IGT CARE-CALL: An Innovative approach to providing lifestyle education and behaviour change to prevent type 2 diabetes.

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PROJECT AIM:

To provide a convenient, accessible and tailored service that would motivate and enable people to make positive lifestyle behaviour changes to prevent or delay the onset of type 2 diabetes.

BACKGROUND:

In Salford, over 50% of the 220,000 population has a recorded BMI in the overweight or obese category. Obesity and inactivity are known risk factors for type 2 diabetes. Based on WHO criteria[1] one in seven adults has impaired glucose regulation (IGR). This translates as an estimate of 6964 individuals in Salford[2]. Without any intervention, this could increase Salford's diabetes registers by 3745 over the next 10 years.

METHODS:

Working collaboratively since 2010, NIHR CLAHRC for Greater Manchester and Salford Diabetes Team developed a six month, telephone based lifestyle and behaviour change intervention for people diagnosed with impaired glucose tolerance (IGT) with the aim of preventing them from developing type 2 diabetes. The referral pathway commenced at the seven GP practices that participated in the project.

Eligibility criteria required a diagnosis of IGT (confirmed by an Oral Glucose Tolerance Test within the last six months), FINDRISC calculation (a validated tool used to assess 10 year absolute risk for developing type 2 diabetes), current weight and BMI. Throughout the development of the pathway, focus groups and workshops were held to obtain practice and participant views to enable service improvements to be made. Delivered by a team of trained health advisors, the programme provided motivational support and evidence based education via a series of electronic scripts developed and maintained by the specialist diabetes team.

RESULTS:

55 Participants enrolled and completed the project.

75% (n=38) of participants achieved a weight loss and of these 28.8% achieved a loss of 5% or more (Figure 1).

Mean weight loss was 3.3kg (SD4.3) and mean BMI reduced by 1.1kg/m^2 (SD1.5). These reductions were statistically significant ($p<0.001$) (Table 1).

33 participants had a baseline BMI >30kg.m^2 and of these 70% reduced by an average of 2.1kg/m^2.

FINDRISC scores reduced by an average of 1.2 points (SD1.5)($p<0.001$).(Table 1).

Qualitative results demonstrated:

88% (n=36) participants reported increased understanding of their fasting and glucose tolerance results.

90% (n=37) felt they received relevant up to date advice on how to reduce their risk of developing type 2 diabetes.

78% (n=32) reported they definitely felt more confident about how to reduce their own risk of developing type 2 diabetes.

18 month follow-up data is being collated and demonstrates continued weight loss (Figure 2).

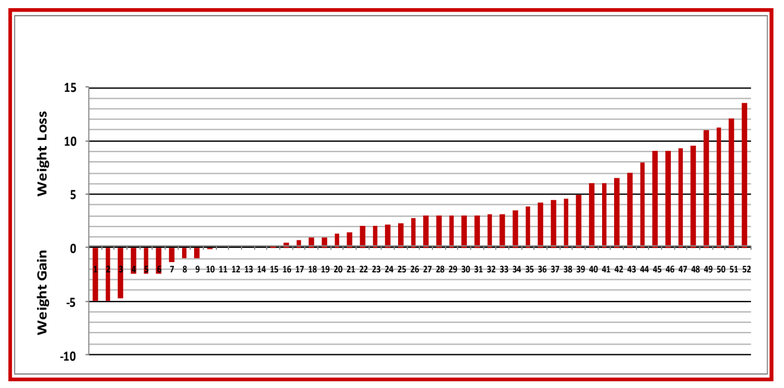


Figure 1: Ordered difference weight change

	Baseline	Post intervention	Difference	*P*
N	55	55		
BMI(kg/m^2): mean SD	32.4 (6.5)	31.0 (5.8) n=52	-1.1 (1.5)	P<0.001
Weight (kg): mean SD	90.0 (17.0)	86.7 (15.7)n=52	-3.3 (4.3)	P<0.001
Diabetes risk score (FINDRISC) mean (SD)	18.7 (3.6)	17.7 (3.5) n=51	-1.2 (1.5)	P<0.001
Diagnosis of IGT (%)	100	21.8 (n=12)		
Diagnosis of IFG (%)	0	9.1 (n=5)		
Normal	0	47.3 (n=26)		
Diagnosis of T2D (%)	0	9.1 (n=5)		
Inconclusive	0	3.6 (n=2)		
Not available	0	9.1 (n=5)		
Fasting Plasma glucose (mmol/l)(±SD)	6.1 (0.5)	5.9 (0.6) n=52	-0.3 (0.6)	P<0.001
OGTT 2-h plasma glucose (mmol/l) (±SD)	9.1 (0.9)	7.5 (2.5)	-1.6 (2.3)	P<0.001

