



Application number/Title: 9188 - Associations between neighbourhood takeaway food environments, consumption of takeaway food and body weight.

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Keywords provided by the Applicant PI to describe the research project:

Diet, Weight, Neighbourhood, Exposure, Policy, Prevention

Application Lay Summary:

1a: Neighbourhood access to food outlets may play an important role in determining diet and health. This research will examine the extent to which neighbourhood takeaway food outlet exposure is associated with consumption of energy dense takeaway foods, body weight (body mass index and percent body fat) and likelihood of overweight and obesity in UK adults. Obesity is a risk factor for multiple chronic diseases, including type 2 diabetes, heart disease and stroke. Further, we will test for evidence of effect-modification of this relationship by sex, income, education, and genetic predisposition to obesity and disinhibited eating (developed from genotypic data).

1b: Mitigating the obesity epidemic is a UK public health priority. Governmental nutrition and health policies increasingly suggest that unhealthy neighbourhood takeaway food environments could be modified to promote healthier eating and improve health. However, the evidence-base to support such interventions remains weak. Through developing a better understanding of if and how food environments influence behaviour and health, this research will contribute to the UK obesity prevention strategy. As obesity is a risk factor for multiple chronic diseases, including type 2 diabetes, coronary heart disease and stroke, this research contributes to UK Biobank's prevention of serious disease aim.

1c: Using data for nearly 500,000 adults across England, I will use computerised mapping software (GIS) to capture exposure to takeaway food outlets in residential 'neighbourhoods' defined around individuals' home addresses.

Locations of food outlets will be obtained from Local Authorities. I will then relate this exposure to consumption of takeaway food (from dietary intake data) and body weight (measured BMI and percent body fat) outcomes. We will explore the nature of these neighbourhood food environment effects across key individual, social and biological/genetic groups (derived from UK Biobank genotypic data) using statistical analyses testing for evidence of effect-modification.

1d: Full cohort.