# Supplementary appendix

## Changing Clinical Perspectives on Sex and Healthcare Disparities in Ischemic Heart Disease

### Supplementary appendix

**Ischaemic heart disease mortality normalized to its prevalence**

The mortality from ischaemic heart disease (IHD) normalized for prevalence is a value that determines whether a country, a region or a demographic group of patients has a higher or lower mortality for the disease under examination. Women-to-men rate ratios for death from IHD in relation to the prevalence of IHD per 100,000 inhabitants were also calculated. A rate ratio of 1.0 indicates equal rates in the two groups, a rate ratio greater than 1.0 indicates a relative increased risk for women, and a rate ratio less than 1.0 indicates a relative decreased risk for women.

Confidence Interval (CI) of the ratios was calculated by means of the formula CI= ln(x1/x2) +- 1.96*SE (logRR), where the standard error was extrapolated with the delta method**.**

**Measures of national income**

There are several categories of national income definition. The Transitions Performance Index (TPI) is the one that is used most commonly in the European Commission.[1] The TPI identifies four income ranking areas: (1) transition leader, (2) strong transition, (3) good transition, (4) moderate transition, and (5) weak transition. Throughout the manuscript, the term "high-income countries" represents a composite of leaders and strong or good performers, while the term "middle-income countries" refers to moderate and weak performers.

**Sex-specific reproductive risk factors - impact in later life cardiovascular health**

Research efforts focused on women's cardiovascular health have significantly increased during the past decades, but still, female-specific cardiovascular disease (CVD) risk factors remain understudied and largely unrecognized. The sex-specific reproductive risk factors identified are premature menopause, gestational diabetes, hypertensive disorders of pregnancy, preterm delivery, polycystic ovary syndrome, and systemic inflammatory and autoimmune disorders[2]. Reproductive history including miscarriage and stillbirth and a short reproductive lifespan have been also associated with increased risk of CVD in postmenopausal women [3-5]. Hormonal disorders in women of reproductive age and these reproductive-age factors are associated with higher risk of developing

chronic cardiometabolic diseases after menopause but possibly as well in the years preceding menopause.

Amongst women, the onset of cardiovascular events generally occurs later in life relative to men. Considering sex-specific reproductive risk factors occur early in a woman's life, an opportunity for unique risk factor identification and early intervention exists. Yet, this opportunity is often overlooked.

An evolving number of sex-specific factors to aid in the recognition and assessment of women's CVD risk have emerged[6-8] but in addition to the traditional risk factors, reproductive age-related factors should also be considered CVD risk factors and/or CVD risk enhancers (**Figure 6 in Main Text**). Sex-specific reproductive risks need to be incorporated into risk scores, or risk assessment algorithms given the recent data showing their association with adverse CVD evolution over women's lifespan.

Our understanding of female-specific CVD risk factors is continuously growing. Recent research has shown genetic links between cardiometabolic disorders and sex-specific risks[9], as well as proteomic profiles that are associated with diseases in peri- and postmenopausal women identifying over 50 protein markers and pathways associated with CVD. Genetic and proteomic studies during the reproductive years may help to detect and predict CVD later in life.

Research efforts should also be directed at providing a better understanding of the physiology of female reproductive decline considering it as a modifiable event, because preserving age-related hormonal functions is key to provide increased life choices and possibly lengthen health span. Estrogen confers cardio-protective effects by improving circulation and vascular health, maintaining oxidative balance, and reducing fibrosis and arterial stiffness in the vasculature[10].

## Perinatal depression

Perinatal depression (PND) is another underrecognized factor contributing to maternal cardiovascular risk. Research indicates that PND increases maternal CVD risk by 36%. These findings suggest that including reproductive history—such as PND and other stress-related reproductive conditions—in CVD risk assessments could improve early prevention strategies tailored to women[11]. Therefore, reproductive history including PND should be considered in a woman's CVD risk assessment[11].

