

Written Evidence Submitted from Professor Roy Taylor and Diabetes UK (FWM0192)

Additional evidence following Select Committee on Health and Social Care meeting of 19 May 2026 - Professor Roy Taylor and Diabetes UK

In the UK, 12 million people, equivalent to 1 in 5 adults, are living with diabetes or pre-diabetes. It is estimated that 6.3 million people are living with prediabetes and a further 1.3 million are living with undiagnosed type 2 diabetes. The prevalence of type 2 diabetes has risen year on year in recent decades, with rates rising fastest in younger adults. The causes of type 2 diabetes are complex. Factors including age, weight, ethnicity, socio-economic status and genetics all contribute to someone's likelihood of developing the condition. Getting support to lose and maintain a healthy weight can help prevent the onset of type 2 diabetes, manage the condition and, for some, support remission.

The impact of stigma on diabetes care

8 in 10 people living with diabetes say they've faced negative attitudes because of their diabetes. This includes experiencing stigmatising attitudes in healthcare settings as well as from family and friends, colleagues, in public, and wider society. Stigma means that people with diabetes, whatever type they live with, are less likely to get the support they need. Diabetes UK will soon be sharing polling data on the number of people who've missed appointments due to stigma and can share this with the committee when available. Previous research has shown that many GPs and commissioners hold negative perceptions of type 2 diabetes, seeing it as a 'lifestyle choice'.

Economic aspects of T2D Path to Remission Programme (PTRP)

The Diabetes Remission Clinical Trial (DiRECT) was a 2 year randomised controlled trial followed by 3 years observation of routine follow up by a practice nurse. It included an evaluation by an independent health economists which found that the total cost of delivering the intervention over 2 years was £1411 per person (95% confidence interval £1308, £1511) (1). This included visits for research purposes and other costs which could be minimised. The total cost of delivery over 5 years was £1691 (95% CI: £1566, £1822) and the annual health care savings per year were estimated to be £480 per participant lower than costs associated with standard type 2 diabetes treatment (including medication and hospital admissions)

The main saving was in the halving of the number of serious adverse events (defined by need for hospital admission) (2). The event rate was 4.8 per vs 10.2 per 100 person years). It is likely that the true cost savings are greater as DiRECT was not designed with statistical power to detect differences in rates of cancer and heart disease and these aspects were not included in the formal economic analysis. Firstly, there were 8 cancers in those randomised to NICE-based care (exactly the number expected for people with T2D over 5 years) but only 1 in those randomised to weight loss. These numbers are too small to be analysed statistically but the difference is supported by decreased numbers of cancers in larger series after weight loss induced by bariatric surgery. A second area of underestimated saving may be in decreased rates of cardiovascular disease. The QRISK score (used to estimate cardiovascular risk over 10

years) decreased sharply in the weight loss group (3). Thirdly, there has been a sharp increase in cost of drugs prescribed for T2D as DiRECT was conducted between 2014 and 2019.

The cost saving (decreased food and alcohol expenditure) to the individual taking part in PTRP is around £1,100 over the one year of the programme (1). There was an indication that a degree of cost savings on food and alcohol continued after the 1 year programme.

Remote vs in person uptake of programme

The current service specification for the programme states that everyone who is referred should be offered a choice between remote or in person one to one sessions. Digital only delivery that does not include one to one sessions with a health coach is not permitted.

Choice is established as part of the programme delivery based on feedback from participants from an earlier version of the programme. People who took part in the programme were surveyed in 2022. The satisfaction rate for those who had been offered a choice on delivery was 87% compared with 61% for those not offered a choice.

The preferred delivery modes reported in 2022 were as follows:

- Choice is crucial (important to 84%).
- Hybrid delivery is most preferred (31%) for flexibility.
- Some prefer 1:1 face-to-face (24%).
- Group sessions appeal to some (12%) but can be intimidating; group size ideally 8-15.
- Remote options valued by shift workers; remote groups least preferred (4%).

Optimisation of programme

The impact of the programme could be increased by providing supportive follow up following the 12 month intervention. At present, there is no follow up and Primary Care practice is not geared up to provide appropriate care following the Pathway to Remission Programme. After the first year weight regain occurred (Figure). Average weight plateaued at 6 kg below starting level in the follow up of DiRECT but this could readily be improved as the follow up was in routine primary care without additional support. For the T2D PTR it would be feasible and cost effective to employ an extension to the NHS weight loss app to include a specific section on avoidance of weight regain with signposting to appropriate support if needed.

