

West Midlands Diabetes Mellitus Transformation and Sustainability Network

Wednesday 28th February
Manor Hotel Meriden

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Facilitator

Mr Paul Midgley

Director of NHS Insight, Wilmington Healthcare
Chair Patient Cabinet & Vice Chair Rushcliffe Active,
Rushcliffe CCG

Patient and Public Senate Member, East Midlands
Academic Health Science Network



Switch mobile phone off or to silent



Aims

- ❖ To facilitate effective communication between organisations and their leadership at regional level
- ❖ To bring decision makers together in order to:
 - Have a clearer appreciation of the key issues
 - Be better informed
 - Enable solutions through collaborative working
 - Develop a forum for communication between individuals and organisations
 - Share ideas and experiences
 - Share patient experiences, innovation, data, clinical and technological advances
- ❖ Outcomes:
 - Each of us leaves today with more knowledge and information than we arrived with
 - A sustainable and relevant model for effective communication within and outside our locality
 - Materials from the meeting will be published including identified actions from the table discussions

Objectives

- ❖ Know what the data says about your service's outcomes and costs vs comparators, then aim high in your plans to improve
- ❖ Learn from each other, network tirelessly, make new friends
- ❖ Steal then adapt the best ideas, particularly around prevention
- ❖ Focus on prevention and aim for effective management – what does that look like for patients?
- ❖ Provide parity of esteem – patients' mental health also affects diabetes control and outcomes
- ❖ Really make sure we get value throughout - sweat community assets as part of your strategy, engage all available resources not just NHS
- ❖ No 'them and us' – we will all rely on one combined STP programme budget for treatment and prevention of diabetes

STP aide memoire: Diabetes Prevention

Reduction in the projected growth in diabetes incidence

- Obesity & diabetes strategy – have one, make it comprehensive
- CCGs support GP practices to audit practice registers
- CCGs and LAs roll out National DPP
- LAs work with NHS Health Check providers to systematise risk assessment

Digital diabetes prevention announced....

NHS England, Public Health England and Diabetes UK have teamed up with leading companies from the tech sector as the battle against obesity and Type 2 diabetes goes digital.

More than 5,000 people are expected to benefit from a pilot project which will see five companies and eight areas of the country test drive a range of apps, gadgets, wristbands and other innovative digital products, which starts this month.

Users will be able to access health coaches and online support groups as well as set and monitor goals electronically. Some patients will also receive wearable technology to help them monitor activity levels and receive motivational messages and prompts, which is being made available on the NHS for the first time.

This online method of receiving support has the potential to have a similar impact to face-to-face interventions – helping bring down high blood sugar levels and in turn prevent or delay onset of Type 2 diabetes.

Heathier You: The NHS Diabetes Prevention Programme was officially launched last year to support people who are at high risk of developing Type 2 diabetes. Those referred on to the face-to-face programme get tailored, personalised help, this includes; education on lifestyle choices, advice on how to reduce weight through healthier eating and bespoke physical activity programmes, which together have been proven to reduce the risk of developing Type 2 diabetes.

This new pilot offers similar support, assistance and guidance but through the use of the new digital interventions.

Digital Diabetes Prevention support - Companies involved

Hitachi – The Smart Digital Diabetes Prevention solution helps people at risk to make a sustained lifestyle change to prevent the onset of Type 2 diabetes through personalised lifestyle goals. It combines an online portal – available through a smartphone or a desktop computer – which supports self-assessment, monitoring and management with a professional health advisor who provides regular advice and coaching.

Buddi Nujjer – A highly sensitive wristband which monitors the user's activity, sleep patterns and eating frequency is paired with a smartphone application. People have access to 22 educational sessions via the Nujjer app which targets diet, physical activity and mental resilience and users receive feedback on their personal data.

Liva Healthcare – A dedicated coach pairs up with the user for 12 months starting with a personal face-to-face meeting. Throughout the year the user and the coach have around 26 digital personal coaching sessions and the Liva platform and patient app supports the patient with smart goal setting and plans, lifestyle tracking, video communication and online peer to peer support to encourage participation and lasting lifestyle change.

Oviva – An eight-week intensive lifestyle intervention with an experienced dietitian providing personalised advice and support. One-to-one coaching is available through a combination of a smartphone app and phone calls and supported by videos and podcasts covering useful topics on how people can eat more healthily. After the initial eight weeks, there is ongoing access to a dietitian and monthly follow-up calls up to 12 months to ensure healthy habits are maintained.

