Preventing type 2 diabetes in primary care

Supporting lifestyle change in people with impaired glucose tolerance

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About the CLAHRC

The CLAHRC for Greater Manchester is a collaboration between the University of Manchester and 20 NHS Trusts across Greater Manchester. Their five year mission is to improve healthcare, reduce inequalities in health and support self-management for people with cardiovascular conditions (diabetes, heart disease, kidney disease and stroke). This poster describes the interim results of the CLAHRC diabetes implementation theme which works with NHS Bolton and NHS Salford to offer diabetes prevention for people at increased risk of developing type 2 diabetes in primary care.

The challenge

The CLAHRC worked in partnership with NHS Bolton and NHS Salford to improve quality of care for people with IGT. This was achieved by implementing evidence-based preventative lifestyle services, translating intensive programmes used in randomised controlled trials into primary care-based, real-world settings. Educational support, offered through a series of structured goal setting and action planning, provides people with enhanced understanding of their condition, empowering them to make choices about how they can make and sustain lifestyle changes that will reduce their risk of developing type 2 diabetes.

The background

There is strong evidence to suggest that without any lifestyle or medical intervention, approximately 50% of people with impaired glucose tolerance (IGT) will develop type 2 diabetes, accompanied by increased risk of cardiovascular disease and development of microvascular complications, within five to ten years[1,2]. Randomised controlled trials have shown that relatively modest lifestyle changes delay or prevent the onset of type 2 diabetes in people with IGT[3,4]. Lifestyle interventions have also been shown to be cost-effective, particularly when targeting those people with IGT who are at highest risk of developing type 2 diabetes[5].

The process

Two models of lifestyle support were tailored to local context and existing community services. The NHS Bolton service is face-to face delivered by health trainers. In NHS Salford the service is purely telephone based delivered by health advisors. Both programmes offer educational support over a period of six months and are evidence based[6]. Interim results for both services are now available. These include patient biomedical outcomes (e.g. fasting and 2 hour oral glucose tolerance test [OGTT] results; changes in weight, waist circumference, and Finnish Diabetes Risk Score[7,8]) complemented by focus group, interview and questionnaire data with attention on patient satisfaction.

	NHS Bolton	NHS Salford
Mean weight loss	2.64kg / 2.86% (n=93)	2.64kg / 2.79% (n=16)
Mean waist circumference reduction	2.42cm / 2.21% (n=74)	n/a
Mean FINDRISC reduction	0.94 points (n=101)	1.13 points (n=16)
Reduction in mean 2 hour glucose levels following OGTT	0.65 mmol/l (n=51)	2.03 mmol/l (n=16)
% reverting to normoglycemia following OGTT	51 (n=26)	75 (n=12)

Table 1: Clinical outcomes for NHS Bolton and NHS Salford

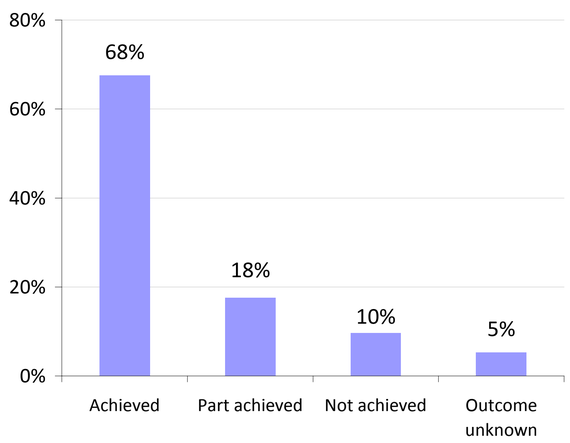

Figure 1: Achievement of overall patient-set goals across both projects

"Getting the one-to-one contact is very helpful."

"It [the relationship] is more personal."

"It [the service] is helpful, it educated me about my diet and also motivated me."

"I am more motivated to do it."

"I find it [the service] very encouraging and I am treated with respect."

"Informative. All the information I did not have before (…), could not find out (…) you did not know they have all the information."

"It is personal; she [the health trainer] listens, targets are not set for me but it is [about] agreeing them and making them realistic and then monitoring it [the goal achievement]."

"[You] want to succeed (…) [there] is someone who measures you; you do it for yourself but at the same time you do not want someone else to think you can not do it."

"The one thing I found helpful was to discuss issues [around diet and exercise] face-to-face from time to time (…)."

"I feel so much fitter now."

Figure 2: Feedback from NHS Bolton participants (focus group data)

"I told my health advisor, 'there is no chance I will lose weight. I haven't lost weight for over 20 years.' He just listened to me and almost 'manipulated' me into making me think what I could do. I have now lost 10lbs and have reduced my alcohol by half and hardly notice it! There was no pressure, no hammering home that I must lose weight. He (the health advisor) was so laid back. It's a fantastic service."

"It is an excellent scheme and if it helps reduce the chances of getting diabetes for anyone it is worth doing"

"The guidance, the support, the information and the motivation I received from Care Call has given me the confidence to know I can, and have, prevented myself from getting diabetes and all the complications that come with it, just by changing my lifestyle and looking after myself."

"I felt someone was really helping me, giving me more confidence."

"The respect you build up with your health advisor happens so quickly. There is no point in lying. If you have had a bad weekend, you tell him. He picks you up and gets you right back on track."

Figure 3: Feedback from NHS Salford participants (focus group and questionnaire data)

Results for both services

Clinical outcomes (Table 1)

- A mean weight loss of 2.85% / 2.64kg (n=108)
- A mean waist circumference reduction of 2.21% / 2.42cm (n=74)
- A mean FINDRISC reduction of 0.97 points (n=118)
- A mean reduction of repeat OGTT results of 0.84mmol/l. 57% (n=38) of those who agreed to a repeat OGTT reverted back to normal glucose levels

Behaviour change

- 85% (n=97) of participants achieved or partly achieved their overall, long-term lifestyle goal (Figure 1)
- 52% (35 out of 68) of inactive participants started doing regular physical activity. 74% (31 out of 42) of those not having fruit or vegetables on a daily basis have now increased their consumption (based on FINDRISC results)

Service user feedback (Figures 2 and 3)

Service users rated both services positively. They particularly highlighted the honest and respectful relationship they developed with their health advisor/health trainer and the individually tailored support received. The information and motivational support provided is highly valued and identified as a key factor in achieving and maintaining behaviour changes. Service users report improved wellbeing due to their lifestyle changes. Participants strongly expressed the view they would not have made these lifestyle modifications without the health advisor's/health trainer's motivational support.

Conclusion

Both face-to-face and telephone based services are effective in helping people at risk of developing type 2 diabetes make and maintain healthier lifestyle choices. Clinical outcome data suggests that improved lifestyle changes and improvements in weight and waist circumference are comparable to published studies. The mode of service delivery - telephone or the face-to-face– best to chose depends on local and contextual factors. Factors to consider include currently available primary care services; demographic characteristics of the local IGT population and operating service location (e.g. rural or an urban setting). Additional information, including cost-effectiveness, will be available once the formal evaluation has been completed. However, this interim data suggests service users and local health economies are benefiting from the services provided. Evaluation outcomes and service user feedback will enable further service enhancements to be made.

References:
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The **NIHR CLAHRC for Greater Manchester** is a collaboration of **Greater Manchester NHS Trusts** and the **University of Manchester**, and is part of the **National Institute of Health Research**.
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