A glimmer of hope?

This issue of the British Journal of Obesity describes some potentially exciting news from Public Health England (PHE) concerning the fight against obesity, alongside some encouraging clinical background. At the recent Diabetes UK conference in March, Simon Stevens, Chief Executive of the NHS, announced plans for a comprehensive NHS Diabetes Prevention Programme, based on the evidence compiled from the US DPP (Diabetes Prevention Program; DPP Research Group, 1999), as well as the Finnish Diabetes Prevention Study, the Da Qing trial and others, which clearly demonstrate that a high percentage of incident type 2 diabetes can be avoided by managing excess weight, although other factors are also important.

The National Obesity Forum, along with all physicians interested in managing obesity, its health burdens and inequalities, will welcome any initiative aimed at reducing levels of the condition, however cunningly it is disguised as diabetes prevention. This is excellent news, and exactly what we’ve been calling for over the last 15 years, given the inadequacies of the Quality and Outcomes Framework and the lack of resources for obesity management. Things could be about to change. The two expressions – “obesity management” and “diabetes prevention” – are, to all intents and purposes, synonymous, but of course the latter is more palatable to politicians, the general public and the Daily Mail.

Simon Stevens said, “It’s time for the NHS to start practising what we preach. The NHS already spends an estimated £10 billion a year on potentially avoidable illnesses, and the human toll is more than 100 amputations a week and around 20,000 early deaths every year. Yet for over a decade we’ve known that obesity prevention cuts diabetes and saves lives. If these results were from a pill we’d doubtless be popping it, but instead this programme succeeds by supporting people to lose weight, exercise and eat better” (Diabetes UK, 2015).

Diabetes costs the NHS more than £1 000 000 per hour, around 70% of which is spent on managing the complications. It is a leading cause of preventable sight loss in people of working age and is a major contributor to kidney failure, heart attack and stroke. There are around 5 million people in England alone at high risk of developing type 2 diabetes. However, there is evidence that many cases are preventable and that behavioural interventions can significantly reduce the risk of developing the condition. The NHS Diabetes Prevention Programme aims to identify those at high risk and refer them into an evidence-based behavioural intervention to help them reduce that risk (NHS England, 2015).

The problem with a national DPP was always going to be the cost of rolling it out; the trials upon which it is based included extremely intensive lifestyle interventions which, inevitably, were expensive, and it is often said that to roll the programme out across the UK population would have prohibitive costs. However, if the DPP intervention is modelled over a lifetime, with the assumption that the interventions are instituted continuously until participants die and that the outcome will remain the same, as occurred during the 2.8 years of the DPP observation (Ratner, 2006), lifetime costs of treatment with intensive lifestyle intervention are only $1036 (£687) more than placebo ($51,607 vs. $50,571 [£34,212 vs. £33,525]; Herman et al, 2005).

Furthermore, in this edition of the BJO, Anita Bowes and colleagues provide good news, hinting that weight loss and diabetes prevention can be undertaken at a fraction of the cost of the original studies by drastically cutting the time spent with each individual patient, incorporating group sessions and pre-existing exercise programmes to provide diet and lifestyle input. This trial – which could be known as “DPP Lite” – makes the proposed NHS programme look more financially viable, and therefore more feasible for Government coffers, although only time will tell whether it will ever see the light of day.

The study by Bowes et al (see page 149) had some important and beneficial results: 10.6% weight loss is excellent, alongside impressive blood pressure reductions and improvements in HbA1c. However, the show isn’t over till the fat lady sings; the research team need to build upon their initial successful pilot study to provide more substantial evidence of success.
Specifically, numbers were small, understandably for a pilot study, but this gives too low a statistical power to judge conversion rates to diabetes, and fasting blood glucose inclusion criteria started very low at 5.5 mmol/L, a level that frequently would not be expected to progress to overt diabetes. Long-term maintenance is taken into account but somewhat glossed over. An outcome missing here, and which is generally ignored in trials such as Counterweight and even Look AHEAD (Action for Health In Diabetes), is the number of obese individuals identified and enrolled into weight loss programmes, who are transformed from anonymous obese individuals and have their general health well managed for the first time.

Given the degree of weight loss, it is intriguing to extrapolate as to what additional effect pharmacotherapy and surgery would have in inducing weight loss and preventing diabetes. Both treatment modalities are poised at the crossroads. It is possible that two novel weight-lowering agents, Saxenda (liraglutide; Novo Nordisk, Bagsvaerd, Denmark) and Mysimba (naltrexone/bupropion; Orexigen Therapeutics, San Diego, CA, USA), might become available within the next 12 months, both having recently been approved by the European Medicines Agency, substantially increasing drug therapy options. The availability of surgery and Tier 3 weight management services, however, is under severe threat with the return of jurisdiction over commissioning to Clinical Commissioning Groups rather than NHS England, as has previously been the case (see page 126). It would be a travesty if pharmaco-therapeutic or surgical interventions were compromised by the intransigence of authorising bodies, whilst the NHS, NHS England, the Department of Health and PHE were all calling out louder than ever for enhanced obesity management to prevent type 2 diabetes.