Digitally-enabled type 2 diabetes structured education

Speaker: Dr Mark Jenkins, Medical Director
Chronic diseases linked to obesity, such as diabetes, heart disease, and cancer cause 60% of global deaths.

Risk factors are known and if treated can prevent up to 80% of all type 2 diabetes, heart disease, and stroke, and 40% of all cancers.
About Oviva

Our mission is to revolutionise access to care and health outcomes in dietetics by incorporating new technologies into care.

Today, we provide dietetic services in over 800 locations across Europe, including to:

- 24 NHS CCGs, 2 Local Authorities and 1 Scottish Health Board
- Over 800 GP practices & specialist clinics, and 4 hospitals across Switzerland, Germany and France

Selected UK partners, awards & locations:
Technology-enabled dietetics is effective & lower cost

Comparative Effectiveness of Weight-Loss Interventions in Clinical Practice


In two behavioral interventions, one delivered with in-person support and the other delivered remotely, without face-to-face contact between participants and weight-loss coaches, obese patients achieved and sustained clinically significant weight loss over a period of 24 months. (Funded by the National Heart, Lung, and Blood Institute and others; ClinicalTrials.gov number, NCT00783315.)

New technologies will be essential to improving NHS dietetic capacity to meet the growing patient demand

Comparison of Methods for Delivering a Lifestyle Modification Program for Obese Patients

A Randomized Trial

Andres G. Digenio, MD, PhD; James P. Mancuso, PhD; Robert A. Gerber, PharmD, MA, MBA; and Roman V. Drozdik, MD, PhD

Background: Physicians frequently prescribe medications for weight loss but offer minimal lifestyle counseling despite the additional benefits of combining both interventions.

Objective: To compare 5 methods of delivering a lifestyle modification program to obese patients receiving subcutaneous insulin.

Design: Randomized, 6-month, open-label study. Participants were assigned to intervention groups by using a computer-generated schedule of randomly permuted blocks. Block length was 5.

Setting: 12 independent research clinics with experience running obesity trials.

Patients: 576 patients with obesity (body mass index $\geq$ 30 and $<40$ kg/m$^2$).

Intervention: High-frequency face-to-face lifestyle modification counseling (HF-F2F) ($n = 76$), low-frequency face-to-face counseling (LF-F2F) ($n = 76$), high-frequency telephone counseling (HF-TEL) ($n = 76$), high-frequency e-mail counseling (HF-EMAIL) ($n = 76$), or no dietitian contact (self-help [SELF]) ($n = 76$). All participants received subcutaneous insulin, $10$ mg/d; a lifestyle manual; and access to a weight-loss Web site.

Measurements: Percentage change in body weight at 6 months was the primary outcome. Secondary end points included changes in waist circumference; lipid, glucose, and insulin levels; blood pressure; weight-related symptoms; and quality of life at 6 months.

Results: At 6 months, the mean weight loss, relative to baseline, in the HF-F2F and HF-TEL groups was similar (8.9% [95% CI, 8.0% to 9.8%] and 7.7% [CI, 6.8% to 8.7%]) and significantly greater than that in the other groups (LF-F2F, 6.4% [CI, 5.4% to 7.3%]; HF-EMAIL, 5.9% [CI, 5.0% to 6.8%]; and SELF, 5.2% [CI, 4.3% to 6.1%]). All groups showed significant improvements in waist circumference, high-density lipoprotein cholesterol, and triglyceride levels, and measures of quality of life and weight-related symptoms. There were no serious adverse events and no differences in minor events among groups.

Limitation: Most participants were women, and the attrition rate was 30%.

Conclusion: High-frequency telephone contact with a dietitian was similar to HF-F2F contact for supporting lifestyle modification in obese patients trying to lose weight. The findings might be used by providers and health systems to promote healthy lifestyle changes for their patients.

Funding: Pfizer Global Research and Development.


For author affiliations, see end of text.
ClinicalTrials.gov registration number: NCT00471172.
# Why are new diabetes education approaches required?

