

Type 2 Diabetes: Making Prevention a Priority

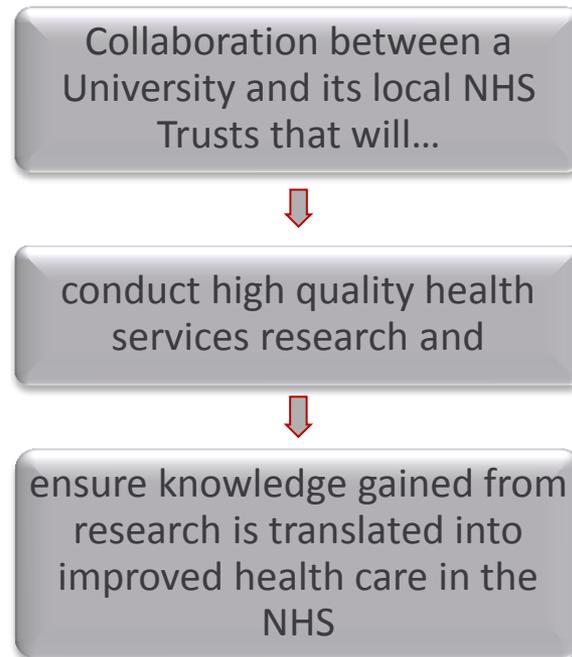
‘The IGT Care Call Project’

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Collaboration for
Leadership in
Appplied
Health
Research and
Care

Introduction



PACCTS (pro active call centre treatment support) randomised controlled trial conducted in Salford¹

Results demonstrated significant improvement in glycaemic control in people with type 2 diabetes (T2D)

Knowledge gained from RCT translated into practice

Development of Diabetes Care Call service to prevent T2D
'IGT Care Call project'.

1. Young, R.J.; Taylor, J.; Friede, T. et al (2005) Pro-active call centre treatment support (PACCTS) to improve Glucose Control in Type 2 diabetes. A randomised controlled trial. Diabetes Care 28: 278-282.

Why prevention should be a priority

- Incidence of type 2 diabetes is rising
- 1.4 million (1996); 3+million (2013) Predicted 5 million by 2025
 - More than 400 people diagnosed every day ²
- 10% of NHS budget is spent each year on diabetes care ³
 - £1 million per hour
 - £17,000 per minute ⁴

‘Diabetes costs threaten to bankrupt the NHS in the next generation’

2. Diabetes UK (2013)

3. State of the Nation (2012)

3. HexN, Bartlett C, Wright D et al (2012) Estimating the costs and future costs and future costs of type 1 and type 2 diabetes in the UK, including direct health costs and indirect societal and productivity costs .
Diabetic Medicine.. 29 (7) 855-862

4. Diabetes UK (2012). Diabetes in the UK 2012. Key Statistics on Diabetes

Impaired Glucose Tolerance (IGT)

- Asymptomatic condition and known precursor for T2D
- Approximately 50% of people with IGT will develop T2D, accompanied by increased risk of cardiovascular disease, in 5-10 years⁵
- People with BMI ≥ 25 kg/m² more likely to develop T2D.
As weight increases, risk increases ⁶
 - Salford estimates 7000 people may have IGT (50% BMI ≥ 25 kg/m²)
 - Potential to increase Salford's diabetes registers by 3500+ within 10 years.
- Strong evidence to demonstrate T2D can be prevented or delayed with lifestyle intervention^{7,8,9}

5. Lindstroem, J. et al (2008) Determinants for the effectiveness of lifestyle intervention in the Finnish Diabetes Prevention Study. Diabetes Care 31(5): 857-862