## Psychosocial stress and cardiovascular outcomes

Psychosocial stress has consistently been associated with negative CVD outcomes in both healthy individuals and those with preexisting CVD.[12] Women are more likely to experience a distinctive burden of psychosocial adversities, are more prone to stress-related mood and anxiety disorders, and more vulnerable to adverse cardiovascular effects resulting from stressors.[13] Stress-related activation of the sympathetic nervous system and the hypothalamic-pituitary-adrenal axis influences cardiovascular physiology through elevated cortisol levels, increased blood pressure, and systemic inflammation[14]. As gonadal hormones play a critical role in modulating the body's stress response, women may exhibit heightened vulnerability to stress-induced effects, contributing to sex-specific differences in cardiovascular outcomes[15].

## The unique burden of psychosocial stressors in women

Women, particularly young and middle-aged, face a unique burden of psychosocial stressors that increase their risk of CVD later in life. Over one in four ever-partnered women under age 50 experiences physical, sexual, or psychosocial abuse by a partner. Such experiences have been associated with a 30-50% higher risk of CVD, diabetes, and all-cause mortality[16,17,18] Furthermore, domestic violence frequently contributes to mental health conditions such as depression and posttraumatic stress disorder (PTSD), both of which are established risk factors for CVD

**The role of caregiving stress**

In addition to domestic violence, women disproportionately shoulder the burden of unpaid caregiving, comprising over 80% of informal caregivers globally. Informal caregiving is recognized as a chronic stressor, linked to increased prevalence of CVD risk markers, including hypertension and elevated inflammation[19]. These cumulative stressors exacerbate women's cardiovascular vulnerability over time

**Childhood adversity and "biological embedding"**

Childhood adversity, particularly sexual abuse is more common in girls than boys and is linked to a 50% higher incidence of CVD events in adulthood. This type of trauma induces long-term changes in the nervous, endocrine, and immune systems, a process known as "biological embedding," [20], that increases the risk of chronic conditions. Studies suggest that the association between childhood trauma and CVD is stronger in women than in men.[21]

**Sex differences in stress response**

Women exhibit a more pronounced inflammatory response to acute mental stress compared with men, with decreased glucocorticoid sensitivity, leading to more prolonged inflammation and increased platelet aggregation and higher CVD risk[22,23]. These sex-based differences in stress response underscore the need for tailored interventions to mitigate their cardiovascular impact.

**Biological mechanisms linking psychosocial stress and cardiovascular outcomes**

Psychosocial stress has consistently been associated with negative CVD outcomes in both healthy individuals and those with pre-existing CVD.[12] Women are more likely to experience a distinctive burden of psychosocial adversities, are more prone to stress-related mood and anxiety disorders, and more vulnerable to adverse cardiovascular effects resulting from stressors.[13] Stress-related activation of the sympathetic nervous system and the hypothalamic-pituitary-adrenal axis influences cardiovascular physiology through elevated cortisol levels, increased blood pressure, and

systemic inflammation[14]. As gonadal hormones play a critical role in modulating the body's stress response, women may exhibit heightened vulnerability to stress-induced effects, contributing to sex-specific differences in cardiovascular outcomes[15].

**Stress and microvascular dysfunction**

Women with coronary disease exhibit more pronounced peripheral microvascular vasoconstriction both at rest and following mental stress compared with men, a response linked to decreased microvascular flow at the coronary level.[24] Stress-induced microvascular constriction likely contributes to cardiac conditions that occur disproportionally in women and where microvascular function is thought to play a role. One is non-obstructive coronary artery disease (INOCA); in fact, women with this condition show enhanced peripheral vasoconstriction in response to mental stress.[25] Other conditions include mental stress-induced myocardial ischemia and stress-induced (Takotsubo) cardiomyopathy.[25,26] Similar to inflammation, microvascular changes with mental stress have been associated with adverse CVD events in women but not in men.[27,28]

**Technology and digital health**

Digital health interventions (DHIs), including telemedicine, mobile health, remote monitoring, and wearables, are essential for improving adherence and supporting lifestyle changes that promote cardiovascular health (CVH)[29]. These interventions enhance CVH by improving healthcare visit adherence, facilitating blood pressure monitoring, supporting weight control, and promoting physical activity and healthy behaviors[30]. This is particularly important for women at various life stages, including pregnancy and the postpartum period[31].

