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Summary of research

Key words: Stroke, depression, socioeconomic status, deprivation

Application Lay Summary:

1a: There are important gaps in our understanding of how depression and socioeconomic status (SES) affect stroke risk. Compared to known vascular risk factors, the role of psychosocial and socioeconomic factors has been under-researched.

This research project aims to:

1. Determine the association between each of SES and depression and stroke incidence
2. Investigate interactions between age and gender in the associations between depression and stroke
3. Explore pre-specified hypothetical pathways by which SES may impact on stroke, including via lifestyle risk factors (e.g. smoking) and physiological factors (e.g. hypertension); determine how depression contributes to these pathways

1b: The growing burden of stroke and poor mental health worldwide is a major public health problem, and reduction in health inequalities remains a key challenge in improving the health of many nations. The proposed project is therefore highly health-related and in the public interest, with potential for informing stroke prevention strategies among those with poor mental health

and/or from lower socioeconomic groups, and directing subsequent research on the mechanisms by which depression and SES may impact the body's vascular system.

1c: This project will include data from both the UK Biobank and the New South Wales 45 And Up Study in Australia. The latter recruited participants of a similar age group to the UK Biobank, collected similar baseline data, and is linked to hospital and mortality data.

Survival analysis will be used to determine the associations between depression and SES and stroke incidence. Path analysis, which essentially involves performing simultaneous regression models, will be used to determine estimates of the direct and indirect effects of exposures on the outcome.

1d: The full cohort will be included in the analyses.

We would like to extend the outcome of interest beyond stroke (the current outcome), to also include other cardiovascular disease outcomes (such as myocardial infarction and heart failure), using the ICD 10 codes I00-I99.