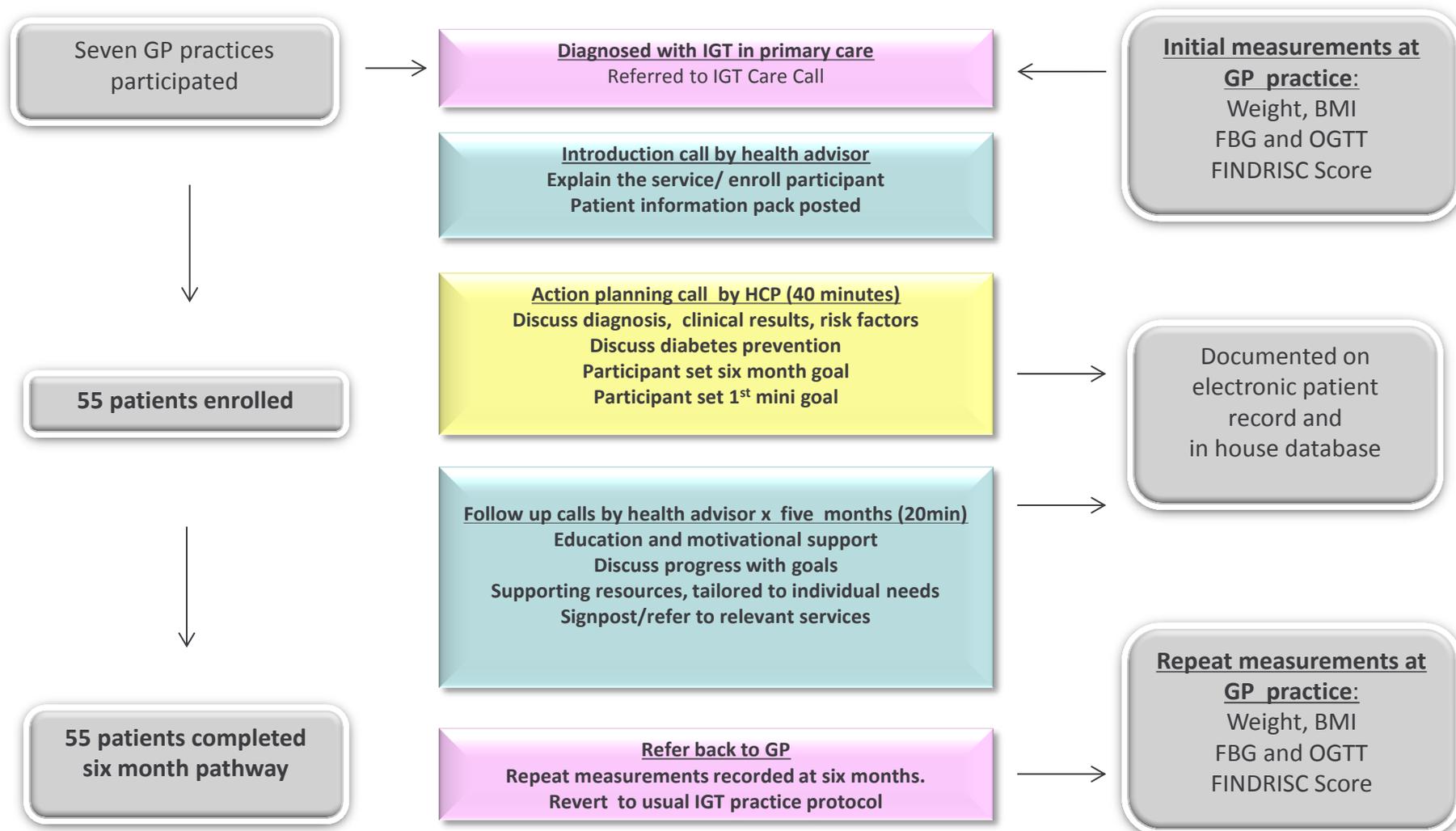
6. DECODE study group (2002). Age, BMI and glucose tolerance in 11 European population based surveys. Diabetic Medicine. 19:558-565

7. Pan, X.R. et al (1997) Effects of diet and exercise in preventing NIDDM in people with impaired glucose tolerance. The Da Qing IGT and Diabetes Study. Diabetes Care 20(4): 537-544.

8. Eriksson KF, Lindarde F(1991) Prevention of type 2 diabetes mellitus by diet and physical exercise. The 6 year Malmo feasibility study. Diabetologia 34: 891-8

9. Tuomilehto J, Lindstom J, Eriksson JG et al (2001) Prevention of type 2 diabetes by changes in lifestyle among subjects with IGT. New England J.Medicine. 344: 1343-1350

The IGT Care Call Pathway



Example: 'my six month lifestyle goal is to lose 1 stone'



Goal 1 Month 1



Goal 2 Month 2



Goal 3 Month 3



Goal 4 Month 4



Goal 5 Month 5

CC_Project_Data_Input_File.xls [Read-Only] [Compatibility Mode] - Microsoft Excel

IGR Care Call Project - Calls / Goals

1. Select Health Advisor from list: Sue Hawksworth | 2. Select Patient Identifier from list: Y197

Buttons: Save New Goal, Edit Existing Goal, Delete Goal

Blood results and measurements	Initial	End
Oral Glucose TT	9.6	
Fasting Blood Glucose	6.4	
Weight	93.9	
BMI	33	