DHIs such as mHealth and eHealth services offer personalized digital health technologies that track and collect biometric and self-reported health data over time. This approach could significantly increase the availability of women-specific cardiovascular data, addressing the gender data gap[32]. The information gathered from these technologies can be used to develop targeted,

gender-sensitive interventions and to validate artificial intelligence (AI)-based screening and risk prediction models[33]. By incorporating diverse, real-world data, these models will improve in both accuracy and relevance for women's CVH.

Despite their potential, inequitable access to DHIs has been highlighted since the COVID-19 pandemic, particularly for women who are older, from ethnic minority groups, non-English speaking, low-income, or living in areas without broadband Internet access[34]. These disparities point to structural barriers in universal access to DHIs.

As DHIs become more widespread, formal evaluations by trusted organizations, such as cardiovascular professional societies, will be essential to ensure quality and effectiveness. Expanding access to DHIs and increasing the representation of women and minority groups in product development, clinical research, and health service deployment are crucial steps in preventing the widening of CVH disparities and ensuring that all populations benefit from digital health advances.

**Table S1. 2005-2019 IHD age-standardised prevalence rate, mortality rate, mortality rates normalized for prevalence, and risk ratio women to men in individuals of all ages, per 100,000 inhabitants. Data from GBD 2019**

| Country | Age-standardised prevalence rate of IHD (100,000) | | | | Age-standardized mortality rate for IHD per 100,000 inhabitants | | | | Mortality rates normalized for prevalence % | | | | Women to men ratio | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2005 | | 2019 | | 2005 | | 2019 | | 2005 | | 2019 | | 2005 | 2019 |
| | Men | Women | Men | Women | Men | Women | Men | Women | Men | Women | Men | Women | | |
| **Transition leader** | | | | | | | | | | | | | | |
| **Ireland** | 2902 (2674 - 3145) | 1297 (1164 - 1432) | 2578 (2357- 2823) | 1155 (1035 - 1282) | 163.08 (152.75 - 169.84) | 87.08 (76.15 - 93.05) | 99.6 (86.85 - 106.76) | 53.27 (44.39 - 59.12) | 5.62 (5.1 - 6.19) | 6.72 (5.83 - 7.74) | 3.86 (3.38 - 4.42) | 4.61 (3.87 - 5.49) | 1.19 (1.01 - 1.42) | 1.19 (0.96 - 1.49) |
| **Strong transition** | | | | | | | | | | | | | | |
