	22495 (19708 , 26011)	35418.6 (31030 , 40954.8)	81598 (73136 , 91853)	39880.5 (35744.7 , 44892.4)	12.6 (5.7 , 19.6)
Hamadan	32879 (28990 , 37613)	32760.1 (28885.2 , 37476.7)	81652 (73246 , 91854)	35245.4 (31616.7 , 39649.1)	7.6 (1.4 , 15.2)
Hormozgan	18064 (16009 , 20645)	36228.4 (32107.1 , 41403.5)	56852 (50897 , 63965)	37193.1 (33297.4 , 41846.7)	2.7 (-4.1 , 9.7)
Ilam	7068 (6179 , 8062)	34170 (29871.4 , 38976.6)	24387 (22025 , 27660)	36201.1 (32695 , 41060)	5.9 (-1.6 , 14.1)
Isfahan	75990 (66216 , 87183)	32838.4 (28614.9 , 37675.6)	239261 (212339 , 270170)	33707.9 (29915.1 , 38062.6)	2.6 (-5.3 , 11.4)
Kerman	37309 (32711 , 43305)	34956 (30647.6 , 40573.7)	121170 (107655 , 137733)	36298.4 (32249.9 , 41260.2)	3.8 (-4.5 , 14)
Kermanshah	30275 (26369 , 34614)	33822.3 (29458.4 , 38669.4)	95711 (86288 , 109165)	36339.8 (32762.2 , 41448.1)	7.4 (0.5 , 15.9)
Khorasan-e-Razavi	90118 (79422 , 102871)	33618.6 (29628.5 , 38376.4)	246735 (223190 , 277623)	35806.7 (32389.7 , 40289.2)	6.5 (-1.4 , 15.2)
Khuzestan	67421 (60761 , 76994)	44562 (40160.1 , 50889.1)	198421 (179149 , 224260)	42428.1 (38307.2 , 47953.2)	-4.8 (-9.2 , -1.1)

Kohgiluyeh and Boyer-Ahmad	7289 (6464 , 8352)	35037.2 (31070.9 , 40147.1)	23253 (21023 , 26084)	35434.6 (32036 , 39749.5)	1.1 (-3.6 , 6.5)
Kurdistan	22122 (19557 , 25120)	32781.4 (28979.8 , 37223.3)	72579 (65005 , 81561)	35940.4 (32190 , 40388.4)	9.6 (2.4 , 18.6)
Lorestan	26058 (22963 , 30004)	33924 (29894.8 , 39060.1)	64323 (57470 , 72353)	33164.5 (29631 , 37304.6)	-2.2 (-8.4 , 3.6)
Markazi	26843 (23750 , 30314)	32078.2 (28382.5 , 36226.1)	68457 (61745 , 76751)	33599.7 (30305.1 , 37670.4)	4.7 (-1.9 , 12.5)
Mazandaran	51958 (46216 , 60108)	35941.9 (31969.9 , 41579.6)	176962 (159549 , 201896)	34592.1 (31188.3 , 39466.1)	-3.8 (-8.3 , 2)
North Khorasan	12234 (10690 , 14190)	36592.3 (31975.3 , 42444.4)	33214 (29931 , 37651)	37643.5 (33922.7 , 42672.6)	2.9 (-2.1 , 8.7)
Qazvin	17420 (15484 , 19876)	33857 (30095.3 , 38631.7)	50494 (45286 , 56960)	34345 (30802.5 , 38742.5)	1.4 (-4.6 , 7.6)
Qom	12430 (11016 , 14300)	33318.4 (29528.8 , 38329.4)	42196 (38098 , 47884)	31496.7 (28438.3 , 35742.6)	-5.5 (-10 , -1.1)
Semnan	11639 (10297 , 13199)	32784.7 (29004.8 , 37177.6)	30320 (27358 , 34537)	33232.7 (29986 , 37855.5)	1.4 (-4.9 , 7.6)
Sistan and Baluchistan	22114 (19531 , 25620)	32611.6 (28801.7 , 37781.6)	60840 (55260 , 67970)	35013.7 (31802.4 , 39116.9)	7.4 (-0.1 , 15.7)
South Khorasan	17195 (15122 , 19741)	38397 (33768.2 , 44081.1)	33474 (29784 , 37880)	37883.1 (33706.5 , 42869.4)	-1.3 (-6.4 , 4.8)
Tehran	151314 (135255 , 170761)	32145.5 (28734.1 , 36276.9)	581666 (523789 , 650224)	30248.9 (27239.1 , 33814.2)	-5.9 (-11 , -0.8)
West Azarbayejan	37705 (32878 , 43140)	31490.3 (27458.2 , 36028.7)	126213 (114171 , 142738)	34267.1 (30997.6 , 38753.6)	8.8 (0.7 , 17.7)
Yazd	15112 (13439 , 17055)	33186.6 (29512.8 , 37453.5)	41894 (37703 , 46490)	34429 (30984.7 , 38206.3)	3.7 (-3.4 , 11)
Zanjan	15655 (13625 , 18013)	31903 (27766.7 , 36707.4)	45708 (41529 , 51185)	36262.4 (32947 , 40608)	13.7 (4.7 , 23.8)

