## SUPPLEMENTARY TABLES

Supplementary Table 1. Distribution of the number of antihypertensives by CVD risk level ( n 99,468)

|  | CVD | Higher risk | Lower risk | Sum |
| :--- | :--- | :--- | :--- | :--- |
| 1 | $7,078(36.59 \%)$ | $463(42.01 \%)$ | $40,960(51.83 \%)$ | 48,501 |
| 2 | $7,878(40.73 \%)$ | $379(34.39 \%)$ | $25,421(32.17 \%)$ | 33,678 |
| $>=3$ | $3,740(19.33 \%)$ | $210(19.06 \%)$ | $9,886(12.51 \%)$ | 13,836 |
| 0 (No antihypertensives reported) | $640(3.31 \%)$ | $49(4.45 \%)$ | $2,395(3.03 \%)$ | 3,084 |
| NA (No medications reported) | $8(0.04 \%)$ | $1(0.09 \%)$ | $360(0.46 \%)$ | 369 |
| Sum | 19,344 | 1,102 | 79,022 | 99,468 |

Individuals classified as higher risk were those without prior diagnosis of CVD (self-report), and were aged $\geq 60$ years, and were obese (BMI >30), and were current smokers.

Supplementary Table 2. Concordance between BP measurements at baseline and follow up within three years, using BP threshold of $140 / 90 \mathrm{mmHg}(\mathrm{n} \mathrm{2,134)}$ ).

|  | Measured BP < 140/90 at <br> repeat visit | Measured BP > <br> repeat visit | Sum |
| :--- | :--- | :--- | :--- |
| Measured BP < 140/90 at <br> baseline | $226(20.21 \%)$ | 1,118 |  |
| Measured BP $>=140 / 90$ at <br> baseline <br> Sum | $292(79.79 \%)$ | $743(73.13 \%)$ | 1,016 |
|  | 1,165 | 969 | 2,134 |

The Cohen's kappa here is 0.5302715 which indicates "moderate agreement". The Spearman correlation coefficient is 0.5307913 .

Supplementary Table 3. Multivariable logistic regression identifying factors associated with hypertension control stratified by number of comorbidities and prior CVD status, among middleaged UK adults on anti-hypertensive treatment

| Coefficient | No comorbidities |  |  |  |  | 2+ comorbidities without CVD |  |  |  |  | 2+ comorbidities with CVD |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | n | $\%$ <br> controll ed | OR | $\begin{aligned} & 95 \% \\ & \mathrm{Cl} \end{aligned}$ | $p$ | n | \% <br> controlle <br> d | OR | $\begin{aligned} & 95 \% \\ & \mathrm{Cl} \end{aligned}$ | p | n | \% <br> controlled | OR | $\begin{aligned} & 95 \% \\ & \mathrm{Cl} \end{aligned}$ | p |
| Age group, years |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 40-49 | 3750 | 38.0 | 1 |  |  | 775 | 55.5 | 1 |  |  | 381 | 64.8 | 1 |  |  |
| 50-59 | 13166 | 35.7 | 0.89 | $\begin{aligned} & (0.82, \\ & 0.96) \end{aligned}$ | 0.002 | 2586 | 47.7 | 0.77 | $\begin{aligned} & (0.66, \\ & 0.91) \end{aligned}$ | 0.002 | 2138 | 56.9 | 0.73 | $\begin{aligned} & (0.58, \\ & 0.92) \end{aligned}$ | 0.008 |
| 60-69 | 28052 | 29.1 | 0.66 | $\begin{aligned} & (0.61, \\ & 0.72) \end{aligned}$ | <0.001 | 4991 | 39.1 | 0.57 | $\begin{aligned} & (0.48, \\ & 0.68) \end{aligned}$ | <0.001 | 6728 | 49.2 | 0.58 | $\begin{aligned} & (0.46, \\ & 0.73) \end{aligned}$ | <0.001 |