OurPath – A six week mobile and desktop digital programme with structured education on healthy eating, sleep, exercise and stress management. Patients also get a set of smart weighing scales, a wearable activity tracker, access to a social support network and a health mentor. After six weeks, users move onto OurPath's 'Sustain' programme, which aims to keep people on track with their health goals for the long term. Individuals can continue to chat to their support group and health mentor, as well as access evidence-based education articles.

The eight pilot areas are:

- North East London sustainability and transformation partnership (STP)
- Somerset STP
- Humber Coast and Vale STP
- Bristol, North Somerset, South Gloucestershire STP
- Buckinghamshire, Oxfordshire and Berkshire STP
- Lancashire and South Cumbria STP
- Central London, West London, Hammersmith and Fulham, Hounslow and Ealing (CWHHE)
- Salford

<https://www.england.nhs.uk/diabetes/digital-innovations-to-support-diabetes-outcomes/nhs-diabetes-prevention-programme-digital-stream>

Table Facilitators

If your table has a “facilitator required” sign, please do appoint this role amongst yourselves to assist the smooth running of the discussions and maximise the effectiveness of your time

AGENDA

- 12.30 Registration, lunch and networking
- 13.15 Aims and Objectives: **Mr Paul Midgley**
- 13.25 Chair introduction: **Professor Ian Macdonald**
- 13.40 Public Health England update: **Dr Giri Rajanatnam**

Session One: Transforming Prevention of T2D

- 13.55 One talk, table discussion, panel Q+A
- 14.55 Break and networking
- 15.10 NICE Guidelines Overview: **Mr James Jagroo**

Session Two: Transforming Outcomes for People with T2D in a Sustainable Manner

- 15.25 One talk, table discussion, panel Q+A
- 16.45 Chair's summary and key actions: **Professor Ian Macdonald**
- 16.50 Meeting close

SESSION ONE AGENDA

- 13.15 Aims and Objectives: **Mr Paul Midgley**
- 13.25 Chair's introduction: **Professor Ian Macdonald**
- 13.40 Public Health England Update: **Dr Giri Rajaratnam**

Session One: Transforming Prevention of T2D

- 13.55 Diabetes Prevention Programme: **Dr Nikki Burger**
- 14.10 Table discussion
- 14.40 Feedback and panel Q&A: Speakers
- 14.55 Break and networking

Chair's Introduction



Welcome and Introduction

“Chair introduction”

Professor Ian Macdonald

Professor of Metabolic Physiology,
University of Nottingham

Major risk factors for developing Type 2 Diabetes

Overweight and obesity – especially abdominal obesity, increased liver fat content (NAFLD) – **need to lose weight**

Low physical activity / Inactivity – **Need to increase Physical Activity – How?**

Genetic susceptibility – especially to an Obesogenic / Diabetogenic environment – **cannot rapidly change the genes so need to address the Environment**

Diet composition/Food patterns - Sugar-sweetened beverages/high energy density, high GI/low fibre foods – **move to lower energy density, lower GI and higher fibre, smaller portions, regular eating**

Metabolically Healthy Obesity (Fat but Fit) Fact or fiction?

De Ycaza, Donegan, Jensen (2017) – IJO In Press

MHO = large waist but no other Met Syndrome symptoms

1805 MHO (38 ± 11 yr) and 3048 MHNW (35 ± 11 yr).

Median follow up 15 yr 80% of MHO vs. 68% of MHNW developed at least one cardiometabolic risk factor ($p < 0.001$).

MHO individuals who gained $\geq 10\%$ body weight more likely to have developed metabolic complications vs to those that did not gain weight

Bradshaw et al (2017) – IJO In Press

3,969 adults who were not underweight and free of the components of MetSyn (except large waist) at the initial visit studied for 9 yr

The relative rate of developing each risk factor was higher among MHO than MHNW

elevated fasting glucose [MHO vs. MHNW, HR: **2.33** (1.77, 3.06)].