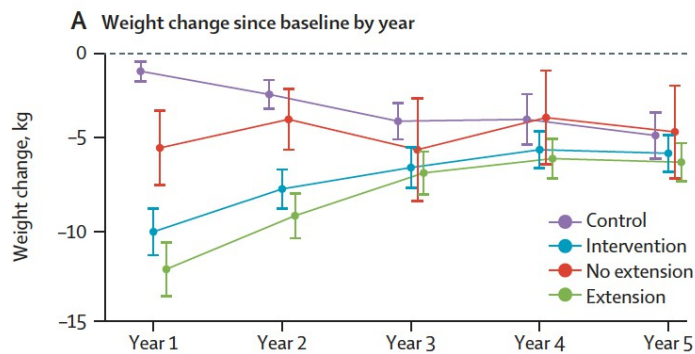


Figure 2A from 5 year DiRECT paper showing the average weight loss at one year onwards (2). The blue line showing data on the whole Intervention group is most relevant to consider.

Other potential optimisations include expanding the number of places funded on this programme and increasing awareness and uptake in areas of deprivation. Further work on improving understanding of why weight loss is considerably poorer in people of black African ethnicity, and extending the current limitations on who can take part in the programme (specifically: increasing the upper age limit above 65 years and widening the BMI range accepted into the programme from the current 27-65kg/m²).

The critical issue of T2D in young people

Over the past 30 years, the number of young adults (defined as under 40 years old) with T2D has increased markedly (4, 5). Younger-onset T2D is associated with much higher BMI at diagnosis than in older people. The differential in weight between groups with and without T2D decreases with increasing age such that it is only 5kg in those diagnosed after age 80 years (6). At the time of diagnosis of T2D, young women are almost 24kg heavier and young men almost 16kg heavier than those without diabetes (6). Young-onset T2D is associated with increased risk of developing eye, kidney, nerve and heart complications (7). A person diagnosed with T2D at age 30 loses 14 years of life expectancy compared with 6 years if diagnosed at age 50 (8). UK 2021-22 data show females make up a greater proportion of those with younger-onset T2D (61.3%). The implications for pregnancy are particularly severe, with (9):

- 15 times greater chance of having a baby weighing more than 4kg, with potential major long term health issues for the mother;
- 5 times greater chance of still birth (2.8 cf. 0.5%);
- 4 times greater chance of stillbirth and death in the first week (1.8 cf. 0.4%).

The impact of the rapid progression of complications in younger-onset T2D upon the future economically active population will be profound (4). Increased taxation on sugar sweetened beverages has decreased purchases of these nutrition-poor, high-calorie products with a decreased rate of obesity in children and adolescents (10), but this is a relatively small step in controlling the personal harm and societal disbenefits associated with the current food environment.

Value of PTRP approach for associated conditions

Cancer. In the 5 year follow up of DiRECT there were 8 cancers in the control group treated by NICE guidelines (exactly the number expected) but only one in the weight loss group. All these cancers were of types known to be associated with obesity. The magnitude of benefit is considerable but it should be noted that the numbers involved were small although the general effect is supported by analysis of large numbers following bariatric surgery (11).

Heart disease. Calculated risk of heart disease fell by around 50% to the level expected for age and weight by one year after intervention if remission of T2D was achieved (12, 13). Smaller but important decrease in risk was achieved merely by being randomised to the weight loss programme (2).

Sleep apnoea. This troublesome and often undiagnosed condition was improved by weight loss, with better quality of sleep (14). Individuals using positive pressure equipment to aid sleep reported being able to stop this treatment.

Benefit for joint replacement surgery. Heavier people have both increased chance of requiring knee or hip replacement and also are disadvantaged during the post-operative rehabilitation. In the North East of England sufficient numbers of the population underwent successful weight loss (mainly after low calorie diets) to be able to demonstrate a two thirds decrease in admissions to intensive care, decreased duration of post-operative stay in hospital and halving of all complications after knee or hip replacement (15).

Impact of the Healthier You Programmes

The clinical leadership within NHSE that has underpinned the success of the PTRP has been replicated for other areas. Currently commissioning is underway for a suite of clinically and economically beneficial programmes grouped together as the 'Healthier You' interventions.