| Gender |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Female | 21460 | 35.3 | 1 |  |  | 5032 | 45.6 | 1 |  |  | 3047 | 52.3 | 1 |  |  |
| Male | 23508 | 28.6 | 0.78 | $\begin{aligned} & (0.75, \\ & 0.82) \end{aligned}$ | <0.001 | 3320 | 39.7 | 0.85 | $\begin{aligned} & (0.77, \\ & 0.95) \end{aligned}$ | 0.002 | 6200 | 51.3 | 1.04 | $\begin{aligned} & (0.95, \\ & 1.15) \end{aligned}$ | 0.392 |
| Ethnic group |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| White | 41829 | 31.7 | 1 |  |  | 7728 | 42.8 | 1 |  |  | 8560 | 51.4 | 1 |  |  |
| Black | 1230 | 32.0 | 0.74 | $\begin{aligned} & (0.62, \\ & 0.87) \end{aligned}$ | <0.001 | 186 | 45.7 | 1.01 | $\begin{aligned} & (0.67, \\ & 1.50) \end{aligned}$ | 0.980 | 134 | 49.3 | 0.75 | $\begin{aligned} & (0.48, \\ & 1.19) \end{aligned}$ | 0.224 |
| S. Asian | 767 | 35.7 | 1.00 | $\begin{aligned} & (0.82, \\ & 1.23) \end{aligned}$ | 0.987 | 177 | 55.9 | 1.64 | $\begin{aligned} & (1.07 \\ & 2.52) \end{aligned}$ | 0.025 | 318 | 55.7 | 1.03 | $\begin{aligned} & (0.68 \\ & 1.55) \end{aligned}$ | 0.895 |
| Mixed | 192 | 26.0 | 0.61 | $\begin{aligned} & (0.44, \\ & 0.86) \end{aligned}$ | 0.004 | 45 | 53.3 | 1.18 | $\begin{aligned} & (0.64, \\ & 2.16) \end{aligned}$ | 0.594 | 42 | 57.1 | 1.13 | $\begin{aligned} & \text { (0.60, } \\ & 2.13) \end{aligned}$ | 0.699 |
| Other | 735 | 37.0 | 0.99 | $\begin{aligned} & (0.82, \\ & 1.20) \end{aligned}$ | 0.930 | 159 | 48.4 | 1.09 | $\begin{aligned} & (0.72, \\ & 1.65) \end{aligned}$ | 0.681 | 142 | 55.6 | 0.94 | $\begin{aligned} & (0.60, \\ & 1.47) \end{aligned}$ | 0.790 |
| Townsend <br> Deprivation Index, quintiles ${ }^{3}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Q1: Least deprived | 9985 | 30.7 | 1 |  |  | 1381 | 41.8 | 1 |  |  | 1372 | 51.5 | 1 |  |  |
| Q2 | 9546 | 30.8 | 1.01 | $\begin{aligned} & (0.95, \\ & 1.07) \end{aligned}$ | 0.859 | 1467 | 40.4 | 0.94 | $\begin{aligned} & (0.81, \\ & 1.09) \end{aligned}$ | 0.427 | 1540 | 52.9 | 1.05 | $\begin{aligned} & (0.91, \\ & 1.22) \end{aligned}$ | 0.480 |
| Q3 | 9243 | 31.0 | 1.02 | $\begin{aligned} & \text { (0.95, } \\ & 1.08) \end{aligned}$ | 0.613 | 1580 | 41.5 | 0.96 | $\begin{aligned} & (0.83, \\ & 1.12) \end{aligned}$ | 0.629 | 1620 | 49.3 | 0.92 | $\begin{aligned} & (0.80 \\ & 1.07) \end{aligned}$ | 0.275 |
| Q4 | 8729 | 32.8 | 1.09 | $\begin{aligned} & (1.03, \\ & 1.17) \end{aligned}$ | 0.005 | 1761 | 44.3 | 1.07 | $\begin{aligned} & \text { (0.92, } \\ & 1.24) \end{aligned}$ | 0.369 | 1947 | 49.9 | 0.93 | $\begin{aligned} & (0.80 \\ & 1.07) \end{aligned}$ | 0.304 |
| Q5: Most deprived | 7411 | 34.5 | 1.20 | $\begin{aligned} & \text { (1.12, } \\ & 1.29) \end{aligned}$ | <0.001 | 2154 | 46.6 | 1.14 | $\begin{aligned} & (0.98, \\ & 1.33) \end{aligned}$ | 0.081 | 2757 | 53.6 | 1.05 | $\begin{aligned} & (0.91, \\ & 1.21) \end{aligned}$ | 0.479 |
