S6 Table. Sensitivity analysis using multiple imputation using the random forest non-parametric algorithm. Age adjusted and multivariable logistic regression of risk factors for any hospital admissions (compared to none), $\geq 7$ hospital admissions (compared to $<7$ admissions) and $>20$ days of hospital stay (compared to $\leq 20$ days) from 1999-2009 in 25,639 men and women aged 40-79 years 1993-1997

|  | All | n | Any hospital admissions OR ( $95 \% \mathrm{CI}$ ) | $p$ value | n | Seven or more admissions OR (95\% CI) | p value | n | 20 or more hospital nights OR (95\% CI) | $p$ value |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Men † |  |  |  |  |  |  |  |  |  |  |
| Current nondrinker | 1091 | 856 | 1 | - | 211 | 1 | - | 327 | 1 | - |
| Current drinker | 10516 | 7575 | 0.85 (0.73-0.99) | 0.039 | 1562 | 0.87 (0.74-1.03) | 0.097 | 2146 | 0.77 (0.66-0.89) | <0.001 |
| Men $\ddagger$ |  |  |  |  |  |  |  |  |  |  |
| Current nondrinker | 1091 | 856 | 1 | - | 211 | 1 | - | 327 | 1 | - |
| Current drinker | 10516 | 7575 | 0.91 (0.78-1.06) | 0.236 | 1562 | 0.93 (0.79-1.10) | 0.393 | 2146 | 0.83 (0.71-0.96) | 0.013 |
| Men $\ddagger$ |  |  |  |  |  |  |  |  |  |  |
| Current nondrinker | 1091 | 856 | 1 | - | 211 | 1 | - | 327 | 1 | - |
| $(0,7]$ units per week | 5211 | 3855 | 0.95 (0.80-1.11) | 0.501 | 824 | 0.95 (0.80-1.13) | 0.570 | 1141 | 0.84 (0.72-0.98) | 0.028 |
| $(7,14]$ units per week | 2432 | 1747 | 0.93 (0.78-1.11) | 0.400 | 345 | 0.91 (0.75-1.11) | 0.335 | 469 | 0.80 (0.67-0.95) | 0.012 |
| $(14,21]$ units per week | 1285 | 890 | 0.86 (0.70-1.04) | 0.119 | 181 | 0.93 (0.74-1.17) | 0.553 | 238 | 0.81 (0.66-1.00) | 0.050 |
| >21 units per week | 1588 | 1083 | 0.81 (0.67-0.97) | 0.025 | 212 | 0.88 (0.70-1.09) | 0.233 | 298 | 0.84 (0.69-1.03) | 0.087 |
| Women † |  |  |  |  |  |  |  |  |  |  |
| Current nondrinker | 2372 | 1843 | 1 | - | 402 | 1 | - | 649 | 1 | - |
| Current drinker | 11660 | 8134 | 0.77 (0.69-0.86) | <0.001 | 1313 | 0.71 (0.63-0.81) | <0.001 | 1961 | 0.68 (0.61-0.75) | <0.001 |
| Women $\ddagger$ |  |  |  |  |  |  |  |  |  |  |
| Current nondrinker | 2372 | 1843 | 1 | - | 402 | 1 | - | 649 | 1 | - |
| Current drinker | 11660 | 8134 | 0.85 (0.76-0.94) | 0.002 | 1313 | 0.79 (0.70-0.90) | <0.001 | 1961 | 0.75 (0.67-0.84) | <0.001 |
| Women $\ddagger$ |  |  |  |  |  |  |  |  |  |  |
| Current nondrinker | 2372 | 1843 | 1 | - | 402 | 1 | - | 649 | 1 | - |
| $(0,7]$ units per week | 8747 | 6184 | 0.86 (0.77-0.96) | 0.006 | 1045 | 0.82 (0.72-0.93) | 0.003 | 1558 | 0.77 (0.69-0.86) | <0.001 |
| $(7,14]$ units per week | 2001 | 1347 | 0.82 (0.72-0.95) | 0.007 | 186 | 0.70 (0.57-0.84) | <0.001 | 270 | 0.64 (0.54-0.76) | <0.001 |
| $(14,21)$ units per week | 646 | 429 | 0.79 (0.65-0.96) | 0.018 | 60 | 0.68 (0.51-0.92) | 0.011 | 92 | 0.67 (0.52-0.86) | 0.002 |
| >21 units per week | 266 | 174 | 0.79 (0.60-1.04) | 0.096 | 22 | 0.60 (0.38-0.96) | 0.031 | 41 | 0.81 (0.56-1.17) | 0.255 |

OR = Odds ratio, $\mathrm{Cl}=$ Confidence intervals. Comparison group: Lifelong abstainer †Adjusted for age $\ddagger$ Adjusted for age, smoking status, education level(low/others), social class (manual/non-manual), body mass index (continuous), prevalent heart disease or stroke, prevalent cancer and prevalent diabetes
Round brackets in intervals denote strict inequalities; square brackets denote non-strict inequalities
Variables used in the multiple imputation include: age, sex, social class, education level, smoking status, beer, wine, sherry, spirits (at present and at age 20 and 30), physical activity, prevalent disease, hospital admission and hospital days