| **Austria** | 2687 (2495 - 2898) | 1206 (1104 - 1313) | 2548 (2356 - 2758) | 1136 (1036 - 1243) | 159.41 (148.14 - 168.63) | 96.91 (84.85 - 104.94) | 109.48 (99.67 - 118.2) | 63.13 (53.31 - 70.88) | 5.93 (5.37 - 6.55) | 8.04 (7.02 - 9.2) | 4.3 (3.83 - 4.82) | 5.56 (4.71 - 6.57) | 1.35 (1.15 - 1.6) | 1.29 (1.06 - 1.59) |
| **Belgium** | 2939 (2736 - 3171) | 1274 (1163 - 1401) | 2676 (2476 - 2907) | 1175 (1062 - 1293) | 116.43 (109.16 - 121.53) | 62.01 (54.14 - 67.18) | 74.25 (67.85 - 78.75) | 39.61 (33.83 - 43.78) | 3.96 (3.62 - 4.34) | 4.87 (4.23 - 5.6) | 2.78 (2.49 - 3.09) | 3.37 (2.87 - 3.96) | 1.23 (1.04 - 1.45) | 1.22 (1 - 1.48) |
| **Denmark** | 2766 (2587 - 2967) | 1335 (1239 - 1438) | 2462 (2234 - 2692) | 1126 (1019 - 1240) | 126.67 (118.16 - 132.8) | 70.45 (61.65 - 75.74) | 73.88 (67.15 - 78.96) | 40.49 (34.2 - 44.91) | 4.58 (4.19 - 5.01) | 5.28 (4.66 - 5.98) | 3 (2.65 - 3.39) | 3.59 (3.05 - 4.24) | 1.15 (0.99 - 1.34) | 1.2 (0.97 - 1.47) |
| **Finland** | 2999 (2734 - 3279) | 1503 (1370 - 1649) | 2556 (2344 - 2782) | 1295 (1175 - 1431) | 195.02 (183.11 - 202.63) | 103.09 (89.74 - 110.26) | 137.34 (126.23 - 146) | 71.39 (59.84 - 79.14) | 6.5 (5.86 - 7.21) | 6.86 (5.99 - 7.86) | 5.37 (4.8 - 6.01) | 5.51 (4.66 - 6.52) | 1.05 (0.89 - 1.25) | 1.03 (0.84 - 1.26) |
| **Germany** | 3058 (2819 - 3291) | 1353 (1244 - 1465) | 2822 (2590 - 3064) | 1270 (1153 - 1386) | 142.62 (133.21 - 148.63) | 83.77 (73.44 - 89.51) | 107.22 (98.58 - 113.44) | 60.76 (52.6 - 66.38) | 4.66 (4.24 - 5.12) | 6.19 (5.46 - 7.02) | 3.8 (3.41 - 4.24) | 4.79 (4.14 - 5.54) | 1.33 (1.13 - 1.55) | 1.26 (1.05 - 1.51) |
| **Luxembourg** | 2053 (1873 - 2261) | 1075 (932 - 1237) | 2047 (1846 - 2261) | 1026 (905 - 1163) | 129.42 (120.59 - 137.21) | 68.64 (60.59 - 74.41) | 73.33 (63.53 - 82.44) | 38.91 (31.47 - 45.32) | 6.31 (5.63 - 7.07) | 6.39 (5.37 - 7.6) | 3.58 (3.04 - 4.22) | 3.79 (3.05 - 4.71) | 1.01 (0.82 - 1.25) | 1.06 (0.8 - 1.39) |
| **Netherlands** | 3631 (3367 - 3926) | 1476 (1341 - 1612) | 3275 (2993 - 3568) | 1327 (1205 - 1462) | 109.12 (101.47 - 114.46) | 54.77 (48 - 59.02) | 63 (57.05 - 67.53) | 34.74 (29.55 - 38.5) | 3.01 (2.73 - 3.31) | 3.71 (3.24 - 4.25) | 1.92 (1.7 - 2.17) | 2.62 (2.23 - 3.07) | 1.23 (1.04 - 1.46) | 1.36 (1.11 - 1.67) |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sweden** | 2476 (2205 - 2787) | 1350 (1190 - 1533) | 2384 (2112 - 2695) | 1290 (1130 - 1466) | 148.75 (138.8 - 156.25) | 79.64 (69.21 - 86.51) | 96.04 (87.92 - 103.22) | 54.41 (45.64 - 62.8) | 6.01 (5.27 - 6.85) | 5.9 (4.99 - 6.97) | 4.03 (3.48 - 4.66) | 4.22 (3.44 - 5.18) | 0.98 (0.79 - 1.22) | 1.05 (0.81 - 1.35) |