| Household Income, GBP |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Greater than 100,000 | 1456 | 36.7 | 1 |  |  | 130 | 50.0 | 1 |  |  | 99 | 56.6 | 1 |  |  |
| 52,000 to 100,000 | 6005 | 34.3 | 0.89 | $\begin{aligned} & (0.79, \\ & 1.01) \end{aligned}$ | 0.065 | 634 | 45.9 | 0.80 | $\begin{aligned} & (0.55, \\ & 1.18) \end{aligned}$ | 0.265 | 523 | 56.2 | 0.99 | $\begin{aligned} & (0.63, \\ & 1.53) \end{aligned}$ | 0.950 |
| 31,000 to 51,999 | 9323 | 32.0 | 0.83 | $\begin{aligned} & \text { (0.74, } \\ & 0.93 \text { ) } \end{aligned}$ | 0.002 | 1246 | 45.7 | 0.80 | $\begin{aligned} & (0.55 \\ & 1.15) \end{aligned}$ | 0.226 | 1142 | 51.8 | 0.89 | $\begin{aligned} & (0.58, \\ & 1.36) \end{aligned}$ | 0.584 |
| 18,000 to 30,999 | 11054 | 30.8 | 0.81 | $\begin{aligned} & (0.72, \\ & 0.92) \end{aligned}$ | <0.001 | 1906 | 41.3 | 0.69 | $\begin{aligned} & (0.48, \\ & 1.00) \end{aligned}$ | 0.050 | 2047 | 51.7 | 0.94 | $\begin{aligned} & (0.62, \\ & 1.43) \end{aligned}$ | 0.767 |
| Less than 18,000 | 9753 | 30.4 | 0.79 | $\begin{aligned} & (0.69, \\ & 0.89) \end{aligned}$ | <0.001 | 2818 | 43.6 | 0.71 | $\begin{aligned} & \text { (0.49, } \\ & 1.03 \text {, } \end{aligned}$ | 0.071 | 3659 | 51.1 | 0.90 | $\begin{aligned} & (0.59, \\ & 1.36) \end{aligned}$ | 0.605 |
| Occupation category ${ }^{4}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Professional and Administrative | 17182 | 34.6 | 1 |  |  | 2375 | 45.5 | 1 |  |  | 1912 | 54.7 | 1 |  |  |
| Skilled trades | 2084 | 27.6 | 0.87 | $\begin{aligned} & (0.78, \\ & 0.97) \end{aligned}$ | 0.011 | 237 | 35.9 | 0.85 | $\begin{aligned} & (0.64, \\ & 1.13) \end{aligned}$ | 0.265 | 326 | 46.6 | 0.76 | $\begin{aligned} & (0.60, \\ & 0.97) \end{aligned}$ | 0.028 |
| Services | 2358 | 34.2 | 0.93 | $\begin{aligned} & (0.85, \\ & 1.02) \end{aligned}$ | 0.133 | 503 | 45.1 | 0.96 | $\begin{aligned} & (0.78, \\ & 1.17) \end{aligned}$ | 0.661 | 316 | 57.6 | 1.17 | $\begin{aligned} & (0.91, \\ & 1.50) \end{aligned}$ | 0.212 |
| Manual and Industrial | 3052 | 28.7 | 0.86 | $\begin{aligned} & (0.78, \\ & 0.94) \end{aligned}$ | <0.001 | 457 | 46.2 | 1.16 | $\begin{aligned} & (0.94, \\ & 1.44) \end{aligned}$ | 0.169 | 579 | 51.1 | 0.91 | $\begin{aligned} & (0.75, \\ & 1.11) \end{aligned}$ | 0.371 |
| Other employment | 1550 | 34.0 | 1.03 | $\begin{aligned} & (0.92, \\ & 1.15) \end{aligned}$ | 0.582 | 219 | 38.4 | 0.82 | $\begin{aligned} & (0.61, \\ & 1.10) \end{aligned}$ | 0.180 | 185 | 56.8 | 1.14 | $\begin{aligned} & (0.84, \\ & 1.56) \end{aligned}$ | 0.397 |
| Retired | 15838 | 28.9 | 0.91 | $\begin{aligned} & (0.87, \\ & 0.97) \end{aligned}$ | 0.002 | 3026 | 39.5 | 1.00 | $\begin{aligned} & (0.88, \\ & 1.13) \end{aligned}$ | 0.947 | 4077 | 48.6 | 0.89 | $\begin{aligned} & \text { (0.79, } \\ & 1.01) \end{aligned}$ | 0.066 |