Demographics	
Referred From	Salford Medical Pr
Postcode	M8 7DF
Gender	Female
Ethnicity	Asian
Age	47
Choice	
Date of Introduction call	06/12/2012
Choice of service	Total Telephone
Nurse	Henson

Goal / Call Details

Goal/Call: 9 | Appointments:

Date of Call: 08/05/2013 | Referrals:

Previous goal achieved?: Yes | Resources:

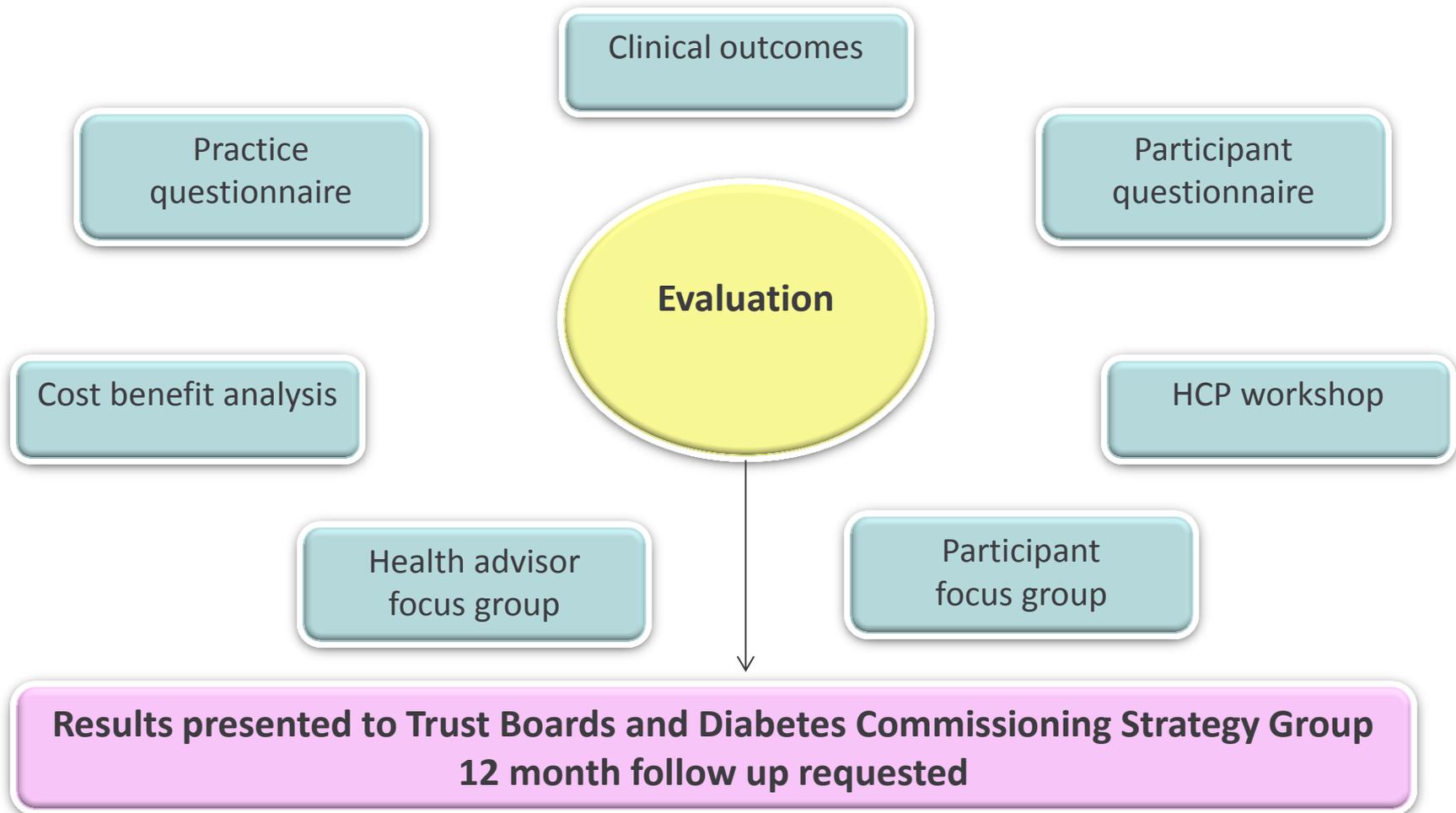
Has Goal been set?: Yes

Goal Type: Healthy Eating

Notes (Free Text):