Table 1: Pre and post intervention results

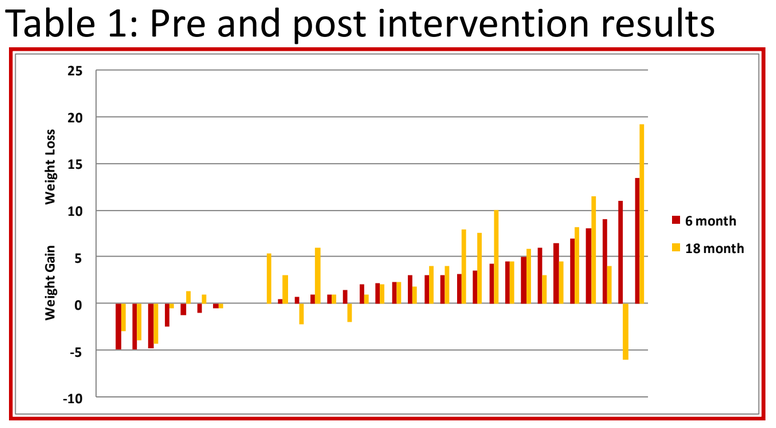
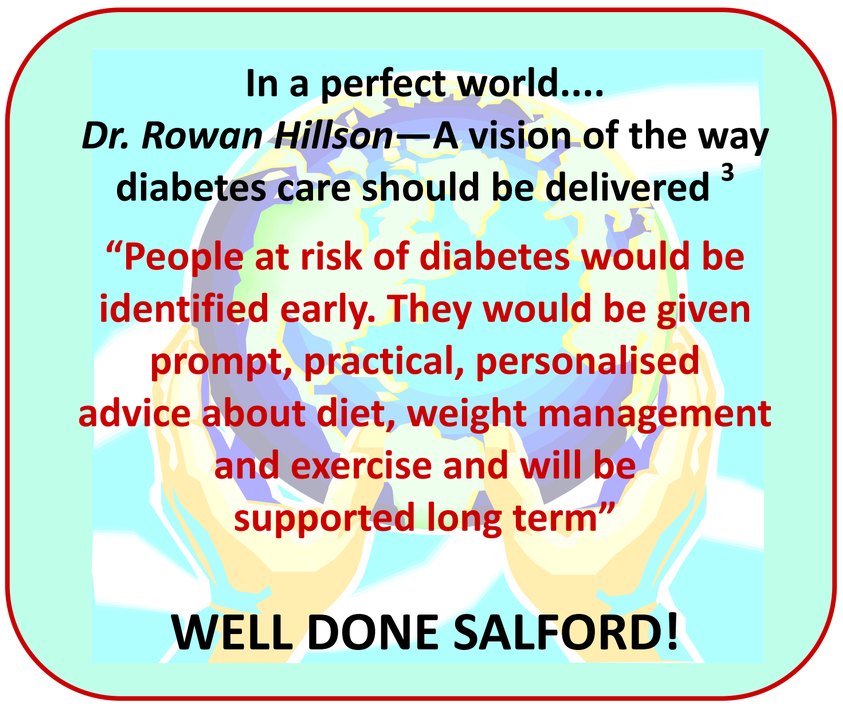


Figure 2: Individual weight change at 6 and 18 months

SUMMARY:

IGT Care-Call provides an individually tailored behavioural intervention programme which:

- Results in improved glucose tolerance and reduced progression to diabetes.
- Achieves significant weight loss by six months which is maintained at 18 month follow up.
- Is highly acceptable to both clients and providers.
- Is easily adapted to provide lifestyle advice to a wide variety of people and medical conditions.



ACHIEVEMENTS:

- Winner of the QiC Diabetes Best Type 2 Diabetes Prevention Initiative 2011.
- Finalist in the HSJ Patient Safety Award 2012.
- Highly Commended in the HSJ Care Integration Award-Diabetes Category 2012.
- NICE Guideline PH38 2012 use our project as an example of 'see this guidance in practice'.

References; 1) Santaguida PL, Balion C, Hunty D, et al., Diagnosis, prognosis and treatment of IGT and IFG. Evidence report/technology assessment (Summary) 2005 (128): 1-11. 2) Yorkshire and Humber public health observatory. Diabetes Community Health Profile—An Overview of NHS Salford , February 2012. 3) Hillson R.A vision of the way diabetes care should be delivered (2009), Diabetes & primary care Vol 11 No.2