| Unable to work | 796 | 39.3 | 1.24 | (1.06, | 0.006 | 1050 | 49.6 | 1.13 | (0.95, | 0.164 | 1495 | 54.8 | 0.96 | (0.82, | 0.595 |


| because of sickness or disability |  |  |  | 1.44) |  |  |  |  | 1.34) |  |  |  |  | 1.12) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Unemployed/una nswered | 2108 | 32.8 | 0.88 | $\begin{aligned} & \text { (0.80, } \\ & 0.98) \end{aligned}$ | 0.016 | 485 | 43.9 | 0.86 | $\begin{aligned} & (0.70, \\ & 1.06) \end{aligned}$ | 0.156 | 357 | 54.6 | 0.94 | $\begin{aligned} & (0.74, \\ & 1.19) \end{aligned}$ | 0.601 |
| Highest level of education (ISCED) ${ }^{5}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5: Tertiary | 18640 | 32.9 | 1 |  |  | 3043 | 44.6 | 1 |  |  | 2944 | 53.4 | 1 |  |  |
| 4: Post-secondary non-tertiary | 5672 | 32.9 | 1.01 | $\begin{aligned} & \text { (0.95, } \\ & 1.08 \text { ) } \end{aligned}$ | 0.716 | 1041 | 42.7 | 0.96 | $\begin{aligned} & (0.83, \\ & 1.11) \end{aligned}$ | 0.612 | 1002 | 48.5 | 0.86 | $\begin{aligned} & (0.74, \\ & 1.00) \end{aligned}$ | 0.044 |
| 2-3: Secondary | 9793 | 32.1 | 0.94 | $\begin{aligned} & (0.89, \\ & 1.00) \end{aligned}$ | 0.040 | 1704 | 45.2 | 1.00 | $\begin{aligned} & \text { (0.88, } \\ & 1.13 \text { ) } \end{aligned}$ | 0.959 | 1715 | 54.9 | 1.06 | $\begin{aligned} & \text { (0.94, } \\ & 1.20) \end{aligned}$ | 0.337 |
| 1: Primary | 9917 | 29.1 | 0.90 | $\begin{aligned} & (0.85, \\ & 0.96) \end{aligned}$ | <0.001 | 2395 | 40.6 | 0.88 | $\begin{aligned} & \text { (0.77, } \\ & 0.99) \end{aligned}$ | 0.040 | 3379 | 49.6 | 0.89 | $\begin{aligned} & (0.80, \\ & 1.00) \end{aligned}$ | 0.042 |
| Country of birth, by income level ${ }^{6}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| UK | 40966 | 31.5 | 1 |  |  | 7638 | 42.8 | 1 |  |  | 8466 | 51.4 | 1 |  |  |
| Other high income | 1177 | 36.3 | 1.10 | $\begin{aligned} & \text { (0.98, } \\ & 1.25 \text { ) } \end{aligned}$ | 0.118 | 181 | 49.7 | 1.18 | $\begin{aligned} & (0.87, \\ & 1.61) \end{aligned}$ | 0.283 | 161 | 57.1 | 1.18 | $\begin{aligned} & (0.85, \\ & 1.64) \end{aligned}$ | 0.311 |
| Middle income | 2305 | 33.9 | 1.04 | $\begin{aligned} & (0.90, \\ & 1.20) \end{aligned}$ | 0.611 | 424 | 48.1 | 0.90 | $\begin{aligned} & (0.64, \\ & 1.25) \end{aligned}$ | 0.521 | 491 | 54.4 | 1.02 | $\begin{aligned} & \text { (0.71, } \\ & 1.47) \end{aligned}$ | 0.899 |
| Low income | 520 | 34.2 | 1.02 | $\begin{aligned} & (0.82, \\ & 1.28) \end{aligned}$ | 0.845 | 109 | 47.7 | 0.87 | $\begin{aligned} & (0.54, \\ & 1.40) \end{aligned}$ | 0.554 | 129 | 51.9 | 0.88 | $\begin{aligned} & (0.54, \\ & 1.44) \end{aligned}$ | 0.617 |
