Evaluation of the ‘Living Well, Taking Control’ Community-based Prevention and Management of Type 2 Diabetes Programme: a Study Protocol and Presentation of Preliminary Findings

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Aims of the presentation

• Demonstrate the use of different evaluation methods in a type 2 diabetes community projects setting.

• Provide preliminary findings from the evaluation of ‘Living Well, Taking Control’ programme.
The ‘Living Well, Taking Control’ programme
The LWTC programme

• LWTC is a £1.2 million programme funded by the Big Lottery.

• Delivered by 4 community and voluntary sector partner agencies in the North East, West Midlands, and Devon.

• Focused on the prevention and management of type 2 diabetes in non-clinical community settings.

• Runs from October 2013 to June 2015.

• Works with individuals with ‘pre-diabetes’ and newly-diagnosed type 2 diabetes.
The LWTC programme

The programme focuses on 5 healthy lifestyle issues:
1. Understanding your body and your condition
2. Healthy Diet
3. Regular physical activity
4. Positive mental health & well-being
5. Achieve and maintain a healthy weight

• 4-6 weekly group-based education sessions
• Additional five hours from menu of optional sessions
• Support and follow-up sessions for 12 months
Evaluation of the LWTC programme

1. Service evaluation – conducted by UWE
   • Economic evaluation (SROI)
   • Pre-post evaluation with all participants
   • Process evaluation (fidelity of implementation)

2. Randomised controlled trial – led by University of Exeter, collaborating with UWE and the University of Birmingham.
   • Economic evaluation (cost-effectiveness analysis and long-term modelling)
   • Pre-post evaluation in a sample of pre-diabetes participants and waiting list control group.
Economic evaluation

Social Return on Investment (SROI):
• Framework for measuring and accounting for a much broader concept of value.
• Measures change in ways relevant to the people or organisations that experience or contribute to it.

Methods - Six stages:
1. Establishing scope and identifying key stakeholders.
3. Evidencing outcomes and giving them a value.
4. Establishing impact.
5. Calculating the SROI.
6. Reporting, using and embedding.

• Focus groups, interviews, and questionnaires with stakeholders.
• Analysis of financial data.
Example:

- **Stakeholder** – beneficiaries with a BMI of 25 or higher.
- **Output** – 190 people participating in LWTC
- **Outcome** - Became more aware of the amount of food being eaten. Stopped snacking between meals and had small meal portions. Ate less food and lost weight.
- **Indicator** - Number of participants achieving at least a 5% weight loss at 6 months.
- **Source of date** – 6 month review data.
- **How much change?** – Estimated 64 achieving indicator by 6 months
- **Proxy** used to value the change – 6 months membership at a slimming club
- **What is the value of the change?** - £125.48
Pre-post evaluation

• Biometric measures (weight, height, BMI, waist circumference, BP, HbA1c).

• Questionnaire (demographics, physical activity, diet, well-being, depression, changes in health, course satisfaction).

• Accelerometer-measured physical activity data in a subsample of participants.

• All measures collected by the partners at baseline, six months, and twelve months.
Process evaluation

Fidelity of implementation:
• Understanding what the programme looks like.
• Describe the intervention components, understand how it is implemented, and the mechanisms by which it creates change.

Methods:
• Audio recordings of programme sessions
• Interviews and focus groups with participants and facilitators.
Randomised Controlled Trial

• Funded by the NIHR School for Public Health Research
• Participants with pre-diabetes from Exeter and Birmingham
• 312 participants (156 intervention, 156 wait-list control)
• Recruited October 2014 to February 2015.

• RCTs are considered the most powerful tool for evaluating effectiveness of interventions, but are expensive, and are sometimes not appropriate.

http://www.isrctn.com/ISRCTN70221670
Where we are at….

- Pre-post service evaluation – Questionnaire data and biometric measures for 681 participants at baseline, 123 at six-months, and 7 at 12-months (Dec 2014).
- Accelerometer data for a subsample of participants.
- SROI started in Oct 2014.
- Fidelity assessment started in Jan 2015.
- RCT – approximately 40 participants recruited into trial so far.
Preliminary results

Participant demographics:

• 223 participants with type 2 diabetes (32.8%), 448 with pre-diabetes (66.0%). (miss=10)

• 262 males (38.5%), 413 females (60.7%). (miss=6)

• Age ranged from 24-91 years old. (miss=16)

• 104 normal weight (16.5%), 226 overweight (35.8%), and 302 obese (47.8%). (miss=49)

• 233 retired (34.2%), 141 employed (20.7%), 91 unemployed (13.4%), 53 long-term sick or disabled (7.8%). (miss=93)

• 45 smokers (6.61%). (miss=157)

• 102 had some sort of disability (15%). (miss=54)
4-week course satisfaction

• Did the course benefit you? 98.8% yes (N=427).

• How much did you enjoy the course (scale 1-10)? Mean= 9.02 (N=424)

• Did the course meet your needs? 98.3% yes. (N=408)

• How much would you recommend this course to friends and family (scale 1-10)? Mean= 9.1. (N=132)
6-month follow-up results

- 123 participants have provided 6-month follow-up
- Mean weight loss = 2.1 kg (p<0.001) (N=121, miss=2)
- Mean BMI decrease = 0.79 kg/m² (p<0.001) (N=118, miss=5)
- Mean waist circumference decrease = 2.6 cm (p=0.04) (N=100, miss=23)
- Mean HbA1c decrease = 6.5 mmol (p<0.001) (N=93, miss=30)
- Increased physical activity (p=0.004) (N=60)
- Improved diet (p=0.04), increased consumption of fruit and vegetables (p=0.026) and high fibre foods (p=0.005) (N=91)
- Improved general health state (p=0.002) (N=91, miss=32)
- Reduction in pain and discomfort (p=0.01) (N=100, miss=23)
Complications

• GP referrals & recruitment
• NHS approvals
• Data collection (by partners)
• Four different partners
• Four different locations (SES, ethnicity etc.,)
• Multiple evaluation methods
• Eligibility
Any questions?