Goal / Call	Date of Call	Previous goal achieved?	Has Goal been set?	Overall Goal Type	Overall Goal	Goal Type	Details of Goal	Appmnts	Referrals	Resources	Notes (Free Text)	Date Updated
AP 1	15/12/12		Yes	Weight Loss	Lose 1 stone in six months	Healthy Eating	stop mid-morning and afternoon snacks					02/05/13
2	07/01/13	Yes	Yes			Healthy Eating	swap fizzy drinks to no sugar cordial			✓	Healthy portion sizes	02/05/13
3	05/02/13	Yes	Yes			Healthy Eating	5 alcohol free days and use low calorie mixers			✓	Think before you drink	02/05/13
4	12/03/13	Partial	Yes			Activity Healthy	begin walking 3xweek (20min), consider local class		✓	✓	pedometer; HTrainer info -low confidence attending class	02/05/13
5	10/04/13	Yes	Yes			Healthy Eating	Attend beginner zumba class with HTrainer			✓	energy in = energy out	02/05/13
6	04/05/13	Yes	Yes			Healthy Eating	continue current activity, now attending zumba alone			✓	considering stopping smoking. Smoking cessation info sent	02/05/13

Six month evaluation



Changes in Fasting Blood Glucose

Category	Baseline		Changes	Difference	<i>P</i>	95% CI
Fasting blood glucose (mmol/l) mean (SD) (n=40)	6.2 (0.44)	6 months	5.8 (0.59)	0.4(0.60)	<0.0002	0.21-0.59
		18 months	5.9(0.62)	0.29(0.69)	0.01	0.07-0.51

67.5% (n=27) of participants reduced their fasting blood glucose at six months

62.5% (n=25) of participants reduced their fasting blood glucose at 18 months

Diagnoses at six and 18 months (n=40)

Category	Baseline	6 month	18 month	Diagnosis
Normal (fasting and 2 hr OGTT)	0	23(57.5%)	4(10%)	Normal
Normal fasting glucose	0	n/a	22(55%)	
Impaired fasting glucose	0	4(10%)	8(20%)	IGR
Impaired glucose tolerance	40(100%)	12(30%)	4(10%)	
Type 2 diabetes	0	1(2.5%)	2(5%)	T2D
Total	40	40	40	

Changes in Weight and BMI at six and 18 months

Category	Baseline	Stage	Changes	Difference	<i>P</i>	95% CI
Weight (kg): mean (SD) (n=38)	91(14.41)	6 months	88.11(14.93)	2.85(4.19)	0.0002	1.47-4.22
		18 months	88.15(15.76)	2.81(4.89)	<0.001	1.20-4.42

- At six months 73% (n=28) of participants had a confirmed average weight loss of 4.6kg (5.1% body weight) per person
- At 18 months 68% (n=26) of participants had a confirmed average weight loss of 5.1kg (5.7% body weight) per person.

Category	Baseline	Stage	Changes	Difference	<i>P</i>	95% CI
BMI (kg/m ²): mean (SD) (n=38)	32.02(5.15)	6 months	30.99 (5.34)	1.02(1.46)	<0.0001	0.54-1.50
		18 months	30.96(5.29)	1.06(1.74)	0.0006	0.49-1.63

Service user feedback at six months

Motivational:

- 93% (n=38) discussed goals regularly with their health advisor, stating this helped achievement of their overall goal

Educational:

- 90% (n=37) felt their health advisor definitely gave relevant, up to date advice on how to reduce their risk of developing T2D

Successful in changing behaviour:

- 78% (n=32) definitely felt more confident in reducing their own risk of developing T2D as a result of participating in the programme

Accessible:

- *“It really helped to be able to fit my telephone appointment around my work shifts. It fits in great with my lifestyle”*

Practice feedback

*“A very useful service to have available.
It offers a far greater level of advice and
support than we are able to offer in general
practice due to time constraints”*

*“Patients receive far more education and
input than they would have had from us
alone”*

*“Care Call offers long term support which
is better for both us and the patient as
sometimes messages need re-enforcing
to be effective”*