| UK country of residence ${ }^{7}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| England | 39774 | 32.2 | 1 |  |  | 7515 | 43.6 | 1 |  |  | 8103 | 52.0 | 1 |  |  |
| Scotland | 3242 | 28.0 | 0.80 | $\begin{aligned} & (0.74, \\ & 0.87) \end{aligned}$ | <0.001 | 478 | 40.6 | 0.86 | $\begin{aligned} & \text { (0.71, } \\ & 1.04 \text {, } \end{aligned}$ | 0.124 | 746 | 49.3 | 0.88 | $\begin{aligned} & \text { (0.75, } \\ & 1.03 \text { ) } \end{aligned}$ | 0.102 |
| Wales | 1952 | 30.7 | 0.94 | $\begin{aligned} & \text { (0.85, } \\ & 1.03 \text { ) } \end{aligned}$ | 0.196 | 359 | 40.7 | 0.90 | $\begin{aligned} & (0.72, \\ & 1.12) \end{aligned}$ | 0.324 | 398 | 48.7 | 0.88 | $\begin{aligned} & (0.72, \\ & 1.09) \end{aligned}$ | 0.238 |
| BMI (categorical) ${ }^{8}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Underweight | 96 | 50.0 | 1.58 | $\begin{aligned} & (1.05, \\ & 2.37) \end{aligned}$ | 0.027 | 18 | 55.6 | 1.35 | $\begin{aligned} & (0.52, \\ & 3.50) \end{aligned}$ | 0.533 | 14 | 78.6 | 2.39 | $\begin{aligned} & (0.65, \\ & 8.70) \end{aligned}$ | 0.188 |
| Normal (ref) | 9183 | 35.5 | 1 |  |  | 970 | 47.9 | 1 |  |  | 1139 | 57.1 | 1 |  |  |
| Overweight | 20358 | 30.4 | 0.82 | $\begin{aligned} & (0.78, \\ & 0.87) \end{aligned}$ | <0.001 | 2597 | 43.3 | 0.91 | $\begin{aligned} & (0.78, \\ & 1.06) \end{aligned}$ | 0.214 | 3380 | 52.5 | 0.84 | $\begin{aligned} & (0.74, \\ & 0.97) \end{aligned}$ | 0.016 |
| Obese | 15140 | 31.3 | 0.80 | $\begin{aligned} & (0.75, \\ & 0.84) \end{aligned}$ | <0.001 | 4694 | 42.3 | 0.80 | $\begin{aligned} & \text { (0.69, } \\ & 0.93 \text {, } \end{aligned}$ | 0.003 | 4615 | 49.6 | 0.72 | $\begin{aligned} & \text { (0.63, } \\ & 0.83) \end{aligned}$ | <0.001 |
| Smoking status |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Never | 23984 | 32.1 | 1 |  |  | 4091 | 44.2 | 1 |  |  | 3276 | 51.8 | 1 |  |  |
| Previous | 17040 | 30.5 | 1.06 | $\begin{aligned} & (1.01, \\ & 1.11) \end{aligned}$ | 0.013 | 3358 | 41.6 | 1.05 | $\begin{aligned} & (0.95, \\ & 1.15) \end{aligned}$ | 0.369 | 4606 | 49.9 | 1.00 | $\begin{aligned} & \text { (0.91, } \\ & 1.10) \end{aligned}$ | 0.988 |
| Current | 3709 | 35.3 | 1.26 | $\begin{aligned} & (1.17, \\ & 1.36) \end{aligned}$ | <0.001 | 830 | 46.5 | 1.09 | $\begin{aligned} & \text { (0.93, } \\ & 1.28) \end{aligned}$ | 0.283 | 1279 | 56.9 | 1.22 | $\begin{aligned} & (1.06, \\ & 1.40) \end{aligned}$ | 0.005 |
| Alcohol units per week (categorical) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| None reported | 13016 | 34.7 | 1 |  |  | 4037 | 47.0 | 1 |  |  | 4084 | 53.7 | 1 |  |  |
| Less than 5 units | 3898 | 34.2 | 0.98 | $\begin{aligned} & \text { (0.91, } \\ & 1.06) \end{aligned}$ | 0.629 | 642 | 42.1 | 0.84 | $\begin{aligned} & (0.70, \\ & 1.00) \end{aligned}$ | 0.044 | 567 | 52.9 | 0.99 | $\begin{aligned} & \text { (0.82, } \\ & 1.18) \end{aligned}$ | 0.873 |
