# Telephone Delivery of Diabetes Prevention Programmes

Sarah Cotterill<sup>1,2,3</sup>, Sarah Knowles<sup>1,2</sup>, Chris Bundy<sup>2,3</sup>, Michael Spence<sup>1</sup>, John Humphreys<sup>1</sup>, Nia Coupe<sup>1,2,3</sup> and Aneela McAvoy<sup>1</sup>

<sup>1</sup>NIHR CLAHRC Greater Manchester, <sup>2</sup>The University of Manchester and <sup>3</sup>Manchester Academic Health Science Centre

# **BACKGROUND**

The English NHS Diabetes Prevention Programme (NHS DPP) has been launched by NHS England, Public Health England and Diabetes UK. NHS DPP offers tailored personalised help to reduce diabetes risk including education on healthy eating and lifestyle, help to lose weight and physical activity programmes, using a face-to-face group-based delivery model. A national roll-out will lead to 100,000 places being available across all areas of England by 2020.

One of the NHS DPP demonstrator sites has adopted a telephone service, based loosely on motivational interviewing (MI). Motivational interviewing can be used to facilitate change in health related behaviours through a patient-centred approach based on negotiation and empathy. It includes techniques to elicit reasons for and barriers to health behaviour change.<sup>1</sup>

## **AIM**

Review the evidence for a DPP based on telephone delivery of motivational interviewing.

## **METHODS**

## Qualitative scoping interviews

Purposive sample of those involved in the conception, formation, management and delivery of the telephone service

11 key informants in one NHS DPP pathfinder site.

## Interview schedule

- Describe the telephone service (using TIDieR)<sup>2</sup>
- Identify the evidence the service is based on
- Identify documents for desk research

## Desk research.

Documents relevant to the local telephone service and the national NHS DPP.

#### Literature review - themes

- Evidence on telephone delivery of diabetes prevention services;
- Evidence on behaviour change techniques used in the telephone service;
- Extent to which telephone service follows the service delivery model indicated by NHS DPP.

# **RESULTS**

## Telephone intervention – description

Regular telephone calls from a trained non-clinical health advisor employed by NHS with limited access to electronic patient records.

Core elements of the service include educational messages, goal setting, action planning and motivational interviewing. The programme consists of 9 telephone calls, supplemented by educational materials sent by post:



#### **Introductory Phone Call**

#### Action Planning Call (30-40 mins)

NDH diagnosis Diabetes risk factors Identifying changes SMART action plan Weight loss targets

## 6 Telephone Calls (10-20 mins)

Scripts
Portion control
Weight loss
Increasing activity
Meal planning
Personalised to individual circumstances

#### Final Call (at 9 months)

Summarise progress Reminder of repeat blood tests Diabetes symptoms to watch for

## Telephone delivery.

International evidence on telephone delivery of lifestyle interventions to prevent diabetes is scarce, unclear and inconclusive.

	Face to Face: RCTs (PHE review) <sup>3</sup>	Face to Face: Before and After studies (PHE review) <sup>3</sup>	Pathfinder telephone service 2010 <sup>4</sup>
Weight loss 12-18 mths (kg)	1.57kg (0.86; 2.28) N=20 studies	2.46 (1.94; 2.99) N=18 studies	2.81 (1.20; 4.42) N=40
Fasting glucose fall 12-18 mths (mmol/l)	0.06 0;0.11) N=16 studies	0.09 (0.04; 0.14) N=11 studies	0.29 (0.07; 0.51) N=40
Mean (95% CI)			N= 55 participants

Table 1. Comparison of the pathfinder telephone intervention and national evidence for face to face services

## Motivational interviewing

Motivational interviewing should focus on selfdirected goals, which is potentially at odds with the directive elements of the telephone intervention.

It is uncertain whether telephone delivery of motivational interviewing is effective or not.

# Comparison with NHS DPP model.

NHS DPP Specification	Telephone DPP		
Structured intervention – diet and supervised exercise	Yes		
Behaviour change approach	Yes		
Face to face delivery in groups	No. Telephone delivery to individuals		
16 hours over 9 months	No. Up to 3 hours over 9 months. But contact is personal rather than in a group		

Table 2. Extent to which telephone service meets requirements of the NHS DPP model

## **CONCLUSIONS**

There is insufficient evidence to favour a face to face delivery of DPP over other delivery methods. Evaluation of the effect, content and delivery of DPPs in England is necessary, including remote methods such as telephone.

## **REFERENCES**

- 1. Prochaska & Velicer. 1997. The Transtheoretical Model of Health Behavior Change. American Journal of Health Promotion: 12(1) 38-48.
- 2. Hoffmann Glasziou Boutron et al. 2014. Better reporting of interventions: template for intervention description and replication (TIDieR) checklist and guide.
- **3. Ashra et al.** 2015. A systematic review and metaanalysis assessing the effectiveness of pragmatic lifestyle interventions for the prevention of type 2 diabetes mellitus in routine practice. Public Health England.
- 4. Savas, Grady, Cotterill, et al. 2015. Prioritising prevention: Implementation of IGT Care Call, a telephone based service for people at risk of developing type 2 diabetes. Primary care diabetes. 9:3-8
  Full report and further information: http://clahrc-

gm.nihr.ac.uk/our-work/exploiting-technologies/ national-diabetes-prevention-programme/

## **ACKNOWLEDGEMENTS**

This research was funded by Public Health England, Diabetes UK, NHS England and NIHR CLAHRC Greater Manchester

The National Institute for Health Research Collaboration for Leadership in Applied Health Research and Care (NIHR CLAHRC) Greater Manchester is a partnership between providers and commissioners from the NHS, industry, the third sector and the University of Manchester. We aim to improve the health of people in Greater Manchester and beyond through carrying out research and putting it into practice.

http://clahrc-gm.nihr.ac.uk