| **Good transition** | | | | | | | | | | | | | | |
| **Czech Republic** | 4820 (4402 - 5296) | 2693 (2448 - 2980) | 4432 (4001 - 4953) | 2562 (2298 - 2861) | 272.62 (256.18 - 282.2) | 168.29 (152.1 - 177.75) | 188.86 (158.64 - 221.57) | 117.97 (95.3 - 138.33) | 5.66 (5.1 - 6.28) | 6.25 (5.52 - 7.08) | 4.26 (3.49 - 5.19) | 4.6 (3.72 - 5.7) | 1.1 (0.94 - 1.3) | 1.08 (0.81 - 1.45) |
| **Estonia** | 5557 (5141 - 6027) | 3475 (3189 - 3773) | 5388 (4900 - 5924) | 3567 (3247 - 3898) | 377.87 (352.47 - 406.03) | 197.88 (176.18 - 215.49) | 195.55 (155.95 - 253.77) | 112.91 (87.72 - 153.95) | 6.8 (6.11 - 7.57) | 5.69 (5 - 6.49) | 3.63 (2.78 - 4.74) | 3.17 (2.33 - 4.3) | 0.84 (0.71 - 0.99) | 0.87 (0.58 - 1.32) |
| **France** | 2440 (2244 - 2641) | 1088 (987 - 1201) | 2304 (2086 - 2528) | 1045 (938 - 1150) | 81.99 (75.67 - 87.34) | 38.34 (32.15 - 42.28) | 54.7 (49.58 - 58.87) | 26.07 (21.39 - 29.64) | 3.36 (3.02 - 3.74) | 3.52 (2.99 - 4.15) | 2.37 (2.09 - 2.7) | 2.49 (2.07 - 3.01) | 1.05 (0.86 - 1.28) | 1.05 (0.84 - 1.32) |
| **Italy** | 2960 (2676 - 3264) | 1434 (1282 - 1598) | 2838 (2550 - 3152) | 1339 (1196 - 1497) | 104 (95.45 - 111.46) | 56.58 (47.53 - 62.72) | 73.61 (65.37 - 79.3) | 41.07 (33.8 - 46.17) | 3.51 (3.1 - 3.98) | 3.95 (3.32 - 4.69) | 2.59 (2.25 - 2.99) | 3.07 (2.54 - 3.7) | 1.12 (0.91 - 1.39) | 1.18 (0.93 - 1.5) |
| **Malta** | 2229 (2039 - 2433) | 937 (813 - 1070) | 2357 (2149 - 2580) | 950 (840 - 1070) | 170.75 (159.12 - 180.24) | 98.35 (86.24 - 106.34) | 118.13 (106 - 129.71) | 68.64 (56.49 - 77.96) | 7.66 (6.88 - 8.53) | 10.49 (8.85 - 12.45) | 5.01 (4.38 - 5.74) | 7.22 (5.93 - 8.8) | 1.37 (1.12 - 1.68) | 1.44 (1.13 - 1.83) |
| **Slovenia** | 4138 (3713 - 4623) | 2345 (2065 - 2668) | 3661 (3275 - 4104) | 2191 (1923 - 2500) | 122.64 (111.41 - 141.64) | 66.26 (56.41 - 82.74) | 84.7 (67.04 - 107.01) | 40.81 (30.9 - 54.39) | 2.96 (2.51 - 3.5) | 2.83 (2.23 - 3.58) | 2.31 (1.78 - 3.01) | 1.86 (1.36 - 2.56) | 0.95 (0.71 - 1.28) | 0.81 (0.53 - 1.22) |
| **Moderate transition** | | | | | | | | | | | | | | |
| **Croatia** | 4439 (3962 - 4964) | 2224 (1967 - 2522) | 3932 (3472 - 4433) | 2109 (1852 - 2394) | 246.91 (230.74 - 261.03) | 161.28 (143.89 - 173.21) | 173.74 (142.52 - 207.96) | 119.72 (95.31 - 144.01) | 5.56 (4.89 - 6.33) | 7.25 (6.22 - 8.46) | 4.42 (3.53 - 5.53) | 5.68 (4.46 - 7.22) | 1.3 (1.07 - 1.6) | 1.28 (0.92 - 1.79) |