elevated triglycerides [HR: **1.63** (1.27, 2.09)],

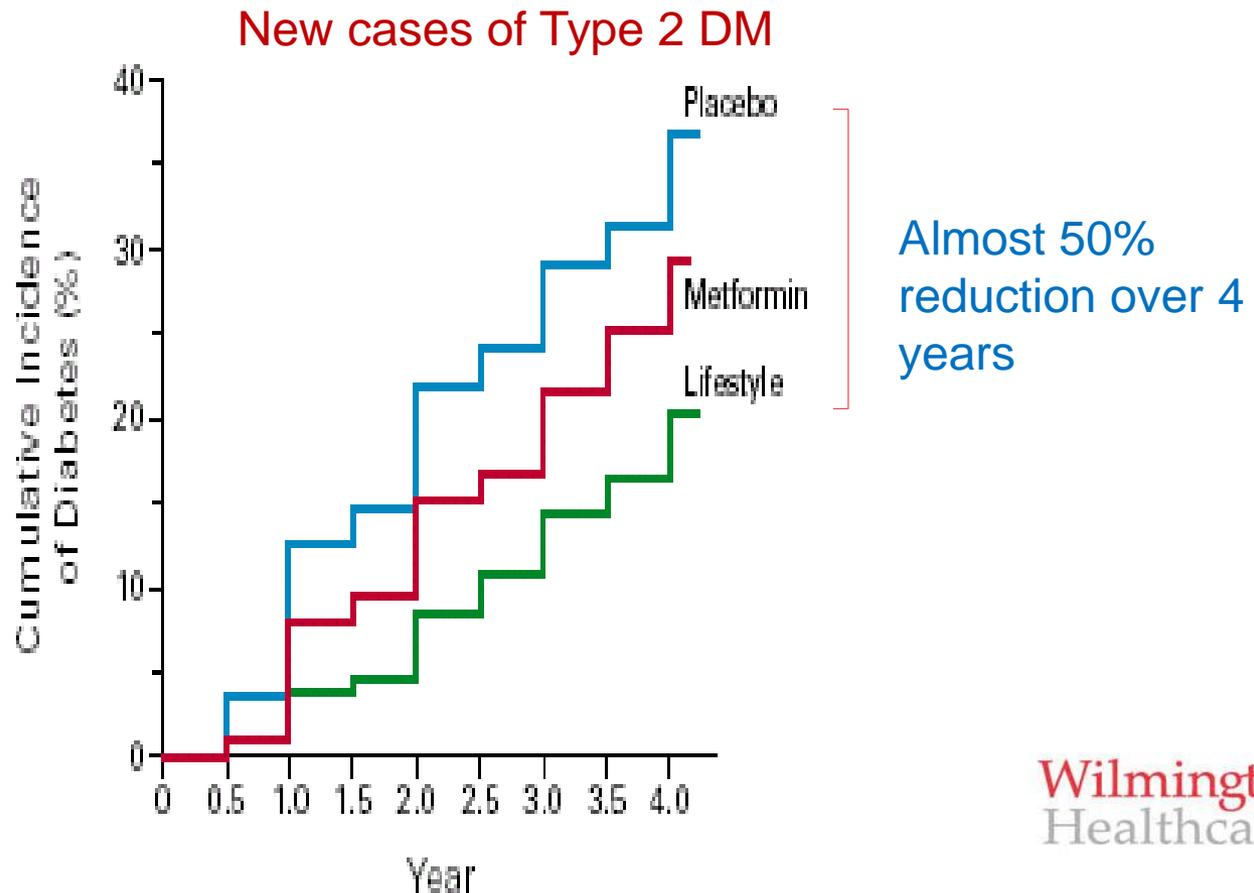
low HDL-C [HR: **1.68** (1.32, 2.13)]

elevated blood pressure [HR: **1.54** (1.26, 1.88)]

So obesity is a marker of disease risk even if not accompanied by risk factors originally

Diabetes Prevention Program (2000)

Diet & Exercise target was >7% weight loss and > 150 min exercise per week (moderate intensity - e.g. brisk walking)



Follow up on DPP (US) and Chinese Da Qing

Benefits from Lifestyle Intervention in Patients with Pre-Diabetes: Lessons Learned from the Diabetes Prevention Program and Outcomes Study (Hoskin et al 2014)

| Benefit | Comment | KEY Findings | References |
|--|--|--|-------------|
| Prevent diabetes in those with IGT/IFG | 58% reduction in risk of developing T2D over 3.2 years; 34% after 10 years | Weight Loss was major predictor (1 kg weight loss predicted 16% reduction in risk); increased PA predicted weight loss and helped sustain it; if met all goals risk reduction 89%; more effective in older participants. | 1, 2, 3, 16 |
| Diabetes prevented in a population with previous GDM | Lifestyle intervention and metformin equally effective | Both intensive lifestyle and metformin prevented diabetes by approximately 50% in women with IGT and a history of GDM. Genetics did not change risk. | 25, 26 |