<table>
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<tr>
<th>1</th>
<th><strong>Low uptake rates</strong></th>
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<tr>
<td>7.4%</td>
<td>of people attend education within 12 months of diagnosis(^1)</td>
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Known barriers to attendance\(^2\):
- Logistical – transport, distance, timing
- Medical – co-morbidities
- Financial – travel costs, health insurance
- No perceived benefit – seen as low priority
- Knowledge – of DSE, of condition
- Emotional – fear, denial, embarrassment
- Cultural – literacy, language

<table>
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<th>2</th>
<th><strong>Limited clinical impact</strong></th>
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<tr>
<td>60%</td>
<td>of people do not meet their diabetes treatment targets</td>
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The evidence shows effective behaviour change programmes must include\(^3\):
- Minimum of 11 hours contact time
- Tailored support to personal preferences and health needs
- Accessible and flexible support to ensure maximum uptake and attendance

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1. National Diabetes Audit (2016-17)
2. Chatterjee et al. 2017
What is Oviva Diabetes Support?

A fully remote type 2 diabetes structured education and behaviour change programme, delivered 1-to-1 by a diabetes specialist dietitian over 12 weeks.

Key objectives:

• Widen access to care and **improve uptake** of structured education, particularly for those unable to access face to face services

• Help people with type 2 diabetes **improve their confidence in self management**, **lose weight** and **improve their blood sugar control**

• **Reduce demand on NHS services** through lower diabetes medication needs and demands on primary and secondary care through better risk factor control and lower complication rates

Available in 18 NHS CCGs today, including:
Diabetes Support: a remote, person-centred pathway

1. **Activation call & initial assessment**
   - Motivational interviewing call to encourage uptake
   - 45 minute assessment with the diabetes specialist dietitian to co-create goals

2. **Behaviour change coaching and education**
   - 8 sessions of 1-to-1 specialist dietitian support
   - Provided by telephone call or optional Oviva smartphone app

3. **Self-monitoring and lifelong learning**
   - Lifelong access to learning materials either online or in hard copy (guidebook + DVD)
   - Optional Oviva smartphone app for tracking meals and goals

4. **Outcome collection**
   - PROMs & Friends & Family test score
   - 6 month follow-up for signposting
   - Collection of validated clinical outcomes from primary care

✔ Over 3 hours of 1 to 1 remote coaching from the diabetes specialist dietitian to drive behavior change

✔ Over 10 hours of structured education materials, including videos & podcasts to aid learning
Welcome to Oviva Diabetes Support

Click on the topics below to find important information about living a healthy life with diabetes.

1. Introducing diabetes
2. Looking after your diabetes
3. Eating a healthy diet
4. Making healthy carbohydrate choices
5. Getting started

4. Making healthy carbohydrate choices

Video | Choosing healthy carbohydrates
Lucy Diamond introduces Glycaemic Index and explains the benefits of following a low GI diet.
Optional app for tracking, goals and communication

**Home screen**
- Active Goal: Improve plate distribution
- Thursday, July 20, 2017
- Friday, July 21, 2017
- Sarah 12:21: Hi Paul. Thanks for posting your usual breakfast today. One thing I often try to get people to do is increase the variety of their meals. This ensures a good range of nutrients and also helps to keep it interesting and stop

**Activity tracker**
- Daily Activity track
- Weekly Activity track
- Monthly Activity track
- Walk: 30 min
- Swim: 30 min
- Add Activity Entry

**Weight tracker**
- Daily Weight track
- Weekly Weight track
- Monthly Weight track
- Last Recorded Weight: 78.5 kg
- 06/06/2017
- 0 kg
- 04/06/2017
- 79 kg
- 0.5 kg
- 14/07/2017
- 79.5 kg
- 1 kg
- 18/07/2017
- 80 kg
- Add Weight Entry

**Personal goals**
- Replace crisps with fruit for snacking
- Go swimming 2x per week

Syncs with Fitbits, Apple Healthkit and Google Fit
# Real-world impacts across 18 NHS CCGs to date

<table>
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<tr>
<th>Metric</th>
<th>Percentage</th>
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<tr>
<td>Uptake rate from 2,010 referrals</td>
<td>74%</td>
</tr>
<tr>
<td>Education attendance rate of 1,392 enrolments</td>
<td>89%</td>
</tr>
<tr>
<td>Completion of behavioural change intervention</td>
<td>52%*</td>
</tr>
<tr>
<td>Self-confidence in managing their diabetes pre &amp; post</td>
<td>4/10 &gt; 8/10</td>
</tr>
<tr>
<td>‘Extremely likely’ or ‘likely’ to recommend in F&amp;F Test</td>
<td>97%</td>
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*Importantly we have identified not everyone is ready to engage with a behaviour change intervention, so we are looking at how to best optimise their journey through the programme.*
Real-world clinical outcomes benefits at 6-12 months