| **Cyprus** | 2084 (1897 - 2307) | 864 (748 - 988) | 2150 (1899 - 2456) | 998 (877 - 1143) | 206.36 (191.9 - 224.47) | 120.03 (106.1 - 134.75) | 118.5 (103.15 -140.65) | 72.71 (61.02 - 88.38) | 9.9 (8.73 - 11.23) | 13.9 (11.57 - 16.7) | 5.51 (4.49 - 6.76) | 7.29 (5.79 - 9.17) | 1.4 (1.12 - 1.76) | 1.32 (0.97 - 1.8) |
| **Greece** | 2320 (2132 - 2518) | 1038 (941 - 1148) | 2304 (2099- 2532) | 1039 (933 - 1153) | 143.12 (134.76 - 148.52) | 100 (89.4 - 105.65) | 113.14 (104.65 -119.46) | 72.94 (63.17 - 78.96) | 6.17 (5.6 - 6.79) | 9.64 (8.47 - 10.96) | 4.91 (4.38 - 5.51) | 7.02 (6.03 - 8.17) | 1.56 (1.33 - 1.83) | 1.43 (1.18 - 1.73) |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Hungary** | 5038 (4597 - 5538) | 2674 (2431 - 2971) | 4414 (3951 - 4966) | 2462 (2199 - 2743) | 302.06 (284.76 - 312.91) | 185.57 (167.6 - 195.39) | 221.55 (188.35 -258.48) | 141.31 (116.76 -165.39) | 6 (5.4 - 6.65) | 6.94 (6.12 - 7.87) | 5.02 (4.13 - 6.1) | 5.74 (4.68 - 7.04) | 1.16 (0.98 - 1.36) | 1.14 (0.86 - 1.52) |
| **Latvia** | 5014 (4593 - 5484) | 2843 (2565 - 3155) | 4763 (4314 - 5261) | 2873 (2553 - 3214) | 432.35 (409.78 - 457.83) | 211.01 (192.04 -222.97) | 270.95 (222.42 -330.45) | 157.4 (127.39 -195.02) | 8.62 (7.77 - 9.58) | 7.42 (6.54 - 8.43) | 5.69 (4.55 - 7.11) | 5.48 (4.29 - 6.99) | 0.86 (0.73 - 1.02) | 0.96 (0.69 - 1.34) |
| **Lithuania** | 4449 (4086 - 4872) | 2702 (2431 - 3020) | 4355 (3981- 4783) | 2710 (2437 - 3028) | 421.66 (399.08 - 439.7) | 236.39 (213.78 -249.09) | 297.18 (252.88 -348.59) | 176.14 (144.67 -206.21) | 9.48 (8.57 - 10.48) | 8.75 (7.66 - 9.98) | 6.82 (5.67 - 8.21) | 6.5 (5.29 - 7.99) | 0.92 (0.78 - 1.09) | 0.95 (0.72 - 1.26) |
| **Poland** | 3270 (2833 - 3775) | 2027 (1726 - 2388) | 2728 (2345 - 3162) | 1686 (1430 - 2001) | 252.43 (235.24 - 264.08) | 143.1 (126.7 - 151.3) | 174.68 (142.25 -211.15) | 98.91 (78.99 - 120.18) | 7.72 (6.61 - 9.01) | 7.06 (5.87 - 8.49) | 6.4 (5 - 8.2) | 5.87 (4.49 - 7.67) | 0.91 (0.72 - 1.16) | 0.92 (0.63 - 1.33) |
| **Portugal** | 1704 (1508 - 1931) | 856 (743 - 986) | 1864 (1636 - 2144) | 890 (777 - 1013) | 89.04 (83.07 - 93.33) | 56.62 (49.88 - 60.87) | 59 (54.09 - 63.31) | 34.97 (29.38 - 38.97) | 5.23 (4.56 - 5.99) | 6.61 (5.57 - 7.86) | 3.16 (2.71 - 3.7) | 3.93 (3.25 - 4.76) | 1.27 (1.02 - 1.58) | 1.24 (0.97 - 1.59) |
| **Slovakia** | 4175 (3748 - 4676) | 2317 (2068 - 2621) | 3664 (3261 - 4103) | 2085 (1856 - 2353) | 368.35 (346.06 - 381.28) | 230.97 (207.6 - 243.98) | 241.64 (196.24 -290.93) | 166.75 (134.09 -201.34) | 8.82 (7.82 - 9.96) | 9.97 (8.64 - 11.5) | 6.6 (5.26 - 8.28) | 8 (6.33 - 10.11) | 1.13 (0.94 - 1.36) | 1.21 (0.87 - 1.69) |