Note. UI: Uncertainty interval

Table S2: Deaths due to cardiovascular diseases among adults aged 60 years and older in Iran in 1990 and 2023, by sex, with percentage change in rates per 100,000
 (Generated from data available from <http://ghdx.healthdata.org/gbd-results-tool>)

	1990		2023		Percentage change in rate per 100,000
	No (95% UI)	Rate per 100,000 (95% UI)	No (95% UI)	Rate per 100,000 (95% UI)	
Iran	81022 (71540 , 89382)	2549.6 (2251.3 , 2812.7)	113430 (94576 , 130224)	1149.2 (958.2 , 1319.3)	-54.9 (-62.6 , -45.8)
Alborz	1336 (1149 , 1488)	2023.1 (1741.1 , 2253.5)	3962 (3056 , 4619)	1103.6 (851.5 , 1286.7)	-45.4 (-54.3 , -33.4)
Ardebil	1377 (1219 , 1511)	2326.4 (2060.8 , 2554.2)	2334 (1937 , 2668)	1554.6 (1290.6 , 1777.1)	-33.2 (-44.4 , -19.9)
Bushehr	838 (745 , 916)	2480.5 (2205.1 , 2710.6)	1281 (1047 , 1467)	1173.2 (958.8 , 1343.2)	-52.7 (-61.2 , -44.5)
Chahar Mahaal and Bakhtiari	820 (721 , 902)	2246.9 (1976.8 , 2472.5)	1683 (1344 , 1931)	1480.1 (1182.1 , 1698.4)	-34.1 (-43.9 , -21.8)
East Azarbayejan	4737 (4159 , 5289)	2381.8 (2091.2 , 2659.6)	7587 (6427 , 8744)	1447.4 (1226.1 , 1668.1)	-39.2 (-50 , -25.1)
Fars	5157 (4501 , 5688)	2655.5 (2317.6 , 2929)	6256 (4971 , 7279)	989.9 (786.7 , 1151.8)	-62.7 (-69.5 , -55.2)
Gilan	5194 (4550 , 5760)	3264.4 (2859.5 , 3619.6)	4786 (3700 , 5578)	1129.1 (873.1 , 1316.2)	-65.4 (-71.2 , -58.6)
Golestan	1763 (1560 , 1950)	2775.7 (2455.5 , 3070.2)	2596 (2149 , 2957)	1269 (1050.5 , 1445.4)	-54.3 (-62.4 , -45.4)
Hamadan	2712 (2294 , 3039)	2702.5 (2286.2 , 3027.5)	3372 (2776 , 3924)	1455.5 (1198.1 , 1693.7)	-46.1 (-55.2 , -35.4)
Hormozgan	1246 (1082 , 1379)	2499 (2169 , 2765.5)	1860 (1537 , 2114)	1216.6 (1005.5 , 1382.9)	-51.3 (-59.6 , -41.2)
Ilam	420 (370 , 467)	2028.4 (1786.3 , 2258.8)	709 (591 , 826)	1052.5 (877.8 , 1225.5)	-48.1 (-56.7 , -38.1)
Isfahan	6631 (5791 , 7326)	2865.7 (2502.6 , 3166)	7674 (6186 , 8965)	1081.1 (871.5 , 1263)	-62.3 (-69.1 , -54)
Kerman	2341 (2035 , 2632)	2193.6 (1906.3 , 2465.8)	3488 (2908 , 4045)	1045 (871.1 , 1211.6)	-52.4 (-60.9 , -42.2)
Kermanshah	2510 (2135 , 2794)	2804.3 (2385 , 3121.5)	3521 (2877 , 4029)	1336.7 (1092.4 , 1529.7)	-52.3 (-61 , -40.2)
Khorasan-e-Razavi	7046 (6130 , 7865)	2628.5 (2286.9 , 2934.1)	8479 (7029 , 9822)	1230.4 (1020 , 1425.4)	-53.2 (-62.5 , -41.6)
Khuzestan	4847 (4314 , 5324)	3203.7 (2851.4 , 3519.2)	7009 (5846 , 7991)	1498.7 (1250 , 1708.8)	-53.2 (-60.1 , -44.7)