Mortality in people with IGT after transition to T2DM - 23-Year Follow-up of the Da Qing Diabetes Prevention Study. Gong et al, Diabetes Care 2016

Table 1—Baseline characteristics of participants who progressed to diabetes within 10 years, 10–20 years, and more than 20 years or never developed diabetes over the 23-year follow-up

| | Time to progression to diabetes (years) | | | P value |
|----------------------------|---|-------------------------|--------------------------------|---------|
| | 0–10 (<i>n</i> = 319) | 10–20 (<i>n</i> = 118) | >20 or never (<i>n</i> = 105) | |
| Age (years) | 45.9 ± 9.0 | 46.1 ± 9.5 | 41.9 ± 8.3 | 0.0003 |
| Female sex, <i>n</i> (%) | 140 (43.9) | 55 (46.6) | 48 (45.7) | 0.88 |
| BMI (kg/m ²) | 26.5 ± 3.6 | 25.7 ± 3.9 | 24.3 ± 3.6 | <0.0001 |
| FPG (mmol/L) | 5.7 ± 0.8 | 5.5 ± 0.8 | 5.3 ± 0.7 | <0.0001 |
| PG2h (mmol/L) | 9.1 ± 0.9 | 8.9 ± 0.9 | 8.7 ± 0.7 | <0.0001 |
| Blood pressure | | | | |
| Systolic (mmHg) | 136.4 ± 24.3 | 130.4 ± 22.5 | 125.6 ± 19.4 | 0.0001 |
| Diastolic (mmHg) | 89.0 ± 14.2 | 87.0 ± 12.0 | 84.3 ± 12.1 | 0.012 |
| Cholesterol (mmol/L) | 5.0 ± 1.3 | 4.9 ± 1.2 | 4.6 ± 1.3 | 0.09 |
| Smoking, <i>n</i> (%) | 127 (39.8) | 53 (44.9) | 40 (38.1) | 0.56 |
| Previous CVD, <i>n</i> (%) | 5 (1.6) | 1 (0.9) | 0 (0) | 0.39 |
| Death, <i>n</i> (%) | 125 (39.2) | 37 (31.4) | 12 (11.4) | |

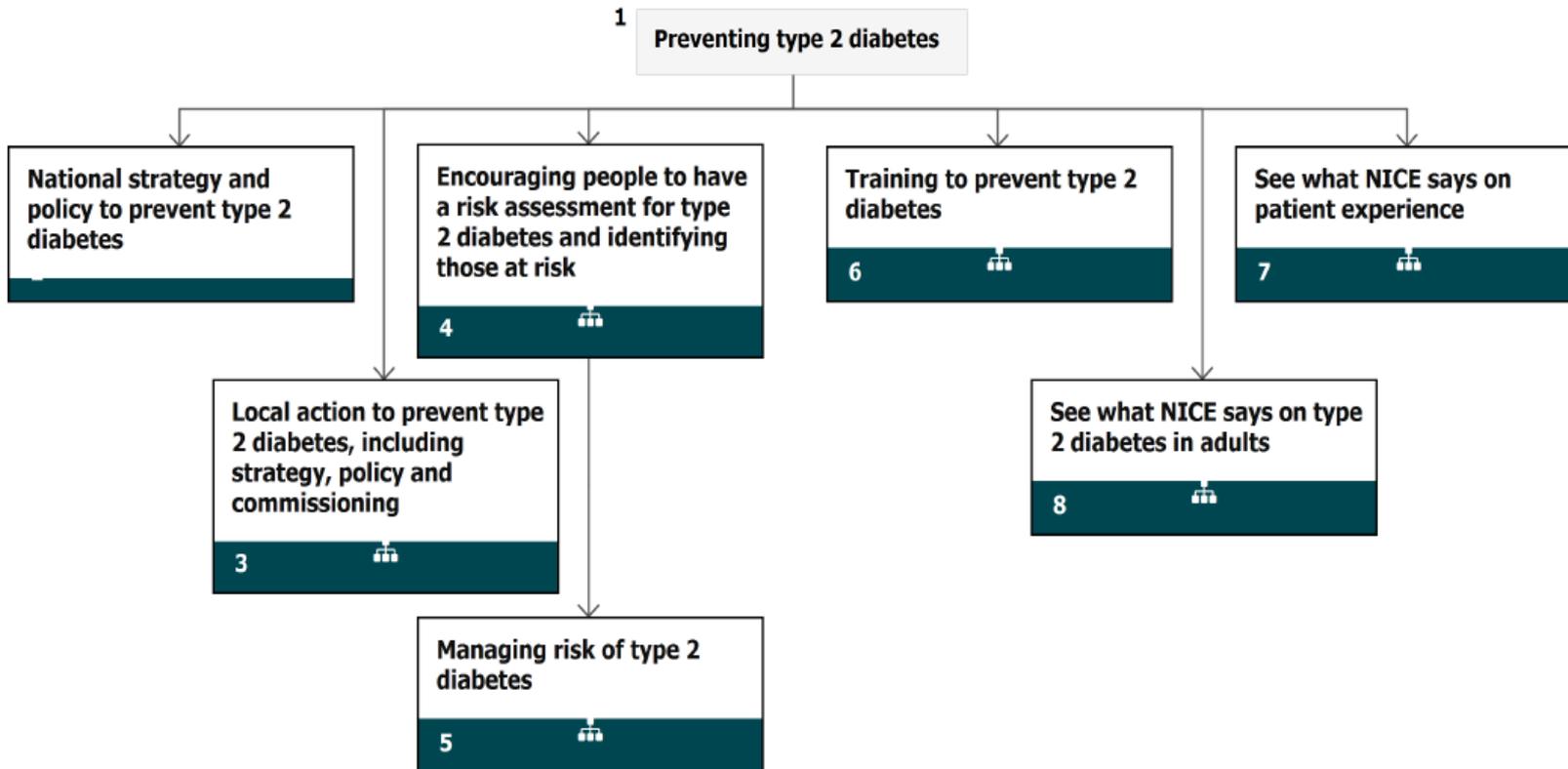
Data are mean ± SD unless otherwise indicated. CVD, cardiovascular disease; FPG, fasting plasma glucose; PG2h, venous plasma glucose concentration 2 h after 75-g oral glucose load.