Oviva $n = 107$

<table>
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<tr>
<th>HbA1c reduction (mmol/mol)</th>
<th>Weight reduction (kg)</th>
<th>Diabetes remission rate$^3$</th>
</tr>
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<tbody>
<tr>
<td>7</td>
<td>0.5</td>
<td>Unknown</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
<td>27%</td>
</tr>
<tr>
<td>14</td>
<td>4.3</td>
<td>27%</td>
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1 X-PERT 2006 RCT publication  
2 DESMOND 2018 RWE publications  
3 Defined as HbA1c <48 mmol/mol, excluding medications
Participant case study

Background:
Patient JL: 55yr old male
Joined April 2017

Start of programme:
1.90m, 98kg, BMI 27 kg/m²

12 month results:
Weight down 14kg
BMI down to healthy range at 23kg/m²
HbA1c down 55 mmol/mol
Confidence up from 4/10 to 9/10

“*The programme was great, my dietitian was great and the app was very useful. I could get advice whenever I needed, and I am recommending Oviva as people ask me how I lost weight.*”
CCG case study: Chiltern & Aylesbury Vale CCGs

Uptake from 335 referrals (since July 2017)

- Referrals enrolled: 75%
- Referrals unable to contact: 9%
- Referrals awaiting contact: 12%
- Declined: 4%

Reasons for declining:
- Already enrolled in other programme: 2
- Help not needed/wanted: 9
- Unable/prefers not to participate in digital services: 3

- Patient referred to Live Well Stay Well hub
- Patient offered choice of service to suit their needs, including Life & Health or Oviva Diabetes Support
- Patient opting for Diabetes Support referred and contacted by Patient Pathway Coordinator for enrolment.
- Patient undertakes Diabetes Support and primary care advised of progress, completion, and long-term goals.
CCG case study: Chiltern & Aylesbury Vale CCGs

Demographics of enrolments

<table>
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<tr>
<th>Age</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>18-45</td>
<td>14%</td>
</tr>
<tr>
<td>46-65</td>
<td>48%</td>
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<tr>
<td>65+</td>
<td>38%</td>
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<table>
<thead>
<tr>
<th>Gender</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Male</td>
<td>56%</td>
</tr>
<tr>
<td>Female</td>
<td>44%</td>
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Engagement & completion

- Enrolments completing first appointment with dietitian: 85%
- Success rate for all scheduled appointments: 92%

“Diabetes Support has offered our patients an alternative choice in the way they receive their diabetes support & this is proving to be successful both in health outcome data as well as patient satisfaction.

The programme has been vital during our diabetes transformation project and has allowed us increase education uptake and engage the hard to reach populations”

- Angela Jessop, Chiltern & Aylesbury Vale CCGs
## Diabetes Support benefits for the NHS

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<th>Improved uptake in hard to reach&lt;sup&gt;1&lt;/sup&gt;</th>
<th>CCG efficiency savings</th>
<th>CCG quality improvements</th>
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<tbody>
<tr>
<td></td>
<td>- E.g. men, people who work or provide care, and BME groups</td>
<td><strong>£983 savings per participant</strong> over 5 years&lt;sup&gt;2&lt;/sup&gt;</td>
<td>- Uptake &amp; attendance rates – for CCG Improvement &amp; Assessment Framework (IAF)</td>
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<td></td>
<td>- Activation Call increases uptake in people with lower Patient Activation Scores (Level 1-2)</td>
<td>- 14% reduction in secondary care usage, avoiding one elective admission for 13 in every 100 patients each year</td>
<td>- Achievement of 3 treatment targets – for QOF and IAF</td>
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<td></td>
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<td>- 10% reductions in primary care attendances</td>
<td>- Prevent complications – STP and FYFV prevention agenda</td>
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<td>- 14% reductions in prescribing spend</td>
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2. Frontier Economics Cost Saving Model developed for Oviva based on existing clinical outcome data
What’s next?

1. We are currently undertaking 3 independent evaluations of Diabetes Support:
   - 750 patients across NWL with Imperial College Health Partners
   - 400 patients in Salford CCG with the University of Manchester
   - 300 patients in Somerset CCG with King’s College London

2. There are new opportunities with Diabetes Transformation Funding and the NHS England Wave 2 Test Bed programme

3. We have extended our approach with Diabetes Prevent, currently being evaluated by NHS England as part of the Healthier You Digital Stream

4. We have also extended our approach with Milestones DM2, our type 2 diabetes remission programme currently in a clinical trial with Manchester University NHS FT
Thank you!
For questions please email: mark.jenkins@oviva.com