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Lay Abstract

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Ethnic Patterning of pathways to type 2 diabetes: multi-level analysis of UK patient records and derivation of a risk prediction algorithm

Ethnic patterning of type 2 diabetes mellitus is well known in the UK, as elsewhere, with 2-6 times increased risk among some minority groups compared to the majority population. There are also ethnic differences in the progression from 'pre-diabetes' to full diabetes, but there is currently less research in this area. The reasons for ethnic differences in diabetes are likely to be complex. However, increasing rates in home countries and higher relative risk among migrant groups when they move to new countries, compared to host populations, indicates there is value in identifying the role of environmental, social, healthcare and behavioural factors (e.g. diet and exercise) in these differences. Exploring relationships between these factors will help to design effective prevention and treatment strategies of benefit to all ethnic groups. The aim of the study is to analyse a range of factors and examine how they predict ethnic differences in the pathways from impaired glucose regulation (pre-diabetes) to diabetes and associated complications, using electronic patient records within the ResearchOne dataset. Based on the findings from these analyses, we will derive and test a new risk prediction tool for type 2 diabetes and the progression from pre-diabetes to diabetes, within and between ethnic groups.