

## The Public Health Practice Evaluation Scheme (PHPES)

Addressing the challenges faced by 'front line' practitioners

# The Community-based Prevention of Diabetes (ComPoD) trial of a voluntary sector-led programme



The ComPoD trial was funded to provide robust evidence on the effectiveness of a 'real-world' diabetes prevention programme in the UK.

### Background

Diabetes is a serious, expensive and growing public health problem. It currently accounts for around 10% of NHS spending (Diabetes UK, 2013). If recent trends continue, it is predicted that within 25 years one in 10 people will have diabetes, around 90% of these type 2 diabetes (IDF, 2015).

European (Tuomilehto et al, 2010) and UK guidance (NICE, 2012) recommends intensive lifestyle interventions to prevent the onset of type 2 diabetes in people with raised blood glucose levels ("pre-diabetes") who are at high risk of developing the condition.

### Our practitioner partners

The PHPES scheme enables people working in public health, who are introducing innovative initiatives aimed at improving health, to work in partnership with NIHR SPHR to conduct rigorous evaluations of their cost-effectiveness.

For the ComPoD study, NIHR SPHR researchers worked with 2 voluntary sector organisations:



Westbank ([www.westbank.org.uk](http://www.westbank.org.uk)), based near Exeter, and Health Exchange ([www.health-exchange.co.uk](http://www.health-exchange.co.uk)) in Birmingham.



They received Big Lottery funding to deliver a diabetes prevention programme in their local areas and are now involved in delivering the national programme.

***"This evaluation by NIHR SPHR will provide robust evidence of our effectiveness and inform our learning so that we can improve the programme"***

*Jaine Keable, Head of Health & Wellbeing, Westbank*

Research studies in other countries have demonstrated that programmes which support people to achieve modest weight loss through changes in diet and physical activity can prevent or delay the development of type 2 diabetes in people at high risk.

On the basis of this research, in March 2015 the NHS, Public Health England and Diabetes UK announced the launch of the Healthier You: NHS Diabetes Prevention Programme (NHS DPP) for England, with a first wave roll out during 2016. However, there is a lack of good quality information to inform this on how well diabetes prevention programmes work, whether they represent good value for money and the best way to implement them in 'real-world' settings, particularly in the UK. Findings from the ComPoD study go some way towards addressing this gap.

They indicate the extent to which an existing community-based diabetes prevention programme in England was able to support changes in line with those observed in programmes delivered as part of research studies in other countries.

## Key issues

- The ComPoD trial ([www.isrctn.com/ISRCTN70221670](http://www.isrctn.com/ISRCTN70221670)) evaluated the effectiveness of an existing community-based diabetes prevention programme being delivered by voluntary sector providers.
- It aimed to provide robust evidence on the impact of a diabetes prevention intervention in a UK real world setting.

## Key research questions

1. Is the Living Well, Taking Control (LWTC) diabetes prevention programme superior to usual care in promoting weight loss (primary outcome), modifying other diabetes risk factors (e.g. HbA1c, physical activity) and improving self-reported outcomes in adults at risk of type 2 diabetes at 6 months?
2. What key provider and participant characteristics moderate any effects of the programme at 6 months?
3. To what extent are any changes in outcomes amongst participants at 6 months maintained up to 12 months?

## Method

**Design:** 6 month randomised, waiting list controlled trial across two sites (Exeter, Birmingham areas), with 12 month observational follow up of intervention group participants only. Participants were randomised to receive the LWTC programme immediately (intervention group) or after 6 months (waiting list control group).

**Sample:** Between Nov 2014 and Jun 2015 the study met the target sample size by recruiting 314 adults aged  $\leq 75$  years via GP practices. Participants were at high risk of type 2 diabetes due to a GP record of a recent blood glucose test in the 'pre-diabetes' range and BMI  $>25\text{kg/m}^2$ .

**Intervention:** The LWTC programme structure, content and delivery were designed to be adherent with NICE guidance. The programme comprised an initial four 2-hour group sessions held weekly in local venues, led by trained lifestyle coaches, followed by 3-monthly individual contacts plus attendance at 5+ chosen classes/activities up to 12 months.

**Outcomes:** Researchers assessed changes in objectively-measured weight (primary outcome), physical activity (via accelerometers), blood glucose (HbA1c), blood pressure, and self-reported diet, health and well-being.

### About NIHR SPHR

The NIHR SPHR aims to build a high quality evidence base for cost-effective public health practices. We work with local practitioners and members of the public, carrying out a wide range of research projects and programmes with a school wide focus on alcohol, ageing well and health inequalities

## Key findings and learnings for practice

- 10% of the target population were recruited, a further 4% referred to the programme outside the trial (14% uptake).
- There was good representation of men and ethnic minorities in the recruited sample comprising mainly older, obese adults with long term conditions from areas with above average deprivation levels.
- Only 28% had HbA1c in the pre-diabetes range when tested at baseline using point-of-care test machines.
- The LWTC programme had significant but modest effects on weight-related outcomes (in line with prior reviews), diet and health status at 6 months but limited effects on other risk factors (HbA1c, physical activity).
- Effects were largely consistent across each site/provider and population subgroups at 6 months, and maintained but not improved at 12 months.
- There were some issues with programme delivery and attendance which suggest areas for improvement.

## Public involvement

Two ex-programme participants served on the ComPoD Trial Steering Committee which provided study oversight. Two larger Public & Patient Involvement meetings in March 2015 and October 2016 informed study conduct and write-up.

## What next?

Write up and modelling of cost-effectiveness are ongoing.

## References/resources

See: [www.england.nhs.uk/ourwork/qual-clin-lead/diabetes-prevention/](http://www.england.nhs.uk/ourwork/qual-clin-lead/diabetes-prevention/); [www.nice.org.uk/guidance/ph38](http://www.nice.org.uk/guidance/ph38) and contact below.

## SPHR Contact/Find out more

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***The ComPoD study showed the Living Well, Taking Control Programme had significant, but modest, effects on weight-related outcomes, diet and health status and identified areas for improvement in the NHS Diabetes Prevention Programme***

This project was funded by the NIHR School for Public Health Research (SPHR) Public Health Practice Evaluation Scheme (PHPES).

### About PHPES

PHPES projects are:

- generated by front line practitioners,
- designed to provide transferable, robust evidence on the impact of local practice for local practitioners,
- developed and delivered in collaboration with NIHR SPHR academics building evaluative capacity in public health practice.