Background Cardiovascular disease (CVD) contributes to dementia and disability risk. It also affects the cost of care. The English NHS long-term plan targets preventing 150,000 CVD events from 2019–2029. However, after decades of declines in CVD mortality in England, CVD mortality improvements have slowed since 2011, which may indicate a slowdown in incidence reduction from around 2006. Therefore, there is uncertainty about how CVD burden and associated health and social care costs might evolve in the next decade.

Methods Simulations for people aged 35–100 in England and Wales were carried out using the IMPACT Better Aging Model (BAM), an open-cohort, stochastic Markov model which synthesises observed trends in CVD incidence and mortality, dementia and disability in the English Longitudinal Study of Ageing (ELSA) and national ONS data. The synthesised trends were projected to 2029.

We modelled undiscounted health and social care costs and quality adjusted life years (QALYs) for 2019–2029 under two scenarios:

1. Basecase – age-specific CVD incidence continue to decline, following the long-term trends;
2. Age-specific CVD incidence do not decline after 2006, following recent trends.

Healthcare costs were based on hospital episode statistics (HES) data, matched to ELSA participants and calibrated to Office for Budget Responsibility healthcare cost estimates. Age-related social care costs were estimated using reported social care contact hours from ELSA combined with PSSRU unit costs. Utility weights for QALYs were from EQ-5D MEPS catalogue and Health Survey for England.

Results In the basecase scenario 1, median healthcare costs (2019 prices) are projected to increase by ~12% between 2019–2029, from £93.0bn to £104.6bn per year. Social care costs are projected to increase by ~27%, from £8.0bn to £10.2bn per year.

In the CVD flat-lining scenario 2, median healthcare costs increased by ~15% from £93.5bn in 2019 to £109.6bn in 2029, and social care costs increased by ~30% from £8.2bn in 2019 to £10.7bn in 2029.

When compared with scenario 2, the basecase scenario would generate ~200,000 additional QALYs/year by 2029, which, valued at UK Treasury rate, would be worth some £12 billion per year.

Conclusion This study projects future health and social care costs resulting from the recent slowdown in CVD incidence and mortality declines. We predict that social care costs will grow twice as fast as healthcare costs over the next decade, regardless of future improvements. Total funding policy therefore need to needs to be urgently addressed, which may prove politically challenging.

Acknowledgement This work was supported by MRC grant G0900535 (to JHM and MM). The authors would like to thank the Office for Budget Responsibility (OBR) and the University of Liverpool for their support.

Supporting information

Appendix A: Sensitivity analysis

Appendix B: Cost of social care

Appendix C: Sensitivity analysis of age-related social care costs

Appendix D: Data sources

Appendix E: Longitudinal effects of CVD on health and social care costs

Appendix F: Results of simulation scenarios

Appendix G: Supplementary tables

Appendix H: Supplementary figures

Appendix I: Supplementary methods

Appendix J: Supplementary references

Appendix K: Supplementary tables and figures

Appendix L: Supplementary methods and analyses

Appendix M: Supplementary data

Appendix N: Supplementary information

Appendix O: Supplementary material

Appendix P: Supplementary information

Appendix Q: Supplementary information

Appendix R: Supplementary information

Appendix S: Supplementary information

Appendix T: Supplementary information

Appendix U: Supplementary information

Appendix V: Supplementary information

Appendix W: Supplementary information

Appendix X: Supplementary information

Appendix Y: Supplementary information

Appendix Z: Supplementary information

References

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OP20 CARDIOVASCULAR DISEASE BIOMARKER PROFILES AMONG HARMFUL AND HAZARDOUS DRINKERS: A CROSS-SECTIONAL STUDY FROM NORTH WEST RUSSIA

Background Heavy alcohol drinking is increasingly recognized as a risk factor for cardiovascular disease (CVD), although the mechanisms underlying this are not well understood. Moderate alcohol consumption is associated with changes in many blood biomarkers of cardiometabolic risk. There are however few studies of the impact of harmful and hazardous drinking on...