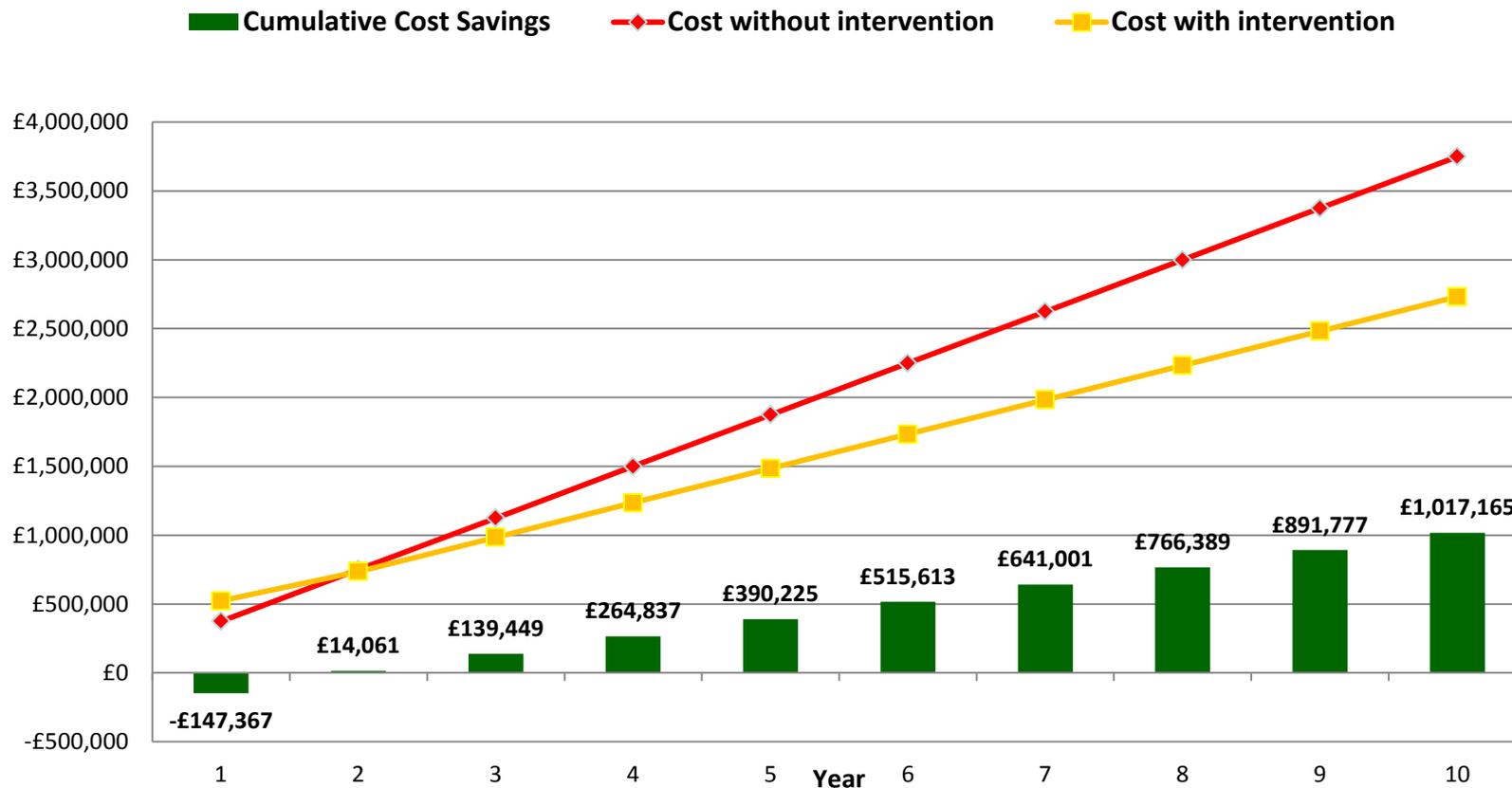
***“Feedback has
been good from
patients and I am
now able to
discuss their care
management with
them on a much
higher level of
understanding”***

Cost of service provision

Costs including 50% overheads			
Band 4 Health Advisor	Lifestyle support	£82.45	per participant
Band 7 Health Professional	Initial assessment and goal setting	£41.58	per participant
Telephone calls		£11.52	per participant
Total		£135.55	per participant for six month programme

Note: As the service was already established and staff trained in the relevant motivational interviewing approaches, cost of training has not been included.

