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Application Number / Title: 14053 - Non-motor symptoms of Parkinson’s disease

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Keywords provided by the Applicant PI to describe the research project:
Parkinson’s disease, non-motor symptoms, prediction model

Application Lay Summary:
1a: Parkinson’s disease (PD) is a movement disorder, but patients suffer from other non-motor symptoms (NMS) (i.e. constipation and sleep disorders) many years before disease onset. The aim of this project is to see whether combining these NMS we can produce a useful and accurate method of identifying people at risk. In particular, we aim at: 1) identify subjects who have NMS; 2) study their profile; and 3) flag these subjects as potentially at increased risk of developing PD in order to follow them and collect further clinical data to see whether this possible early detection works.

1b: UK Biobank is in a unique position to provide data for this purpose. If a constellation of such symptoms is found to perform well enough this could ultimately be offered to individuals interested in knowing their risk, including for early intervention trials. Such work would contribute to the longer term goal of understanding the preventability of PD.

1c: A cross-sectional analysis of the association of proxies for known risk factors for PD and NMS will be conducted on the entire cohort (after exclusion of possible prevalent cases). We predict that these NMS will show a pattern commensurate with the epidemiology of PD i.e. more abnormalities in males than females and increasing with age, more common in non-smokers. We will also test the associations with socioeconomic status and rurality. We will initially look at symptoms in isolation but then derive a NMS score that may have more power to detect associations

1d: The cross sectional analysis will be carried out in the full cohort