

The DIAMOND study

Health Behaviours Team, BRC Diet & Obesity Theme

Dr Elizabeth Morris

What was your study about?

Recent research has shown that it may be possible to treat people with type 2 diabetes with an intensive weight loss programme, known as a total diet replacement (TDR) programme, which provides about 800 calories per day in the form of commercially produced soups, shakes and bars, but little or no 'real' food. However, these types of programme are not routinely available in the NHS, so few people are being offered them. Instead, most people with diabetes are given dietary advice by their GPs and diabetes nurses. Practitioners and patients have been asking whether or not the benefits of TDR programmes can be achieved with a low-energy (low calorie) food-based diet instead. But before we can truly answer that, we needed to develop a programme to provide people with dietary advice and support. Then we needed to know if it was possible to train GPs and practice nurses to deliver such a programme and for them to support people to achieve substantial weight loss. We conducted this 'feasibility study' to answer these questions and to help us decide whether we could run a bigger trial to test the effect of a low energy, food-based programme on health in the longer term. It is only after a big trial that we will be able to see if this programme is a good long-term treatment for type 2 diabetes, but the first step was to see if such a trial is possible.

How did you involve patients and/or the public?

It was GPs and patients who first approached us to ask if we could help to work out whether this sort of diet could be used for managing diabetes in GP surgeries and everyday life, which prompted the generation and prioritisation of our research questions and ultimately initiated our design and conduct of the DIAMOND feasibility study.

To help us understand what it is like to have type 2 diabetes, and what people want to find out when they see their doctor or nurse (in particular when talking about weight and diet), we set up discussion groups with people who had experience of living with diabetes, and with some people who had also tried a low-carbohydrate diet. One of our PPIE panel also joined the study team and was an active member of the trial management group throughout.

What was the impact of involving patients and/or the public?

The people in the discussion groups told us what they would want to know about what they can and can't eat on a diet, and suggested ways we could make the diet easier to follow – like showing what to look for on food labels in shops – or increase people's motivation to stick to the diet, by monitoring their blood glucose at home to track their progress. They also helped to make sure our study materials were understandable and clear, and could be used

by people with different baseline dietary patterns and preferences. These contributions directly helped us to recruit over target numbers of patients into the feasibility study, ahead of schedule, and retain them all to follow up at the end of the study, with good adherence to the intervention.

Our PPI representative on the study team made valuable contributions like helping us to decide what outcomes to measure and how to prioritise these, and suggesting questions we could ask in our patient interviews to understand what results were important to the people who took part. He has also remained involved in analysing and reporting the results and in discussing learning points from the feasibility study and priorities for a full scale trial moving forwards.

What were the challenges and how did you overcome these?

Diet and weight loss can be very personal topics to address, so it was important to make sure we listened to people with a range of views and experiences. We ran our discussion groups in diverse locations, and included people of different ages, genders, and cultural and ethnic backgrounds, as well as different dietary preferences. This helped us to make sure the study we designed and materials we produced were inclusive and relevant for a wide range of people with type 2 diabetes, representative of the people using UK primary care.

What advice do you have for other researchers considering patient and public involvement activities?

This experience has shown me how valuable meaningful PPI involvement from the initial stages of study design can be and how much it can contribute to the success and utility of a research project – and I would encourage other researchers considering PPI activities to incorporate meaningful PPI from early on in projects in the future.