These programmes comprise:

- Type 2 Diabetes Path to Remission Programme
- Diabetes Prevention Programme (offers a 9 month, personalised support package with practical tools and advice on healthy eating and behaviours change for people with prediabetes)
- Behavioural Support for Obesity Prescribing (a 9 month support package for individuals prescribed GLP-1 medications for weight loss via primary care)
- Long Term conditions Prevention Programme (which is being piloted to offer support for individuals diagnosed with hypertension)

The Diabetes Prevention Programme has been very successful in helping people diagnosed as having pre-diabetes avoid progression to type 2 diabetes. The rate of development of diabetes was halved (16).

The Behavioural Support for Obesity Prescribing programme will provide dietary and activity advice for people receiving appetite suppressant drugs in order to achieve the level of benefit demonstrated in the intensive support studies developed by pharmaceutical companies. If the drugs alone are prescribed the weight loss achieved in the real world of approximately half that in the structured research studies (17, 18).

The Long Term Conditions Prevention Programme addresses the wide range of weight-related conditions which will benefit from weight loss, with expected impact both upon absence from work and upon personal health. Outcome data from the latter two programmes are not yet available.

Support for the Healthier You Programmes

Despite the expansion of the programmes and the current commissioning underway, there is uncertainty around how they will be managed in future. The clinical leadership and networks that have fostered the successful innovation need to be sustained within the changes to the NHS.

Government could further support the impact of these programmes by

- Speeding up the rollout of weight loss medication to those who are eligible under NICE guidance
- Increasing early identification of people at high risk of type 2 diabetes via expanding NHS health checks to younger people in communities at higher risk of type 2 diabetes.

Further details on application of the Personal Fat Threshold concept

The hypothesis that people with T2D but normal BMI might achieve remission by dietary weight loss () derived from observation from the first two studies of dietary remission. These studies observed that the metabolic mechanisms causing T2D were reversed in exactly the same manner whether the BMI was at the lower or the higher end of the range studied (27-45 kg/m²). The concept was tested by studying people with T2D and BMI 21-27kg/m² during dietary weight loss. The underlying mechanisms were also identical, and 70% of this group achieved remission of T2D (). Importantly, these people with normal BMI could be identified in advance by measuring waist circumference. MRI scans revealed the extent of fat accumulation in the abdomen which accounted for this excess adiposity undetected by BMI. It can now be simply stated that a person with T2D is heavier than they personally can tolerate. The value in de-stigmatising T2D is immense, and explanation to patients in this BMI range is met with huge relief. It is not their fault, but merely an expression of genetic susceptibility.

Wider recognition of the concept would be of great importance in drawing attention to all the diseases associated with obesity which will also occur disproportionately in people with larger waist circumference. It is usually overlooked that the current 'epidemic' of obesity is not the fault of evidently heavy people but represents a frame

shift upwards of the weights of almost all individuals. The population average (median) BMI used to be 24kg/m² in but is now 28kg/m²).

Although population-wide action to prevent the continuing increase in population weight was considered in the initial phase of the Select Committee's enquiry it would be remiss not to comment that prevention is better than cure. Taxation on food composition designed to bring about reformulation in the same way as the successful Sugar Sweetened Beverage Tax is the only feasible way of changing the food environment. The total cost to the taxpayer of overweight in the UK is £93 billion annually (2023 data; Institute of Fiscal Studies).

Diabetes UK are soon to launch a new Grand Research Challenge into Precision prevention. This will look at how to personalise interventions further with the aim of finding more effective and economical ways of preventing type 2 diabetes.

Important note about safety of weight loss

Bringing about rapid dietary-induced weight loss has long been regarded as dangerous by some dietitians and nutritionists - despite the lack of evidence. In both the 5 year follow up of DiRECT and in the large Path to Remission Programme no adverse effects of concern were detected. However, currently there is much concern and publications about loss of muscle mass during weight loss. This is a seriously mistaken concept which arises from use of the 'impedance meter' which can measure proportions of fat and water in the body. The loss of non-fat mass reflects water loss, but is commonly misinterpreted as muscle loss. Direct MRI measurement of muscle volume shows no or minimal change. The postural muscle are indeed likely to undergo very small decrease in volume due to physiological adaptation to carrying around a lower weight every day - the obverse of wearing a weighted vest for the same period of time. Assessment by independent psychologists have confirmed the increase in physical well-being and ability to move around following 15kg weight loss ().

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