Potential Cost Savings: Estimated Salford IGR population – primary care costs

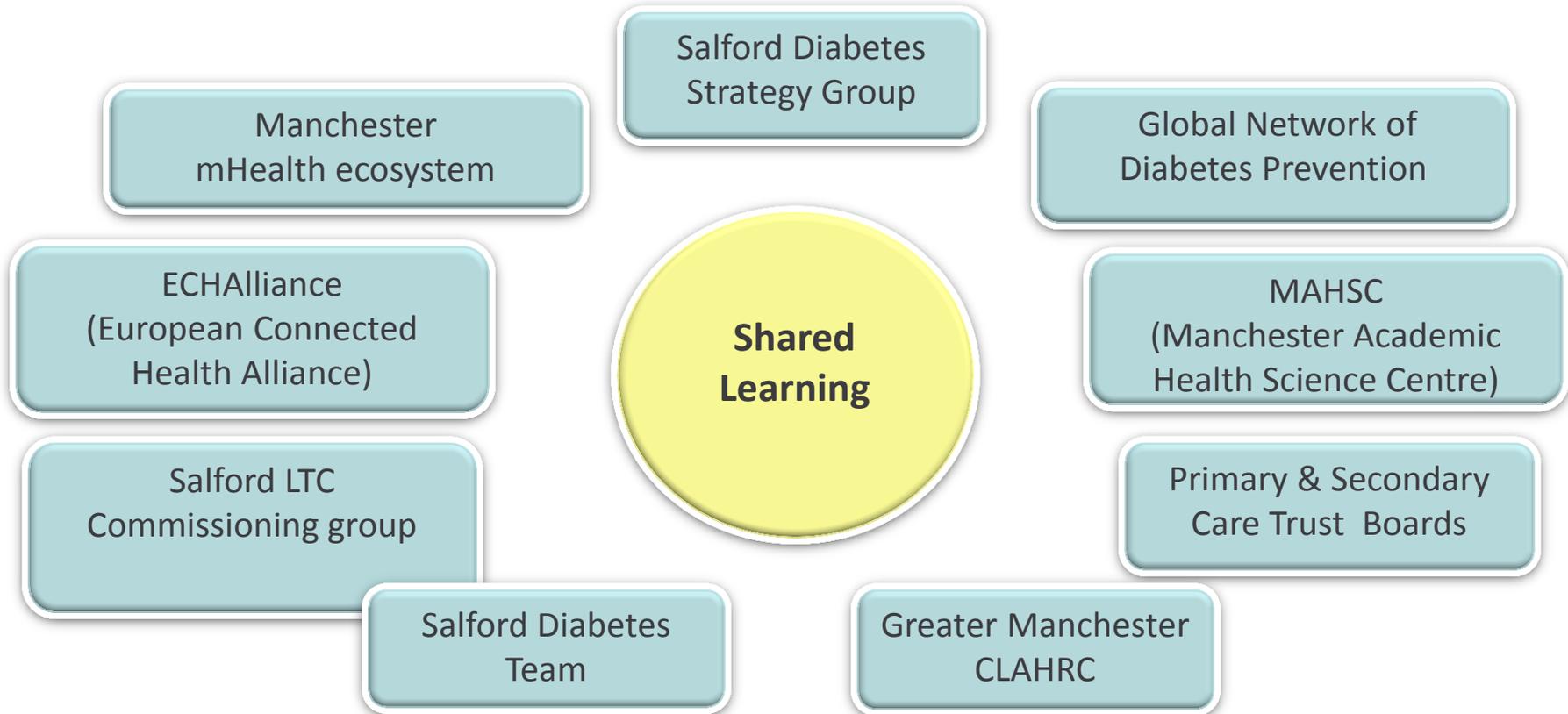


Phase 2: 'The IGR project'

- Non recurrent funding to enable roll out to all GPs
- Gain greater understanding of variations in approaches to read coding and recall systems in primary care
- Revised pathway in response to patient and health professional feedback
 - Impaired fasting glucose and/or impaired glucose tolerance
 - Choice of initial contact (group education/telephone)
 - Pathway extended to 12 months, 'step down' approach

Evaluation report completed December 2013

Partnership involvement



NICE PH38 (July 2012)

Preventing type 2 diabetes: Risk identification and interventions for individuals at high risk.

Summary: Making prevention a priority

- Dynamic, interactive, patient centred approach
- Increased understanding of IGT and diabetes prevention
- Facilitates long term positive behaviour changes
- Supplements care from GP/PN/Diabetes Team
- Refers to relevant services/resources
- Cost effective, convenient, reproducible model of care provision.

Thank you

All project reports available to download from:

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

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