Kohgiluyeh and Boyer-Ahmad	434 (376 , 483)	2087.5 (1807.8 , 2321.4)	827 (646 , 961)	1259.9 (984.3 , 1464.7)	-39.6 (-50.1 , -28.1)
Kurdistan	1410 (1154 , 1617)	2090.1 (1710.4 , 2396.1)	2745 (2261 , 3200)	1359.5 (1119.6 , 1584.6)	-35 (-48.4 , -15.8)
Lorestan	1871 (1649 , 2068)	2435.3 (2147.1 , 2692)	2837 (2361 , 3275)	1462.7 (1217.1 , 1688.4)	-39.9 (-49.6 , -26.5)
Markazi	2136 (1802 , 2407)	2553.1 (2154 , 2876.1)	2493 (2011 , 2952)	1223.4 (987.1 , 1448.9)	-52.1 (-61.7 , -40.1)
Mazandaran	4005 (3498 , 4425)	2770.7 (2420 , 3061)	4989 (4031 , 5840)	975.3 (787.9 , 1141.7)	-64.8 (-71.3 , -57.7)
North Khorasan	869 (728 , 983)	2600.3 (2178.3 , 2941.1)	1173 (989 , 1362)	1329.6 (1120.6 , 1543.4)	-48.9 (-59.2 , -34.2)
Qazvin	1105 (937 , 1251)	2147.3 (1820.7 , 2431)	1927 (1610 , 2239)	1310.7 (1094.9 , 1522.9)	-39 (-51.2 , -24.1)
Qom	1054 (907 , 1175)	2826.4 (2432.5 , 3150.3)	1911 (1564 , 2216)	1426.4 (1167.4 , 1654.1)	-49.5 (-58.7 , -37.5)
Semnan	746 (649 , 833)	2100.2 (1827.8 , 2346.9)	1063 (876 , 1236)	1165.4 (959.9 , 1354.9)	-44.5 (-55.2 , -30.8)
Sistan and Baluchistan	1763 (1553 , 1983)	2600.6 (2290 , 2923.8)	1963 (1611 , 2352)	1129.7 (927.1 , 1353.4)	-56.6 (-65.3 , -46.6)
South Khorasan	919 (781 , 1039)	2053 (1743.4 , 2319)	1026 (819 , 1210)	1161.7 (927 , 1369.6)	-43.4 (-55.3 , -27.9)
Tehran	10517 (9231 , 11770)	2234.2 (1961 , 2500.4)	14180 (11547 , 16742)	737.4 (600.5 , 870.6)	-67 (-73.4 , -60)
West Azarbayejan	2878 (2482 , 3201)	2403.3 (2073.1 , 2673.6)	5803 (4887 , 6706)	1575.5 (1326.9 , 1820.7)	-34.4 (-45.2 , -19.9)
Yazd	1044 (895 , 1180)	2292.7 (1966.2 , 2590.8)	1387 (1136 , 1625)	1140.1 (933.7 , 1335.8)	-50.3 (-60.7 , -38.1)
Zanjan	1294 (1094 , 1464)	2637.6 (2228.4 , 2983.1)	2510 (2088 , 2866)	1991.5 (1656.6 , 2274.1)	-24.5 (-37.7 , -7.7)