| 5 to 10 units | 6896 | 33.3 | 0.94 | $\begin{aligned} & (0.88, \\ & 1.00) \end{aligned}$ | 0.068 | 1010 | 44.4 | 0.93 | $\begin{aligned} & (0.80, \\ & 1.07) \end{aligned}$ | 0.302 | 1053 | 52.7 | 0.96 | $\begin{aligned} & (0.83, \\ & 1.10) \end{aligned}$ | 0.540 |
| 10 to 20 units | 9711 | 31.5 | 0.88 | $\begin{aligned} & (0.83, \\ & 0.94) \end{aligned}$ | <0.001 | 1223 | 40.3 | 0.79 | $\begin{aligned} & (0.68, \\ & 0.90) \end{aligned}$ | <0.001 | 1617 | 51.5 | 0.90 | $\begin{aligned} & \text { (0.79, } \\ & 1.01) \end{aligned}$ | 0.082 |
| 20 to 30 units | 5344 | 28.9 | 0.79 | $\begin{aligned} & (0.73, \\ & 0.85) \end{aligned}$ | <0.001 | 655 | 36.8 | 0.69 | $\begin{aligned} & (0.58, \\ & 0.83) \end{aligned}$ | <0.001 | 892 | 48.9 | 0.80 | $\begin{aligned} & (0.69, \\ & 0.94) \end{aligned}$ | 0.005 |
| More than 30 units | 6103 | 25.5 | 0.66 | $\begin{aligned} & (0.62, \\ & 0.72) \end{aligned}$ | <0.001 | 785 | 33.9 | 0.58 | $\begin{aligned} & (0.49, \\ & 0.69) \end{aligned}$ | <0.001 | 1034 | 44.4 | 0.65 | $\begin{aligned} & (0.56, \\ & 0.76) \end{aligned}$ | <0.001 |
| Weekly physical activity ${ }^{9}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| High (METs > 1200) | 22166 | 31.3 | 1 |  |  | 3209 | 42.6 | 1 |  |  | 3637 | 50.6 | 1 |  |  |
| $\begin{aligned} & \text { Low (METs <= } \\ & 1200 \text { ) } \end{aligned}$ | 13273 | 33.6 | 1.07 | $\begin{aligned} & (1.02, \\ & 1.12) \end{aligned}$ | 0.008 | 2994 | 44.1 | 1.04 | $\begin{aligned} & (0.94, \\ & 1.16) \end{aligned}$ | 0.439 | 3332 | 53.1 | 1.10 | $\begin{aligned} & \text { (1.00, } \\ & 1.21) \end{aligned}$ | 0.056 |
| Number of antihypertensive medications |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | 23417 | 30.5 | 1 |  |  | 4254 | 45.7 | 1 |  |  | 3254 | 51.3 | 1 |  |  |
| 2 | 14850 | 33.0 | 1.19 | $\begin{aligned} & (1.14, \\ & 1.25) \end{aligned}$ | <0.001 | 2543 | 40.0 | 0.84 | $\begin{aligned} & (0.76, \\ & 0.93) \end{aligned}$ | <0.001 | 3617 | 54.5 | 1.18 | $\begin{aligned} & (1.07, \\ & 1.30) \end{aligned}$ | <0.001 |


| >=3 | 5183 | 35.1 | 1.38 | $\begin{aligned} & (1.30, \\ & 1.48) \end{aligned}$ | <0.001 | 1235 | 41.9 | 0.95 | $\begin{aligned} & (0.83, \\ & 1.08) \end{aligned}$ | 0.448 | 2055 | 47.6 | 0.92 | $\begin{aligned} & (0.82, \\ & 1.03) \end{aligned}$ | 0.137 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Medication list unavailable | 1518 | 29.5 | 0.98 | $\begin{aligned} & (0.87, \\ & 1.10) \end{aligned}$ | 0.731 | 320 | 42.8 | 0.88 | $\begin{aligned} & (0.69, \\ & 1.11) \end{aligned}$ | 0.278 | 321 | 48.9 | 0.89 | $\begin{aligned} & \text { (0.70, } \\ & 1.12 \text { ) } \end{aligned}$ | 0.312 |
| Family history of CVD |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| No | 16531 | 31.1 | 1 |  |  | 2840 | 44.0 | 1 |  |  | 2383 | 50.6 | 1 |  |  |