Type 2 diabetes: prevention in people at high risk

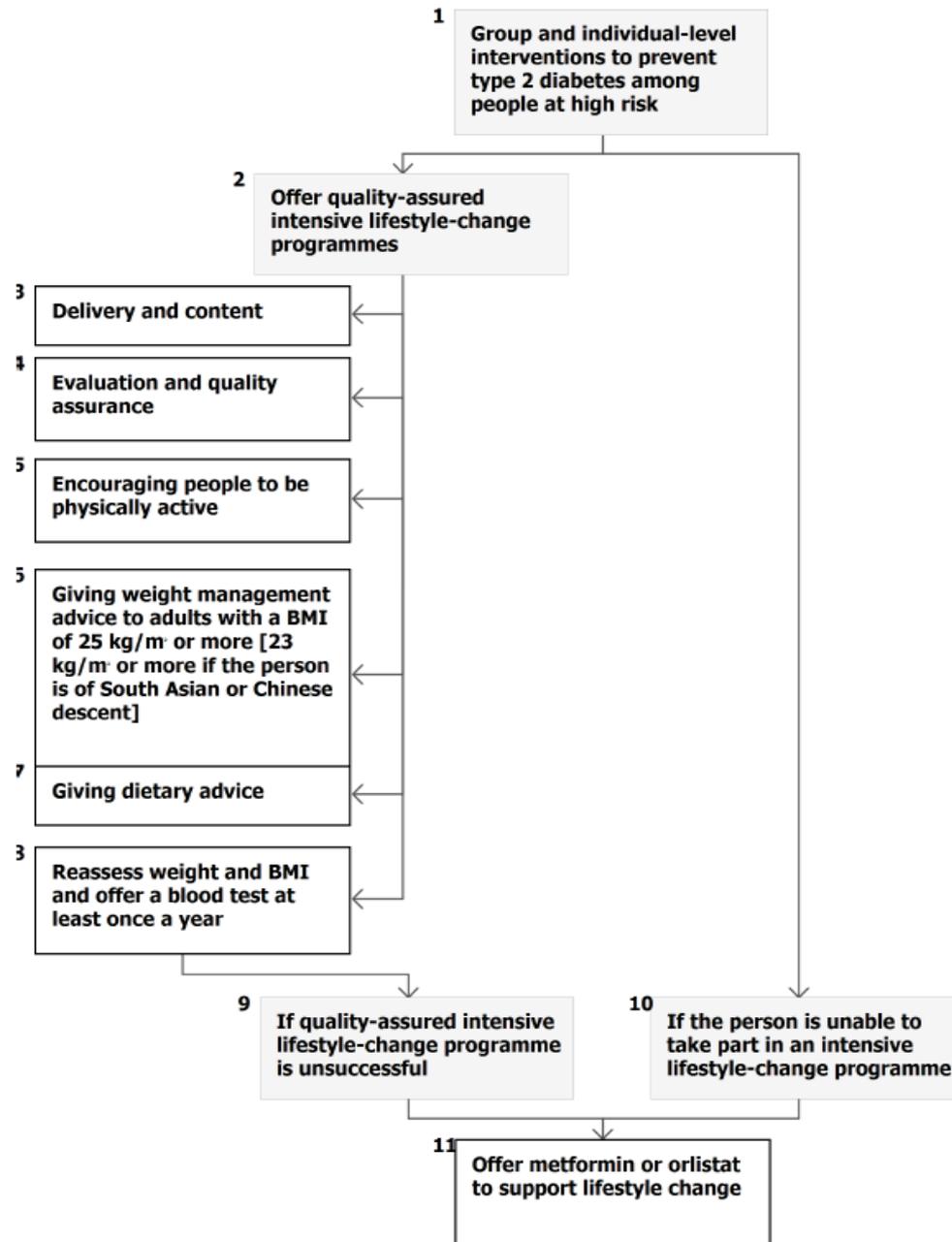
Public health guideline [PH38] Published date: July 2012 Last