Note. UI: Uncertainty interval

Table S3: DALYs due to cardiovascular diseases among adults aged 60 years and older in Iran in 1990 and 2023, by sex, with percentage change in rates per 100,000
(Generated from data available from <http://ghdx.healthdata.org/gbd-results-tool>)

	1990		2023		Percentage change in rate per 100,000
	No (95% UI)	Rate per 100,000 (95% UI)	No (95% UI)	Rate per 100,000 (95% UI)	
Iran	1631421 (1425812 , 1804161)	51338.7 (44868.5 , 56774.6)	1970725 (1692508 , 2240916)	19965.7 (17147.1 , 22703.1)	-61.1 (-67.4 , -53.6)
Alborz	25947 (22059 , 28993)	39302.8 (33414.2 , 43917.4)	71653 (57476 , 81825)	19960.9 (16011.4 , 22794.6)	-49.2 (-56.7 , -38.8)
Ardebil	28425 (24787 , 31418)	48039.6 (41891 , 53098.1)	40065 (34093 , 45177)	26688.6 (22710.5 , 30094.1)	-44.4 (-53.3 , -33.5)
Bushehr	16672 (14661 , 18322)	49324.2 (43376.7 , 54207.3)	23459 (19489 , 26613)	21479.7 (17844.1 , 24366.8)	-56.5 (-63.7 , -48.9)
Chahar Mahaal and Bakhtiari	16262 (14120 , 17985)	44571.3 (38699.5 , 49293.3)	27639 (22752 , 31491)	24308.4 (20010.4 , 27696.4)	-45.5 (-53.3 , -34.7)
East Azarbayejan	92305 (80361 , 102849)	46416.3 (40410.2 , 51718.3)	128439 (109210 , 146282)	24503.2 (20834.8 , 27907.3)	-47.2 (-56.5 , -35.2)
Fars	108249 (93451 , 120151)	55744.6 (48124.2 , 61873.9)	106269 (86116 , 122921)	16816.7 (13627.5 , 19451.9)	-69.8 (-74.3 , -64.2)
Gilan	102143 (88597 , 112974)	64191.9 (55678.7 , 70998.7)	81220 (66299 , 93876)	19163.5 (15643.1 , 22149.8)	-70.1 (-75 , -64.6)
Golestan	38857 (34119 , 42906)	61180 (53720.9 , 67556.4)	50331 (42304 , 56652)	24598.8 (20675.6 , 27688.1)	-59.8 (-66.3 , -52.7)
Hamadan	55312 (46760 , 61843)	55111.7 (46590.7 , 61618.9)	56131 (46537 , 63902)	24229.2 (20087.8 , 27583.6)	-56 (-62.8 , -47.5)
Hormozgan	25672 (22136 , 28447)	51485.7 (44395.2 , 57050.7)	33245 (28325 , 37472)	21749 (18530.5 , 24514.6)	-57.8 (-64.5 , -49.1)
Ilam	8135 (7160 , 9079)	39328.6 (34612.2 , 43890.1)	12549 (10713 , 14268)	18628.8 (15903.6 , 21180.4)	-52.6 (-60 , -44)
Isfahan	124550 (107740 , 137690)	53823.6 (46559.1 , 59501.6)	127996 (105537 , 146600)	18032.5 (14868.4 , 20653.5)	-66.5 (-72.2 , -60.1)
Kerman	48119 (41389 , 54065)	45083.6 (38778.7 , 50654.9)	59992 (50973 , 68024)	17971.6 (15269.8 , 20377.6)	-60.1 (-67.3 , -52.1)
Kermanshah	52369 (44470 , 58447)	58505.7 (49681.1 , 65295.9)	61109 (51333 , 69946)	23202.1 (19490.3 , 26557.4)	-60.3 (-66.8 , -50.3)
Khorasan-e-Razavi	144787 (126211 , 162471)	54013.3 (47083.3 , 60610.3)	146435 (125509 , 166523)	21251 (18214.1 , 24166.1)	-60.7 (-68.3 , -51.8)
Khuzestan	96768 (85159 , 106643)	63958.7 (56286.3 , 70485.9)	131782 (112826 , 149433)	28178.6 (24125.4 , 31953)	-55.9 (-62.5 , -48.4)