| **Spain** | 2459 (2266 - 2657) | 1124 (1027 - 1232) | 2351 (2145- 2588) | 1113 (1002 - 1236) | 94.12 (86.8 - 98.67) | 49.72 (41.74 - 55.33) | 60.71 (55.88 - 65.33) | 31.98 (26.69 - 36.87) | 3.83 (3.46 - 4.24) | 4.43 (3.75 - 5.22) | 2.58 (2.29 - 2.92) | 2.87 (2.37 - 3.48) | 1.16 (0.95 - 1.4) | 1.11 (0.89 - 1.4) |
| **Weak transition** | | | | | | | | | | | | | | |
| **Bulgaria** | 4341 (3861 - 4893) | 2423 (2163 - 2709) | 4036 (3615 - 4523) | 2254 (2002 - 2542) | 412.06 (388.1 - 434.84) | 256.36 (235.01 - 270.86) | 300.9 (250.37 - 353.62) | 190.23 (158.49 - 224.13) | 9.49 (8.32 - 10.83) | 10.58 (9.27 - 12.08) | 7.46 (6.07 - 9.15) | 8.44 (6.84 - 10.41) | 1.11 (0.92 - 1.34) | 1.13 (0.84 - 1.52) |
| **Romania** | 4090 (3651 - 4610) | 2379 (2114 - 2686) | 3760 (3339 - 4248) | 2196 (1962 - 2480) | 299.11 (282.64 - 314.08) | 207.85 (190.79- 219.46) | 219.87 (187.44 - 257.9) | 143.54 (119.71- 166.92) | 7.31 (6.43 - 8.32) | 8.74 (7.61 - 10.04) | 5.85 (4.78 - 7.15) | 6.54 (5.34 - 8) | 1.19 (0.99 - 1.44) | 1.12 (0.84 - 1.49) |
| | | | | | | | | | | | | | | |
| **Overall** | 91036 (82841 - 100234) | 47311 (42455 - 52796) | 84649 (76331 - 93992) | 44872 (40041 - 50241) | 5687.95 (5328.62 - 5991.66) | 3290.96 (2932.92 - 3530.83) | 3801.55 (3257.65 - 4393.35) | 2270.78 (1866.09 - 2677.66) | 6.25 (5.59 - 6.99) | 6.96 (6.03 - 8.02) | 4.49 (3.74 - 5.39) | 5.06 (4.09 - 6.25) | 1.11 (0.93 - 1.33) | 1.13 (0.85 - 1.49) |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **European Union average** | 3372 (3068 - 3712) | 1752 (1572 - 1955) | 3135 (2827 - 3481) | 1662 (1483 - 1861) | 210.66 (197.36 - 221.91) | 121.89 (108.63 - 130.77) | 140.8 (120.65 - 162.72) | 84.1 (69.11 - 99.17) | 6.25 (5.59 - 6.99) | 6.96 (6.03 - 8.02) | 4.49 (3.74 - 5.39) | 5.06 (4.09 - 6.25) | 1.11 (0.93 - 1.33) | 1.13 (0.85 - 1.49) |

IHD= ischaemic heart disease. GBD 2019 definition describes IHD as International Classification of Disease (ICD) classes I20-25.9, namely: angina pectoris, acute myocardial infarction, subsequent ST elevation (STEMI) and non-ST elevation (NSTEMI) myocardial infarction, certain current complications following ST elevation (STEMI) and non-ST elevation (NSTEMI) myocardial infarction (within the 28 day period), other acute ischaemic heart disease, and chronic ischaemic heart disease. Data and definitions from Global Burden of Disease Database, 2019

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