Preventing type 2 diabetes overview

NICE Pathways



Group and individual-level interventions to prevent type 2 diabetes among people at high risk



Diabetes management – Dietary aspects

Some proposals that high fat diets are more appropriate for people with T2 Diabetes than low fat/high carbohydrate diets

This has always been the case for some patients with markedly impaired B-cell function, but is it appropriate for all people with diabetes?

SACN, NHS-England and Diabetes UK are about to embark on an assessment of the literature – report 2019 (hopefully)

Physical activity aspects of Diabetes Prevention and Management.

DPPG concluded that weight loss was much more important than Physical activity in preventing diabetes

But they used lower intensity activity (10,000 pedometer counts /day) and did not have diet without exercise so cannot exclude better adherence to diet when exercising as well

What about higher intensity exercise?

i.e. High Intensity Interval Training

(Was originally the Wingate Test for assessing Anaerobic capacity)

A Practical and Time-efficient high-intensity interval Training Program Modifies cardio-Metabolic risk Factors in adults with risk Factors for Type 2 Diabetes Phillips et al, Frontiers in Endocrinology (2017)

Obese people with IFG/IGT – trained for 6 weeks

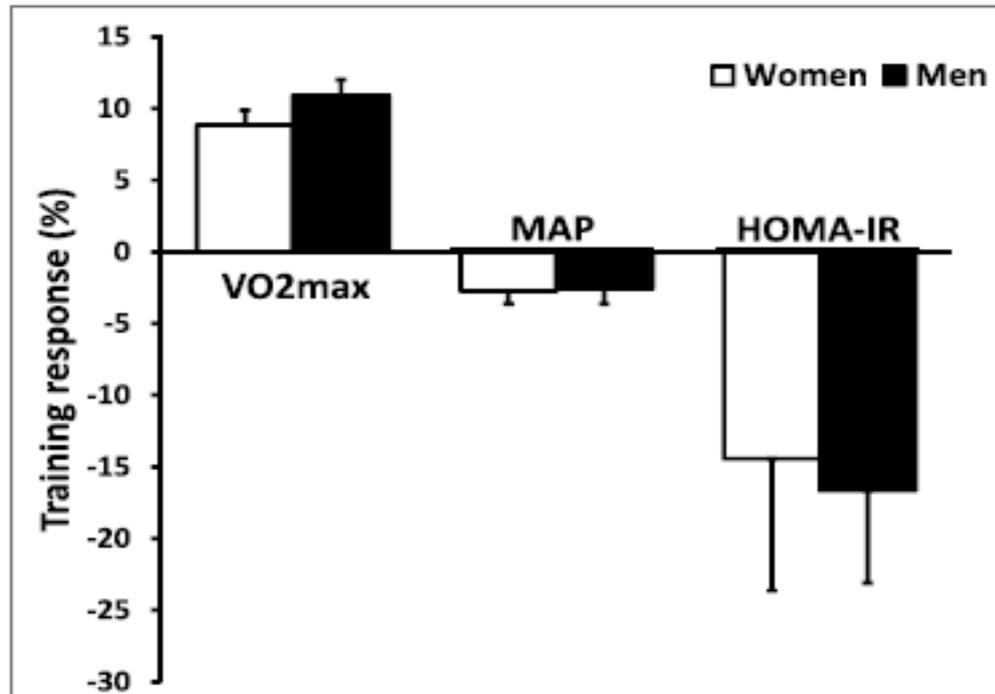


FIGURE 2 | An analysis of the training response to 5-by-1 HIT for $\dot{V}O_2$ max, MAP and HOMA-IR in men and women. Inter-participant variability in response to HIT is large for both men and women, but on average both genders respond to a similar extent. Abbreviations: $\dot{V}O_2$ max, maximal aerobic capacity; MAP, mean arterial pressure; HOMA-IR, homeostatic model assessment of insulin resistance; HIT, high-intensity interval training.

High-intensity interval exercise training for public health: a big HIT or shall we HIT it on the head? Biddle & Batterham (2015)

Biddle recommends that we focus our attention elsewhere if we want population-level gains in physical activity impacting public health. His conclusion is based on his belief that high-intensity interval training interventions will have limited reach, effectiveness, and adoption, and poor implementation and maintenance.

In contrast, Batterham maintains that there is genuine potential for scalable, enjoyable high-intensity interval exercise interventions to contribute substantially to addressing areas of public health priority, including prevention and treatment of Type 2 diabetes and cardiovascular disease.

“Public Health England Update”

Dr Giri Rajaratnam

Deputy Regional Director,
