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Summary of research

Key words: Cardiovascular Disease, Obesity, Active Commuting

BACKGROUND: The beneficial effects of physical activity on cardiovascular disease (CVD) outcomes are well understood. Among Western populations however, lifestyles have become increasingly sedentary. Active commuting (AC) (walking/cycling for some/all of the journey between home and work) is recommended by NICE as a way of incorporating greater levels of physical activity into daily life. However, while current evidence generally suggests an association between AC and good health, the strength of this evidence is varied and the nature of the relationship remains unclear.

AIM: This project will take a systematic, sequential approach to exploring the impact of AC on CVD. The outcomes can be split into 3 categories, reflecting their position on the causal pathway: (i) Biological antecedents of CVD (anthropometric measures including BMI and blood pressure); (ii) Diagnosed CVD conditions (hospital in-patient data, and primary care data to be requested when available); (iii) CVD mortality (death registry).

This research will meet UK Biobank's purpose of improving the prevention of illness and the promotion of health. This application requires data only (no samples) from the full cohort and repeat assessment subcohort.

OBJECTIVES: To assess: (i) cross-sectional associations between baseline AC status and baseline CVD antecedents and self-reported diagnosed CVD (for the whole cohort); (ii) associations between baseline AC and future risk of CVD diagnosis and death (for the whole cohort, using linked HES and mortality data); and (iii) whether uptake of AC is associated with a change in anthropometric CVD antecedents (for the repeat assessment subcohort only (n=20000)).