Kohgiluyeh and Boyer-Ahmad	8767 (7532 , 9758)	42143.5 (36208.1 , 46905.9)	14024 (11401 , 16114)	21370.8 (17373.5 , 24555.2)	-49.3 (-57.3 , -39.6)
Kurdistan	28028 (22948 , 32040)	41532.8 (34004.8 , 47478.7)	46944 (39661 , 54215)	23246.1 (19639.9 , 26846.8)	-44 (-54.9 , -27.9)
Lorestan	37637 (32279 , 41935)	48998 (42022.6 , 54593.5)	47875 (40509 , 54624)	24684.1 (20886.1 , 28163.6)	-49.6 (-58 , -38.5)
Markazi	41873 (35216 , 47354)	50039.4 (42084.7 , 56589.1)	39950 (33069 , 46380)	19608.3 (16230.8 , 22764.1)	-60.8 (-68.1 , -51.4)
Mazandaran	82074 (71615 , 90920)	56774.7 (49539.5 , 62893.4)	85966 (71691 , 97942)	16804.4 (14013.9 , 19145.4)	-70.4 (-75.5 , -65.1)
North Khorasan	18837 (15767 , 21341)	56344.1 (47162 , 63833.3)	21261 (18245 , 24428)	24096.9 (20678.7 , 27685.7)	-57.2 (-65.4 , -45.8)
Qazvin	21895 (18555 , 24625)	42554.8 (36063.9 , 47862.1)	32848 (27723 , 37661)	22342.7 (18856.2 , 25616.2)	-47.5 (-57.1 , -35.2)
Qom	20791 (17609 , 23362)	55728.4 (47201.1 , 62621.8)	31876 (26983 , 36519)	23793.5 (20141.4 , 27259.5)	-57.3 (-64.7 , -47.3)
Semnan	14551 (12605 , 16262)	40985.8 (35505.1 , 45806.8)	18221 (15221 , 21034)	19971.6 (16682.9 , 23055.2)	-51.3 (-60.6 , -39.5)
Sistan and Baluchistan	38024 (33266 , 42640)	56073.3 (49057.9 , 62880.9)	36510 (30534 , 42846)	21011.8 (17572.7 , 24658.3)	-62.5 (-69.2 , -54.1)
South Khorasan	18495 (15569 , 20877)	41298.5 (34766.3 , 46618.1)	16221 (13585 , 18675)	18357.6 (15374.3 , 21134.4)	-55.5 (-63.5 , -44.1)
Tehran	212256 (185515 , 237102)	45092.4 (39411.4 , 50370.6)	256289 (217117 , 298210)	13328 (11290.9 , 15508.1)	-70.4 (-75.8 , -64.6)
West Azarbayejan	56723 (48490 , 63323)	47373.6 (40497.1 , 52885.7)	100265 (85859 , 113756)	27222.1 (23310.9 , 30884.8)	-42.5 (-51.8 , -30.4)
Yazd	20383 (17488 , 22983)	44762.1 (38402.9 , 50470.4)	22868 (19394 , 26507)	18793 (15937.9 , 21783.7)	-58 (-65.7 , -48.6)
Zanjan	26514 (22354 , 30122)	54032.9 (45554.1 , 61383.5)	41292 (35241 , 46817)	32759.3 (27958.9 , 37142.6)	-39.4 (-49.7 , -25)

Note. DALYs: Disability-adjusted life years; UI: Uncertainty interval