| Yes | 28437 | 32.2 | 1.03 | $\begin{aligned} & \text { (0.99, } \\ & 1.08) \end{aligned}$ | 0.133 | 5512 | 42.9 | 0.98 | $\begin{aligned} & (0.90 \\ & 1.08) \end{aligned}$ | 0.743 | 6864 | 52.0 | 1.06 | $\begin{aligned} & \text { (0.97, } \\ & 1.17) \end{aligned}$ | 0.208 |
| Ever screened for bowel cancer |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 17055 | 31.5 | 1 |  |  | 3436 | 42.6 | 1 |  |  | 4003 | 49.9 | 1 |  |  |
| No | 27061 | 32.0 | 0.91 | $\begin{aligned} & (0.87, \\ & 0.95) \end{aligned}$ | <0.001 | 4708 | 44.0 | 0.93 | $\begin{aligned} & (0.84, \\ & 1.02) \end{aligned}$ | 0.127 | 4976 | 52.8 | 1.06 | $\begin{aligned} & \text { (0.97, } \\ & 1.15) \end{aligned}$ | 0.210 |

Note: ${ }^{1}$ Number of individuals in levels of a categorical variable may not add up to total $n$ because 'Do not know' and 'Prefer not to answer' categories have been removed from results table ${ }^{2}$ Hypertension control is defined as mean systolic $B P>=140 \mathrm{mmHg}$ or mean diastolic $B P>=90 \mathrm{mmHg}$ at baseline assessment, among treated hypertensives. ${ }^{3}$ The Townsend index is a measure of material deprivation calculated at the level of census output areas. ${ }^{4}$ Occupation categories have been condensed from those recorded in UKB. Professional and Administrative: Managers and Senior Officials, Professional Occupations, Associate Professional and Technical Occupations, Administrative and Secretarial Occupations. Skilled trades: Skilled Trades Occupations. Services: Personal Service Occupations, Sales and Customer Service Occupations. Manual and Industrial: Process, Plant and Machine Operatives, Elementary Occupations. Other employment: free text entry that was not coded by UKB. ${ }^{5}$ Self-reported highest education achieved was mapped to the International Standard Classification of Education (ISCED) categories ${ }^{6}$ Self-reported country of birth was mapped to the World Bank Analytical Classifications for calendar year 2010. ${ }^{7}$ The assessment centre the participant attended was used as a proxy for country of residence ${ }^{8}$ BMI has been categorised as: Underweight < $18.5 \mathrm{~kg} / \mathrm{m}^{2}$; Normal 18.5-24.9 kg/m ${ }^{2}$; Overweight 25.0-29.9 $\mathrm{kg} / \mathrm{m}^{2}$; Obese $>=30.0 \mathrm{~kg} / \mathrm{m}^{2} .{ }^{9}$ The total Metabolic Equivalent Task (MET) minutes per week is based on self-reported frequency and duration of walking, moderate and vigorous activity, and was then dichotomized based on WHO physical activity guideline thresholds. ${ }^{10}$ The number of comorbidities considered to be of interest cardiovascular disease, diabetes, arrhythmia (afib/flutter), asthma or COPD, migraines, epilepsy, anxiety, depression, osteoarthritis, other joint disorder.