Public Health England

Session One: Transforming Prevention of T2D

“Diabetes Prevention Programme”

Dr Nikki Burger

Lead GP,

South Worcestershire CCG

Table Discussion

How are you currently doing re: engaging with DPP in your area to target those at highest risk?

What about those for whom DPP isn't possible?

How do we sustain positive steps made after initial contact?

Who else beyond primary care is responsible for preventing diabetes and how do we engage them?



Feedback from Tables & Panel Response

Table feedback, discussion
and panel Q&A

Tweet your questions #WMDMTSN

- Professor Ian Macdonald
- Dr Giri Rajaratnam
- Dr Nikki Burger

Break and networking
- back at 3.10pm please



SESSION TWO AGENDA

15.10 NICE Guidelines Update: **Mr James Jagroo**

Session Two: Transforming Outcomes for People with T2D in a Sustainable Manner

15.25 Dudley MCP – Commissioning better outcomes across the whole care pathway:

Ms Jo Taylor and Ms Shelagh Cleary

15.55 Table discussion

16.25 Feedback and panel Q&A: Speakers

16.45 Chair's summary and key actions:

Professor Ian Macdonald

16.50 Meeting close

“NICE Guidelines Update”

Mr James Jagroo

NICE Implementation Facilitator Midlands
and East,
NICE

Session Two: Transforming Outcomes for People with T2D in a Sustainable Manner

**“Dudley MCP – Commissioning better
outcomes across the whole care pathway”**

Ms Jo Taylor

Primary Care Commissioning Manager, Dudley
CCG

Ms Shelagh Cleary

Public Health Manager,
Dudley MBC

Table Discussion

In your STP area, to what extent are NICE guidelines for T2D being followed?

What needs to be done locally to reduce variation?

Who do you need to work with in your area to improve T2D outcomes within existing budgets?



Feedback from Tables & Panel Response

Table feedback, discussion
and panel Q&A

Tweet your questions #WMDMTSN

- Professor Ian Macdonald
- Mr James Jagroo
- Ms Jo Taylor
- Ms Shelagh Cleary

Evaluation, Reflections and Key Points

- What are the main points you have learnt today?
- What do you intend to feed back to your local clinical team, commissioning team or MDT?
- What do you want to change locally as a result of what you've hear today?

Thank you for attending the West Midlands Diabetes Mellitus Transformation and Sustainability Network

The next meeting is scheduled for **Tuesday 11th September** at Manor Hotel Meriden

Please complete your online feedback survey

Slides, handouts & group work will be published on the website:

<https://www.networks.nhs.uk/nhs-networks/regional-diabetes-commissioning-network-portal>

Follow your group **@WilmHealthcare #WMDMTSN**